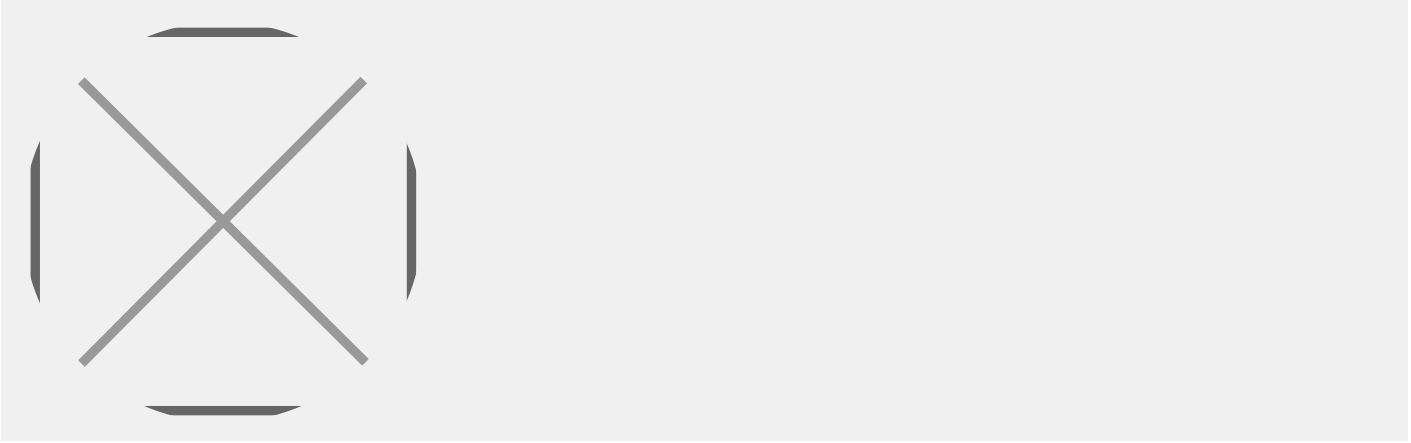
Interview: Andrew Sinclair, CEO, OtoSim, Canada



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Tags: OtoSim Inc., R&D, Venture Capital, Innovation

OtoSim's CEO Andy Sinclair discusses the current issues surrounding otoscopy diagnosis and the potential of the company's groundbreaking simulation technology.

What was your motivation for getting involved with OtoSim Inc. originally?

OtoSim's inventors submitted an invention disclosure via the Hospital for Sick Children (SickKids) to MaRS Innovation, where I was the initial contact. MaRS Innovation recognized that their non-optimized prototype needed some industrial design and patent filings to be commercialized, and spent over $100,000 doing so. I also personally invested much of my time in starting the company up. In January 2011 we incorporated the company and I was appointed part-time CEO, and since the beginning of 2013 I have moved to full-time CEO.

In what ways have you been able to use your experience in contract R&D at OtoSim?

I brought two decades of medical device development and technical sales experience to the startup, I proposed the business model to take this product to market. One marketing challenge is that OtoSim is based on a new way of teaching that requires a small investment: buying an OtoSim. The key competitor is the conventional way of teaching, which has no cost. There is another option, but it is very old technology with few images and no interactivity. Because of this unsatisfactory competition, OtoSim represents a paradigm shift in teaching with a large, validated improvement in performance. OtoSim's key challenge is to build awareness of the value of medical simulation to teachers, students and nurses.

What are the historical factors that have led to poor training in performing an otoscopy for medical students?

Students simply learn from books and look at each other's healthy ears to practice the physical techniques, but healthy ears do not offer the opportunity to practice otoscopy techniques as they relate to recognizing pathologies. By developing a simulator that presented these pathologies at the same size and geometric dimensions as an ear, students can diagnose more accurately by the time they start working in clinics. A clinical study on third year medical students demonstrated that after two hours of group training with OtoSim's product, their accuracy rose from 54 percent to 78 percent.

A Canadian-based study indicated that nearly half a million dollars is wasted every year on unnecessary drugs for preschoolers in Canada with ear infections. Is this symptomatic only of Canada or do you see similar expenditure in other countries?

There are similar expenditures worldwide. There are estimates that billions of dollars a year are unnecessarily spent on antibiotics, which is a waste of government money and results in antibiotic-resistant bacteria and therefore worsens health outcomes. Correct diagnosis training globally would lower drug costs to government and insurers. To put is facetiously, the problem is that better diagnosis resulting in saving money on pharmaceuticals will not motivate the purchase of OtoSim's devices, because teaching institutions are paid to put out students, not well-trained students. The universities do not derive any financial benefit from fewer antibiotic prescriptions. In an ideal situation, the government would want every medical school to use simulation technologies to properly train students and save money; but it will take time to make that link. The benefit, which is to public health, is decoupled from expense, which is to the medical schools. Interestingly OtoSim has been sold in over a dozen countries, but has sold poorly in Canada. This may be because Canadians are not early adopters. When I worked in contract research and development, it was easier to sell to US-based medical device companies because we were experts from afar. Perhaps Canadians simply think that Canadian inventions cannot be that good.

