



Business challenge

Arthritis Research UK wanted to extend beyond its standard fundraising role and offer personalised treatment-based advice to people with arthritis.

Transformation

Working with the IBM® Watson® Assistant service on the IBM Cloud™ platform, Arthritis Research UK created an online virtual assistant designed to answer queries about a diverse range of self-management topics, including exercise and medication.

Results

Offers support at all hours

for people seeking personalised care information

Improves engagement

by providing meaningful support to people with arthritis

Boosts visibility

by attracting public interest and potential donors

Arthritis Research UK

Launching a cognitive virtual assistant to provide personalised support

Arthritis Research UK is a nonprofit organisation focused on investing in breakthrough treatments, the best information and vital support for everyone affected by arthritis. The organisation is dedicated to a singular mission: harnessing the power of exceptional science to help people overcome the pain, isolation and fatigue caused by arthritis. Founded in 1936 and headquartered in Chesterfield, England, Arthritis Research UK has more than 220 employees.

“The scope of what we can do with IBM Watson is very exciting for our organisation.”

—Liam O’Toole, Chief Executive Officer, Arthritis Research UK

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Extending direct support

For the millions of people living with the daily impact of arthritis, finding answers to questions about the condition can be challenging. Information about arthritis is readily available online, but sorting through pages of conflicting advice can be daunting and confusing.

Each year, the Arthritis Research UK website receives thousands of questions from people failing to find clear, relevant information about symptoms, treatment options and daily arthritis management online. Assessing its mission and objectives in 2016, the organisation saw an opportunity to extend beyond its standard behind-the-scenes fundraising role and provide more direct support to the people it serves.

“We’re traditionally a research charity, but with our changing goals, we wanted to put more immediate focus on people with arthritis,” says Liam O’Toole, Chief Executive Officer for Arthritis Research UK. “We’ve seen quite a few unmet informational needs, and a virtual assistant was a way we could help people right away, at scale.”

Launching a virtual assistant

Arthritis Research UK and an IBM Watson team discussed the charity’s objectives and determined how to best apply IBM cognitive technologies to meet its needs, starting with developing a virtual personal assistant to field queries from people with arthritis and provide instant answers in an interactive chat format. With more than eight decades of research and expert input from leading medical professionals, Arthritis Research UK had vast stores of information—including 15,000 pages of unstructured data—to draw upon in developing its content.

Working with the IBM Watson Assistant service on the IBM Cloud platform, Arthritis Research UK created a beta version of a cognitive chatbot focused on two key content areas: exercise and medication. After successful testing with a user group of 500 people with arthritis, the organisation’s subject matter experts extended the virtual assistant’s reach to encompass a diverse range of self-management topics, including symptoms and pain mitigation.

For ease of use and to avoid any potential privacy concerns, Arthritis Research UK launched the virtual assistant as an app on its website instead of a downloadable mobile app. Each day, approximately

100 site visitors enter questions and “converse” with the virtual assistant, which analyses input, infers intent, and provides targeted information and resources. As more people use the virtual assistant, the intelligent solution “learns” and provides increasingly targeted responses over time.

Offering personalised support

With its virtual assistant, Arthritis Research UK offers an “anywhere, anytime” resource for people with arthritis seeking personalised, easily accessible self-care information. “We opened a helpline roughly around the same time as the virtual assistant, but the phone line is a one-on-one system running from 8 AM to 8 PM,” says Coxon. “The virtual assistant is 24/7, and we can provide support to many people at once.”

Plus, the virtual assistant support model improves engagement and creates stronger relationships with the people the charity was ultimately founded to serve. “Some people are happy to be quite open with the virtual assistant and seek the information they really want to find,” says Tim Donovan, IBM Technical Consultant, Emerging Technology Services. “This allows Arthritis Research UK to have meaningful

conversations, answer questions close to the heart and build deep relationships with its end customer.”

Finally, the virtual assistant helps position Arthritis Research UK as a leader in developing new and innovative ways to support people living with arthritis, laying the groundwork for greater visibility in the public eye. In addition to generating interest among healthcare professionals, who direct patients to the virtual assistant for ongoing support, the new platform attracts and encourages potential donors, providing a concrete demonstration of the organisation’s efforts for, and engagement with, people with arthritis.

Arthritis Research UK looks forward to continuing to explore and develop its virtual assistant with IBM Watson cognitive capabilities, including speech-to-text functionality for people struggling to use keyboards, mice and phone interfaces. “The scope of what we can do with IBM Watson is very exciting for our organisation,” says O’Toole.

Solution components

- IBM® Cloud™
- IBM Watson® Assistant

Take the next step

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