Artificial Intelligence in Healthcare for All: Towards Designing a Platform for Sustainable Stakeholder Engagement

Project Overview

As Artificial Intelligence (AI) systems become better at sorting data, finding patterns, and making predictions they are being developed for an expanding range of tasks within healthcare, where increased capture and availability of data lends to their utility. AI technologies are set to disrupt healthcare provision, reshaping professional roles, practices and codes of conduct, changing patient: healthcare-professional relationships, and expanding the confines of information relevant to health and wellbeing. This raises ethical, social and legal questions; in particular, it has been noted that much of the expertise, research and development of AI tools occurs the private sector, whilst the data needed to test and develop algorithms is generated through publicly-owned/taxpayer-funded healthcare systems - a mismatch that inevitably raises concerns about privacy and public trust. While AI may perform better than humans at certain tasks in healthcare, many factors will impact large scale adoption.

The AIDE project aims to understand barriers and facilitators to implementing AI in healthcare by collecting stakeholder perspectives about how AI will change lives and impact healthcare experience, accessibility or quality, and determine how concerns might be resolved to promote acceptance and adoption of data-driven technologies. Calls to find ways to regulate AI use in healthcare are founded on the understanding that clinicians and patients must be able to trust that approved technologies meet robust standards. However, it is not clear whether these priorities are also shared by the wider public and professionals at the sharp end of healthcare, and if there are disparities between countries with different socio-cultural contexts. The UK and Japan are among the global leaders of the AI industry. As AI governance and regulation is developed in these countries we will assess who are the key influencers for policy making, what information sharing platforms or networks exist, and how decisions can be founded on input from all stakeholders. We will identify where AI systems are currently being used/developed in healthcare settings in Oxford and Osaka and consult with researchers, developers, healthcare professionals and patients to understand 1) prior experience of AI, current and anticipated use in healthcare, and other valuable applications; 2) how they learn about developments; 3) factors perceived to influence adoption/implementation; and 4) what safeguards, controls or types of engagement would inspire trust. This will allow us to build a platform for sustained dialogue on AI in healthcare.

Objectives

- Identify concerns
- Develop engagement strategies
- Develop and integrate user-centricity
- Contribute to global policy on engagement in AI

Approach

1 - Review academic literature and Twitter data to map the engagement landscape

How and where does stakeholder engagement take place for AI in health; who is leading it; what tools or guiding documents are available; does the level/mode of engagement differ between types of AI or areas of implementation; and what types of engagement mechanism would stakeholders like to see?

2 - Conduct focus groups and interviews (Q-Sort methodology) to explore stakeholder perspectives

What are the expectations, concerns, valuation practices and perceived limitations of AI in health; how do they influence adoption and implementation; what safeguards and regulatory controls would stakeholders like?

What are the intended benefits?

This research will provide evidence for a sustainable engagement platform to support decision making and policy development on the use of AI software and algorithms in healthcare. Effective engagement will allow AI tools to be developed and used in alignment with concerns/aspirations of all stakeholders, taking into account their needs and valuation practices. This will lead to greater transparency, responsibility and accountability; build public trust and acceptance; and enable AI systems to realise their potential to benefit the health and wellbeing of society.

About us

This work is being led by researchers based at the University of Oxford in collaboration with colleagues at Osaka University. It is supported by UK Research and Innovation's (UKRI) Fund for International Collaboration (FIC) in a joint UK-Japan initiative (Project Reference ES/T007214/1).

Latest updates: www.AIDEproject.web.ox.ac.uk

大阪大学 OSAKA UNIVERSITY

UNIVERSITY OF OXFORD