Becoming a Clinical Educator: An Exploration of What Clinical Educators Do and How They Prepare to Teach in a Healthcare Setting

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ABSTRACT

Becoming a clinical educator: An exploration of what clinical educators do and how they prepare to teach in a healthcare setting

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Clinical educators are experienced professionals who, in the course of performing their regular jobs, teach, supervise and assess students in a workplace-based practicum. Although research has identified problems in the ways clinical educators fulfill their roles and responsibilities, little is known of their daily experiences or how they prepare to teach, as well as the complexities of clinical settings that may contribute to these problems. Because clinical educators rarely receive any formal preparation in teaching methods and what little preparation they receive is voluntary, this study aims to understand the primarily informal learning processes (both micro and macro) by which these professionals become clinical educators and how these help them in their daily practice in their healthcare work settings.

This dissertation reports on an exploratory multiple case study where participants from four allied health professions serve as cases. Data was collected through in-depth interviews, observations, and documents. Several layers of analysis of the data, together with fieldnotes, yielded a model of the experience of becoming a clinical educator. The power of this model lies in that it emerged from the data gathered and is richly illustrated with the voices of the participants.

Findings from this research present the act of becoming a clinical educator as evolving through professional socialization in the workplace. It is embedded in the context of professional practice and is therefore best learned in this context of becoming

and developing as a health professional. It is anticipated that this examination of teaching and learning in the healthcare workplace will add to the body of knowledge of workplace learning in healthcare settings, as teaching and learning in the healthcare workplace is a complex and individual experience. The model provides a way to conceptualize the practices of clinical educators, their development within the role, refinements in practice, and suggestions for future research.

ACKNOWLEDGMENTS

It was a long time ago that I began this journey and like most of life's journeys, there are no ends, just beginnings. Although another stage of my life is unfolding, I take this time now to reflect not on where I am going, but where I have come from. The idea for this dissertation grew out of my own personal experiences. For me, clinical education was the inspiration, dedication, and pride that I experienced throughout my life. It was the driving force that enabled me to succeed in the many challenges I have faced. This journey has been remarkable, one filled with sacrifice and accomplishments and one that has enabled me to grow as a person. Throughout this journey, I have not traveled alone. This work could not have been completed without the support of my family and friends. Over the years they have been my compass, and whenever I was lost or wondering they helped me find my way. There are no words to express my gratitude to my parents. It is unfortunate that they were unable to complete this journey with me.

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as you shared of yourselves in an open and honest manner. I am honored to have the opportunity to share your experiences with the academic world.

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CHAPTER ONE: INTRODUCTION

What leads a health care professional to become a clinical educator? Stutz-Tanenbaum and Hooper (2009) discuss their early experiences as clinical instructors, that is, healthcare professionals who teach students in the clinical setting. At first, they identified themselves as occupational therapists that trained students. They believed that acting "primarily as practitioners over educators shaped what we imagined we were supposed to do when we 'took' students." (p. 1) They were expected to share their expertise in their specific practice area – occupational therapy – and to show students how procedures were performed. They also thought they were responsible for observing, assessing and giving feedback to their students as the students applied the knowledge learned. But with time, they began to realize that being practitioners did not prepare them adequately for being clinical educators. "We found that we increasingly wanted to become as knowledgeable about how to design good learning experiences as we were about occupational therapy" (Stutz-Tanenbaum & Hooper, 2009, p. 1). Other clinical educators discuss similar experiences. Abreu (2006) describes her career development, as "a tale of two loves," that is, being both a clinician and an educator (p. 598). With time and experience, Peloquin (2006) began to merge her dual identities as a healthcare practitioner and a healthcare professional that teaches students.

All these educators have a number of common characteristics: They are health professionals who teach students while working in the clinical setting and their experiences have led them to develop professional identities as educators. In addition, they realize that their own professional education programs did not adequately prepared them for their teaching role.

But how do other clinical educators feel about their work? And how do they prepare for the educator role? Does this preparation adequately prepare them? This chapter initiates a conversation about these issues by providing a background on the roles of clinical educators teaching pre-service professionals and the context in which they prepare for their roles – specifically allied health professionals such as laboratory scientists, respiratory therapists, physiotherapists, and occupational therapists, who teach in clinical settings—and identifies issues in this environment that might benefit from further study. I begin this chapter by providing a general description of clinical education in healthcare institutions and the context in which professionals prepare for their roles as clinical educators. Next, I describe a gap in the literature on these issues and suggest a research study to address the gap. I conclude the chapter by stating the main and supplementary research questions, suggesting the likely value of the study to the different parties involved in the preparation of allied health professionals for roles as clinical educators, and name assumptions inherent in the study.

A Background on Clinical Education

Clinical education is the mainstay of the education and development of most healthcare professionals (Kilminster & Joly, 2000; Spencer, 2003), including physicians, nurses and allied health professionals. It is defined as "the supervised acquisition of professional skills" (Lekkas, Larsen, Kumar, Grimmer, Nyland et al., 2007, p. 19) in health professional education programs. Virtually all health education programs include a clinical education component (Lekkas et al., 2007), notably medicine (Wooliscroft, Van Harrison & Anderson, 2002), nursing (Lee, Cholowski & Williams, 2002), and allied health professions (Strohschein, Hagler & May, 2002), and it is considered to be a "vital

component" (Bennett, 2003, p. 438) in the preparation of students for their professional role. Higgs and McAllister (2005) suggest that clinical education is the best way for all healthcare students to learn in the context of clinical practice, and it is through this experience that students learn what it means to be a health professional. Clinical education is the phase of professional education programs where students gain hands-on experience while working with patients in the clinical setting under the supervision of a qualified practitioner – the clinical educator. Most people are familiar with medical internship or residency where medical students enter the hospital setting and are supervised by a staff physician. All health professions have a similar practicum that is required before students can graduate and take certification or licensure examinations.

Clinical education evolved from a simple apprenticeship model, where students learned by observation and supervision from master clinicians, to more complex models evident today, where students learn to be interactional, reflective and patient-centered health professionals (Higgs, 2009). There is a growing body of evidence that underpins the models of clinical education, adult learning and teaching methods (Hobbs, Henley, Higgs & Williams, 2000). With this growing body of evidence, educational institutions and students now expect supervising practitioners to demonstrate expertise as educators (Higgs & McAllister, 2007). The problem is that there is little evidence to describe or explain how these professionals develop this expertise.

Clinical educators are the professionals who supervise, teach and evaluate students in this clinical context, and are instrumental in student development. Clinical educators provide "orientation, socialization, and personal and professional support" for students (Smedley & Penney, 2009, p. 31). The details of the tasks they perform differ

among the various professions, but essentially clinical educators all have similar roles and responsibilities. For example, in most professions, students learn to both use medical equipment and handle patients. Many of these skills and abilities, such as working with real patients and medical equipment, are realized in the clinical setting and cannot be learned in the academic setting. In addition, clinical educators evaluate students' skills and these evaluations dictate whether students can write their certification examinations and ultimately be licensed to work in the field.

By sharing their knowledge and skills, clinical educators help students learn the skills and attitudes required of them as professionals, skills that are essential as they begin to function as professionals. It is also in the clinical setting that students develop professional identities and competencies, particularly the ability to solve problems and make professional decisions in unpredictable and complex situations (Rosenwax, Gribble & Margaria, 2010). The effectiveness of professional education programs is therefore closely linked to the quality of this practicum component and the quality of the instruction students receive in the clinical context (Ralph & Walker, 2008).

Allied health professionals are health care providers working in fields other than medicine, pharmacy and nursing. The term refers to over 20 different professionals, and includes dieticians, medical laboratory scientists, occupational therapists, physiotherapists, radiology technicians, respiratory therapists, and medical social workers, that together represent almost half of Canada's healthcare workforce. But becoming a clinical educator in allied health professions is an increasingly complex journey. The Canadian Institute on Health Information [CIHI] (2008) suggests that allied health has grown in response to increased demands on the health care system. These

demands result from changes in patient demographics (such as an increasing number of older patients who require more services), changes in medical technology that impact directly on improvements in patient care but require the intervention of allied health professionals, and changes in how health care is delivered to the public. In an effort to deal with the impact of these increased demands, governments have expanded allied health workers' scope of practice. Some services that were once provided by physicians or other health professionals, for example, radio-oncology treatments, are now provided by allied health workers (Health Canada, 2004).

Clinical educators working in this context have a particularly challenging role in that they teach and supervise students while also performing their clinical duties (Thorne, 2006). Many experience pressures in the workplace that impact on what they do and how they teach in the clinical setting. McAllister (2005) groups these challenges to changes in patient care and to changes in the workforce. McAllister adds that the pressures related to changes in patient care include an increased workload, patients with increasingly complex needs, new workplace and legislative requirements, and a broadening of roles to include more patients. McAllister also identifies pressures related to changes in workplace staffing such as inadequate staffing, chronic staff shortages, and problems with recruitment and retention of staff. All these pressures and constraints influence what clinical educators do and how they function in their workplace.

The Context of Clinical Education

There are a number of factors in the immediate work environments of clinical educators that influence their behavior and likely affect how they conduct their teaching activities. In attempting to explain the differences in knowledge, development and

competencies among people, Bronfenbrenner (1979) suggested that environmental factors like those just described affect people and influence their work and activities. He notes that these factors overlap one another and refer to the environment in which they interact as an ecosystem. An ecosystem is “the complex of living organisms, their physical environment, and all their interrelationships in a particular unit of space” (Encyclopedia Britannica, 2013). Describing ecosystems offers a concrete framework to account for the reciprocal interactions of behavior and environment. Bronfenbrenner suggests five levels of influence within an ecosystem: individual, interpersonal, organizational, community, and policy.

This section explores the context, or ecosystem, in which clinical educators work and prepare for their roles. It starts by describing the healthcare workplace. Next, it describes the education of health professionals and their need for continuing education and training. It then examines the nature of clinical education and concludes with a consideration of how professionals prepare for their roles as clinical educators.

Challenges of the Healthcare Workplace

The primary function of the health care system is to facilitate health and healing. It does this by ensuring the preventative, curative and palliative care needs of the population (CIHI, 2010a). Because of growing populations in general—and its aging in particular—demand for healthcare services in North America is growing and is anticipated to grow for the next half century. Canada is no exception. “Appropriate planning and management of health human resources is key to ensuring that Canadians have access to the health providers they need, now and in the future” (CIHI, 2007, p. 6).

In response to this need, steps have been taken to increase the number of professionals to meet this increased demand. Statistics Canada (2007) reports that the number of health care workers in Canada has grown more rapidly than Canada's population and will continue to grow. Efforts have also been taken to increase the number of places available for students in programs that train healthcare workers and to expand the scope of practice of healthcare workers so that they can provide more direct services to patients (CIHI, 2010a). For example, advanced practice nurses such as nurse practitioners are providing a larger range of services to patients, services that were once the sphere of physicians. A number of respiratory therapists have been certified as perfusionists and now man cardiac bypass equipment in operating rooms (Health Canada, 2009). Medical technologists are now licensed to inject medications (Ordre professionnel des technologistes médicaux du Québec [OPTMQ], 2004).

Another factor affecting the healthcare workplace is technical advances in medicine. Adoption of such technology requires not only adapting existing work practices, but also affects training of healthcare workers to operate the technology and interpret on its effectiveness. For example, medical laboratory scientists have new competency requirements in clinical genetics and molecular biology, areas that have recently developed (Canadian Society of Medical Laboratory Science [CSMLS], 2010). Radiologic technicians are increasingly involved in radio-oncology treatments for cancer patients (Canadian Association of Medical Radiation Technologists [CAMRT], 2005). Different professional groups use telemedicine, or the exchange of medical information from one site to another via electronic means (Rafiq & Merrell, 2005), to manage patient care across distances. Not surprisingly, some of the training of pre-service professionals

on how to use this technology falls to clinical educators, as the equipment is not available in schools.

Also influencing medical practice, especially in Canada where healthcare is financed by the government, are policies established by federal and provincial governments. In their roles as policy makers and partners, these governments collaborate with various stakeholders to ensure that effective and accessible services are available to Canadians (Health Canada, 2009). As a matter of policy, governments increasingly encourage reliance on allied health professionals to provide direct care to patients.

Although demand for healthcare increases, a growing shortage of qualified health professionals presents a challenge to meet this demand. The World Health Organization estimates a shortage of more than four million health personnel worldwide (Dal Poz, Gupta, Quain and Soucat, 2009). Like other countries, Canada faces such a shortage. Part of this stems from government decisions in the 1980s and 1990s. To meet budget deficits at that time, governments reduced funds for training health professionals. As a result, universities and colleges trained fewer students then, and a shortage now exists. This shortage means that working healthcare workers have higher workloads because of the increasing number of patients (Madet, 2007). Furthermore, patients have increasingly complex ailments and treatments, while also being more educated and knowledgeable and, consequently, have higher expectations and demand quality services from healthcare providers (The Royal College of Physicians and Surgeons of Canada, 2006).

The Education of Healthcare Professionals

Aspiring healthcare professionals prepare for their roles through professional programs in universities and colleges. All education programs, whether they prepare

doctors, nurses, or allied health professionals, aim to provide students with the skills, knowledge and attitudes that enable them to pass their certification exams and to reach a basic level of *competence* when they join the workforce (Ladyshewsky, 2002).

Competence refers to the ability to successfully perform a specific job-related task and requires knowledge, skill, or ability associated with that task (Schroeter, 2008). Schroeter adds that competence has an environmental context, is rooted in a knowledge base that is professionally oriented, and in analytic skills. With this in mind, the competence of clinical educators can be defined in the specific environment in which they work and practice, and in the skills they possess.

To prepare students to achieve competence, virtually all education programs for health professionals have a two-part curriculum. First is classroom-based learning where students acquire a broad theoretical knowledge of their healthcare specialty and complement this knowledge with specific skills developed and practiced in laboratory sessions. Second is clinically based learning where students link theoretical knowledge and skills acquired in the classroom and labs with actual practice in the field through closely supervised practicum in a healthcare institution. Both parts of the curriculum focus on developing profession-specific knowledge and skills. Recently, most programs also stress interpersonal competencies, such as soft skills. Some require healthcare professionals be able to interact with others, such as colleagues, students and patients (Yonge, Krahn, Trojan, Reid & Haase, 2002; Henderson, Fox & Malko-Nyhan, 2006). Others stress training new professionals to work across professions and with people of different cultures (called *inter-professional* and *intercultural skills* respectively) (MEQ, 2000; McAllister, 2005). In addition, health professions include competencies related to

education and teaching in their curricula. However, the primary focus of education and teaching in these programs is on educating patients. In recent years, some experts have called for expanding the scope of this competency to include teaching peers and students (Smith, Aguero-Rosenfeld, Anastasi, Baron, Berg, Bock, Campbell et al., 2010).

Many programs that train nurses and allied health professionals are based in technical colleges. In the past, more were housed there, but over time, many professions such as occupational and physiotherapy gravitated their training programs to universities to raise the level of the profession. Others, such as medical laboratory sciences, have developed certificate and postgraduate programs through colleges and universities so that people who have other undergraduate degrees can ease into the profession and people who worked in these professions in other countries can gain credentials to continue their work in Canada (Ministère d'éducation du Québec [MEQ], 2000).

Subsequent to their education, graduates of most health professional programs write certification examinations, which are usually provided by the national certification bodies for each profession. In Canada, they include the Canadian Association of Occupational Therapists (CAOT), the Canadian Physiotherapy Association (CPT), the Canadian Society of Medical Laboratory Scientists (CSMLS), and the Canadian Society of Respiratory Therapists (CSRT). For each of these associations, certification is a voluntary process by which these non-governmental associations recognize the individual who meets the necessary qualifications to practice.

In Canada, healthcare is also within provincial jurisdiction. Consequently, most professionals have to be licensed to practice in their province. Licensure is an obligatory process by which a government agency regulates the profession and licenses or grants

permission to an individual to practice. Individuals who wish to practice in a profession must apply for licensing after graduation from an education program and maintain their license throughout their working career. Each province has its own licensing body. In Quebec, licenses are granted through *l'Ordre des professions*.

Clinical educators are instrumental in ensuring that students are ready for the certification and licensing processes. Part of the responsibility of a clinical educator is to assess student performance in the clinical setting. This assessment is primarily related to technical and professional skills. The academic institution is responsible for assessing knowledge but as performance in the clinical setting requires the application of theoretical knowledge, clinical educators also assess the ability of the student to transfer their knowledge to the clinical setting (CSMLS, 2010). Essentially, clinical educators are responsible for ensuring that students – or new graduates – can function as professionals. *Professionalism*, for Richardson (1999), means an occupational group that is highly trained, competent and specialized. The development of a profession depends on maintaining "a status, a knowledge base, and a scope of practice, which all together ensure a competence in professional practice." (p. 463)

Ongoing Training of Healthcare Workers

Once their entry-level education is complete, health care professionals start working, but their education does not end. Typically, healthcare workers participate in two types of learning activities. The first is continuing education to maintain their licenses to practice and to advance their skills and knowledge. The majority of health care professions in Canada have national certification bodies and provincial licensing bodies that oversee the professions. These bodies specify the amount of continuing

education needed, oversee the record keeping related to continuing education, and sometimes accredit programs or providers of continuing education.

The second type of ongoing learning activities is training and development offered by an employer. According to Allen, Ceolin, Ouellette, Plante and Vaillancourt (2007), health care employers provide a variety of formal training initiatives to address a variety of work-related needs: to orient new employees and those returning from an extended leave of absence; prepare workers to use new instruments and equipment or apply new work techniques or protocols; comply with new regulations, such as safety regulations; develop *soft skills*—general workplace skills needed to succeed such as time management and negotiating skills; and prepare people for supervisory and management roles. Training prepares health care professionals to rapidly integrate new knowledge into their practice, determine patient care in a changing environment, and update their competencies on a continuing basis (Landers, 2000).

In addition to formal training and development programs, much work-related learning occurs informally, in the context of the everyday work place (Billett, 2002; Eraut, 2004). For example, when working on a specimen for a particular patient, a laboratory technician might learn a particular technique that can be applied to other cases. Such informal learning not only influences practice but, when harnessed on an organization-wide scale, allows organizations to rapidly respond to continuous changes in the organization's external environment (Ellinger, Watkins & Bostrom, 1999). Healthcare organizations are no exception. Workers learn by observing their co-workers, conversing with colleagues about their knowledge and experiences, and receiving feedback from the team they work with (Egan & Jaye, 2009).

The Nature of Clinical Education

These informal learning processes also play a key role in clinical education, because they provide professionals with opportunities to observe colleagues at work, discuss work techniques with them, and receive feedback from experienced peers. To provide such experiences, clinical education by nature must differ from traditional classroom instruction in format and environment. Classroom instruction is a structured environment that provides group learning and practice experiences through a series of planned lectures and lab-based exercises. It provides limited personal interaction between teacher and students. In contrast, clinical education occurs in a less-structured environment that focuses on individual or small-group instruction and involves interaction between the clinical educator, students, and patients working on real cases. Because clinical educators cannot always plan the exact nature of the cases presented to students and, as a result, cannot fully plan all learning activities, it has certain spontaneity. Students must respond to the illnesses and problems experienced by the patients whom the clinical educator happens to see on a given day (Higgs & McAllister, 2005). In other words, clinical education is, in many ways, a somewhat formalized informal learning experience.

Strohschein, Hagler and May (2002) suggest that through a "consistent and effective approach to the clinical education process" it is possible "to influence the formation of these attitudes and skills and, by doing so, have an impact on the future of the profession" (p. 161). However, the development of these skills and attitudes are dependent on the abilities of clinical educators.

Preparing to Work as a Clinical Educator

Given that developmental processes—structured informal learning—play a crucial part in allied health education programs, how do the people who supervise these clinical educational experiences learn to teach clinical knowledge and skills, professional and personal skills, attitudes, behaviors, and values to students? Do clinical educators "teach the way we were taught" as Stutz-Tanenbaum and Hooper (2009, p. 1) suggest or, are there formal or informal methods to encourage the development of clinical educator abilities? Do clinical educators participate in these?

Landmark, Hansen, Bjones and Bohler (2003) described three areas that nursing instructors identified as important to the development of competence and skills in clinical education. The first area is didactic factors, which refers to theoretical knowledge and its application in practice settings. The second area is role function, which refers to the clinical educator role. For example, do clinical educators simply allow students to observe them in their professional role or do they encourage students to become increasingly independent and help them develop technical and professional skills? The third area of importance for clinical instructors are organizational factors, which refers to institutional factors that influence what they do, such as planning, and expectations of both teaching and learning processes. For example, in some institutions clinical educators plan clinical education programs while in other institutions, a manager plans programs. As well, different healthcare institutions may have different expectations for students.

Formal preparation in each of these areas is available to clinical educators. Many employers offer training and development for staff taking on clinical education responsibilities. Many academic institutions and professional associations also provide

new clinical educators with formal training for their roles. But the availability of training does not always mean that professionals take advantage of it. Some health institutions may not be capable of providing training for clinical educators and do not expect these instructors to undergo formal training. Some professionals may also not see the value of training. In addition, there are no available figures for the percentage of allied health clinical educators who have had formal training.

Furthermore, organizational processes need to be in place for staff to use the knowledge and skills acquired in these workshops. Henderson, Fox and Malko-Nyhan (2006) suggest that, in addition to formal training, new clinical educators need ongoing support including opportunities to practice teaching others during the provision of care, and they need their managers and leadership teams to recognize the importance of teaching and learning in the clinical setting, to encourage and provide feedback when they teach students, and to foster those elements in the culture that support teaching and learning practices. Empirical evidence suggests that such processes are available for doctors and nurses who work as clinical educators. But less is known about the clinical educators in allied health professions.

Although some clinical educators report actively seeking out additional assistance to design effective clinical learning experiences for their students (Stutz-Tanenbaum & Hooper, 2009), no systematic study has been performed to assess the extent to which clinical educators in allied health professions actively receive ongoing support for their teaching. In fact, few exploratory studies exist. There is evidence that clinical educators in allied health professions might not formally prepare for their roles as clinical educators, much less participate in ongoing support activities. Because workloads of

clinical educators are often heavy (Rodger, Webb, Devitt, Gilbert, Wrightson & McMeeken, 2008), clinical educators in allied health professions might shortchange their students because patients need their services. Furthermore, Statistics Canada reports that little if any continuing education for these professionals focuses on upgrading teaching skills or other issues related to clinical education (Allen et al., 2007).

There is an ongoing discussion in the literature, notably the medical and nursing literature, that professionals should empower students to direct and evaluate their own learning. This is because, once they become practitioners, students are expected to examine their practices and participate in continuing education activities and initiate the learning process that lead them to further develop as professionals, determine what competencies they require, and then employ any necessary changes to their practices (Fox, Mazmanian & Putnam, 1989). Although this particular approach provides insight into the process of learning within the context of medical practice, it has been used to address curriculum changes in medicine (Fox, 1996). A similar discussion is taking place in the workplace training literature, where workplaces are increasingly being seen as “legitimate learning environments” (Billett, 2004), where employee development is an important responsibility. However, a number of educators believe that educators in the clinical setting must assume a dominant role, initiating and structuring all learning activities (Anderson, 1988).

There is, in essence, a gap between espoused theory and theory-in-action (Argyris & Schön, 1974) or theory as used in practice. Although clinical educators may want to empower students to direct and evaluate their own learning, they control their interactions with students, thereby limiting opportunities for self-evaluation and self-direction.

Understanding the nature and reasons for this gap is consequently an important aspect of this research study. It may be that this pattern of behavior is the result of inadequate preparation for the role of clinical educator. Clinical teachers may lack the knowledge in educational theory that underpins their practice but there may be other factors. The lack of research and literature related to clinical education, in particular in allied health, is a problem. But a larger problem is the need to explore the level of clinical educators' knowledge of education, to test this knowledge, and to theorize from it. Given the complexity and uniqueness of the clinical context, there is a need to explore experiential knowledge in this field. Although there is a general belief in the importance of clinical educators, one cannot assume that all experienced practitioners can automatically function as clinical educators (Opacich, 1995). This is similar to the ongoing debate in training and higher education as regards who make the best trainers, experts in their field – known as subject matter experts – who become trainers, or experienced trainers who become subject matter experts.

There is, therefore, a need to integrate academic and clinical curricula for the achievement of clinical education goals. Partly because of difficulties in integration and partly because of limited clinical educator preparation, there may be a general lack of learning goals for clinical placements and for clinical educators' objectives and strategies. However, in the absence of an explicit curriculum, a hidden curriculum arises (Everingham & Feletti, 1999), and these two curricula may be incongruent.

The Research Problem

Given the importance of clinical education in the preparation of allied health professionals, the concern about the preparation of experienced professionals to provide

clinical education is a significant one. Because there is little empirical evidence available to inform this situation, an exploratory study of the formal and informal processes that professionals follow to prepare for their roles as clinical educators might illuminate our understanding of these processes.

This study aims to filling this gap by taking an exploratory approach. It focuses on the experiences of allied health professionals working as clinical educators in a tertiary healthcare institution, and explores the process of becoming a clinical educator, from recruitment to the graduation of students. When doing so, this study specifically focuses on two main areas of inquiry: how clinical educators develop educational skills and the relationship between clinical education and the context in which they work.

Specifically, the main research question underlying this study is "How do clinical educators in allied health professions prepare for their roles and responsibilities in student teaching in the allied health workplace?"

Supplementary questions include:

- How do professionals decide to become clinical educators? How did they initiate the process of becoming a clinical educator and what expectations were set at that time?
- How do professionals learn to become clinical educators? In which formal and informal specific activities do they participate? Who initiated those activities: the employer or the professional? How useful were those activities?
- How do clinical educators structure or present activities that develop student technical and professional skills? What influences these choices? Do they expect students to direct and reflect on their learning?

- What are clinical educators' beliefs about teaching? How have their own learning experiences shaped these beliefs and, by extension, their teaching?

Several assumptions underlie this study. First, I assume that allied health professionals who act as clinical educators are committed to the education of allied health students. Second, I assume that the professionals who participated in this study were honest and accurate in sharing their experiences and beliefs. Third, I assume that the clinical educators participating in this study apply the basic requirements for the education and supervision of allied health students required by accreditation bodies. Fourth, I assume that clinical educators have job descriptions that identify required competencies and outcomes, and they have access to preparatory activities that help them develop their competence as practitioners and educators.

A study of this nature would contribute to the literature and knowledge on training, education, and workplace learning: most immediately, that of allied health professionals. McDonough and Osterbrink (2005) reported that clinical educators feel they lack knowledge about the teaching and learning process. By exploring how clinical educators prepare for their roles, this study might identify gaps in their preparation and suggest ways of addressing it. Specific insights from the participants themselves and the analysis of data about their experiences might influence future professional development activities around clinical education.

A second way that this study might provide value is that it might assess the extent to which the research on clinical education processes in medicine and nursing applies to allied health professions. Because of a lack of research into how allied health professionals become clinical educators, allied health professions rely, instead, on

research into the experiences of medical and nursing educators. This study might suggest which challenges are common to all types of clinical educators in healthcare and which ones are specific to allied health professions.

A third way that this study might provide value is to the broader literature on training and workplace learning. It may be especially useful in the specialization of informal learning. Informal learning refers to instruction that happens outside of the formal classroom (Marsick, 2009) and in which workers have a say in the purpose and content of the learning, and may or may not be aware that learning is occurring (Carliner, 2012). Interest in informal learning is growing (Carliner, 2012) but this interest lags available research. Because clinical education is a structured form of informal learning, and the process of becoming a clinical educator relies heavily on informal learning processes, this study could deepen understanding of informal learning processes and suggest ways that informal learning might benefit professions outside of healthcare.

Perhaps the most fundamental value of this study might be to clinical educators themselves. An examination of their knowledge of education and how they apply this knowledge in their work might add to an understanding of experiential knowledge, how professionals are transformed and/or changed by it, and how their clinical practice changes as a result of it. It is assumed that this change may lead to improvements in teaching and student learning and those who read the final report might who see themselves and that, in turn, might influence their knowledge and practice.

Definitions

Allied health professionals are health care providers working in fields other than medicine and nursing. They make up about 48% of Canada's health care workforce

(CIHI, 2008) and include more than 20 different professions including medical laboratory science, occupational therapy, physiotherapy, radiology technology, and respiratory therapy. In Quebec, all those practicing in these professions must be licensed to practice in their particular field of expertise. The majority work in hospitals but many also work in community clinics and other public and private health institutions.

Clinical education is an essential component of all education for pre-service healthcare professionals in which students work in the field in "real-world situations" applying the knowledge and skills learned in school under the close supervision of an experienced professional (Rosenwax, Gribble & Margaria, 2010). It is a broad term that refers to this phase of the process of healthcare professionals, although other terms exist. For example, the nursing literature uses *fieldwork* and *preceptorship.* The literature on occupational and physiotherapy use the term *clinical supervision*. Other terms commonly encountered include *clinical teaching, clinical instruction*, and *fieldwork*. What is common to all these terms is that they identify the clinical component of professional education that occurs in a clinical setting (Moore, Morris, Crouch & Martin, 2003).

Clinical educators are the experienced professionals who teach, supervise, and assess pre-service professionals during the phase of their education when they work in the field, called clinical education (McAllister, Higgs, & Smith, 2008). The main responsibility of clinical educators is to ensure that students are ready to write certification examinations in their chosen profession and are ready to apply for a license to practice in the clinical setting. Other terms for clinical educators include *clinical facilitators, clinical instructors, clinical supervisors, clinical teachers, fieldwork educators, medical educators, nurse educators, nurse lecturers,* and *preceptors*.

CHAPTER 2: LITERATURE REVIEW

This chapter identifies clinical education as a crucial component of health professional education and examines how allied health clinical education can be located within the broader context of academic and clinical education. I begin the chapter with a discussion of how the literature was selected, including the topics chosen, how the search was conducted, and the criteria used to select the literature. The second section portrays allied health professionals by discussing their areas of professional practice, the allied health workplace, the education of professionals, and training in the workplace. The third section discusses the roles and responsibilities of clinical educators and the characteristics of clinical educators. The final section examines the development of allied health clinical educators, with an emphasis on available preparation programs, competencies, and the responsibilities of different stakeholders. The importance of these topics sets the stage for a discussion of how they are addressed in the study, the details of which are addressed in the chapter on methodology.

Theoretical Perspective

That clinical educators learn about and adjust to their roles within the context of a larger social environment suggests that a social ecology perspective might be helpful in describing and making sense of issues related to clinical educator experiences. Social ecology examines the interrelationships among diverse personal and environmental factors. In essence, the social ecology perspective considers learning and activity as interaction between the individual and his or her environment (McLeroy, Bibeau, Steckler & Glanz, 1988). Healthcare itself occurs within an ecology consisting of

biological, psychological, social, cultural, and structural influences. These influences affect how health professionals conduct their daily work as well as how they assume their professional roles, including those of clinical educator. A combination of individual, micro level factors such as interactions within one's family or work groups, and macro-level factors such as cultural beliefs and values, influence individual behavior (Earp & Ennett, 1991). The experiences of clinical educators are too complex to be understood by considering only one level of influences such as the influence of public policy or supervisory practices. Instead, a consideration of the development of clinical instructors requires more comprehensive approaches that integrate personal, psychological, organizational, cultural, and regulatory perspectives.

Higgs and Hunt (1999) were early advocates of the use of the social ecology perspective to examine clinical education in allied health. They suggested its usefulness in understanding the complexities that healthcare professionals experience. Social ecology illustrates the complexity of the different factors that influence clinical education. It is a multilevel perspective that is fluid as circumstances change at different levels in the physical and social environments that surround clinical teaching. Consequently, it is a useful framework for this study because, as noted, a number of different factors impact on clinical education, in particular on what clinical educators do and how they develop the knowledge, skills and behaviors necessary to teach allied health students, essentially how they develop their identities as clinical educators. As Stutz-Tanenbaum and Hooper (2009) suggest, many health professionals increasingly wear two hats: that of practitioner and educator. Not only are they responsible for expanding roles in healthcare teams (CIHI, 2007), health professionals are also required

to engage in student, peer, and patient education. This complexity challenges educators to adapt their knowledge and practice to meet the diverse needs of patients and to work effectively with other members of the healthcare team. This study highlights these layers of complexity in clinical education and examines how clinical educators recognize teaching and learning opportunities in this unique environment.

Selection Of Literature

I conducted a preliminary search using the databases ERIC and PubMed (MEDLINE) when first I began this study. I used the terms “clinical education” with “healthcare” or “health workplace.” The ERIC search only led to 23 documents, most of which did not deal directly with educators in the healthcare setting but rather with educators in other settings such as law and athletic training. Nevertheless, about eight articles did prove useful. The PubMed search led to the other extreme with a total of 1680 documents, the majority considering the terms separately. The use of PsychInfo Academic Search Premier also led to more documents. The resulting total number of articles that addressed the terms was over 200. An examination of a portion of the documents identified only a small number of empirical studies related to the experiences of clinical educators, primarily in medicine and nursing. An examination of the dissertation database also proved fruitful with five dissertations written on the topic of clinical education, using various frameworks. The bibliographies of these were also consulted for pertinent references. See table 1 below for a list of electronic resources used for this review.

Table 1
Electronic resources

Databases	**Search engines**
Academic Search Premier	Google Scholar
Medline via PubMed	EBSCOHost
ERIC (Educational Resources Information Center)	
ProQuest Digital Dissertations	
PsychINFO (American Psychological Association database)	

An examination of documents from this preliminary search identified other terms used to describe the activities of clinical educators, including preceptor, clinical supervisor, and nurse lecturer. This led to another search with these terms as well as with a list of various disciplines in the healthcare field. See table 2 below for a list of the key search terms used for this literature review.

Table 2
Key search terms

Learning model	**Health Professional**	**Discipline**
Clinical education	Clinical educator	Allied health
Clinical instruction	Clinical instructor	Laboratory technology
Clinical teaching	Clinical teacher	Nursing
Clinical supervision	Clinical supervisor	Physiotherapy
Fieldwork	Fieldwork supervisor	Occupational therapy
Medical education	Medical teacher	Radiologic technology
	Preceptor	Respiratory therapy

Literature searches were also conducted during the proposal preparation phase and during the preparation and elaboration of a pilot study aimed to test the data collection and data analysis instruments. Further searches were conducted during the data collection and data analysis phases. For example, as research participants discussed issues related to communication and to their identity as professionals and educators, separate searches were conducted to identify relevant literature in these areas. In addition, to identify available education programs and resources for clinical educators, I conducted a separate search using the Google search engine. These different programs and resources led to a further search of different academic institutions that had relevant information and links to resources and instructional materials.

As Creswell (2007) suggests, a priority system for reviewing the literature, beginning with refereed articles, was established. For this study, it was important to consider only journal articles, thereby relying on the peer review process involved in publication as a means to ensure validity and study quality. Articles that did not meet this criterion were set aside for later examination. Many of these were descriptive and experiential reports. Copies of the majority of the journal articles were made and filed by author(s) names. Only a few articles that predated 1994 were not retrievable.

Figure 1 below presents an illustration of how the different literature located relates to the research topic under consideration. Results of the literature search focus on a number of different issues that influence clinical educators, for example, personal and professional attributes, educator beliefs and experiences, different institutions such as government and academic organizations, clients, and available resources for teaching. In addition, there is a large body of literature that discusses issues specific to clinical

education, in particular, roles, responsibilities and tasks of clinical educators, models of clinical education, and preparations for clinical educators. Many of these were examined for background information.

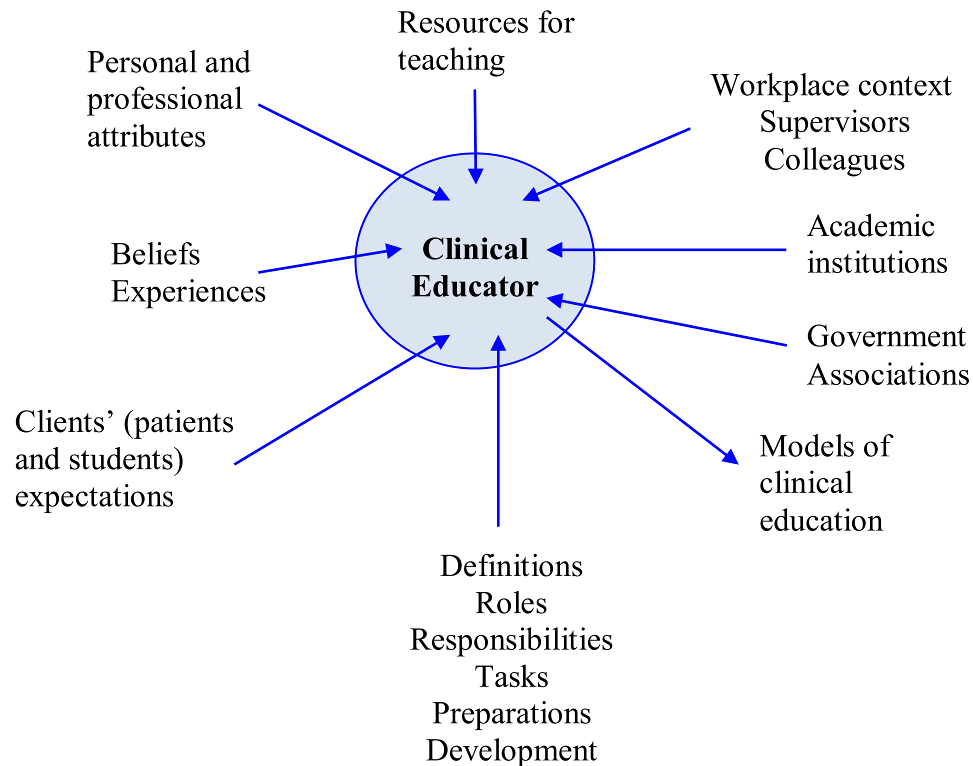

Figure 1. Results of literature searches

Of particular importance is that the majority of the literature focuses on medicine and nursing. There are a number of studies that present frameworks for understanding and improving clinical teaching for physicians (Steinart et al., 2006; Hesketh et al., 2001; MacDougall & Drummond, 2005). Hesketh et al., in particular present a framework to train physicians as educators. Studies addressing nursing educator training are also available (Kaviani & Stillwell, 2000; Henderson, Winch & Heel, 2006; Brennan & Hutt, 2001). But literature focusing on allied health professionals is more limited. But the

concerns raised in the allied health literature compare to those in the medical and nursing literature. Although they may teach different content, the challenges they encounter and the strategies they use to teach are similar, as illustrated in this study.

A Portrait of Allied Health Professionals

Allied health professionals are health care providers working in fields other than medicine, pharmacy and nursing. They make up about half of Canada's health care workforce (CIHI, 2008) and include dieticians, medical laboratory scientists, occupational therapists, physiotherapists, radiology technicians, respiratory therapists, and social workers. All these professionals are licensed and certified to practice in their particular field of expertise. The focus of this research study is clinical educators working in the medical laboratory technology, respiratory therapy, physiotherapy, and occupational therapy fields. This section examines the roles and responsibilities of the professionals working in these different areas and then considers the education of allied health professionals.

Areas of Professional Practice in Allied Health

As a profession integral to healthcare, members of the *medical laboratory technology* profession play an essential role in the health care system. According to the Bureau of Health Professions (2005), a medical laboratory scientist performs a range of medical laboratory tests – from simple blood tests to follow up medical conditions to more complex tests that uncover diseases. They confirm the accuracy of test results obtained and report their findings to physicians and other health professionals. Their responsibility begins with sample collection and extends to the interpretation and

communication of patient results to physicians. Laboratory scientists must also recognize factors that could introduce error or cause problems that lead to incorrect diagnosis and treatment of patients, in particular as physicians rely on laboratory test results to diagnose and treat patients (Stegall & Stegall, 2006). In Canada, there are over 20,000 medical laboratory technologists working in various institutions, such as hospitals, public and private laboratories, pharmaceutical companies, and research facilities. They are the third largest health care group after nurses and physicians (Health Canada, 2004).

Respiratory therapists evaluate, treat and care for patients who have breathing or cardiopulmonary disorders. These problems may result from disease or trauma and require diagnostic tests, assessments and therapy that respiratory therapists provide. Some of these therapies include the administration of oxygen and other medications, and managing patients' airway to assist breathing. Patients with serious breathing problems may require a mechanical ventilator or other breathing apparatus, life support equipment set up and maintained by respiratory therapists (CIHI, 2007). Although the majority work in hospitals, they also work in other centers such as rehabilitation and diagnostic clinics, and in private companies that service medical equipment.

According to the Canadian Association of Occupational Therapists (2007), *occupational therapists* are regulated health professionals who promote health and well being by enabling individuals, groups and communities to participate in occupations that give meaning and purpose to their lives. The concept of occupation is broad and refers to what people do during the course of their daily life, such as self-care, play, work, study and leisure. Their main areas of practice are physical health and the neurological, musculoskeletal, cardiovascular and respiratory systems. Occupational therapists also

work in mental health and in other areas such as palliative care, vocational rehabilitation, and health promotion. Generally, occupational therapists help patients improve their ability to perform tasks in their daily lives and working environments. An illness or disability, physical or mental may infringe on a patient's ability to feel, think or act in their daily activities. As a result, occupational therapists strive to enhance ability or modify environmental barriers in order to facilitate independence (CIHI, 2010a). The majority of occupational therapists work in healthcare institutions, such as hospitals and community clinics but a number also work in private practice.

The Canadian Physiotherapy Association defines *physiotherapy* as a health care profession aimed at evaluating, restoring and maintaining physical function. Physiotherapists also aim to prevent and manage pain, and assess and treat physical disabilities as a result of injury or disease, in a manner to encourage patients to improve and increase their independence (CPA, 2000). Physiotherapists treat a wide range of ailments and specialize in areas such as cardiopulmonary physical therapy, geriatrics, orthopedics, and neurology. The majority of physiotherapists work either in healthcare institutions, such as hospitals, or in the private sector.

The Education of Allied Health Professionals

In the past, almost all allied health programs began in hospitals where programs were established to provide trained personnel to operate the specialized equipment related to the health delivery system. This was the norm after the end of World War II. Spencer (1976) reports that hospitals amortized the costs of training these individuals as essential for the operations of the healthcare facility. Higgs and Hunt (1999) report that traditionally, the education of beginning practitioners focused on the acquisition of

clinical competencies, first as apprentices and then as autonomous professionals. Allied health students worked alongside and learned from experienced professionals in the workplace setting until they were functionally independent. This type of education persisted for many years in hospital-based programs, where knowledge of experienced practitioners (as teachers) was passed down to the next generation. As equipment became more complex and those using them sought self-actualization, hospitals began to realize that formal programs with supporting academic resources would be a more manageable training arrangement. Allied health programs were then transferred to colleges and universities (Higgs, 2009).

Today, the education of allied health professionals differs for each of the professions. The education of technical professionals, notably medical laboratory technologists and respiratory therapists is usually a two or three-year program based primarily at a community college or technical school. In Quebec, the education program is based in community colleges but there is one university program for medical technologists. Currently, there are a number of university-based programs across Canada for medical technologists (CSMLS, 2010) and respiratory therapists are able to move into other professions such as perfusion (www.michener.ca). On the other hand, the education of rehabilitation professionals, notably occupational therapy and physiotherapy takes place at a university. The entry-level requirement for rehabilitation professionals is a master's degree. There are 14 university programs in rehabilitation sciences across Canada, some of which also offer a doctoral program. In Quebec there are four universities that offer education programs for rehabilitation professionals.

The national associations certify graduates from accredited professional education programs who have passed their certification examination. They include: CSMLS (Canadian Society of Medical Laboratory Scientists), CSRT (Canadian Society of Respiratory Therapists), CAOT (Canadian Association of Occupational Therapists), and CPT (Canadian Physiotherapy Association). Allied health professionals also have to be licensed to practice in their province. In Quebec, professional orders, one for each profession, oversee the licensing process. Table 3 summarizes the education and licensing requirements of allied health professionals.

Table 3
Allied health professionals' education level and licensing requirements

Profession	**Educational Level**	**Licensing Requirement**
Medical laboratory technology	Technical school, college or university	Yes
Respiratory therapy	Technical school or college	Yes
Occupational therapy	University – master's	Yes
Physiotherapy	University – master's	Yes

Competence Requirements for Allied Health Professionals

Specific content areas are the main focus of the education programs for each allied health profession but many also have some general education courses, such as English or French and some general science courses. Competence requirements emphasize technical and professional skills. Few of the education programs offer instruction in teaching skills. However, they all include competence in providing clinical instruction and evaluation for students as part of their professional competence (CSMLS, 2005; NPAG, 2009; ACOTRO,

2011; NARTB, 2011). Competence, according to Srinivasan, Li, Meyers, Pratt, Collins et. al. (2011), entails having the knowledge, skills, abilities or characteristics associated with high performance on a job.

There is therefore an assumption in the health professions that professions are responsible for all forms of training and teaching. This assumption arises from their licensing abilities, which also ensures that the professions oversee all education and professional development in their fields. Furthermore, most health professionals are experts in their field and may not have developed the skill to effectively teach in the clinical setting. However, there is an ongoing debate in the training field about whether certified training professionals should be responsible for the education and development of professionals (Lee, 1998). Others suggest that subject matter expertise is important to trainer credibility and only slightly more important than teaching skills in the eyes of learners (Carliner & Bernard, 2011). Surveys of medicine (Branch, Kroenke & Levinson, 1997) and nursing students (Yonge et al., 2002) undergoing clinical placements, however, view subject matter expertise as more important. This debate has not yet reached the allied health professions.

Even though they may not provide instruction on teaching skills, all the education programs provide either resource manuals for clinical educators or links to resources for clinical educators available at other institutions. In addition, licensing requirements demand that professionals engage in a certain number of formal continuing education activities. To this end, the professional orders and certification bodies offer various learning activities, as do many healthcare workplaces. It is up to each professional to

decide on the format and topic of activities they require. How many of these activities are related to teaching will be examined in a subsequent section.

Roles And Responsibilities Of Clinical Educators

The main purpose of the clinical practicum is to integrate students into the allied health profession, essentially to prepare them for membership in their chosen profession. Through the practicum, students develop a view of the professional world that leads them to identify profession-specific problems and to use methods to resolve them. Through their interactions with professionals, they learn what it means to be a professional, and to apply skills and knowledge to tasks that are specific to professional practice. Students learn many of these through interactions with clinical educators, peers and other professionals. This section considers the roles and responsibilities of clinical educators and how these are operationalized in the healthcare workplace. Clinical educators therefore play a key role in the development of health professionals (Kilminster & Jolly, 2000; Spencer, 2003).

Although clinical educators have various roles in the workplace, their main function is related to the facilitation of student learning (Barrett, 2007). However, because of the settings in which they work, clinical educators are responsible not only for their students but also for their patients (Higgs & McAllister, 2005). In some cases, clinical educators are the most experienced professionals in their area. These responsibilities can lead to stressful conflicts especially when extra work needs to be taken on in addition to student supervision (Brennan & Hutt, 2001).

The topic of roles and responsibilities has been documented in the literature. Crotty and Butterworth (1992) conducted a literature review to identify the roles and

responsibilities of nurse teachers and examine the activities they perform. They identified a total of 454 tasks performed by nurse educators. The majority of the tasks identified can be grouped into three main functions: teaching, professional, and administrative.

There is a consensus in the literature that the role of a clinical educator, in all health professions, is primarily a teaching role that includes an orientation to the work environment and instruction on what professionals routinely do in the clinical setting (Kaviani & Stillwell, 2000). The teaching and professional roles are connected as most clinical educators carry out their professional duties while also teaching students. This is how they socialize the student into the workplace. Their professional role also calls for educators to be involved in the various professional groupings that exist within the discipline (Farmer & Farmer, 1989). Thus physicians, nurses and allied health professionals belong to a number of different associations, nationally and provincially.

The administrative function of clinical educators includes tasks related to program management, including program development, monitoring, maintenance, and evaluation (Brammer, 2006). Clinical educators not only develop learning activities for students, they must also observe students carefully, assess their skills, and evaluate their performance level through the completion of assessment forms. Ultimately, clinical educators are responsible for ensuring that pre-entry level students achieve competence in the profession. Competence for students necessitates educators' assurance that students provide patients with optimal care (McAllister, Higgs & Smith, 2008).

Clinical Education in Allied Health

Placement models are extensively discussed in the clinical education literature. Generally, the larger professional groups – medicine, nursing and laboratory technology

– commonly have a small group of students, usually two or more, with one clinical educator. The literature of other professional groups – physiotherapy and occupational therapy, in particular – has traditionally used a 1:1 model, that is one student with one instructor (Moore, Morris, Crouch & Martin, 2003). However, because of external factors such as workforce constraints, costs of training and increasingly complex patient situations, physiotherapists have encouraged instructors to take on more than one student at a time (Lekkas et al., 2007; Currens & Bithell, 2000). Though educational institutions in recent years have been increasing their student numbers, there has not been a corresponding increase in the number of clinical sites for clinical education (Grant & Davis, 2004). As a result, those who teach are now taking more students.

To cope with the pressure in the workplace, several authors discuss alternatives for clinical placements. Some laboratory programs, for instance, have adopted simulations where clinical educators from a healthcare institution bring samples and cases from the institution to the college or university, for students to work on (Grant & Davis, 2004). Other alternatives include split clinical rotations, that is some clinical work performed on off-shifts, and multiple-site rotations. For example, with increased specialization and reorganization of health care services, not all institutions are able to provide sufficient experiences for students (McAllister & Whiteford, 2008). As a result, a student may have to travel to more than one site for a particular area.

Clinical education was historically based in hospital or institutional settings but in recent years there has been a move to community settings and to consultation roles. As a result, the lack of traditional placements for students has led to the creation of “role-emerging placements” in clinical education (Jung, Solomon & Cole, 2005, p. 44), notably

in rehabilitation professions. These placements are defined as occurring in a setting that does not have an established program or staff. Examples of these non-traditional placements include practicum in community centers servicing individuals with HIV (Nixon & Cott, 2000), placements in a transitional home for women with addictions (Huebner & Trysaenaar, 1996), and placements where students trained Vietnamese staff in an orphanage (McAllister & Whiteford, 2008).

Clinical Educator Characteristics

There is disagreement in the literature regarding characteristics that clinical educators must have. All agree that clinical teachers must have two important traits (Branch, Kroenke & Levinson, 1997). Firstly, they must be up-to-date in their clinical practice because "imparting knowledge is a key attribute" for teaching and student learning. This requires expertise in clinical skills because students need to master them. The second important trait is dedication to teaching (p. S1).

Alsop and Ryan (2001) concur that clinical educators must be "well qualified in their specialist field" and have "the necessary skills and qualifications to teach in the fieldwork setting" (p. 37). However, the emphasis in the clinical setting is different from that of the academic setting because, as Alsop and Ryan suggest, the primary role of a clinical educator is that of a practitioner. Teaching in the clinical setting is a secondary role. Knight and Brumels (2010) concur with this perspective and add that clinical teachers "should not be expected to develop lesson plans for what they teach, nor will their delivery be systematic" (p. 5).

Higgs and McAllister (2007) suggest that clinical educators strive to achieve a sense of balance between their identities as professionals and educators. This necessitates

building a sense of compatibility between the various aspects of the self, the relationships and the roles of being an educator while at the same time responding to the changing nature of the activities they engage in at their workplace. It is this ability of clinical educators to strike a balance between the different tasks they engage in that is addressed in this research study. Learning in the healthcare workplace is complex and educators need to be creative to balance the limited time and the pressures inherent in the workplace with the needs of their patients and students. As will be evident when I present the findings from this study, this ability of clinical educators to strike a balance between the different tasks required of them and the priorities inherent in their workplace is a vital aspect of their roles and responsibilities.

Development Of Clinical Educators

Although there is scant research and literature that addresses the development of clinical educators, many authors identify the importance of preparation for teaching professionals (Higgs & McAllister, 2005; Steinart et al., 2006; McAllister, 2005; Ralph & Walker, 2008; Bassendowski, Layne, Lee & Hupaelo, 2010; Kassam et al., 2011). The suggestion is that given their roles and responsibilities, the requirements for licensing, and as the challenges existing in a complex workplace, clinical educators must be adequately prepared. There are calls for practitioners to be more than competent; they must also be independent decision-makers, be willing to accept responsibility and be accountable to all stakeholders (Higgs & Hunt, 1999). In particular, professionals need to be prepared for an uncertain future both in terms of the knowledge and skills they require and in terms of the educational strategies they use, with an emphasis on flexibility, responsiveness and proactivity to changing contexts and an ongoing commitment to

quality education. Furthermore, clinical educators need to prepare their students for change by encouraging them to develop these same skills.

Clinical teaching is rarely presented as an opportunity to contribute to the profession, to shape the profession, or to enhance one's own professional development. Nevertheless, many educators make a significant personal investment in their students (Higgs & McAllister, 2005). This leads to vulnerability and growth for both students and educators. Higgs and McAllister add that clinical educators have additional pressures to be accountable for their work with students and with clients. This dual responsibility may, at times, be at odds. Grant and Davis (2004) note that while the majority of teaching professionals and clinical educators stress that they are involved in teaching for the intrinsic rewards it offers, they also express disappointment at the lack of acknowledgement they receive.

A number of authors have identified a need for preparation for clinical educators. A few have even called for educators to be graduates of extended programs. Higgs and McAllister (2005) suggest that the lack of preparation of clinical educators is a chronic problem that pervades every professional group in healthcare – medicine, nursing and allied health. Wilkerson and Irby (1998) discuss the need for medical faculty to be effective teachers, given the pressures they experience as a result of curriculum reform and competition in health care. Given that teaching and clinical practice have a different set of skills, health professionals need new knowledge, skills and abilities in order to do both well. Bennett (2003), as well, identifies the need for continuing professional development for all professionals and, in particular, for clinical educators. She stresses the need for physiotherapy educators to develop their teaching skills, evaluate their

practice, and keep up-to-date with current research. There is consensus that a need exists for clinical educators in all health professions to learn the craft of teaching through professional development.

Even though preparation is deemed important, there is little in the literature that addresses what exactly should be included in this preparation. Lee, Cholowski and Williams (2002) conducted a study to examine the characteristics of clinical educators. They conclude that despite the value that both students and educators have for teaching ability, educators are poorly prepared and in some cases unqualified. After examining various models of clinical education, Lekkas et al. (2007) concluded that regardless of which model is selected, both the planning of clinical education and the preparation of clinical educators are critical for success.

Higgs and McAllister (2007) argue for a systematic process to encourage and support clinicians when they take on the role of clinical educator. But what exactly is the need? Interest in workplace training programs has increased in recent years as the need for highly skilled practitioners has grown, given the changing context of the healthcare workplace. To meet this need, workplaces have developed training programs for clinical staff that teach and/or supervise students (Bennett, 1997). Grant and Davis (2004) also make a number of suggestions, both instructional and non-instructional, to address the problem of the need for preparation. These range from teaching workshops or continuing education programs offered by educational institutions, to luncheons, journal clubs and recognition by employers.

Higgs and McAllister (2005) identify six main dimensions that are interactive and dynamic in their model of being a clinical educator. These dimensions are: a sense of

self, a sense of relationship with others, a sense of being a clinical educator, a sense of agency, seeking dynamic self-congruence, and growth and development. Higgs and McAllister suggest that preparation programs take these dimensions into account. I expect that most clinical educators would have difficulty explaining how they learned to become educators because most of what they learned was implicit, tacit knowledge. Scanlon (2001) found that most nurse educators found ways to teach that were implicit and intangible. As a result, most of their knowledge about clinical instruction was attributed to experiential learning. Nevertheless, there is consensus that clinical educators must be competent to teach.

Competencies Required of Clinical Educators

Scanlon (2001) conducted one of the earliest studies on how nurse educators learn to teach in the clinical setting for her dissertation and later published her findings. Her conclusions were that clinical teaching requires a different set of competencies than does professional practice. As a result, Scanlon suggests that preparation programs should consider the experiences and expertise of these professionals but also the distinct needs of their students. Higgs and Hunt (1999) define competence for clinical educators as the knowledge, skill, and professional abilities associated with both clinical teaching and professional practice.

In a study on effective behaviors for clinical instructors, Ell (2003) reports that clinical educators identified subject-matter knowledge as most important for effective teaching. Ell also surveyed students who acknowledged knowledge and the ability to answer or find the answers to complex questions as most important. However, expertise in a specific professional domain may not be sufficient. Ell (2003) and Higgs and Hunt

(1999) add that the effective clinical educator should also have knowledge of learning theory and teaching methods.

Effective education requires the development of a learning program based on assessment and clearly stated purposes, goals and objectives, with appropriate learning activities, relevant resources, and evaluation emphasizing learning outcomes (Smith & Ragan, 2005). Good teaching is therefore a reflection of good planning. Ell (2003) identifies a number of skills required of clinical educators. These include the creation of interactive learning environments, the development of educational activities organized with clearly defined goals and expectations, effective communication, regular feedback to students, evaluation of the effectiveness of the educational program and one's teaching, the ability to adapt teaching to individual learner differences, and enthusiasm for teaching. Most of these teaching skills are detailed in instructional design textbooks (Smith & Ragan, 2005) and elaborated in university courses. The importance of teaching skills has been considered from both student and clinical educator perspectives (Rogers, Lautar & Dunn, 2010), with the suggestion that instructors need to develop their teaching skills, especially teaching methodology that focuses on student learning styles, planning of learning experiences, and assessment of student skills.

In addition to knowledge and skills related to the craft of teaching, clinical educators must be competent in professional abilities. Ell (2003) identifies participation in lifelong learning, the advocacy and practice of sound professional ethics, and collaboration with others to ensure the quality of education. The four professions under consideration in this study have also identified professionalism as important competencies (ACOTRO, 2011; CSMLS, 2005; NARTB, 2011; NPAG, 2009).

These competencies may or may not be set by the departments where clinical educators work but an assessment of clinical educator competence is mainly conducted by the workplace. Baer (2001) suggests that employers are required to assess the competence of all their employees, including clinical educators. When deficiencies are encountered, employers have the responsibility to follow-up by providing remedial training to correct the deficiencies. Miller (1990) proposed a hierarchy in the assessment of clinical competence. From lowest to highest, the levels were defined as the professional knows, knows how (competence), shows how (performance), and does (action). Assessment at the level of “knows” corresponds to the lowest levels of Bloom’s (1956) taxonomy of cognitive events, that is knowledge and comprehension. Knows-how describes different actions taken by a professional such as responding to a specific scenario or event. The next level, shows how, can be assessed through observed performance in standardized tests. Assessment of the highest level of “action” involves identifying required performance during regular practice.

Despite the limited research on the benefits of different forms of clinical education, there is no doubt about the overall value of clinical education in the preparation of health professionals (Ferguson & Edwards, 1999). Employers consider the acquisition of practical skills crucial in the new graduates they employ (Laudicina & Beck, 2000). This is because knowledge gained in the clinical setting is what equips professionals to handle workplace challenges (Scarseletta, 1997). However, there is no available research on how clinical educator competence and performance are assessed.

Teaching Strategies

Clinical educators use a variety of teaching strategies as they facilitate student learning. Aagard, Teherani, and Irby (2004) suggest that clinical educators struggle to find ways to integrate students into their busy practice while at the same time minimizing disruptions to patient care. They add that most of these strategies focus on time-efficiency, such as using mini-lectures, targeted questions, and discussions to promote learning. Phillips and Duke (2001) discuss the importance of teaching strategies, such as questioning, used by clinical educators in the development of critical thinking skills in nursing students. Crang-Svalenius & Stjernquist (2005) discuss the value of using case studies during teaching sessions. Most of the literature focuses on developing professional skills through various hands-on methods, such as simulations and role-plays (Beaubien & Baker, 2004; Noble, Kubacki, Martin & Lloyd, 2007).

Most of the available literature focuses primarily on teaching strategies used in medicine and in nursing. There was no available literature in allied health. It is therefore not known if clinical educators in allied health professions use similar strategies to their professional counterparts in medicine and nursing. This study addresses this issue in the chapters that focus on the allied health professions.

Learning the Craft of Teaching

What is available as regards preparation programs depends on educators' beliefs about teaching and learning. Since clinical educators are practicing professionals, principles of adult learning can be used for the design of preparation programs. Clinical educators are expected not only to be competent in their disciplines, they are also

expected to be adept and professional in their interactions with colleagues and patients, even within the “murky lowlands” of practice (Schön, 1987).