What is the importance of medical devices in Canada?

The local medical device industry is made of small startups. The multinationals have branch plants, as well as regulatory and sales departments, but rarely do manufacturing or R&D in Canada. It is the small companies that are doing it. Some of them are very successful, and are often acquired by bigger companies.

What do you think it would take to get one of those companies to stay in Canada, grow, develop and maintain their independence?

I do not think being acquired is a bad idea. Many smaller companies need to partner with a larger company to take their products to market. But manufacturing and R&D in Canada are by the big players is very modest. Reports indicate that Canada's R&D support infrastructure is one of the best in the world. The country's SR&ED tax credits provide incredible opportunities here. But it is easier for multinationals to manage their R&D at headquarters because of synergies created by collaborating. Therefore, I am not sure how the government could further motivate multinational medical device companies to do their research and manufacturing in Canada. There is no major Canadian-based medical device company. While many small startup generic pharmaceutical companies are committed to staying in Canada, the large businesses are slowly drifting away.

You have said that the goal of OtoSim is to become the name brand that everyone recognizes. How are you going to do this?

The first step is to continue to aggressively participate in trade shows, meet customers from institutions, and then continuously following up electronically and in person. OtoSim has a well-managed contact management system with over 1500 qualified contacts with people who have *touched* our product at shows and liked it. For now, 90 percent of sales come from our own hands on contacts, but as brand awareness in OtoSim builds, that number will drop and the majority of sales will come from word of mouth. The medical training community is small and well connected. Therefore, getting key opinion leaders on board as early adopters is incredibly valuable, as their testimonials are well respected. Simply put, the more often people buy the product, the more other people will learn of its existence. Students, and subsequently teachers, will make OtoSim well known because they instantly see the value of the product. It is simply a matter of time.

Do you think OtoSim will be going even bigger by expanding to nose or throat devices?

OtoSim has just released an eye simulation and training device: OphthoSim. Nose and throat devices are two more obvious areas. There is also the potential for improvements to our existing products and new products in development, including medical devices. I would like to focus on creating a few products well, and as OtoSim drives profits or receives a major investment, we could expand the portfolio after growing our staff first. OtoSim just hit one million dollars in cumulative sales, and I expect to do $1 million this year and double in 2014. The size of the market is related to the number of institutions interested in acquiring this technology. Since some have bought dozens, there is potential for every medical or nursing school or other elite healthcare center to do

the same. The market potential could then be as high as hundreds of millions of dollars. There is still a significant piece of the market to conquer. Furthermore, OtoSim has no serious competitors and has patent protection to consolidate that monopoly position.

What would you like to achieve in five years?

In five years, OtoSim will have up to two dozen employees, a distribution network worldwide, and potentially a discreet R&D function in partnership with SickKids. OtoSim will have millions, likely tens of millions in sales. OtoSim might outsource some supplies offshore for economic reasons but sales and marketing and R&D will remain in Toronto. Ultimately, someone may buy-out OtoSim, but I hope that the strength of the local team will result in keeping the company here. I will do everything I can to make OtoSim the most successful and attractive company in the world. My board will determine the acceptability of any offer to buy the company. My most important worry is ensuring the company continually has incredible sales. Fundamentally, I am not a strategist, I am a tactician: I worry about what I am going to do next week and month, not what I will be doing five years from now.

What motivated you to choose OtoSim over other companies in your career?

Firstly, the inventors are genuinely amazing people whose ultimate objective is to improve medical training and healthcare outcomes worldwide. Secondly, OtoSim had an incredibly rapid path to market and was able to have immediate impact and success. Thirdly, several people including the granting agencies thought OtoSim was a bad idea, and so it is partly ego-driven proving them wrong. Moreover, I think that every member of staff and I are fully committed to making OtoSim successful, which is indispensable to driving a small company.

The irony is, if you run two companies in Canada and they both fail, you are a failure. If you fail twice in Silicon Valley or Boston, you are considered as an incredibly well trained entrepreneur who has *done it all* twice. This is the difference of the Canadian perspective. Startups are still essentially like lottery tickets. Venture Capitals (VCs) only invest in de-risked ideas. Organizations like MaRS Innovation have helped by investing while there is still risk to allow companies like OtoSim become successful.

What is the key takeaway from your experience at OtoSim Inc.?

The key takeaway is that none of these problems are unique to Canada but that some of the solutions, such as MaRS Innovation and the MaRS Discovery District, are. The government needs to spend less on discovery and more on commercialization. Universities are funded well, but there are insufficient resources to get their ideas from the laboratory to the market. To place that

responsibility on VCs is wrong; their job is to invest in the best to maximize their returns to their investors. Canada needs to build commercialization bridges, like MaRS Innovation, to get the technologies sufficiently attractive to attract VC money.

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