

# August 2016: 26 people from various fields collaborating to build health games for children with asthma



In Quebec, one in four children suffer from asthma.

One in two affected person does not do their therapy as agreed.<sup>1</sup>



## Enhancing self-management capabilities significantly reduces hospitalizations

25% increase in adherence when behavioural and educational strategies are combined. Cost to savings ratio of 1:10 in some cases. Possibly far greater impact than any improvement in treatments.<sup>2</sup>



## All patient ecosystem should be involved

Effective treatment requires a system that is proactive and emphasizes health throughout a lifetime.<sup>2</sup>



## Health games (fun learning) have shown promising results

in changing behaviors and influencing health outcomes.<sup>3</sup> However, establishing communities of researchers, developing theoretical basis, exploring new funding mechanisms is needed.<sup>4</sup>

## Breathing Games promotes respiratory health

by encouraging the appropriation of care by each citizen. We create a **common** – collectively managed resources that are freely accessible and can be used and enriched by everyone – by spurring collaboration between all interested stakeholders to build on collective intelligence.



1. Bousquet J & Khaltaev N (Eds) (2007). *Global surveillance, prevention and control of chronic respiratory diseases*. WHO. 2. Sabate E (Ed) (2003). *Adherence to long-term therapies: evidence for action*. WHO. 3. Baranowski T et al. (2016). "Games for Health for Children – Current Status and Needed Research." *Games Health J*, 5(1). 4. Kharrazi H et al. (2012). "A Scoping Review of Health Game Research: Past, Present, and Future." *Games Health J*, 1(2).

# Two days game jam to build free/libre games from scratch

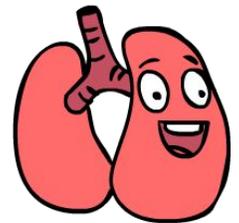
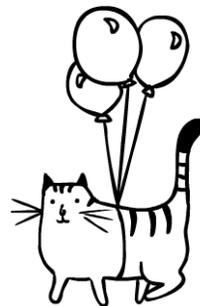
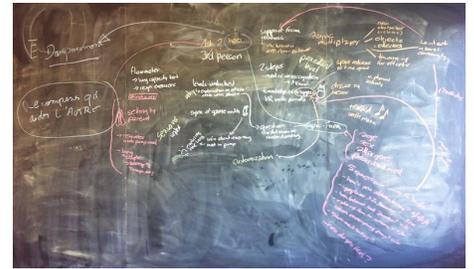


“One game aims to measure the flow of the patient, so they blow into the device, the character gets launched into the air and has to avoid asthma triggers: cats, ... The other is a tamagotchi-style app where you take care of your little lung character.

At the beginning it was chaotic, ambitious. Then, some people backed it to what we can do in two days. By the afternoon, we divided into groups and let the process go and see what the challenges were.

It is great that it is open source, free/libre, that it is there for everyone, including for developing countries where certain things that are proprietary do not get easily sent over there.”

*Jonathan Ng, 2d and 3d animator, asthma patient*



“Knowing how we can start just from a group of people who is interested in building something together, each person bringing their own skills, is an amazing, eye-opening experience. We are coming together and working for a common goal, common values without having the same knowledge at the beginning, and we learn from each other.

Having that collaboration is really key to developing any tool that will be useful for the patient at the end. I would really like to see this app tested out, for the patient to play with it and see how user-friendly it is, so that we can have some feedback and improve it. We definitely need to keep our minds together to work on that.”