Strohschein, Hagler and May (2002) suggest that a “consistent and effective approach to clinical education requires a guiding philosophy that is clearly communicated, understood, and embraced by all the groups and individuals involved in the clinical education process.” (p. 161) These are related to the assumptions made by Knowles, Holton and Swanson (2005) regarding adults as learners. Adults, they suggest, are self-directed, their experiences a rich source for learning, their learning needs determined by their particular circumstances, and their learning problem-centered. Rose, Best and McAllister (1999) developed and evaluated a program that applies seven principles essential to the preparation of clinical educators and includes incorporating adult learning methods such as encouraging experiential learning and reflection on practice. The program provided educators with an opportunity for microteaching specific activities such as managing the learning program, orienting students to the workplace, giving feedback, and assessing student performance.

There is a growing body of evidence that underpins models of clinical education, adult learning and teaching methods (Hobbs, Henley, Higgs & Williams, 2000). With this, educational institutions and students now expect supervising practitioners to demonstrate expertise as educators (Higgs & McAllister, 2007). All the health professions examined for this study include clinical teaching as a competency. However, there is little evidence to describe or explain how these health professionals learn to function in their roles as educators.

A number of programs specifically targeting allied health clinical educators

provide credit for participation. However, few of the programs include educational theory. The Michener Institute offers a Clinical Educator Certificate that is classroom based (http://www.michener.ca/ce/clined_cert.php), and offers the following modules:

- An introduction to teaching and learning in the clinical setting,
- Evaluating learning in the clinical setting,
- Coaching and mentoring in the clinical setting, and
- A clinical educator certificate assignment.

The University of Ottawa offers a mix of online and classroom sessions, in French. There are also a number of online resources available through various sites. McGill University, the University of British Columbia and the University of Western Ontario all offer free online courses. Kassam et al. (2011) recently conducted a review of existing web-based resources for clinical educators and located a number of web sites in Canada, the United States, the UK and Australia. All contained content material and two addressed various teaching topics, all of which were specific to health professionals, but not specifically to allied health professionals. A summary table of formal preparation programs for allied health clinical educators available in Canada is presented below.

Further research is required as to which professional groups participate in these activities and if credit is provided for the online based programs. It was not clear from their websites as to whether credit is granted. Only the Michener Institute provides details on the courses and requirements for their clinical educator certificate. Furthermore, there is a lack of information on how these programs were developed. Only the University of Western Ontario provides some information as regards the project’s origins.

Table 4
Education programs for allied health clinical educators

Academic Institution	Program	Mode of preparation
Michener Institute	Certificate in Clinical Education	Classroom based
McGill University	Student supervision modules for physiotherapy and occupational therapy	Online
University of British Columbia	Preceptor Development Initiative	Online
University of Ottawa	L'art de superviseur de stagiaires (French)	Online and classroom based
University of Western Ontario	Preceptor Education Program (PEP)	Online

Other allied health professions, such as physiotherapy and medical laboratory science, have resources available through their national associations and through the academic institutions that offer the education programs. For example, the McGill University School of Physiotherapy and Occupational Therapy (www.mcgill.ca) offers web-based tools to facilitate learning and a link to the University of Western Ontario PEP program discussed above. The Université de Montréal provides a link to the University of Ottawa program in French. Other professions provide training and resources for beginning clinical educators. Professional associations recognize the importance of training clinical educators and many offer educational courses and workshops at their annual meetings or symposia.

The Informal Nature of Clinical Education

Although there is little available research on informal learning especially as it relates to clinical education, Eraut (2004) suggests it is important in developing job-

related competence. Marsick and Watkins (2001) define informal learning as intentional and often based in academic institutions but is not necessarily classroom-based or highly structured. Informal learning involves learning from other people and from personal experience, often together (Eraut, 2004). The preparation of clinical educators and efforts individuals take to become clinical educators can be seen as a type of informal learning.

Marsick and Watkins (2001) advance a model for enhancing informal learning that develops from everyday encounters, such as those occurring at work. Often these incidents are unplanned or unexpected and learners may be surprised that they have learned. Professionals may encounter a new life experience or a new challenge or problem to resolve. This unexpected event may trigger unexpected or informal learning. The context in which the experience occurs influences how clinical educators interpret situations, the actions they take, and the learning that is stimulated.

The workplace may organize a number of other informal learning activities. Jacobs and Park (2009) suggest mentoring and coaching programs and other individual initiatives, such as learning through experience, self-directed learning, reading work-related literature, and informal meetings as possible alternatives. Some associations, such as the Quebec order of medical technologists (www.optmq.qc.ca), recognize the value of informal activities, such as reading journals and learning through teaching activities. This recognition of informal learning stems from a belief that professionals can learn and apply knowledge they have informally acquired.

Beginning practitioners, including experienced professionals who recently become clinical educators, are beginners or novices and not experts in teaching. They are beginning a journey toward expertise as clinical educators. This necessitates initial

competence and the capacity to learn. But there is a need for continuing education opportunities. Educational programs equip health professionals with the knowledge and skills they need to succeed at an entry level and for ensuring that health professionals are accountable for the quality of care they dispense and to maintain their competence. Higgs and Hunt (1999) suggest that contextual factors at work in the development of clinical educators require a consideration of new domains of learning and practice. Academic institutions have an important role to play here, as do governments through policy decisions, certification and licensing bodies.

Baer (2001) suggests that both employers and employees are responsible for ensuring clinical competence. It is a shared responsibility. The employer is responsible for ensuring that employees are competent and capable of performing their duties. Employees are responsible for self-improvement and for ensuring they are up-to-date in their technical and professional knowledge. They are also responsible for identifying and engaging in educational opportunities that enhance their professional abilities.

Becoming and being a clinical educator is a developmental process and similar to the development process that clinical educators endeavor to facilitate for their students. Higgs and McAllister (2007) suggest that this journey requires educators to take responsibility for their own growth and development. Active learning and practice in teaching should be linked with regular reflection on practice as educators. Peer support and mentoring provided by the healthcare institution can help but clinical educators must also be committed to their own personal and professional growth.

Conclusion

This chapter explored a number of important influences on the clinical education process. It examined published studies about clinical educators in health professions. The literature addresses different models of clinical education, characteristics of educators and different aspects of teaching. Yet there is a lack of research on the experiences of how allied health professionals learn to become clinical educators. In addition as both adult learners and instructors, clinical educators are often motivated by their changing role in the healthcare system and in their workplace, both of which should be considered in order to obtain a more complete and holistic understanding of their experiences.

An examination of how clinical educators prepare for their roles and responsibilities necessitates a consideration of how clinical educators define and understand clinical education, and how they develop the teaching skills required in the context in which they work. During their education, professionals are not generally provided instruction on how to be clinical educators, on what is important, on what skills and knowledge they need to apply, or on what aspects of professionalism they need to model and encourage in students. By examining clinical educator perceptions, beliefs and ideas about their roles as clinical instructors, their use of educational methods and teaching strategies in the workplace, and their main influences on their teaching, a more complete picture of what they do and how they prepare for their functions will emerge. The next chapter details the research methods that guide this study.

CHAPTER THREE: METHODOLOGY

As noted in Chapter 1, this research study explores the question: How do allied health clinical educators prepare for their roles and responsibilities in student teaching in the allied health workplace?

Supplemental questions include:

- How do professionals decide to become clinical educators? How did they initiate the process of becoming a clinical educator and what expectations were set at that time?
- How do professionals learn to become clinical educators? In which formal and informal specific activities do they participate? Who initiated those activities, the employer or the professional? How useful were those activities?
- How do clinical educators structure or present activities that develop student technical and professional skills? What influences these choices?
- What are clinical educators' beliefs about teaching? How have their own learning experiences shaped these beliefs and, by extension, their teaching?

This chapter details the methodology used in this study to address these questions. To do so, I first identify a research paradigm and method that guide this study. Next, I describe the criteria for choosing the research setting and participants. Then, I discuss the process for collecting and analyzing data. I close the chapter by describing measures taken to ensure the methodological rigor of this study.

Choosing a Research Methodology

Because little empirical knowledge on the phenomena of the preparation of allied health professionals for their roles as clinical educators is available, this study is, by nature, exploratory. As the researcher, I start it with no working hypotheses although, as a

former clinical educator myself, I do have certain beliefs about the phenomenon based on work experience. As a result, I place this study within the naturalistic or interpretivist paradigm of research (Guba & Lincoln, 1994). The interpretivist paradigm supports the view that there are many truths and multiple realities. It also focuses the holistic perspective of the person and environment that is congruent with the aims of clinical education (van Manen, 1990).

Research conducted within the interpretivist paradigm typically uses qualitative methods. Qualitative methods emphasize the socially constructed nature of reality, a close relationship between the researcher and the object of study, and the context that influences the inquiry. Qualitative inquiry is holistic in nature, and oriented towards the discovery of knowledge using processes aimed at inductively generating knowledge from empirical evidence (Polit & Hungler, 1999). Studies using naturalistic or interpretivist methods attempt to understand a phenomenon, to describe and elucidate the human experiences related to that phenomenon as it is lived, and are particularly useful for developing theory about an emerging or under-explored phenomenon. Subsequent studies using other paradigms can be used to confirm and build on theory emerging from naturalistic or interpretivist studies.

Several specific types of methodologies can be used to conduct studies within the naturalistic or interpretivist paradigm. Morgan and Smircich (1980) argue that the suitability of a specific research method stems from the nature of the social phenomenon being explored. The social phenomenon that is the focus of this study is a workplace where experienced professionals oversee the clinical education component of students entering the profession. Formal preparation for these experienced professionals – called

clinical educators – is voluntary and most clinical educators do not participate in it, thus starting their work as clinical educators with no formal preparation. As a result, the method selected to study this phenomenon must provide insight into the multiplicity of means of preparing to become a clinical educator, including the option to skip formal preparation altogether.

If one considers the preparation of clinical educators within a profession to be a unique situation to that profession, then the preparation of clinical educators in a given profession, such as laboratory technology or occupational therapy, is an individual case. According to Yin (2003), a case is an event, an entity, or a unit of analysis. The process by which clinical educators in a particular allied health profession prepare for this educational role could serve as a unique case. Furthermore, the case could be compromised with the experiences of two or more clinical educators specialized in that particular allied health profession.

The case study methodology investigates a contemporary phenomenon in its real-life context. Creswell (2007) suggests that a case study is "an exploration of a 'bounded system' or a case through time through detailed, in-depth data collection involving multiple sources of information rich in context" (p. 61). It uses several sources of evidence about the case (Yin, 2003), such as interviews, observations, and analysis of pertinent documents. Given characteristics of the case study and characteristics of the case study methodology, it seems well suited to address the questions of this study. To ensure that the cases represent the experiences of more than one clinical educator, each case includes at least two members of the particular allied health profession under study to ensure a broader understanding of the phenomenon of becoming a clinical educator.

However, as the healthcare system considers each profession as a group, a broader interest exists in determining the extent to which the experiences of different professions are similar. A multiple case study approach, which compiles and contrasts cases about clinical educator experiences in several allied health professions, would provide such an insight. Furthermore, multiple cases strengthen the results by replicating the information gathered, and ensuring robust findings (Yin, 1989).

Selecting a Research Setting and Participants

To ensure that the data is as representative as possible of the ways that clinical educators prepare for their roles, the setting in which the study is conducted and the participants should be purposefully selected. The following sections explain the process.

Criteria for Selecting a Research Setting

The research setting refers to the place where I can conduct my study. I sought a site that meets several criteria. One is that the research site be a teaching hospital. Only teaching hospitals can provide clinical education in all allied health professions and have formal affiliations with colleges and universities that offer educational programs in allied health. Ideally, I could conduct the entire study within the context of just one institution. Doing so would allow me to explore how the organizational context affects the preparation of clinical educators. Studying several professions within a single institution would offer several perspectives on just one context, thereby offering the opportunity to reach informed conclusions about the impact of that one context on the preparation of clinical educators. If participants worked in different institutions, the data would reflect several institutional contexts.

Implied in this is that the research setting would also have to provide access to clinical educators in several allied health professions, as I had previously determined that the study needed to reflect several professions. Furthermore, because industry data suggest that medical laboratory, respiratory therapy, occupational therapy, and physiotherapy represent four of the largest allied health professions, the research setting would ideally offer access to clinical educators in each of these professions.

The only types of institutions that meet all these criteria are *tertiary care institutions,* which are often university or teaching hospitals that use sophisticated technology, multiple specialties and intensive care facilities to treat patients with complex diseases (*McGraw-Hill Dictionary of Modern Medicine*, 2002). I therefore selected a tertiary care institution as the research setting for this study. The selected research setting would, by nature, be located in a large urban center because most tertiary care institutions are located in such communities.

One practical advantage of choosing a single institution in which to perform the study is related to ethics approvals. All studies conducted in healthcare environments must receive ethics approval from that institution, even if the study is conducted under the auspices of a university and received ethics approval from that university (as this one did). Limiting the study to just one hospital meant that this study only required one additional ethics approval.

To recruit a specific location, I leveraged my personal contacts and requested permission to conduct the study from department administrators in a tertiary care hospital that meets the criteria stated and where I had previously worked. I worked at this hospital between 2004 and 2006 as an education consultant, where I developed a training program

for clinical instructors in a medical laboratory department. To minimize the likelihood of my previous employment biasing the study, I did not recruit participants for whom I developed the training program.

When I spoke with the different department administrators, I described the purpose of the study and explicitly solicited their support for the research. The support requested included making their staff available to participate in the study on work time and in their workplace, and providing a place to conduct interviews. In addition, these administrators were also asked to participate in interviews to provide an institutional perspective on clinical education in their department and profession.

After the department administrators agreed to involvement in the study, I completed the research ethics process used in this institution. Because it is a bilingual institution located in Quebec, the detailed ethics application included a detailed project summary, interview and observation guides, and consent forms for participants in both English and French. When the Research Ethics and Feasibility Committees of the Hospital approved the study, I received formal agreement letters. One condition of the approval was that I was required to request consent from patients and/or students if present during observations. Another condition was the mandatory use of a Hospital-approved consent form for all participants.

Criteria for Selecting Participants

Once ethics approval was granted, I recruited participants. The selection of participants was based on what Patton (2002) calls *purposeful sampling,* which entails selecting participants from groups likely to have experiences relevant to the research question.

Although the study focused on the development of clinical educators across the major allied health professions, participants representing the diversity of occupations were sought. Because medical laboratory technology, respiratory therapy, occupational therapy, and physiotherapy represent the largest number of allied health professionals, I would ideally recruit from each of these four professions. Each profession would serve as its own case within the study.

The four professions would also provide insights into the diversity of approaches to clinical education within allied health professions. Each of the four professions has its own educational requirements to receive a license to practice. Laboratory technologists and respiratory therapists require a college-level diploma to receive a license. In contrast, occupational therapists and physiotherapists require master's degrees. Similarly, the different professions have different types of interactions with patients. Laboratory technologists, who work in laboratories analyzing patient samples, rarely interact directly with patients. In contrast, physiotherapists and occupational therapists all interact directly with patients to provide care. Most significantly, some professions, such as laboratory technology, typically provide clinical education to groups of two to four students, while others such as occupational therapists generally train only one student at a time.

To provide some diversity of experiences as clinical educators within a given profession, I wanted to recruit a minimum of two participants in each of the four professions. Having two participants from the same profession provides a basis for comparison when preparing the case of a specific profession. When feasible, I recruited a third participant, in particular when professionals worked in different sub-specialties.

Participants must have had experience as a clinical educator. To provide a broad range of perspectives on the preparation process, I sought participants with differing levels of experience. To make sure that participants had had enough experience that they, themselves, could have a point of comparison among different educator experiences, the minimum experience I sought was two years in the field and at least two separate clinical education experiences, whether the experience involved only one student or a group (which still counted as a single experience). But I also actively recruited participants with more experience. In addition, participants would have to supervise students over an extended period of time, more than one week. I also hoped that some of the participants would have received formal preparation for their roles as clinical educators. But this was not a requirement because the literature suggests that most clinical educators do not receive any formal preparation. Consequently, I did not anticipate finding participants who met this. The only type of clinical educator I actively excluded was the educator who only supervises students occasionally, that is one day a week or a few days over several weeks. They would not be good candidates because of their limited experience.

In terms of the total number of participants, Merriam (2009) suggests that the number be sufficient to answer the research question. Typically, this means between six and twenty participants. Somewhere in this range, researchers reach the point of saturation, in which additional participants provide little or no new insights. The decision about the number of participants in this study was complicated by the fact that I sought to study four separate professions. Under ideal circumstances, I would recruit six to twenty participants for this study. But because of time limitations, I would not be able to do so. In addition, a number of professions only had a small number of potential candidates.

Respiratory therapy, for example, had only four possible participants. Consequently, I focused on choosing a number that ensured a minimum diversity of experiences in each profession. This meant seeking eight participants: two from each profession. If time permitted, I would interview a third in each profession.

To specifically recruit participants for the study, I relied on names and contact information given by the department administrators who agreed to provide the setting for the study. I first sent potential participants a recruiting letter, electronically, which described the purpose of the project and the details of participation. See Appendix A for a sample of the recruiting letter. I followed up one week later with a second e-mail message and a telephone call. Participants who expressed interest were then screened to ensure that they met the selection criteria, and I explained what involvement in the study would entail on their parts as well as the protections afforded to participant, including confidentiality, a member check of all transcripts, and the freedom to withdraw at any time. I asked those who agreed to participate to sign a participation form. See Appendices B and C for copies of the participation form for this study, for the University and the research site. I eventually recruited ten participants: three laboratory technologists, two respiratory therapists, three occupational therapists, and two physiotherapists.

How Data Was Collected

When studying a case, Yin (2003) recommends that researchers collect a variety of types of data, including interviews, observations, documents, archival records and physical artifacts. Furthermore, Lincoln and Guba (1985) suggest that researchers conduct member checks to verify the accuracy and completeness of the data as well as

field notes to reflect on the research process and raise issues that occur during the course of the study, such as researcher bias. For this study, I followed these suggestions. The following sub-sections describe how I collected and verified the different types of data that informed this study.

Interviews

Interviews, which are “repeated, face-to-face encounters between the researcher and the participants directed toward understanding participants’ perspectives on their lives, experiences or situations as expressed in their own words” (Minichiello, Aroni, Timewell & Alexander, 1990, p. 103), are at the heart of this study. They provide the *emic* perspective of becoming a clinical educator: that is, clinical educators describing how they prepare for this role, what activities they conduct with students, and their beliefs and values surrounding their role, essentially to collect descriptions that get at the meaning of the phenomenon being explored (Kvale, 2007). Even though a researcher may observe aspects of this practice (as I did), it can only be deeply understood and interpreted through participant reflection and articulation.

To fully draw out this level of reflection and articulation, I conducted three interviews with each participant. The first interview elicited background about participants and their development as clinical educators. Questions focused on educators’ early experiences as clinical educators and important influences on their roles as professionals and as clinical educators. Two or three weeks later – after the participant had an opportunity to review the transcript of the first interview – I conducted a second interview. Questions explored activities performed, the roles and responsibilities of educators and students during the placement, as well as follow-up questions to the first

interview. During the third interview, conducted one week after an observation session, questions focused on the observations made between participants and students at work. Each interview lasted between 60 and 90 minutes.

The majority of the interviews were conducted in a small office located in the Hospital. I have used this office for my own work at the institution. The office is centrally located but far from the areas where participants work. The room is kept closed at all times as required by the Hospital ethics forms, except when an instructor who was not a participant in the study uses one of the computers in the office.

To receive an institutional perspective on the clinical education programs in each profession, I also conducted brief semi-structured interviews with department administrators or managers to whom the participants report. These interviews focused on the nature of the clinical education program, recruitment and selection of clinical educators, preparation of clinical educators, and evaluations of educators and programs.

Separate protocols, or interview guides, were developed for each type of interview (Creswell, 2007). The guides identify the types of issues to be addressed in a particular interview and provide "a path to the journey … to point out landmarks and markers they think are important for us to understand and map the journey" (Dilley, 2000, p. 124). The interview guide for the semi-structured and unstructured interviews offered a flexible approach allowing me to adjust the order and exact wording of questions in interviews in response to the comments made by participants. See Appendix D for the guide for the three interviews with participants and Appendix E for the interview guide for department supervisors.

To ensure an accurate record of the interviews, I audiotaped each interview and prepared a typed transcript. I then asked each participant to review the transcripts to ensure their accuracy. I incorporated participants' suggestions for changes into the final transcript, which served as the basis for data analysis.

I took several measures to protect participants' privacy. I did not mark identifying names of participants or their employer and affiliated academic institution in interview transcripts. As a second layer of protection, I provided the Hospital and its affiliated academic institutions with confidentiality. To further protect the privacy of participants, I locked all audiotapes and written information about the interviews in a cabinet. This was a requirement of the research ethics committee at the Hospital. Last, transcripts provided to participants were placed in sealed envelopes and labeled confidential.

Conducting Observations

Interviews provide insights into how people work but they do not uncover what people actually do in the course of performing their jobs. To fully understand the complexities of phenomena such as clinical education, observations are one of the most comprehensive methods available (Becker & Geer, 1970). They more fully help to appreciate phenomena not possible with insights solely provided through interviews.

To understand the clinical education experience in practice, I observed short periods of participants working in their clinical settings, both where participants engage in their regular activities and where student teaching occurs. Through observations, I collected data about the specific activities in which clinical educators engage with students. Because patients and students did not agree to participate in the study, I requested their verbal consent to record general observations about the work; I did not

record specific interactions with students or patients to avoid breaching patient confidentiality or interfering with site operations. If students or patients were present during an observation, I made them aware of the research project and informed them of the confidentiality of any collected information. No mention of any specific patient or student was made in the transcripts or field notes. See Appendix F for a sample observation guide that was used.

In addition, for two participants, I was able to observe as they conducted their regular duties on a ward. This was important, as I was unfamiliar with what these professionals actually did in their work area. As a result, I followed an occupational therapist, Paul, for about one hour as he went about his routine functions. I was also able to follow one of the physiotherapists, Rachel, as she worked in the intensive care unit. Even though I was somewhat familiar with the roles and functions of a physiotherapist, I was unsure what they did in the intensive care unit. These opportune visits were very useful and helped me get a better sense of the roles and functions of these professionals.

Data from Other Sources

In addition to the interviews and observations, I also collected data from the following sources:

- The web site of the Hospital
- Official communication by the Hospital to the public, such as public newsletters and informational brochures
- Public tours of the Hospital

- Documentation of the specific clinical education and training programs, provided by participants; this documentation included training checklists, student materials and training manuals, assessment forms, and training schedules.
- Departmental results of a 2012 survey conducted by the Hospital Multidisciplinary Council – the council of allied health professionals that reports to the Hospital Board of Administration, which is the
- Each department manager also provided me with information about the department, as regards staffing and clinical educators. They also gave me access to the survey conducted by the Multidisciplinary Council, the council of allied health professionals that reports to the Hospital Executive Director and the Board of Administration.
- Documentation from the academic institutions sponsoring the clinical education program which participants provided me
- When available, artifacts such as photographs and drawings of teaching activities were provided by participants. For example, one participant provided a flowchart of a patient's progress in the Hospital and the instances of professional interventions, as an illustration of the impact of allied health professions.

Member Checks

As noted earlier, I provided participants with the opportunity to review and validate transcripts of their interviews. This process is called a *member check* and it serves an important role in ensuring that the data accurately reflects the *emic* perspective sought in this study (Lincoln & Guba, 1985; Merriam, 1988).

Participants were given complete transcripts of interviews and summaries of observations. I provided participants with a specific amount of time to review and reflect

on a given transcript. I sent reminders to participants who did not respond by the stated date and advised them that their feedback was important to me.

I conducted member checks between each of the three interviews so participants had an opportunity to react to the transcript and bring questions and comments to the next interview. I made the corrections and modifications requested by participants and used only the approved version of the transcripts in the analysis.

Field Notes

I documented and reflected on my research experiences through field notes, also called a researcher diary. These notes recorded details about settings, contexts, participants, time, actions and interactions, as well as my thoughts about the context and the data gathered (Creswell, 2007; Merriam, 2009). The field notes also included drawings I made of the work areas where teaching occurred, including details of the context encountered in observations. The researcher diary also included a personal log, which contains notes about the circumstances of data collection, details about settings, impressions, and notes from the literature. I consulted this diary before second and third interviews, and observations so I would bring previous experiences with individual participants into the next meetings with them. The research diary also proved useful in the data analysis phase, as it provided context for the interviews and observations.

Pilot Study of the Data Collection Procedures

To develop a preliminary understanding of how clinical instructors prepare for their role, a pilot study was conducted during the summer and fall of 2011. This study piloted the procedures just described except that there were two interviews and field

visits to each clinical setting. The participants were the three medical laboratory technologists who also participated in the current study.

To ensure that the data gathered during the pilot study was still relevant and accurate, I conducted additional interviews with each of the three participants. The information gathered during the pilot study was still applicable and I was able to use the data collected for this dissertation study. I then continued with observations and with a third interview for each of these participants.

How Data Was Analyzed

One of the goals of a qualitative study is to develop theories, propositions of relationships and processes that recur across several cases, that emerge from the data and that provide insights into a phenomenon. Researchers generate these theories by searching for recurring patterns and relationships in the data and assessing whether those patterns and relationships support more general propositions—called theory.

Data analysis is the systematic process through which researchers generate this theory and qualitative studies produce large amounts of rich data to systematically analyze (Appleton, 1995). Miles and Huberman (1994) note that data analysis procedures used in qualitative research are *inductive* and *iterative*. Inductive analysis requires an "immersion in the details and specifics of the data to discover important categories, dimensions, and interrelationships" (Patton, 2002, p. 80). Iterative processes are ones in which researchers return to the data repeatedly (Merriam, 2009) to seek interpretations and re-interpretations as new understandings are developed. At the same time, more data is collected and new theories proposed and assessed.

In keeping with the inductive, iterative processes just described, the analysis of data from this study occurred in a series of stages (Stake, 1995; Gibbs, 2007; Merriam, 2009). In the first, I examined interview transcripts, field notes, and other data collected and prepared case descriptions. These case descriptions facilitated the process of "open coding," a term used by Strauss and Corbin (1998). The case descriptions were descriptions of individual participants in a specific allied health profession. These case descriptions followed a parallel structure to facilitate the observations of patterns across professions. The observation of patterns within and across cases permitted the identification of emerging concepts and categories (Merriam, 2009; Gibbs, 2007).

Once I had identified preliminary categories, within and across cases, I began a second phase of analysis, called *axial coding* (Strauss & Corbin, 1998). Axial coding involves re-examining categories to establish a refined set of categories and relationships among them.

After completing axial coding, I then conducted the third and last phase of analysis, called *selective coding*. In selective coding, researchers select a core category and systematically relate it to the other categories, validating the relationships and filling in categories that need further refinement and development (Strauss & Corbin, 1998). The core category represents the central phenomenon of the study and is identified by asking the following fundamental questions: What is the main idea presented in this study? What do I say if I am to conceptualize my findings in a few short sentences? When coding, I looked for different patterns, including dominant ones, that is, patterns that appear across three or four cases. I also looked for weak patterns, that is, patterns that

occur in two cases, and for interesting patterns or patterns are identified by only one or two participants or mentioned in the literature but not observed across cases in this study.

Ensuring Methodological Rigor

The value of a qualitative research study is described by van Manen (1990) as the “validating circle of inquiry” (p. 27) where the reader acknowledges and recognizes the experiences they could have had through the researcher’s description and interpretation. This is also known as methodological rigor.

Ensuring methodological rigor is a requirement of all qualitative research; it assures the credibility and trustworthiness of the findings and resulting conclusions. Ensuring methodological rigor begins by following consistent, systematic data collection procedures and similarly consistent, systematic analysis procedures. All of these procedures must be methodologically congruent with the assumptions of the paradigm in which the research is located.

A number of measures are required to address other threats to the credibility and trustworthiness of the study and its conclusions. These include researcher bias, applicability and transferability, dependability, and confirmability of results (Lincoln and Guba, 1985; Leininger, 1994; Appleton, 1995; Sandelowski, 2000; Yin, 2003; Merriam, 2009).

Researcher bias refers to the understandings and beliefs that a researcher already has regarding the phenomenon under study, as well as any circumstances that might exist to influence the researcher. Such biases might lead the researcher to over-emphasize certain data collected in a study because it confirms a bias, or ignore data because it challenges an existing bias. I took several measures throughout the study to minimize the

likelihood that my biases would affect this study. Because I worked in the institution in which I conducted the study, one of the most important aspects of protecting against researcher bias pertained to addressing my familiarity with the institution and its operations. On the other hand, this previous experience plays a significant role in understanding and interpreting the phenomenon because I already had foundational knowledge about clinical education and could identify subtleties of practice that might elude someone with less experience in this phenomenon. But the previous experience might also cause me to overlook certain issues or worse, might influence my analysis.

To address this unique opportunity for researcher bias, I made contact only with administrators and departments that I had not had any previous working experience. I also solicited participation from clinical educators who had not been involved in the training program I developed ten years previously.

My previous work as a clinical educator in another institution and as an educator consultant developing a training program for clinical educators also provides a potential source of bias. Consequently, at the start of the study, I conducted a *frame interview*, during which I disclosed my beliefs, expectations, and biases regarding clinical education. In addition, I drafted a narrative that identified my biases regarding clinical education. The field notes and researcher diary I kept while collecting data also provided an opportunity to reflect on biases and report them.

To ensure that my biases were not influencing the collection of data or its analysis, I asked a fellow doctoral student to conduct an *audit* of the study toward its completion. In the audit, the other researcher reviewed the data and findings to ensure that researcher bias was kept to a minimum.

Ensuring credibility of the data is also a significant concern of qualitative researchers. Sandelowski (2000) suggests that if the findings from a research study are to be a true representation of participants' experiences then they must "fit" the data from which they were derived. To ensure the credibility of data, researchers must ensure its dependability, confirmability, and applicability or transferability.

Dependability refers to the degree of consistency that an instrument measures the attribute that it is intended to measure (Polit & Hungler, 1991). Lincoln and Guba (1985) refer to dependability as the repeatability or replicability of a study. Several measures ensured the dependability of the data of this study. One is thick description (Denzin & Lincoln, 2005), which involves capturing in-depth descriptions of participant experiences and their social context. The study participants, all clinical educators in the clinical setting, described their experiences in detail. I also observed them performing their work. A second means is triangulation, in which researchers rely on several sources of data to draw conclusions (Denzin & Lincoln, 2005) and, ideally, several types of data. This study uses two types of triangulation. One involves seeking the perspectives of several clinical educators, leading to conclusions about clinical education from several perspectives. As noted earlier, this study sought views from several allied health professions and several clinical educators in each. The other means of triangulation is by using several sources of data about any given clinical educator: three interviews, observations, documents and background from the supervisor were used for each participant.

Confirmability refers to whether the data collected accurately reflects the phenomenon studies. To confirm that the data was accurate, I conducted member checks, described earlier in this chapter. To confirm that conclusions are logically drawn from the

data, I examined findings with other research studies and from the theoretical literature. The constant comparison of emerging findings with the literature took place throughout the research process, both during data collection and data analysis, and continued during the writing of the research report. Whenever my findings differed from the empirical literature, I collected additional data to confirm my findings. In addition, the audit mentioned earlier in this section also served as a means of ensuring the confirmability of the findings.

Applicability and transferability in qualitative research have been related to generalizability (Sandelowski, 2000). Because qualitative inquiry does not aim to generalize but rather to "elicit meaning in a given situation at a particular period of time" (Field & Morse, 1985, p. 22), readers can determine the extent to which the findings apply or – or transfer to – other similar situations.

Note: How to Read the Participant Sketches in the Following Four Chapters

The next four chapters present the data collected from this study. Each chapter presents the case of a particular allied health profession: medical laboratory technology, respiratory therapy, occupational therapy, and physiotherapy. To enhance credibility and transparency of the research process, a number of processes were used to provide an audit trail. Reference to a particular fragment during an interview is identified in brackets. As well, quotation marks (" ") are used to indicate participants' words excerpted from the interview transcripts. After each excerpt a number appears after the participant's name. For example, (Laurie, I-20) specifies that this excerpt is from fragment number 20 from participant Laurie's interviews. Where reference is made to fieldnotes, the code FN is used, followed by the number allocated to that note in brackets as (FN-1). Reference to

observations and documents is likewise identified as (Laurie, O) and (Laurie, D-1), followed by the number of the fragment in the observation or the document. Verb tenses and pronouns used in the quotes are sometimes changed to reduce grammatical ambiguity and enhance readability. When such changes occur, they are signaled by the use of square brackets [ ]. The convention "…" is used to denote that words or sections have been omitted from an excerpt.

A number of research participants preferred to conduct interviews in French. In this case, the participant words are noted in italics within quotes. A translation is either provided in brackets with the notation, TR, or a summary of the translation is included in the body of the text. All French translations were interpreted by the researcher and verified by the research participants as part of their member checks.

CHAPTER 4: DESCRIPTIVE FINDINGS OF CLINICAL EDUCATORS IN THE MEDICAL LABORATORY TECHNOLOGY PROFESSION

This chapter examines the experiences of clinical educators in the medical laboratory profession. I begin this chapter with an overview of the role, functions, and education of medical laboratory technologists. Then, I discuss clinical education in medical laboratories at the research site. Next, I profile the three clinical educators who participated in the study. I close the chapter by developing an emerging profile of clinical educators in the medical laboratory profession.

About Medical Laboratory Technologists

As professionals integral to healthcare, members of the *medical laboratory technology* profession play an essential role in the health care system. According to the Bureau of Health Professions (2005), a medical laboratory scientist performs a full range of medical laboratory tests – from simple blood tests that follow up medical conditions to more complex tests that uncover diseases. They are also responsible for confirming the accuracy of test results and reporting their findings to physicians and other health professionals. Their responsibility begins with collecting samples, such as bloods, and extends to interpreting and communicating patient results to physicians. Most medical technologists communicate their results via a laboratory computer system: they release results and track patients' status through this system. All laboratory professionals have access to the same system, except for technologists working in Transfusion Service who use a different system for blood banking that tracks patients' transfusion history across the province of Quebec via Hema-Québec, Canada Blood Bank Services in the rest of the country (CIHI, 2010b).

To maintain the integrity of the laboratory process, laboratory scientists must recognize factors that could introduce error or cause problems that lead to incorrect diagnosis and treatment. According to Stegall and Stegall (2006), physicians rely on laboratory test results to diagnose and treat patients, that is, laboratory test results support 94% of decisions taken by physicians. In Canada, there are over 20,000 medical laboratory technologists working in various institutions, such as hospitals, public and private laboratories, pharmaceutical companies, and research facilities. According to Health Canada (2004), they are the largest health care group after nurses and physicians.

The education of medical laboratory technologists is usually a two or three-year program based primarily at a community college, technical school, or university. After graduation from a post-secondary institution, students can apply to write the national certification examination by the Canadian Society for Medical Laboratory Science (CSMLS). There are also a number of certificate and postgraduate programs offered through colleges and universities so that people who have other undergraduate degrees can ease into the profession and people who worked as technologists in other countries can gain credentials to work in Canada (MEQ, 2000). In addition, there are certificate programs available in new areas for laboratory professionals, such as molecular biology and clinical genetics (CSMLS, 2010).

Like all healthcare professionals, medical laboratory technologists are educated with a two-part curriculum, classroom-based learning followed by clinically based learning. Both parts of the curriculum focus on developing profession-specific knowledge and skills, although soft skills are also stressed (MEQ, 2000). Both complement one another in the development of laboratory professionals. Academic institutions are

responsible for both parts of the curriculum, although healthcare institutions provide the resources and staffing required for the clinical placements.

In Canada, healthcare is also within provincial jurisdiction. Each province has its own licensing body for health professionals. Individuals, who wish to practice as medical laboratory technologists, must apply for licensing after graduation from an education program. In Québec, licenses are granted by the *Ordre professionnel des technologistes médicaux du Québec* (OPTMQ). Laboratory professionals must also maintain their license throughout their career by engaging in continuing education activities related to their professional roles.

In addition to the national certification body (CSMLS) and the licensing body (OPTMQ), there are a number of subject-based associations that offer members access to educational materials and journals. For example, in the field of Biochemistry there are the Canadian and American associations of Biochemistry and Clinical Chemistry. In Pathology there are various associations, American and Canadian, which focus on content issues specific to the specialty. The same can be said for the other laboratory specialties. Membership in these associations is voluntary.

Clinical Education in Medical Laboratory Technology at the Research Site

This section provides a portrait of clinical education in the medical laboratory profession at the research site. It begins with a general description of each of the departments associated with the profession and is followed by an examination of their approach to clinical education.

About Medical Laboratory Technology at the Research Site

At the healthcare institution that served as the research site, there are over 170 medical technologists working in six different departments: Biochemistry, Hematology, Microbiology, Pathology, and Transfusion Service. The last department is commonly known as Blood Bank. Each department has a manager, known as a chief technologist, who provided me with a detailed breakdown of the staffing and activities for their section. Each of the departments also has a number of specialty areas. For example, Microbiology includes Virology and Molecular Microbiology.

Clinical Education at the Research Site

Each of the departments has designated clinical educators. There is at least one clinical educator in each of the departments and some departments, notably Biochemistry and Hematology, have more than one clinical educator. The department managers suggested that this is because these two areas generally have four or more students at any given time. Most of the clinical placements take place during daytime hours, although there is a placement during the evening shift in Biochemistry. In addition, two different academic institutions send students to this site for clinical education. Students are at the healthcare institution four days and attend classroom sessions the fifth day

The academic institution typically sets the clinical objectives and provides the evaluation forms for the clinical placement. These clinical objectives are organized by competency and include tasks, standards and conditions for their attainment. The Ministry of Education, in collaboration with the national certification association, develops these competencies. Most are technical and skill-based, focusing on laboratory techniques, equipment, interpretation of results, and problem solving. Professional

competencies related to communication and teaching are also included as are quality and safety issues related to laboratory medicine (CSMLS, 2005). The academic institutions provide guidelines for the evaluation of these competencies and criteria to evaluate student performance. Students are evaluated, both in terms of knowledge and technical skill, by both the academic institution and the healthcare institution. A review of the documents that the three laboratory educators used to assess student performance included these guidelines and criteria. Students must pass both evaluations before they can graduate from the education program.

Participant Sketches

This section describes each of the three medical laboratory technologists who participated in this study. It specifically profiles Laurie, Liza, and Louise, each of who act as clinical educators in different departments. Each profile considers the participants' activities as a medical laboratory technologist, their work as a clinical educator, and their reflections on clinical education.

Profile 1 of a Clinical Educator in Medical Technology: Laurie

Laurie describes her experience as a clinical educator as exciting. “I love it,” she says (Laurie, I-88). In spite of the work involved, Laurie is committed to the development of students, not only because it is a part of her job but also because she enjoys it. “It is a change from my routine. You get to leave the paper work on the desk and you just go and enjoy. Especially I think that I like teaching. I like interacting with people, seeing new faces, finding out who they are. It's exciting” (Laurie, I-86). Teaching students is a welcome change from her routine and one that she feels stimulates her as a professional:

"We are always learning," she says. "We're always changing and developing. And that is what makes life rich. And that is what makes our job interesting and rich" (Laurie, I-184). This section profiles Laurie. It begins with a description of her role as a medical technologist, continues with a discussion of her work as a clinical educator, and closes with her reflections on clinical education.

Laurie as a Medical Technologist

Laurie has a number of roles and responsibilities in the healthcare institution, of which clinical education is only one. She has worked as a medical laboratory technologist for seven years and has always worked in the department where she is employed. She is the quality management coordinator for her department and oversees the quality of the work performed by staff. Her main responsibility is overseeing the training of staff and students (Laurie, I-6). Before she became quality coordinator, all laboratory professionals in Laurie's department were expected to teach. For Laurie, teaching continues to be "an important part of my job because of the quality" aspect (Laurie, I-10).

Laurie also has a number of other duties and responsibilities, such as keeping the department policy and procedure manual up-to-date and participating in hospital committees related to her job. She also conducts certain specific training tasks, such as staff orientation and performance assessments. Furthermore, she conducts regular training sessions for other professionals in the hospital who use the services of her department (Laurie, I-12).

Laurie's early experiences as a student and as a novice professional were important influences in her development as a medical technologist. She conducted several clinical placements in this institution and had a number of placements in other

institutions. Her placements at her current employer marked her most because it was where she had several technologists assigned to teaching her. She admits to feeling "lost" because there was little continuity and structure to her daily activities when a student. She describes her experience as a student "a disaster" because "I remember having a hard time, even though everybody else thought that I was good. In my conscience, it was hard for me to say 'I am lost, I don't know what I am doing' " (Laurie, I- 26). She attributed her feelings to a lack of organization in the department. As a result of these early experiences, Laurie decided to change the student experience to being more positive than what she experienced when she was a student (Laurie, FN-1).

At first, Laurie taught students because this was expected of all staff. But she was determined, if given the chance, to change the student experience to one that was more positive than what she had experienced herself. Laurie's main motivation for becoming a clinical educator was therefore "to resolve problems related to student teaching" (Laurie, I-14) and "to resolve the complaints we were getting from students who were not happy with their training" (Laurie, I-16). She adds: "Part of my job [as quality management coordinator] is to fix complaints" and to "improve the internships" (Laurie, I-17). Acting as the quality coordinator position gave her this opportunity.

When she first began to teach students, Laurie was nervous because "many students were my age or actually even older" (Laurie, I-31). She feared she would not be taken seriously because of her youth and lack of experience. "My biggest fear was that they would not take me seriously. Therefore I was trying to establish the relationship. Yes, sure you can come and ask me any questions but I am still the one who is going to grade you," Laurie asserted (Laurie, I-32). She was also afraid that she would "not be

able to handle it" (Laurie, I-52) because teaching was a heavy responsibility for someone who was still only learning herself. Nevertheless, she took on the challenge.

With time, she grew into her role as teacher and began to enjoy it. She also took on the challenge of changing the student training program in her department in an effort to address her own student experiences.

How Laurie Approaches Clinical Education

At any given time, throughout the school year, Laurie teaches one or two students at a time for a period of three to four weeks. She has students coming from two different colleges that offer the medical laboratory technology education program. One of the colleges offers an English-language program, the other a French-language program. All total throughout the year, there are eight different groups of students going through her department (Laurie, I-4).

Before students arrive in the department, Laurie prepares materials that students use to develop their practical skills. "First, I prepare fake samples. We prefer that they begin by working on these fakes." It is important for Laurie that students "practice and have real hands-on experience." Although she calls these samples "fake" they are actually real samples, samples collected for and kept only for training purposes. It is important that students practice on real samples but since most of the samples used in this department are irreplaceable, it is equally important to have simulations set aside for teaching (Laurie, I-38). Since quality care to patients is central to her profession, students first develop their technical skills with these.

Laurie also verifies the equipment that students use, equipment that the department has set aside for student training. She notes that students "sometimes

dislocate something or change the settings. So I will make sure that it works before a new student comes" (Laurie, I-39). Part of the responsibility of being a laboratory professional is maintaining and ensuring the proper functioning of laboratory equipment and Laurie encourages students to be responsible for their own equipment.

Laurie also prepares a number of documents for students. These include a schedule of activities and the student training manual. The manual contains policies and procedures for department activities, specifically, procedures that students perform (Laurie, D-3). An examination of these revealed detailed procedures and issues that students must consider when performing them. Laurie also has a number of checklists included in the training manual. These link learning tasks with required competencies. Laurie also gathers the student evaluation forms and the competencies provided by the academic institution. She reviews these to ensure that there are no new guidelines for assessment and that all the competencies are addressed (Laurie, D-4).

As clinical educator, Laurie conducts regular daily meetings with students and spends most of this time teaching. She reviews the schedule for that day, the objectives, and the techniques that students will be performing: "We … sketch out the day so that they know what should be done first and how they should manage their time" (Laurie, I-24). Then Laurie "reviews the techniques in the morning so that we cover everything they're supposed to know. I have a checklist of the training in the morning, so I will tell them exactly … today we are going to do .... The safety issues are … The maintenance is … I will go over all the theory. If they have specific questions they may ask the staff technologist but most of the time they ask me" (Laurie, I-95).

Once these early morning sessions are complete, Laurie then introduces students to the technologist who will oversee their activities for the remainder of the day. At various points throughout the day, Laurie observes students working. Then at the end of each day, she reviews student accomplishments and provides feedback. This was discussed in the interviews and also observed during the data collection phase.

Laurie organizes the teaching tasks in a logical fashion. She begins students on pre-analytical methods. "We always start with the reception so that they understand … the principles and the flow of the specimens" (Laurie, I-148). Here, they learn to prepare, describe and process patient specimens. The next stage in specimen analysis is known as the analytical phase. Here students learn how to use the available equipment for processing specimens. This includes maintaining and setting up the instruments, preparing reagents and other resources, and resolving technical problems. The third stage involves identification, which may include preparing samples for interpretation. Here students also learn to solve problems related to interpretation. Some of the areas in the laboratory are highly specialized and students spend a short amount of time there with highly skilled professionals. "There are some special techniques that only some do, that not everybody got trained in" (Laurie, I-62).

Throughout the day, students develop their technical skills in each laboratory area. Laurie also assesses their technical abilities and gives them daily feedback on their progress. "I ask them a lot of questions to make sure they understand what they are doing" (Laurie, I-92). If required, students can be given additional time to hone their technical skills, for example "if they do something wrong or need to practice more" (Laurie, I-144). As the internship progresses, Laurie expects students to become

increasingly independent. She says, “I intervene less and less into the organization of the day because by then they know how to do it” (Laurie, I-24).

Laurie is flexible because not all students are able to perform at the same level. “Everybody has their own talents,” Laurie suggests. Some can perform more in a shorter period of time while others take longer to complete their tasks. Consequently, she organizes teaching sessions to “ensure that they all do what is expected of them” (Laurie, I-154). She also tries to have a flexible schedule because “different students need different things” (Laurie, I-164).

Laurie also models professional behaviors. In addition to developing technical skills, students are expected to develop professional skills such as communication, teamwork and interdisciplinary collaboration (Laurie, I-124 and D-4). For Laurie, these are important skills that she keeps in the forefront of her teaching and she is vigilant of student interactions with staff and other professionals to ensure these are attained.

Throughout the placement, Laurie uses a number of teaching strategies. Her focus is not only to teach but also to ensure that students understand the impact of their practice. Laurie encourages students to perform tasks in a specific way, “the correct way.” They must also understand why tasks are performed that way, that is, to understand how theory is applied in the workplace. “It’s not just do the techniques,” Laurie suggests. “It is important to understand what the technique is about, the theory behind it. You have to know the whole process of what comes after as well. What will be the consequences for the patient? What will be the consequences if you make a mistake?” (Laurie, I-92) These are all part of the professional role that medical technologists play and consequently, important responsibilities that students need to learn.

To ensure that students understand the theory behind a procedure and can resolve problems when they arise, Laurie asks students directed questions. There are two types of questions that Laurie uses as a teaching strategy. The first relates to student comprehension about the procedure they are performing as well as the impact the procedure has on patient care. Examples of these questions are, “Why would you do that? Why do you do it this way? What happens if you find that? Like when they do the reception, most of the time everything is fine.” The other type of question is directed at problem solving or clinical reasoning. Examples of these questions are, “I ask, ‘what would you do if the name doesn’t match?’ … So they have to know how to troubleshoot too” (Laurie, I-170). For Laurie, solving problems that arise is crucial. In order to develop these advanced critical thinking skills, Laurie presents various scenarios for students to consider and to determine what they would do to resolve the problem (Laurie, I-48).

Laurie also alternates teaching methods during sessions. She teaches students how to perform techniques and then she observes as they practice. She gives extensive feedback and encourages students to practice until they master the technique. Laurie discussed in the interviews how she also engages students in discussions on the impact of their technical skills for patients. These different methods were also evident in the observation. In addition, as part of her assessment, Laurie asks students to teach her: “They teach *me*,” she suggests. And she asks them to consider: “ ‘Why did you do that?’ ‘What if …?’ (Laurie, I-172). For Laurie, the patient is always central to any activity and students must be aware of this, even if they are using “fake samples,” they still need to treat them as if they were the real thing. Laboratory professionals have an important impact on patient care and students must be cognizant of this at all times.

In order to learn how to become a clinical educator and develop an effective program for students, Laurie participated in a number of formal preparatory activities. She is currently working on a management degree and feels the courses she has taken to date have encouraged her to better manage the quality of the work conducted in the department. One of Laurie's goals is to encourage her staff to become more confident. This is important, she suggests, because when employees "feel more confident they will produce more. Employees should not be afraid to ask questions [because] … the atmosphere in the lab will just go down. It is important that people be more relaxed because they will have more self confidence." Through her courses she has been able to develop strategies to instill and build self-assurance in staff (Laurie, I-186).

Laurie also participates in learning activities organized by her professional association. The association's annual symposium offers sessions on training new employees. Laurie uses "the same techniques to train students because they … will be new employees" (Laurie, I-73). Laurie links training of students with training staff because students will be new employees when they graduate. In fact, her department has hired a number of former students in recent years.

Although the association sessions were developed for managers to organize their training systems, Laurie uses the knowledge gained to develop her training program for students. Some of the sessions she attended included the following topics: *How to organize the training manual; what kind of checklist to prepare; how to prepare the employee for upcoming work* and *how to prepare orientation*. Here she learned a number of teaching methods that she incorporates into her program. "This is why I created it – the

orientation document. How to make sure they actually listen, the little techniques" that keep students interested and active in their learning.

> There was a lot of tricks for everyday. How to keep them thinking, how to motivate them, to do their own troubleshooting … It was very technical with little tricks to deal on a day-to-day basis but it was also about the proper documentation and the proper techniques. How to find out what we can do to improve, how to do continuous improvement (Laurie, I-75).

For Laurie, training students is the same as training staff. What is different is the "specific tricks and techniques" she uses when teaching students (Laurie, I-79).

Perhaps the most important way Laurie has learned to become a clinical educator has been through informal learning. She discusses how she maintains contact with other professionals through association symposia. Many of these individuals work in nearby institutions and this affords her an opportunity to "interact, go for suppers … share our experience" (Laurie, I-79). In addition, Laurie learned new teaching methods by observing other trainers. Even though she conducts most of the training in her department, she occasionally invites a guest speaker to discuss or present a new method or an issue related to health and safety. Laurie finds these sessions stimulating and invaluable and she "borrows" methods from these guests (Laurie, I-180).

Finally, Laurie learns by working and through experience. She uses her experiences as a student to ensure that her clinical education program is effective. She consults with her department chief and her supervisor regularly, and she asks staff for feedback on student performance. "If you don't get the real feedback from the bottom, you will never improve the work. If the staff doesn't feel confident and they don't feel

safe, and they will not come back with you" (Laurie, I-190). The quality of work is therefore the foundation for the relationships made in the workplace. It is what they share and what they instill in students. She adds: "The quality is the standard of the work, the standard life of work" (Laurie, I-191).

Laurie also encourages students to give her feedback about the training in the department. She created an evaluation tool, specific for her department, for students to complete at the end of their placement. Even though the academic institution has an evaluation form for students to complete, Laurie created this tool because she feels that the College's evaluation form is too general and she wants to know "exactly where the weaknesses are" (Laurie, I-21). After consultation with staff, Laurie also completes the summative evaluation form provided by the academic institution (Laurie, D-4).

Laurie's Reflections on Clinical Education

Laurie believes that teaching students is an important responsibility because it is a forum to train new professionals. Students are the future of the profession and, as Laurie suggests, "they are always full of fresh ideas" that benefit the department, the patient, and the hospital (Laurie, I-86). Sometimes training students can be a challenge, especially if they are unable to perform at a high level. But even these can be positive, especially if the student questions her to consider something she had not previously considered. "Sometimes they will ask a question: 'But why do you doing it that way?' And then you think … why **am** I doing it that way?" (Laurie, I-87) As well, students suggest program improvements. Laurie considers each suggestion and whether it can be realized. In this way, having students is "enriching to the department" (Laurie, I-190).

In addition, Laurie suggests that clinical placements are a good recruitment tool. Despite the challenges and the work involved in teaching, students are a source of enrichment for the department. The presence of students encourages learning and further development for all staff: “I think that the richness of having students to come to the departments is really because they will bring fresh ideas and because you get … to update your knowledge … a pool of new ideas … but I think that it’s very important that once you get used to a routine, you can never break it. Or when you have somebody new or innocent, they will ruin your routine. And sometimes that’s a good thing” (Laurie, I-99). As a result, many former students have been recruited to work in the department.

On a personal level, Laurie feels she has grown both personally and professionally as a result of teaching. She has learned to be patient: “I am more patient now. I think that I was missing patience before” (Laurie, I-122). She has also learned to be a more effective teacher: “to keep people more interested in what [I am] saying rather than just talking for hours and losing their interest” (Laurie, I-123). In addition, her teaching experiences have led Laurie to “learn a lot of things about the techniques themselves.” This awareness has led to her become a better educator and manager.

However, there are also a number of challenges in being a clinical educator. For Laurie, juggling her different responsibilities is her biggest challenge. Teaching students is only one of her responsibilities. In order to accomplish everything that she is supposed to do, she often works extra hours or through her lunch. “I sometimes stay half an hour longer and sometimes come in half an hour earlier” (Laurie, I-70). “I am always trying to do extra things before they come or in between the students. I always have a week or two off without any student at that moment so I am trying to catch up. But definitely it affects

my workflow. I have some of the documents pending, of my work. It gets delayed" [because of the presence of students] (Laurie, I-66).

Language issues are sometimes a challenge, in particular when a staff member or a student is not fluent in either English or French. In order to accommodate deficiencies, Laurie adapts the student schedule around staff. She describes how for the French-language students she will "choose people that are more francophone. I will actually change the schedule of the lab just to put my [francophone] students. … So I will choose my people and then the schedule is made around that" (Laurie, I-160). With a large and diverse group of professionals, Laurie is able to modify the schedule to match students with instructors. "We have such a mixture of cultures in this hospital" that it is hard not to find the right match between staff and student (Laurie, I-163). Preventing language problems is therefore a concerted effort at flexibility.

Laurie suggests that she has been successful in improving the training of students in her department, which was her main reason for developing the training program. The department now gets few complaints from students and she is generally happy that she has been able to provide students with a positive experience. "I don't think that I would want them to go through a bad experience because I know the *stage* and how bad it is. I know they can have it better than that" (Laurie, I-28), that is, better than what she experienced when a student. Before Laurie took over the clinical education program, the department had protocols and a general schedule for students. But Laurie suggests that "by reorganizing them and giving the students a good orientation, the students felt less lost, and they were comfortable. Just this aspect improved the whole experience for the students" (Laurie, I-22).

Laurie reflects on her accomplishments annually and reviews student feedback in an aim to make changes (Laurie, I-48). For Laurie this is an important responsibility because students often have valuable suggestions about improving the quality of the work conducted in her laboratory (Laurie, I-82). “That’s actually what I did. We started from scratch, the whole thing. … I have done a lot of things differently. For example, I reinvented … installed the orientation day that wasn’t there before” (Laurie, I-164).

The clinical education program in Laurie’s department is more rigorous than it was before she took up the role. It is also “more strict now,” Laurie suggests. “Since I now give them the whole basis, I expect them [students] to do it” (Laurie, I-30). In addition, she encourages students to act as independent professionals. As the rotation progresses, “I will lower … the amount of time I spend with them each morning just to make sure they can start functioning by themselves.” Laurie believes this is the best way for them to learn to take responsibility for their acts and thereby learn what it means to be a professional (Laurie, I-30).

Laurie believes there is an important link between teaching students and managing quality in the laboratory. She says:

> It is related to quality because if you do not train your staff properly, then the quality of work will disintegrate. Because if someone just repeats what you told him to do but doesn’t understand the background of it, he will not be able to troubleshoot. The minute they don’t realize that the troubleshooting is necessary, the quality of work goes down because they will not see that something is off. And why I say it’s similar it’s because … I strongly believe that to train new employees you have to start from the basics because sometimes they might think

> they know but they might miss just a little part of it which might have a big influence at the end result. (Laurie, I-120)

Consequently, the effectiveness of the clinical education program is connected to the quality of the work conducted in the laboratory.

Profile 2 of a Clinical Educator in Medical Technology: Liza

Liza describes her experience as a clinical educator as enriching, an experience that has led her to develop both "personally and professionally." Liza adds that she has "gained in self-assurance and that she has learned through my contact with students" (Liza, I-132). She enjoys teaching and suggests that when teaching, there is "never a dull moment." She is always ready to prepare for teaching because it allows her to "be ready for the unexpected" (Liza, I-120). Not only is it part of her job but it is also something that she enjoys doing. What has also been gratifying for Liza is sharing her knowledge and experience with students: « *Je trouve ca gratifiant … pas juste d'avoir des connaissances … mais d'être capable de transmettre à d'autres, de les donner le gout de faire ce travail ici* » (Liza, I-82). This section profiles Liza. It begins with a description of her role as a medical technologist, continues with a discussion of her work as a clinical educator, and closes with her reflections on clinical education.

Liza as a Medical Technologist

Liza has worked as a medical laboratory technologist in the institution for twenty years. She has experience in several laboratory disciplines and departments and, for a period of two years, worked at a private company. When that contract ended she returned to the healthcare institution, at first in her old department but then with time, she moved

to the department she currently works in: « *C'est comme des circonstances qui est arrivé. Ils m'ont demandé de retournez … parce qu'ils étaient 'short of staff'* » (Liza, I-18).

Liza's current job title is clinical instructor and for the last six years, she has been responsible for the teaching of students during their clinical education phase. Liza also has a number of other duties, in particular when she does not have students or when the technical coordinator for her department is absent. These include overseeing the quality of laboratory services, training staff, resolving technical problems that arise in the department, and working as a medical technologist (Liza, I-14). When training staff, she utilizes a staff training manual, developed by the coordinator, that differs from her student teaching manual and guidelines (Liza, D-1).

Liza's early experiences as a student and novice professional were influential in her becoming a clinical educator. While a student, Liza conducted a number of clinical placements at the institution where she currently works, including the laboratory where she is the clinical educator. She describes her student experiences as being positive and she learned a great deal from her instructor.

When the clinical educator in her department left to work elsewhere, Liza's laboratory chief approached her to take over the teaching responsibilities for the department. She recalls that with only two weeks notice she took on the next group of students and was surprised by the request: « *j'ai pris la prochaine 'batch of students'* » (Liza, I-20). She was initially reticent to taking on this responsibility. She recalls her initial reaction: "Oh my God! Am I going to be able to do this?" (Liza, I-22). She felt this way because she had not worked in the department very long and did not believe she was strong in the subject area. She felt this to be a stressful situation but she took the time to

review her subject matter as she taught. Liza explains, « *C'était stressant, mais c'est bien passé. J'ai eu une belle 'review' avec ce groupe d'étudiants* » (Liza, I-22). Being accepted into the department and the role she plays in it has been very important for Liza. At first, she describes being afraid of making mistakes and not being able to meet expectations: « *J'ai était très stressé*. *J'avais peur de ne pas être à l'autore »*. But with time she feels she has adapted to her role: « *je me suis adapter avec le temps »* (Liza, I-30). For Liza, time and confidence eased her feelings of stress.

Liza was also concerned about teaching in English, not her first language. In addition, she was not used to talking all day. In her other job, she had few occasions to speak: « *Je travaillais au microscope et je n'avait pas besoin de parlais beaucoup*. » (TR, I did microscopy work all day and did not have to talk). In addition, most of her work had been conducted in French and she was nervous about teaching in English: « *C'était plus ca qui me stressais, enseigner du matin au soir en anglais*. » Nevertheless, Liza took up the challenge of being a clinical educator (Liza, I-59).

Unlike Laurie, Liza has not engaged in any formal learning activities that focus on teaching skills. In order to prepare for her role as clinical educator, Liza took a few courses that focused on her content area. This she felt was important, as her main weakness, she felt, was in her subject matter and she had to become more knowledgeable in her field (Liza, I-97). As a result, she took two refresher courses offered by her national association: « *j'ai suivi la formation à … puis ca m'as aidé beaucoup »* and she plans to take more sessions in the near future (Liza, I-107). In addition, the chief of her department encouraged her to take additional courses offered through the national

association and the American association. Liza discusses how these courses have helped her become more proficient in her subject matter.

Most of Liza's learning to become a clinical educator has been informal. Her focus was on professional tasks, which she learned on her own by reviewing textbooks and writing up notes. She asked colleagues for their old school notes and diligently worked through them (Liza, I-59). She also prepared in order to teach students, as she did not want to appear as though she "did not know my stuff" (Liza, I-120). Liza also refers to a brochure published by the Quebec order of medical technologists on teaching students and suggests this was informative and gave her numerous ideas: « *C'était très intéressant et j'ai utilise quelques idées discuter dans cette brochure*. » (Liza, I-106)

Liza acknowledges that the clinical instructor she had as a student was an important influence. She identified with how she was taught and supervised, and she appropriated much of what she learned from this instructor into her own work as an educator: « *J'ai pris un peu de ca façon de faire des choses comment* ***elle*** [stress] *m'a montrer* » (Liza, I-28).

