

# Artificial Intelligence (AI) for Canadian Pharma: Opportunity or risk?

By Jonathan Gwillim

In the run up to the 2018 PAAB Training workshops (Nov 20, Montreal, Nov 22, Toronto). We sat down with 3 of the workshop's speakers to discuss how AI can be used to engage with healthcare professionals, patients and consumers.

In a world in which Dr Google remains the first point of call for health advice, improving patient education, engagement and adherence is key to improving outcomes. Some of the most innovative companies, seeking to address patients' concerns with immediate, accurate answers, are already using AI tech to do this.

***“Companies want to engage patients and HCPs in meaningful dialogue - and realize that to do so - they need to move to the conversational channels that these customers are using.”***

Automating communications can foster new dialogue with existing patients and attract new ones along the way, turning the passive experience of consuming (often less than dependable) web

## How Automation Is Transforming Pharma Marketing

**DATA MINING** identifies the most effective messages to target individual patients and the optimal time to send them.

For example, in patient program platforms that collect adherence information, data from Amazon's Alexa could be used to recognise a person's bedtime routine based on instructions to turn off the lights, then remind them to take their bedtime dose of stool softener.

### CONTRIBUTORS:



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**CHATBOTS** can engage users in one-on-one discussions about their health, to complement a conversation with healthcare provider, within a password gated site.

A pre-set model (or several models) determine how responses are provided. The Bot may then learn overtime (depending on its sophistication) based on human interventions that occur whenever it gets stuck.

## What the innovators say

“Two-way dialogue with life sciences companies is so important, because the content is pulled from safe and credible places,” says Dr John Reeves, Chief Medical Officer at conversationHEALTH, a start-up that designs and develops AI-driven conversations between such companies and their audiences.

“Pharma has always been quick to pick up and run with new innovations and AI will no doubt be the same; it’s early days right now, but the technology will very soon become mainstream.

Companies are going to find they’re no longer communicating in a meaningful way; there’s a fundamental desire to maintain an ongoing conversation with patients. This technology will allow them to do so, putting the best sales rep or MSL in the pocket of a doctor at scale.”

“Although some content can be automated, there is also a time when the chatbot can direct the conversation to a real person,” adds Lexi Kaplin, conversationHEALTH Chief Product Officer. “This helps to relieve resources as staff can handle more complex questions vs. day to day requests. This support can apply all the way across from MSLs to the field force.

### DID YOU KNOW?

The AI currently in use falls in the category of “artificial narrow intelligence”. ANI is good at performing a narrow set of tasks based on a combination of predetermined / programmed models and machine learning. AGI (Artificial General Intelligence), on the other hand – machine learning that can match that of a human in any task – remains a distant prospect.

## How to keep compliant

The scope to improve healthcare communications through AI is, clearly, huge. But pharma companies must comply with the PAAB regulations when designing new solutions.

### ***“You must comply with the PAAB code when designing AI solutions”***

“For data mining, the PAAB would need a detailed description of the model determining which patients get which PAAB approved content during the initial review so that the underlying logic and model assumptions can be reviewed,” says Patrick Massad, PAAB Deputy Commissioner. “A detailed description of how machine learning will take place must also be included in the submission if applicable.”

“For chatbots, the initial submission must include a detailed description of the model determining which scripts are used in which contexts (such that the underlying logic and model assumptions can be reviewed). Again, if applicable, A detailed description of how machine learning will take place must also be included”

### ***“AI is a great opportunity, just be good bot parents!”***

*-Patrick Massad, Deputy Commissioner, PAAB.*

Massad makes clear that the pharma industry must treat communications from their human employees and a chatbot as one and the same. “Don’t approach AI with the thinking “Uh, don’t look at me, the Bot said it” or “Uh, that wasn’t me, the Bot did it”. That’s a recipe for regulatory issues. Currently, AI behaviour is shaped by the models that are initially imposed on it and by the way it is taught thereafter. The industry is responsible for the Bots it creates and shapes.”

**PAAB REVIEW IS REQUIRED FOR CHATBOTS:**

They answer questions received in natural language using a combination of predefined scripts created by the manufacturer / agent and machine learning spearheaded by the manufacturer / agent.

The Bot exists because of the drug manufacturer, the drug manufacturer has influence over the Bot, and the Bot is operating in a context in which the drug manufacturer has a vested interest. The manufacturer is therefore responsible for content and links generated by the Bot.

Learn more at the 2018 PAAB workshop, Montreal, November 20 and Toronto, November 22 where our speakers will cover:

- 01.** How chatbots and marketing automation can be incorporated into marketing activities today
- 02.** What the future may hold for AI
- 03.** How to manage data captured through these tools

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