

# Putting patients at the heart of artificial intelligence

*“The human interface is crucial - there must always be people keeping an eye on what’s going on and be prepared to step in”*

Patient representative

*“The potential for predicting ailments is just phenomenal. Surely the public has to be made aware of that?”*

Patient representative

## Introduction

We are living in a world enabled and enhanced by artificial intelligence (AI). From entertainment to chat bots to virtual assistants – the use of AI is ubiquitous. And it will soon become a part of healthcare too, through faster and more accurate diagnosis, personalised treatment, better triaging of demand and better predictions. AI will therefore greatly impact the 7 million people living with heart and circulatory diseases.

With the support of the British Heart Foundation (BHF), the All Party Parliamentary Group (APPG) on Heart and Circulatory Diseases conducted an inquiry in 2018 to better understand patient perspectives on AI. It found huge potential for AI to transform the lives of those with living with heart and circulatory diseases and a greater need for those affected to be included in discussions about the development and adoption of these new technologies.

We recommend that policy makers, the NHS, charities, healthcare professionals and the health technology industry should engage and involve patients in the design, development and diffusion of AI. If they do not, the developments in AI might not reflect the needs of the very people who could benefit from it.

### **The APPG on Heart and Circulatory Diseases**

The APPG on Heart and Circulatory Diseases is a cross party group of MPs and peers, working to improve health outcomes for people living with heart and circulatory diseases. It provides a forum for parliamentarians to work with experts across the health sector, patients, and researchers. The BHF provides the secretariat and supports the APPG’s mission of ensuring that heart and circulatory diseases remains high on the political agenda, so that together we can beat the heartbreak these conditions cause every day.

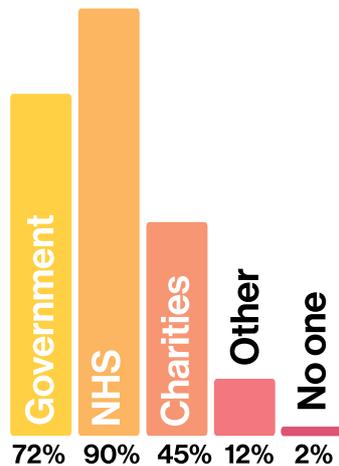
### **What is Artificial Intelligence (AI)?**

AI is a set of computer actions that mimic human intelligence, like ‘learning’ or ‘problem solving’.

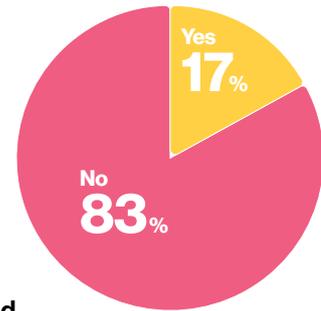
# Key findings

The inquiry involved a literature review, roundtable discussions with patients, policy makers, cardiologists, researchers and industry representatives, and a public survey. It found that AI has the potential to improve outcomes for people with heart and circulatory diseases in numerous ways, from prevention, to treatment, to follow-up care. Uses include medical imaging (for scans to diagnose conditions and to predict outcomes), triaging, and better self-management of care. These developments need to be closely followed by meaningful patient engagement, or public opinion could turn against the use of AI in healthcare (for example in the same way that it did against genetically modified food).

Who do you think has a responsibility to inform the public about current and potential future uses of artificial intelligence in healthcare?



Are you aware of any current cases of artificial intelligence being used in the diagnosis and treatment of heart and circulatory diseases?



Our survey of heart and circulatory patients found that:

**85%** of respondents supported the use of AI in diagnostics and treatment

**91%** of respondents thought the public should be informed about the use of AI in the treatment of heart and circulatory disease

**90%** of respondents thought the NHS should be informing the public about the use of AI in healthcare

**86%** of respondents are happy for their anonymised health data to be shared

Only **17%** of respondents were aware of any current uses of AI being used in the diagnosis and treatment of heart and circulatory disease

An overwhelming majority of patients support doctors using AI in the healthcare sector – but far more needs to be done to inform and include patients in these decisions, where appropriate.

# Key recommendations

**1** NHSX should set up discussions with charities and the public, to explore patients' views and concerns about the use of AI in healthcare.

**2** Understanding Patient Data (UPD) should work with charities, patients and the healthcare sector to develop tools and resources for engaging the public on AI.

**3** Academic Health Science Networks should facilitate the exchange of information around new developments in AI between patients charities, and industry partners.

**4** NHS England and NHS Digital should explore the impact of wearables and AI on health inequalities.

**5** NHSX should work with UPD, charities, and patient organisations to ensure that policy development in AI is designed with the explicit purpose of understanding, promoting and protecting public values and that this is clearly and openly communicated.

**6** NHS England and NICE should develop standards for publication for AI research, providing trustworthy guidelines for researchers, the media and the public.

Read the full report at [bhf.org.uk/appg-AI-report](https://bhf.org.uk/appg-AI-report)