The most important way Liza learned to be a clinical educator was through experience. Teaching is learning, she suggests. Just as students learn to be professionals by working in the hospital environment, Liza too learned to be a clinical educator through her work as she teaches students. "I learn by working with students in the same way as they learn from doing tests. Sometimes I make mistakes but I learn from them just like students learn from the mistakes they make when doing their work" (Liza, I- 278).

How Liza Approaches Clinical Education

As clinical educator, Liza trains two students at a time for a period of four weeks (Liza, I-13). In total throughout the year, there are four different rotations of students going through her department. At one point Liza had three students at a time but found this to be difficult to manage: « *Ca n'était pas faisable dans le laboratoire* » (Liza, I-12). Thereafter, Liza always has only two students at once. An observation of the training space illustrates sufficient space for two students beside where she works. When asked where she had put the third student, Liza responded that she had to give up some of her personal workspace for that student, that is, where she does her paper work (Liza, O-25).

Liza took over from another clinical educator who had developed a plan for student teaching. When Liza became the clinical educator, she reviewed the plan and made a number of changes. Specifically, Liza changed the order of what she teaches, preferring to have students gradually build on their basic skills in the first week and stressing more difficult problems in the final weeks of the rotation: « *Surtout j'ai change des fois l'ordre qu'ont montre des choses. Je trouvais qu'il y avait des techniques qu'était trop compliquer et qu'ont montré trop au début. J'ai essaye d'aller plus graduellement ... plus d'emphase sur la base au début et de garder les problèmes pour la fin* » (Liza, I-32). A review of the current teaching plan supports this.

The week before they work in a specific area, Liza prepares materials for them by reviewing procedures and documents: « *Je suis toujours une semaine en avance, ma révision .... C'est sur aussi que les soirs je vais amener la documentation et lire mes procédures, par exemple, qu'est ce qu'ont va couvrir le lendemain. Je vais lire. Je fais ma préparation de cours* » (Liza, I-71). She also gathers samples in increasing

complexity for students to work on. For Liza, it is important that students first work on completed patient samples: « *Je ramasse des … échantillons intéressant. Je cherche un 'bank' de cas nouveaux* » (Liza, I-73). This is important as students learn best through working on "real patient samples" (Liza, I-74), "*la verité"* (Liza, I-278) and not just discussing them or working on fake samples.

In addition to preparing samples for student practice, Liza also devises a student schedule and plans the activities that students engage in. It is also important that she makes arrangements for students should she be absent for any time during the training session. To ensure that training is seamless, she regularly consults with one of her colleagues who usually replaces her when absent.

Liza's experience as a clinical educator has led her to organize her teaching plan by week. During the first week, students develop basic skills in sample processing. They learn to organize their work area and practice on samples that have already been processed. During the second week, students learn more advanced skills such as problem solving. In the third week, students work specifically on problem cases. Here, they also work on multiple samples at once in order to develop their technical abilities. In the fourth week, students are responsible for providing services to clients –products to patients and supplies for hospital units (Liza, I-71).

Throughout the training, Liza uses a number of teaching strategies. These include teaching students to perform techniques, teaching organization skills, observing students as they perform their techniques, asking questions in order to ensure that students are aware of the impact of their work on patient care, giving regular feedback on student abilities, and evaluating them at the end of the rotation.

Although students practice many laboratory techniques in school before they arrive at the Hospital, they mainly work on one sample at a time. In the hospital laboratory, however, staff and students must multitask and perform several different procedures at the same time. Liza suggests that sometimes students are overwhelmed with the amount of work that staff performs on a given day. It is therefore very important that students develop organizational skills: « *Je vais prendre du temps avec chacun séparé, parce que souvent ils ne sont pas rendus à la même étape, dépendant du cas qu'ils ont. Je vais prendre le temps de les expliquer comment ils devraient organiser leur travail* » (Liza, I-169). This is important as large amounts of work may suddenly arrive at any time or a complicated case may consume technologists' available time. « *Ca fait parti de notre métier »* (Liza, I-95, TR All this is part of our profession).

Liza also models professional behavior. She encourages students to work together and to help out staff whenever possible. Essentially, students learn by working in the laboratory. When she is busy helping her colleagues, Liza expects students to work independently. « *Ils savent où sont les procédures qu'ils ont besoins. Je suis quand même la pour les questions, mais je les dis « je vais être moins disponible, parce que … il y a du travail* » (Liza, I-165, TR, They know where the procedures are. I am there if they have any questions but I tell them that I will be less available because of the work).

Throughout their training, students are expected to take detailed notes. Before answering a question, Liza asks students to review their notes. Part of being independent is being able to access information. « *Je les demande de regarder leur notes, par exemple, si il y a quelque chose qu'ils ont déjà vu ou qu'ils ont oublié »* (Liza, I-95). In addition, repeat techniques if there is any doubt as to the accuracy of the results they

obtained. « *Ont va faire deux trois des fois quatre … quand le résultat est ambiguë* » (Liza, I-187, TR: Sometimes we repeat three or four times if results are unclear). This is important, she suggests, because many of the laboratory tests performed in her department are critical for patient care. When problems arise, Liza reviews the techniques with students and she encourages them to repeat the steps. At the same time, she asks questions to discover if they understand how the problems arose and what they could do to prevent a recurrence. Although she discussed this process in the interviews (Liza, I-263), it was also noted during the observation (Liza, O-4).

Liza also uses case analyses to review unusual samples or results in order to encourage students to think through problems and resolve them. She keeps aside interesting samples for students to work on. She prefers that students work on these cases on their own, rather than discussing a past case with them: « *Si il y a des cas intéressant, je vais les laisses faire de début à fin. Ils aiment mieux ca parce que ... ils vont se souvenir parce que … ils l'ont faite au complet* » (Liza, I-203). She encourages students to write up these cases and to present them at school sessions. Working on these cases gives students a better sense of the impact of their work on patient care and leads them to develop critical thinking skills.

Liza provides students with regular verbal feedback on their performance. « *J'essaie de toujours faire des commentaires verbales »* (Liza, I-46). However, she does not always document what she says. She has no training checklists or job aids to help document student progress but does make notes when students are having problems. When completing the student summative evaluation at the end of the rotation, she gives students extensive comments, notably positive comments, about how they performed

throughout the rotation. « *J'essaie surtout de renforcer des bons points plus. Mais s'il ya quelque chose que n'est pas correct, je les dis. C'est important qu'ils le sachent, parce que ont ne le fait pas comme ca, c'est dangereux … pour le patient*. » (Liza, I-48) For the purposes of evaluating students, Liza uses the forms provided by the academic institution that details the competencies and guidelines for assessment (Liza, D-3).

Liza's Reflections on Clinical Education

Liza sees her role as moulding students into future medical laboratory science professionals, as they are the future of the profession. She relies on the schools to provide the theoretical information and believes that her job is to help students develop technical skills and critical-thinking strategies. Should the department hire new graduates after they complete their training, the new employee orientation period is shortened considerably. Consequently, teaching students organization and multitasking skills is very important in her laboratory. She describes how important this is in her work area: « *Des fois ca vas arrive que je vais les faire comme arrêter surtout quand je couvre le lunch. Des fois je vais les donné un peu de ma responsabilité du lunch pendant qu'ils font … pour qu'ils voient que des fois pendant qu'ont travaille ont ce fais interrompe parce qu'il y a une plus grosse urgence. Puis il faut la faire maintenant. Ils ont des scenarios réels aussi en même temps*» (Liza, I-201). It is important for Liza that students learn to organize their work properly because the nature of the work in her department is such that they may have to stop one task in order to complete another more urgent task.

Teaching students, for Liza, involves preparing them for their professional role. « *Si un patient commence à saigner, ont peut pas prévoir, il saigne, et des fois ont est trois personnes qui cours pour sauver la vie de ce patient* » (Liza, I-97, TR: If a patient is

bleeding or another critical circumstance, we will sometimes be three people working on this one case). It is therefore important that students take their role responsibly and professionally. Patients depend on laboratory personnel for their well-being and students are part of this service. « *Il ne faut pas dire « oh, je ne sais pas mais peut-être … [le patient a ca]. C'est pas correcte, il faut être sur … [de nos résultats]. Des fois, je vois que le résultat qu'ils ont ne fait pas, surtout si c'est un patient connu, ce n'est pas sensé avec qu'est qu'il avait. Donc je le refaire, puis je les fais refaire, des fois je les demande de préparer des réactifs* » (Liza, I-189). In her laboratory, error is not an option.

As much as possible, Liza reflects on her teaching, in particular, when she completes student evaluation forms. Here, she stresses student strengths and points they should improve on, in terms of professionalism: « *A la fin, dans leur évaluation, j'essaie de faire un effort. Je trouve leurs forces, leurs points à améliorer mettons, mais vraiment en terme de professionnel en labo, pas juste [dans ma spécialité]* » (Liza, I-114). At the same time, she reflects on her own strengths and weaknesses and what she can do to improve teaching. This reflection, Liza suggests, is an important exercise that helps her realize her accomplishments as a clinical educator.

Another important aspect of Liza's beliefs about clinical education is the importance of being familiar with the theory behind the procedures conducted. When she first began to work in her department, she realized that her theoretical background was not strong. Liza says, « *ma théorie n'était pas fraiche*. » This realization led her to update her knowledge base. As a result, she returned to the books from her specialty in order to refresh her theoretical knowledge. « *Fait-que, j'ai lu mes livres et mes notes* » (Liza, I-59). Understanding why a specific procedure is conducted in a certain way and what are

the problems that may arise are important to Liza. She uses this as a foundation for the program she developed for students.

For Liza, it is important that students function at a high level. Patients that require the services of her laboratory are often critically ill and depend on the services provided. She stresses an attention to the details of the techniques used, the reasons why these are important, and what to do when unexpected problems arise. This is the job, she says: « *C'est ca la job.* » She encourages students to understand why and what they are doing at all times: « *Qu'est ce tu vas faire, regarde ta théorie. La pratique va chercher la théorie en même temps. Ce n'est pas juste une question de théories, faut que je sache qu'est que je vais faire avec.* » A professional must be aware of the presence of interferences or if reagents are not functioning properly (Liza, I-191). The test results the department provides and the products they dispense to patients must be correct at all times because patients are critically ill and dependent on laboratory services. « *Je vais ... leur faire prendre conscience que présentement, une tel est en train de faire ce patient la qui va très mal* » (Liza, I-226). For Liza, students must be encouraged to be conscious of the impact of their work on patient care.

For Liza, many of the challenges she encounters in her workplace relate to staffing shortages and a high workload that result in a lack of time to complete all duties. « *Ont est toujours short-staffed. Le travail augmente.* » Even when she teaches students, the department coordinator will ask her to help out. The most stressful part of her job is to teach and work at the same time. « *Des fois ca me mets du stresse, parce que des fois je n'ai pas le temps de faire ces choses la.* » She has two young children at home and cannot take her work there to complete. She also cannot stay after work to complete her

teaching duties. As a result, the staffing problem frustrates her*: « Ca m'énerve un peu. »* (Liza, I-93). Nevertheless, she is becoming increasingly secure in her teaching role: *« Au début, juste enseigner, c'était beaucoup, mais maintenant, je suis plus a l'aise. »* She has learned to adapt to the situation by working through breaks. « *Il y a des journées plus occupé, des jours ou ont est short staff, puis que il faut que je couvre, par exemple pendant l'heure de lunch ou parce que un patient est en danger. »* As Liza works in a critical care area, it is important that everyone work in unison, especially if a patient has a serious condition or has suddenly taken a turn for the worse (Liza, I-93).

Liza also discusses how she does not have the time to regularly update her notes or to document ideas. « *J'ai assez de matières à remplir pour les quatre semaines. Je n'ai pas le temps de réviser le plan* » (Liza, I-46). She sometimes writes notes to herself in order to not forget but, most of the time, she keeps her ideas in her mind until she has a chance to update her program. A review of her plan (Liza, D-1) identifies a detailed description of the teaching and learning activities but no information on the teaching strategies used or on how students are assessed.

Liza occasionally encounters problems with language, especially when a student is not proficient in the language of instruction. She has had students who are recent immigrants and not fluent in English. At times, Liza feels these students do not understand what she is saying and laments their failure to admit they do not understand: « *des fois, je n'étais pas certaine qu'elle a compris. Mais, elle ne oser pas de dire qu'elle n'a pas compris* » (Liza, I-99). To deal with this situation, Liza admits to spending more time with students who have difficulties to ensure they are able to function.

Liza is sometimes frustrated with the academic institution because school learning is different from learning in the workplace. « *Des fois ca me chicotte parce que eux, ils font l'examen en théorie sur d'autres sujets que ce qu'ont fais au labo*. » As a result, students are sometimes confused because their basic techniques are not at a level where they should be. The school emphasizes problem cases but Liza suggests that it should focus on developing basic techniques (Liza, I-34). Students can always learn more advanced skills once they have perfected these basic skills.

Liza suggests that she has been successful in the training of students in her department. As the laboratory is critical to the Hospital, Liza screens students to ensure that they are capable of performing at the level that the department head demands. This is why she only encourages good recruits to meet with the chief. Her role is essentially to help students organize their work, to show them how to function, and to ensure they are able to perform: « *Moi je dirai que c'est vraiment … les aider à s'organiser pour planifier leur travail. Je pense c'est ca. Les montrer c'est ou les procédures, les dire « la, tu va faire tel chose », puis j'en fais un petit peu un* 'summary' *de qu'est-ce qu'ils devraient faire* » (Liza, I-206).

Liza feels that she has been an effective clinical educator because she has risen to the challenge provided her when she first took on the clinical educator position. Her department head encouraged and supported her in all aspects of her role (Liza, I-126). Her work colleagues are also supportive and agree to help whenever possible (Liza, I-128). Students have also told her that their experience in her department was one of the best they had throughout their clinical education. "Students really like it, especially when

we do something that is an urgent situation. They also like the complex cases because in school they only discuss them. Here we actually work on them." (Liza, I-284)

Profile 3 of a Clinical Educator in Medical Technology: Louise

Louise has had disparate experiences that have led her to describe her clinical education experience as a rollercoaster, with both highs and lows: « *Il y a des bouts qui était vraiment le fun, que j'ai adoré d'enseigner. Et d'autres bouts ou le stress du travail était trop* » (Louise, I-130). Riding the rollercoaster of teaching students is both a fun and a stressful activity. She loves to teach but also finds it to be a challenging experience. This section profiles Louise. It begins with a description of Louise's role as a medical laboratory technologist, continues with a description of her work as a clinical educator and closes with her reflections on the clinical education experience.

Louise as a Medical Laboratory Technologist

Louise has worked as a medical laboratory technologist in the healthcare institution for two years. Since she graduated, she has only worked in the laboratory department she teaches in. Here, she has experience in several laboratory sub-specialties as part of her job functions. She works primarily on the evening shift, with occasional work during daytime hours (Louise, I-5 and I-6). Louise's current job title is medical laboratory technologist. It is a profession that she is happy to have chosen and she enjoys it thoroughly (Louise, I-30). In addition to her regular work, Louise occasionally orients new hires to the evening shift work (Louise, I-12), as there is no evening coordinator responsible for new staff.

Louise's supervisor approached her to teach staff and students during her regular shift. "My boss asked me if I wanted to teach the techs on the bench and then she asked me if I wanted to train the students" (Louise, I-14). As teaching is not part of her regular work, Louise receives a stipend for teaching students and staff (Louise, I-15). However, by the time data collection ended for this research project, Louise had applied on a daytime position and no longer taught students. In this department, there are two clinical instructors responsible for training students during daytime hours. Another technologist took on the role of clinical educator for the evening shift. When asked how she felt about not teaching students, she said: "I am actually happy because it is a lot of work and I don't get any extra time to prepare. I still enjoy teaching and hopefully I will some day teach students in the day shift" (Louise, FN, 10).

When she first began to train students and staff, Louise describes being "scared … and nervous" (Louise, I-39), but with time she has become more comfortable in her role. She says she is now "definitely more comfortable, more confident" (Louise, I-47). When asked whether this was important, she replied: "you have to be confident in what you're doing when you want to teach it to someone" (Louise, I-65). Teaching students is different from training staff because new staff conducts most of its training during the day shift. When asked to explain further how training a student differs from training a new hire, Louise adds: "They [new staff] also have the basis for how things work in the lab because they have been trained during the day. I will say that if I have to train someone during the day then, of course, that would be different. But having to show [a student] everything – from zero to getting that person to be « semi-autonome » [TR, independent] within the lab is definitely a challenge" (Louise, I-41).

How Louise Approaches Clinical Education

When first interviewed, Louise had acted as clinical educator for one year and trained, on average, two to three students per year, for a period of six weeks each. At the time Louise was asked to take over student training, evening training had been available. Louise herself had conducted her clinical placement on the evening shift. (Louise, FN-31). Although Louise's predecessor trained two students at a time, Louise agreed to only one student at a time, which she found more manageable and less stressful. "With the workload I told [supervisor] that I could not do more than one [student] at a time" (Louise, I-22). When asked if she had used the same program for student training as her predecessor or whether she had modified it, Louise informed me that she was not aware of a program or plan for student training on the evening shift. Louise's supervisor devised a schedule and assigned tasks. Students followed Louise as she went about her tasks and worked with Louise on the same assignments (Louise, I-28).

With Louise, I had the opportunity to learn how a novice educator prepares for student teaching. At first Louise relied on her supervisor arranging the student schedule and learning activities but with time, she began to make changes to this program and introduced a different format. Louise's schedule is organized by different workstations, each of which has specific tasks that must be accomplished. During her first student placement, Louise's supervisor scheduled her to begin the student rotation on the main analyzer. She felt this was difficult and she felt that the student was lost because it was too soon to expect a student to understand how a major analyzer functions in a large hospital. Louise explained this to her supervisor, « *Tu vas la perdre elle et tu vas me mettre en dépression. Elle n'a aucune notion de qu'est-ce que c'est vraiment d'automate*

en milieu hospitalier » (Louise, I-213). When asked about how the learning activities flowed when she was a student, Louise replied that she began with the simpler workstations and gradually made her way toward the main analyzer (Louise, I-35).

Louise has not taken any formal courses or participated in learning activities that address teaching skills. As a result, she relies primarily on her experience as a student and a professional in the department. She describes her student experience as very positive and she especially liked to be in a small group with other students. She admits that much of what she does with students was influenced by her own student experience. “I did my … *stage* here” (Louise, I-28) and this experience helped “me what to start with … and how to continue” (Louise, I-32) throughout the student placement.

Louise consulted with one of the daytime clinical educators for advice on teaching students: “I didn’t have any experience. I did go see … [clinical instructor, day shift] to see if she had any documentation that I could use before my first stage. I did read a bit of that. But except for that, I went how I was shown both during my stage and as I was starting my training. So, like I said, I improvised a bit.” (Louise, I-33)

Louise admits that she learned to be a clinical educator through work experience, by trial and error: “I learned by trying different things and seeing how they work. Sometimes they do and sometimes they don't. … yes trial and error” (Louise, I-194). She describes how her first student had certain difficulties understanding and performing a number of techniques. She says she used this experience to change her approach for the next student. Louise describes how one student did not understand the sequence of tasks. In her own mind, there were three steps that could be done in any order but the student did not understand the importance of the sequence and consequently mixed it up. As a

result, Louise decided to always instruct students using the same sequence: « *Donc moi a ma tête c'était trois opérations puis en va répéter ca tout le temps pour il faut absolument qu'il soit dans le même ordre »* (Louise, I-194) – a valuable lesson in the importance of consistency when teaching students.

With her second student, Louise asked her supervisor to modify the schedule to begin with the simpler tasks, such as learning the computer system and processing samples with only a few tests. "I was mainly going by what was the easiest going to the more difficult. And putting layers over layers over more stuff each day" (Louise, I-32). In this way, the student could practice and feel more in control of the situation. What was most important was that students learn how to work in a medical laboratory: "*qu'est ce que je pensais que c'était important comme points à savoir pour travailler au laboratoire »* (Louise, I-206). Thereafter, the schedule was modified with this in mind.

Louise uses the procedures and training checklists available for training staff. In a fieldnote, I paraphrase what Louise told me about these documents: Staff use the training checklists for training purposes and the procedure manual as a resource for everyday practice tasks. Students have access to department documents through a generic username and password specifically set up for students (Louise, D-2).

Without a teaching plan to fall back on, Louise admits that it was preferable to only have one student at a time. She suggests that she would have difficulty with more than one because everyone learns differently:

> "I am thankful that I had only one per rotation this year or else I would have been like … Every person is different. They all have their learning speed, their … patterns. Sometimes for some people they're more auditive, more visual. So

> sometimes for this person you need to explain more. For that person you have to show more how to do it. And everyone has learning difference. Some learn quicker and some learn slower and some are not interested at all." (Louise, I-44)

Each student is unique and learns in a different manner. Part of what Louise believes important as a clinical educator is to adapt her instruction to student needs and abilities.

Despite her claims that she did not have a teaching plan, Louise admits to being conscious of how students learn based on her own experiences. She describes having a basis for a plan in her mind: « *c'est sur que j'allais plus avec qu'est ce que j'avais dans ma tète »* (Louise, I-205) and using this as the scheme for student training. When asked to describe how she teaches students a specific task, Louise explains how she instructs students, then models the skill or technique, then asks students to repeat what she has completed: « *je fais mon analyse puis que j'aimerais que tu le reproduises »* (Louise, I-69). She expects students to write detailed notes and make reference to them when performing tasks. Finally, she observes students as they repeat what she has done and gives feedback on their abilities. « *Je les demande de refaire la séquence comme moi je la montré, comment elle avait dans son cahier* » (Louise, I-209). Throughout the process, she encourages students to ask questions if they are unsure of anything. « *Si jamais t'as des questions, arrête-moi. Je vais répéter qu'est ce que je viens de dire. Dite que j'ai besoin de reformulé dans d'autres mots que tu comprends … même si il faut que je le répète deux, trois, quatre fois »* (Louise, I-206). If required, students are encouraged to repeat tasks until they are mastered.

In order to ensure that students are properly introduced to each specific work area, Louise begins the training week on the weekend rather than on Monday evening. She

does this because it is often quieter on the weekends and she can devote more time to showing students new techniques and spending time supervising them while they practice. Louise describes this strategy as "nice … because … on the weekend it was really much quieter than on the week." She would instruct students by saying, " 'This is that machine. This is how we do it. These are the problems you could face. These are the controls.' " As the week progresses, students understand the reason behind this scheme and say to Louise, "OK now I understand what you meant" (Louise, I-26). Using this strategy helps to ensure that students received invaluable preliminary instruction. As Monday evening would often prove to be a very busy time for the laboratory, students are then better able to shadow the educator and complete the tasks they are assigned.

During the interviews, Louise describes how she began to itemize what students should be accomplishing during a given week: « *Une liste de dire: La première semaine, qu'est ce qu'il faut montrer? La deuxième semaine, sur quel banc ont est? Qu'est ce qu'il faut que je la montre. Troisième semaine, quatrième, cinquième …* » (Louise, I-212, TR The first week this is what I show them. The second week, what do I need to show them. The third week, fourth, fifth). This appears to be the beginnings of a training plan.

Louise also models professional behavior. She believes that it is important to show students what is acceptable behavior. Furthermore, when conflicts arise it is important to be professional and take students aside: « *parler avec quelqu'un sur un point, si tu n'est pas content avec, tu essaie de prendre cette personne à part sans que personne voit* » (Louise, I-87). It is also important to discuss problems with students in a confidential manner, away from the bustle of the laboratory.

Louise provides students with verbal feedback while they practice their technical skills. In interviews, she discussed the importance of regular feedback. She does not document student progress but rather she makes mental notes as to what students are doing well and what they need improvement on: « *Notes mentales pour dire quels points elle avait plus de difficultés* » (Louise, I-210). Louise believes that regular verbal feedback is important. During the observation, Louise also reiterated the importance of feedback for both students and new staff because “they need to know what they are doing right and what they're doing wrong” (Louise, O-24).

Louise expressed some difficulty with student evaluations. She stated being nervous when she had to test students to ensure competence. Even though she followed the directives of the academic institution and completed the evaluation forms provided, she felt uneasy. This is not surprising given her limited experience. She admits not remembering how she was evaluated as a student and consequently she consulted with her supervisor to ensure that she was doing it right. « *Moi j'ai faite comme je pensais. Puis après ca, j'ai rencontre* [supervisor] *pour l'expliquer garde, j'ai évalues comme ca … et je pense que elle allait avoir cette note la, qu'elle mérite une 70 ou qu'elle mérite un 80 parce que c'est ca* » (Louise, I-52). Despite her nervousness, Louise suggested the assessment went well: « *C'est bien passé »* (Louise, I-54).

Louise's Reflections on Clinical Education

Louise believes that the goal of clinical education is to prepare students to be entry-level professionals. This involves doing the work as well and as quickly as possible. It also involves teamwork, multitasking and acting in a professional manner. It means that students must develop a certain “*savoir vivre*. They should help out their

colleagues when possible. Louise tells students: “go and see the other person on your team and ask them if they need help.” There is always something to do. “Little things that would mean that she doesn’t have to lose five minutes on that and she can concentrate on [a specific task]” (Louise, I-138).

Louise expects a high level of professionalism from students. When they begin to work they can manage their own expectations, but as students they need to be encouraged to perform at a high level: “when they start working … *ils vont mettre la bar pour eux-mêmes plus haut. Ils vont pas dire, oh j’ai juste mon travail puis ca fini la* » (Louise, I-140). To get students to this level, Louise provides students a strong base they can build on when they begin working (Louise, I-179). She does this by encouraging them to work on their own: « *je trouve la meilleure façon de montrer à quelqu’un quoi faire, c’est de la laisser faire* » (Louise, I-179). Working on real, not fake, samples and in the actual workplace with her colleagues is the mainstay of Louise’s clinical education program. Essentially, students follow her as she performs her regular duties. When possible, she encourages them to redo what she has already performed.

Louise believes her role, as clinical educator, is primarily to share her knowledge. She depicts her responsibilities as an educator as “a nice experience” (Louise, I-14). She adds that teaching is rewarding: “Teaching someone … Being able to show someone else how you do your job, to be able to explain it, to be able to pass your knowledge over to someone else. And to be able to pass those little tricks that you develop after years … [with] experience. That’s always nice” (Louise, I-15). Here, Louise is referring to practical knowledge – for example, understanding how an instrument works and how to

resolve problems when they arise: « *Je voudrais y aller en détail pour t'expliquer pourquoi le machine agit de cette façon* » (Louise, I-113).

Despite her early difficulties teaching students, Louise describes her experience in a positive manner. She especially enjoys working with different automated equipment: « *Toute qui est technologie*. » Even as a student she enjoyed working with the equipment: « *J'aimais regarde ca même pendant mon stage, par exemple comment le …* [analyzer] *bougeais* » (Louise, I-120). She also enjoys sharing this with students.

Louise admits having grown personally as a result of her teaching experience. She has become more comfortable and confident as a clinical educator: "*Je suis certainement plus confortable et confiante* » (Louise, I-108). She adds that she is proud when she completes a student rotation and she is able to share her love for the work: « *T'es fière de toi quand tu fini avec une étudiante. J'ai réussi a montré a quelqu'un pourquoi moi j'aimais qu'est que je fait. J'ai réussi a partager qu'est ce que j'aime faire avec quelqu'un d'autre, a lui montré … C'est sur qu'il y a beaucoup de stress mais a la fin, j'ai était contente* » (Louise, I-110, TR, It is stressful but in the end, I am happy).

Louise adds that she would have preferred to be freed up to teach, rather than working and teaching at the same time. She says repeatedly: "I couldn't be liberated either because we were so short of staff or because it was busy" (Louise, I-24). When asked what she would do if given additional time, Louise responds going more deeply into the various workstations: « *Aller plus en profondeur* » (Louise, I-159). Furthermore, she would take more time to teach: « *Je pendrais plus de temps. Définitivement prendre plus de temps. … pour enseigner»* (Louise, I-203). This includes, for example, familiarizing students more with the laboratory computer system (Louise, I-204) and

encouraging students to troubleshoot equipment problems or solve other laboratory problems (Louise, I-117).

For Louise, many of the challenges she encounters in her workplace relate to staffing shortages that result in a lack of time to complete all duties. She suggests that staff would have benefitted from additional personnel on the evening shift: « *il faudra une [autre] personne pour couvrir* » (Louise, I-144). In order to manage her time, Louise describes having to skip breaks and shorten her meal breaks to ensure that the work is complete and that students are well trained: « *je saute la pause … parce que j'ai pas le temps pour la prendre ou même des fois, je prends juste ma pause d'une demi-heure, je saute la pause d'une heure parce que je n'ai vraiment pas de temps* » (Louise, I-142).

Louise also notes a disconnect between classroom learning and practical learning in the workplace. Louise relates how the academic institution focuses more on theory than on practical issues while the workplace concentrates primarily on the completion of tasks. Because her goal is the development of entry-level skills (Louise, I-173), Louise decides not to focus on the theory behind the tasks she performs. She knows her theory, she says, and expects that students also know it. What is important is that they learn how to work as medical technologists. « *Je connais quand même la théorie qu'ils voient en cours, puis je me suis dit « garde, je n'ai pas besoins de me mettre dans la théorie parce que ils le savent. Au pire ils vont faire ca à l'école. Surtout que pour moi un stage c'est plus «bienvenue a ton milieu de travail. Puis voici comment une technologiste travail. Ceci est qu'est ce qui reste à faire et voici comment à le faire »* (Louise, I-92). This is the role that Louise prepares students for.

In addition to staffing shortages and a high workload, Louise's department was at the center of major renovations occurring at the healthcare institution. During the interviews Louise described how the workflow changed because the grounds just outside the laboratory were being dynamited for the construction of a new building. Louise called her situation as being "in dynamiting mode" (Louise, I-20) because some of the instruments were not functioning well during this phase. She feels that the students she had at this time were shortchanged as regards their clinical experience: "You know the problem we had during the evening. The machines not working. The workload being what it was. … I am kind of sad for those girls because I had to rush their training because I couldn't take the time I wanted to take… I still had to do my work." Louise found this experience very stressful and would explain to students: "OK I'm training you but .... I still have to process the specimens, as fast as I can" (Louise, I-20).

Louise stresses the importance of teamwork, which is particularly important on an off-shift when there are fewer professionals manning a busy laboratory: «*Il y a aussi plus de travail en équipe en soir comparait au shift de jour* » (Louise, I-136). The goals she set for students were to learn to help out and work with others, not just with their instructor. "If you see that there is something to do … go and see the other person on your team and ask them … [if they need help]." There is always something to do. Even if all a student can do is something small, every little bit helps staff to "concentrate on something else" (Louise, I-138). This is what teamwork is all about. As a result, the ability of a student to work independently and with the team is an important assessment of the effectiveness of her teaching.

I asked Louise what lessons she learned from her teaching experience and what she would do differently if she had known that she would be teaching students. She admitted to having learned a lot from her first year teaching (Louise, I-205) and that she began to realize the importance of having a plan for teaching. Louise said, « *Peut-être j'avais du les montrer ca de cette façon au lieu de l'autre façon. Peut-être j'avais du me faire un plan* » (Louise, I-224). In a discussion during the observation, I asked Louise if she had been able to devise and implement a plan. Louise suggested that she had been able to make a few changes, in particular the orientation and the laboratory computer system but she had not been able to implement any other changes (Louise, FN-33).

Profile of Clinical Educators in Medical Technology

Three medical technologists volunteered for this study, all of who trained as students in the healthcare research site. They also began to work at the site shortly after graduation from the academic institution. Each works in a different department and performs the functions of a medical technologist specific to their area of specialization. Despite their different work areas, the three clinical educators have similar experiences. Table 5 below, summarizes the participants' roles as clinical educators. This section compares the research findings between the three participants as it discusses the three main areas of commonality between the two educators: characteristics related to the person, to the context in which they work, and to the process of becoming a clinical educator. Each of these is described in this section.

Table 5
Medical technologists as clinical educators

	Laurie	Liza	Louise
Years of experience as a medical technologist	7	20	2
Years of experience as a clinical educator	7	6	1
Job title	Quality coordinator	Clinical instructor	Medical technologist
Job status	Full-time	Full-time	Part-time
How participant became a clinical educator	Part of job	Part of job	Recruited
Trained as a student at work site	Yes	Yes	Yes
Influenced by early experiences	Yes	Yes	Yes
Number of students trained at a time	1-2 (mainly 2)	2	1
Number of clinical educators in the laboratory	1	1	1 (evening)
Number of weeks training per group	3-4	4	6
Number of rotations per year	8	4	3
Formal learning	Yes	No	No
Informal learning	Yes	Yes	Yes
Challenges in the workplace	Time	Time Staffing	Time Workload Staffing
Words to describe experience	Exciting	Enriching	Rollercoaster
Engagement in professional development	Yes	Yes	In progress

Personal and Professional Characteristics

There are personal and professional characteristics common to all three clinical educators. All have worked at the healthcare institution for a varied number of years, Laurie for seven years, Liza for twenty years, and Louise for two. As clinical educators, Laurie has seven years of experience, while Liza has six, and Louise one. Both Laurie and Liza have permanent full-time positions, while Louise works evenings on a part-time basis. On average, they have from one to two students at a time for a period of three to six weeks per student. All three technologists were recruited into their roles as educators. Laurie and Liza have teaching positions in their departments while Louise was recruited to teach students after her predecessor left for another position.

Multiple responsibilities

In addition to their roles as clinical educators, all three participants have a number of other responsibilities. Laurie is the quality manager for her department, which entails the development, regular review, and implementation of policies and procedures. She is also responsible for the training and development of staff in her laboratory, and conducts regular training of other health professionals in matters related to her laboratory area. Laurie is also actively involved in Hospital committees. Liza assists the technical coordinator of her department when required, in particular training staff and reviewing quality practices in her laboratory. Louise also “trained staff” regularly. Teaching students is therefore only one of multiple responsibilities for clinical educators.

Early professional experiences are important influences

Their experiences as students in the department in which they currently work as well as their early experiences teaching have influenced all three clinical educators. All three participants trained as students in their current workplace and these early experiences were influential in their development as clinical educators. Both Liza and Louise describe their experiences as students in positive terms and share instances where their instructors encouraged and supported them throughout their placements. Laurie, on the other hand, describes her student placement in the department as a “disaster” because she felt “lost” throughout her placement, citing a lack of consistency because all staff was involved in her training. Nevertheless, she received positive feedback on her abilities and was offered a job in the department. Each of the participants describes instances where they relied on their experiences as students when teaching their own students. Liza, in particular, identified with how she was taught and she admits appropriating much of what her instructors did in her own teaching.

Clinical educators in laboratory medicine also described their initial experiences teaching students. Laurie acknowledges being afraid of not being taken seriously because of her youth and her limited experience as an educator. Liza was initially stressed and not at ease in the subject matter because she had not been working in the department long before being asked to take over the teaching position. Louise admits to being “scared” and “nervous” when first asked to teach. This was partly due to her limited experience and partly because she had never trained from scratch. Until she began to teach students, she had only oriented staff, trained primarily on the day shift, to work on evenings. Despite these early fears, each clinical educator rose to the occasion and has grown to

enjoy their clinical teaching roles. Essentially, these early experiences marked the clinical educators and influenced how they teach students.

The Context

The workplace is an important resource for learning and development for all three clinical educators. All three were encouraged by their supervisors to take on the role of clinical educator. In addition, for Laurie and Liza, their respective departments have also facilitated their learning as professionals and educators.

However, all three clinical educators note a number of challenges teaching students while also performing their work as laboratory professionals. All three address time pressures, heavy workloads and staffing issues as major obstacles. In addition, each educator also discusses how she manages these challenges by "shortening" breaks or working longer hours. All three also describe how they deal with students who have difficulties either understanding oral instructions or in performing technical skills.

The lack of time to fulfill all their responsibilities is a major challenge all three clinical educators experience. All three work extra hours or through their breaks in order to complete all their assigned tasks. Laurie admits that some of her other work is "delayed" because of student training. Liza comes in before students begin their day and sometimes works through her breaks to complete her work. Louise describes frustration with not being "liberated," that is freed up from her daily routine to teach students.

Two of three participants discuss how staff shortages in their laboratories are an important challenge. Liza suggests that her laboratory is often short staffed and that she helps the coordinator or resolves problems when they arise or completes tasks that another technologist would have accomplished. Louise also mentions that her department

has both a heavy workload and is often short staffed. Working on the evening shift while the department was undergoing major renovations did not help her situation.

Finally, two of three participants discuss how language is a challenge to teaching. Both Laurie and Liza discuss how students do not always comprehend the language of instruction. To accommodate the situation, Laurie tries to "match" staff with students to ensure that language problems are minimized. Liza discusses students who have limited comprehension in English and how she works to resolve the situation. In all cases, clinical educators try to deal with the challenges they encounter and find a way to turn these challenges into opportunities for developing their students.

The Process of Becoming a Clinical Educator

Of the three clinical educators in laboratory medicine, only Laurie has engaged in formal learning activities that address teaching methods. She regularly attends seminars and workshops provided by her professional association. Even though these activities focus on training new employees, Laurie sees students as potential future employees and consequently she believes that the strategies learned here are applicable to her student program. From these sessions, Laurie has adapted many of the "tricks and techniques" learned here to her student teaching. In addition, Laurie is also currently working on a management certificate and has taken courses related to employee development.

Liza has participated in several professional development activities offered by the Quebec order and her subject matter associations. All these activities are related to her specific content area: « *j'ai suivi la formation à … puis ca m'as aidé beaucoup*. » She admits to being interested in learning more about teaching issues, in particular for reading

materials related to teaching. She has consulted a brochure published by the Quebec order on teaching students and suggests this was an invaluable source of information.

All three participants rely primarily on informal and experiential learning to become clinical educators. The workplace as the main learning environment is a common theme. The three educators learned to teach as they taught students. “We are always learning,” Laurie suggests. “We’re always changing and developing.” Liza adds that just as students learn to be professionals by working in the hospital laboratory, she too has learned to be a clinical educator through her work teaching: “I learn by working with students in the same way as they learn from doing tests. Sometimes I make mistakes but I learn from them just like students learn from the mistakes they make when doing their work.” Louise discusses how she learned to teach by trial and error: “I learned by trying different things and seeing how they work. Sometimes they do and sometimes they don't.” She has learned through “trial and error.”

Being a clinical educator

All three participants are dedicated to their instructional roles and viewed themselves as teachers whose job is to provide technical knowledge and practical skills to future laboratory professionals. None of the educators could easily separate their teaching roles from their roles as practitioners. Laurie discusses how teaching is part of her job as a quality management coordinator. Liza sees herself as a medical technologist who is also a clinical educator. Louise describes herself as a medical technologist who teaches students and trains staff. Being a healthcare professional and being a clinical educator are connected and inform one another.

Preparing for teaching

Clinical educators in medical technology prepare for students in a variety of ways. Two of three clinical educators have teaching plans. Laurie has a detailed program and teaching manual that includes schedules, policies, procedures, training checklists and department evaluation forms. Liza has a general plan and teaching manual but it is not as detailed as Laurie's. It includes teaching activities but not strategies or assessments of these activities. Louise admits to not having a teaching plan but during the discussions, she mentions a number of items that resemble a basic teaching plan, albeit in her mind and not documented. She also expresses interest in devising a teaching program. Although Louise does not have a detailed plan she does have a general plan in mind when she teaches. In all cases, participants' plans begin with basic techniques and tasks and then progress through to more complex techniques and tasks.

Teaching activities

Two of the three clinical educators prepare samples or have students redo tests that were already done. This is particularly important for Laurie and Liza, as patient samples may not be available for student practice. As a result, both these educators will make available samples specifically for student practice. Louise encourages students to repeat tests she has already performed. For all three participants it is crucial that students work on "real samples" and learn through actual practice and not observation. In addition, Laurie and Liza also have space and resources set aside for students to use. Laurie, in particular, has equipment set aside for student use.

All three participants have similar views on the responsibilities of laboratory clinical educators. They instruct students to develop the skills required of a laboratory

technologist. They also help students apply their knowledge to practical situations, such as problem solving, in an effort to bridge the theory to practice gap. Furthermore, they observe students as they practice and provide feedback as students throughout the placement. Finally, the participants assess student performance. Throughout each placement, clinical educators in medical technology also work in assigned areas.

All three educators begin teaching with basic techniques and then build "layers of complexity" as students gain competence. Laurie discusses organizing activities from the "basics" to "complex and specialized." Liza encourages students to first develop "basic skills" in her laboratory specialty before they work on "more complex" patient cases. Louise describes "putting layers over layers" from basic to more complicated activities as students gain confidence.

Active teaching strategies

Clinical educators in medical laboratories use a variety of teaching methods to ensure that students learn to be professionals. Laurie asks students questions to ensure they "understand … the principles and the flow of the specimens." She also observes them as they practice their techniques and provides feedback on their performance. This was evident both in the interviews and during the observation. Liza models technical skills and encourages students to repeat techniques until they master them. For Liza, students are expected to obtain the same results: « *je le refaire, puis je les fais refaire* » [TR. I analyze the tests and then students repeat them]. Liza also provides students with extensive verbal feedback, « *toujours faire des commentaires verbales*. » Louise also encourages students to practice their technical skills on samples she has completed

herself. Throughout the clinical placement, she gives feedback because students “they need to know what they are doing right and what they're doing wrong.”

Clinical educators adapt their training to student needs in particular when students have difficulties. Laurie admits to having a flexible schedule because not all students are able to perform at the same level. “Everybody has their own talents,” she says, and she “modifies the teaching” to ensure that students accomplish what they are expected to complete. Liza adapts her teaching program to students with difficulty and has made certain changes to her program because of student requests. For example, she has increased the amount of time students spend on the automated analyzer. Louise adapts the training to students’ abilities and interests. « *Chaque personne est différente*, » she admits. To accommodate these differences, Louise changes her pace of teaching if students misunderstood instructions or if they require additional information.

All three clinical educators stress the importance of problem solving and critical thinking. Laurie stresses that solving problems is crucial to professionalism and has students actually solving problems both of a technical and patient-based nature. Liza provides students with complicated cases “because in school they only discuss them. Here we actually work on them.” To this end, she schedules a week for problems related to patient cases, equipment and reagents. Liza encourages students to repeat tests until their final results match with that of the department staff who first performed the tests. Both Laurie and Liza ask extensive questions and review what students do at each step to ensure they understand what can go wrong and what they can do to resolve problems they encounter. Louise instructs students to think about what can happen when protocols are

not followed but she does not mention whether she allows them to make mistakes or how she instructs students to resolve problems they encounter.

Only Laurie discusses using alternating strategies to ensure that students are following her train of thought. She describes discussing issues followed by having students perform a task, followed by other activities. She feels this is important in order to keep students "awake and alert." These techniques were some of those she learned during a teaching session at an association symposium.

Clinical educators also assess whether students have met the clinical objectives. All three participants discuss the importance of evaluating students and of providing "lots of comments", both verbal and written in their evaluation forms. Students who perform well are encouraged to meet with the department head for possible employment.

The importance of clinical education

All three participants discuss the importance of their work as clinical educators in the development of laboratory professionals. For Laurie, it is an important part of the quality of the services her department dispenses. In addition, students are the "future" of the medical laboratory profession and she treats them as though they were "new employees." For Liza, students are potential future colleagues. As a result, she is particularly concerned that they learn to work in a team with other staff members. She also believes it important that students learn to enjoy their work as medical technologists, « *essayer de les faire aimer ce travail*. » For Louise, students are entry-level professionals who should be able to "function independently" in the laboratory. To this end, Louise expects a high level of professionalism.

An interesting theme arises when the medical technologists describe how they see themselves. All three participants describe their initial fears teaching students but with time, each has become comfortable in her role. Laurie discusses how teaching students has led to her becoming "more patient" and a more effective teacher. Liza reveals that she is more confident and self-assured since she began to teach: « *ca m'a aidé beaucoup au niveau d'assurance personnelle*. » She now takes great pleasure in sharing her knowledge and abilities: « *Je trouve ca gratifiant … pas juste d'avoir des connaissances … mais d'être capable de transmettre a d'autres, de les donner le gout de faire ce travail ici. »* Louise discusses being more confident in what she does: « *J'ai plus d'assurance aussi dans ce que je fais*. » In addition, she is now more comfortable teaching students, no longer "scared" and "nervous" but *« certainement plus confortable*. »

Of the three educator participants, only Laurie regularly reflected on her training program and on student performance. She also asked students to share their thoughts about their clinical rotation and reviewed their "suggestions for improvement." She uses student ideas and her own reflections as a means to improve her teaching program. Liza makes mental notes of ideas she has throughout the placements and she tries to make changes to her training program but often lacks the time to do so.

Teamwork is another important professional skill and one that is often not stressed in the academic institution. Unlike the classroom, there is no end to work in the medical laboratory. There is always something to do, especially since most laboratories are open 24 hours a day. Technologists often have to pass over their work to a colleague. As a result, it is important that students learn to communicate effectively and organize their work in such a way so that anyone can take over when they leave at the end of their

shift. Louise encourages students to help staff whenever possible. Even if they are only able to do a few tasks, every little bit helps staff to "concentrate on something else."

Becoming a clinical educator as a medical laboratory technologist is a time-consuming process that involves both personal and professional growth and development. The role is complex and often stressful yet rewarding both for the clinical educators who learn new skills and for students who learn what it means to be a healthcare professional in an allied health field.

CHAPTER 5: DESCRIPTIVE FINDINGS OF CLINICAL EDUCATORS IN THE RESPIRATORY THERAPY PROFESSION

This chapter examines the experiences of clinical educators in the respiratory therapy profession. Like the previous chapter, I begin with an overview of the roles, functions, and education of respiratory therapists. Then, I discuss clinical education in respiratory therapy at the research site. Next, I profile both of the clinical educators who participated in the study. I close the chapter by developing an emerging profile of clinical educators in the respiratory therapy profession.

About Respiratory Therapists

As professionals who are integral to healthcare, respiratory therapists play an essential role in the health care system by monitoring and treating patients who have cardiopulmonary problems. According to an information pamphlet published by the Michener Institute (www.michener.ca), rising levels of pollution, an increasingly older population, and better methods used to treat, monitor and prevent heart and lung diseases have led to an increased need for respiratory therapy services in healthcare institutions, in particular hospitals. When patients have difficulty breathing because of serious heart and lung diseases or trauma, they require diagnostic tests, assessments and therapy. Some of the therapies that respiratory professionals provide include the administration of oxygen and other medications, and managing the airway to assist breathing. Patients who have serious problems breathing may require a mechanical ventilator or other breathing apparatus. Respiratory therapists set up and maintain these mechanical ventilators as well as other life support equipment.

According to the Canadian Institute for Health Information (2007), respiratory therapists work primarily in hospitals. They also work in home care, clinics, teaching, research, rehabilitation and diagnostic clinics, and sleep-disorder laboratories. Some also work in the private sector for medical equipment companies and in sales. A number continue to attain additional certification to specialize in the use and care of heart-lung bypass instruments in operating rooms.

The education of respiratory therapists is usually a two or three-year program based primarily at a community college or technical school. There are 21 colleges and technical institutes across Canada and two universities that offer the education program (CIHI, 2007). The programs in Quebec are known as the Respiratory and Anaesthesia Technology program. Specialty areas within respiratory therapy include pulmonary function testing, critical care – that is, intensive care units and coronary care units – anesthesia in operating rooms, and neonatal and pediatric respiratory care (www.vaniercollege.qc.ca/respiratory-anaesthesia). Graduation leads to certification by the Canadian Society of Respiratory Therapists (CSRT) through a national certification examination. There are also a number of certificate and postgraduate programs through colleges and universities, although not in Quebec. Some of these programs include certification in clinical perfusion and coronary care (www.michener.com).

Like all healthcare professionals, the education of respiratory therapists is a two-part curriculum. In the classroom, students acquire a broad theoretical knowledge of the profession and complement this knowledge with specific skills developed and practiced in laboratory sessions. In clinically based learning, students link theoretical knowledge and skills acquired in the classroom and labs with actual practice in the field through

closely supervised practicum in a healthcare institution. Both parts of the curriculum focus on developing profession-specific knowledge and skills. As well, education programs stress interpersonal competencies, such as soft skills, as respiratory therapists have to interact with other healthcare professionals, students, and patients (Ministère de l'éducation du Québec (MEQ), 2000).

Clinical Education in Respiratory Therapy at the Research Site

This section provides a portrait of clinical education in respiratory therapy at the research site. It begins with a general description of the Department of Respiratory Therapy and its approach to clinical education.

About Respiratory Therapy at the Research Site

At the research site, the department manager informed me that there are approximately 60 respiratory therapists working in the institution. These professionals work in three main areas: anesthesia and adult intensive care, pediatric services, and the pulmonary function laboratory. The division of anesthesia includes the operating room, the intensive care units, and surgical units. Here therapists manage and operate different ventilators and respiratory aids used on patients. In the operating room, they assist physicians in anaesthetizing patients undergoing surgery. In the pediatric division, therapists work in the neonatal intensive care unit as well as in follow-up clinics. In specialized laboratories such as the pulmonary function laboratory, they perform breathing tests, stress tests, sleep studies, and occasionally participate in research. There is also one respiratory therapist available at all times as part of the cardio-resuscitation team, commonly known as the code blue team, that responds whenever a patient is in

crisis. In addition, there is one respiratory therapist on call to emergency services, should a patient require respiratory care in the emergency department.

The academic institution typically provides the clinical objectives and the evaluation forms for the clinical placement. These clinical objectives are organized by competency and include tasks, standards and conditions for their attainment. The Ministry of Education in collaboration with the national certification association (CSRT) develops these. Academic institutions also provide guidelines and criteria for the evaluation of the objectives and criteria to determine student competency. Clinical educators use these to assess student competency and to grade students.

Clinical Education at the Research Site

Clinical education placements generally take place during the last year of the education program. Each rotation – anesthesia, pulmonary function testing, critical care, pediatric respiratory care, and home care – usually takes place at different institutions. The research site has students in each of the specialty areas except home care, which is conducted at another institution. According to one of the research participants, the length of the rotations in each specialty area differs, for example students spend nine weeks in anesthesia and eight weeks in pediatric respiratory care. Students are at the healthcare institution four days and attend classroom sessions the fifth day of each week.

After graduation from their education program, students can write national certification examinations. Then, like all healthcare professionals, respiratory therapists have to also be licensed to practice in their province. Individuals who wish to practice in the profession must apply for licensing after graduation and maintain their license throughout their working career. This license requires professionals to participate in a

required amount of continuing education on an annual basis (www.opiq.ca).

In addition to the national certification body (CSRT) and the licensing body (OPIQ), there are a number of subject-based associations that offer members access to educational materials and journals. Some of these organizations include the Canadian Board for Respiratory Therapy and the American Association for Respiratory Care. Membership in these associations is voluntary.

Participant Sketches

This section describes each of the two respiratory therapists who participated in this study. It specifically profiles Rita and Rebecca, each of who act as clinical educators in different sections of the department. Each profile considers the participants' activities as a respiratory therapist, their work as a clinical educator, and their reflections on clinical education.

Profile 1 of a Clinical Educator in Respiratory Therapy: Rita

For Rita, being a clinical educator is a growing experience, both personally and professionally. "It's been a growing experience. I've become … maybe more mature … I keep calm in situations, ensuring that I listen, ensuring that I am getting through to the RTs, you know. There is a lot of being unselfish and not looking for glory or looking for this. It's really humbling, unselfish, and at the same time growing" (Rita, I-137). For Rita, being a clinical educator means being professional at all times, being prepared, and working to the standards expected of a respiratory therapist.

Rita as a Respiratory Therapist

Rita has worked as a respiratory therapist for 14 years. When she first began working in the hospital, she specialized in anesthesia, working in the operating room and the intensive care unit (ICU). Two years into this position, she became the clinical instructor for anesthesia (Rita, I-24). For the last six years, she has had the position of clinical educator. Her actual title is respiratory therapy education consultant (Rita, I-8). This was a new position and before her, there was no respiratory therapy clinical educator in the hospital. In fact, Rita suggests that even when she began in this position, there was no one in "my position in respiratory therapy in Quebec. So it was brand new and I had to find my way around and more or less define my position" (Rita, I-25).

As clinical educator, Rita is "responsible for organizing continuing education for respiratory therapists" (Rita, I-13). She also writes and revises departmental policies and procedures, making "any revisions of procedures or if there is any new procedure that we're doing" (Rita, I-14). Some of these are interdisciplinary in nature, for example those that involve patient care in the intensive care unit (Rita, I-15). As a result, Rita also trains other healthcare professionals such as nurses in these new procedures. Essentially, she "organizes practical sessions for complex procedures" (Rita, I-16).

One of these complex procedures involves the transport of critically ill patients to the Hospital from rural areas. This type of policy is crucial because "transporting a critically ill patient is a high-risk procedure." I use this excerpt to illustrate the complexity of her responsibilities. "In the transport of a patient, you have an RT [respiratory therapist], a nurse, an orderly and sometimes a physician." Rita collaborated with two nurses and a physician for this procedure: "I was the RT representative and

reported back to [department manager].” Once the policy was created, an implementation plan was then developed. When complete, revisions were made based on feedback from the professionals who were trained. (Rita, I-22).

Rita is also responsible for a number of other tasks. They include: organizing “the orientation of new RTs, competency evaluations, organizing in-service [sessions], and working on short term projects.” She also conducts research when she “audits charts and collects data about the impact of new processes” and presents to the Hospital community and at respiratory conferences. In addition, Rita participates in multidisciplinary rounds and provides “teaching to nurses and residents” (Rita, I-26).

As a clinical educator, Rita also develops and maintains the student training program. The department has two clinical instructors who train students and a number of preceptors who orient new staff. Rita developed the training programs for both groups and oversees their activities. She conducts regular meetings with students and spends time teaching them but delegates most areas to the clinical instructors, in particular when the instructors are in the operating room or with patients in the ICU (Rita, I-35).

Rita conducted her anesthesia placement in the department she currently works in. She “follow[ed] a respiratory therapist who showed me what to do and we were expected to learn” (Rita, I-52). She had a similar experience in other hospitals. Essentially, students observed their instructors. One problem with this system, Rita felt, was the lack of consistency between instructors: “When there are too many different trainers, we [students] would complain of being shown too many different ways of doing the same task. Everyone had their own way of doing things and [this made it] difficult [to follow]” (Rita, I-59). This often led to confusion and ambiguity.

Her main influences when she began to teach were a former teacher at another hospital and a surgeon where she currently works. “In other hospitals [during her clinical rotation], in respiratory, actually I had a good teacher. … He was very very good at explaining things so that you would understand why you were doing something. So that fit very well with me because I have a hard time just doing something as a robot versus doing something because it needs to be done” (Rita, I-149). Understanding why professionals do things, the theory behind practice is important for Rita.

Rita relates that she did not learn very much from her instructor where she currently works but learned a great deal from a surgeon. The instructor would always be: “quizzing you, quizzing you, trying to find out what you know. And if you didn’t know it, you had to go back and learn and review it and come back and tell her. So I found it, sometimes … they would say, ‘No you need to do this.’ And then I would question, ‘Why am I doing this?’ ” As a result, she would often look to an anesthetist in the department. “It was great because they [physicians] are a wealth of knowledge … and they have that experience because they have been teaching residents. I learned a lot from them versus the RT I was with. I would look to the anesthetist and he would say, ‘No, I don’t want you to do that.’ And then [he] would explain what needed to be done. And then OK I would understand. So … as a student, I learned a lot more from the anesthetist [than from the respiratory instructor]” (Rita, I-147).

These early experiences influenced how she teaches. Her approach is more hands-on and interactive than it was when she was a student. In addition, it is more organized and consistent across different instructors. She also has training checklists and instructors are taught how to teach and how to evaluate (Rita, I-61). Since everyone is now using the

same instructional and evaluation methods, the training is more consistent throughout the department than it was when she was a student.

When Rita first began as a clinical educator, she relied on her experiences as a student and a novice professional. In “the beginning I had to draw on my experiences.” With time, she changed “the way I do things to get some sort of success. So now what I am trying to do is supplement that with actual tools [received] from the [respiratory therapy] association” (Rita, I-168). Regular reflection “on how the sessions went,” what she would do next time, and what she would not are also important (Rita, I-119).

Rita feels that all her responsibilities are equally important, notably those involving the training and development of therapists. During my first visit to the respiratory therapy department, Rita suggested that respiratory therapists must “continue to develop and be active members of the respiratory care team, not outsiders who merely assist physicians and nurses.” This is important because respiratory therapists are constantly experiencing changes as new equipment, such as ventilators, are becoming more complex (FN-1).

How Rita Approaches Clinical Education

There are two students in each rotation at the healthcare institution. Rita suggests that she would not be able to train more than two students at a time: “The most I would want to do is two students to myself.” When she conducts training sessions with staff, she also has only two staff members at a time. (Rita, I-112) She wants to ensure that each trainee gets sufficient practice on the simulators and has the chance to ask questions or review the procedure. When asked why this is important, Rita responded: “RTs are very visual and hands-on. They learn a lot more when they’re hands-on. As well … at a couple

of the conferences I attended and a couple of the simulation sessions that I participated in, I found it very very helpful and very stimulating. If I was to sit and do this on a powerpoint presentation, I would find it boring. And I am sure that the retention would be like this [gestures very little] versus if I have them actually do it" (Rita, I-111).

Students are in the anesthesia placement for nine weeks. Usually there are two students in each placement. The training includes "a powerpoint presentation, case studies, role playing and discussions. Some of the items covered in the workshop are principles of adult learning, the one-minute preceptor, techniques of evaluation and constructive feedback. The case scenario between a student and a preceptor were played out in the training session and so one person would be the student and another preceptor. We would discuss how you would resolve a conflict resolution" (Rita, I-47).

Rita takes the time to prepare everything for them to ensure that training goes smoothly: "Things must go smoothly otherwise people will not learn and they won't be able to do their jobs properly" (Rita, I-170). To ensure that everything is ready, she developed a pre-training checklist to verify that nothing has been omitted or inadvertently forgotten (Rita, FN-3).

There is a master schedule for training that Rita devised in collaboration with the anesthesia clinical instructor. She also has a checklist of tasks that she must complete before training begins. These include preparing documents and checking the simulators that will be used in the training. "I take the mannequins and all the equipment out. I have a copy of the policy and procedures. So when the trainee comes, I can say, 'ok we're going to start'." (Rita, I-109) In addition, Rita prepares all the training checklists and daily evaluation sheets that instructors are expected to complete.

Once the simulators are set up and ready to use, Rita instructs students on procedures that describe how to set up and maintain the equipment used in anesthesia. Rita uses her training checklists and observation guides as training resources. "It is important they know the individual steps in what they have to do and also what I will be checking." Then she encourages students to practice what she has done, all the while observing what they do and providing feedback on their progress. Then she makes note of what they accomplished and where they had difficulties. Students are encouraged to practice until they feel comfortable. Once the session is complete, the students then meet with the clinical instructor who reviews the checklist and observation guide and follows-through with the same procedure but now on real patients and not mannequins or simulators. "Or students may watch a professional work on a patient and then do it themselves. It is important that students understand the steps involved in a task in detail and to put them all together before they actually go to a patient. They have practiced the steps and then they apply them with real patients" (Rita, I-165).

All the steps described above were noted during the observation. Rita and her colleague had the checklist and the observation guides ready for the training session. They also had a copy of the procedure available and a tip sheet for staff. First, they set up the equipment – a new ventilator – to make sure it functioned properly. Then they took it apart before the first trainee arrived. They conducted a brief training session that was a refresher on setting up the equipment. The trainee was then asked to put the equipment together and verify that its functioning. Throughout the session whenever the trainee had difficulties, Rita would ask questions and give tips to help the trainee recall the

information or verify it against the tip sheet. In addition, Rita took notes and completed the observation guide and training checklist (Rita, O).

Some of the training conducted in the department of respiratory therapy is done formally, in particular when the session involves [various equipment], "We sit down and do formal training. ... I try to do a simulation as much as I can when they're first trying it out." (Rita, I-80) This formal training is important because students may not have been exposed to the specific equipment used in the healthcare institution or they may not have had sufficient practice with the equipment. During a visit to the intensive care unit, Rita informed me that since many of the patients are critically ill, the equipment – in particular, ventilators – must be set up quickly as patients' airway may be obstructed. As a result, therapists may only have a few minutes to set up the equipment properly (Rita, FN-5). This message was evident during the observation where therapists were being timed to set up the new ventilation system.