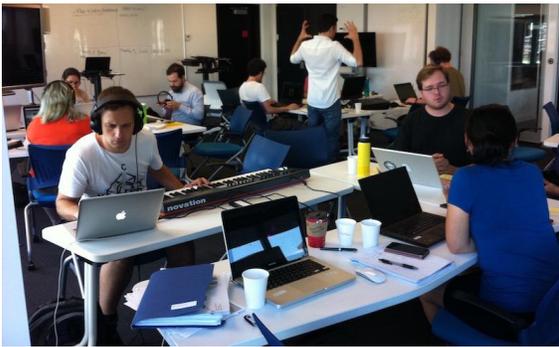
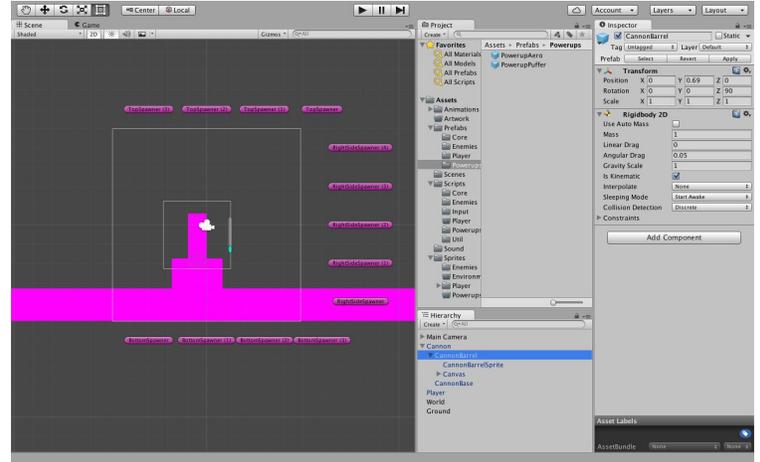
*Sze Man Tse, paediatric respirologist, Sainte-Justine hospital*





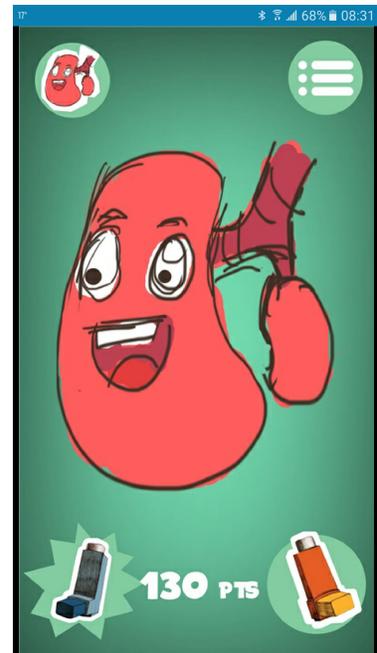
“I am really pleased because it is not a game jam with competition and a lot of ego. People are here for something with a purpose, and I think everyone is very friendly and ready to do something. There is no stress, it is fun; we speak, we play, we work, it is really cool!”

*Amélie Bouita, composer and sound designer*



“In 2014, when we co-founded the project on cystic fibrosis, it was very small. I could not see a future for the free/libre and open source model: there was not enough people interested, and the games needed for a 30-minutes daily therapy would have required a full-time, specialized team. It becomes much more realistic to make small game modules that can be adapted to different respiratory exercises. Today, I watch the energy and dynamics of the group and see there is a future for the project. It is very lively, stimulating, motivating.”

*Yannick Gervais, psychologist, game designer and developer*



# www.breathinggames.net

Videos to be released!

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Thanks: Jim Anastassiou, Fabio Balli, Ned Birkin (UK), Jocelyne Bouchard, Amélie Bouita, Francis Brosseau, Peter Chernoff, Léo Ferland, Aurélien Folie, Manon Gaudet, Sylvie Gendreau, Yannick Gervais, Marc-Antoine Giguère, Valentin Gomez, Alex Gray, Manuel Izquierdo, François-Eric King, Cristina Mahneke, Patricia Morales, Jonathan Ng, Humberto Quintana, Simon Riverin, Sze Man Tse, Alena Valderrama, Yanick Vezina, Andrei Zanescu.

More than 400 hours of work were logged in our system.  
This will enable us to redistribute the funds we raise.

## Next events

- August Workshop *World Social Forum*, Montreal – workshop *OpenSym*, Berlin
- September Begin of study at *Sainte-Justine university hospital*, Montreal
- October Gamejam, Montreal
- November Congress *FRQS*, Montreal – day *RRSPQ*, Montreal – day *JASP*, Montreal – meeting *WHO GARD*, Iran
- February 2017 Keynote speeches on Health Commons, Montreal
- March Gamejam, Geneva
- June Begin of study at *University of applied sciences Western Switzerland*, Neuchâtel

Breathing Games is a member of the Open Source Initiative and a signatory of the United Nations Global Compact, a call to align organizations with universal principles on human rights, labour, environment and anti-corruption. In Canada, the initiative is hosted by the Canadian Academy for the Knowledge Economy.



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