



## AWS Government, Education, & Nonprofits Blog

# Using artificial intelligence to help increase breast screening attendance

by [AWS Public Sector Blog Team](#) | on 22 JAN 2020 | in [Amazon Lex](#), [Artificial Intelligence](#), [Education](#), [Healthcare](#), [Higher Education](#), [Public Sector](#) | [Permalink](#) | [Share](#)

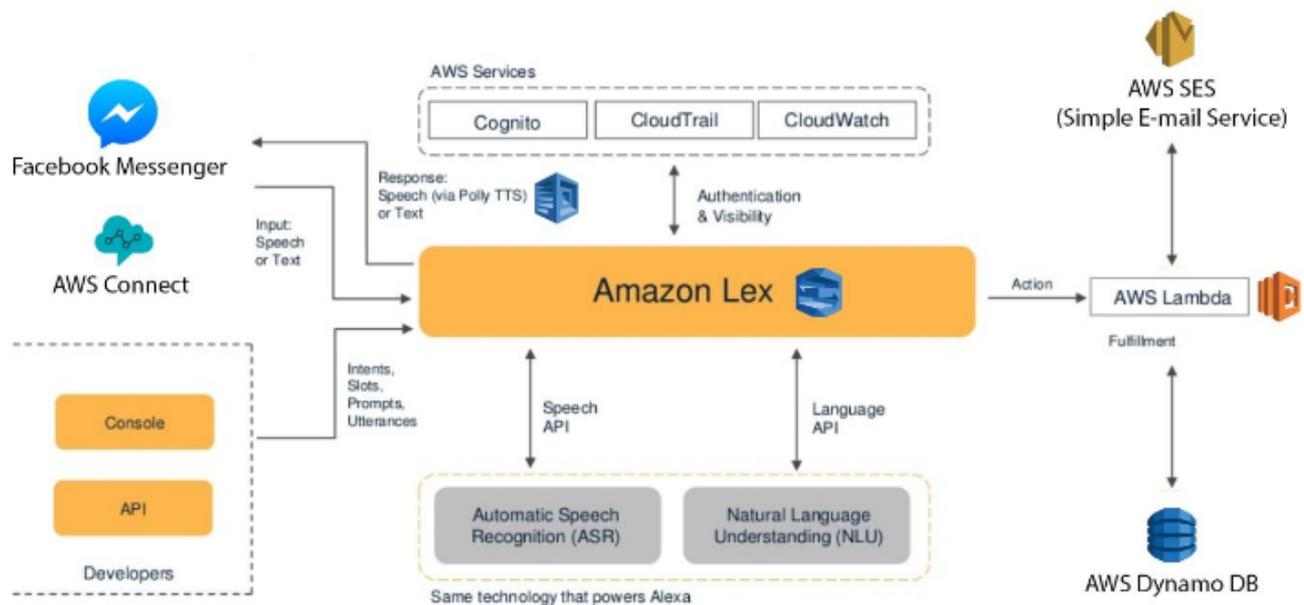


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[University Hospitals of North Midlands Trust](#)'s Breast Care Unit approached [Redmoor Health](#) to discuss innovative ways to improve patient engagement. Turning to social media, the [Health Innovation Campus at Lancaster University](#), Redmoor Health, and the [National Health Service \(NHS\)](#), began using Facebook to reach the at-risk demographic (women 49+ years old). Through this collaboration, they saw the number of patients attending vital breast screening appointments increase by 13% – among the best in the country.

It soon became clear that people using social media expected round-the-clock responses, which prompted the need for a new system. The group developed an AWS Chatbot within Facebook Messenger using [Amazon Lex](#), a service for building conversational interfaces into any application using voice and text, as well as [AWS Lambda](#), [Amazon DynamoDB](#), [Amazon Polly](#), [Amazon Simple Email Service \(Amazon SES\)](#), [Amazon Connect](#), [AWS CloudTrail](#), [Amazon CloudWatch](#), and [AWS Identity and Access Management](#).



Over the course of eight months, the developer team at Lancaster University worked with the front-line medical staff to compile responses to some potential frequently asked questions through social media such as “When do I get my results?”, “Am I eligible for a screening?,” and “Can I book an appointment?”

This artificial intelligence (AI) plug-in for Facebook can now answer the majority of questions patients asked, whether clinical staff are available or not. They also developed a telephone interface, which uses AI to provide the correct answers to verbal questions in real-time.

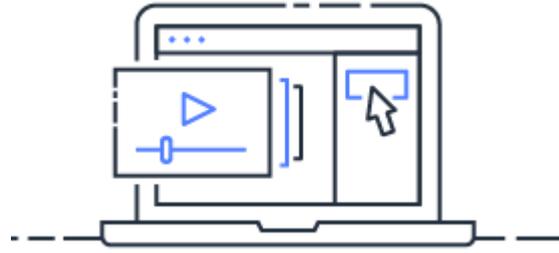
“AI is so powerful in this instance. It has allowed us to transform health services as a whole for patients and care providers,” said Cameron Booth, Digital Advisor for Redmoor Health. “Now, patients can get responses to their critical questions immediately instead of days and medical staff are freed up from these tasks that are now automated.”

Due to the success of the Chatbot model, the Redmoor team is developing it for other cancer and mental health screenings. AI is now being developed further to help redesign services by automating the cancer screening bookings.

Social media is just one example of how technology is deployed on the front line of healthcare. Another example is through Amazon Echo devices for home healthcare monitoring and enablement such as medication reminders.

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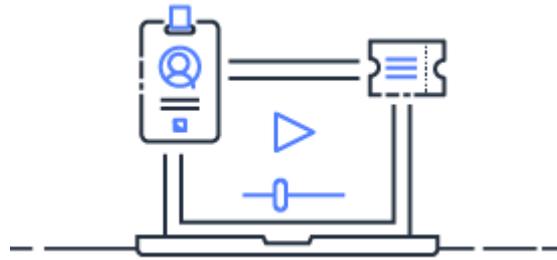
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