However, most of the training is done informally: "Most is informal, watch me then try it yourself, in the workplace as work is ongoing" (Rita, I-84). After the formal session is complete, students are then placed with the clinical instructor on the wards or in the operating room. Here, they are able to practice their technical skills using actual equipment and with patients. The clinical instructor shows them what to do, then either has students observe or perform the task. The instructor is also expected to follow the training checklist developed for each task and complete the daily evaluation forms. These Rita then reviews regularly.

In order to learn how to best develop the clinical education program for students and training program for staff, Rita participates in a number of formal preparatory

activities. Of particular importance are Canadian and the American respiratory therapy conferences. The Canadian association provides "leadership and educator sessions. A session on simulations for RTs working at the bedside" was particularly useful. Here she learned "simple ways of simulating a task" (Rita, I-65). She has applied much of what she learned here into her own simulation sessions, with both students and staff.

At American association conference sessions, Rita learned "to develop the preceptor training program." The sessions she attended "dealt with feedback, conflict resolution, effective communication, and evaluation" (Rita, I-54). When she participated in these sessions, she realized similar type sessions would be useful for both preceptors and clinical instructors in her department. She wanted the instructors to enable student development and therefore organized practice teaching scenarios. "I would do a case scenario between a student and a instructor for the day and then we played it out in the training session. And so one person would be the student and another the instructor." She found these role-play sessions to be so useful, she developed similar sessions for preceptors, or trainers of new staff. The goal of these sessions is to develop trainers to improve communication, feedback, and to resolve training problems. (Rita, I-47)

Participation in American association sessions on training evaluation led Rita to adapt templates into evaluation tools. At one session, she reviewed training checklists and evaluation rubrics, organized by task. She was then provided with "templates and a whole package on how to do orientation and competency assessment." Rita shared these with her manager and together they decided that these would be useful in their department. They "purchased the package and then started using the tools to structure our orientation" (Rita, I-55). The new system was now quite different from that in the past, where: "the

person came, they were given a binder, they read through everything, and then told, ‘OK start working’.” (Rita, I-61)

Rita then adapted training checklists for staff training. Staff readily “embraced the idea of having a training checklist because it provided them with guidelines for teaching” (Rita, I-67). A cursory examination of a sample of the training checklists underlined their level of detail, identifying all the steps involved in accomplishing a specific task (Rita, D-1). The sample scrutinized was divided into several sections: general information about the trainer and trainee and date of training, the goal of the task, the different steps involved in the procedure, a comment section, and a place for signatures. The different steps included two columns, one for accomplished and another entitled “not done.” Trainers check off items on the checklist during training sessions. Included on the checklists were a required reading list, for example the policy or procedure in question. The same checklist was used for both student and staff teaching.

Rita also learned to develop and created a daily evaluation tool. She adapted the tool provided by the American association after several trials. “After reviewing how the orientation went, we modified the information a couple of times to get what we needed” (Rita, I-55). A similar evaluation tool is used for both student teaching and staff orientation. A cursory examination of a sample of the evaluation tool identified five general areas: Patient interaction and evaluation, Equipment setup, Procedures, Professionalism, and General performance. Although staff is graded along a scheme from 1 (unacceptable) to 4 (no action required), the student version had only two items: “acceptable” and “needs improvement.” The purpose of this tool is to “track performance of trainees” (Rita, D-2). All trainers are required to complete these daily evaluation tools.

Perhaps the more important way Rita learned to become a clinical educator has been through informal learning. She speaks at length about networking with other professionals who teach. “Now, because now you’re starting to see a lot more clinical educators … I can network with them. … ‘How do you do this? What do you do when you have this problem?’ ” Even though they may have different job titles, collaborating with them is invaluable (Rita, I-65).

Rita also learns from regularly reading articles on teaching and on respiratory content areas. “I do read certain articles that give you ideas, how to implement things, how to train.” These she values and tries to apply in her teaching. Her reading in content areas has also led to her development as a therapist. For example, Rita was enthusiastic about an article that described the implementation of a new procedure that she then used in her department: “I actually found an article [that described] how they implemented it, how they gathered quality data in the initial phase, how they presented it and how they revised after. So I kind of mirrored that.” (Rita, I-106) She is currently working on presenting her results at a Canadian association meeting.

Rita also learns by working and through experience. She uses her experiences as a student and as a respiratory therapist to learn to be a clinical educator. I had found the observation of her teaching to be very interactive and I wanted to understand why she chose to make it so. In an interview held after the observation, I asked Rita how she had developed her training program:

> “I think it was trial and error. Because there were a couple of times that I started off where I would queue a lot of stuff and then the RT would be there and say ‘uh huh, yes, I understand.’ And if you ask them to do it, then you realize they don’t

understand what you're saying or what you were doing. That's when I decided that, instead of me showing them first, let them show me and then we can make it interactive." (Rita, I-144)

As a result of the reactions of staff while training was underway, Rita decided to modify her teaching strategies. She adds that interacting with her colleagues "also changed the way I do things to get some sort of success. So now what I am trying to do is supplement that with actual tools from the association" (Rita, I-168).

Rita's Reflections on Clinical Education

For Rita, the purpose of clinical education is for students to "graduate as an RT … [They] are supposed to function in the unit. So as a student what you are supposed to be doing is getting familiar with the institution's policies and procedures" (Rita, I-164). By the end of the clinical rotation, students are expected to "function as a professional" (Rita, I-165). Furthermore, the role of those who teach is to develop students and staff to the point where they can function independently as respiratory therapists. "They [students and staff] must know intuitively what to do. They have the policy and procedure but there may not be time to consult it if they don't know where to go to find the information. And what happens when the unknown occurs? How will they proceed? They need to be able to think on their feet, solve problems as they arise" (Rita, I-180).

For Rita, clinical education is important because it is her way of enhancing the role of respiratory therapists. She feels that respiratory therapists are not always seen as important professionals and are often confused with nurses. She feels the most important aspect of her job is the development of respiratory therapists. Clinical education, Rita says, is "one way of me giving back to the profession in terms of … helping to define the

role of the RT. That is, there were task and procedures we were not doing before that we are now. Also bringing new ideas, bringing new equipment, bringing new processes to the team. It's important because with all the technological advances, you have to keep yourself and the RTs up to date, otherwise they will be left behind" (Rita, I-31).

Despite the importance of her role, Rita acknowledges she encounters a number of challenges as a clinical educator. She has a number of different responsibilities and has difficulty finding the time to complete everything. Rita asks, "how I am going to juggle all the tasks I have to accomplish" (Rita, I-27). To alleviate her load as she takes on more duties, she finds that she has gradually begun "to delegate much of the student training to the clinical instructors" (Rita, I-40).

In the same way, Rita has begun to delegate the orientation of new staff to other respiratory therapists who act as preceptors. "I realized that … it was difficult for me to train every new RT. At times we would have three or four people starting at the same time and for us to have a fair evaluation of a new RT, it's impossible for me to be everywhere" (Rita, I-46). As a result, the department supervisor to hired a second clinical educator for pediatric respiratory care, given that it was a distinct area of practice.

Despite having time constraints, Rita believes it important to follow-up on student training and to ensure that students are learning what is expected of them. She also spends time with instructors who express difficulty with the daily evaluation forms. "These [specific competencies / tasks] are included on their daily evaluation sheet. Even though it is seems like a lot of work to fill the sheet, it is organized" and instructors only have to check off items accomplished and note any comments (Rita, I-57).

Another important challenge for Rita is the attitude of some staff, in particular "senior RTs who do not embrace change." Sometimes when she changes a procedure, "even if I have the evidence to show, the senior people will say, 'oh, what are you coming with, something new again'." She finds it frustrating to deal with people who do not see the benefit of change. However, she admits that some staff embrace change once they have been convinced of the benefit. The department encourages therapists to attend conferences and with attendance at these some staff began to realize what she was doing.

There are similarities between the training program for students and that for new staff. "There is a bit of an overlap. The difference I would say is that a student is not ultimately responsible for the patient. That is the job of the RT who is always there with the student." A new employee, on the other hand, is responsible for patient care. "It's no longer that someone is next to you making sure you do everything right." Even though there is always someone with a new staff member, the orientee is a professional and responsible. The role of the trainer of new staff is "to get the person comfortable with our policies and how we do things. With a student you're not really doing that. Students are often doing the task for the first time whereas a new orientee would have done the task as a student." Rita developed parallel programs for staff and students because what they do is similar and the expectations of each also similar (Rita, I-161).

In order to ensure that all students are properly trained, Rita observes them at work on a regular basis. This is important for hiring purposes: "We've started to go to the unit and observe how students are practicing. So then I have an idea as to should we hire this person. We've had students who have gotten A's and then they start working and they're not good practically" (Rita, I-74). Rita also observes trainers. If required, she

organizes learning sessions. She also spends time with instructors reviewing various tasks, such as how they provide feedback. To further ensure the effectiveness of the training, Rita has plans to use videotapes of a therapist doing a specific task and then asking instructors how they would evaluate this. She wants to begin with this because many trainers are hesitant to provide new staff with feedback. She often reminds staff, " 'We're not evaluating you, we're evaluating the task you are doing.' " Her goal with the video is to begin a conversation about staff evaluation. "Ok, this step was good. This step, no. What would you do then?" She feels these videos could serve as important training tools for instructors and staff (Rita, I-76).

On occasion, Rita admits to having students encountering difficulty in an area. "I had one or two like that," she says. In this case, Rita would arrange to give these students extra time and a chance to perform according to standard. If the student has a problem understanding a specific task, she stops what she is doing and tries to find another way to teach. If it is a language issue, she asks another colleague fluent in French to help (Rita, I-72). When she can, Rita thinks of another example or tries teaching in a different manner. "Sometimes they're not getting it so I give another example. … I have one example and if I need another, I ask people or I take it from the top of my head" (Rita, I-124). Rita is therefore always thinking on her feet whenever she is teaching.

Profile 2 of a Clinical Educator in Respiratory Therapy: Rebecca

For Rebecca, teaching is a rewarding experience. Teaching "makes me happy and it's rewarding at the same time when you see the outcomes. It's rewarding" (Rebecca, I-30). The most rewarding aspect is her patients in the neonatal intensive care unit (NICU): "The babies come in very sick, they are very premature, sometimes less than a pound.

And the time you spend with them and see them grow and get bigger. You nurture them and just to see them off the respirator, to see them well and smile. Just seeing everything it makes me happy inside" (Rebecca, I-31). However, there are also challenges related to teaching, leading Rebecca to describe the clinical education experience as also being a "rollercoaster" (Rebecca, I-137). "Just because it started with the training and stuff … it's always highs and lows and ups and downs. I did get a lot of that here because the unit got busy and then problems arose" (Rebecca, I-138). This section profiles Rebecca. It begins with a description of her role as a respiratory therapist, continues with a description of her work as a clinical educator, and closes with her reflections on the clinical education experience.

Rebecca as a Respiratory Therapist

Rebecca has worked as a respiratory therapist for 10 years. When she first began working in the Hospital, she was one of the respiratory therapists working in pediatric respiratory care and has always worked in this area (Rebecca, I-16). Two years into this position, she became the clinical instructor for the pediatric division (Rebecca, I-10). For the last year and a half, she has been the acting clinical educator for the pediatric division, replacing the clinical educator currently on leave (Rebecca, I-8).

As clinical educator, Rebecca is "responsible for reviewing and revising departmental policies and procedures in the NICU [neonatal intensive care unit]." She is also responsible for training students, new staff and other professionals, such as nurses (Rebecca, I-22). With the clinical educator in this division, currently on leave, Rebecca developed the training program for students. She also helped develop training checklists and daily evaluation tools specific for students in her area (Rebecca, I-17). These are the

same documents that Rita adapted from the American association for the adult division. She also trains residents in various procedures: “The doctors have to know how to do this as well” (Rebecca, I-120).

Both Rita and Rebecca work together to assess staff following the introduction of new equipment or a change in policy. “We need two people to do these assessments,” Rebecca suggests. “We set up the equipment and check to make sure it's working and then we help during the evaluation. We switch back and forth. When she is giving feedback, I take down the equipment and then when I give feedback, she takes down the equipment.” This collaboration was noted during the observation conducted for this study. I noted how they work together during the observation of staff assessment of a new type of ventilator (Rebecca, O). When Rita, for example, was suddenly paged because of a problem on a unit, Rebecca took over the evaluation of the staff member without missing a step. When Rita returned, she saw that Rebecca was reviewing the assessment with the staff, and she proceeded to take down the ventilator for the next staff member.

As with Rita, Rebecca is responsible for regular staff assessments. “We do workshops and we have refresher days where they come in and we test their skills. Even at the bedside sometimes we have checklists where we go see … [how they perform different techniques]. Are they doing everything on the checklist?” (Rebecca, I-53) When asked why they do these checks, Rebecca replied that these were “audits for certification and for patient safety.” Patients in intensive care areas are on ventilators but being on a ventilator can also lead to complications. It is therefore important that “the RTs are doing everything right to prevent anything serious from happening” (Rebecca, I-55).

As clinical educator, Rebecca is also responsible for continuing education for respiratory therapists. She participates in workshops offered by companies on the use of new equipment and then organizes sessions to share this knowledge with her colleagues: “Once I learn the information, I relay it to them right away.” (Rebecca, I-58) Rebecca also organizes in-house sessions with invited speakers: “We also get lecturers coming in. To give them different lectures, so that they [respiratory therapists] can gather information.” Many topics are content-based but, on occasion, there are sessions on more general subjects, such as handling stress or improving communication skills (Rebecca, I-56). She also facilitates a journal club where therapists read and discuss professional papers (Rebecca, I-62).

As part of her functions, Rebecca is active in a number of different areas outside the hospital. She participates in “the interview board at the college,” where she is the hospital representative. Applicants to the education program must pass an interview using questions devised by the interview board. She also meets with students during an orientation day at the healthcare institutions. Students are encouraged to “visit the hospitals. See what is involved. So that you see if this is something you want to do” (Rebecca, I-12). Prior to these visits, students often did not know what respiratory therapists did in a healthcare institution.

Rebecca is also active in both the Canadian and American associations of respiratory therapy. She regularly networks with professionals who also work in pediatric respiratory care. “If we are unsure about something, for example a ventilator mode, I will send my questions through the team [at the hospital] to the network and they will respond

in a matter of minutes" (Rebecca, I-43). For Rebecca, this network is an invaluable group with whom she learns and shares knowledge and experience.

As a student, Rebecca conducted her clinical education rotation in this hospital in the pediatric division. She went to other institutions for other clinical placements and even though she had good experiences in those other locations, Rebecca "fell in love when she came here for her rotation in NICU" (Rebecca, I-22). She then decided that this was where she wanted to work. Rebecca enjoys working with critically ill patients. Her experiences here are the driving force behind what and how she performs her work.

Rebecca discusses two important mentors who encouraged her to be a clinical teacher. One of her teachers in the respiratory therapy education program was a particularly important influence that persuaded her to continue her education. Rebecca describes her student experiences as "outstanding. I was always encouraged to continue with my studies (Rebecca, I- 67). It was also suggested that I was a natural leader. … I really enjoyed my stage here and cannot think of any bad experiences" (Rebecca, I-68). This teacher also encouraged Rebecca to work in an area that she was passionate about. "She coached me, continue with your studies, do your bachelor's, you'll be good in this. .... Focus on this area and you'll do great." As a result, Rebecca took a number of courses in "neonatal emergency" (Rebecca, I-46). Her other mentor, her "greatest mentor," is Rita, the clinical educator profiled earlier in this chapter. Rita "encourages me and gives me the chance to do what I can. I have learned a lot from her and try to do things as she would do them" (Rebecca, I-45).

In order to learn to become a clinical educator, Rebecca participates in different preparatory activities, both formal and informal. However, much of her learning to be a

clinical educator has arisen through informal means. For example, when she was first asked to replace the clinical educator for the pediatric division, Rebecca met with the acting educator to learn about her role and responsibilities. “I followed her for about a week before she left. So I did get to see her routine but then I adapted it to myself” (Rebecca, I-91). She did not want to make any major changes because she knew that this educator would return to the department.

Rebecca also reads as much as she can in her topic area. She regularly reads the journals from the respiratory therapy associations in an effort to “stay up to date as much as possible” (Rebecca, I-71). Rebecca also formed the journal club that meets monthly in the department. The purpose of this club is to review published papers. She facilitates this group of therapists by locating a research paper and sending it to the members of the club. “Everyone has to read the article. They then meet as a group and discuss what the article is saying. Someone presents. Someone chairs the club that day – we have different chairs. As much as possible, it is important to not only to relay information so that they can learn and also to share the work.” This activity serves two purposes: to share knowledge and information among the members of the team and to further develop the team, to improve patient care (Rebecca, I-62).

Rebecca also makes arrangements for staff to participate in webinars, which are live interactive conferences made available through the Internet (Oxford Dictionaries, 2014). These webinars are made available through “companies that service the equipment” that respiratory therapists use. Therapists interested in the topics meet in the department conference room to participate in these learning sessions (Rebecca, I-62).

Rebecca regularly attends the Canadian and the American respiratory therapy conferences that provide formal learning sessions and workshops for respiratory therapists. She finds the Canadian association sessions on leadership and education particularly interesting. She also attended a number of sessions on simulations. Even though the department had already been doing simulations for staff, Rebecca began to use these for student training as well (Rebecca, I-65). But most of what she learned about simulations was from Rita and she has applied much of what she learned both from Rita and from association sessions. They [the educational sessions] were great and very useful. I learned not only how to use them [simulations] but also what to do when they were not working well. There was also a session on how to read student behavior to see when they have problems and what to do" (Rebecca, I-122).

Perhaps the most important way Rebecca prepares for her roles and responsibilities is through working in the department. As clinical instructor, she learned to appreciate the importance of tracking student progress through regular completion of daily evaluation forms that Rita developed in collaboration with the neonatal clinical educator. She also learned to be a more detail-oriented instructor through the use of the training checklists. "I also learned some of the teaching strategies she [Rita] uses, such as being more interactive and encouraging students to be hands-on. I used to talk more than I do now. Now I show them, discuss with them, ask them questions to stimulate them, and watch as they practice on the simulators" (Rebecca, I-150).

How Rebecca Approaches Clinical Education

Rebecca has worked as a clinical instructor training students in the workplace for the last eight years. She teaches two students at a time four days per week, for a period of

eight weeks, during their clinical rotation (Rebecca, I-10). She developed the training program in collaboration with the clinical educator in the pediatric division. She uses the same training checklists and daily evaluation tools developed by Rita, except that they are specific for tasks performed in the pediatric division (Rebecca, I-17). Rebecca also instructs students as she performs her regular duties: "Students follow me around as I check the different equipment and see how the babies are doing. I check to makes sure that the ventilators are giving them what they need. I also follow-up the results of lab tests to make sure that the patients are stable" (Rebecca, I-18).

Rebecca collaborated with the other clinical educator, currently on leave, to devise a master schedule for training. "I teach the students about the different ventilators, how to set them up and how to check if they are working properly. The clinical educator would help if I was doing something else." Most of the training is done on simulators because it is safer for students to conduct their initial practice on mannequins and not patients (Rebecca, I-18). Because of this, Rebecca sets up the simulators to make sure they are working, before instructing students on their use.

Most students have never had any exposure to premature infants and sometimes just getting them to follow her around is difficult. Some students will even tell her: " 'I don't want to do hands-on. I can do everything else but not this'." (Rebecca, I-20) In a visit to the unit, Rebecca showed me the different mannequins they have as well as the ventilators they use for training purposes and how these ease the transition for students (Rebecca, FN-5).

Depending on the topic of the learning session, Rebecca often begins teaching sessions with powerpoint presentations to review procedures. Then she conducts

"interactive sessions so that staff and students get hands-on practice with the equipment. We get them to come in and set up [equipment] that we use and that they need to be proficient in different techniques and using different equipment" (Rebecca, I-51). As clinical educator, Rebecca develops and revises the departmental policies and procedures. "This is how we get the team to be on the same page … standardize practice" (Rebecca, I-41). After students learn to perform the tasks assigned, Rebecca asks questions or sometimes she gives them a short quiz to ensure they understand what they learned.

Rebecca also mentors clinical instructors in the department. She organizes informal discussions on teaching issues and she regularly observes instructors as they teach students: "We interact with each other. Let's say if I see that a student is not doing something properly, I will speak with her [instructor] directly. … I will discuss it with the clinical instructor, then they will go and relate it back to the student" (Rebecca, I-73). She prefers not to approach the student directly because she does not want to interfere with the instructor's approach. "I try not to step [over the instructor] … I don't like to cause any ruckus. … I am the instructor and the one who evaluates them and should be giving them [clinical instructors] feedback" (Rebecca, I-74).

Rebecca uses both formal and informal teaching methods to share the knowledge she has gained. For new procedures or equipment, she teaches students formally through lectures and workshops. She also expects students to review the material before they attend the learning sessions. However, at times students do not prepare beforehand. "For new things, yes we do do a formal training. If it's something that I think they should know, I send them home to review. They come back and they have to show me that they have reviewed. Have they grasped the concept when I ask the questions? It's a lot of

asking questions" (Rebecca, I-86). Staff, as well, is taught formally as discussed above. Rebecca also uses a number of different informal strategies when teaching, such as discussions and hands-on practice. Students also follow the clinical instructor as she goes about her daily functions. "When at the [patient's] bedside, when we do a [procedure], I make them go through each step." If the patient is stable she encourages students to observe the clinical instructor while discussing the different steps in the procedure. Then the clinical instructor observes them performing the techniques (Rebecca, I-88).

Rebecca begins her instruction with a short overview of what is different about this equipment compared to what they are already familiar with. She will ask questions in order "to link the theory they learned in school." Rebecca suggests that this is "very important." Once the instruction is complete, she then repeats the steps, now with the student doing them as noted on the training checklists. Then she encourages them to redo the process again from beginning to end. Throughout the practice, Rebecca asks questions to ensure students know what they are doing and why. Once the practice is complete, the clinical instructor reviews the training checklist with the student to see what they will do next time. Rebecca suggests, "the goal is to improvement in their techniques." The student then watches the instructor and helps her perform the same task. For some of the equipment, Rebecca also has short videos provided by the company that services it. She shows students these after they have had a chance to practice. The videos serve as "a review of what they have accomplished" (FN-5).

Rebecca also completes the training checklists and the daily evaluation sheets that Rita developed. She feels these are important to track student progress and to make sure they are learning what is intended. "If we fill these out every day it is easier to fill out the

final evaluation forms for the college. Since we track students every day, we know what their performance is like -- their strengths and their weaknesses." Even though they are time-consuming to complete, there are advantages. "I know people don't like to fill these out because it takes time but I think it saves time in the end" (Rebecca, I-38). A cursory examination of a sample of the training checklists reveals details about each task. The versions for staff and students are similar. The only difference is that students are not expected to accomplish the task on the first try but encouraged to practice until the task is mastered. The training checklist is intended as a set of guidelines for the training (Rebecca, D-1). The daily evaluation forms have four sections each with a potential grade of acceptable or needs improvement. The four sections are: *patient interaction/ evaluation and equipment set-up, procedures, professionalism and general performance* (Rebecca, D-2). These forms are also useful when providing students with "regular feedback" on their progress (Rebecca, I-39).

Rebecca believes that students need to be constantly observed and assessed. "Any wrong move and … the patient is at risk. So we have to make sure. We have to make sure because they don't have the skills. They don't have the critical thinking skills so we have to make sure that we support them and get their feedback and go from there" (Rebecca, I-76). It is the responsibility of the clinical instructor to ensure that no harm comes to patients and that students are aware of the impact of their actions.

Rebecca also feels it is also important to adapt the teaching methods to the needs of the student. For example, if the student is not performing well, she tries to probe into why this is occurring. If the student does not understand something, Rebecca tries explaining it in a different manner. "I try to see where they are having difficulties. I ask

questions. What's preventing you from completing this task? Where is it going wrong? If they say, 'Everything is fine,' then I try a different strategy. For example, I explain it differently or I remove them from the unit because sometimes pressure causes people not to be focused" (Rebecca, I-82). Perhaps the student experiencing difficulty needs to practice more. If this is the problem, Rebecca encourages them to work on the simulators for a longer period of time (Rebecca, I-83).

At times, students do not pay attention while she is teaching them. Rebecca finds this to be a problem, in particular, when she is making a presentation. When this occurs, she will change her strategy to be more interactive. "A lot of people don't like to just sit down and listen. They prefer more interactive" (Rebecca, I-133). When this occurs, Rebecca changes her approach, from lecturing to hands-on practical at the patient's bedside. "If I'm sitting down talking in an education session and I see that they're bored, I will move to the bedside right away." There are also students who prefer to get an overview of the theory before they perform the techniques. "And then the ones that need the practice, I see that and I go back and I do educational sessions before we even go to the bedside. So I have encountered both, the ones that need bedside right away and the ones that need theory first and then go to the bedside" (Rebecca, I-131).

Reacting to student cues is another way that Rebecca works to develop an effective training program. There are students who "I see that are bored with me taking baby steps. With these individuals, I jump ahead because different students have different learning patterns and so I can go faster, while others I have to take it slower. I go … I gear myself with their needs. I see how they work. I see if they're bored and just …

twiddling their thumbs … so I look at that too" (Rebecca, I-88). She will therefore change her pace when teaching as she sees student reactions to the instruction.

Rebecca's Reflections on Clinical Education

Rebecca sees students as the future of the profession. It is therefore important to train them well so they will be able to function as professionals. "Students are the future and they must be encouraged to learn as much as they can. This is how they will become professionals. Part of this means responding with a moment's notice and doing our job as best we can" (Rebecca, I-80). To enable this development, Rebecca's student training program focuses not only on technical issues, but also on theoretical applications and professionalism. As they are the future, Rebecca also encourages students to attend the continuing education sessions offered in the department. "We want them to get exposed to that information while they are here as students, even before they come here as workers. It is better for them. The more they see, the more it will stay with them" (Rebecca, I-78).

Clinical education, for Rebecca, is a way to learn as much as possible and to share her knowledge with colleagues. It is also intended to improve practice and to develop professionally. It is important to "share the information that I have learned with others. Because looking around I do see like … areas where people are lacking and I do like to help. … I want to go help and take initiative to get things done properly." She adds that her goal is: "To improve whatever is being done at the bedside or wherever it is. I like to see people strengthen themselves, get better. … I want to share with everyone and by teaching them … it is a great way to share that information" (Rebecca, I-28).

When asked to explain how what she does links with what she believes about clinical education, Rebecca replies: "Clinical education is … getting new information about what is going on outside," in other institutions. They look to "what other centers are doing … to improve patient care … what's new for [equipment] and ventilators." In addition, the clinical educators examine what the research says about their practice, for example: "what are the papers and the research studies showing?" Once they have gathered all the information available about "the evidence, what the best practices are … in the other centers in Canada or America, or whatever they're doing, they then relay the information to the team so that we can become better with our standards of care. And then we go from there" (Rebecca, I-36). Clinical education, for Rebecca is not only the experience of teaching students and staff but also of sharing knowledge.

At times, students are not interested or they do not understand what they are supposed to do. "I try to repeat the steps and keep repeating until they get it. But there's a limit," Rebecca says. "This is not always easy and it takes time, something we don't have a lot of especially if we have to move to the next patient. If they're not getting it, then at some point then you know that it is not for them. Or, if there is a crash [a patient takes a sudden turn] and we have to respond" (Rebecca, I-78).

Other health professionals can also be challenging. Rebecca discusses how some physicians do not follow the protocols developed by the department. They may have conducted their training in another institution or even another country, such as the United States, and are used to working with the protocols of the other institutions they worked in. Even when reminded that "we don't do that here, some will still insist on using what they are familiar with. If there is an issue with it [the department protocol] and if you

don't agree with it, then show me your protocol that you used before and then we can examine it. But don't just not use it.' It's frustrating because it is our policies and procedures that should be followed" (Rebecca, I-104).

One of Rebecca's most important challenges is the lack of time. There is "not enough time in a day," she suggests. The day of one of her interviews, for example, she came to see me immediately after "an in-service for the interdisciplinary team, that is nurses and respiratory therapists working in the neonatal intensive care unit (Rebecca, I-105). Right after the interview, she had a meeting with the operating room team to review the procedure for a new piece of equipment. Later that day, she also had to check on the preceptor [trainer for new staff] for the unit because of a potential problem with a new staff member. Furthermore, she had a number of documents on her desk to complete. She suggested she is always "running around from one thing to another, back and forth, and not being able to complete everything she has to do" (Rebecca, I-107).

In addition to sharing knowledge with her colleagues and working to develop continuing education activities for them, Rebecca also feels that being a clinical educator has helped in her own personal and professional development. She discusses how she had developed the leadership skills she has always wanted to have. Rebecca says,

> I had always had the need to be a leader, to be assertive and to … share the information that I have learned with others. Because looking around I do see like … areas where people are lacking and I do like to help. So like my way, my personality and things in me that I want to go help and take initiative to get things done properly. And get things done better. To improve whatever is being done at

the bedside or wherever it is. I like to see people strengthen themselves, get better. And now I am a leader, or at least I try to be. (Rebecca, I-28)

Profile of Clinical Educators in Respiratory Therapy

Two respiratory therapists volunteered for this study, both of who trained as students in the healthcare research site. They also began to work at the site shortly after graduation from the academic institution. Each works in a different area of the department, yet they both perform similar functions and have similar experiences. Table 6 below, summarizes the participants' roles as clinical educators. This section compares the research findings between the two participants as it discusses the three main areas of commonality between the two educators: characteristics related to the person, to the context in which they work, and to the process of becoming a clinical educator. Each of these is described in this section.

Personal and Professional Characteristics

There are personal and professional characteristics that are common to both clinical educators. They have both worked at the healthcare institution for a varied number of years, Rita 14 years and Rebecca 10 years. They also began their careers in a similar manner: Both worked for two years as respiratory therapists before being promoted to the position of clinical instructor. Then, they became clinical educators for the department. Although Rita has a permanent job as a clinical educator, Rebecca is replacing the educator who is on leave and plans to return to her position as clinical instructor upon her colleague's return. They have similar responsibilities and often

collaborate when training or assessing staff. Table 6 below, summarizes the main findings for each.

Multiple responsibilities

Both Rita and Rebecca have a number of similar responsibilities as clinical educators. They organize continuing education for respiratory therapists and write and revise the department policies and procedures in their respective areas. Many of the protocols they are responsible for are also interdisciplinary in nature. This is because respiratory therapists work as part of a multidisciplinary team that includes nurses and physicians, among other professionals. Both educators are responsible for the training programs for staff and students, and mentor professionals who teach new staff and students. Part of the training program entails their developing practical sessions for both staff and students. Many of these sessions involve the use of simulators. As Rebecca suggests, most of the initial training is done on simulators because it is safer for students to conduct their initial practice on mannequins and not patients.

The clinical educators in respiratory therapy are also responsible for developing and maintaining training checklists and daily evaluation forms. The training checklists are organized by task, for example for each piece of equipment or each procedure that respiratory therapists work with. Daily evaluation sheets are used to track progress in performance. Both forms are used during all training sessions, as it is important that all trainers follow the same guidelines and evaluate all trainees and students in the same manner. The content of the forms is the same for staff and students, however they differ in terms of the grading scheme.

Table 6
Respiratory therapists as clinical educators

	Rita	**Rebecca**
Years of experience as a respiratory therapist	14	10
Years of experience as a clinical educator	6	1.5
Years of experience teaching	12	8
Job title	RT education consultant	Clinical instructor
How participant became a clinical educator	Part of job	Recruited to replace educator on maternity leave
Trained as a student at work site	Yes	Yes
Number of students trained at a time	2	2
Number of clinical educators in the department	2	2
Number of weeks training per student group	9	8
Number of rotations per year	3	3
Challenges in the workplace	Time Staff reticence	Time
Words to describe experience as a clinical educator	Growing	Rollercoaster
Engagement in professional development	Yes	Yes

Respiratory therapy clinical educators also train other professionals, such as physicians and nurses. Rita, for example, developed and delivered training sessions for nurses, respiratory therapists and physicians working on the transport team. Rebecca also trains nurses, in particular if they are “not using the respirators properly or if patients are

not responding" as expected. In addition, she also trains the residents in various techniques because physicians must know these as well as therapists.

Together, the clinical educators in respiratory therapy conduct refresher courses for respiratory therapists and conduct regular competency assessments of staff. I had the opportunity to observe them together on one such assessment of staff therapists setting up a new type of ventilator. Their work at this time was seamless.

In addition to acting as clinical educators, both Rita and Rebecca are involved in various activities and committees. For example, Rita provides teaching to nurses and residents as well as respiratory therapists in anesthesia as part of an annual university-level anesthesia refresher course. Rebecca is active at the college where the respiratory therapy educational program takes place, in the interview board at the college, where she is the hospital representative.

Finally, both Rita and Rebecca are active in both the Canadian and American associations of respiratory therapy. They participate regularly in the annual association meetings and maintain contact with various professionals working in their respective divisions. Rita noted the value of networking *with them* and contacting this group to discuss problems and their resolutions. Rebecca discusses the network of professionals who also work in pediatric respiratory care with whom she shares information and with whom they consult whenever there is any question about a new piece of equipment. "For both Rita and Rebecca, this ability to network is an invaluable source of knowledge and experience.

Early professional experiences as influential

How each therapist was trained as a student was an important influence in their development as clinical educators. Rita's experiences with different instructors who had different ways of teaching led her to develop a more consistent and interactive program for students. Rebecca's love of what she does in her job led her to take her mentor's advice and take additional courses to take a leadership role as a respiratory therapist.

Both Rita and Rebecca also refer to hospital colleagues who were influential. Rita discusses how an anesthetist "would explain what needed to be done and why." This physician gave her a good foundation for her own learning and encouraged her to think through problems. Rebecca suggests that her "greatest mentor" was Rita, the clinical educator in adult anesthesia. Rita "encourages me and gives me the chance to do what I can. I have learned a lot from her and try to do things as she would do them."

The Context

The respiratory therapy workplace is an important resource for learning and development for both clinical educators. Rita and Rebecca have been encouraged by their supervisors to take on the role of clinical educator. In addition, their functions as clinical educators have facilitated their learning as professionals and educators through participation in various sessions organized by the associations of respiratory therapists.

Nevertheless, both clinical educators discuss the challenges they encounter regularly. Their main challenges include the lack of time, staff that is not compliant, and students who are unprepared or not interested in the tasks they perform. Both Rita and Rebecca discuss their lack of time to do everything they need to do. Rita laments her inability to find the time necessary to follow-up on student training and to ensure that

students are learning what is expected of them. Because student training is only one of her many responsibilities, Rita finds it difficult "to juggle all the tasks I have to accomplish." In addition, there are a number of projects that Rita would like to work on, such as staff training videos, but a lack of time has prevented her from advancing this. Rebecca also addresses her "not [having] enough time in a day to accomplish all her tasks and she feels she is always running around from one thing to another, back and forth, and not being able to complete everything" she has to do.

Both Rita and Rebecca discuss the need to follow-through on staff completion of the daily evaluation forms that track student progress because, at times, staff are reticent to complete these. In addition, sometimes they have to arrange follow-up training sessions with staff. For example, Rita conducts regular sessions on how to give feedback. This is important especially since respiratory therapists work directly with a number of professionals and with patients. Rebecca discusses how sometimes colleagues and students do not take her seriously. She does not provide a reason but it is possible that she is seen as only a temporary replacement.

Finally, both educators discuss students who either have problems in an area or are unable to focus on the instruction. Rita admits to occasionally having students who have difficulty in an area. "I had one or two like that," she says. In this case, Rita would arrange to give these students extra time and a chance to perform according to standard. If the student has a problem understanding a specific task, she will stop what she is doing and try to change how she is teaching or provide further instruction. "Sometimes they're not getting it so I give another example. … I have one example and if I need another, I ask people or I take it from the top of my head." Rebecca also feels that, at times,

students do not focus on the task at hand. They are easily "distracted" and she has "to pull them out of there. Pull them out. Sit down. Give that talk. See what's happening." At times, as well, Rebecca senses that students are not interested or they do not understand what they are supposed to do. "I try to repeat the steps and keep repeating until they get it. ... This is not always easy and it takes time, something we don't have a lot of especially if we have to move to the next patient." Rebecca suggests that sometimes these students are not making the effort they should be.

Since both Rita and Rebecca believe that their training programs help develop the future members of the profession, they acknowledge the importance of developing students to the point where they can function as professionals. This is an important theme identified by both participants. Since both Rita and Rebecca see students as the "future" of the profession, it is important that they train them to the point where they are able to "function as professionals." This entails mentoring students and their instructors, adapting the training to meet the needs of the individual student, and assessing them regularly to ensure they are meeting their objectives.

Rita discusses how clinical education is one way that she can give "back to the profession" by defining the role of the respiratory therapist. Today therapists are performing tasks they never used to in the past. In addition, she believes that therapists have an important role to play in the larger healthcare team working to ensure effective patient care. With all the technological advances, in terms of equipment and treatments, it is crucial that all professionals be up to date otherwise they will not be seen as equals alongside the other health professions. In order to be part of the healthcare team, all staff and students "must be encouraged to learn as much as they can. This is how they will

become professionals." They must be ready at "a moment's notice" to do everything they can to perform their responsibilities as well as they can. With this in mind, Rita and Rebecca facilitate a training program that focuses on technical, theoretical, and professional skills and knowledge.

The clinical education placement is seen as a recruiting tool. It is also a reason why students must learn, not only the duties of a respiratory therapist but also what it means to be a respiratory therapist, to accomplish the duties of a therapist according to standards of the profession. In the past, Rita suggests that the department encountered difficulties with some students after they were hired. Now, the clinical rotation is more strictly reviewed and students are assessed more regularly to ensure they meet the expectations of the department, in addition to the objectives set by the academic institution. In addition, the final week of the placement is used as a final test on student performance as if they were respiratory therapists. "There is patient care and how what you do will impact on the patient," Rita suggests. "This is part of what makes us professionals." Rebecca adds that it is an important task they perform. "But you know the ones who are going to grasp it in the end. I can see it … just by looking at them. Is she comfortable at the bedside? Is she comfortable doing this task? I then I go from there." Students who show potential are encouraged to apply to work in the department.

The Process of Becoming a Clinical Educator

How clinical educators prepare for their roles and responsibilities is an important theme that arises in both the interviews and observations. Both clinical educators discuss how they have grown both personally and professionally through their teaching efforts.

As a way to prepare for their roles as educators, both participants have participated in a number of formal and informal learning activities.

Both Rita and Rebecca regularly attend American and Canadian respiratory therapy conferences. These associations offer regular leadership and educator sessions. In addition, Rita learned how "to develop the preceptor training program." Much of what she learned from these sessions led her to develop similar type sessions, such as feedback and conflict resolution, for department trainers. Rebecca has also participated in a number of sessions offered by the two associations and discusses the usefulness of the package of tools they received from the American association. From them, the department received "templates and a whole package on how to do orientation and competency assessments." These are the source of the training checklists and the daily evaluation forms used by department trainers.

Perhaps the most important way the respiratory therapy clinical educators learned to become clinical educators has been through informal learning. Both Rita and Rebecca speak about how networking with other professionals who teach is particularly useful. They share knowledge and learn how other educators resolve problems. Rebecca suggests: "If we are unsure about something, for example a ventilator mode, I will send my questions through the team [at the hospital] to the network and they will respond in a matter of minutes." For both Rita and Rebecca, this network is an invaluable group with whom she learns and shares knowledge and experience. In addition, both Rita and Rebecca regularly read articles on content issues and on teaching. Rita relates that she reads "articles that give you ideas, how to implement things, how to train," issues that are invaluable. Rebecca facilitates the activities of a journal club for respiratory therapists.

She searches for interesting articles, shares them with the club members, and then the group meets to "discuss what the article is saying." For Rebecca, this activity serves two purposes: to share knowledge and information among the members of the team and to further develop the team. In addition, Rebecca also arranges for webinars, or interactive online conferences, made available through "companies that service the equipment" that respiratory therapists use. This is another example of how clinical educators both arrange for their own development as well as that of their colleagues.

Preparing to teach

Both clinical educators learn by working and through their experience. Rita suggested that much of what she learned resulted from her experiences training students when she was the clinical instructor for the anesthesia division. She notes that much of what she learned was by "trial and error." She would get cues from trainees that formal lecturing was not an effective way to teach. Consequently, she decided to make her teaching sessions more interactive.

Both Rita and Rebecca relate how colleagues have been instrumental in their development as educators. When Rita first began as a clinical educator, she relied on her own experiences as a student and as a novice professional. In "the beginning I had to draw on my experiences." With time, working with colleagues "also changed the way I do things to get some sort of success." As a result, Rita uses her experience to supplement the tools she received from the respiratory therapy association. When Rebecca was asked to replace the clinical educator for the pediatric division, she was able to meet with the educator and learn about her role and responsibilities. "I followed her for about a week

before she left. So I did get to see her routine." Furthermore, learning from her colleague led her to "adapt the training program … to myself."

Both clinical educators also discuss learning from students. As mentioned above, Rita adapts her teaching methods when students do not understand a particular issue. Teaching has also led to her own personal development. She believes she has grown both personally and professionally as a result of teaching. She has also learned to make every moment count and "turn everything into a learning experience." For Rebecca, teaching students has led to her becoming more patient and more adept at teaching. "I have learned to be more patient with students, to change how I teach depending on how they respond and to wait for them to answer my questions before going on to the next step." She has also learned to prepare herself before each presentation. "I have to prepare when … providing instruction. [I] have to think it through. Consider the details. I have to prepare for each presentation." For both Rita and Rebecca, being a clinical educator means being professional at all times, being prepared, and working to the standards expected of a respiratory therapist. It also means developing staff and students to the same level of expectations as they have for themselves.

Being a Clinical Educator

As clinical educators, both Rita and Rebecca develop and maintain the training programs in their respective divisions. They mentor staff that teach and follow-up on all training that occurs in the department. Rita and Rebecca oversee the training and ensure that students and trainees are functioning as expected. If any problems or difficulties arise, the clinical educators will adapt the program to student needs, either by changing teaching methods or by encouraging students to repeat technical skills until they are

mastered. If there is a new policy or procedure or a new piece of equipment, clinical educators also provide the training and assess competency. For the purposes of training, staff and students first learn on simulators and mannequins and clinical educators devise interactive sessions. Students and staff first learn on these before they work on real patients. This is important because most of their patients are critically ill and errors are not permissible. Students, in particular, have never worked on patients in intensive care or operating units and must therefore first learn on simulators.

Clinical educators in respiratory therapy developed their training programs as a way to "standardize practice." Rita, in particular feels it is important that the training be consistent regardless of who is training or who is learning, whether it be staff or students. This is the reason behind the training program: the educators conduct research on best practices, update or create new policies and procedures, organize in-service sessions for staff, answer questions, assess competency, and follow-through on audits of performance. The two clinical educators collaborate, in particular, to assess staff competency.

Both Rita and Rebecca developed and revised the training checklists and the daily evaluation forms for their respective divisions. Rita initially developed these for staff to use but then she and Rebecca collaborated to adapt these for student training. These documents are used as guidelines for training and for regular performance assessments. "Are they doing everything on the checklist?" Rita asks. Are they "doing everything right to prevent anything serious from happening?" All staff that trains must do so with the checklists provided for each task. Once training is complete, staff then uses the evaluation tools, on a daily basis, for formative purposes.

Teaching Activities

Like the medical technologists in the previous chapter, respiratory therapy educators use various active learning strategies such as simulations to train students. This is important as many of their patients are critically ill and most agree that students should not be learning technical skills on these patients. As a result, the department has a number of mannequins and ventilators that students can use to practice on. Before engaging in training, however, the clinical educators set these up and ensure they are functioning properly. Simulators are also used when training staff in new techniques or when refresher sessions are required.

Clinical educators also prepare schedules of activities and training checklists as well as other documents to assess performance. These help to organize the training sessions and ensure consistency regardless of who is training. They also help to track progress and make it easier to grade students when they have to evaluate their abilities. The academic institution provides the healthcare institution with competencies and final assessment forms but there are no formative evaluation forms. As a result, Rita and Rebecca have devised the training checklists and daily evaluation forms as a means to conduct regular assessment of students and to track their progress.

Both Rita and Rebecca use similar strategies when teaching. Both clinical educators use formal teaching methods such as powerpoint presentations and interactive teaching sessions with simulators to instruct students. They do this because respiratory therapists are “visual” and prefer “hands-on” learning. In addition, both Rita and Rebecca describe learning through interactive sessions as “very helpful and very stimulating” and therefore use these in their teaching. Following the instruction, the educators answer any

questions before they encourage students to practice using the simulators, one step at a time following the training checklist. Learning one step at a time is important because when “at the [patient’s] bedside, when we do a [procedure], they must go through each step, step by step, otherwise the equipment will not work properly and the patient will not improve.” The patient is always central to every procedure.

Even though the instruction that both clinical educators conduct is formal in nature, most of the training is done informally. Staff learns by working. Students learn as they follow their instructor going about their regular daily work. “Most is informal, watch me then try it yourself, in the workplace as work is ongoing,” Rita suggests. Once the instruction is complete, educators repeat the instruction, now with the student doing the same steps as noted on the training checklist. Once this practice is complete, the clinical educator shares the training checklist with the clinical instructor who then reviews it with the student to see what they will do next time. It is important that students then follow the instructor as she goes about her routine work. If required, the clinical instructor will also use the simulators to reinforce or verify student learning. Both stress the importance of continually observing and assessing students as they go about their duties. “Any wrong move and … the patient is at risk. So we have to make sure. We have to make sure because they don’t have the skills. They don’t have the critical thinking skills so we have to make sure that we support them.” Assessing students regularly and ensuring their progress is being tracked is an important responsibility because of the potential impact of therapist actions on patients’ well being.

Active teaching strategies

Rita and Rebecca both use questions as a teaching strategy to ensure that students understand not only what they have to do but also why they do it that particular way. Asking questions is also important to ensure that students are able to link the practical skills they are learning in the Hospital with “the theory they learned in school.” Even though it may seem as though it is “a lot of asking questions,” it is important that educators be able to answer: “Have they grasped the concept when I ask the questions?”

Both Rita and Rebecca discuss the importance of adapting teaching methods to the needs of their students. This means that educators must think on their feet whenever they teach students. When Rita encounters students who have difficulties she stops what she is doing and tries a different approach. For example, if she thinks there is a problem related to language comprehension, she asks another colleague, who is more fluent in French, to speak with students. If students do not understand something, she provides them another example or she explains it differently. Rebecca also tries to understand why a student is having difficulties and, if required, will “try a different strategy.” Whenever possible, educators encourage students to practice until they attain mastery.

The training program has been developed in such a way that it is flexible depending on the need. Rita has devised the training program to be “very interactive” and “hands-on.” This is because respiratory therapists prefer not to sit and listen to a lecture but to be actively learning on actual equipment and patients. As Rebecca suggests, if she is lecturing and she sees that students are bored, she “will move to the bedside right away.” If, on the other hand, students need to understand the theory behind the practical applications, Rebecca discusses theory before going to the practical. She also changes the

pace of instruction depending on students' "different learning patterns." Rebecca calls this flexibility, "gearing to their needs."

The importance of clinical education

Both Rita and Rebecca believe in the importance of clinical education in the development of professionals. Rita stresses that, by the end of the clinical rotation, students are expected to "function as a professional." In fact, they use the final week of the clinical placement to assess their performance as respiratory therapists. "This is the goal," she suggests. Rebecca, as well, treats students as though they are potential staff members. She encourages them to attend various informal sessions developed for staff because, "we want them to get exposed to that information while they are here as students, even before they come here as workers. It is better for them. The more they see, the more it will stay with them." Students are the future of the profession, Rebecca adds, and consequently must be encouraged to be involved in professional activities. "Students are the future and they must be encouraged to learn as much as they can. This is how they will become professionals."

Clinical education is also important for sharing knowledge among staff and for improving practice. For Rebecca, clinical education is a way to learn as much as possible and to share this knowledge with colleagues. It is also intended to improve practice and to develop professionals. It is important to "share the information that I have learned with others," Rebecca suggests. Learning through clinical education is also an important way to enhance the role of respiratory therapists. Rita feels that respiratory therapists are not always seen as important professionals and often confused with nurses. Through clinical education, she feels she can help "define the role of the RT. … Also bringing new ideas,

bringing new equipment, bringing new processes to the team." In addition, Rita suggests that clinical education is a way of her giving back to her profession. "It's important because with all the technological advances, you have to keep yourself and the RTs up to date, otherwise they will be left behind."

Growing personally and professionally

Both Rita and Rebecca discuss their own personal and professional development as a result of their teaching responsibilities. On a personal level, Rita suggests that an educator "cannot take things personally" and needs to develop "a lot of patience." As an educator she has also had to check her tone of voice so that students are not "offended by the way you speak." In addition, she has to "always think twice before I speak. If I see something, I would stop, I think twice; how am I going to deliver this so they will not be offended and I turn it into a learning experience. So that's what you need to learn to do." As a clinical educator, Rita has also become more mature, more patient, and more focused on how she speaks with staff and students. The experience has been "humbling," she suggests, and she has become "unselfish." For Rebecca, teaching is a rewarding experience. Teaching "makes me happy and it's rewarding at the same time when you see the outcomes." When asked what is rewarding about clinical education, Rebecca replies that patients getting better and leaving the unit to go home makes her feel good and is rewarding to watch as a professional, that she has made an impact on her patients' lives. Patients are very sick but when they improve and get off the ventilators, Rebecca feels it to be a rewarding experience.

CHAPTER 6: DESCRIPTIVE FINDINGS OF CLINICAL EDUCATORS IN THE OCCUPATIONAL THERAPY PROFESSION

This chapter examines the experiences of clinical educators in the occupational therapy profession. Like the previous two chapters, I begin with an overview of the roles, functions, and education of occupational therapists. Then, I discuss clinical education in occupational therapy at the research site. Next, I profile both of the clinical educators who participated in the study. I close the chapter by developing an emerging profile of clinical educators in the occupational therapy profession.

About Occupational Therapy

Occupational therapists help patients improve their ability to perform tasks in their daily lives and working environments. An illness or disability, whether physical or mental, may infringe on a patient's ability to feel, think or act in their daily activities (CAOT, 2007). As a result, occupational therapists work to enhance ability or to modify environmental barriers in order to facilitate the independence of patients (CIHI, 2010a). Their main areas of practice are physical health that includes general physical health and the neurological, musculoskeletal, cardiovascular and respiratory systems. Occupational therapists also work in mental health and in other several areas of practice such as palliative care, vocational rehabilitation, and health promotion.

The education programs for occupational therapy are based in universities. The entry-level requirement in Canada for occupational therapists is a master's degree. According to the Canadian Association of Occupational Therapists (2007), there are 14 university programs in rehabilitation sciences across Canada, some of which also offer a

doctoral program. Four of these university programs are located in Ontario and another four in Quebec.

Like all healthcare professionals, the education of occupational therapists is a two-part curriculum. Classroom-based learning at a university, where students acquire a broad theoretical knowledge of the profession, is complemented with specific skills developed and practiced in laboratory sessions. Then students engage in clinically based learning at a healthcare institution where students link theoretical knowledge and skills with actual practice in the field through closely supervised practicum in a healthcare institution. Both parts of the curriculum focus on developing profession-specific knowledge and skills. Students have to pass both parts of their curriculum before they can write their national certification examination, essential if they intend to practice in Canada. The Canadian Association of Occupational Therapists (CAOT) is the national association that certifies graduates from an accredited professional education program and who have passed the national certification examination.

The academic institution typically provides the clinical objectives and the evaluation forms for the clinical education component of their education, also known as clinical supervision. These clinical objectives are competency-based and include tasks, standards and conditions for their attainment. The academic institutions also provide guidelines for the evaluation of the objectives and the criteria to be used to determine student competency. Part of the responsibilities of clinical educators, known primarily in the occupational therapy profession as *clinical supervisors*, includes a regular assessment of student performance. Occupational therapists typically call this a formal supervision session. As clinical supervisors, the clinical educators supervise students, conduct regular

assessments of students, and grade students according to the criteria provided by the academic institution.

In Canada, health professionals also have to be licensed to practice in their province. After graduating from an education program, students can apply for a license to work. In Quebec, the licensing body for occupational therapists is the OEQ (*Ordre des Ergothérapeutes de Québec*), which regulates the profession and grants individuals a license to practice. This license must then be maintained throughout a therapist's working career. This license requires professionals to participate in a required amount of continuing education on an annual basis.

Clinical Education in Occupational Therapy at the Research Site

This section provides a portrait of clinical education in occupational therapy at the research site. It begins with a general description of the Department of Occupational Therapy and its two divisions. This is then followed by an examination of how clinical education is approached.

About Occupational Therapy at the Research Site

At the research site, occupational therapy has two main divisions: physical and mental health. The physical health division includes neurology and neurosurgery, cardiovascular, orthopedic, and respiratory care. The services are available for both patients who are being treated in the hospital (in-patients) and patients seen in clinics (out-patients). According to the department managers, a number of occupational therapists at the research site work in different areas, whereas a few remain in a single area. There are seven occupational therapists practicing in physical health at the research

site, all of who are full-time employees. They work on most of the units both medical and surgical. There is also one occupational therapist involved in adolescent and young adult oncology. In the mental health division, twelve occupational therapists work on the psychiatry ward and various clinics located throughout the institution. Occupational therapists in mental health also do a number of assessments, such as driving assessments for their patients. Because of the specialized care afforded long-term patients, occupational therapists in mental health do not rotate through the different areas, that is, the therapists working on the psychiatry ward do not rotate through the outpatient clinics and vice versa.

The occupational therapy managers, one for each division, informed me that the occupational therapists use different tools to identify barriers to patient involvement in various daily activities. They also help patients learn to function independently. In a visit to the department, I observed as one occupational therapist conducted an individualized session with a client with the use of a sewing machine. In another visit to the psychiatric ward, I observed an occupational therapist conduct an evaluation with a patient who was creating a piece of stained glass. The goal in both cases was to help patients achieve a certain level of functioning with tasks they regularly engaged in, in particular to those that are meaningful to them.

Clinical Education at the Research Site

All occupational therapists are expected to teach students as part of their regular duties. On average, the physical division has between six and ten students per year, each going through the different areas. The students generally come from one of the two universities in the city offering occupational therapy education programs. Occupational

therapists working in mental health take on average 16-20 students per year from both the universities that offer an occupational therapy education program. Most occupational therapists teach only one student at a time. However, students may be at different stages in their education program. Unlike the clinical education placements for technology programs that take place in the last year of the education program, the clinical rotations in the rehabilitation professions occur throughout the education program. For example, during my observations, one clinical educator had a first year student and another had a student in her last year of studies, both in the master's program.

Occasionally, an occupational therapist supervises a therapist who moved from another province or country. During the data collection phase, one participant, Paul, had one such trainee. This individual had to conduct several weeks training at the clinical site before being granted a license to practice.

Before students arrive at the healthcare institution, they send a short resume of their experience and their abilities. This is a requirement set by the academic institution and it serves as a way for students to introduce themselves to their supervisors. All three occupational therapists discussed the value of this introduction as it helped them plan more suitable activities for their students.

In addition to their regular duties with patients and students, most occupational therapists are also active in various hospital committees and in activities related to the provincial order (licensing body), the association (national certification association), or other government agencies, such as the association of mental health workers for the larger urban area.

Participant Sketches

This section describes each of the three physiotherapists who participated in the study. It specifically profiles Paul, Sophie and Sandra, the clinical educators who teach students in the department of occupational therapy. The processes used to identify fragments in interviews, observations and field notes is the same as that used in the previous two chapters. Each profile considers the participants' roles as occupational therapists in the institution, how they approach clinical education, and their reflections on clinical education.

Profile 1 of a Clinical Educator in Occupational Therapy: Paul

For Paul, the role of the occupational therapist is intimately involved in teaching. Teaching is an important part of who he is and what he does. Paul adds that it is a role that he enjoys and finds "stimulating" because he can share his knowledge with students and help prepare them for their future role as occupational therapists. Being an educator is also a role that challenges him: "It challenges me as I learn something with every student" (Paul, I-23). However, at times the challenges can be overwhelming. At times, Paul feels emotionally exhausted to the point where he feels "like I can't do it. It's draining," especially when students do not rise to the challenge (Paul, I-135). But then the next group of students is good and he feels the experience rewarding. This contrast of feeling drained and rewarded leads Paul to describe the experience of being a clinical educator as "a walk in a minefield … because you never know what's going to come out" (Paul, I-196). Teaching is simultaneously emotionally rewarding and exhausting.

This section profiles Paul. It begins with a description of Paul's role as a physiotherapist, continues with a description of his work as a clinical educator, and closes with his reflections on the clinical education experience.

Paul as an Occupational Therapist

Paul has worked as an occupational therapist at the healthcare institution for the last 13 years. Unlike all the other research participants, Paul conducted his education in the United States and worked for eight years there before he came to Canada. He has a permanent full-time position in the department where the research study was conducted. As an occupational therapist, Paul works in his specialty area, neuro-rehabilitation. Most of the patients he sees have either had a stroke, neurosurgery, multiple sclerosis, or a neurological complication subsequent to orthopedic surgery (Paul, I-4).

As an occupational therapist, Paul has a number of responsibilities. His regular work involves assessing patients who have undergone surgery or trauma that prevents them from functioning. He provides services, such as cognitive treatments, for patients who have undergone brain or spinal cord injuries. He works primarily on post surgery wards and in the recovery area. However, patients may go to other wards for full recovery before they are discharged from the hospital (Paul, I-7).

As mentioned above, Paul trained and worked in the United States. There, the system is different and patients are seen by a team of professionals that work together to ensure patients are treated in a holistic manner. When he first began to work at the current institution, Paul suggests there was no interdisciplinary team. A neurosurgeon had recently been hired and was just setting up the team. As a result, Paul found himself in a role he had not anticipated (Paul, I-27). Because of his previous experience working

within a similar service in the US, he took on the challenge of developing a similar type of team at this institution. Paul suggests that in an interdisciplinary team, each professional's work is linked with every other professional: "for an OT [occupational therapist] ... for me to do my job, the other disciplines [such as nursing] have to do their jobs." As a result, Paul often trains nurses, residents and other members of the interdisciplinary team (Paul, I-17). This interdisciplinary training takes place over two days and focuses on patients who have undergone neurosurgical procedures (Paul, I-33). When he has students, Paul encourages them to participate in these sessions as they focus on "basic knowledge" that they need to know. In addition, it is "a way for them to learn what's their role, what is expected of OT" (Paul, I-35).

In addition, Paul also reviews and develops protocols for specialized services. For example, he is currently working on developing heuristics for occupational therapists. "In OT we lack that kind of structure, thinking approach … So one of my goals is to develop that kind of algorithm or clinical pathway, particularly for ICU but also for neurosurgery patients as well." (Paul, I-43) The goal is to have all members of the neurosurgery team to work in unison for the betterment of patients.

Paul's early experiences as a student and as a professional influence what he does today. These experiences were particularly important because Paul trained in the United States where the role of an occupational therapist is different from the role at the healthcare institution he currently works in. Throughout the interviews, Paul describes his experiences, both positive and negative, and he shared how he used his experiences as learning opportunities. When a student, Paul had many "bad experiences," in particular during his clinical placement. He said that he did not want to dwell on that experience but

on what he “captured,” what he “gained from that experience. You know I had a very rough supervisor." (Paul, I-66) What was particularly difficult was that he found his supervisor to be “not respectful" (Paul, I-68). In addition, Paul had teachers who were not good instructors, not detail-oriented and not thorough in their instruction (Paul, I-69).

These experiences taught Paul a number of invaluable lessons. He vows to never, for example, correct a student in front of a patient or another professional but rather take the student aside for a discussion. Being respectful of students, patients and other professionals is important (Paul, I-72). From the teacher who was not good, Paul learned to be more thorough in his teaching: “What I got from that experience was to be very comprehensive. Like I was doing this and trying not to make any mistakes but she would always find something. But it taught me how to be so vigilant and so meticulous about my work" (Paul, I-69). Furthermore, "So it benefited me as an OT for my clinical practice and my thinking process, even though it was a bad experience. So that aspect I try to instill in my students. Hopefully, in a positive way without being so strict" (Paul, I-70).

Paul learned to become a clinical educator through both formal and informal learning activities. When Paul first arrived in Canada, he had to complete a master’s degree and many of his assignments were clinically based and encouraged him to reflect on his practice: “it was an opportunity for me to reflect on my practice as far as evidence-based [was concerned]. Many of these courses push you or ask you to reflect on your practice and what you can do, what you can contribute to your practice” (Paul, I-53). This reflection encouraged Paul to consider the role that he as an occupational therapist can take and led him to encourage the development of an interdisciplinary team where occupational therapists have a key role.

One of the competencies of an occupational therapist relates to teaching and Paul teaches staff, students and patients. As a result, the educational institution provides occupational therapists with a basic course in teaching adults as part of their education program. But, as Paul suggests, teaching patients and colleagues is very different from teaching students. The goals are different and the content of what a teacher needs to emphasize is also different. Paul suggests that teaching students is more like training staff because they learn what to do in school and then they have to apply their knowledge in the workplace. Teaching patients is not like this. Teaching in general, regardless of who is being taught, involves "assessing the audience. What is it that you're trying to transmit to them? What do you want them to know? Because you can't give everything. What do you expect them to do with that knowledge?" (Paul, I-60) Essentially what is different is the outcome of the learning, what learners do with the knowledge. Students and colleagues help patients and must understand the full impact of what they are doing for their practice and their patients, while patients need to know specifics for their own immediate betterment.

The most important way that Paul has learned to be a clinical educator is through his regular work. He suggests that he is always learning at work, in particular when he is teaching. "Well, when you're teaching you're always learning. What's working, what's not working? We learn from what we do every day. I think I've had a good experience so far" (Paul, I-74). There is always a new experience or a new situation from which one can learn about one's practice. This is the value of clinical education. In addition, Paul suggests that most of what he learned about teaching in school was theoretical and focused on tasks and practice specific to occupational therapy. It was only through

working that he learned to link the theory of occupational therapy with practical applications (Paul, I-62). Consequently, learning at work and while working is the main way that Paul learned to be a clinical educator. “When you’re teaching, you’re always learning,” Paul adds. “We learn from what we do every day” (Paul, I-74).

Paul also admits to learning from his students. The more students you teach, the more you learn to teach: “the more students you get, you reflect more on what worked the first time and what didn’t and you try to modify it” (Paul, I-81). The trick is to take the time to reflect on what you do as a clinical educator and to build on it, he suggests. He also learns how students think and considers how his thinking is aligned with what his students do. Before he enters a ward, he gives students an overview of the patients he is following. He then finds out as much as he can about any new patients. "So before we go in, that’s part of me learning how they’re thinking and they’re learning what I’m thinking. I speak loud, you know when I model the first few times I do the evaluation, so they can watch. Here I am being explicit in my critical thinking. I am doing this because … [of this patient’s condition]" (Paul, I-115).

How Paul Approaches Clinical Education

Paul usually supervises one student at a time but he may take on more than one student. In this instance, the pair of students must come from the same year of study, as it is “hard to supervise students at different levels at the same time” (Paul, I-15). He teaches four students on average each year for a period of eight to nine weeks.

Before students arrive in the department, Paul reviews their resumé and then prepares his teaching activities. He changes his expectations depending on the rotation that students are in: “it depends on which rotation they come in. [The University] tells us

what the expectations for each rotation is, so [at] stage 1 I don't expect them to perform at the same level as stage 4" (Paul, I-85). When examining the students' resumés, Paul considers his expectations of students, given patient needs, as well as student knowledge and abilities, and determines how he plans their learning activities. Then, he considers his caseload and sends students information about what they should review before coming to the Hospital. "I tell them the information they should be familiar with. Basic physiological and other information … " (Paul, I-83). It is important that students be prepared with basic knowledge before they encounter patients. "The clinical area is not the place to learn theory necessarily but to **apply** theory" (Paul, I-91). This is interesting because Paul did the same thing, that is, he sent me material to read, before conducting the observation.

Once he understands how the students think, Paul then organizes the remainder of his teaching program "around where they're at, what they're thinking. I invest a lot of time in the clinical thinking process" (Paul, I-102). Then, the rest falls into place, he suggests. The reason for the adjustment, Paul suggests, is that some students need more time to reach this stage than others. It is therefore important to make adjustments if students need them. He adds that this process "helps them [students] to see the patient from that perspective [from an OT perspective], from that profile. It makes them more effective therapists and more knowledgeable therapists" (Paul, I-126).

Paul suggests he has no formal teaching plan in place for his students. He has nothing written down; rather it is all "in my head" (Paul, I-110). This is his preference because teaching must be flexible and may change "depending on the student. Some students get it fast while others I have to break it down more." As a result, "I have to give

more theory sometimes" (Paul, I-108). This is important because understanding why is almost as important as understanding what to do. Because students learn as they go about the daily activities of an occupational therapist, most of the teaching involves unplanned activities. This is because “my day is not planned. I am pulled right and left. So I cannot predict too much. And again I modify the plan depending on the student. I get students sometimes who are very scared, very intimidated. You know. So it doesn’t work the same way. And some are more confident and they just want to go. You mean. So I need to play it by ear depending on who I am dealing with" (Paul, I-165).

When students first arrive in the department, Paul provides an orientation to the department, the Hospital, and the units he works on. In order to get a better sense of the abilities of the students, he also conducts an interview when they first arrive in the department: "So when I get a student I usually do a little interview to get a sense of where they’re at as far as their learning. I ask them: What is your learning style? Do they like to watch? Jump right into it? How do you learn?" (Paul, I-86) He then takes the responses in consideration when planning the learning activities.

Once their first days are complete, Paul assesses students’ abilities. This is an “assessment of where they are, how they learn and how they think. I can then develop my system around that, what their thinking process is.” Even though some students do not understand the reasoning behind this assessment, Paul continues to do it regularly because “I want them to … tell me what their thinking is" (Paul, I-88). For Paul, it does not matter whether what students are thinking is right or wrong. “I just want to know **why** you are thinking what you are thinking. I want to know what you know" (Paul, I-89).

During the teaching activities, Paul talks out loud to explain what he is doing. Then he asks questions to determine if students understand what he is doing and why. When students are ready to conduct their own assessments, Paul observes as they determine the patient's status. He always watches them closely because many of the patients he sees are critically ill: "I use my judgment over which ones I let them work on and which ones I watch carefully" (Paul, I-159). Throughout the placement, Paul observes students carefully and he rarely allows them to work on their own in the intensive care unit (ICU).

For Paul, the role of the occupational therapist is intimately involved in teaching. Most of the teaching he conducts is informal as he is performing his regular duties. Occasionally, Paul conducts formal teaching: "if I feel that if after a couple of weeks we are still not getting to the next level, then it is time to sit back and do some formal teaching. I've done this before where we have to go back to basic OT theory and that kind of stuff" (Paul, I-113). Paul adds that he only conducts formal teaching when required: "I do formal as needed" (Paul, I-114).

In the early days of the clinical placement, Paul focuses on basic skills that students should have learned in other clinical sites or at school. Among these skills are reviewing patient charts, conducting patient interviews, knowing how to interact with other professionals, and understanding how they are expected to function in the health care system (Paul, I-97). In addition, students learn how to take notes and write progress notes in patient charts.

During a visit to the unit with Paul, he explained how he reviews a patient's chart carefully before he assesses the patient's abilities. He first explains where to gather the

information required from the chart. This is important because some patients have large charts with information from different professionals, such as physician and nurse progress notes, and after different events such as surgery or visits from consultations. Many of these sections have invaluable information for occupational therapists. Although students may have examined patient charts in other placements, Paul does not take chances and teaches students to review charts on his units. Once this is complete, he then proceeds to ask the student questions about what how they will assess the patient, given the information they have just learned. He says he usually takes students aside for this conversation. If required, he encourages students to review the patient's chart again in order to decide on their next steps.

While the student assesses the patient's chart, Paul usually examines other patients' charts before assessing patients. This involves asking questions regarding their progress and their current abilities. If patients are scheduled to be released from Hospital, Paul asks them about their conditions at home, for example, do they have to climb stairs, what types of activities do they regularly engage in, and if they have family support. These are all important, as the goal of the assessment is to determine what a patient requires to function independently in their home. If required, he consults with other professionals, such as nursing and physiotherapy.

In addition to reviewing patient charts, interviewing patients and assessing their ability to function, Paul uses a number of other teaching strategies, such as case studies. "I do case studies … of patients that we have … on how to develop interdisciplinary care" (Paul, I-39). These are actual cases that he works on and he uses to illustrate points related to patient care. For example, he has cases of patients who are not ready for

discharge and require additional follow-up. This type of case is useful to help students think through problems they may encounter and consider what they would do in these circumstances. When required, Paul uses role-play as a teaching activity to simulate patient teaching or interviewing.

Because of the nature of his work, Paul focuses his teaching on the development of critical thinking skills. “I kind of formulate my teaching around where they’re at, what they’re thinking. I invest a lot of time in the clinical thinking process." Then, “You can always teach technical stuff … how to transfer, how to touch, how to assess … but that stuff is easy to teach”, Paul suggests. “What is hard is to know **why** I am doing this and what information I need to get out of it?” (Paul, I-104) During the observation, Paul asked the student to determine what she would do if the patient had not been able to follow the instructions given. What would her next steps be? It is important to not only assess what the patient is capable of doing but also thinking through how a patient would respond to something unexpected. Critically thinking through problems and finding solutions is crucial. The patient may be alone at home and not be able to ask for help. As a result, it is important that the therapist provide the patient with all that is required before they are discharged. As this is his main goal, Paul “formulates the [teaching] activities around that goal” (Paul, I-106). Students, he suggests, do not learn to apply these critical thinking skills until they arrive at the clinical site. They discuss various problems at school, but at the Hospital, the problems are more complex as patients often present with complicated cases, in particular the patients he works with (Paul, I-62).

Paul suggests he uses a systematic approach to teaching: "So my approach is systematic in that sense. So when it is time for them to do an eval [patient assessment],

they go read the chart, then they report on the chart. I check as well, just to know what is going on" (Paul, I-122). Paul also asks students questions based on what they learned about the patient, both before and after the evaluation. "And then they tell me what they saw. Then my questions to them are: what does that information mean to you? From the chart, what kind of profile do you have of that patient? What do you expect that patient to look like? Will your assessment help?" (Paul, I-124) It is important to know what to expect with patients before assessing them and then reviewing these after the assessment. With these questions, Paul sees if students are able to link their classroom knowledge with their clinical experience. "And then I get to see if they are starting to make that connection between what the diagnosis means. For example, a neurosurgery, in our case, if you have a stroke or a surgery or a tumor in a certain part of the brain, they need to know what that brain does, what that region of the brain does. What deficits do they expect from that. … and how they will follow-up with this patient" (Paul, I-125).

Paul's Reflections on Clinical Education

Clinical education, for Paul, is about everyone teaching and learning together. Teaching students is only part of the process. Students are learning about the role of the occupational therapist and patients are learning to function independently given their disability. Paul is continuously learning as he is teaching, as are the other professionals he works with. In addition, Paul is always developing his clinical practice in order to be a more effective therapist for his patients. Each professional has knowledge in his or her specific area. The main goal of the occupational therapist who teaches is "how to translate that information into learning" (Paul, I-62). This means ensuring that the patient

learns as much as he can to become independent, the student learns to help the patient, and Paul sees himself as the link between the student and the patient.

Paul perceives himself primarily as an occupational therapist that teaches. He teaches students and other staff who are part of the interdisciplinary team. He believes that this is important because the patients require services from all team members. “No single profession can do everything. Patients need all of us to work for them” (Paul, I-17). The goal of the clinical practicum is the development of “entry level therapists" (Paul, I-93) who can function independently in a healthcare institution.

Paul discusses a number of challenges that he experiences as a clinical educator. Most of these relate to the context in which he works. For example, he discusses how the lack of space is a major problem. He is particularly concerned with the lack of space between patient beds and how this limits what he can do to assess patients. For example, during the observation, patients watched him as he assessed other patients. In addition, there was little space between two patients to adequately determine how one patient was able to function. During a routine assessment, Paul suggested that he usually asks the patient to walk around the bed but in this case the patient would not be able to do this. As a result, Paul asked him to walk to the corridor. This was not ideal because the patient was not very steady and there was no handrail between his bed and the corridor. He stood beside the patient and asked the student to walk behind the patient with a wheelchair at the ready. Paul also asked me to walk on the other side of the patient. He felt that this would be the safest way to handle this particular situation (Paul, O).

Paul also notes challenges related to the lack of staff and equipment. The institution has increased the number of surgeries performed and this has led to an increase

in the number of patients seen by different professions, in particular those requiring rehabilitation services. Unfortunately there has not been a comparable increase in staffing. The lack of equipment, he suggests, is a problem because "we're thrown into [a] very heavy patient load without the proper equipment on how to rehab these patients. So unfortunately many of them end up long term or they don't end up where they should have because of that aspect" (Paul, I-143).

Paul also discusses a number of challenges specific to student training. One of the aspects of teaching students that Paul struggles with is student evaluation. He suggests that the forms, provided by the academic institution, are unclear: "When you read their criteria, the terms, the language is very vague and then you write whatever you think is fair. Because again, it is the same evaluation for the four internships" (Paul, I-188). In order to deal with this situation, Paul consults with his supervisor to ensure that he is assessing students properly. He also confers with the professors at the University, in particular when he encounters difficulties with students.

Paul also discusses how some students are not prepared for their role in the healthcare institution. They have difficulty linking what they do in school with what they learn in the hospital. Paul suggests that when he encounters these students he feels that he does not want to teach anymore. Paul feels that he is "investing a lot of my time. It takes a lot of time to do all of that too" (Paul, I-134). When students are not prepared, he feels that he is wasting his time because the students do not take clinical work seriously.

When Paul encounters students having difficulty he then conducts formal teaching sessions. He stresses theory because this is what distinguishes an occupational therapist from other professions. "It's your theory," Paul suggests. "It's your frame of reference.

So if I see that they're having a hard time correlating the clinical picture – knowing where this disability is coming from. What part of this is environmental, how much is neurological, how much is psych-social, how much is cognitive. That's our job … to be able to pinpoint where the disabilities are coming from" (Paul, I-112).

Paul sees his responsibilities as clinical educator to be vital to others' understanding the role of the occupational therapist. Students must learn to take on their professional role as therapist. Patients need occupational therapy services in order to function in their daily lives and other professionals need to understand what occupational therapists do and how their work intersects. It is a cyclical process of constant learning and teaching. The success of the program is evident in the results experienced by patients, by hospital staff, and by students.

Paul believes that part of this success results from the support of his colleagues: "It is a very supportive environment. It's very beneficial to be able to do all of these things and you have a strong base where you're free to explore other opportunities" (Paul, I-79). Whenever he needs help or when he has questions or issues, he feels that he can consult with his colleagues. Paul also receives support to engage in the teaching sessions offered by the university and the association. As mentioned previously, Paul regularly attends education sessions both related to teaching and to his content area.

Paul suggests that he learns a great deal from the mistakes he makes when teaching and he uses these mistakes as learning opportunities. He suggests, "the more students you get, you reflect more on what worked the first time and what didn't and you try to modify it …" (Paul, I-81). The key to learning from one's mistakes, as Paul suggests, is focusing on how to improve one's practice, whether as an occupational

therapist or as a clinical teacher. At times, Paul experiments with “a different approach. And I try to change my methods as much as I can but there is … you know I am not an expert in the theory of teaching. I do what I think I know and I use my tricks but I feel with those students I struggle with morally” (Paul, I-190).

Everything must be aligned: "So when they go in, their evaluation needs to be in tune, or focused on those areas. They do everything but knowing that he had this or that, then with this surgery I expect this or that deficit. So, that helps them to start them to see the patient from that perspective, from that profile. It makes them more effective therapists and more knowledgeable therapists" (Paul, I-126). The goal is to develop students to become knowledgeable practitioners. To do this, they must be able to link their occupational therapy theory with their practice. Paul suggests, "So, when they go and they have to advocate for a patient for a certain discharge, they have science to back them up and they have the clinical presentation to back them up. So that is my approach with them" (Paul, I-127).

Profile 2 of a Clinical Educator in Occupational Therapy: Sophie

For Sophie, clinical education is a form of “sharing” knowledge. It is also a way of sharing “enthusiasm and the passion” of occupational therapy and a way of developing someone who will one day take over as a professional. Teaching students is part of the job of Sophie’s work as an occupational therapist and one that she takes pride in. Sophie enjoys teaching and she describes her experience as “gratifying”. Sophie uses the following words to describe her experiences as a clinical educator: “passing on,” “sharing” and “giving back” (Sophie, I-211). She adds, “Even sometimes there’s challenges but then at the end when you feel they [students] have learned and they

appreciate the learning. The personality may not fit that much but at least they learned something and they progressed. That's important" (Sophie, I-199). Sophie also suggests that she feels her role as an educator to be important, as she believes in "sharing" her knowledge and "passing on" this knowledge to the next generation of occupational therapists. She also believes that being an educator is one way she can give back to her profession: "I feel that I have learned this so I want you to know" (Sophie, I-212). She wishes she had learned this when a student, "sometimes I say, 'I wish that someone had taught me this. Or, I am so glad that I learned this'." Sharing her abilities with students ensures the continuation of the profession and improvements in patent care. "You want to share it with the other person, so at least when they're in the workforce they can use those skills. And also for the love of the patients. For them to have better care. And the best learning the person can have. The best OT" (Sophie, I-213). The end goal is patient care and learning as much as possible. For Sophie, clinical education is a learning experience, not only for her students but also for herself. "I am always learning. That's the best part of the job and the best part about teaching students" (Sophie, I-215).

This section profiles Sophie. It begins with a description of Sophie's role as a physiotherapist, continues with a description of her work as a clinical educator, and closes with her reflections on the clinical education experience.

Sophie as an Occupational Therapist

Sophie has worked as an occupational therapist for ten years in the in-patient psychiatric ward. Most of the patients have a combination of physical and mental health problems, such as difficulties with socialization or focusing on tasks. In addition, many disclose inappropriate behavior or anxiety that prevents them from functioning. On the

unit, occupational therapists organize group activities, the purpose of which is to encourage patients to interact with others as a way to address their problems (Sophie, I-13). During a visit to the unit, Sophie informed me that they use various arts and crafts as a way of promoting learning through doing and a way of avoiding the boredom that can be associated with long hospital stays. I was able to spend some time observing patients as they worked on various drawings, wood sculptures, mobiles, and various other creations. One patient wrote poetry while another played music. A small group of patients new to the ward played cards for a time. The role of the occupational therapist on the unit is to encourage the patients to find an outlet that would help them develop a new skill or reinforce a skill they already had.

Throughout the "OT sessions" as Sophie calls these creative ventures, she would discuss the progress of the object the patient was creating and at the same time "try to get them to open up about their problem" (Sophie, O). Although a majority of patients engaged in various creative activities, a few patients did not participate and wandered off. Throughout the sessions, occupational therapists would go around and discuss various issues with the small groups or the individuals as they worked on their projects.

Because not all patients were interested in creative outlets, therapists organized a number of other activities. For example, Sophie's student organized an exercise group. Another occupational therapist had regular sessions for patients who were in the process of transitioning to their homes. This last session included both patients still on the ward and a number of patients no longer living on the ward. Another therapist had a regular session for patients that focused on how to manage money. What is common to all these

sessions is the role of the occupational therapist who aims to help these individuals with mental illness develop skills to care for themselves (Sophie, O).

In addition to her regular duties as an occupational therapist, Sophie is also involved in several hospital committees and in a citywide government agency in psychiatry. Sophie also conducts driving evaluations of patients with mental disorders (Sophie, I-142).

Sophie conducted her clinical placement in the healthcare institution at the research site. She says that she enjoyed her training very much and had the choice to work anywhere and chose to take a position in this institution. There were “plenty of jobs” at this time and she decided to work here because of her good experiences (Sophie, I-19). She adds that her own clinical supervisor is now a valued colleague and she “borrowed” much of what her supervisor did because “they worked.” Then, she suggested, she added her own personal touch. “You see what they do and what works and you say, ‘I will take this and I will take that.’ And then you add your flavor” (Sophie, I-35). Sophie’s experiences as a student were instrumental to her own teaching: “I took what I liked from my supervisor and I also changed what I did not like” (Sophie, I-36).

Sophie discusses how some of her placements as a student were too flexible and there was a lack of structure. When she became a clinical educator, she found that many students, in particular those in the early years of their education, needed structure. As a result, she developed a detailed teaching program for students. “It is written. And I give it to them so they know. You follow through and I’ll also tell them what type of supervisor I am. ‘I’m fair but if I see that you’re not kind of trying, then that annoys me. Know that if you work hard, even if you have difficulty, it’s ok. But if you keep trying, it’s good for

me.' So they know then what to do." The reason she wrote the lesson plan was to help students know what is expected of them and how the learning will progress (Sophie, I-187). Sophie discussed and provided me with a sample of these documents, the aim of which is to help students reflect on and work through the different learning activities.

Sophie shared how, as a student, her best experiences resulted from a supervisor's suggestions to note her accomplishments and challenges during the clinical placement. The documents she developed aim to help students realize their own accomplishments and examine how they resolved the challenges they encounter during their placements. Sophie discusses how sometimes students are reluctant to document their progress and, as a result, fail to meet the expected goals of the clinical placement. "I tell them to write very specific goals that are measurable so you'll know that you've achieved them otherwise you will not be able to follow through. It's for you. You're not writing this for me. It's for you. It's your learning experience" (Sophie, I-189). This tracking of one's progress is particularly important for students in the early years of their education and directly results from Sophie's own experiences as a student.

Sophie describes some of the difficulties she had when she first began to teach. "Your first students, you don't quite know how to explain what you do. You don't really know how to explain it. But over the years it is easier to explain" (Sophie, I-236). Being a clinical educator is a more challenging role than she had expected. But with time, she became more comfortable in her role. The informal contacts with other clinical educators led her to understand that she was not the only therapist who struggled with her role as educator and helped her to find ways to better prepare for student teaching.

How Sophie Approaches Clinical Education

As a clinical educator, Sophie teaches two to three students per year, usually one at a time. The work on the ward precludes her from taking on more than one student at a time. The length of the placements will differ depending on the stage that each student is in their education program and the academic institution. For example, students in the bachelor's program often have a mental health placement in the second year while master's level students are scheduled for a mental health placement in the last year of studies. Every student must go through a mental health placement although some students may undergo more than one placement, for example an in-patient ward and an outpatient clinic (Sophie, I-22).

Students spend approximately nine weeks at the clinical site. The majority of students are either in their second year of the bachelor's program or in the final year of the master's program. Before students arrive in the department, Sophie and her colleagues read all the student resumés and they then identify who will supervise which student (Sophie, I-144). Then the educator responsible for that student contacts the student and informs her of important preliminary details, such as the location and time of the first meeting. In addition, Sophie ask students to review certain disorders so they will have a better sense of the patients they will encounter on the unit. Finally, students are informed of the dress code and what they have to bring to the workplace (Sophie, I-149).

Before students begin their clinical placement, Sophie prepares and prints the documents she gives them. As mentioned above, she developed these documents because she felt that students need a structure in order to better function as a student in her department. First, she prepares a schedule of activities organized by week (Sophie, D-3).

This schedule is similar to the schedule that patients follow on the unit. Second, she prepares a list of questions that students use to reflect on during their placement. These questions are organized by week and by learning activity and are meant for students to complete based on how they have achieved their learning goals (Sophie, D-4).

For Sophie, it is important to have a structured program, in particular for students in the early years of their education program. Learning in the healthcare institution is different from learning at school and students need to have a sense of their role in the department. “It is different and I think they like the structure. So they kind of know where to go and it’s very busy. It might be very overwhelming for a few but most of them they like it because it is very stimulating” (Sophie, I-207). As a result, Sophie also devises a schedule so that students know what they are expected to accomplish each day.

Sophie also reviews the evaluation forms that the academic institution provides her. On an annual basis, she checks to make sure that the activities she has planned for students are aligned with the competencies students are expected to develop. If required, she makes changes to the documents and the learning activities (Sophie, O).

When students first arrive, they are provided with an orientation of the department and the Hospital. In addition, they are provided with the schedule of activities and the policies and procedures they must become familiar with. As they are dealing with patients with mental illnesses, they need to know, for example, how to respond to a patient who is suddenly violent. For Sophie, it is important that students know what to do in any situation. “So I ask them, ‘do you know what would you do? And if I’m not there, who would you go see?” (Sophie, I-64) They also need to be acquainted with the rooms used by the occupational therapists for patient activities. Because of their patients, the

work that the occupational therapists engage in is very structured. Students are expected to participate in various meetings, both related to occupational therapy and those that are interdisciplinary in nature (Sophie, I-59). It is important that students be integrated into the workplace in such a way that they can function, regardless of the situation.

Most of the students she takes are in their second year of the education program. For example, Sophie currently has a student who is in the bachelor's program. Because they are new to the profession, Sophie encourages them to develop an activity that they themselves are interested in. In the past, students have organized activities such as yoga and the importance of laughter. More advanced students will work on other types of activities such as anger management (Sophie, I-129).

Sophie encourages students to plan and organize activities for patients. She provides them with guidelines and with a lesson plan that aims to link the activity developed with one of the occupational therapy competencies (Sophie, D-1). This working document is a student guide to developing activities for patients. Sophie suggests that she also uses it as an assessment guide. For example, if a student organizes a group discussion it is important that she not only choose a topic but also determine how the activity will proceed, how to greet participants and how to provide positive feedback, setting up the room for discussions, and how the discussion should proceed. I observed one such activity with Sophie and her student. Sophie reviewed the activity with me and then observed and took notes as the student facilitated the activity (Sophie, O). These notes will be reviewed during the weekly "supervision sessions," formal feedback sessions between Sophie and her student.

Students are also expected to organize a specific regular session for patients and are expected to participate in sessions organized by other students and by the occupational therapists. In addition, they usually have one or two patients they follow individually as part of their treatment (Sophie, O). Sophie is always present in all activities that her student attends.

Sophie conducts formal teaching in two specific areas, specifically for skills not learned at school but in the workplace. Students need to develop interview skills and they need know how to write therapist notes in patient charts. Their lack of knowledge in these two main areas is the reason why the department does not take students who have not yet had any clinical experiences. “They didn’t know how to interview people and so it was a lot of work on our part” (Sophie, I-22). Now, students observe as Sophie interviews patients for assessment purposes before they conduct interviews on their own. Students are also directed to document their notes on paper, submit to their clinical educator, and revise before they write in the actual patient chart.

All teaching activities are conducted with patients. Sophie does not do any simulations or role-plays with students. She suggests, “It's better they learn with real patients and not with role play. The only time I do it is when they have real problems talking to patients. Like the student who was always crying because she couldn't talk to patients” (Sophie, I-138). For Sophie, working with actual patients is an important activity that cannot be replaced by simulations or role-play. However, should an unexpected situation arise, such as an angry patient acting inappropriately, Sophie encourages students to role-play. “When they’re specific issues, we might practice especially if it was an unexpected situation” (Sophie, I-79).

At times, students may not have developed skills required in the workplace. For example, students may not have yet have had courses on how to lead groups of patients with mental illness. As a result, Sophie reviews instructions and guidelines for activities. This involves lecturing, giving reading materials and then working with them as they develop a simple activity. She says this is harder than if they already come in prepared. "It's harder but you give them material, you give them a few books to read, and then you observe them and they have to jump in." Regardless of where the student is in their education program, they are allowed to observe her for a time but then "they have to do a group. They kind of dive in and learn to do it" (Sophie, I-67). Before they take on a group activity, however, students are expected to complete a lesson plan that details all the tasks that students must accomplish. Sophie reviews this plan with the students before they finalize their group activity. She also asks students questions to ensure that they have thought it through completely and not missed anything. If anything is missing on the student's plan, they are then asked to review and re-present it to her. They cannot actually lead the activity until it has been approved (Sophie, I-73). Then once the plan has been finalized, Sophie conducts a run-through of the activity where the student presents it. Here, she also asks questions to ensure that the student has not forgotten anything. If required, the student can practice until they perfect the activity (Sophie, I-77).

Sophie conducts regular supervision sessions with her students, at least weekly. To prepare for these sessions, Sophie uses a journal of regular learning activities and expectations that both she and her students complete (Sophie, D-4). During the supervision session, Sophie compares her notations with the comments reported by the student. She also uses this journal as a way to provide detailed feedback to students.

Sophie says she tries to give students daily feedback but she realizes that this can be "time-consuming" and furthermore, it makes the experience of being a clinical educator too "heavy". Having a daily journal helps her by ensuring that students get regular and complete feedback on their performance (Sophie, I-42). Students are also expected to complete daily journal entries. The aim is to encourage student reflection and to determine student progress. They are also intended to provide students with a critique of the session they developed.

> Because sometimes students will do a group and you say, 'ok you need to change this and this.' But sometimes they also change the things that were working. They still change it and I say, 'no.' So now, each time they do a group, I sit on the side and I write, 'oh you welcomed the members, that was good. Your room was prepared ahead of time. When so and so said to a patient shut up, you rephrased it and you said it is important to have respect.' Give them, you know, good feedback and also things to improve. So that they know and they keep the sheet. I tell them, 'look at it before you do another group.' If not then, you know, think about it" (Sophie, I-40).

For the formal assessments, Sophie uses the forms provided by the academic institution, known as a *Performance Evaluation Tool* (Sophie, D-2). Students are graded on a scale from one to six on each of the competencies they are responsible for. Some of these include professionalism, critical thinking, and communication (Sophie, I-162). The expectations are different for students at different stages in their education. For example, students in their first year and second year are not expected to be "autonomous in planning and leading them [patient activities]" whereas this is an important goal for

master's level students. In addition, if a student in first or second year conducts an activity, for example on self-esteem, and "get[s] stuck, I will jump in". Whereas, a student in her last year will be expected to be more independent and be able to prevent mishaps (Sophie, I-164).

To learn to become a clinical educator Sophie engages in both formal and informal learning activities. Both of the universities that offer occupational therapy education programs organize learning activities for clinical educators. Sophie participates annually in sessions organized by one of the universities for occupational therapists who teach students. Some of the topics covered in this course include: learning styles and giving feedback. For Sophie, the sessions on feedback were particularly useful. As an example, Sophie discusses how she encourages students to develop a group activity for patents and provides them with extensive feedback on what they accomplish. The goal of this feedback is to ensure that the activity is well planned and that students show respect for patients. If a patient engages in inappropriate behavior, the student is expected to manage the situation. She adds that she makes notes and provides students with these in an effort to encourage them to improve in time for their next activity (Sophie, I-40).

Sophie also took a course on communication at the academic institution where she studied occupational therapy. Some of the documents she prepares for student activities arose from one of the sessions during this course. Each day she writes something in this journal regarding student activities, "I have the folder on my desk … and each day, I write things" (Sophie, I-42). Students are provided with a similar journal with similar questions (Sophie, D-4) and are expected to complete it daily as well. These journals

serve as the basis for Sophie's weekly discussions with students. They are reminders of student accomplishments and issues that arise, items for further reflection and follow-up.

Sophie provided me with a number of the documents that she had developed for her student training program. These included a reflection journal, a student guide to developing an activity for patients, and a schedule of activities. These she developed subsequent to a course she took at one of the universities.

The Canadian association of occupational therapy also provides formal learning activities at their annual conference. Both universities that have an education program also provide regular sessions for clinical educators. One of the last sessions she attended focused on how clinical supervisors can reflect on how they supervise students (Sophie, I-46). Although these sessions are useful and have helped her, Sophie suggests that many are "repetitive" and, as a result, she chooses not to attend them each year. Nevertheless, she suggests it is important to remain up-to-date in all matters of student teaching (Sophie, I-52). When asked what was repetitive, Sophie suggested that the majority of the course is the same each year but there are other discussions that are new and invaluable (Sophie, I-53). As a result, it is of limited utility.

Sophie's Reflections on Clinical Education

Sophie discusses how her role as a clinical educator is to supervise students. She tells students: "You have to learn to do what I do. Students also have to learn to be professional. Some think that the clinical supervision is easy and they don't have to do too much. But we expect them to function like a professional OT" (Sophie, I-105). The goal of clinical education is to develop students to the point where they function as professionals. They are expected to do the same work as the therapists who supervise

them. Part of the problem is that despite being in the education program, students are not always aware of what an occupational therapist does and what is expected of them in the healthcare institution. This is especially true for psychiatry: “They know the theory but they don't know what to do with it when they come here” (Sophie, I-107). Knowing theory is not sufficient. Students must also understand how this theory is applied in the workplace. This is what they learn in the workplace.

For Sophie, the most important challenge she encounters is the lack of time. She finds it difficult to find the time to do everything she has to do. She takes the opportunity to catch up on her work when students end their clinical education placement (Sophie, I-133). She also reflects on what transpired during the placement in an effort to make any changes to the program.

Student behavior is another important challenge. Sophie suggests that at times there are “clashes” between staff and students. Some students are abrasive and unafraid of “asking the doctor questions, challenging the doctor in front of everyone.” These particular students are a problem because she has to try to take them aside and explain why this is inappropriate behavior and what is the impact of this unprofessionalism. Other students are “shy” and unable to function effectively in the unit (Sophie, I-91). She encourages these students to interact with patients. She suggests they take small steps by first talking to them about everyday things such as the weather, what their favorite foods are, and what their projects are. “Anything to start them talking about themselves and building a rapport with the patients” (Sophie, I-93).

For Sophie, it is important to find a solution to these challenges. “They [students] have to learn. And always sometimes knowing your personality is one thing but

sometimes you have to put your personality aside to work with different people and for the sake of keeping the relationship.” One has to behave in a professional manner at all times. In addition, patient needs must always be kept in mind (Sophie, I-95). Sophie suggests that these problems will resolve once she has a chance to speak to these students. This is particularly useful, she adds, when students have problems with authority. Sophie feels that because she is an occupational therapist, some students expect her to help them. She will support and advise them but she does not “want to do therapy with them”. If they have personal issues, she suggests: “It’s not about me providing the help, but leading them to find help about their issues” (Sophie, I-99), that is facilitating their own development.

She finds that sometimes she has to teach students what they should have learned in school. Writing therapist notes in patient charts is an example. Students do not know what they should write in a patient’s chart. Sophie provides them with examples of what they should be writing. Then she asks students to write their notes on a piece of paper. She reviews this and suggests changes. “They then change things and I check again. When it is right, I let them write it in the patient's chart” (Sophie, I-87). For Sophie, it is important to develop students to the point where they function as professionals. Part of the problem is that despite being in the education program, students are not always aware of what an occupational therapist does and what is expected of them in the healthcare institution. This is especially true for psychiatry: “They know the theory but they don't know what to do with it when they come here” (Sophie, I-107). Knowing theory is not sufficient. Students must also understand how this theory is applied in the workplace.

The lack of space in the department is another important challenge. There is not enough office space, for example, when she wants to discuss issues with students. Usually she conducts her supervision sessions in the occupational therapy room but patients are often working on projects in this room. At times, other professionals, such as nurses and physicians also use their assessment room to consult with patients. As a result, she makes arrangements with colleagues to use the office for this purpose (Sophie, I-122). The staff in the department is very collegial and they support one another in all endeavors (Sophie, I-232).

In order to ensure that students accomplish what is expected of them, Sophie has developed a number of tools to help students focus and reflect on their practice. The reflective journal document (Sophie, D-4) aims to help students link the theory behind what occupational therapists do and how they apply it in the workplace with patients. When required, she takes students aside and discusses any issues that she encounters. Sophie feels that it is important to deal with any problems that arise as soon as possible and not wait for the situation to worsen.

Although she feels that maintaining a boundary between herself as supervisor and the students, she also notes that it is important to be personable and to have fun. One of the topics at a workshop she attended dealt with maintaining boundaries between students and supervisors. At first, she did not want to keep a distance from her students but with time, she began to see the advantage of not being so close to students: “I think it’s better because then you intervene with them at a more professional level. You don’t know what they did on the weekend, this or that, and they see me in a different way” (Sophie, I-109). She also tries to include students in all the OT activities that occur on the ward. To break

student isolation, the department always tries to have at least two students undergoing their clinical education at the same time. Even though students are not at the same stage in the education program, they can still collaborate. “This way they can go through things together, help each other and then they come to us less” (Sophie, I-111).

Sophie considers student needs when she devises her teaching plan. With each supervision session, she asks students for any feedback they may have about the program. She suggests that if there is something to change, such as a different teaching strategy or a different learning activity, it is best to do it before the placement ends (Sophie, I-169). Some students respond they do not like the mental health population. In this case, there is nothing she can do except to suggest that mental health issues are encountered in most patient populations and it is something “that you will have to deal with in any kind of case” (Sophie, I-169). For example, feeling depressed may occur with any illness, even cancer. Consequently, learning how to deal with mental health issues is always useful for a healthcare professional. “The physical and the mental is connected, especially in occupational therapy ... You’re supposed to address everything – everything that is affecting the function” (Sophie, I-171).

Although she is sensitive to student needs and tries to adapt her teaching to the particular student, whether a student is actually successful in the academic program is beyond her control. For Sophie, students are considered successful if they attain the goals she sets for them. “If they achieve my goals, then it’s usually a good indicator” she suggests. On the other hand, if “they were not able to lead the groups and they needed me to hold their hands all the time, that’s a problem” (Sophie, I-181). Her role is to support and advise them on how they can attain their goals.

In order to ensure the effectiveness of her training, Sophie regularly reflects on her program. "With that student it [activity] really worked. Next time I'll make sure that I do this. And along the years that's how it turned out to be. The journal, **that** worked well so I'm keeping that. The goals keeping this and this." This reflection and review of the training program ensures that it is always fresh and effective. At times, changes in policy and procedure as well as workplace demands require changes in the training program. For example, Sophie discusses the impact of changes required by the professional association on how the therapists document patient progress: "Now that the charting is more demanding, the Order [the professional order of occupational therapists] is demanding more, we have to review how many clients we give to the students every week. If for me it is taking me longer, then for sure it takes them even longer. So we are kind of reviewing things" (Sophie, I-234).

Profile 3 of a Clinical Educator in Occupational Therapy: Sandra

Sandra enjoys her role as an occupational therapy clinical educator. She describes her experiences as both "challenging" and "rewarding" and compares her experience teaching with treating patients. "With patients sometimes you don't see good results even if you do a good job but with students, it's easier" (Sandra, I-170). She adds, "It's really a reward at the end. Most of the students are really able to say thank you and how they enjoyed it and how they were able to progress." Even if the progress with students is slow, in the end it is rewarding: "slowly you improve and a lot of time to give at the beginning … you give them a lot of instruction and supervision and make sure they go on the right path." But in the end, it is a rewarding experience (Sandra, I-168). This section profiles Sandra. It begins with a description of Sandra's role as a physiotherapist,

continues with a description of her work as a clinical educator, and closes with her reflections on the clinical education experience.

Sandra as an Occupational Therapist

Sandra has worked as an occupational therapist in the outpatient clinic for the last seven years. Her specialty is mental health and she works primarily with families where one member is a psychiatric patient. As part of her job she assesses patients before providing treatments for their illness. Part of this assessment involves a series of questions that she asks the family, first individually and then as a whole. As the family is an important unit, she also conducts follow-up sessions with all family members. Part of her job involves teaching students.

As an occupational therapist, Sandra also participates in interdisciplinary meetings, where nurses, physicians and social workers are also involved. Students are also expected to attend these meetings, which serve to discuss patients from multiple perspectives. "My schedule is pretty busy in terms of with structured time. So they follow that. Then there's unstructured time, like paper work, and group planning" (Sandra, I-26).

As a student, Sandra conducted her clinical education placement in the institution she currently works in. It was her last rotation before graduating from the education program. At first, she had not anticipated working here but her experiences in the department were "very good … the best of all the rotations" and she decided that she wanted to work at the healthcare institution (Sandra, I-31).

Sandra describes how she had a few difficulties in other healthcare institutions where she conducted other placements. "I saw some contradictions and then I was kind of stuck because I would change what I did, things like that. It was not major but being a

student, I felt really insecure with not being able to see the big picture" (Sandra, I-34). She adds that she would occasionally ask the therapists to explain why they were doing certain things but she felt she did not get satisfactory answers. She attributes her feelings to being immature and requiring more of a structured placement, which she received in this institution. "I don't think that I was mature enough. I couldn't speak up and say, 'this doesn't work'." (Sandra, I-33)

These experiences as a student during her clinical placements led Sandra to adapt her teaching program depending on the needs of each student. Sometimes she works with one patient and her student with a different patient, at times her student may be with another therapist. In addition, not everyone does everything in the same manner. Sandra tells her students to not hesitate to discuss with her whenever they "see any contradictions, tell us, if there's anything that we do differently.' And we add, you know everybody has their own way to do things. And two ways can be OK. It's not necessarily that one person is right and one person is wrong" (Sandra, I-38). It is important that students see that each therapist has her own way of working and that there is no single way to help patients deal with their illness.

How Sandra Approaches Clinical Education

On average Sandra teaches two to three students per year, usually one at a time. Usually these are students in the master's level program. She works full-time when she has students but part-time (four days a week) the remainder of the year (Sandra, I-5). Her work precludes her from taking on more than one student at a time. The length of each placement is seven to eight weeks, depending on the stage that each student is in their education program and the academic institution. For example, students in the bachelor's

program often have a mental health placement in the second year while master's level students are scheduled for a mental health placement in the last year of studies. Every student must go through a mental health placement although some students may undergo more than one placement, for example an in-patient ward and an outpatient clinic (Sandra, I-14). All staff members are "strongly encouraged" to take on students as teaching students is part of their job. However, Sandra suggests that it is a task that she enjoys and that she "would have done it anyway" even if not required to (Sandra, I-43).

Students are with Sandra throughout the day, five days a week. They are present as much as possible whenever she is with a patient or a patient's family. At times, when patients are uncomfortable with a student, Sandra asks the student to observe her session through a one-way window. Most of the patients come to the clinic for a few visits but a number of patients arrive for treatment for months or even years, depending on their illness. With clinic patients, Sandra also consults with families of the patient, in particular for those patients who are not of maturity age.

Before students arrive in the department, Sandra reviews the various documents they will need and makes any necessary revisions. One of these documents is the student schedule. Sandra has a master schedule that she generally follows with each student. However, depending on the student's interests and abilities, she may modify it, especially after the first week of the clinical placement. "Because some students will have certain abilities, for example if they already know how to interview patients. Some will learn it in another rotation. But other students need help in this area. Or they may need extra supervision in another area" (Sandra, I-83). Sandra also ensures that students have access to the latest version of the departmental policies and procedures. It is important that

students become familiar with these as emergencies can occur at any time and students must know how to react when these occur (Sandra, I-141).

Sandra also reviews the competencies required by the academic institutions and updates her list of goals for students. Then she compares this list with that which students itemize. Students have to “make their own goals. Because they have to have an evaluation from [the University] so they have to make their goals that fit with the rules of OT.” Then she reviews the goals that students have set for themselves in order to determine if they are realistic. At times, student expectations are too high and have to be modified. At other times, students have lower expectations and Sandra suggests they can do better (Sandra, I-134). Essentially, the goals are negotiated between student and instructor. They are then reviewed at each supervision meeting.

As a clinical educator, Sandra models behaviors, planning and leading interactive activities. She then expects students to plan and lead a number of activities, beginning with simple and continuing through into more complex activities with patients. First, patients are assessed individually “through interviews.” Then, “ we set goals with the patient. What they want to improve. What they want to work on. How. And then we offer … the program” that is common to all patients but also tailored to a particular patient’s needs (Sandra, I-19). Students play an important role in these activities, as they may lead a specific activity, such as an exercise class or a group session that focuses on a specific issue, such as anger management.

The student schedule follows the departmental regular list of activities: “we have a schedule for the patients that is structured. So it is already set. The groups are there. This is my schedule and so it becomes the student’s schedule.” For example, the

department has a number of arts and crafts activities, exercise sessions, and other types of activities targeted for outpatients. As the majority of the patients seen in the department are not residing in the institution, attendance at the various activities is optional but strongly encouraged. Sandra also adds a number of items to the student schedule, such as time for the student to "prepare for the groups" and time for meetings. Some of the meetings include regular supervision meetings between herself and the student. Other regularly scheduled meetings include weekly occupational therapist meetings as well as the multidisciplinary team meetings of all the different professionals that work with the patients in their department. These team meetings include the occupational therapists, psychiatrists, nurses and social workers that all work in the department and follow different groups of patients (Sandra, I-80).

Students begin the placement by first observing Sandra. With the second week, Sandra expects students to take a number of activities on their own but with Sandra's supervision. "I expect them to take charge" in one or more areas. With each succeeding week, students take on more of a role until the end of the placement where they are expected to function independently. Occupational therapists also have to document progress notes in patient charts since this is how therapists and other team members track patients. "This is very important because the whole team will then discuss the patient and make changes or follow-up with other plans" (Sandra, I-84). Students first prepare a draft and then make any necessary revisions. Once she approves the final draft, Sandra then has students write up their notes in patient charts. "I always read it [student notes] and then sign it. This is very important" (Sandra, I-85).

Students also participate in the different activities organized by the occupational therapists and they are encouraged to develop an activity that addresses a problem that patients encounter. Students have to write up a detailed plan of the activity. For this, Sandra uses the planning document that Sophie developed (Sandra, D-1). She reviews the plan to ensure that nothing has been forgotten and then has the student do a trial run of the activity. Should the student require help while the activity is underway, the student gives Sandra a signal and she will then “intervene. And if I feel that there is any situation that needs an intervention, I will do to. So it is clear from the beginning and not to feel that it is a failure but part of their learning. And it’s rare that they will make one big mistake that we cannot correct. And if they do, it can be dealt with” (Sandra, I-106). Fostering student success is therefore important.

In order to function as occupational therapists, students have to learn a number of professional skills. These include “how to make a connection [with patients],” how to behave with patients and other professionals, and how to interact with patients as a therapist. Essentially, it is important that students learn “what to say and how to say something.” Therapists need to “help them [patients] formulate a question that would not necessarily suggest an answer” (Sandra, I-88). Many students want to give “a lot of solutions to the patients.” But it is important for patients to resolve their own problems and not for therapists to find solutions for them (Sandra, I-153). This professional skill is in keeping with the goal of occupational therapy, to help patients become independent in their functioning. However, it is in the nature of most occupational therapists to want to help a patient. Sandra describes, “every OT wants to help and we want to help but sometimes for some patients it works better … if you don’t or if you step back or if you

say something" (Sandra, I-89). Essentially, facilitating patient independence is "what will help the patient in the long run" (Sandra, I-91).

When the student placement ends, Sandra reviews the progress each student makes and notes any necessary modifications to the teaching program. For example, there have been years where students are weak in certain areas. "I don't know why, but the whole year is the same," Sandra suggests. "And they're all weak in something and strong in other things." To deal with these situations, Sandra then considers changes to address these weaknesses before the next student arrives (Sandra, I-145).

Sandra believes it is important to adapt her teaching program to student needs. Students in the early years of their education, for example in the bachelor's program, have different needs as compared to students in the master's education program. "I believe that younger students need a strong structure but older more mature students need to be given their independence to a certain extent" (Sandra, I-35). This belief is based on her own experiences as a student. Just as she was better able to perform certain tasks in the later years of the education program, Sandra feels that students have a better sense of their abilities as therapists as they progress in the program.

As her goal is to facilitate the development of students to the point where they are independent professionals, Sandra organizes her teaching activities to achieve this. Most of her teaching activities are conducted informally as she accomplishes her work. She works with students to plan activities for patients. If a student shows reluctance to conduct an intervention on their own or if the student expresses uncertainty about a specific task, Sandra discusses and sometimes role-plays with students to build their confidence. "I'll be the patient and I say, I don't want to do it. So what do you answer?

But we still discuss it. And then to gave her ideas and eventually … if she has no ideas then I could suggest some" (Sandra, I-65). Some students show more initiative and Sandra gives them the space to try out their own ideas. "It's always more correcting and giving informal advice" (Sandra, I-95). At times, a student admits reluctance at working with a patient or they may say they do not know what to do in certain situations. When this occurs, Sandra uses discussion and role-play in an effort to get the student to come up with her own solutions. She suggests, "What can you say [when this situation occurs]? … Here I'll be the patient and I say, 'I don't want to do it.' So what do you answer? But we still discuss it. Then I gave her ideas and eventually … if she has no ideas then I could suggest some" (Sandra, I-97). Sandra asks questions to ensure that the student has considered all that could occur in a discussion group. A therapist must always be prepared to take on difficult patients and/or situations. If there is something that the student has not taken into account, Sandra encourages her to rethink the activity and consider alternatives. This was discussed immediately following the observation.

Sandra occasionally uses more formal teaching methods, in particular when theory is the main topic. She reviews material that students learn in school, in particular if it is something that is useful in the clinical setting. However, most of the teaching is conducted informally. As Sandra suggests, "I think the more you do the more you learn." She adds, "We can teach them and review their planning for example. Then do it, then review how it went. But they will be the ones doing it. That's how they will learn the best" (Sandra, I-96). It is through performing occupational therapist tasks that a student learns their professional role.

Regardless of where the student is in the education program, Sandra models behaviors expected of the student. "They always observe first and then do it" (Sandra, I-69). Sometimes students tell Sandra that they do not know what to do with the patients. "They say, 'I'm not sure what I'll do if my patient will refuse to do my intervention'." At this point, Sandra asks them a series of questions and discusses possible solutions.

Communication is key for occupational therapists, Sandra suggests. Especially in a clinical setting, "it can be a bit more difficult because people leave and then if you make a big mistake you can be worried for a long time" especially if the patient does not return. However, most situations are easily rectified. "We really have to tell students that there's no mistake that cannot be corrected. You can always go back and explain why you said what you said" (Sandra, I-108). To avoid these situations, Sandra encourages students to practice their communication skills.

As students practice their skills, Sandra always supervises to ensure that everything is going as expected. "I really take the time to ask the student, 'how was your week? Any challenges?' And then they have a daily journal to fill" (Sandra, I-69). She then provides students with daily feedback on their progress. If however, she has not had a chance to discuss a specific issue when it occurs, it is addressed during the weekly supervision session.

The regular supervision meetings between Sandra and her student occur when required, weekly at a minimum (Sandra, I-110). Throughout the week, students are expected to reflect on their work and progress. They have to complete a daily journal that another therapist (Sophie) devised. Here they are expected to document any issues that arise and what the student did to resolve the situation. The purpose of this session is "to

review the week, what they did, what they need to do next week, challenges encountered and what they did to resolve these" (Sandra, I-58). I was privileged to observe one of Sandra's supervision meetings with her student. They discussed how the student's technical and professional skills improved since the last meeting. The student reviewed the tasks and issues she documented in her journal and Sandra asked relevant questions aimed to help the student reflect not only on what she did but what she would do differently if she could. During the observation, they also discussed some of the problems the student encountered and the action plan for the coming week (Sandra, O).

Many of the teaching strategies she uses are similar to those she experienced when a student. The weekly schedule, for example, is similar. Students are expected to lead group activities. Her supervisors also asked her many questions as she prepared for group sessions. She found this to be particularly difficult when she was a student because she felt she was not always prepared and not always aware of what was expected of her. In addition, she had regular feedback sessions with the educators (Sandra, I-110). As a student, however, she did not have a regular journal to document events, thoughts and issues that arose. This is not surprising because the journal (Sandra, D-4) was originally developed by one of her colleagues.

Sandra has never been afraid of trying new things. One of her influences as a student was her supervisor at another institution. This therapist would often tell her, «*Il n'y a rien comme essayer*» (TR: you won't know until you try]. Sandra explains that this encouragement would "give me confidence to try it." She discusses how her instructor would tell her, "If it doesn't work, we'll rethink it," but regardless of the outcome, "you have to try something. If you don't know what to do as an intervention, well if you just

stay there and don't try anything, for sure you won't know better. So try it." Sandra adds that she follows this advice when she trains students. "I make a plan, try it and then if it doesn't work, we'll re-adjust it." What is important is to have the confidence to try new things, especially if there are no major consequences for patients (Sandra, I-63).

In order to prepare for the role of clinical educator, Sandra has engaged in both formal and informal learning activities. Both universities offer training sessions for clinical educators. Sandra discusses how she regularly participates in these. Some of the topics she recently attended include structuring supervision sessions with students, addressing problematic situations, and learning tricks related to teaching in the clinical setting (Sandra, I-118). She also attended several sessions on clinical reasoning. Sandra discusses how these have helped her become more confident and "authoritative" with her students. The "tips" provided are particularly useful, she adds.

The sessions on developing clinical reasoning skills in students was particularly useful. This is not an easy task, she suggests, as there is "no single way to teach this … and everyone [present at the session] had their own definition of what clinical reasoning is." Even though the sessions did not identify a single view of how to teach clinical reasoning, "it was good to see what others had to say as well." It was a "good reflection" on the topic and one she hopes to continue (Sandra, I-148).

The experience of being a student influenced Sandra as she learned to become a clinical educator. When she first began to teach students, Sandra relied on her own experiences as a student. She says, "at first I used what I learned from my own *stage*" (Sandra, I-115). She thought back on the expectations of students and supervisors and worked through these to develop her own teaching program. She also used what she liked

when a student and what her own supervisors did. “I mean what I saw what the supervisors did well and what I thought could have been better. And how I would like to be received here as a student” (Sandra, I-116).

She often thinks back about her mentor who would often tell her to try out her ideas. Sandra takes her advice at heart when she suggests, “If it doesn't work, the student will tell you or you will know they didn't understand. Then you plan something else and try that. You also talk with the student and she will tell you why it is not working and what is better" (Sandra, I-64). This supervisor provided the spark that encourages Sandra to try out different ways of teaching students.

Much of Sandra’s development as a clinical educator arises through her work and what she learns from department colleagues. A number of documents for student training, for example, were developed by other occupational therapists. These include the student master schedule, the departmental list of activities for patients, the lesson plan for student organization of patient activities, and the journal that students are encouraged to keep (Sandra, D 1-4). Sandra also suggests that Sophie was an important influence on her own teaching program as she uses many of the documents and strategies that Sophie uses. Just as her own supervisors would ask numerous questions to ensure that she had planned her activities with patients, Sandra also asks students a number of questions and reviews the lesson plan that students write up (Sandra, I-110).

Sandra regularly reads journals in her subject area. She feels it is important to keep up with developments in psychiatry and occupational therapy. In addition, she participates in a departmental journal club. The therapists select an article, read and then discuss it (Sandra, I-194). In addition, if she ever encounters a situation with which she is

unfamiliar, Sandra looks it up in her textbooks or online and then shares with her colleagues and students (Sandra, I-195).

Sandra's experiences as a student led her to adapt her teaching to students depending on their specific needs. Sandra describes how she had a few difficulties in other healthcare institutions where she conducted other placements. "I saw some contradictions and then I was kind of stuck because I would change what I did, things like that. It was not major but being a student, I felt really insecure with not being able to see the big picture." She added that she would occasionally ask the therapists to explain why they were doing certain things but she felt she did not get any satisfactory answers. She attributes her feelings to being immature and requiring more of a structured placement, which she received in this institution (Sandra, I-34).

Sandra's Reflections on Clinical Education

Sandra believes that teaching students is similar to the role of the occupational therapist. Clinical education serves to prepare students for their professional role as therapists and it is a way for her to perfect her role as teacher. As both teacher and therapist, Sandra aims to "promote independence and being more autonomous", both for her patients and her students (Sandra, I-40). The clinical placement is an important part of the education of an occupational therapist, Sandra suggests, "and I really learned a lot from my *stage*." As a result, she wanted to ensure that students also have a good experience in the institution. "I really want my students to have the same experience … and also to have a positive learning experience. I think it's important" (Sandra, I-45).

Sandra sees herself as a "coach" who encourages students to conduct their practice and to behave as professionals. She sees herself as facilitating student

development: “Helping them progress. Actually I would say that student progression is the main thing” (Sandra, I-49). Clinical educators are mentors of students who are on the cusp of becoming professionals and ultimately grow to be the future, those who will take the place of their teachers in the healthcare system. Sandra remembers what it was like to be a student, especially when her supervisor asked her questions: “This is hard when we’re a student” (Sandra, I-110) and she keeps her experiences in mind when she in turn asks questions. “I try to make it non-threatening. We’re not here to judge you but to see your thinking. That’s how you learn” (Sandra, I-111).

Part of Sandra’s goal as an educator is for students and patients to have confidence in her. Of all the clinical educators she was the most concerned about what patients thought of her students. As an occupational therapist, she has to sometimes “speak up” about a patient “whether if it’s your professional opinion or for the patient … And in family meetings you have to report on how the patient was. And then sometimes the patient doesn’t agree or the family saw them at home the same weekend and they don’t agree. Sometimes everybody agrees and that’s fine. But that’s not often.” What is important for Sandra is that, as a professional, she must “feel confident in [my] professional opinion.” Furthermore, patients need to see that students also have confidence in this opinion (Sandra, I-176). They must be a team, speak in unison and impart confidence in their opinions and in their actions.

Sandra discusses a number of challenges that she experiences as a clinical educator. For Sandra, the lack of time is the biggest challenge. At times, “you can’t even manage what you have, like you can’t manage what you have to do with the patients.” The number of patients she sees has steadily increased over the years and she finds she

does not spend the time she would like to with all her patients, that is she sometimes feels she does not devote the necessary time on their individual problems. “You also need to spend time on your charts, because there’s all these are requirements of the order [OEQ] and everywhere else. So we have to do charts. But then at one point, you can’t do everything so you have to choose” (Sandra, I-125).

Another important challenge for Sandra is that sometimes she feels that “patients are not motivated.” She attributes this to their illness because “I think it’s the nature of the mental health issues.” Patients often cancel appointments or give excuses as to why they are unable to come to the clinic sessions (Sandra, I-126). When patients fail to come to a session, therapists have to locate them at home to encourage them to come to the next session. This is one part of the job that she does not enjoy. She calls it “being pushy” because patients are not motivated to come to the clinic.

Student behavior is another important challenge for Sandra. She recalls how one of her first students was a problem because she “clashed” with staff. She attributes the student’s behavior to being overly confident. To deal with this situation, Sandra took this student aside and explained how her behavior was not professional. In the end, this student was able to attain her stated goals. During one of the interviews, Sandra discussed this situation in detail and suggested that she had not prepared the student adequately and that in future she would better prepare for this type of situation. Since then, Sandra intervenes as soon as an incident occurs and does not wait for the incident to escalate. Being a clinical educator has led her to develop a better way of understanding behavior, that is, of patients and students. Sandra adds that she has also learned to check her own behavior when in the presence of students and patients. “Even at home in my life I have

changed how I talk to and how I demonstrate my feelings. Our body language is as important as our words" (Sandra, I-161).

Central to the philosophy of occupational therapy is the concept of occupational performance. In considering occupational performance the therapist must consider the many factors that comprise overall performance. Sandra reinforces this belief as she teaches her students. During the observation session, Sandra spoke to her student about how important it is to identify the patient's strengths and weaknesses as well as determining the resources available for the patient. In order to ensure that students accomplish what is expected of them, Sandra encourages student to reflect on their practice (Sandra, O).

Occupational therapists assist patients and their caregivers to build skills that enable them to participate in meaningful occupations. Occupational therapists also address "all the needs of the patient," that is, the psychosocial needs of patients to enable them to participate in meaningful life events. Sandra suggested that she aims to help students link the theory behind what occupational therapists do and how they apply it in the workplace with patients (Sandra, I-189). When required, she takes students aside and discusses issues she encounters. This is important because otherwise patients would see the discord between them and misinterpret it.

Profile of Clinical Educators in Occupational Therapy

Three occupational therapists volunteered for this study, two of which trained as students in the healthcare research site. They also began to work at the site shortly after graduation from the academic institution. One specializes primarily in neuro-rehabilitation, another works on an in-patient psychiatric ward, and the third in an

outpatient clinic. Despite their different work areas, the three clinical educators have similar experiences. Table 7 below, summarizes the participants' roles as clinical educators. This section compares the research findings between the participants as it discusses the three main areas of commonality between the two educators: characteristics related to the person, to the context in which they work, and to the process of becoming a clinical educator. Each of these is described in this section.

Personal and Professional Characteristics

Each of the occupational therapists has been working at the institution for a number of years, ranging from seven to thirteen. Both Sophie and Sandra have always worked there, whereas Paul trained and has experience working in the United States. As teaching is part of the duties of all occupational therapists, all the professionals working in the department teach students as part of their regular work. As a result, all three participants teach students as they do their daily functions. In addition, they all discussed how they have always trained students and how they enjoy the experience.

Multiple responsibilities

All three clinical educators assess patients who are unable to function as a result of their disorder or illness. They also provide services and organize activities for patients to engage in a way to treat and manage their disorder or help them function independently. Paul works primarily on the surgical and post-surgical wards and follows patients who have undergone neurological procedures. Sophie works exclusively on an in-patient psychiatric ward where patients have a combination of physical and mental health problems. She organizes her "OT sessions" as creative activities, aiming to have

Table 8
Occupational therapists as clinical educators

	Paul	**Sophie**	**Sandra**
Years of experience as an occupational therapist	13	10	7
Years of experience as a clinical educator	13	10	7
Years of experience teaching	13	10	7
Job status	Full-time	Full-time	Part-time (4 days/ week)
How participant became a clinical educator	Part of job	Part of job	Part of job
Trained as a student at work site	No	Yes	Yes
Number of students trained at a time	1-2 (2 max)	1	1
Number of clinical educators in the department	All staff	All staff	All staff
Number of weeks training per group	7-8	6-9	7-8
Number of rotations per year	4	3	3
Challenges in the workplace	Time Students	Students Space Time	Time Patients Students
Words to describe experience as a clinical educator	Stimulating Challenging Minefield	Gratifying Sharing	Challenging Rewarding
Engagement in professional development	Yes	Yes	Yes

patients “open up about their problems.” Sandra works primarily with families that have a psychiatric patient as a member, in an outpatient clinic.

In addition to teaching and supervising students, all three participants also teach other health professionals and are involved in a number of Hospital committees. Paul tries to include students in the teaching sessions he offers nurses and physicians as a way for them to learn about their role and “what is expected of an occupational therapist.” Sophie also conducts driving evaluations of patients and is involved in a citywide government agency. Sandra is involved in a number of interdisciplinary groups that include nurses, physicians and social workers.

Early experiences as influential

Both Sophie and Sandra conducted their clinical education placements at the institution, whereas Paul conducted his clinical training in the United States. In all cases, educators discuss their experiences as students and suggest that these influenced how they teach students. Paul refers to both positive and negative experiences as opportunities for learning how to be a clinical teacher. Sophie describes her student experiences at the institution as “great,” while Sandra calls it “the best of all the rotations.”

All three clinical educators also discuss unfavorable experiences in other institutions during their student placements. Paul speaks at length of the “bad experiences” he had when a student. He did not want to dwell on the experience and preferred to discuss what he “gained” and learned from that experience. He felt his supervisor was “not respectful” of students and was not a very good teacher. As a result of his experience, Paul suggests that he would never correct or speak inappropriately to a student, especially in the presence of a patient or healthcare professional. Furthermore, Paul prepares extensively and tries to have a comprehensive teaching plan. Sophie suggests that her clinical placements as a student were too flexible and she would have

preferred to have more of a structure. Sandra also discusses encountering "contradictions" among her instructors and this made her feel "insecure". In addition, she refers to situations where she would ask questions of her instructors but would not get a satisfactory answer.

Their experiences as students, in particular, led the clinical educators to adapt their teaching program to student needs. Sophie has developed a very structured and organized teaching plan. She asserts that students often need a structured experience and to ensure this, she developed a detailed and documented teaching plan. Sandra also insists that her students tell her when they "see any contradictions" especially if different therapists perform tasks in conflicting ways.

In addition, the three clinical educators use many of the teaching strategies they themselves encountered when students. Sophie, for example, discusses "borrowing" much of what her supervisors did when teaching because "they worked" and she learned a lot from them. Sandra asks students questions to ensure they are prepared for group therapy sessions. Although she did not appreciate being asked many questions when a student, as an educator she sees the value in this method.

The Context

All three clinical educators describe a number of challenges that they experience. These include challenges related to the context in which they work, student behavior and lack of preparation, and a lack of time to perform all the functions required of them. Both Paul and Sophie explain how a lack of space is a major problem, particularly as patients' beds are too close to one another and they have very little space to assess patients individually. This also becomes an issue when confidential issues are being discussed

with patients. Paul also addresses the lack of equipment and staffing available for proper treatment and follow-up of patients. Sophie describes her biggest challenge as the lack of time because she has difficulty keeping up with all her work. To address this situation, she tries to catch up on her work when she does not have students. Sandra also notes the lack of time to be a major challenge.

Clinical educators also discuss a number of challenges related to student training. Paul suggests that he struggles with conducting student evaluations, as he is unsure about the criteria set for assessing students. He relates that "the language" and terms are vague and one can write anything because the same evaluation is used throughout all the clinical education rotations. Both Paul and Sophie suggest that students are not always prepared for their role as therapists. As Sophie notes, students "know the theory but they don't know what to do with it when they come here." Student behavior is another important challenge for both Sophie and Sandra. Sophie suggests that at times, students quarrel with staff. Other students are shy and unable to function properly. Sandra recalls how one of her students acted inappropriately and "clashed" with staff.

The Process of Becoming a Clinical Educator

All three occupational therapy educators discuss how they engage in both formal and informal learning activities as they learn to become clinical educators. All participate in regular professional development activities. Some of this learning is directed at content-specific issues, such as new treatment techniques and methods. All three clinical educators also discuss courses, workshops or learning sessions organized by the academic institutions.

Both universities with which the healthcare institution is affiliated offer regular teaching sessions for clinical educators. Paul attends sessions at least annually. All three clinical educators discuss the benefits of these sessions. Sophie, in particular, has taken several courses on learning styles and giving feedback and shares how she uses what she learned in her teaching and supervision sessions with students. She also took courses in organizing teaching activities and developed a number of her teaching materials subsequent to these sessions. She keeps a regular journal on her learning and encourages students to also note their accomplishments and the challenges they experience. Sandra has also participated in training sessions offered at the University. Some of the topics that she has found particularly useful include structuring supervision sessions with students, addressing problematic situations, and learning tips for teaching. She also spoke about a workshop she attended on clinical reasoning.

Most of their learning to become clinical educators occurs informally, at work and at conferences. Sophie discusses the importance of networking with professionals she encounters at the different formal sessions she attends. She enjoys the contacts because they enable sharing of experiences. Two of three clinical educators also refer to learning from their experiences as a student. Paul learned to be "meticulous" and "vigilant" about his work as a result of the experiences he had when a student. Sandra discusses how she relied on her own experiences as a student when she first began to teach. She adapted what she found particularly useful into her own teaching: "what I saw what the supervisors did well and what I thought could have been better."

Two clinical educators admit to learning from their students. Paul, for example, suggests that the more students you teach, the more you learn about teaching. This is

because teaching obliges him to reflect on his practice and on how he instructs students. When something does not work, he considers what he did and how he could change to improve student learning. Sophie as well, learns from teaching students. She suggests that the first students she taught were a challenge because she did not know how to teach. But with time she has become more comfortable and now finds it easier to engage and teach students.

The most important way that Paul learned to be a clinical educator is through his routine work. He suggests that he is always learning at work, especially when teaching. As discussed above, he admits to learning from his students. For Paul, the value of clinical education lies in the way new and different situations arise constantly and he has the chance to learn from them. Sandra, as well, feels that she has learned a great deal from her work. She uses, for example, some of the documents that a colleague developed for student training. Sandra also participates in a journal club with her colleagues and shares problems she encounters with them on a regular basis.

Preparing to teach

All three occupational therapists review student resumés and use them as the basis for their teaching program. Preparing for students includes reviewing documents they need for student teaching, including a student schedule and a list of department activities. The latter is particularly important in the mental health division, as patients require a structured system in order to feel safe and comfortable. Sophie has a number of documents that she makes available to students. She developed these subsequent to learning activities she participate in at the University. These include a schedule of student activities, questions for reflection purposes, and a lesson plan for students to develop

group activities. Sandra also reviews the competencies required by the academic institution and prepares a list of goals that she has for students to accomplish. Usually students have to devise their own goals but Sandra will review these to ensure they are realistic and aligned with the department activities. Sandra has a master schedule but adapts it depending on a student's interests and abilities. She also reviews and makes note of departmental activities and activities that students are responsible for. Furthermore, she ensures that the departmental policies and procedures are up-to-date and available.

Since students follow Paul as he conducts his regular duties, he does not mention any documents or other materials that he prepares for student teaching. However, just before I conducted an observation of Paul teaching, he provided me with materials about the roles and functions of occupational therapists and suggested that I read them before the observation. He also informed me that he gives these and other articles to students, especially if they are unsure of what is expected of them as occupational therapists.

Teaching activities

Paul usually supervises one student at a time but may take on a second student when required. Both Sophie and Sandra only take one student at a time. In addition, upon request from the Order, Paul trains occupational therapists who require licensing in the province. This individual is not usually a student and often has a more lengthy rotation in the clinical site. Sophie prefers to have students who have already had a clinical placement. She suggests that it is "very difficult" to take students who have few interactive or people skills. In addition, some students find it "intimidating" to work in a mental health environment.

All three participants have teaching plans, albeit in different forms. Paul says he does not have a formal teaching plan; he has nothing documented but rather it is "all in my head." He prefers to have a flexible and not a structured plan because it may change depending on student needs. Sophie, on the other hand, has a structured and detailed teaching plan. This is important, she suggests, because students need to have some structure when working with psychiatric patients. Sandra's plan is partway between Paul's flexible plan and Sophie's structured plan. She structures her teaching around her own responsibilities as a therapist and models behaviors for students in the first week. Thereafter, Sandra expects students "to take charge" and lead group activities and interact with patients.

Most of Paul's student activities are unplanned as he goes about his daily tasks. This is because "my day is not planned. I am pulled right and left. So I cannot predict too much" what to do at any given moment. Unlike Paul, Sophie conducts formal teaching in two specific areas: teaching interviewing skills and writing therapist notes. These are important workplace tasks that are, unfortunately, not learned in school.

The three clinical educators organize teaching activities to begin with basic occupational therapy skills and gradually move to more complex skills. Most of this teaching is informal in nature and conducted as students follow the educator or perform the duties themselves. Paul, for example, teaches basic skills, such as reviewing patient charts and conducting patient interviews, in the first weeks of the placement. Then students move to assessing patients' status and developing treatment plans. He also begins with relatively simple cases, such as a patient who has a small injury before moving on to more complex cases, such as a patient who had surgery. Sophie encourages

students to begin with a simple activity that they are familiar with, such as an exercise session, before moving on to more complex activities such as an intervention. Sandra uses a number of informal teaching strategies when teaching students. These include discussions, role modeling and correcting students when they make mistakes or when they forget to do something. As most of her patients are seen in a group setting, it is important that students prepare properly before participating in these sessions.

All three clinical educators assess student abilities constantly throughout the placement. They conduct regular feedback sessions and hold, at a minimum weekly, supervision sessions which are essentially progress reports and discussions on goals and what improvements students need to work on. These are meant as reviews of accomplishments and problems students encounter in their clinical activities. In addition, they are meant as a reflective exercise for students to track their progress and identify challenges they experience and plans for subsequent activities. Clinical educators in occupational therapy also complete the assessment forms provided by the academic institution for formal evaluation of student competency.

Unlike the technology professions, occupational therapists do not use simulations when teaching students new skills. Paul prefers to use real situations rather than simulating activities such as interviewing. Instead, he asks students a series of questions to ensure that they understand what they are doing. At times, he encourages students to do a patient assessment on their own and observes as they conduct the interviews. But he always encourages students to prepare for these patient sessions and tell him what they will be asking the patient before reaching the bedside. If Paul sees that a student understands and is able to conduct a reasonable assessment, he encourages that student to

continue, otherwise he asks the student to review their material. Sophie, as well, does not conduct any simulations or role-plays with students but believes it best that "they learn with real patients and not with role play." However, when students have difficulties interacting with patients, she coaches them to react and behave in a professional manner.

The importance of clinical education

All three clinical educators stress the importance of clinical education in the development of occupational therapists. For Paul, the end goal is the development of occupational therapists. Sophie believes that clinical education is a way to share knowledge as well as a way to share her "enthusiasm and passion" for occupational therapy. In her role as clinical educator, Sandra aims to "promote independence" and students being "more autonomous."

All three clinical educators express a desire to provide students with a good experience. Paul believes that clinical education involves sharing teaching and learning between students, educators, and patients. He is constantly learning as his students are. Patients are also learning to function independently, given their disability. Just as she is always learning, Sophie also feels it is important that students learn all they can when under her supervision. "I am always learning," she says. "That's the best part of the job and the best part about teaching students." This is important both for the profession and for patients. Sandra suggests that she also learned a great deal from her instructors and aims to give students a similar experience.

Clinical educators see themselves as instrumental in developing students as professionals. Paul sees himself primarily as an occupational therapist who teaches. His teaching role involves students as well as other professionals and patients. Sophie sees

herself as a supervisor. Because of the environment in which she works, Sophie insists that students follow her directions and always “function as a professional.” They are expected to do the same work as the therapists and eventually function independently. Sandra sees herself as a “coach” and a “mentor” who encourages students to conduct their practice in a professional manner.

Paul focuses his activities on critical thinking because it is important to be able to solve the problems associated with patient’s losing their independence. Sophie believes she plays an important role in the professional development of students. Even when there are challenges to the job, Sophie believes it important that students learn what is expected and they progress to becoming more independent and sure of themselves. Sandra as well aims to have students become more confident in their abilities. In addition, it is important that patients also see this confidence.

Enhancing the role of occupational therapists is another important function of the teaching-learning continuum. Paul sees his role as vital to a general awareness and appreciation of the role of occupational therapists. To ensure that students accomplish what is expected of them, Sophie developed a number of learning tools to encourage them to focus and reflect on their practice. Sandra considers what impacts on student performance in the workplace and tries to address any issues that may hinder their performance. She is satisfied when she is able to help students become effective therapists able to practice in the workplace.

At times, students are unable to attain competency to work as occupational therapists. Paul suggests that he allows students to make mistakes because it is through our mistakes that we become more proficient. But this proficiency is dependent on their

ability to reflect on their practice and act on suggestions provided them by clinical educators. Sophie suggests that she tries to be sensitive to student needs and will modify her teaching program to meet student needs. But she also acknowledges that student success is beyond her control. It is a choice that students make for themselves. Consequently, if students attain the goals she sets, she believes they will be successful.

CHAPTER 7: DESCRIPTIVE FINDINGS OF CLINICAL EDUCATORS IN THE PHYSIOTHERAPY PROFESSION

This chapter examines the experiences of clinical educators in the physiotherapy profession. Like the previous three chapters, I begin with an overview of the roles, functions, and education of physiotherapists. Then, I discuss clinical education in physiotherapy at the research site. Next, I profile both of the clinical educators who participated in the study. I close the chapter by developing an emerging profile of clinical educators in the physiotherapy profession.

About Physiotherapists

According to the Canadian Physiotherapy Association [CPA] (2011), physiotherapists are regulated health professionals who work to improve, restore and maintain functional independence and physical performance of patients. As part of their work, physiotherapists try to prevent and manage pain, assess and treat physical disabilities and injuries, and promote health, wellbeing, and fitness. Through their practice, physiotherapists assess patients who have fractures, spinal and joint conditions, cerebral palsy, work and sport injuries, chronic lung and heart diseases, cancer, age-related issues, and brain injuries or other neurological problems (CIHI, 2009).

Physiotherapists use a variety of methods to assess and treat patients using a variety of methods, including manual therapy – where practitioners use their hands to put pressure on muscles and manipulate joints, therapeutic exercise programs – where practitioners target specific muscles or joints, training and re-training for patients to become better coordinated, mobile or flexible in their regular lives. The goal in these is to

provide a variety of therapies to increase patient strength and flexibility, or to regain mobility after an accident, illness or surgery (CIHI, 2009). Consider this example of a physiotherapist who participated in this study: she helped a patient who was having difficulty standing up straight because of an inability to balance. This physiotherapist taught the patient to hold on to the side of the bed as she was steadying herself.

In a study for the CPA, Bennett (2004) notes that the majority of physiotherapists work in the private sector (43%) as compared to those working in hospitals (23%). Other physiotherapists work in home care, rehabilitation centers, and long-term care facilities.

The entry-level requirement for physiotherapists in Canada is a master's degree in the field. Canada has 14 such programs, some of which also offer a doctoral program (CPA, 2011). Like all healthcare professionals, the education of physiotherapists has a two-part curriculum. The first is classroom-based learning, where students acquire a broad theoretical knowledge of the profession complemented with laboratory sessions where students develop and practice specific professional skills. The second part is clinical education where students apply theoretical knowledge and skills from the classroom at a licensed healthcare institution under the supervision of a clinical educator.

Like their education, licensing is a multi-part process. First, students must pass both parts of their program to become eligible to sit for the national certification examination, issued by the Canadian Physiotherapy Association (CPA). The CPA is the national association that prepares and operates the certification examination, as well as identifies the required competencies required of all physiotherapists in Canada. Third, students apply for licenses in the province where they hope to work. As noted in previous chapters, provincial licensing associations – professional orders in Quebec – are the

bodies to which provincial governments delegate responsibility for overseeing licensing of professionals in a province. The licensing body in Quebec for physiotherapists is the OPPQ (*Ordre professionnel de la physiothérapie du Québec*). Successful graduation from an accredited university and successfully passing the certification exam qualifies a student for a license. Once licensed, professionals must complete a required amount of continuing education annually to maintain their license.

In a position statement, the Canadian Physiotherapy Association (2012) states that physiotherapists take responsibility for clinical education. This responsibility is also included in the Association's Code of Ethics: "Clinical education is a critical component of physiotherapy education programs and is essential to the future provision of quality physiotherapy health care to Canadians." Furthermore, as clinical educators, physiotherapists "facilitate learning and critical thinking, as well as teach and evaluate students' clinical performance and behaviours" (http://www.physiotherapy.ca/getmedia/3b256d44-e16f-4350-b74f-49e4721b7dec/Clinical-Education-of-Physiotherapy-Students_en.pdf.aspx). Clinical education also serves as an important recruitment tool for health institutions because workplaces can determine if the student has the information, skills and competencies required of novice physiotherapists.

As clinical supervisors, clinical educators in physiotherapy teach and supervise students, conduct regular assessments, and grade students. The academic institution typically provides the clinical objectives and the evaluation forms for the clinical education component of their education, which physiotherapists call clinical supervision. These clinical objectives are organized by competency and include tasks, standards and

conditions for their attainment. Clinical educators in physiotherapy are expected to regularly assess student competence during formal supervision sessions. The academic institutions provide guidelines for the evaluation of the objectives and the criteria for assessing student competency.

All physiotherapists are expected to be involved in the clinical education of physiotherapy students (CPA, 2012). The CPA code of ethics also stipulates this requirement as part of physiotherapists' responsibilities to their profession. How this is operationalized depends on the collaboration of the healthcare and academic institutions.

Clinical Education in Physiotherapy at the Research Site

This section provides a portrait of clinical education in physiotherapy at the research site. It begins with a general description of the Department of Physiotherapy and its approach to clinical education. Then it describes the specific experiences of two clinical educators, Phyllis and Rachel.

About Physiotherapy at the Research Site

Thirty-six physiotherapists work at the research site, most of whom work full-time. According to the department manager, three additional physiotherapists work on grants in other divisions in the Hospital and not under her supervision.

The focus of physiotherapy in this institution is narrower than the profession at large, and primarily focuses on certain tasks. Physiotherapists evaluate patients with various respiratory, cardiovascular, neurological and musculoskeletal conditions. They work primarily with hospitalized patients within the health care team to plan and decide how patients will be discharged to a safe and appropriate environment. This environment

can be a return to their home or it can be to another facility. A number of physiotherapists also work in outpatient services, such as clinics, where they follow patients who have been discharged from the hospital. Here, they also assess and treat patients referred by specialists. The department manager discussed how most therapists rotate on different medical and surgical services and remain on one service for approximately six months before moving on to another service. There are a number of physiotherapists, however, who work only on one unit, such as geriatrics and oncology.

The physiotherapy department supports many efforts to facilitate continuing education. The departmental education committee organizes many in-house sessions that focus on clinical skills and case reviews. The committee also arranges for teleconferences on topics such as *Tips for Managing Chronic Pain* and *Using Manual Therapies for Spinal Cord Injuries*, provided by different agencies such as the Order (http://www.oppq2.ca). A departmental "journal club" regularly reviews and discusses articles from physiotherapy journals. The physiotherapy department also provides educational services for both professional, such as nursing, and non-professional hospital staff, such as patient-care assistants. These services focus on specific patient needs. In addition, the academic institution that partners with the research site also sponsors educational events and the department manager informed me that all staff is encouraged to attend these activities. Finally, most of the staff is also involved in a number of hospital-wide committees.

Clinical Education at the Research Site

The department manager discussed how all physiotherapists with at least two years of experience are expected to serve as clinical educators. Unlike the clinical

education placements for technology programs that only take place during the last year of the education program, the clinical placements in the physiotherapy profession occur throughout the education program. As with occupational therapy, students in physiotherapy are expected to send a short resumé of their experience and their abilities to the department manager, who then shares it with the clinical educator for that student.

Participant Sketches

This section describes each of the two physiotherapists who participated in the study. It specifically profiles Phyllis and Rachel, the clinical educators who teach students in the department of physiotherapy. The processes used to identify fragments in interviews, observations and field notes is the same as that used in the previous three chapters. In the participant sketches, I focus on Phyllis' and Rachel's roles as physiotherapists in the institution, how they approach clinical education, and their reflections on clinical education.

Profile 1 of a Clinical Educator in Physiotherapy: Phyllis

Phyllis describes her experience as a clinical educator as stimulating and she is proud of her profession, her work, and the institution she works in. "I like teaching people about what PT [physiotherapy] is because people don't know it and the scope of it, " comments Phyllis, the first of the two physiotherapists profiled in this study, adding that "I'm proud of being a PT and I am proud of the profession" (Phyllis, I-22). Part of this pride involves teaching people how physiotherapists can help them and how important physiotherapy is to their wellbeing. This section profiles Phyllis. It begins with a description of Phyllis' role as a physiotherapist, continues with a description of her

work as a clinical educator, and closes with her reflections on the clinical education experience.

Phyllis as a Physiotherapist

Phyllis has worked as a physiotherapist at the research site for more than 20 years. She works primarily in geriatrics and most of the patients she sees have recently had surgery or been involved in an accident. Some have been sick for a long period of time while others have only been in hospital briefly. She also assesses patients in the outpatient clinic of the research site (Phyllis, I-7).

Phyllis' regular work involves assessing patients, developing a comprehensive treatment plan, and then developing a discharge plan for patients. Physiotherapists "have to go and do the whole research, never mind assessment, go to the chart, get information, get other information, assess the patient, and then … decide what would be a good treatment plan" (Phyllis, I-110). Patients may need, for example, a therapeutic exercise plan or be retrained on how to become more mobile and better coordinated in their activities. Most of her patients are discharged to rehabilitation centers and she loses track of them at that time. The exception is patients who return to the geriatrics clinic, where she continues to follow them.

This follow-up is so important to her that Phyllis also serves on a working group that considers follow-up with elderly patients. She notes that when patients are in the hospital, "they have access to all the different professionals. But once they leave things change. If they go to a rehab center there is some follow-up but if they go back home then there is none or very little." This work group is part of a committee looking at the interface between the hospital and home to make sure that "all the services patients need

are in place and they have access to them." This is just one of several Hospital committees on which Phyllis serves. One of the things she appreciates about these committees is that they are composed of various professionals, including physicians, nurses, social workers, and occupational therapists (Phyllis, I-168), and that provides her with an opportunity to educate other professionals about physiotherapy. "It's trying to get everybody to understand what PT is about and it's a very tedious process. But it's important" (Phyllis, I-133).

In fact, teaching plays a central role in Phyllis' work. In addition to serving as a clinical educator for physiotherapy students, Phyllis also teaches other healthcare professionals such as nurses on how best to follow-through on the treatments she recommends for patients. She also teaches patients, especially those who are about to return home after a lengthy hospital stay. Because many of these patients are afraid of not being able to care for themselves after returning home, Phyllis emphasizes self-sufficiency in her treatments and she often helps them make the transition back to their regular home lives (Phyllis, I-164). She includes patients' caregivers in the treatment and teaching in order to ensure that all know how to adapt the home environment to the patient's condition and prevent further injuries (Phyllis, I-169).

Just as teaching plays a central role in her work, so does learning. Phyllis describes physiotherapy as a dynamic profession as there are always "new competencies and skills required" for practitioners. Partly as a requirement for maintaining her license but mainly out of a sense of professionalism, Phyllis participates in a number of different learning sessions each year. She focuses her continuing education on developing professional rather than teaching skills. She finds that many of these sessions organized

by the professional association to be practical as they provide a chance to try out new techniques in a small group. “These are the best” (Phyllis, I-76).

Although it occurred two decades ago, Phyllis is still influenced by her own training to become a physiotherapist. She had clinical education experiences at several institutions and describes being nervous when she was a student. Phyllis wanted to “do a good job. I wanted them to like me. I wanted to have a good experience and I wanted the hospital to have a good reputation” (Phyllis, I-30). She recalls her clinical education experience at the research site as very positive experience, in particular one of the units that she “absolutely loved” (Phyllis, I-50). Her clinical educators “wanted to teach. And they liked what they did. … They loved having students and invited us to the staff parties. They were cordial. They loved teaching. It was a very family-oriented department and still is. It made you feel good about being part of a team” (Phyllis, I-60).

At another institution, Phyllis had a number of negative experiences. She felt that one of her instructors did not treat the students with respect. In one session with this instructor, for example, students were berated because they could not find the light switch to the room (Phyllis, I-36). The instructor then lifted a piece of equipment and turned on the light, all the while saying: “ ‘Oh my god, what are they sending us from school these days. They can’t even find the damn light.’ ” Phyllis and her colleague then “looked at each other and thought, ‘Ahh, this is going to be fun!’ ” (Phyllis, I-37)

Later, this same instructor asked Phyllis and a fellow student to use a piece of equipment they had never seen before. As they were “trying to figure out how this machine works, the therapist comes in and says, ‘Oh my god, don’t they teach you anything in school?’ So this was like our very first rotation and phys med was very scary”

(Phyllis, I-39). Phyllis felt that expectations of students in this institution were very low and thus students were given menial jobs to complete: “The therapists used to treat their patients and then would go off to lunch and leave a mess. And we had to clean it up.” Phyllis and her fellow student were not happy with this assignment and she remembers thinking, “I don’t think that I signed up to be the cleaning lady” (Phyllis, I-41). Phyllis felt that this experience was “so unfair. You know I was always a very very good student. I always took a lot of pride in my work so this was like … I don’t know. I remember it like it was yesterday” (Phyllis, I-54).

How Phyllis Approaches Clinical Education

These early experiences marked Phyllis and influence how she behaves with her own students. “They knew it was our first time in hospital. If they would have spoken to us like we speak to our students … You can’t expect them [students] to have the knowledge if they haven’t been taught yet” (Phyllis, I-52). She adds, “I learned from my bad experience” (Phyllis, I-32). But her bigger influence Phyllis was from her positive student experience at the research site. It had a lasting effect; she was invited to join the team of professionals and they made her feel welcome in the department.

In fact, this intuitive, informal approach serves as the primary guide to Phyllis in serving as a clinical educator. She does not find benefit in formal training for clinical educators. Although the academic institution that Phyllis is associated with also offers a number of educational sessions for developing teaching skills and Phyllis has attended them, she does not find them particularly useful. She feels they are geared towards someone less experienced, “younger therapists to help guide them” as they may have difficulty teaching students, in particular when there is more than one student at a time.

"It's very hard and a lot of anxiety to have two students. A more seasoned therapist, it doesn't bother them. ... A younger therapist may not know how to handle them." Phyllis now attends these sessions infrequently (Phyllis, I-78). Nor does Phyllis find paper-based and online materials and resources that the university provides to clinical educators particularly useful either, "as an older therapist I'm not sure that we're all that interested. I'm not." She adds that she has the confidence and the knowledge she requires to do her job and to teach (Phyllis, I-82). The one exception is information that the university provides on conducting research, as this is an area that Phyllis is increasingly interested in (Phyllis, I-84).

Most of what Phyllis knows about clinical education she learned through experience. As noted earlier, one key source of knowledge were the clinical educators at her institution who oversaw her practicum there. They "were absolutely the two best and I think it is because of them that I am who I am today. It was those two. I liked their style with patients and with people and I sort of owned … I took … I modeled myself after that. That is who I am" (Phyllis, I-58).

Phyllis prepares for teaching by first getting to know her students. As mentioned earlier, students send a short resumé of their experiences and goals for the clinical placement before starting the practicum. Phyllis believes these resumés are important introductions to students because they provide insights to their past experiences and their goals for the placement. She uses this information to structure early sessions with the students in order to tailor a positive learning experience. I observed this during an orientation session for students. At this time, she asked them questions she felt she should have been asked when she was a student: "What are your experiences? Where have you

been? What have you done? What did you do there? What did they let you do there? This way I have a sense of what these people are coming with. You can't expect them to have the knowledge if they haven't been taught yet" (Phyllis, I-52).

In addition to getting to know her students, Phyllis also prepares reading materials for them: "I give them some basic reading material because I want them to understand." These readings are primarily about the types of patients they will encounter and the role of the physiotherapist in their assessment and treatment. After the visit to the Hospital and the department, Phyllis begins a teaching session. She explains the importance of the reading materials and then asks students a number of questions about what they learned in school about charting, which refers to the documenting of notes regarding a patient's status and treatment plan. She feels that charting is an important topic because reading and writing in patient charts is central to practice. Then, "I show them where we keep our charts. They see how something is written up. You want to encourage some self-directed learning" (Phyllis, I-136).

Phyllis has a number of Powerpoint slides that she shows to students. "I have slides that I show them, teaching slides that I show them because sometimes they remember better when they see it." These slides are about the role of the physiotherapist on the wards. She also reviews samples of charts that she has gathered for teaching purposes. "I want them to look at the different models. He does his charts that way. I do them this way. Somebody else does a different way," Phyllis adds. "I don't care how you do it. Whatever suits your personality, whatever you feel comfortable doing. As long as you note the right information. I show them all the possibilities" (Phyllis, I-138).

Phyllis typically trains two students at a time and four rotations, or groups of students, in a year each lasting seven to eight weeks (Phyllis, I-13). Phyllis usually takes students in the first year of the program because “they have no background” and have therefore not developed any “bad habits and I can develop them into their role rather than having to undo what others have taught” (Phyllis, I-8). In addition, she does not like to work slowly. When she works with students at later points in their studies, she is obliged to “watch what they do, when they do it. Then you have to teach them, and so everything takes that much more time” (Phyllis, I-65). Students in their first year can simply work alongside her; ones who are later in their programs must work increasingly independently. Phyllis describes this process: “when they’re following me and they know nothing, and I can just teach them everything I know and then all I have to do is do my work and check to make sure they are doing as I tell them” (Phyllis, I-66).

Phyllis has a program that she has developed but it is not documented. “For the first year [students] I developed a program in my own head for them” (Phyllis, I-66). The program includes her modeling professional and technical skills before she encourages students to practice. To ensure they understand and are able to accomplish these tasks on their own, Phyllis asks students extensive questions about what they observe. "I go over with them what they should be saying during the assessment. What questions should they be asking patients? Did they see or notice that I did something specific with the patient" (Phyllis, I-69).

Phyllis’ teaching plan is aimed to respond to a goal: “what information is important to you as a PT” to assess, treat and follow-through on patient care. The majority of this information is in a patient’s chart. If not, students need to know to whom

they should speak or where to locate the information missing for formulating a treatment plan. At the start of a clinical placement, Phyllis therefore teaches students how to gather this information. Phyllis suggests, “It doesn’t matter where you work. If you don’t do this well, you will always have problems … [and] if you go through this in the right way, you will always find out what you have to do” (Phyllis, I-67).

Phyllis also prepares students to work autonomously. Physiotherapists, like other allied health professionals, work on a one to one basis with their patients. Acting independently is one of the skills they master in the clinical education phase of the educational programs. Phyllis says, how “I help them become independent by encouraging them and showing them one thing at a time. They then perform these tasks until they are mastered. Then they do a little bit more. It takes time to be able to learn to do everything but eventually they reach the point where they need to be (Phyllis, I-123).

To determine which strategies are most appropriate for any given student, Phyllis assesses their abilities in the first few days of the placement. She admits that if “I have really good students, I go in one direction.” However, if students have difficulty or lack certain basic skills or knowledge, she modifies her methods. Students with difficulty lead Phyllis “to back it up” and repeat or continue at a slower pace. What is most important is that they learn the basic physiotherapy skills. These basics are “the foundation of the profession and they must learn these basic properly in order to continue” (Phyllis, I-147). She feels that it is important that students achieve competency. Students must master one skill before moving to the next.

Should students have difficulties, Phyllis adapts the program to accommodate their needs. She will “give extra help” and focus the teaching on specific tasks. She tells

students, “ ‘today we are only going to focus on getting the right information. Next week, we are going to work on putting all the information together and how you get an analysis but I’m going to help you. Then the week after that you’re going to have to figure it out for yourself.’ ” It is important that students achieve competency but when required, Phyllis slows the pace or focuses on specific skills. Once these are mastered, she then proceeds to the next set of skills. Phyllis tells students, “ ‘that’s my goal for you is that based on all the information you got about the patient you should be able to decide where we’re going to go, what we’re going to do. Who are we going to call.’ ” (Phyllis, I-121) It is important to be flexible with each student because each has strengths to reinforce and weaknesses to address.

Phyllis also notes the cumulative nature of clinical education. What students learn in one placement is not complete and needs to be reinforced in subsequent placements. Phyllis tells students: “ ‘There are so many other areas where your training … you do the same things but you adapt it to where you are’.” (Phyllis, I-27) What they learn in her department is later bolstered in other departments and other institutions (Phyllis, I-107).

Assessments of students are an important part of Phyllis’ teaching, and occur throughout the placement. She conducts regular verbal feedback sessions with students, in particular when they make a mistake. “I do verbal when they do something wrong … like right away.” She also conducts formal mid-term and final assessments. The University provides Phyllis with the forms. I did not have a chance to see these documents but I am sure that they are similar in structure to those used by the occupational therapy participants. Phyllis describes the evaluation forms: “It’s a rating system from 1 to 10 …” Students in their first year are rated from 1 to 3 on these forms.

"The second years you can go to 5 or 6." The system is complicated, she suggests, because not all competencies are assessed at the same time (Phyllis, I-105).

Before she gives students their evaluations, Phyllis always ask them for feedback on their training. This is important because she makes changes to the program based on their suggestions. She systematically reviews all student suggestions at least once a year, sometimes more often and tries to include them in the program for the next year (Phyllis, I-106). She asks students to tell her if something is wrong, as soon as it happens: "I tell them that I expect … that if something is wrong that they tell me right away. Not to wait to half way [midway through the placement] or the end. And I need to know now because everybody is different" (Phyllis, I-97). This was something that I observed during the student orientation. Phyllis stressed the importance of them informing her whenever something was not going according to plan.

Phyllis' Reflections on Clinical Education

Phyllis believes that clinical education is important for the future of the profession. Students learn a great deal in school but they learn to apply this in the hospital. They also learn how to be a professional. "I think it's … important … definitely important for the future of the profession. Absolutely. Because I think that what you learn in the schools is not … that they don't give you the total scope of all the things that you can do" (Phyllis, I-27). She also notes that the practical dimension of training is important. Students "can do the work and they can understand why they're doing it. They can be book smart but they have to understand what they're doing because not everything can be memorized or should be" (Phyllis, I-173).

One of the most significant parts of clinical education is learning to adjust practices to the unique needs of each patient because every patient and condition is different. One of the major benefits of clinical education is its broad application. Phyllis tells students: "There are so many other areas where your training … you do the same things but you adapt it to where you are," especially in facilities other than hospitals (Phyllis, I-27).

Although she enjoys it, Phyllis admits that taking on students "is a lot of extra work" (Phyllis, I-94), an additional task to an already heavy workload. In addition to the time she spends with students, Phyllis must also complete the student assessment forms that the University provides. She finds the forms to be unclear and they take a one-size-fits-all approach, failing to address the issues that are important for students to know at different points in their education. She feels that students need to develop basic competencies and advanced skills, but the forms require her to evaluate each student against the same criteria. "Students in their first placement will not know what other students in later placements would know. Therefore it is unfair to evaluate them the same way" (Phyllis, I-107).

Phyllis laments that not all students are meant to become physiotherapists. This makes for a difficult situation, a situation that makes her feel uncomfortable. She has even felt required to pass students whom she did not deem ready to continue: "I have had one, just a couple of years ago. She was just … she didn't have it … but I was very uncomfortable with flunking her. Because she would have had to take the whole year over …. So I found a way to just **just** pass her." She adds that she felt pressure to pass this student (Phyllis, I-119).

Student expectations of physiotherapy are another challenge. " Students come in and they want to know that the profession that they chose is a good one. Ok. But you're coming and what you read in a book and what you see in an acute care center like this are very very different and ... the young students today want to treat" (Phyllis, I-127). Students see healthcare professionals doing everything especially in television programs set in hospitals and expect to be able to do the same. "But that's not what happens in real life." Phyllis does not want students "to get a bad feeling about what PT is" but finds their expectations are not realistic. She tells them that they are only just beginning in their journey. "This is just one aspect of it. I want them to understand that there are so many but if 'you can do this, you can do anything.' " She reminds them that they first have to learn the basics. "This is probably the most important thing that you need to do." Once they know the basics, "everything else will fall into place" (Phyllis, I-129).

Another challenge that Phyllis discusses is how rehabilitation professionals are seen in the hospital. She suggests that allied health professionals are not recognized for their efforts. Phyllis suggests that physicians and nurses run the hospital: "I think that if we were recognized and respected for the scope of what we can do here in the hospital, it would be better. And I think if anything frustrates me more, is that we are constantly being nudged away. It's still the nursing-doctor partnership and I find that that drives me crazy" (Phyllis, I-153). This is one of the reasons why the hospital committee on the adaptation of elderly patients on which Phyllis is involved in is so important to her. She can advocate for the value of including allied health professionals in the ongoing health of elderly patients.

Despite the challenges, Phyllis feels there are benefits to teaching students. At the end of rotations, students usually bring treats to the physiotherapists. "They bring us cookies and doughnuts and they bring little presents. That's fun." At times, the department will also organize a small celebration for students (Phyllis, I-143). Former students, whom she encounters at professional events, always have a kind word to say. In addition, a number of students have contacted her and other members of the department. "Often they [students] do call us back because they like our department very much" (Phyllis, I-70). This affirms for Phyllis the goals she stated earlier for clinical education: to do a good job, to be liked, to have a good experience and for the hospital to have a good reputation. Despite all the challenges Phyllis experiences in teaching students, "I think they had a very good experience" (Phyllis, I-94).

Phyllis also suggests that students always give her a good evaluation of their clinical education experience: "I got a good report" (Phyllis, I-94). These reviews are her primary means of measuring her success. One student commented, " 'I really liked your style and your style is the style that I want to take on.' So what more can you ask for?" (Phyllis, I-99) This positive impression persists long afterwards.

Through sharing her knowledge with others, Phyllis also realizes how much she knows. "You always think that you don't know things. But when you're imparting what you know, you say oh my god, look at all the things that I told them … and realize you know a lot. Sometimes you forget and you always think someone out there knows more than you but I don't think that is necessarily true" (Phyllis, I-25). It is through the sharing of knowledge that Phyllis realizes the depth of her own knowledge and understanding.

Ultimately, Phyllis is “proud” of her work as a clinical educator and finds the task “stimulating.” She adds, “I learn from them as much as they learn from me. It also stimulates me to see them begin to act as professionals, to see them develop” (Phyllis, I-149). Teaching also fosters pride in her profession. “We have changed so much since when I first began to work. We now take on so many more functions and patients are better served by physio today than in the past” (Phyllis, I-170). The experience of being a clinical educator is instrumental in encouraging this level of pride. It is also stimulating to see students succeed.

Profile 2 of a Clinical Educator in Physiotherapy: Rachel

Rachel describes her experience as a clinical educator as stimulating. « *Pour moi, avoir une étudiante est stimulant*. » [TR, For me, having a student is stimulating] She loves to teach and having students stimulates her to be “up-to-date and always fresh in my knowledge” (Rachel, I-75). Being a clinical educator, she adds, is a “learnful” experience because she feels she is always learning as she teaches (Rachel, I-76). Rachel, the second of the two physiotherapists profiled in this study, adds that she wants to share her passion for her profession: « *Je veux donner à mes étudiants le meilleur expérience possible. Je veux qu’ils aiment notre profession. Je veux leur donner … pas la passion mais j’aime qu’est ce je fait et je veux qu’ils l’aiment aussi* » (Rachel, I-77) [TR, I want to give my students the best experience possible. I want them to love our profession. I want to give them … not a passion but I love what I do and I want them to love it as well]. This passion is her motivation for teaching students. For Rachel, clinical education is a means to growth and development. “Sometimes we make a difference in patients’

lives, sometimes we don't. But I want to give them the chance to do something for the profession … to make a difference" (Rachel, I-78).

This section profiles Rachel. It begins with a description of Rachel's role as a physiotherapist, continues with a description of her work as a clinical educator, and closes with her reflections on the clinical education experience.

Rachel as a Physiotherapist

Rachel has worked as a physiotherapist for nine years in the healthcare institution. Unlike Phyllis, she does not specialize in any specific area of physiotherapy and works in most areas, including both inpatient units and clinics. On average, every six months she moves to a different area, for example from cardiovascular to orthopedics (Rachel, I-7). Rachel prefers this diversity rather than remaining in one area throughout the year, partly because she is able to follow-through on her patients. The change makes her job "more interesting. I hate to do the same thing with the same patients. I need variety" (Rachel, I-10). The only areas she does not work in are patients undergoing cancer treatments (oncology) or in palliative care. Rachel described how she provides manual therapy and develops individualized exercise programs for patients. She also helps retrain patients who require rehabilitation after injury or training on developing their coordination after an injury (Rachel, I-14).

Rachel also has a number of other responsibilities, notably educating patients and their caregivers as well as other health professionals regarding injury prevention, ergonomics, fitness, health and wellness. She believes that teaching is one of her most important roles as a physiotherapist. She teaches staff, "both formally and informally, on the different wards and services such as neurosurgery, orthopedics, ICU [intensive care

unit], medicine and cardiology. This is important because staff need to know what to do with patients when I am not there" (Rachel, I-18).

Rachel is also active on a number of hospital committees. She is involved in a multidisciplinary quality committee that examines quality issues across different professions. She is also active in a patient education committee that develops resources, both paper and online, for patients about different health issues. She provided me with the link to their website where I found a number of invaluable materials (Rachel, I-124).

Rachel describes her early experiences as a student and a novice professional at the hospital, where she was treated as part of the team. "I did most of my *stages* here. I learned a lot and was well treated by the physios. They treated me with respect and like I was already working here, not like a student. I learned a lot, was allowed to make mistakes and learned from them" (Rachel, I-27). Rachel also had good experiences as a student in other institutions, such as at a rehabilitation center: "I worked with the physios in a rehab center and this was a very good experience. But I preferred being in a hospital because it is busier and more stimulating. The patients are also different because they are more sick and need our help" (Rachel, I-30).

How Rachel Approaches Clinical Education

These early experiences marked Rachel and influence how she behaves with her own students. Her experiences at the research site, in particular, were especially influential. Rachel discusses borrowing teaching strategies from her colleagues when she first began to teach students (Rachel, I-32).

On average, Rachel has three students per year, one at a time. Each rotation is from seven to eight weeks, depending on the service and the level that the student is at,

that is, the year at which the student is in the education program (Rachel, I-12). Taking students is part of her regular duties as all physiotherapists are encouraged to take on students. However, she enjoys teaching students and would "still take students even if I don't have to" (Rachel, I-19).

Before students arrive for their clinical placement, Rachel reviews the status of all her patients. She does this in order to select which patients she will assign to the student. "At the beginning I will give them an easy patient to see how they do. Then I will give them increasingly complex cases." This is important because, for Rachel, "patients are the most important and we are there to help them" (Rachel, I-40). Consequently, as students become more proficient, Rachel will assign them increasingly complex cases.

Before students arrive in the department, Rachel also reviews the introductory resumé that students send to the department. She then prepares a schedule of activities and reviews the competencies the student is expected to complete. On the first day of the placement, Rachel greets students at the appointed place and introduces them to the department and to the staff. It is important that students know everyone and feel welcome in the department. This was something that she felt was invaluable when she was a student and she ensures that students feel that they belong (Rachel, I-53). Students are then introduced to the department manager who then discusses the schedule of activities and the goals for the rotation. Rachel also discusses the competencies students are expected to master and links them with the schedule of activities (Rachel, I-54).

Rachel does not create or prepare any theoretical cases. It is important that students work on the patients she has. "I have a heavy workload and don't have time to create any cases. Also, they will see everything they need to see when they follow me"

(Rachel, I-36). The institution has all the different services and students can achieve all the competencies required. She therefore feels no need to create cases to ensure that students are exposed to all situations. “I don’t prepare cases or examples ahead of time but if I need to, they will come to me. And these will be a good illustration for students” (Rachel, I-55). When required, Rachel illustrates with examples of cases. If students require practice to develop certain specific skills such as interviewing patients, Rachel encourages them to practice on her before going to a patient. She suggests this does not happen often, as most students have already undergone at least one or more placements before they come to her (Rachel, I-36).

Students follow Rachel as she goes about her regular work. She tries to include her student in all her daily activities. “I explain what I have to do. First, I go see my regular patients to follow-up on how they are. Have they been doing what I told them to do? Do they need help?” Rachel explains that she often assigns patients a specific activity they have to perform, such as exercise in place or walk to a specific area. She asks the student to check up on these patients as she makes notes in the patient chart (Rachel, I-38). Once this is complete and all her regular patients have been examined, Rachel moves on to new patients. Throughout the day, she observes as students consult with or treat patients. Then she gives feedback on how the student performed. “I try not to watch over their shoulder but from a bit of a distance. I need to be close in case something happens or they need me. But I also need to be far enough to give them a chance.” She feels this is an important teaching strategy as it encourages students to develop their skills as physiotherapists (Rachel, I-39).

Rachel asks questions and observes students as they perform the functions of a physiotherapist (Rachel, I-46). She says, "They already do a fair amount of simulation at school and have no need to do this at the workplace" (Rachel, I-53). It is important that they work on actual patients. This is what she experienced when she was a student and she describes it as the best way for students to learn.

If students encounter difficult patients or patients who are not following the instructions she gave them, Rachel engages in different teaching activities. For example, she suggests, “I want them to see how they would respond if a patient would not do what I have told them to do, if they don't do what is expected of them or if they don't listen. I play the role of the patient and ask them what they would tell me. How would they encourage me to do my exercises?” This is important because patients are not always truthful when asked if they did their prescribed activities. Learning to read patients is therefore an important skill for students to develop (Rachel, I-71). “Most of our patients are nice with them,” Rachel adds. But at times they get “those difficult patients” and students have to know how to handle them (Rachel, I-73).

Although I was unable to conduct an observation of Rachel with a student, we discussed her teaching activities while on a visit to the intensive care unit, the service where she was working at the time. Here, she explained what she did on a regular basis and how she organized her teaching activities. The nature of the work and the patients involved lead me to understand why she only takes one student at a time. Depending on the patient’s illness or disability, Rachel spends differing amounts of time with each. Some patients, for example, have been bed-ridden and unable to move for a lengthy period and require different amounts of treatments than do patients who are about to be

discharged to another unit and therefore beginning to become more mobile. Treatment plans in intensive care areas also differ sharply from those on regular units because patients' conditions are critical (Rachel, FN).

Like other research participants, Rachel learned to be a clinical educator both through formal and informal learning activities. The academic institution offers a number of different learning activities, many of which she participates in regularly. Rachel is particularly enthusiastic about courses she took for clinical educators. Here, she "learned a number of tricks to teach while working." The title of one of the workshops she recently took was *Teaching when there is no time*. When asked what was helpful about this workshop, Rachel replied, "It helped me realize that we can use every moment during the day as a teaching moment. We don't have to lecture students but just talk to them about what they are doing. Ask them questions about why they need to do something. It makes the teaching more dynamic and relevant" (Rachel, I-26).

Rachel also participates in formal learning activities aimed at developing her professional skills. She attends educational sessions regularly at the Canadian Physiotherapy Association conferences where these workshops are offered. These are important she suggests because physiotherapy is a "new and growing profession and we always have new things that we need to learn to help our patients" (Rachel, I- 28).

Colleagues and students themselves are also important influences as Rachel learned to become a clinical educator. She admits to observing learning from her colleagues. "Yes, all the time I am always learning. When I started working here they were always patient and helpful. Many of them taught me when I was a student and I was

happy to work with them. I learned how to teach students from them. I do what many of them do when they have students" (Rachel, I-32).

Rachel also admits to learning from patients and she tells her own students that they can learn from them. "I tell them, if you have a patient you can tell them or ask a colleague. We do it all the time. Personally, I will ask my patient, 'do you mind if I ask my colleague to see you. I'm not sure what I should be doing' … That's the way you learn" (Rachel, I-34). It is impossible to know everything. At times, professionals may not know how to proceed and must therefore ask their colleagues, other professionals, even patients to confirm or ensure they are performing properly. "With every patient you are growing as well as they are, as a professional, Rachel suggests. And every situation is different. You learn from your patients. You learn from your students" (Rachel, I-64).

Rachel also provides students with regular feedback and assesses their abilities. She gives students regular feedback on their performance throughout the day. This is important, as she wants to "reinforce what they are doing well and prevent them from making major mistakes. Small mistakes are OK but not big mistakes" (Rachel, I-49). In addition, Rachel assesses students formally, using the University evaluation forms, at the midpoint and the end of the placement (Rachel, I-48). She also asks students about their experience and if there is anything they feel could have been done better. "Just as I evaluate them, I want them to give me some ideas to improve the teaching." She believes it important to accept student feedback on their learning (Rachel, I-112).

This belief in the importance of learning from each moment in the day is what led Rachel to take a position at the academic institution as an associate teacher in physiotherapy. "I want to learn more and do something a bit different. I love to teach and

this is a good opportunity for me to learn how to be a better teacher" (Rachel, I-76). Rachel believes this new experience will help her become a better teacher and a better professional. She began this position before the interviews were complete. Consequently, I was unable to observe her teaching students in the hospital but was able to observe her working in the intensive care unit and I was also able to conduct the final interview by telephone and email.

Rachel's Reflections on Clinical Education

Rachel believes that clinical education is important for all healthcare stakeholders. "Clinical education is very important for staff who develop students who are the future of the profession". It is also important for students, as they will become the professional physiotherapists who continue the legacy. Clinical education is also important to the healthcare institution because "physio is very important for patient well being," and ultimately, clinical education is crucial for patients, "who are the most important people in the healthcare system" (Rachel, I-22).

Rachel remembers being particularly happy when offered a position at this institution. Her early experiences working were also very positive. She adds that she borrowed from her colleagues Rachel adds that she began to teach students after she had two years of experience. This was good she suggested and sufficient time because it "gave me a chance to get comfortable in the workplace and with patients" (Rachel, I-32). She was also more familiar with the other professionals that she had to work with as well, in particular nurses and physicians.

However, Rachel's early experiences teaching students were difficult and different from what she expected. "My first students were hard. I wasn't sure if I would

be able to teach them properly. Also, I think the student knew that it was the first time and it was hard." Rachel discusses how she "tried to teach my first student the way I was trained." She adds,

> I prepared and had decided how I would show her everything. I introduced her to the patients that I had been following. I asked her to talk to them. She told me that this was not what they learned in school and that she was not comfortable doing what I told her to do. She did not want to talk to the patients. I don't know what she thought physio was about but I think she just didn't want to work with patients. But this is the job. (Rachel, I-69)

This was unexpected and Rachel said she would never have acted like that when she was a student. She ascribes this behavior as the student not wanting to learn to work with patients. "I knew what the job of a physio was like and I wanted to do it. But this student didn't." Rachel consulted with colleagues and teachers at the academic institution. It took a while she suggested, because the student never became comfortable working on the wards. However, "after the teacher in charge of the *stage* talked to her, she began to be better." Rachel did not know what could have caused this behavior but that she probably realized "she had to pass otherwise she would not have to continue" (Rachel, I-70). Nevertheless, it was an important point in her career and it marked her as she continued to teach. This experience led her to want to know more about the teaching process.

Rachel regularly engages in and expects her students to also reflect on their practice. She considers "student accomplishments and what I can do to change the rotation in order to improve it" (Rachel, I-63). With every group of students she learns something new and as a result, she grows "as a professional" (Rachel, I-64). Rachel adds,

"They should be engaged in the same sort of reflection. I encourage them to write it in a journal. They have to keep track of what they do each day and consider how this relates to the competencies. I think it is a good exercise. I still do it when I can and it's important that students do it also" (Rachel, I-65).

Rachel admits to encountering a number of challenges as a clinical educator. Some of the challenges have been a result of the hospital environment, while others are related to students and teaching. The department has been undergoing extensive renovations and, even though, Rachel suggests these will be good "in the long run but right now it is difficult." She discusses how the lack of space leads her to change how she evaluates students. Sometimes she is unable to do it privately, which can be problematic especially if a student is not doing well. At times, she uses other therapists' offices, such as her supervisor, to ensure confidentiality (Rachel, I-111).

Staffing issues is another important challenge. Rachel suggests that there are not enough graduates choosing to practice in the hospital setting. There has been a trend in recent years for new graduates to take positions in the private sector and few want to work in the Hospital. "We need a few more staff to make sure that everyone has the time to do what they are supposed to" (Rachel, I-113). Because of staffing shortages, Rachel suggests they often have to "scramble to find time to see all the patients and to work with them properly." As well, staff is expected to participate in hospital committees and in the last two years, Rachel has decreased the number of activities she participates in. "I used to be involved in many committees but I can't anymore. So I have had to become less involved" (Rachel, I-114).

Rachel also discusses how some students are not prepared for their professional activities and, as a result, some do not succeed. For example, a number of students have little interest in working in a hospital setting. They are more interested in pursuing other goals such as research or teaching. Many go into the private sector because it is less stressful than working in a hospital (Rachel, I-116).

One of her most important challenges relate to student inabilities. Not all students are able to work in a clinical setting. Rachel discusses how she has had students who are unable to engage with patients. For her, this is the single most important skill. She spoke about how some students have few or no patient interaction skills. One student even cried when asked to uncover background information about a patient. She couldn't speak with her patients. "She was a brilliant student, very intelligent. But no patient skills. … I tried to give her a young patient, someone she could relate to but even this patient she couldn't talk to" (Rachel, I-92). She encouraged this student and with time she was finally able to do a minimal assessment. Rachel found it difficult to assess this student and decided to document the problems she had. She recalls how her comments for this student included: "Needs to engage in a patient-professional relationship. Needs to learn to work with patients, needs to get more close to patients." She believed it important to note her difficulties. It was obvious to Rachel that this student would never be able to work in a hospital and that she would probably end up in the private sector or in research. Nevertheless, the student probably learned to appreciate the work of hospital physiotherapists (Rachel, I-96).

In spite of the challenges, Rachel believes that all students are capable of learning to function as a physiotherapist. She discusses how some techniques oblige a therapist to

work very closely with patients. Furthermore, patients have to sometimes be pushed to move. “You have to use your body weight,” regardless of your size and build. She is particularly proud when of a 100-pound student working with a 300-pound patient. “Well you need to push this guy because he is stiff” (Rachel, I-97). Often students are not persuasive enough with patients. This is something they are not taught in school and some students are afraid of hurting patients. But Rachel believes that, with her encouragement, students are able to overcome their fears. It is up to the physiotherapist to ensure that these patients comply with the treatments provided (Rachel, I-73). The aim is to improve function and capacity in order to help improve their health or the quality of their lives and prevent further injury or illness.

Rachel discusses how she has received good evaluations from students. Students praise her for her patience and her teaching ability. They add that Rachel has a good relationship with her patients and they model their own behavior after hers. She recalls how at a conference, Rachel encountered a former student who informed her that she was able to overcome her shyness with Rachel’s help. The student also suggested that Rachel taught her to be both “firm and compassionate” with patients (Rachel, I-121). These are traits that Rachel believes important for clinical educators. “We have a job to do as a physio but we also cannot forget that patients are fragile and we are there to help them” (Rachel, I-122). With her encouragement, students succeed in their goals.

Profile of Clinical Educators in Physiotherapy

Two physiotherapists volunteered for this study, both of who trained as students in the healthcare research site. They also began to work at the site shortly after graduation from the academic institution. One specializes primarily in geriatrics while the other rotates through different services, in particular intensive and chronic care units. Despite their different work areas, the two clinical educators have similar experiences. Table 8 below, summarizes the participants' roles as clinical educators. This section compares the research findings between the two participants as it discusses the three main areas of commonality between the two educators: characteristics related to the person, to the context in which they work, and to the process of becoming a clinical educator. Each of these is described in this section.

Personal and Professional Characteristics

There are personal and professional characteristics that are common to both clinical educators. Both have worked at the healthcare institution for a number of years, Phyllis for more than 20 years and Rachel for nine years. They both have permanent full-time positions and work in both in-patient units and outpatient services. Phyllis works primarily in geriatrics and has specialized in this area, while Rachel rotates through most units in the hospital, as she is more of a generalist. Both physiotherapists prefer their work arrangements and are committed to their patients.

Although they work with different groups of patients, both participants perform similar professional functions. Both Phyllis and Rachel assess patients, develop treatment plans appropriate to the patients' conditions, educate patients and their caregivers, and

Table 8
Physiotherapists as clinical educators

	Phyllis	**Rachel**
Years of experience as a physiotherapist	20+	9
Years of experience as a clinical educator	20+	7
Years of experience teaching	20+	7
Job title	Physiotherapist	Physiotherapist
Job status	Full-time	Full-time
How participant became a clinical educator	Part of job	Part of the job
Trained as a student at work site	Yes	Yes
Number of students trained at a time	1-2 (2 max)	1
Influenced by early experiences	Yes	Yes
Number of weeks training per group	7-8	8
Number of clinical educators in the department	All staff	All staff
Number of rotations per year	3	3
Formal learning	Yes	Yes
Informal learning to become a clinical educator	Yes	Yes
Challenges in the workplace	Time Students	Space Students Staffing
Words to describe experience as a clinical educator	Pride Stimulating	Interesting Learnful Stimulating
Engagement in professional development (professional knowledge and skills)	Yes	Yes

follow-through on treatment plans. The goal is to improve patients' mobility, strength, endurance, balance and gait in order to combat the physiological effects of their illnesses and lack of mobility. Both physiotherapists work within a healthcare team that sees a patient through the course of their hospital stay and ensures that when patients are discharged, it is to a safe and appropriate environment where they can continue with the treatment plan until it is no longer required.

Multiple responsibilities

In addition to patient education, both physiotherapists also teach healthcare professionals such as nurses. Both Phyllis and Rachel discuss the importance of teaching other professionals about physiotherapy. A number of professionals do not know the scope of physiotherapy and both participants regularly inform staff on how best to use their methods to help patients. Phyllis and Rachel are also involved in various hospital committees and use this involvement as a springboard to educating other professionals about the roles and responsibilities of physiotherapists. This is important because, as Phyllis suggests, everyone needs "to understand what PT [physiotherapy] is all about".

All physiotherapists teach students as part of their regular duties. Although they teach students throughout the year, Phyllis usually takes one to two students at a time, while Rachel only has one student at any one time. In a given year, Phyllis has five to six students annually and Rachel three students. Both enjoy teaching and having students and would teach even if they didn't have to. For Rachel, her love of teaching has led her to take a full-time teaching assignment at the academic institution.

Early professional experiences as influential

Most clinical educators discuss the importance of their early experiences as students and as novice professionals and how these influenced their activities as clinical educators. Both Phyllis and Rachel conducted clinical placements at the healthcare institution where they currently work. They describe their student experiences as very positive and the main reason why they decided to work here. Their own instructors wanted to teach students, encouraged them, and made them feel welcome in the department. Essentially, they treated them as though they were members of the team.

However, Phyllis had some negative experiences in another institution. She feels that she was not treated in a respectful manner and that she was not well trained. Furthermore, she felt berated when she made mistakes. Rachel, on the other hand was allowed to make mistakes and encouraged to learn from them.

Both clinical educators admit learning from these early experiences. Phyllis ensures that she speaks with students in a manner distinct from how she was spoken to while a student. When she first meets her students, Phyllis asks them a number of questions to get to know them and to find out about their experiences. During the observation, she showed a genuine interest in her students. Rachel borrowed many methods and teaching strategies from the professionals she worked with.

It is interesting that only Rachel discusses some of the experiences she had when first teaching students. A number of other clinical educators in other professions also mentioned how their first experiences teaching marked them. Rachel recalls the difficulties she had with her first students. Even though she had prepared prior to the student's arrival, she still found the experience to be "hard." Students were unwilling to

perform required tasks and had problems interacting with patients. Their attitudes were so unlike what Rachel anticipated that she was unsure how to handle them. Consultations with colleagues and teachers at the academic institution helped the situation.

The Context

Despite the satisfaction that clinical educators feel when they teach students, both participants also describe experiencing a number of challenges. Teaching and mentoring students is “a lot of extra work,” as Phyllis suggests, and as a result, educators are under additional pressure. These pressures include the extra workload that teaching presents, workloads that are not diminished when they take on students. Many of the challenges that the participants describe are therefore related to the healthcare environment. In addition, both educators also describe some difficulties they have had with students.

The physical renovations occurring in the department have had an impact on the professionals in terms of the space they have to teach students. Phyllis suggests that these renovations will be beneficial in the long run but in the immediate term, the physiotherapists have little personal space and they have no space for teaching or evaluating students. Rachel discusses how the lack of space leads her to change how she evaluates students because she is unable to do it privately, which can be problematic especially if a student is not doing well.

Staffing issues are another important challenge. Rachel discusses how the increased workload is a result of staffing shortages. There has been a recent trend in physiotherapy as increasing numbers of professionals are working in the private sector and fewer working in hospitals. Both participants suggest that clinical placements are a

good way to recruit new physiotherapists. Unfortunately, many students decide to work in areas other than hospitals.

Staffing shortages also impact on time issues. Both Phyllis and Rachel discuss the lack of time to perform all the duties required of them. Time constraints have led Rachel had to become less involved in various hospital activities. To deal with the lack of time available to them, each instructor organizes their student activities around their regular work. Rachel suggests that time issues have led her to “scramble to find time to see all the patients and to work with them properly.” Lack of time also encourages professionals to pass students even when perhaps they feel they should not. Phyllis, in particular, discusses how she felt she had to pass a student even though this individual was not ready to continue. The way the competencies and the evaluation schemes are arranged, as well as staffing issues and lack of time, encourages professionals to “just pass” students rather than taking more time to mentor them. Undoubtedly, this will have an impact on the future of the profession.

Another important challenge for both educators is the lack of student preparation for the clinical placement. Students often do not know what is involved in being a professional and what is expected of a physiotherapist. Phyllis usually takes in students who are in the early stages of the educational program and she has to spend time teaching the basic skills required. She suggests that student expectations of the profession are not realistic. Rachel teaches students who are in later stages of their education but even then students are not adequately prepared. Some students have difficulty engaging with patients and have few listening or interactive skills. They are more interested in pursuing

other goals such as research or teaching and, as a result, many go into the private sector because it is less stressful.

Despite the challenges they encounter on a regular basis, both Phyllis and Rachel feel that they have been successful in their teaching efforts. Both discuss how they have received good evaluations from students and that this is a motivating factor for them. In addition, they will encounter students at various physiotherapy activities, for example at conferences. Here students often praise them for their teaching abilities and are grateful to them. As Phyllis suggests, this is one of the best rewards of being a clinical educator and it affirms the goals she has set for herself.

Rachel believes that all students, despite their interests, are capable of learning to function as physiotherapists. They just need encouragement, mentoring and coaching to learn and perform the tasks required of them. Part of her role is helping students overcome their fear of interacting with patients. This is because patients are central to the work of a physiotherapist. Both Phyllis and Rachel are enthusiastic about their work and their professions and work hard to develop students to also become enthusiastic.

The Process of Becoming a Clinical Educator

Both physiotherapist participants discuss how they engaged in formal and informal learning activities as they learned to become clinical educators. Phyllis and Rachel both attend formal learning sessions offered by their association. These sessions are aimed at developing professional and technical skills specific to the field of physiotherapy and both participants discuss the benefits associated with these educational sessions. Phyllis, in particular, prefers the learning sessions offered by the professional

association (CPA) because they are practical sessions that introduce new skills and equipment. “These are the best,” she suggests.

Both Phyllis and Rachel also attend educational sessions offered at the academic institution with which they are affiliated. These learning activities at aimed at clinical educators in an effort to help them become better clinical teachers. Rachel applauds the courses she has taken at the University as useful because they “helped me realize that we can use every moment during the day as a teaching moment.” She has also used much of what she learned at these courses in her teaching activities. Phyllis, on the other hand, was not as enthusiastic about the sessions offered at the academic institution. She suggested they were not particularly useful because they were aimed at educators with less experience. Phyllis prefers to rely on her own experiences to teach students. The academic institution also makes available teaching resources for physiotherapists but only Phyllis discussed accessing these and she suggests they are not particularly useful for her needs, except for materials related to research.

Both physiotherapists discussed the importance of informal learning activities as they learned to become clinical educators. Most of Phyllis’ knowledge of teaching is based on her experiences, based on her knowledge about her practice and about teaching. Phyllis also describes how the clinical educators she had when a student, were a big influence on how she teaches and that she “modeled” herself after them. Rachel learned to use various teaching strategies from colleagues when she first began to teach students. She also learned to teach from patients and from her own experiences with students and she encourages students to learn from patients. This is because professionals learn, Rachel affirms, primarily through their interaction with patients.

Preparing to teach

Both clinical educators use a variety of methods to prepare before students arrive in the department. Both Phyllis and Rachel examine student resumés carefully and use them to structure and plan their teaching sessions, in particular for the early stages of the clinical placement. Then they use their experiences as a basis for what they need to prepare.

Phyllis and Rachel also prepare schedules of activities that serve as a structure for the clinical placement. They have a general plan for each of their specialty areas but make slight modifications depending on the patients and the situations encountered on the wards. Depending on students' prior experiences and abilities, for example, Rachel decides which patients she assigns them. Phyllis gathers examples of patient charts for an introductory discussion on charting, one of the basic tasks that physiotherapists engage in that Phyllis believes important for students to master. In addition, Phyllis prepares a number of readings for students and she reviews powerpoint slides for teaching.

When they first arrive in the institution, all students undergo an orientation session, to both the healthcare institution and the department. They begin with a brief interview with the department manager who provides an overview of how the department is structured, the roles and responsibilities of different individuals and what is expected of students. Students are then provided with a schedule of activities and tasks they are expected to accomplish. These are usually aligned with the competencies that students are expected to master. This orientation session is important because it sets the stage for the remainder of the placement. Phyllis also uses the orientation to get a sense of students' abilities, their strengths and weaknesses, and to have them get to know her.

Teaching activities

Each of the clinical educators who participated in this study trains students throughout the year. Unlike the technical programs, students in physiotherapy have their clinical placements throughout the education program. In addition, all physiotherapists at the research site, who have a minimum two years experience, are expected to train students. Both Phyllis and Rachel enjoy teaching students and each take three to four different groups of students. These rotations last from seven to eight weeks depending on the service where the training is occurring.

Phyllis takes two students at a time, usually in their first year of the education program. She feels it important to take on beginning students as they have little experience and therefore not acquired “bad habits” from other instructors. She prefers to develop them into their role as physiotherapists rather than undoing what other professionals have taught them. Rachel, on the other hand, only takes one student at a time. The nature of their work and the patients they have is a factor in the number and the types of students they teach.

Both participants have a similar teaching program. Most of the teaching is conducted as students follow their instructor on the units as they conduct their work. Both educators have a heavy workload and use a number of strategies to ensure that students are learning what is expected of them while at the same time ensuring that patient care is not compromised. Neither instructor has a documented teaching plan, although Phyllis admits to having “a program in my own head.” Both participants discuss how they model behaviors as well as professional and technical skills before they encourage students to practice on their own.

Both educators also engage in regular verbal feedback and assessment of students. At the start of the rotation, student knowledge and abilities are reviewed as regards their basic skills. Phyllis suggests that depending on the students' abilities, knowledge and skills she will modify the program by changing her pace or repeating various tasks. Rachel also observes and assesses students, from a short distance, as they work with patients. Then she gives them feedback on their performance. If required, she encourages them to practice skills and techniques they have difficulty with. In addition, Rachel provides examples of cases to help students better understand what treatments are best for different patients and why these are selected. For both clinical educators, helping students to develop the competencies required of a physiotherapist is important and providing feedback and assessing abilities regularly is one way to ensure students are learning what is expected of them. The skills that students learn in the Hospital are, as Phyllis asserts, "the foundation of the profession and they must learn these basic properly in order to continue."

Part of their responsibilities as clinical educators is formally assessing students at two points in the clinical placement: at the midpoint and the end of the rotation. The academic institution provides the forms used for these assessments. Depending on where students are in the education program, instructors evaluate the competencies they are responsible for in each placement.

Students also have a chance to give the instructors feedback on the clinical experience. Both Phyllis and Rachel discuss how they ask students for suggestions for training improvements. Phyllis reviews these suggestions at least annually and makes changes when appropriate. She also insists that students tell her if something is unclear.

Phyllis tells students that it is “your responsibility” to be honest about their clinical learning experience. Rachel also stresses the importance of student feedback and feels that it is an important part of her job as a clinical educator. “Just as I evaluate them,” Rachel suggests, “I want them to give me some ideas to improve the teaching.”

Teaching strategies

Most of the teaching activities that both instructors engage in are primarily informal in nature. Both Phyllis and Rachel organize their teaching around the patients they work with, as they go about their daily duties. Students follow them and observe as they work with patients. Students are also given specific tasks, such as reviewing patient charts, determining how best to assess patients’ conditions, interacting with patients, and developing treatment plans. They also have to ensure that the treatment plan developed is having the expected effect. Part of the challenge in building an effective treatment plan for patients is discovering all required information about the patient. As a result, Phyllis spends a fair amount of time explaining to patients how to go about locating all the necessary data, not only from patient charts but also from patients themselves as well as other health professionals.

Both Phyllis and Rachel use a number of teaching strategies in their interactions with students. They ask students questions to ensure that students understand the details of what they are doing as well as why they are doing it. In school, students learn a great deal of theory that they are expected to apply in the clinical setting. Questions identify what is important and how students should think through problems or situations. Phyllis sees it as a way to encourage professional independence. For Rachel, asking questions also “makes the teaching more dynamic and relevant."

Both educators also adapt their teaching to students when required. For example, Phyllis will “give extra help” and tries to focus the teaching so that students are able to follow. Rachel encourages students to interact with patients to ensure their treatments are having the necessary effect or if patients need additional help. At times, this is difficult for students to accomplish and Rachel conducts coaching sessions or role plays with students to help them develop better interviewing skills. Both build on student experiences, that is, they begin with simple tasks and progressively move to more complicated tasks, in an effort to become increasingly independent professionals.

Students are encouraged to reflect on what they do and keep a reflective journal. Phyllis requires students to take extensive notes during their learning sessions, notes they use as they progress in their placement. Rachel also encourages students to write a reflective journal of what they do on a daily basis and how this links with the competencies of a physiotherapist. She believes this is “a good exercise” and feels it important for students to complete. She herself keeps a reflective journal of her experiences as both physiotherapist and teacher.

It is interesting that only Phyllis, at times, conducts more formal teaching with students. This is primarily because most of her students are in their first clinical placement and many have not been exposed to patients. For this purpose, Phyllis has a number of powerpoint slides and documents that she uses for lecturing. Most of the lecturing is carried out during the orientation and in the early days of the placement. Rachel does not engage in any formal teaching because she feels this is not the purpose of the rotation. However, she helps students work through their assignments, in particular case studies and literature reviews.

The importance of clinical education

Not only do both Phyllis and Rachel enjoy teaching, they believe that clinical education is important for "the future of the profession." In the Hospital, students learn to apply what they learned in school. This is important because as Phyllis suggests, the schools do not "give [students] the total scope of all the things that you can do." In the healthcare institution, students are exposed to patients and other health professionals and they learn what it means to be a practicing physiotherapist. In addition, what students learn in one institution and one service can be built on with the skills they learn in others. For Rachel, students will become the future of physiotherapy. Rachel suggests that clinical education is also important for patients because they are central to the healthcare system, "the most important people."

Clinical education is also important for staff that develops students. Both Phyllis and Rachel believe they play an important role in the development of these future professionals. When she teaches, Phyllis realizes the depth of her knowledge and she relishes sharing it with others. She also believes that teaching is "a serious responsibility" and therefore she aims to do a good job. Her role as clinical educator is instrumental in getting students to the stage where they can become independent professionals.

Both clinical educators believe that teaching students is a rewarding experience. Both share a passion for teaching and describe the clinical education experience as an opportunity for personal and professional growth and development. Phyllis describes her biggest reward is "seeing students work as professionals." She describes her educator experience as one of pride, pride in her abilities and in her profession. She also suggests it is a "stimulating" experience because she learns from teaching. Rachel describes her

experience as interesting, “learnful” and “stimulating.” She also feels that she learns as she teaches and being a clinical educator means being “up-to-date” and “fresh” in her knowledge. For both physiotherapists, being a healthcare professional is an important part of their development as clinical educators.

CHAPTER 8: PROFILE OF CLINICAL EDUCATORS IN ALLIED HEALTH PROFESSIONS

The previous four chapters examined the preliminary categories identified with each individual case. At the end of each chapter, I identified common characteristics across each of the participants as well as what is unique to them. In this chapter, I contrast these same categories across the four professions: participants' role as professionals, their approach to clinical education, and their reflections on clinical education.

This chapter is structured to begin with the conclusions and then present the data that generated it. The purpose is to make it easier to read, given the large amount of data presented in previous chapters. I begin the chapter by summarizing the findings in terms of the characteristics of clinical educators as identified by the research participants. Then I elaborate the cross case analysis that illustrates how the findings arose from the data. This section focuses primarily on dominant patterns that appear that appear in nine or all ten participants and all four professions. I also consider strong patterns, that is, patterns observed in six to eight participants and in all four professions, and weak patterns, that is observations made in four or five participants and in all four professions. As the healthcare workplace was identified as having a direct influence on the clinical education experience, in particular how it affected how clinical educators learned to become clinical educators and how they developed and acted in their teaching programs, I then present a model of becoming a clinical educator. This model takes into account the experiences of the clinical educator participants and how these are linked with the constraints and opportunities afforded by the workplace and the healthcare system.

General Profile of Clinical Educators

Overview of Research Participants

Clinical educators develop into their role through their interactions with their environments (McLeroy et al., 1988) and most educator behaviors arise from various levels, including the individual or biological and psychological, as well as the social, cultural, and structural levels. Thus, in examining how health professionals learn to become clinical educators, we need to also consider individual micro level factors and macro level factors that influence individual behavior and the inter-relationships among these (Earp & Ennett, 1991). This is because the experiences of clinical educators are too complex to be understood from only one level of analysis and require more comprehensive approaches that integrate all the relevant perspectives.

Of the ten allied health professionals in the four professions represented in this study, eight have permanent full-time positions and nine work full-time when they teach students. Only one participant, Louise, works part-time and during the evening shift. Three participants are medical laboratory technologists, two respiratory therapists, three occupational therapists, and two physiotherapists. At the research site, there are approximately 175 medical laboratory technologists, 60 respiratory therapists, 25 occupational therapists, and 40 physiotherapists. All told, according to a survey conducted by the Multidisciplinary Council (2012) at the research site, there are approximately 800 allied health professionals working in the institution in various capacities and in areas of patient care, research and education.

Participants differ in the number of years of professional experience. They have from two to more than 20 years of experience in their respective professions. The

participants also have a range of one to more than 20 years of experience as clinical educators. However, only one participant has one year of experience and one other more than 20 years of experience teaching. The remainder of the participants have from six to thirteen years of experience as clinical teachers.

As this institution is a teaching hospital affiliated with a major medical school in the same urban center, most allied health professions also actively teach students. However, each profession assigns clinical teaching to its employees in different ways. Technical professionals, that is, laboratory technologists and respiratory therapists, have designated clinical educators responsible for the training and development of students. Rehabilitation professionals, that is, occupational therapists and physiotherapists, require all professionals to teach students as part of their regular work. The Multidisciplinary Council (2012) reports similar patterns for other allied health professions. That is, there are designated educators in other technical professions, such as radiologic technology, and other allied health professionals, such as dieticians and speech pathologists, teach students as part of their daily functions.

Nine of the ten clinical educators are female and one male. The predominance of female professionals is not surprising given the available data on gender in allied health professions. According to the Canadian Institute for Health Information (2010), the percentage of females in each profession in 2008 was as follows: 70% respiratory therapists, 78% physiotherapists, 85% medical laboratory technologists, and 92% occupational therapists. Nine of ten participants being female is consistent with these figures. A gender survey of allied health professionals at the research site is not available.

Characteristics of Clinical Educators

Table 9 below summarizes the general characteristics of clinical educators as identified by the research study participants. The main categories described by clinical educators are: their role in the institution, their experiences as students and professionals, the activities they engage in to learn how to teach, the materials they prepare for students, their functions as clinical educators, the different teaching activities they engage in, their thoughts on clinical education, the difficulties or challenges they experience as clinical educators, and their views on the effectiveness of what they do as clinical educators.

Clinical educators' perceptions of their role and the duties they engage in are influenced primarily by their experiences as students and as professionals in the workplace. An unexpected finding was that nine of ten participants conducted clinical education placements in the department they currently work in. Part of the reason each chose to work here is the positive experience they had as students. As a result, these early experiences influence how they act as clinical educators as they aim to provide their own students with similar good experiences.

All the professions considered in this study include teaching as a competence. However, only the rehabilitation educators identified formal courses in teaching organized by their academic institution. These courses are short-term, usually one or several days in length and focus on specific topics, such as assessment and clinical reasoning. A few educators attend formal learning sessions on clinical teaching offered either by a university or a professional association. All engage in professional development activities, primarily in their subject areas. However, none of the educators participates in extended teaching programs. All clinical educators claim to base their

Table 9
Summary of study findings

<table>
<tr><th>Category</th><th>Findings</th><th>Conclusions</th></tr>
<tr><td>Description of role in the institution</td><td>• All perform roles and functions related to their profession and teach students as part of their regular job
• All have additional responsibilities, including teaching staff, patients or other professionals
• Eight of ten educators are involved in various Hospital committees</td><td>Clinical Education Is One of Many Responsibilities Expected of Allied Health Professionals</td></tr>
<tr><td>Early experiences as a student and professional</td><td>• All educators are influenced by their experiences as students and novice professionals
• Nine of ten educators conducted their clinical placements at the research site and in the department they are currently working
• Eight of nine educators described their clinical placements as students in the healthcare institution in positive terms</td><td>Early Experiences as Students and Professionals Influence How Participants Act as Clinical Educators</td></tr>
<tr><td>Learning to become a clinical educator</td><td>• All educators learn to teach through experience and other informal methods
• All educators participate in formal learning activities in their content areas
• Eight of ten educators attend formal learning activities in teaching</td><td>Clinical Educators Do Not Participate in Extended Teaching Programs

Clinical Educators Rely Primarily on Informal and Experiential Learning To Become Clinical Educators</td></tr>
<tr><td>Preparing for students</td><td>• Nine of ten educators prepare documentation
• Eight of ten educators prepare and use materials and/or equipment to develop student technical and professional skills</td><td rowspan="2">Clinical Educators Supervise One or Two Students at a Time
• Plan materials
• Teach
• Assignment of roles
• Adapt teaching to student needs
• Ensure learning goals are met
• Give feedback and assess students</td></tr>
<tr><td>Being a clinical educator</td><td>• All teach one to two students at a time
• All teach both technical and professional skills
• All adapt teaching to student needs
• All have a general plan as regards their teaching responsibilities; five have a detailed program they devised</td></tr>
</table>

Teaching activities	• All use different strategies (simulations, discussions, demonstrations) that aim to encourage students to become independent professionals and teach and mentor students to attain goals • All use informal teaching methods as they conduct their daily work: modeling, questioning, and organizing activities from basic to complex • Six of ten educators use formal teaching methods such as interactive teaching sessions and lectures	Clinical Educators Employ a Variety of Teaching Techniques • Simulations • Other active learning strategies • Discussions and demonstrations • Mentoring
Thoughts on clinical education	• All educators stress the importance of clinical education and their roles in the development of future professionals • All express positive descriptions of experiences as educators and identify these as important to their own personal and professional development	Clinical Educators Believe Their Work Is Important for the Future of Allied Health Professions Clinical Education Leads to Educators' Personal and Professional Growth
Challenges of being a clinical educator	• Challenges impact on educators' ability to complete all necessary responsibilities both to patients and students • The lack of time and space for teaching • Student inabilities/ difficulties and their lack of preparedness for clinical work	Clinical Educators Face Numerous Workplace Challenges • Limited time and space • Limited ability to support students • Meeting challenges causes anxiety
Views on the effectiveness of clinical education	• All believe they are effective because students learn to act as professionals • Nine of ten clinical educators intend to improve their teaching skills	Clinical Educators Strive to Meet Professional Demands

knowledge of teaching on their experiences through colleagues and with their students, that is, primarily through informal and experiential means.

Clinical educators rely on active learning methods when teaching students. As a result, nine of ten clinical participants prepare for student activities by developing

documents and teaching materials, such as procedures and evaluations. They also prepare simulations, both high fidelity and low fidelity for student teaching. The technical professions in particular have equipment set aside for student learning, equipment they maintain and set up before students can use them. A majority of educators also organize role-plays and case studies. Simulations, therefore, play a significant role in teaching. In addition, all clinical educators have a general plan as to how they organize their teaching activities.

Clinical educators aim to encourage students to become independent professionals and teach and mentor students to attain these goals. To accomplish this they teach both technical and professional skills. They engage primarily in one-on-one or one-on-two teaching, that is, one educator for one or two students. They rely on various active learning strategies such as discussions, demonstrations and interactive sessions when teaching students. They model technical skills and professional behaviors. They organize their teaching to begin with basic skills before teaching more complex skills and techniques. In addition, as students are central to their teaching, clinical educators endeavor to respond to student needs. This means introducing complex skills when students are ready and slowing down their teaching when students need additional instruction or practice.

Clinical educators firmly believe in the importance of clinical education in the development of healthcare professionals. Students are seen as the future of their professions and potential future colleagues. As a result, clinical educators stress the importance of ensuring that students are adequately prepared for their roles and

responsibilities as healthcare providers. In addition, educators discuss the importance of clinical teaching in their own personal and professional growth.

Despite their perceptions of the importance of clinical education, all the participants face a number of workplace challenges. They identify lack of sufficient time and space for teaching as major problems. However, they also disclose that students are not always prepared for learning in the clinical workplace and, at other times, students lack interest or ability to function optimally. Because of their numerous responsibilities, educators admit to having a limited ability to support these students. In addition, meeting these different challenges causes anxiety in clinical educators.

Despite the challenges they encounter, clinical educators feel they are effective as teachers because students are capable of functioning as professionals. Several also discuss how they value the relationships they build with students and how important it is for them to share their knowledge. The majority of the educators acknowledge that learning to be a clinical educator is ongoing and they do not have all the answers. They mentor students to become professionals and, at the same time, strive to meet their own professional demands. As a result, they intend to continue participating in education activities both in their content areas and in developing their teaching skills.

Cross Case Analysis

Using the social ecology perspective, which considers learning and activity as interactions between individuals and their environment (McLeroy et al., 1988), I explored patterns across the four allied health professions. In this section, I present 10 conclusions arising from patterns observed when analyzing data across the four allied health

professions. Evidence is provided from the data and references to pertinent literature that address the same conclusions.

Conclusion 1: Clinical Education is One of Many Responsibilities Expected of Allied Health Professionals

Clinical education is a job responsibility included in either the job descriptions or performance plans for most participants. Whether or not they are trained to fulfill their roles, participants are expected to train new professionals when the need arises. And this is only one of their many responsibilities. Clinical educators also perform the roles and functions associated with their profession, including quality assessment, developing protocols and policies for their teams, participating in committees, educating patients, and training other professionals.

Within the social ecology perspective, this conclusion identifies structural issues affecting clinical educators. The nature of clinical education in allied health professions is that clinical educators have numerous duties and responsibilities and that teaching students is only one of the tasks they accomplish. The image that Rita uses of “juggling” the different roles and responsibilities she has in the hospital is telling. This relates to the sense that educators have competing responsibilities and have difficulty balancing all expectations. This problem is identified in all health professions and is not specific to allied health. The literature in nursing, medicine and allied health all describe similar tensions in clinical educators regarding their roles and responsibilities. McAllister (2005), in a study on speech pathologists, reports that their primary responsibility is patient care and that they have a legal, ethical and moral responsibility toward their patients. However, they must also allow for their other duties related to their professional activities

as well as activities in the healthcare institution. Smedley and Penney (2009) discuss these same tensions in nurses. Taylor, Tisdell and Gusic (2007) describe how one physician compares the challenge of teaching in a clinical setting to “teaching on the fly.” This is because teaching competes with other demands and takes place in a context that has many distractions outside an educator’s control. Consequently, being a clinical educator is related to being a practitioner, as one informs and impacts on the other.

As expected, a number of dominant patterns emerge from the data regarding the clinical educators’ roles in the healthcare institution. All ten clinical educators in all four professions perform the roles and functions associated with their profession as previously outlined. In addition, all ten participants have additional responsibilities in their positions. They teach students as part of their regular duties. Laurie, Liza and Louise, for example, perform the roles and functions of medical laboratory technologists while teaching students. Rita and Rebecca are respiratory therapists responsible for the training and development of staff and students. Paul, Sophie and Sandra are occupational therapists who teach students as they conduct their daily work. Phyllis and Rachel perform the roles and functions of physiotherapists with the added responsibility of teaching students.

Another dominant theme emerges with all ten participants having additional responsibilities, some of which include teaching staff or other professionals. Laurie acts as quality coordinator for her department and trains new staff. Liza replaces the technical coordinator in her department, helps train staff, and reviews quality measures in her department. Louise trains staff. Laurie, Rita and Rebecca are responsible for staff skill development, continuing education, and maintaining department policies and procedures. Rita and Paul develop protocols for multidisciplinary teams of which they are members.

Paul, Sophie, Sandra, Phyllis and Rachel teach other professionals, such as nurses and physicians, as well as patients as part of their regular functions. Eight of the ten participants are also involved in various Hospital committees. These committees are multidisciplinary in nature and often include physicians and nurses and other health professionals. Several participants encourage students to attend these in an effort to inform them of the importance of allied health in multidisciplinary teams.

A weak but relevant pattern emerges with educators involved in community work, outside of the healthcare institution. Laurie, Rita, and Rebecca are active in their professional associations. Rita and Rebecca are also involved in their academic institution. Finally, Sandra works on a citywide government agency in psychiatry.

Another weak but important pattern is that only four participants – Laurie, Liza, Rita and Rebecca – have clinical education as their primary role. It is interesting that these educators all belong to technical professions, laboratory medicine and respiratory therapy. Technical professions often work with complex equipment and must practice on these before they work on actual patients. The only exception to this is Louise, who has only been teaching for a short amount of time and during the evening shift. The remaining six educators teach students as they go about their regular duties. Each profession therefore organizes clinical teaching duties according to its needs.

Conclusion 2: Early Experiences as Students and Professionals Influence How Participants Act as Clinical Educators

Clinical educators are influenced by their early experiences as students and as professionals. In turn, these early experiences serve as catalysts for how they act as educators. Within the social ecology perspective, this conclusion identifies a social and

cultural issue affecting clinical educators. Individuals' behaviors are shaped by various interactions, in particular by work-related groups and peers. A dominant pattern, that is all ten educators, refer to their early experiences as students and novice professionals as influential in how they act as clinical educators. In addition, they use these experiences as a guide to how they should, or should not, teach students.

Laurie suggested she was "lost" during her placement because staff was not really teaching her. In response, Laurie developed a more comprehensive and rigorous program for students to ensure that students do not feel as she did. Liza borrowed from her instructor and adapted much of what she did. Louise tries to use many of the lessons she learned as a student when she trains. Rita learned both from her teachers, who she felt were not effective, and a physician who acted as a mentor. Rebecca's influences were her teachers at the academic institution and Rita, the other clinical educator in her department. Paul discusses how his instructor was not "respectful" of students and not a particularly good teacher and how he uses this experience to ensure his students have better experiences than he did. Sophie suggests that she used what she liked from how she was taught as a student, in particular the use of a structured program to guide the development of her own teaching program. Sandra was confused by "contradictions" between instructors and, as a result, asks students to advise her of any inconsistencies in her teaching. Phyllis' feelings of not being properly taught as a student lead her to ensure that students are adequately prepared and able to accomplish their assigned tasks. Rachel uses teaching methods and strategies similar to those of her instructors. It is clear that, for the participants in this study, in all four professions, their experiences as students were a major influence on how they conduct their clinical teaching. They influenced not only

their understandings of their profession, but also impacted on how they developed as clinical educators.

It is particularly interesting that nine of ten clinical educator participants conducted their education placements at the institution where they work. Paul was the only participant who studied and worked in the United States. In fact, all nine participants who studied in the province conducted a clinical placement in the department in which they currently work. This is important because clinical educators become familiar with the working environment when students.

Given the shortages of health professionals it is not surprising that most clinical educators choose to work where they had positive experiences as students and avoid workplaces where they had negative experiences. The nine clinical educators who conducted their clinical education at the healthcare institution described their student experiences in positive terms. Laurie was provided with good feedback and Liza enjoyed her placement. Both Rita and Rebecca describe their student experiences as "outstanding." Sophie describes her experiences as "great." Sandra explained how her clinical placement at the institution was "the best of all the rotations." Phyllis and Rachel discussed how the instructors they had as students wanted to teach, encouraged them, made them feel welcome in the department, and treated them as they were members of the team. For these educators, their experiences as students were the main reasons they decided to work at their current workplace.

A weak but important pattern arises from five of ten clinical educators who describe negative experiences in other institutions. Both Phyllis and Paul speak at length about their experiences in other institutions where they felt their instructors were "not

very good teachers" and did not treat students with respect. Sophie discusses how her clinical placements were too flexible and not structured enough. Sandra relates how she felt insecure in some of her placements because her instructors contradicted one another. Rita discusses how an instructor at another institution was not "very good at explaining things so that you would understand why you were doing something." For Rita, this meant difficulty following the instructor as she conducted her work. Nevertheless, for all these educators, even their negative early experiences are still clear in their minds and influence what they do today.

The clinical education literature does not consider educators' early experiences as students and novice professionals. Only a few experiential reports, Brennan & Hutt (2001) in particular, discuss their personal experiences as clinical nurse educators. Teaching is only part of their functions and they express a high level of stress especially when extra work needs to be taken on in addition to student supervision. As a result, they call themselves "Jacks of all trades, masters of none" because they do not feel they have enough time to master everything they are intended to accomplish on a regular day. In addition, even though they are responsible for clinical teaching, Brennan and Hutt feel they have no influence in what actually happens often because they are not privy to what the academic institutions do and decide regarding student learning. However, the research conducted for this study suggests that early experiences as students and professionals teaching students are important influences on how clinical educators accomplish their roles and responsibilities. It is their main source of knowing what it means to be a clinical educator and they feel they have some influence especially as regards recruitment of future professionals in their departments.

Early experiences teaching also reveal a strong pattern. Six of ten clinical educators describe their fears and problems when they first became clinical educators. All three medical technologists share their feelings when they began to teach. Laurie describes feeling nervous because many students were older than her and she feared not being taken seriously. Liza describes being afraid and stressed in her early days as an educator, partly because it was unexpected and partly because she was not comfortable teaching the content material. In addition, French is her first language but she had to teach in English in the workplace. Louise describes feeling “scared” and nervous when first asked to teach students. Rita did not describe her early experiences teaching students but she discussed how she felt staff reluctance to the changes she established affected her efforts. Sandra recalls how she had problems with one of her first students who “clashed” with staff and attributes this behavior to the student being overly confident. Rachel remembers the difficulties she had with her first students. Even though she had prepared prior to the student’s arrival, Rachel found the experience to be “hard” because students were unwilling to perform the tasks requested and had problems interacting with patients. Laurie, Liza, and Sandra spent time reviewing their content knowledge in order to appear competent when they first began to teach students. They hoped that this would alleviate their lack of teaching experience. With time, they became confident in their abilities and have, as a result, grown into their role as clinical educators. Significant to all educators is that despite these early difficulties, all persisted and eventually became confident and capable as they gained experience.

Another interesting pattern arises when eight participants discuss the importance of using the clinical placement as a recruitment tool. They refer students to their chief of

service and recommend them to work in the department when they are particularly "good". For example, Laurie and Liza encourage students to speak with the chief of their laboratories; Rita observes students to ensure they are functioning adequately and to decide whether they will make good employees; Rachel encourages students to apply for positions when they show evidence of fitting in the department. Since nine educators conducted their training in the institution, it is apparent that clinical education serves as a good source of future employees. In addition, nine participants were recruited to work at the institution through their clinical placements.

This is an important finding yet there is no available allied health research on the impact of clinical education on healthcare worker recruitment and retention. A report in the medical laboratory profession (CSMLS, 2004, p. 18) suggested that staff recruitment was one of the benefits of the clinical practicum. An examination of the nursing literature suggests that although staff recruitment is not an objective of the clinical practicum, it is inevitable in a workplace where there are many demands placed on nurses (Smedley & Penney, 2009). As a result, clinical education placements serve as an important way to gauge student abilities and to determine whether or not they would be appropriate candidates for employment.

Conclusion 3: Clinical Educators Do Not Participate in Extended Teaching Programs

How clinical educators prepare for their roles and responsibilities is an important theme that arises in both the interviews and observations. As a way to prepare for their roles as educators, a majority of participants have participated in a number of formal learning activities. However, none of the educators has participated in extended teaching programs. Within the social ecology perspective, this conclusion identifies a

psychological, social and cultural issue affecting clinical educators. Factors such as how they develop the knowledge, skills and behaviors necessary to teach as well as how they develop their identities as clinical educators arise primarily from what programs are available to them as well as which development programs they participate in. In addition, how they transfer this learning to their clinical educator roles in their workplace also influences their abilities and impacts on how they encourage student development.

A strong pattern emerges from the data in that eight of ten clinical educators, from all four professions, have attended formal learning sessions on teaching. Most of these are offered either by the professional association or the academic institution they are affiliated with. All eight educators adapted many of the “tricks and techniques,” as Laurie suggests, addressed in these sessions to their student training programs. Rita, for example, adapted training materials from her association and now includes them in all her training and development sessions. The sessions that Laurie, Rita and Rebecca attend focus primarily on new employee training, but since they see students as potential future employees, they use what they learned in their student programs. Paul, Sophie and Sandra regularly attend sessions at the academic institution they are affiliated with. However, they suggest the sessions offered at the academic institution are limited and repeated annually. Phyllis and Rachel also attend formal sessions on teaching offered by their professional associations and by the academic institution with which they are affiliated, although Rachel finds these more useful than Phyllis.

The formats of these formal learning sessions on teaching are primarily short courses or single sessions. Topics mentioned by educators include teaching strategies, organizing teaching activities, developing teaching materials, teaching for clinical

supervisors, learning styles, learning tips, clinical teaching, clinical reasoning, giving feedback, resolving conflicts, communicating effectively, and assessing students.

All ten clinical educators also attend formal learning activities in their specific content areas. Laurie, Liza and Louise have attended conferences and taken courses offered by their associations and their Order in their specific subjects areas. Rita and Rebecca regularly attend sessions provided by respiratory therapy professional associations. Paul, Sophie and Sandra participate in conferences offered by the occupational therapy associations, where they attend content-based sessions. Phyllis and Rachel have both participated in formal learning sessions offered by the physiotherapy association. Phyllis in particular prefers these sessions to the ones offered at the academic institution, as they are practical and skills oriented.

A significant finding is that none of the participants has attended any extended program in teaching. As discussed in the literature review, a number of education programs directed at clinical educators are available. The academic institution with which occupational therapists and physiotherapists are affiliated offers an online program on clinical teaching. Even though the professionals who participated in the study were aware of its existence, none have taken advantage of its availability. For the technical professionals, that is medical laboratory technologists and respiratory therapists, the professional associations have courses available for educators, however these are arranged by topic and do not lead to a certificate in clinical education. They also provide links to online resources and training but none of the participants has taken advantage of these. Two participants (Paul and Rachel) were asked if they were interested in available online modules and both responded that they preferred short-term sessions rather than

taking extended courses on teaching. Sophie and Sandra participate in at least one session on teaching per year provided by the academic institution. Laurie, Rita and Rebecca also plan to continue learning sessions made available by their associations. Liza expressed an interest in taking courses on teaching but was not aware of their availability. Only Phyllis had no interest in formal courses on teaching but this is understandable given that she is at the end of her career.

Even though the participants all value teaching ability, the literature indicates that educators are poorly prepared and in some cases unqualified to teach. Lee, Cholowski and Williams (2002) suggest that clinical teaching behaviors may be important determinants in planning and ensuring high quality learning in clinical settings, but they add that more research is required. McAllister (2005) reports that lack of preparation or inadequate preparation of clinical educators is “a chronic problem” (p. 147). Hillman, Schwandt and Bartz (1989) suggest that instructors need more than just content knowledge; they also require knowledge of and skills to use various instructional methods and to use them when required. Duteau (2012) suggests that with the challenges associated with their role, it is important to provide clinical educators with the “tools they require to fulfill their responsibility and commitment” (p. 41). Training is situational and dependent on context, content and participants. It is therefore important to use the most appropriate method for learners: A good fit between the content and the instructional method with the skills and knowledge required of learners. This is true not only for students but also for professionals who are learning to become clinical educators.

In addition, most of the formats that the participant clinical educators engage in are not systematic in their approach. Educators participate in learning activities that interest them

or in which they feel they have a need. However, the literature suggests that a systems view is best when designing training and development (Rummler & Brache, 1995), otherwise a "vacuum" view of performance that focuses only on subject-matter-driven training and development ensues. An organized extended program in teaching might alleviate this "vacuum" view.

The rapid obsolescence of knowledge and skill in the current health care system demands continuous professional growth (Hegge, Powers, Hendrickx & Vinson, 2002). Mechanisms such as accreditation and certification have developed measures to ensure health care quality (Accreditation Canada, 2012). Many of these establish basic requirements for the maintenance of professional competence in times of knowledge growth. Continuing education is one strategy commonly used by many professions to develop and maintain competence and is intended to fill gaps where knowledge and skill lack, especially when a professional takes on complex new tasks. It is founded on the premise that gains in knowledge lead professionals to improve how they practice, subsequently also improving patient outcomes (Davis et al., 1999). Clinical teaching, however, is more than simply technique. It requires a sensitive and highly complex mix of knowledge, skill and professional judgment. It is evident through this research study that clinical educators are aware of this complexity and aim to do what they can to ensure students have the experiences they require to become effective healthcare professionals. Whichever is selected, this learning should be integrated into the workplace.

Conclusion 4: Clinical Educators Rely Primarily on Informal Learning and Experiential Learning To Become Clinical Educators

Since none of the clinical educators participated in extended teaching programs, all rely primarily on informal and experiential learning to become clinical educators. Within the social ecology perspective, this conclusion identifies a psychological, social, cultural and structural issue affecting clinical educators. What shapes their behaviors are the informal learning efforts they select to engage in and their interactions with colleagues in the workplace. A dominant pattern arises when clinical educators discuss the importance of informal learning in their development as clinical educators.

The most common informal learning that participants discuss include individual learning, reading, and reflection on experiences in the workplace. Although there is some instruction in teaching skills, the majority of the topics are subject matter based. Liza discusses reading materials from her Order that address teaching issues. Rita reads extensively on teaching methods. Laurie, Rebecca and Sophie network with colleagues in other institutions for advice and suggestions. However, due to the structure of these activities, there is little evidence to show the impact of these activities on competence and professional practice.

Another dominant pattern arises when clinical educators from all four professions discuss the importance of learning from experience. Laurie, Liza, Louise learned to teach as they teach students. Laurie discusses how she is constantly learning on the job. “We are always learning,” she suggests. “We’re always changing and developing. And that is what makes life rich. And that is what makes our job interesting and rich.” Even when she makes mistakes, Liza suggests, “I learn from them just like students learn from the

mistakes they make when doing their work." Louise relies on her student experiences as well as the experiences she had when she first began to work. She says she taught as "shown both during my *stage* and as I was starting my training."

Both Louise and Rita discuss how they learned to teach by "trial and error" as they learned to teach. They would depend on cues from students about whether their teaching methods were effective and, when required, they would change their approach. They also describe learning from other professionals and from colleagues, especially when they first began as clinical educators. Rebecca suggests that she also learned from colleagues, in particular other clinical educators in her department, and through her own experiences teaching students. Paul, Sophie and Sandra refer to learning from their experiences as students as instrumental in their development as clinical educators. Paul learned to be "meticulous" and "vigilant" about his work and teaching as a result of his early experiences. Paul also admits that the more he teaches, the more he learns to teach. Sandra learned to teach from her experiences as she adapted what she found useful from what her own supervisors did. Phyllis relies on her extensive experience and knowledge as a physiotherapist as well as the influence of her own instructors when a student. Rachel discusses how she learned to use a number of strategies from colleagues when she first began to teach.

Clinical educators see the need to improve their teaching skills. Most of the clinical educators reveal that the teaching activities they engage in are similar to those they learned when students. That is, experience is the most important teacher for all the clinical educators who participated in this study. All recognize that a clinical teacher's influence is powerful, for all professionals. Two educators discuss learning sessions they

attended on teaching strategies and how invaluable these were to their own development as clinical teachers. It is apparent that for most educators, teaching skills are learned and not innate. As a result, there is room for further development of clinical educators. Rosenwax, Gribble and Margaria (2010) suggest that within the allied health professions, there is an expectation that recent graduates have a defined level of clinical and professional competence and that these are consolidated in the clinical setting.

Rogers, Lautar and Dunn (2010) suggest that there is a need for clinical educators to improve their teaching skills. They base their conclusions on a study of student perceptions that identified the need for educators to develop teaching skills, in particular on teaching methods that focus on students' different learning styles, planning learning experiences, and assessing students' skills. Other authors (Ohrling & Hallberg, 2001; Brammer, 2006; Knight & Brumels, 2010) emphasize clinical knowledge and experience as the most important characteristic for clinical educators. All ten clinical educators feel they do their best to provide effective clinical training that includes both didactic and experiential instruction, within the complex context in which they work. They all discuss receiving good evaluations from students and are particularly proud of their building relationships with students. They also reveal their involvement in student recruitment as an important aspect of their functions.

Informal Learning Leads to Personal and Professional Growth. A dominant pattern emerges from the data as all ten participants discuss how they developed both personally and professionally as a result of their teaching experiences. Laurie and Rebecca admit to being more "patient" and more adept at teaching. The experience of teaching led Liza to become more confident and self assured in both her teaching and her

professional activities. Louise has become “more comfortable” and “more confident” as she has progressed. This admission is in direct contrast with her initial fears of becoming a clinical educator. Both Rita and Rebecca admit to being more prepared and professional as a result of being educators. In turn, teaching encourages them to become more proficient in their daily work. Paul admits that teaching has led him to reflect on his practice. He says, “when you’re teaching you’re always learning. What’s working, what’s not working? We learn from what we do every day.” Sophie acknowledges that she learns while teaching: “I am always learning. That's the best part of the job and the best part about teaching students.” This learning is not only about content matter but also personal development. Sandra puts it best when she states, “Even at home in my life I have changed how I talk to and how I demonstrate my feelings. Our body language is as important as our words.” Phyllis overcame her early negative experiences and turned these into opportunities to develop into a self-assured and confident professional. She states that she learns from students as much as they learn from her and that as they develop into professionals, she becomes proud of her profession and its responsibilities. Rachel learns as she teaches because she feels it important to be “up-to-date and always fresh” with her knowledge and abilities. Teaching students has encouraged her to grow into the professional she feels she should be.

Participants suggest that they have grown both personally and professionally as a result of their teaching and they have learned to be clinical educators through different informal ways. But education and learning are characterized as organized systems of learning outcomes and the means by which learners achieve these outcomes (Merriam & Brockett, 1997). As mentioned earlier, all the participants are certified and licensed by

their professional associations. As a result, they are all competent in their respective professions both as clinical practitioners and teachers. However, few admit to having had any formal preparation in clinical teaching. The majority relies primarily on informal means to prepare for their roles and responsibilities with students.

Conclusion 5: Clinical Educators Supervise One or Two Students at a Time

Clinical educators supervise one or two students at a time. Within the social ecology perspective, this conclusion identifies a social and structural issue affecting clinical educators. Requests from academic institutions as well as changes in the healthcare system have led most clinical educators to take on more students now than they had in the past. This means either taking on two students at a time or having more clinical placements spread out throughout the academic year. As a result, a dominant pattern arises when clinical educators discuss supervising one to two students at a time. Four clinical educators only take one student at a time and four others take two students when required. The other two educators always teach two students at a time.

Being a clinical educator entails a number of different tasks, primarily involving teaching students in the healthcare workplace. However it also includes preparing materials for teaching and following up on student assessments. In essence, participants engage in a teaching cycle that begins with the design and development of teaching activities and continues to evaluation. The clinical educators also identify student needs as central to this teaching cycle. However, their responsibility for the development of future professionals necessitates that patients also be a main focus of their role.

On average, students are with the clinical educators for a period of time of four to nine weeks. Clinical placements for the different professions occur at various stages in

the education programs, depending on the profession. For the technical programs, that is laboratory science and respiratory therapy, clinical placements occur at the end of the academic program. Clinical placements in rehabilitation programs such as physiotherapy and occupational therapy, on the other hand, are interspersed throughout the program.

Moore, Morris, Crouch & Martin (2003) noted that most clinical educators in physiotherapy prefer to have only one student at a time because time is essential in the development of a relationship between students and educators. Their findings reveal that more time for interaction between student and educator was available in the 1:1 model than in the others. They add that educators with two or three students had to be more organized and reduce their caseloads. Many strongly disliked having more than two students at a time because it was less rewarding, partly because of the reduced caseload. Lekkas et al. (2007) conducted a study of experiences of clinical educators with different numbers of students and found that those with two or three students spent less time with their students than those with one student. Students and educators both questioned if there was enough time to identify individual strengths and weaknesses and for feedback, which is an essential component of the clinical learning experience.

Phyllis, the clinical educator with the most experience, disclosed that hospitals and other healthcare institutions have been asked to take on more students in an effort to alleviate the healthcare worker shortage. Ralph and Walker (2008) suggest that the shortage of professionals in numerous disciplines is a worldwide phenomenon and is having a major impact on clinical placements. DalPoz, Gupta, Quain and Soucat (2009) concur that this situation is not exclusive to health professionals. To address this shortage, most of the clinical educator participants agree to taking on either more students

at a time or more placements throughout the year. Laurie is now taking students from two different institutions, as is Sophie. Phyllis has not increased the number of students she takes at a time, usually one or two per rotation, but she has increased the number of placements. In the past, she would have only two groups of students, now she has four. Liza is planning to try one clinical placement from a second institution in the near future.

Clinical educators prepare materials for students before the placement begins. What clinical educators do to prepare for students is an important subset of the tasks they engage in when teaching. All the research participants discussed the importance of preparing materials and teaching tools prior to students' arrival in the department. Many suggest that their duties are continuous and do not begin with students' arrival or end with their departure. A number of dominant patterns emerge from the data as regards efforts that clinical educators conduct prior to the start of clinical education placements. Documents used as teaching materials need to be reviewed and readied for students. Furthermore, simulations, both high and low fidelity, need to be gathered, set up, checked and made functional for student use.

Since training is situational and dependent on context, content and participants, it is important to use the most appropriate method for learners. Students are often unfamiliar with the different situations that occur in the clinical setting and educators need to situate students in their context, thereby leading them to link their theoretical knowledge with practice knowledge.

Henderson, Winch and Heel (2006) suggest that clinical educators have the responsibility to prepare and structure student learning, provide opportunities for the transformation of theoretical knowledge into craft knowledge, facilitate student learning,

and provide feedback on performance. Preparing for student activities also means developing schedules that outline the different learning activities for students and linking these with the required competencies and the regularly schedules events in the department. Nine of ten clinical educators prepare a number of documents, including schedules of activities, before students arrive in the department. Only Louise does not actually prepare any documents but relies on materials developed by other instructors and a schedule devised by her supervisor. In addition to schedules and assessment forms, Rita and Rebecca review training checklists and daily evaluation forms. Sophie also reviews and modifies questions for student reflection journals and a student guide for developing activities for patients that she developed. Paul and Phyllis gather reading materials for students as well as sample charts for teaching sessions. The reading materials relate to professional issues, such as the role of the professional when interacting with patients. Laurie, Liza and Sandra also review any relevant case studies on specific content topics. In addition, students must become familiar with Hospital and departmental policies and procedures and several clinical educators have included these in their programs.

Clinical educators actively plan student activities. All ten educators have a general plan as regards their teaching roles and activities. Laurie, Liza, Rita, Rebecca, and Sophie have a detailed teaching program they devised. The remaining four educators admit to not having a detailed program. However, there is a structure to their teaching. Louise discusses how she organizes teaching activities. Louise, Paul, Sandra, Phyllis and Rachel admit not having a standard program because most of their time at work is not planned. These five participants discuss how they have a plan in their minds. Louise

suggests that she has no plan but during the interviews she discusses how she organizes teaching activities to build on student learning, suggesting the existence of a general plan.

In all cases, clinical educators begin the clinical placement with basic techniques and then build on these "layers of complexity" as students become more comfortable in their role and gain competence. Laurie discusses how her teaching program begins with basic techniques and gradually moves to more "complex and specialized" techniques and skills. Sophie models behaviors and skills and expects students "to take charge". Sandra also encourages students to develop activities for patients that will lead them to increased levels of autonomy as they develop professionally.

Assignment of roles. Another important distinction between the different professions is the number of individuals involved in clinical teaching. The technical professions, laboratory science and respiratory therapy, have designated professionals who teach students. The rehabilitation professions, physiotherapy and occupational therapy, on the other hand require all staff to teach students. As previously mentioned, all the professions include teaching competencies in their job descriptions.

Adapting teaching to student needs. All ten clinical educators adapt their teaching to student needs, when required. Since clinical educators are aware of the knowledge and skills required in the healthcare institution, they are best placed to modify the teaching process according to learner needs (Kaviani & Stillwell, 2000). Laurie adapts her schedule because sometimes students need more time in one area. Liza and Rita adapt their teaching when students encounter difficulties. When possible, educators such as

Liza encourage students to practice their skills until these are mastered. Phyllis provides students with “extra help” and focuses the teaching on problem areas.

Ensuring learning goals are met. The majority of participants discussed how they were trained when students and how these early experiences influence what they do as educators. Laurie, for example, discusses how approaches currently used are different from when she was a student. Clinical education in the past was like an apprenticeship where students followed a professional and learned by observation. Occasionally, students were encouraged to practice their skills. But circumstances are quite different today and expectations of professionals are higher than they were in the past. As a result, Laurie and Rita as well as other educators have developed a more interactive type of learning model for students. Students are more actively involved in learning and developing their skills on real patients and on equipment used in the hospital. In addition, all the educators aim to encourage students to become independent professionals. To this end, they teach and mentor students throughout the clinical practicum. They also help students apply their knowledge to practical situations in an effort to bridge the theory to practice gap. Furthermore, they all observe students as they practice and provide feedback as students perform various technical and professional skills. The clinical educator participants in all four professions also assess whether students have met the clinical objectives set by their individual certification bodies.

Clinical educators give regular feedback. In addition to evaluating student performance, all ten educators also provide students with regular verbal feedback. Regular feedback is important for Louise because students “need to know what they are

doing right and what they're doing wrong." Feedback is therefore one way to reinforce performance and professionalism. In addition, all the rehabilitation educators conduct regular formal supervision sessions with students. Students complete progress reports and educators follow through on goals and student performance. However, only two clinical educators participated in educational sessions related to assessing students. Quilligan (2007) trains facilitators and this experience has led her to reflect on how difficult it is to give good feedback. Henderson et al. (2005) suggests that the ability to give and receive feedback is a life-long skill and one that practitioners need to master. This is because poorly considered feedback or feedback that is judgmental may have a negative influence on students and prevent them from learning effectively. Phyllis, in particular, recounts her own experiences with negative feedback.

Clinical educators assess student performance. Throughout the clinical placement, educators supervise students and give feedback on their performance. They generally use evaluation forms provided by the academic institution for midpoint and final assessments, although Laurie and Sophie admit to adapting these forms to their specific needs. The importance of providing students with effective feedback is complex but necessary. Several educators noted that their evaluation sessions are important because it is through these that they determine how students have developed through the placement and whether students are able to function independently. Many also use these sessions to gain feedback from students on their own teaching ability and they make changes to their program subsequent to student suggestions. Phyllis, in particular, informs students that they have a responsibility to be honest about their clinical training. Quilligan (2007) and Henderson et al. (2006) suggest that professionals often have difficulty giving

students good feedback. This is because most professionals want to succeed and also want their students to succeed. However, at times, students are unable to meet the stated goals. Educators can only encourage their students to perform well. Rachel suggests that all students are capable of functioning as professionals. All they need is encouragement, mentoring and coaching to learn and perform their duties.

Conclusion 6: Clinical Educators Employ a Variety of Teaching Techniques

Clinical educators use a variety of teaching techniques, including active learning, simulation, discussions and other active learning methods. Within the social ecology perspective, this conclusion identifies a psychological, social and cultural issue affecting clinical educators. The following sub-sections explore each of these techniques and how they affect the work of clinical educators.

Clinical educators employ active learning methods. All ten clinical educators use a variety of teaching methods, both formal and informal, to ensure that students learn to be professionals. The overall goal for the clinical placement is the integration of students into the healthcare workplace and the application of knowledge learned in the academic institution. Ramani (2006) discusses how healthcare educators have multiple teaching roles: teacher, administrator, lecturer, small-group facilitator, assessor, and role model, among others. As a result, they need to know how to use various strategies as they teach. Different techniques are therefore used at different stages of training. Educators begin with an orientation to the workplace and to the work conducted in the department. Much of this instruction is discussed with students as tasks are outlined and goals set.

Clinical educators typically begin a day with students debriefing their goals for the day. They review the status of the work, for example patients that need to be seen or

tests that require follow-up and work that is incomplete. Then they assign tasks to students. Usually students are given a mix of tasks that require supervision with tasks they can work on independently. If the task is new, clinical educators demonstrate or model the skill or behavior either on actual patients or on simulations. Students then perform the tasks. As students practice, educators provide verbal feedback. They also ask a number of questions to ensure students understand what and why they are doing. The sessions are interactive and discussions take place throughout. Finally, students receive feedback on their performance before they either repeat the task until it is mastered or they go on to a new task. If the task was performed on a simulator, then students either observe an instructor performing the same task on a patient or they work on patients themselves, always with supervision.

Since training is situational and dependent on context, content and participants, it is important to use the most appropriate method for learners. Students are often unfamiliar with what occurs in the clinical setting and case studies help to situate students in their context, thereby leading them to link their theoretical knowledge with practice knowledge. Most of the clinical educator participants describe the importance of students developing professional expertise with actual patients and real cases studies rather than those they learned through their textbooks. Laurie, Liza and Louise, for example, discuss the importance of students working on “real samples.” Rita’s teaching sessions are “very interactive” and “hands-on” because students and novice professionals prefer working on actual equipment and patients. Paul uses actual situations and cases when teaching and Sophie reiterates that students learn best when working “with real patients”. As a result,

clinical educators use cases acquired from their own practice to illustrate issues that students need to understand in depth in order to build their own professional skills.

Clinical educators employ simulations. A strong pattern emerges from the data as eight of ten clinical educators use various simulations to teach and to develop students' technical and professional expertise. All the technology educators, that is, medical laboratory technologists and respiratory therapists, use high-fidelity simulators for student training. These include equipment set aside for student use in the laboratories and/or equipment that is specifically used for training purposes. Laurie and Liza encourage students to practice on equipment and/or samples set up specifically for practice purposes. Rita and Rebecca have ventilator simulators for training purposes. Louise does not set up simulators or prepare samples for students to practice on but she encourages students to repeat laboratory tests she has already completed. She then compares the results they obtain with hers. The competencies students are required to attain include standards required of students, that is, students must obtain results comparable with those of their instructor with a specific level of accuracy. Most clinical educators also employ low-fidelity simulations when teaching.

Simulators take various guises and include large equipment that surgeons use to practice their surgical skills. Nursing also uses a variety of simulators for various techniques, such as practicing invasive procedures such as inserting IVs. Laurie and Liza have equipment used solely for student practice. Respiratory therapists also have simulators available for staff and student training. The department in which Louise works also has a number of simulators, noted during a visit to the department, for students to practice invasive techniques prior to working on patients but Louise does not make use of

these. The purpose of these simulators is for students to practice on before working on actual samples or patients, in particular samples and techniques where mistakes are not an option and may have a detrimental effect on patient care.

Kneebone, Scott, Darzi and Horrocks (2004) suggest that many health professionals carry out invasive clinical procedures. They suggest that in the current healthcare system, it is not acceptable for students or novice professionals to gain their basic skills on real patients, because of possible risks of error and consequent harm to patients. As a result, many professions have simulators to encourage learning while at the same time minimizing risk to patients. Clinical educators integrate students into the workplace setting and facilitate student integration into practice (Kaviani & Stillwell, 2000). Using simulators is one important way that educators ensure that students are capable of performing their professional tasks before actually working on real patients.

Clinical educators employ additional active learning strategies. Although simulations are often thought of as high-fidelity simulations, case studies and role-plays can be seen as low-fidelity simulations (Beaubien & Baker, 2004). Six of ten clinical educator participants, from all four professions, make use of these simulations. Laurie, Liza and Rachel use case studies to review procedural skills and content knowledge to ensure that students understand the impact of their professional abilities on patient care. Rita, Rebecca and Sandra also rely on case studies as examples of the application of knowledge and to practice professional skills.

Nine of ten clinical educators also use low-level simulations such as role-plays and case studies to help students acquire higher level skills. Liza gathers samples that exhibit various types of problems for students to work on. She devotes an entire week of

training to problem solving. Liza begins with simple cases and then gradually gives students more complex cases. Paul, Sophie and Rachel regularly use role-plays to help students become comfortable when interacting with patients, for example when instructing students on how best to interview patients. This is particularly important in the critical care areas where these professionals work. In addition, a number of educators mentioned that students have to prepare case studies and present these at the academic institution. Most of the instructors discussed how they help students prepare these.

Case studies and role-plays are active forms of learning, distinct from passive learning via traditional lectures. Cases are based on real, problematic situations (Crang-Svalenius & Stjernquist, 2005). Educators present a case, then discuss the case and add information as students examine the situation to resolve a specific problem. Role-plays help students learn to apply their skills when dealing with patients by allowing learners to interact with a “patient” while carrying out a clinical task. This is especially important in the rehabilitation professions where patients must be assessed for treatment and then encouraged to collaborate with their healthcare provider in the development of a treatment plan. These types of low-fidelity simulations are commonly used in health professions to help sharpen students’ abilities and to encourage the development of professional skills.

A weak pattern also emerges from the data as six of ten educators use formal teaching methods such interactive teaching sessions and lectures. The technical professionals in particular do more formal teaching than do the rehabilitation professionals, partly because of the nature of their work. The participants report a number of formal strategies such as interactive teaching sessions with or without simulators,

lectures using powerpoint slides and other documents, and reviewing procedures. Educators in technical programs also make extensive use of high-fidelity simulations for students as previously discussed. Most students have not been exposed to equipment used in the clinical setting and many of these formal sessions introduce students to these. These different teaching methods are important in the clinical setting and, as only health practitioners are aware of the knowledge and skills necessary in the health workplace, they orient their students to the work environment and adapt their teaching with regard to the work being conducted in the clinical area.

Clinical educators employ discussions and demonstrations. A dominant theme emerges from the data as all ten educators use informal discussions, questions and demonstrations as part of their teaching repertoire. These strategies are generally used as they conduct their daily work. They model behaviors and techniques, observe students as they work, give regular feedback and ask questions, all with the aim to encourage students to practice until they master techniques and professional skills. In all cases, educators begin with basic techniques and simple tasks and then build on these as students gain competence. Louise describes this process best when she suggests “putting layers over layers” from basic to more complicated activities. This is an important teaching strategy as it serves to socialize the student to the workplace and to the profession. McAllister, Higgs and Smith (2008) suggest that professional socialization is important because it helps to move students away from thinking as students to thinking as health professionals.

When introducing activities, educators usually perform the tasks required as students observe. Concurrently, educators explain the nuances of the task and what to do

when problems occur. Students have usually performed these basic techniques in school but the equipment they used might have been different. As a result, it is important for students to learn to perform the same tasks given the context. Throughout the observations, students are often asked a series of questions to ensure they understand the procedures and to resolve any basic problems that may arise. Studies examining the use of different levels of questions are discussed extensively in the literature. Phillips and Duke (2001) suggest that asking questions helps students "apply their knowledge and develop critical thinking skills" (p. 524). Seven of ten educators describe the value of using regular questions because it encourages professional independence. Indeed, all observations of student teaching revealed the extensive use of questions. As Paul suggests, "once they begin to work they will be on their own with their patients and they must be able to solve problems." Rita adds that asking questions also makes the teaching more dynamic and Laurie suggests that it will make the learning "less boring" for students than if they are just listening passively to an instructor.

The use of regular short questions throughout a training session is a common practice in health professions. In medicine, Aagaard, Teherani and Irby (2004) call it the "one-minute preceptor" because students are asked specific targeted questions. It is a useful technique when integrating students into a professional's busy practice while also trying to minimize disruptions to patients. Commonly used in medicine where the goal is patient care and not student teaching, asking students specific questions helps to ensure that they are following the instruction while also linking new knowledge to what they learned in school. As a result, the technique is now used widely in all health professions. All participants discussed the different types of questions they ask students, that is more

knowledge-based questions early in the placement and higher-level questions later in the clinical placement. This is an effort to help students "link their theory with the practical."

Clinical educators mentor students to become professionals. A dominant pattern emerges from the data in that all ten clinical educators discuss their important role in mentoring students to become future professionals. The literature examined for this study does not emphasize the importance of mentoring relationships. Nevertheless it is widely assumed that mentorship is building relationships between educators and their students. Mentorships are learning relationships between individuals who wish to share or develop a mutual interest (Carruthers, 1993), and therefore, for the student whose focus is on attaining professional skills, a mentoring relationship with the clinical educator is invaluable. Mentors act as advisers, guides, facilitators, and a role model to a learner who seeks to explore the mentor's experience in the area of their mutual interest. For the clinical educators who participated in this study, today's students are tomorrow's professions, the "future" of allied health professions, and "new employees," according to Laurie. For Liza, they are also her future colleagues. For Sophie, students are novice professionals who "function independently" with patients. It is evident that clinical education is an invaluable phase in the education of health professionals as they prepare to enter their respective profession (Ralph & Walker, 2008).

To summarize, clinical educators have a number of perspectives on teaching. No single perspective supersedes others; each is adapted to students, the goals, and the clinical context. Nevertheless, they are reminiscent of Pratt's five perspectives on teaching: Effective teaching should be planned and conducted using learners' needs; teachers should create a learning environment that is both supportive and challenging;

teaching involves socializing students into the norms and values of their profession; teachers must be committed to the subject matter; and the ultimate goal is to change society for the better (Pratt and associates, 2005).

Conclusion 7: Clinical Education Believe Their Work Is Important for the Future of Allied Health Professions

A dominant pattern emerges from the data as all ten clinical educators discuss the importance of their work in the development of healthcare professionals. Within the social ecology perspective, this conclusion identifies another social and cultural issue affecting clinical educators. It is a combination of individual beliefs linking with interactions within work groups and cultural beliefs and values. Students are often described as “the future” for each discipline and must therefore be adequately prepared to take on their future roles. Both Louise and Rita assert that students must also “function independently” and as professionals. In addition, Phyllis suggests that professionals also represent the healthcare institution and that student success favors the institution where they train. Strohschein, Hagler and May (2002) suggest that clinical education is the best way for students to learn in the context of clinical practice and is the best place where professional skills and behaviors can be taught and where students can learn to refine them. This is because many of the skills developed during clinical placements cannot be provided in the academic setting as patients or equipment may not be available. It is in clinical education situations that students integrate the knowledge, skills, attitudes and values they learned, and apply them holistically to patient care. Cognitive, psychomotor and affective skills are thus integrated in the clinical setting. It is also during clinical experience that theory consolidates into practice.

Conclusion 8: Clinical Education Leads To Personal and Professional Growth

Clinical education is also important in the development of healthcare professionals who teach students. A dominant pattern emerges from the data as all ten educators in all four professions admit that being a clinical educator has led them to become more self-assured and confident in their abilities and has caused them to have more control over their professional identity. Within the social ecology perspective, this conclusion identifies a psychological issue affecting clinical educators.

Laurie, Liza and Louise discuss how they have developed both personally and professionally through their teaching activities. Study participants all use positive words to describe how their experiences teaching have affected them: more patient (Laurie), confident and self-assured (Liza), comfortable (Louise), more mature and unselfish (Rita), happy (Rebecca). In addition, Paul, Sophie and Phyllis also suggest that teaching students have made them better professionals.

Clinical education is also an important vehicle for sharing knowledge among staff and for improving practice. For Rita and Rebecca, clinical education is a way to learn as much as possible about their profession and sharing this knowledge with colleagues. Learning through clinical education is also an important way to enhance the image of allied health professionals. Teaching students and preparing them for their professional roles enhances educators' ability to influence practice and the future of their respective professions. Several authors suggest that clinical teaching is "vital" for the development of experiential knowledge (Lee, Chilowski & Williams, 2002; Bennett, 2003; Higgs & McAllister, 2005), both for educators and students. Paul suggests that he is learning whenever he has students. Sophie admits that the best part of teaching is what she learns.

Sandra claims that she learned a great deal from her instructors and aims to give students a similar experience. Ramani (2006) suggests that clinical teaching needs to be valued as much as medical practice and clinical research. He adds that health institutions should promote self-reflection and self-development of teachers and provide incentives for those who participate in these programs.

All the clinical educators enjoy teaching students. They use the following words to describe their experiences: exciting, enriching, stimulating, gratifying, rewarding, sharing and learning. DeCicco (2008) notes that clinical teaching programs have numerous benefits for clinical educators, including enhanced self-esteem and confidence, personal and professional satisfaction, and preparation for leadership roles. DeCicco adds that clinical education also benefits the organization through decreased staff turnover and improved patient care. The premise is that staff retention occurs when professionals are happy and feel they are valued. Finally, DeCicco suggests that professions also benefit from clinical education in that they gain critical thinking skills and use this to provide more effective patient care.

Conclusion 9: Clinical Educators Face Numerous Workplace Challenges

A dominant pattern emerges from the data as all ten clinical educators who participated in this study identify a number of challenges they experience as they perform their duties. Within the social ecology perspective, this conclusion identifies a structural issue affecting clinical educators. It also relates to how clinical educators adapt to their complex environment in an attempt to reach their goals.

Most of the issues educators discuss are contextual in nature and include heavy workloads and lack of time and space as main challenges. What is especially relevant

here is the difficulty in maintaining a sense of balance between providing appropriate care to patients while at the same time providing meaningful learning experiences for students given the complex context in which they work. The research participants also discuss a number of challenges related to students who are unable to perform as expected either because of language misunderstandings, disinterest, or lack of student preparation for the clinical setting.

The challenge of limited time and space. All the clinical educators lamented the lack of time available to them to meet the educational needs of their students without sacrificing quality services to patients. Laurie, Liza, Louise and Sandra work extra hours in order "to catch up" with all their responsibilities. Laurie adds that her professional work is sometimes "delayed" because of student training. Rita laments her inability at finding time to follow-up on student training and assessment. Rebecca also has difficulty finding time to complete all her work. Teaching represents an addition to physiotherapist and occupational therapist workloads and educators note that this workload is not diminished when they teach students. The only area where educators have been able to make up time is by either working additional hours or cutting back on their involvement in Hospital committees and other non-patient related activities as Rachel and Sophie have elected to do. Higgs and McAllister (2005) note that one of the difficulties faced by clinical educators is the burden they experience as they cope with competing demands and responsibilities. A number of studies (Moore, Morris, Crouch & Martin, 2003; Griscti, Jacono & Jacono, 2005; Higgs & McAllister, 2005; McAllister, Higgs & Smith, 2008) have identified the combination of a heavy workload and the lack of time to accomplish all necessary tasks as important challenges for clinical educators. The result

is a lack of control and a sense of conflict and anxiety about their inabilities to maintain equilibrium given their responsibilities.

Concurrent with the lack of time available, all ten educators also discussed how staff shortages impact on their ability to complete all their tasks. Liza suggests that her department is often short staffed and she has to help out or resolve problems when they arise. The problem is that students have to wait for her to become available for their instruction or to be assigned tasks. In addition, during data collection, Louise's department was in the middle of demolitions and construction of a new hospital wing and as a result, much of the routine not-urgent work was transferred to the evening shift when she worked. As expected, this added to the stress and impacted on her ability to effectively teach her students. Paul and Phyllis also worked in the vicinity of this construction and much of their workspace was relocated to a temporary location.

A number of educators also discuss the lack of available teaching space as a problem. This challenge has only been given cursory consideration in the literature and seems to be specific to the research site. At the time of the interviews with educators, the institution was undergoing major renovations in the areas where most participants work. The departments of occupational therapy and physiotherapy lost not only their teaching space but also staff personal space. This created difficulties especially during feedback or supervision sessions with students because now these sessions were no longer confidential. Working on the wards is also problematic according to Paul who believes that patients' beds are too close to one another and there is little privacy for in-depth discussion and treatment of critically ill patients.

Limited ability to support students. A number of clinical educators discuss an inability to meet student needs, especially when students are unprepared or when they are unable to accomplish assigned tasks. Higgs and McAllister (2005) suggest this is an important challenge for clinical educators given the demands being placed on their shoulders. Student demographics today are different from those in the past and their expectations are different. Laurie, Liza and Rita discuss how sometimes students do not understand the language of instruction and how they have tried to work around this problem. Sometimes students have difficulties performing specific tasks and Rita gives them extra time in order to master the task at hand. Paul and Sophie suggested that students are not always adequately prepared for the clinical setting and, at times, do not know what it means to be a therapist. They know their theory, Sophie suggests, but they do not know what it means or how to apply it in the workplace. Rachel adds that some students have difficulty interacting with patients and few have developed listening or communication skills. Sandra recalls how one of her students clashed with an experienced professional because she disagreed with their assessment. As a result, several educators spend valuable time reviewing these skills with students rather than performing actual patient care. Finally, Rachel discusses how some students are not interested in pursuing a career in a clinical setting and do not function as expected at the institution. These students are more interested in private practice, education or research and do not show enthusiasm for their professional activities.

Meeting challenges causes anxiety in clinical educators. It is apparent that workplace challenges are a major source of anxiety and may lead to a sense of alienation from the educator role. Several educators have questioned their abilities to teach students.

Louise is overwhelmed by both teaching and working as a professional and has difficulty balancing her two roles. Throughout one of the interviews she would ask me what she should do in certain situations. Unfortunately, this was beyond the scope of the research and I was unable to provide her with suggestions except to encourage her to collaborate with other instructors. Paul described feeling emotionally exhausted to the point where he feels that the experience is “draining.” He feels that he gives everything he can of himself when he teaches and does not receive sufficient support in return. Higgs and McAllister (2005) address this sense of alienation from their role as clinical educators as an important problem that leads to burnout or an inability to teach students. At times this feeling leads to an inability to function as a practitioner. Kahn (1990) suggests that personal disengagement refers to one’s separation from work roles, that is, people withdraw and defend themselves physically, cognitively, or emotionally during role performances. Personal engagement, on the other hand, occurs when employees feel positive emotions toward their work, find their work to be personally meaningful, consider their workload to be manageable, and have hope about the future of their work.

What is interesting is that all the clinical educators find ways to adapt to their constraints. They put in extra hours or find space somewhere in the hospital to conduct their teaching activities. They manage to turn their challenges into opportunities for learning and development. They work around student weaknesses and try to help them develop into competent professionals. They use staffing shortages and increased workloads as a way to integrate students into the workplace. Liza reports that students are often surprised at how she manages to do everything and she uses this as an opportunity to teach students how to organize their work in order to be more efficient. Laurie and Rita

enlist colleagues to help out when students have problems in the language of instruction. Nevertheless, the feelings of anxiety and being overwhelmed are present and it is to their credit that they manage to survive the ordeal, as some of their solutions to the problem may be problematic in themselves.

Conclusion 10: Clinical Educators Strive To Meet Professional Demands

Despite the challenges educators encounter in their workplace, they strive to meet all the professional demands placed on them. Within the social ecology perspective, this conclusion identifies a social, psychological and cultural issue affecting clinical educators. A dominant pattern emerges from the data as all ten clinical educators describe their development of reflective practice behaviors as a result of their work as clinical educators. They have each undergone a personal and professional transformation as a result of being a clinical educator and they have tried to maintain a balance between their professional and educator responsibilities.

Brownstein, Rettie and George (1988) suggest that health practitioners who act as educators must learn new skills in order to be effective in the transfer of their knowledge. Clinical educators used a number of similar words to describe their early experiences: afraid (Laurie and Liza), nervous and scared (Louise), and challenging (Paul). Rita describes how she often has to "juggle" all the different responsibilities she has and how sometimes it is difficult to maintain a balance between her professional duties and her teaching duties. Both Louise and Rebecca use the image of a rollercoaster to describe their experiences as clinical educators. As Rebecca suggests, her experience is like a rollercoaster with many "ups and downs, highs and lows." Paul describes his experience as "a walk in a minefield" because he never knows what to expect. These are very

powerful images that illustrate frustration and a difficulty with adapting to stressful situations where educators have to choose between their responsibilities.

Clinical educators perceive their effectiveness in developing novice professionals. However, they realize that they themselves are also learning as they teach. As a result, they acknowledge their own need to further develop their teaching skills. Rogers, Lautar and Dunn (2010) suggest that there is a need for clinical educators to improve their teaching skills. They base their conclusions on a study of student perceptions that identified the need for educators to develop teaching skills, in particular on teaching methods that focus on students' different learning styles, planning learning experiences, and assessing students' skills. Other authors (Ohrling & Hallberg, 2001; Brammer, 2006; Knight & Brumels, 2010) emphasize clinical knowledge and experience as the most important characteristic for clinical educators. All ten clinical educators feel they do the best to provide effective clinical training that includes both didactic and experiential instruction, within the complex context in which they work. They all discuss receiving good evaluations from students and are particularly proud of their building relationships with students. They also reveal their involvement in student recruitment as an important aspect of their functions.

Clinical educators realize the need to balance their teaching and professional roles. Just as clinical education has changed over the years from an apprenticeship where students followed a professional and learned by observation. Occasionally, students were encouraged to practice their skills. But today, most educators rely on active learning techniques to encourage student involvement in learning and developing their skills. As well, clinical educators aim to encourage students to become independent professionals.

Juggling their different responsibilities is important not only for the sake of their students but also for patients. They immerse themselves in their practice and acquire skills as clinical teachers in an effort to better integrate into their role. Clinical educators in the allied health professions examined in this study perform the duties associated with their profession but also teach students as part of their work. All have additional responsibilities in the health workplace. In addition, the workplace is complex and as practitioners they have the added responsibility of maintaining their competence and being up-to-date in advances in their profession. Their perceptions of their role and the duties they engage in are influenced primarily by their personal experiences. Clinical educators endeavor to strike a balance between both responsibilities: that of clinical practitioner and clinical teacher. They also try to balance student needs with the requirements of the workplace.

Developing a Model of the Experience of Becoming a Clinical Educator

The study data reveals that clinical educators are accountable at different levels. Patients are entitled to appropriate health services. Students expect an education that prepares them for entry to their chosen profession. The academic institutions to which educators are affiliated require the fulfillment of educational goals. Clinical educators must uphold the standards and requirements of their profession while also balancing students' need for certain experiences with their patients' needs. In addition, the healthcare institution is part of a larger health system that is government-based. The workplace context therefore influences the work and activities of clinical educators. Since allied health professionals learn to become clinical educators primarily through their

experiences, both personal but especially professional, there is a need to consider the contextual influences they have as they assume their roles as educators.

Each of these influences overlaps and interacts within the ecosystem (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 1998). The development of clinical teachers is essentially an interaction between the individual and his or her environment (McLeroy et al., 1988) and most educator behaviors arise from various levels, including the individual or biological and psychological, as well as the social, cultural, and structural levels. There is a link, for example, between how clinical educators learn to become clinical educators and how they learn to be health professionals.

A Continuum of Being/Becoming a Clinical Educator

One of the main findings of this study is the nature of how professionals adapt to their professional roles, in particular the role of clinical educator. Part of the challenge of becoming a clinical educator is finding the right balance between professional practice and clinical teaching. Participants discussed how they learned to become educators through their experience as professionals and as students to guide them on their journey. They use their experiences as a way to build their own teaching programs. Most had little instruction in teaching – related to the design, development, implementation and evaluation of teaching, that is the teaching cycle -- and no teaching abilities before being selected or expected to fulfill their roles and responsibilities. Since the competencies required of entry-level professionals include a teaching component, these individuals are expected to know how to teach.

A number of participants, in particular Laurie, Liza and Louise, recalled their early fears when they first began to teach. A few, in particular Paul and Phyllis, shared

their negative experiences when they were students. There is therefore a link between the lack of formal preparation and the feeling of not being ready to teach. With time and as they gained experience, clinical educators become more comfortable in their roles. They immerse themselves in being a clinical educator. This entails gaining control over their professional identities and gaining control over their capacity to handle a wide range of tasks or situations.

When further examining the data, there appears to be a learning continuum for clinical educators as they move between clinical practice and teaching roles, the one feeding into the other. For the research participants, being a clinical educator means three main characteristics: having a sense of self as a clinical practitioner, collaborating with patients, students and other professionals, and attaching value to the roles and responsibilities they have as practitioners who teach. Essentially, being a clinical educator means having a sense of agency, a sense of control over their activities as a professional who also teaches students. Their experiences as students, novices and professionals inform their development as clinical educators. The participants see being and becoming a clinical educator as inter-related, that is, each informs their development and influences their daily work as clinical educators.

Just as beginning professionals learn to integrate into their workplace and immerse themselves in their work, they also learn what it means to be a professional, specifically an allied health professional. In a sense this process mirrors the developmental process that educators facilitate for their students. Students come to the healthcare institution to learn how to become health professionals. They learn the theory and techniques involved in their chosen profession in their education programs. Then in

the health institution, they integrate what they have learned into the healthcare workplace, that is, link theory and techniques to their practice.

Clinical educators plan or design and develop learning activities for students to ease into their future roles as allied health professionals. Just as students learn from their clinical educators across the continuum from student to entry-level professional, clinical educators themselves also go through a similar process of learning vicariously through their experiences as they themselves move through the continuum of an allied health professional to becoming a clinical educator, responsible for future health professionals.

But what is also important for clinical educators is how they both integrate into the workplace and immerse themselves in their roles and responsibilities as practitioners and educators and how the challenges they describe influence their development as educators. It is evident that these challenges are an important part of their experience and is part of the reason why participants describe their experiences in dualities, that is as both positive and conflictual.

Key Concepts in Developing a Model of Becoming a Clinical Educator

The clinical educator participants suggested that their experience as professionals was the single most important aspect of how they learned to become a clinical educator. I would therefore like to propose two parallel dimensions: being a practitioner and being a clinical educator as mirror images of one another connected by their immersion in practice and teaching. Each of the participants learned to be educators in the context in which they work. Each of these dual roles, teacher and practitioner, have similar cycles.

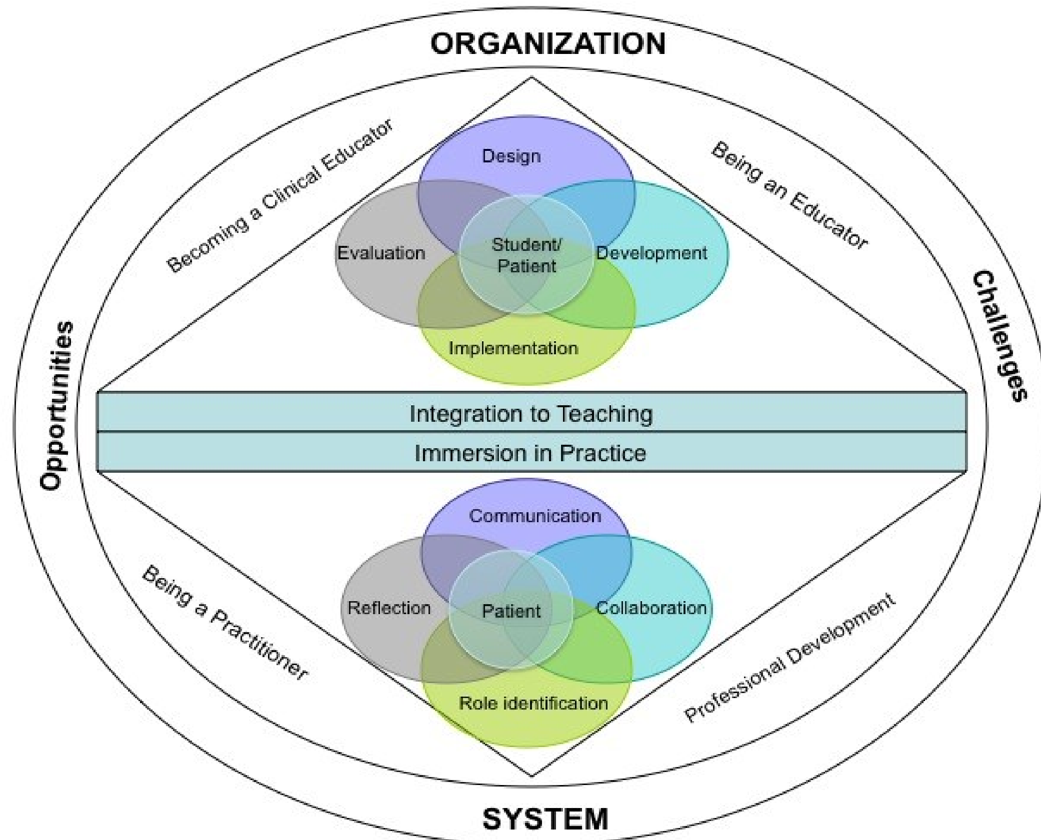

Figure 2. A model of becoming a clinical educator

The professional cycle involves communication, collaboration, role identification, and reflection. At the center of the professional cycle is the patient, for whom health services is focused. Communication skills are key in all professions, as practitioners must communicate with their patients, with other professionals, and with colleagues on a regular basis. Collaboration is also important because allied health professionals use skills that achieve common goals in a complex setting. Many collaborate with other professionals and with patients. Role identification is key as it involves understanding one's role and the roles of others in a multidisciplinary context. Reflection involves critical evaluation of one's professional practice in a healthcare context.

Immersion in practice involves applying knowledge and skills and addressing the barriers to professional practice. It also includes using appropriate role behaviors to support the goals of the department, the organization, and the profession. These are common to all allied health professions and are associated with the values and standards of each of the professions. Most of these are learned through the education programs of each profession. But the actual connecting of all these factors is learned during the clinical education phase. This is where students and practitioners learn what it means to be an allied health professional.

The teaching cycle is similar to the professional cycle. Being a clinical educator means understanding the role, taking pride in it, designing, developing and implementing learning activities, teaching, and conducting evaluations of student abilities. However, the focus is no longer just on the student but on both the student and patients. All clinical educators are first practitioners and second teachers. Their main motivation is their sense of commitment to patients. Connecting students' desires to serve patients with their interest in themselves becoming practitioners is a central feature of clinical education. Even though students are important, patients continue to be the focus of professional duties and the focal point of the department in which they work. As a result, the teaching cycle for clinical educators necessarily includes the central role of patients.

Integration to teaching involves using and adapting knowledge and skills in practice as well as seeking new knowledge for improvement. Most of this knowledge is acquired through practice or through teaching. Integration to teaching also involves supporting students as they learn to assimilate into their professional activities. In order to anchor clinical learning in allied health contexts, students must be actively involved with

patients at the clinical site where professional decisions are being made and where patients are followed through for an illness or other health issue. It is the clinical educator's responsibility to ensure that they develop and effect these opportunities for students. By the same token, clinical educators need to develop their own teaching skills and learn behaviors that are appropriate for a learning environment. Effective health care also means ensuring that clinical educators have opportunities to meet their educational goals and fine-tune their learning as they continue to gain experience.

Being a Clinical Educator in a Complex Environment

The complex environment in which clinical educators work means that challenges, complexity, multiple responsibilities, and tensions between these are inherent in their role. Understanding the complex nature of this role is essential if they are to manage it. It also requires appreciating the nature and diversity of roles of clinical educators and the factors that influence their role.

Clinical practice takes place in a complex, rapidly changing environment, where there are many grey areas of practice (Schön, 1987). Clinical educators therefore face the challenging task of preparing students to work in this complex environment while simultaneously teaching in this environment. At the same time, clinical educators need to fulfill their professional responsibilities to patients and their profession. This gives rise to multiple roles. The clinical educator participants characterized their roles in different ways, such as role model, supervisor, teacher, evaluator and professional. They structure and monitor students throughout their clinical placements in an effort to prepare them for their professional role, that is, they socialize students for their chosen profession. Even the most inexperienced educator, Louise, described this as her main role.

However, there are a number of issues that educators identified as contributing to their inability to manage clinical education effectively. The complexity of the workplace as well as staffing shortages contributes to this difficulty. Clinical educators identify a lack of time and space as important challenges they encounter regularly. These impact on their ability to effectively teach students in the clinical setting. Students' motivations and abilities are also identified as important issues.

A number of educators also discuss how they are able to adapt their teaching given the challenges they experience. Essentially, they see these challenges as opportunities for learning and development and try to work around them to ensure that students attain their goals while also, at the same time, ensuring patient care. Learning how to do this is not innate but a skill that can be learned. Rachel discusses how a course she took on teaching when there is no time helped her develop the skill to adapt her teaching to the challenges existing in her workplace. It would be beneficial if this type of course would be more widely available.

Perception of Competence and Capacity to Act as a Clinical Educator

Clinical educators' perception of their competence relates to how they see themselves in terms of whether they are able to act within this role. It also identifies whether they feel they have the necessary skills, confidence and whether they are comfortable being clinical educators. These aspects are distinct and each of the participants discussed how they originally felt not ready to take on the role but with time they have grown into the role of clinical educator and become confident and comfortable. The only exception, not surprisingly, was Louise, who had only one year of experience and can therefore be seen as a novice educator.

Competence refers to having the qualities or capacities for a particular task and capacity refers to the power and ability to do something (Srinivasan, Li, Meyers, Pratt, Collins, Braddock, Skeff, West, Henderson, Hales & Hilty, 2011). In the clinical education setting, capacity for being a clinical educator means feeling empowered and having the ability to take appropriate action when required. Competence and capacity to act as perceived by the clinical educators participating in this study is defined in terms of whether they have acquired the skills as a clinical educator, how they prepare for their roles and whether they are confident and comfortable in their role of clinical educator. This element is distinct from their perceptions of being professional practitioners.

All the study participants describe the importance of their role as one of developing future professionals and ensuring that the future of the profession is optimal for patient care. This model also explains why a number of clinical educator participants discuss dissatisfaction with the formal and informal learning activities provided them. These are useful because they address specific issues related to the teaching cycle. However, they are also limited because they do not address how this learning can be integrated into their working realities, specifically how these can be applied in a complex workplace fraught with numerous challenges.

As a result, more needs to be done to help clinical educators better integrate their teaching activities into their everyday professional experiences. A number of participants have been able to adapt what they learn in various professional development activities to their specific workplace. By doing so they have managed to convert the challenges into opportunities for development and for growth. It would be advantageous for other clinical educators to also be able to do the same.

What is distinct in this model is how these two functions, practitioner and educator, are integrated into the whole, influenced by organizational and system challenges and opportunities that encourage growth as both educator and practitioner. The model of becoming a clinical educator, presented above, represents the structural and contextual dimensions of allied health practice. It also describes the manner in which professionals organize their work, interact and communicate with professionals and patients, make decisions, and create an environment where both professional care is delivered and teaching is conducted in a manner where everyone benefits.

CHAPTER 9: CONCLUSIONS, LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This chapter closes the description of this study by linking it back to the larger clinical education process and, more broadly, to the engagement of subject matter experts in educating and training professionals in their field. It first offers conclusions, where I suggest implications to practice and to research and theory. I then identify the limitations of the study and conclude with suggestions for future research.

Conclusions

A number of important findings, regarding the nature of clinical education and the development of clinical educators into their roles, emerged from the data. Clinical educators are either recruited into their position or are expected to teach as part of their regular work. They have numerous responsibilities, of which clinical education is only one. They learn to become clinical educators mainly through their experiences as professionals and by teaching. Clinical educators plan and structure learning activities for students with simulations and other active learning strategies. Despite their appreciation for their responsibilities, clinical educators face a number of workplace challenges. Finally, they believe that clinical education is important in the development of allied health professionals and they strive to meet their professional demands. Figure 3 below summarizes the main findings.

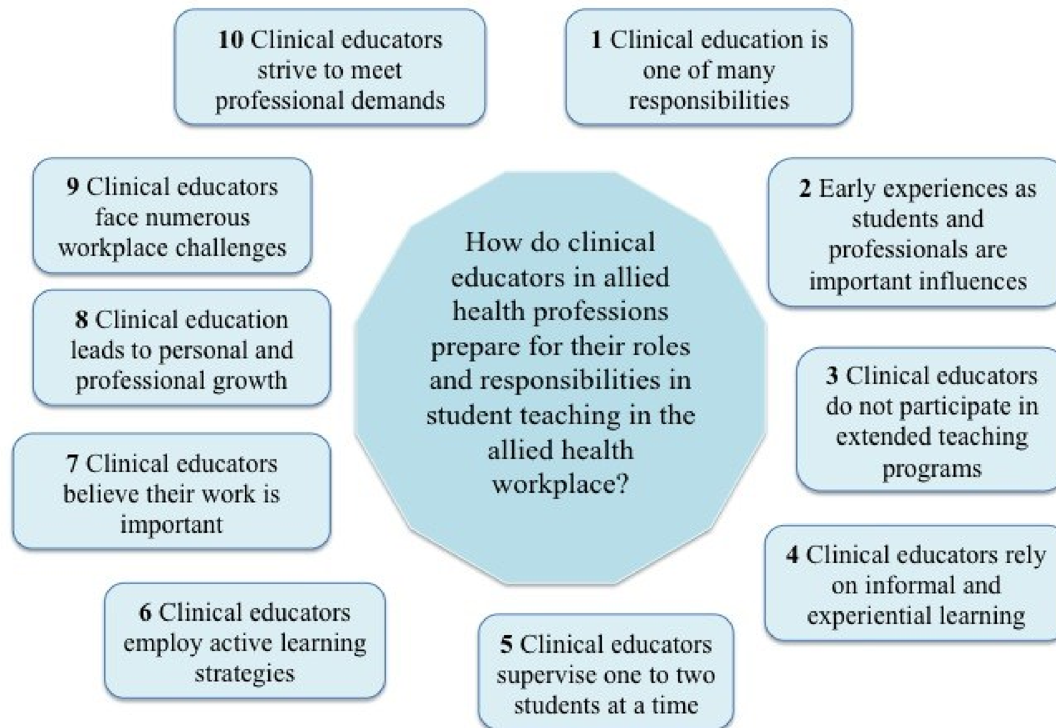

Figure 3. Study Conclusions

Implications to Practice

The implications identified are clustered into several major areas. One cluster revolves around the manner in which clinical educators are recruited for their roles. Another cluster considers how clinical educators are prepared for their roles and responsibilities and how they are motivated to performing well. A third grouping relates to how educators prepare for their role and how they are evaluated. A fourth cluster considers the importance of continued support and improved working conditions for clinical educators. A fifth grouping considers the importance of ongoing professional development for clinical educators.

The first cluster of implications pertains to how clinical educators are recruited. Although each profession expects its members to serve as clinical educators, the level of interest and skill of those selected may not be considered, in particular for those professions where everyone is expected to teach. Each group of professions uses a different system for selecting and retaining its clinical educators. Technical professions, such as laboratory medicine and respiratory therapy, have designated personnel who act as clinical educators. Rehabilitation professions, such as occupational therapy and physiotherapy, expect all staff to act as clinical educators. I am not sure which system is best but I think it may be beneficial for health institutions to review and possibly reconsider their approach to recruiting clinical educators.

All the study participants are committed to being clinical educators and disclose a willingness to take on more students, all for the betterment of the profession and the healthcare system, in particular for patients. But they also suggest that not all their colleagues enjoy teaching. However, this study may be skewed because of those who did participate. There is no way to know if those who did not participate have similar experiences. It is possible that, if given the choice, they would not engage in teaching duties. Furthermore, this links with the larger debate undergoing in training and development as to who is best qualified to teach.

The second cluster of implications to practice pertains to requirements for training and development. There is an acknowledgment by several participants and in the literature that there is a need for instruction on the craft of teaching. Even though each profession includes teaching skills in their competencies, there is no consideration of how this is accomplished. Teaching is therefore an assumed competency. But as the data

show, clinical educators have little or no formal preparation for their teaching roles, little support for teaching, and not enough time to both perform their work as professionals and teach students. Although their role as clinical educator is often rewarding in itself, there is little evidence that educators are motivated to perform well. All the educators who participated in the study are committed to clinical teaching and many noted their own inabilities and the need for more skill in teaching. This same discussion has led to calls for more development in the craft of teaching for physicians (Steinart et al., 2006) and nurses (Barrett, 2007). This same discussion is also beginning for allied health professionals (Higgs & McAllister, 2007).

A number of participants have taken formal instruction in teaching methods and assert the need to take additional instruction. Various institutions, such as academic and professional associations, offer most of this instruction through short-term workshops or lectures. Although this form of instruction might be helpful, this study found that much of the learning of clinical instructors occurs through experience. This is appropriate for adult learners as they learn best from immediately applicable learning and from experiences such as problem situations rather than from formal courses, especially lecture-style courses.

The third cluster of implications to practice pertains to assessments of clinical educator performance. Regardless of how they prepare for their roles and responsibilities, it is important that educators undergo regular performance appraisals or evaluations. Although study participants engaged in ongoing personal review and reflection of their teaching skills and program, none was formally assessed for their role. The nursing

literature, in particular, has examined this issue (Yonge et al., 2002) but it has not been widely discussed in the allied health literature.

The next cluster of implications to practice focuses on the level of support and guidance that clinical educators receive for their work. The data suggests that several workplace issues affect the work of clinical educators, including lack of time and space, increasing workloads and staffing shortages in their areas. Many worked overtime to complete their clinical education assignments. All clinical educators report these as major obstacles to performing their professional responsibilities and teaching students and doing both well. In an ideal world, healthcare institutions would provide more staffing and rearrange educators' professional duties so that they had sufficient time to teach students in the workplace.

The last cluster of implications to practice focuses on the professional development and growth that occurs during clinical education experiences. Participants reported that their work as clinical educators led to personal and professional growth, although none saw this is as a form of professional development.

Implications to Research and Theory

This section describes three main implications of the study findings to research and theory: How clinical educators' belief systems influence their roles and responsibilities; how clinical educators define their work; and how similar clinical education in allied health is compared to other professions.

All the clinical educators believed that their work in clinical education was important, even "vital" (Bennett, 2003) for students and for the future of allied health professions. In addition, they identified their own professional expertise and competence

as central to student development and understanding of the realities of clinical practice. Furthermore, all clinical educators expressed their dedication to teaching through various means such as role modeling and facilitating student learning. These perceptions are their motivation for how they plan and organize their teaching programs, what activities and strategies they select for teaching students, and how they interact with students. However, all believe that they need to better learn how to integrate the craft of teaching into their daily practice. They are convinced that they have more to learn and that this learning will help them become better clinical educators. There is therefore a need for additional research into the links between learning and practice. Although the hospital context encourages learning, there is little evidence as to how informal learning can be used to link tacit professional knowledge and experiential learning in workplace contexts involved in clinical education, and the application of the model that emerged from this study to broader work in training and development.

A second important implication to research and theory relates to the definition of the work of clinical educators. As noted, clinical educators perceive their work to be important but clinical education is only one of numerous responsibilities. Although there is an understanding as to clinical educators' main role, that is, facilitating student learning while also conducting professional practice, educators themselves acknowledge the need to further develop their teaching skills, especially when there is little time for teaching. The reality of the health workplace, with its constraints such as a diminished workforce, increasingly complex patient care, and increasing student numbers, precludes educators' abilities to access available resources for learning.

In different fields, in particular adult education and human resources and development, expert trainers are responsible for training. But in the healthcare workplace, content experts conduct all training. Clinical educators are experts in their field and have experience in their chosen profession. As experienced professionals, they are also assumed to be competent as educators, given the requirements of their positions.

There is an ongoing debate in the training field as to who is ultimately responsible for training. The assumption in the training field is that a trained training professional is responsible (Lee, 1988). But there is an assumption in the healthcare fields that the professions are responsible for all forms of training. This assumption is reinforced by their right to licensing, which also grants these professions the right to oversee all education and continuing development in their fields. As part of this system of oversight, healthcare institutions and the education programs with which they are affiliated undergo regular accreditation to ensure the alignment between programs and to determine how they are together attaining the larger goals of ensuring effective health care. Because healthcare practitioners train their own, few professional trainers work in healthcare especially in the training of physicians, nurses and allied health professionals. No professional trainer works at the research site. This study illuminates this barrier about who gives particular types of training in healthcare workplaces, which might warrant a discussion within the field of training and development about the boundaries of its work in the workplace.

Most professional development activities for clinical can be seen as informal. Not only is ongoing professional development a requirement of professional licensing, it is also required to ensure that knowledge and skills are linked to practice. Although

historically informal learning has been highly important in the professional development of a wide range of professions – accountants, doctors, lawyers, nurses, psychologists, social workers, teachers– it has not been examined in the context of clinical education. However, many associations and workplaces do not consider its value in terms of staff development. In addition, because there is no extended program readily available, most clinical educators choose whether or not they want to participate in them, when and how (Wihak & Hall, 2008). Health professionals are encouraged to engage in formal professional development activities that are recognized with credit for improved performance. In addition, professionals are expected to keep their professional knowledge up-to-date through informal learning activities such as reading professional journals and attending professional conferences. They also continually hone and evolve their professional skills through informal learning associated with their professional practice. All licensing bodies allow professionals to collect a certain amount of credit for informal learning activities. But what is missing from the literature is a consideration of research into informal learning in clinical education.

The learning continuum shows the importance of linking informal and experiential learning with the development of clinical educators. Marsick and Watkins (2001) suggest that informal learning takes place when professionals identify a need, a motivation and an opportunity for learning in their workplace. However, further research is required on how tacit knowledge and experiential learning in workplace contexts is involved in clinical education. Eraut (1994) suggests that informal learning is important in developing job-related competence. Developing competence as a clinical educator can be seen in this light. The quality of professional education depends on the quality of

practice and becoming a clinical educator is equated with being an allied health practitioner. This in turn is influenced by their professional development. Eraut adds that knowledge is involved in developing professional competence, in particular for teachers. Teachers have skilled behaviors acquired through practice. But knowledge of how to teach is tacit. Through clinical education, professionals gain experience in acting as a health professional working with patients and other professionals within the context of the workplace environment. Much of this knowledge is also tacit. With these new experiences, they connect these with other experiences and begin to generalize and apply this new learning to new contexts. While informal learning in the health workplace is important, this learning needs to be linked with practice and must be relevant, applicable and effective. It can also be enhanced through a structured program that focuses on both formal and informal learning activities.

However, there are barriers in the clinical workplace that influence how this learning is applied. According to Billett (2001), ways in which workplaces support or inhibit individuals' engagement in professional activities are important in shaping the learning that takes place. There is a dynamic between the expressed expectations of the health workplace and the needs of professionals and those of patients and other stakeholders. This interconnection between educators and the workplace is under constant negotiation. The model presented in this study is a first step in the exploration of how informal and experiential learning can be incorporated in clinical education.

A final implication to research and theory relates to a consideration of how clinical education for allied health professionals differs from, or is comparable to, that of physicians and nurses. The lack of available literature in allied health obliges researchers

to consider research conducted in medicine and nursing. This study produced a model of becoming a clinical educator. This model places clinical educator experiences at the center of being and becoming a clinical educator, showing how one's experiences and beliefs about the value of clinical education as well as how immersion in the process of teaching while also engaging in professional practice, seeks to develop and maintain relationships with students and other professionals. In turn, these clinical experiences influence the role and approaches adopted and actions taken in being a clinical educator. Consequently, the model provides a way of conceptualizing and discussing clinical educator practices, facilitating better preparation and development within the role, and refinements in practice for educators currently in the field as well as those who will engage in clinical teaching in the future.

It is significant that the nursing and medicine literature addresses similar issues. The complexity of the clinical setting and the challenges incurred through workplace challenges are similarly discussed by all health professionals. Clinical educators in all healthcare fields identified barriers to learning and practice. The importance of peer and management support for overcoming these barriers and for creating a learning environment is also elaborated. What is different in medicine and nursing is a more widespread availability of support and resources for clinical educators. At the research site, for example, leaders in both fields make available numerous resources for clinical educators. In addition, the academic institutions also provide extended programs in developing teaching skills specific to the health workplace. There is therefore a need for similar programs for allied health professionals who teach.

The findings of this study show that participants believed in the primacy of the patient (Macdougall & Drummond, 2005), as do physicians and nurses, as they work to ensure quality patient care. Like the clinical educators studied by Higgs and McAllister (2005), the participants in this study also experienced this as a dilemma in purpose. Although they want to meet student needs, patient care always comes first. As a result, some of the decisions and actions they take in their regular work means acting in a way that is contrary to what they feel they should be doing. In addition, time pressures and working conditions are their reality. Providing care to patients always takes priority over teaching students. To find a way to "juggle" all their responsibilities means that, at times, they have to limit their interactions with students, which prevents the development of optimal student behaviors. The gap arises not only from a lack of educational theory that informs clinical educator actions but is also the result of actions taken to manage their complex environment.

Limitations

Interpretive studies of this type have significant strengths as well as some inherent limitations. The decision to focus on ten participants in this study led to a richness of data that illuminated the breadth of their experiences as clinical educators. However, since it is not the intention of such research to generalize, the findings may not be relevant to other clinical educators or to different disciplines.

Another limitation derives from my position as an insider in the research process. My insider status brought some advantages to selecting participants for the study from diverse professions and with different levels of experience. My knowledge and personal experience of the field of clinical education also brought a number of advantages in being

attuned to the reality and nuances of the research setting, and in focusing my observations and interviews to probe and illuminate experiences. As a result, I was able to get beneath the surface to uncover details of clinical educators' knowledge embedded in practice. An outsider unfamiliar with the field may not have been able to bring certain perspectives to the inquiry. My doctoral supervisor and a group of doctoral students were also invaluable in challenging me to refine my emerging narratives.

Participants were generous of the time they gave me toward the study. The depth of their reflection was the result of a sense of collegial relationship with me. This issue of the *emic*, that is insider, versus *etic*, that is outsider, perspective is an ongoing struggle for researchers working in the interpretive paradigm (Denzin & Lincoln, 2005). I do not have any solution to this problem other than to note the need for a heightened awareness of researcher influence and openness and the need for constant critical appraisal of researcher limitations and strengths during analysis and discussion.

A further limitation of this study lay in my attempts to remain the observer and interviewer, rather than step into the role of a critical friend. As well as creating tensions in the research process, this position also created personal and ethical dilemmas for me. I wanted to help participants when they asked me questions, but I did not want to influence their thinking, feelings or behavior. This could however make for an interesting study, that is, an investigation on the impact of critical friendship on the management of dilemmas experienced by clinical educators.

A further intentional delimitation of this study lies in the fact that it focuses only on the experiences of the clinical educators. While the data uncovered considerable insights into how they perceived and resolved problems, experienced time pressures and

tensions, among other themes, I do not know if their supervisors or the chiefs of their departments also experienced these problems and pressures in the same way. It may also be beneficial to explore in another study how students perceive the pressures and experiences by clinical educators, and whether they see the same problems that their clinical educators perceive. Such explorations may be part of future research.

Suggestions for Future Research

This section elaborates the areas where future research can be conducted to add to the body of literature in clinical education. These areas include the validation of the model of becoming a clinical educator, the investigation of professional development activities that benefit clinical educators, an examination of the link between clinical education and training in the health workplace, and an exploration of whether the experiences of the clinical educators presented in this study apply to other educators in other fields, to their supervisors, and to students.

The model presented in this study must be validated. Further study of expertise in teaching in the clinical setting and its expression by clinical educators is indicated. The resonance and utility of this model for clinical educators who did not participate in this study from the professions considered may prove useful. Testing the model using clinical educators in other allied health professions and possibly other health professions is also warranted. Feedback on whether this model is relevant and applicable to these individuals can only uncover other experiences that either enhance or reduce aspects of the model. This in turn would serve to integrate information and explore whether the model can further guide research and practice. At the least it would identify practical tips on how it can be implemented into professional development activities and whether it is worthwhile

doing so. In addition, it would be beneficial to test the model with clinical educators at various stages of experience in order to examine whether the model is applicable to educators at different stages of growth and development. It would uncover whether this model has broader applicability to other professions.

A second area for future research is the investigation of the types of orientation and training that would improve clinical education and make clinical educators feel better prepared. The majority of participants suggested an interest in further pursuing learning in teaching methods. It was unclear however if their preference was for formal or informal learning. It would also be beneficial if educators would have some form of integration into their role as clinical educators when they first begin to teach. This would only help alleviate clinical educators' feelings of discomfort and trepidation when they first learn that they will be teaching students. Related to this is the development of instructional materials, such as training checklists and assessment forms, to help clinical educators identify important areas for teaching. Another related area is an exploration of how clinical educators can be supported to develop theories of clinical education from their practice. Exploring the development of professional craft knowledge about being a clinical educator also warrants further investigation. Further study of expertise and professional mastery in clinical educators is indicated, to uncover strategies to enhance the quality and outcomes of clinical education. In addition, further study will define the attributes of clinical educators. Findings from these new studies would provide information about the importance of role models for educators in the early stages of their development as clinical educators.

Another area for further research is an issue that arose during the data collection process. A number of participants teach both students and staff and they do not distinguish what they do with both these groups, as they see students as potential new employees. In addition, many use the same tools, such as instructional strategies and evaluation forms, used in the teaching and evaluation of students. The literature suggests that staff training and clinical education are two different activities, yet in many health workplaces they are conducted interchangeably. Clinical educators train staff and trainers teach students. As a result, it would be invaluable to explore the impact of student teaching in the workplace on new employee training, from both the perspective of the students and the clinical educators. This also links with how clinical educators distinguish between training new professionals and ongoing professional development. Do clinical educators see them as requiring different skills? If we agree that training programs for all trainers is a requirement, would trainers who provide professional development need to be on a separate track from that of clinical educators? What they do and how is quite different, especially in terms of their learners. Clinical placements are usually short-term and only take a few weeks and therefore focus primarily on entry-level skills. Practitioners require more advanced skills and their development is ongoing throughout their careers.

Finally, additional research is required with various stakeholders. Senior hospital and department leaders have invaluable perspectives on clinical education. An examination of whether the model of becoming a clinical educator relates to their views would be beneficial. Furthermore, although other studies have considered the views of students, this study did not. Consequently, a consideration is required of their

perspectives on the quality of their educational experience and if better prepared clinical educators would impact their learning and how.

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APPENDICES

Appendix A Recruitment letter

Appendix B Consent form to participate in research (Clinical Educators), Concordia University

Appendix C Consent form to participate in research (Clinical Educators), research site

Appendix D Interview guide (Clinical Educators)

Appendix E Interview guide (Administrators/Managers)

Appendix F Observation guide

Appendix A: Recruitment Letter

Ofelia Ribeiro
Department of Education
Concordia University

Dear Clinical Educator,

I am conducting research into the experiences of clinical educators in allied health as part of my doctoral dissertation within the Department of Education at Concordia University. I am interested in how allied health professionals prepare for their roles and responsibilities, what influences them, and what they do and how. I have been given your name as a possible participant in this research study and am asking for your help. It is hoped that the information found in this study will be useful in understanding the complexities of your work as an allied health clinical educator.

Specifically, I am asking you to participate in a series of interviews and observations during the spring and summer 2013. We will discuss your beliefs regarding teaching students in the workplace, what you do to prepare for your teaching duties, and what has influenced you as a clinical educator. If you agree, I would also like to see any documents that you prepare for student teaching, such as schedules, training checklists, or other materials that you use during your sessions with students.

All discussions and any materials you provide me will be kept confidential. I am the only individual who will ask you any questions and who will have access to the information you provide. All the original information, that is, any audiotapes, transcripts or summaries of our conversations will be kept under lock and key. No one else will ever have access to these. Furthermore, your name or place of work will not be noted on any of these. You can be assured of complete confidentiality.

I shall give you an identifying number should you wish to withdraw from the study. Should this be the case, I will then be able to locate and discard all of the information you have provided. I will be the only person who will have access to your personal identification code. After each session, I will provide you with summaries of our conversations. This is important because it will ensure that I have not misinterpreted or misrepresented anything you said. I will encourage you to review them carefully and make any changes that you see fit. I will not begin any data analysis until your confirmation is made.

You can contact me by email (oribeiro@jgh.mcgill.ca) or you can call me at extension 5086. Leave a message if I am not in. Thanks again for your interest and involvement. If you decide to not participate, I will understand. You do not have to contact me.

Looking forward to our conversation,

Ofelia Ribeiro

Appendix B: Participation Form (University)

CONSENT TO PARTICIPATE IN

Becoming a Clinical Educator: An Exploration of What Clinical Educators Do and How They Prepare to Teach in a Healthcare Setting

I understand that I have been asked to participate in a program of research being conducted by Ofelia Ribeiro of the Department of Education of Concordia University. The research will take place at the Jewish General Hospital.

Contact Information

Ofelia Ribeiro, Department of Education, Concordia University and Department of Diagnostic Medicine, Jewish General Hospital, 514-340-8222, extension 5086, email: o_ribeir@education.concordia.ca or oribeiro@jgh.mcgill.ca

A. PURPOSE

I have been informed that the purpose of the research is to explore how health care professionals, specifically allied health professionals, perceive their roles and responsibilities when teaching students in the healthcare workplace. It will also explore how we prepare for our roles and how we go about our tasks.

B. PROCEDURES

The research will be conducted at the Jewish General Hospital during the spring and summer of 2013. At least three interviews, to take place at different times, will be conducted by the researcher, at my convenience. Each interview will not take more than one and a half hours. In the first interview, the researcher will ask me background information about how I prepare for my role as clinical instructor. In the second

interview, the researcher will gather information about what I do on a typical day as I teach and supervise students in the healthcare workplace. Observations of me in my workplace will also be conducted as I go about my daily work. Subsequent interviews will review issues that come up as the research progresses.

Written notes will be taken throughout each interview and observation session. In addition, the interviews and discussions will be audio-taped. Shortly after each interview and observation, I will be provided with summaries or transcripts of the session in order to confirm their accuracy and completeness. The changes that I request will be included in the final data collection.

C. RISKS AND BENEFITS

I understand that there are no foreseeable risks associated with participating in this study. Since participation is strictly confidential, no one will have access to the information provided. As per requirements of the research ethics committee at the Jewish General Hospital, my personal information, that is my identity and workplace, will be given a unique code number, in order to protect my identity. My signed consent forms and my unique code will be placed in a sealed envelope in a locked cabinet in the secretariat at the Jewish General Hospital (D-123). The original audiotapes, identified only by my unique code, will also be kept in the locked cabinet.

I understand that access to my identifying information will be restricted and supervised by the researcher only. The information I provide by audiotape will not be identified with my name. No information that discloses my identity will be allowed to leave this institution. No one from the Jewish General Hospital will be allowed to see the

information collected or the consent forms. Nobody, including my supervisors or colleagues, will know the content of the information I provide.

The benefits of participation include the chance to discuss and reflect on my experiences as a clinical instructor. Participation in this study will also afford me the opportunity to make a contribution to my profession, as there is a lack of research currently available on the experiences of allied health professionals as clinical teachers. As a result, participation in this study will help the researcher advocate for the needs of clinical instructors as they fulfill their roles and responsibilities.

D. CONDITIONS OF PARTICIPATION

- I understand that I am free to withdraw my consent and discontinue my participation at anytime without negative consequences.
- I understand that my participation in this study is:

  CONFIDENTIAL (i.e., the researcher will know, but will not disclose my identity)
- I understand that the data from this study may be published.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

NAME (please print)

____

SIGNATURE

____

If at any time you have questions about the proposed research, please contact the study's Principal Investigator Dr. Saul Carliner at 514-848-2424, extension

If at any time you have questions about your rights as a research participant, please contact the Research Ethics and Compliance Advisor, Concordia University, 514.848.2424 ex. 7481, ethics@alcor.concordia.ca

Appendix C: Participation Form (Research Site)

Consent Form to Participate in Research (Clinical Educators)

Jewish General Hospital Form

Ofelia Ribeiro

Dr. Elizabeth MacNamara

JGH – Department of Diagnostic Medicine

Becoming a Clinical Educator: An Exploration of What Clinical Educators Do and How They Prepare to Teach in a Healthcare Setting

We invite you to participate in this research study because you are an employee working at the Jewish General Hospital as an allied health professional and have been involved in student training.

Purpose of study:

The main goal of this study is to understand how health care professionals perceive their roles and responsibilities when they are teaching students. It will also explore how they prepare for their role, their influences, and how they go about their tasks.

Procedures:

If you agree to participate in this study, you will be asked to participate in a series of semi-structured interviews between April and September 2013. You will be asked a number of questions on a one-to-one basis. We are interested in your opinion on these issues. We will take written notes on what you will tell us and we will also tape-record your comments. You will be provided summaries or transcripts of the main discussion

points for review. These interviews will each take approximately 1 hour and a half and will be done at a time and place that is convenient for you. If required, you will be freed up from work for the purposes of this study.

Risks:

We do not anticipate any risks to your participation.

Benefits:

Your participation in this study will help us understand the experiences of allied health professionals who act as clinical instructors. Your participation will help us to better appreciate your perceptions of your roles and responsibilities, how you prepare for them, and what influences your work.

Voluntary Participation/Withdrawal:

Your participation is voluntary. You have the right to refuse to participate in this study. If you agree to participate in the study you have the right to discontinue at any time and for any reason. You may also refuse to answer any question you are not comfortable with. In the event that you withdraw or you are withdrawn from the study, all the information collected for the purpose of this study may be used in order to preserve the scientific integrity of the study. If you do not wish to participate in this study, all you have to do is inform the researcher. Your employment at the JGH will not be affected in any way.

Confidentiality:

All information obtained from you during this study will be treated confidentially within the limits of the law. All the information you provide will be kept confidential and all

data will be collected and analyzed by Ofelia Ribeiro. Your personal information, that is your identity and workplace, will be given a unique code number. The consent form and your unique code will be placed in a sealed envelope and kept in a locked cabinet in the secretariat at the Jewish General Hospital (D-123). Access to your identifying information will be restricted and supervised by the principal researcher only. The information you provide by audio-tape will not be identified with your name. No information that discloses your identity will be allowed to leave this institution. No one from the JGH will be allowed to see the information collected or the consent forms. Nobody, including your supervisors or colleagues, will know the content of the information you provide.

The Research Ethics Committee may look at medical and research records identifying you for the purpose of monitoring this research.

The results of this research may be published or communicated in other ways; however, your identity or any other identifying information will not be disclosed in any reports or publications.

Compensation Clause:

There will be no cost to you for participating in this study, and as there is no special fund established for this study you will not be entitled to any compensation unless required by law. This does not limit any of the legal rights that you are entitled to nor relieve the investigators and this institution from their legal and professional responsibilities.

Questions:

If you have any questions about the research now or later, or if you think you may have suffered from any risk, you should call Ofelia Ribeiro at 340-8222 ext. 5086. If you have

questions about your rights as a research participant, you may call the Jewish General Hospital Local Commissioner of Complaints and Quality of Services, Rosemary Steinberg, at 340-8222, ext. 5833.

STATEMENT OF CONSENT

Becoming a Clinical Educator: An Exploration of What Clinical Educators Do and How They Prepare to Teach in a Healthcare Setting

I have read the above information and my questions were answered to my satisfaction. A copy of this signed consent form will be given to me. My participation is voluntary and I can withdraw from the study at any time without giving reasons, without it affecting my employment now or later. I do not give up any of my legal rights by signing this consent form. I agree to participate in this study.

Name: ____

Signature: ____

Date: __________________________

Consent for was administered and explained in person by:

Name: ____

Signature: ____

Date: ___________________________

A copy of this signed consent form will be given to you and the original will be placed in the confidential file.

Appendix D: Interview Guide (Participants)

Interview 1

Goal: To gather background information regarding early experiences as a student and a novice clinical educator and explore their influences and challenges

Interview Protocol #(code):

Time of interview:

Date:

Place:

Interviewer:

Interviewee:

Position of interviewee:

Context issues:

(Briefly describe the context)

Questions:

1. What led you to become a clinical educator? How did you come to have this position?
2. How would you define clinical education?
3. Describe your experiences as a student when you first came to the hospital?
4. How did the way you were taught influence how you teach students?

5. What is your main goal?
6. What is your main role as a clinical educator? Do you have other roles?
7. What are your beliefs about teaching? How do you structure or present activities that develop student technical and professional skills?
8. What are your main responsibilities? What is expected of you? Why do you think this? What do you expect of the experience of being an educator in the hospital?
9. What type of problems do you experience? How do you resolve them?
10. How does the physical environment of the workplace influence how you teach? Are there any factors that help or hinder your teaching?
11. How do your colleagues at work influence what you do?
12. Is there anything that you do regularly to prepare for your role? How important is regular preparation? Describe what you do before students begin their clinical experiences. What do you do when student training ends?

(Thank the individual for participating in this interview. Assure him or her of confidentiality of responses and possible future interviews.)

Interview 2

Goal: To follow up on first interview and to gather information on roles, responsibilities, tasks, and teaching strategies used. This interview will also serve as the basis for the observation that will occur after. For example, many of the tasks will then be tabulated during the observation.

Interview Protocol #(code):

Time of interview:

Date:

Place:

Interviewer:

Interviewee:

Position of interviewee:

Context issues:

(Briefly describe the context)

Questions:

1. What are your main responsibilities? What is expected of you?
2. Describe the tasks you do on a typical day as a clinical educator? What are your goals? Are these tasks scheduled on a given day?
3. What are the main teaching/learning activities in which you engage in regularly?

4. How do you select specific activities for students?
5. Why do you teach students in this manner? Do you feel that these activities help students? Why?
6. Do you prepare for these differently depending on the student?
7. If you could, what would you do differently?

(Thank the individual for participating in this interview. Assure him or her of confidentiality of responses and possible future interviews.)

Interview 3

Goal: To follow up on observation.

Interview Protocol #(code):

Time of interview:

Date:

Place:

Interviewer:

Interviewee:

Position of interviewee:

Context issues:

(Briefly describe the context)

Questions:

1. Are the tasks you described in the second interview and during the observation an accurate picture of what you do on a given day?
2. Follow-up on issues that arose during the observation. Ask: Why did you decide to do that this way?
    a. How did you come to do things that way?
    b. What have your experiences been in the past using these particular activities/ strategies?
    c. What were student reactions?

d. Why did you choose to change these?

3. Follow-up issues that arose in the data analysis of the first two interviews and the observation.

(Thank the individual for participating in this interview. Assure him or her of confidentiality of responses and possible future interviews.)

Appendix E: Interview Guide (Administrators)

Goal: To gather background data on recruitment and development of clinical educators

Interview Protocol #(code):

Time of interview:

Date:

Place:

Interviewer:

Interviewee:

Position of interviewee:

Context issues:

(Briefly describe the context)

Questions:

1. How many clinical educators do you have in this department?
2. What are your criteria for selecting clinical educators?
3. Is a job description (with competencies, objectives, and/or expected outcomes) for clinical educators available? Describe these.
4. What are the main responsibilities of clinical educators?
5. What are your expectations of the clinical educators?

6. Do educators engage in professional development or continuing education? What types of activities do they participate in? Do you believe it is important that they engage in developmental activities? Why?
7. Does the department or hospital have resources or practices available for clinical educators? For example, are any of the following available: Policies, procedures, or a knowledge database?
8. Do you know if the academic institution has available resources or practices for clinical educators, such as training manuals, handbooks, or links to websites?

Appendix F: Observation Guide

Interview Protocol #(code):

Time of interview:

Date:

Place:

Observer:

Participant code:

Context issues:

(Briefly describe the context)

Time	From to
Types of individuals involved in observation (**S**tudent, **C**olleague, **M**anager, **P**atient, etc.	
Type of interaction (**T**eaching, **O**bservation, **M**odeling behavior, **A**ssessment, etc.)	
Main topic	
Strategies used during intervention (**D**iscussion, **M**odeling, **C**oaching, etc.)	

Content of verbal interaction (**Q**uestion, **R**eminder, **I**nstruction, **F**eedback, etc.)	
Affective tone of interaction (**I**nterest, **F**rustration, **A**nnoyance, etc.)	
Comments	
Researcher notes	