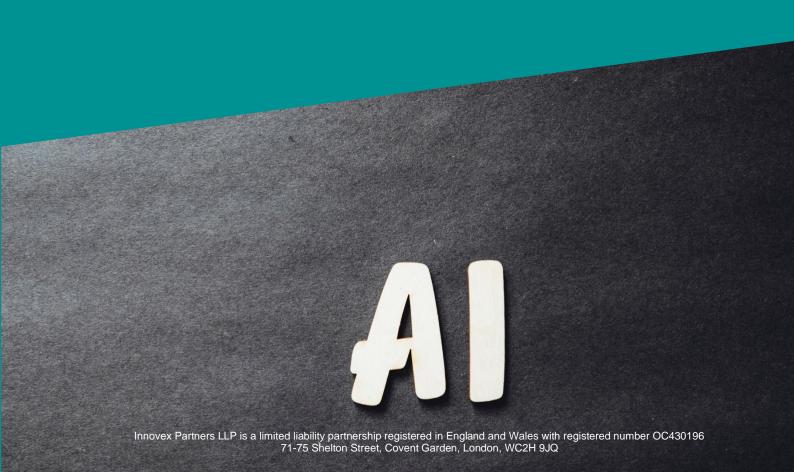# Can Artificial Intelligence bring needed change in primary healthcare or is it a flashy distraction?

April 2022

AI has the potential to revolutionise the delivery of healthcare services, from streamlining medical diagnosis and record keeping to providing more personalised treatment options. At the same time, there are inherent biases that exist within health and social care systems which, if embedded within an AI approach, could potentially widen health inequalities further.

At Innovex, we believe that AI technology should work for everyone, not just a few. We bring together experts from varying backgrounds to discuss how to create an equitable AI ecosystem that helps to reduce health inequalities. Through our round table discussions, we aim to create a platform to discuss how to improve access to healthcare, develop inclusive algorithms and enable better patient experiences. As a result, we hope to humanise AI to create an equitable health system that works for us all.

Our concerns about AI

AI is already making huge contributions to clinical, research, and public health. However, AI could also misdiagnose, underdiagnose people, and potentially increase disparities. We are deeply concerned about the potential of AI to worsen existing health inequalities and increase disparities in care.

The urgency to innovate should be tempered by the need to understand AI's current opportunities through the lens of healthcare equity, disproportionate vulnerability, and socio-determinants of algorithmic discrimination. Addressing ethical implications can ensure that the development and use of AI will bring about positive impacts on vulnerable patient populations while mitigating the risk of harm.

Take away points

Learn from our past - Leverage our collective past NHS experience with e-health to avoid repeating the mistakes that impacted service access by the most disadvantaged communities. Use this experience to ensure that AI and future technology benefit all members of society equally.

Focus on directly impacting people – Refocus on the development and implementation of AI technology, to prioritise ways in which these advances can directly enhance patient care, reduce inequality, promote innovation, and increase access to digital technology. By having conversations with citizens and professionals alike, we can gain insight into how AI can meaningfully benefit people and make informed decisions about its use.

Hold real-world conversations - Primary Care Networks are working with patients needing complex care that require early dialogue and interaction with other communities and third-sector services to identify disadvantaged groups. Our AI conversations will need to start by defining a group in our population.

Use AI to tell us what the problem is – Instead of AI saying this is what the existing data is telling us, can we get it to resolve simple problems to stop health inequality from being repeated? What can AI offer us to solve real-world problems?

Mind the innovation fatigue - We must bear in mind the worrisome concept of 'clinician fatigue' when introducing another new health technology requiring changes to established workflows. It can be wholly demoralising for clinicians who are already overburdened and adding to making their lives a misery.

Bring people together in creative hubs - There is a role for external parties who can bridge collaboration between clinicians, researchers, data scientists, engineers, and industry. Skunkworks AI lab is a perfect example of how such a hub could be organised. By providing physical spaces such as labs and incubation centres to foster collaboration or online networks to facilitate conversations around AI and equity, these creative hubs could be an invaluable asset to unlock the potential of AI in primary care.

Reflections

Primary care is struggling with the basics such as connectivity to allow reliable online consultations and linking patient records across systems. Therefore, holding rich conversations utilising Artificial Intelligence as a solution is too advanced for the existing infrastructure. At the same time, we cannot shy away from Generation Z (patients and workforce born between 1996 and 2010) who have high expectations of having access to this technology in addition to human interaction.

Imagine Generation Z ten years from now
There is fierce market competition for AI skills, and this is a place where the NHS does not and cannot compete. What would be a possible solution to not only train from within the NHS but also retain? Can the answer be found in partnering with industry specialists already working with primary care to offer apprenticeships, development and training programs specifically designed for NHS staff to gain in-house AI and machine learning skills.

What happens if?....
- We apply AI to identify problems, risks, gaps, and opportunities at scale, at pace, and faster.
- AI creates algorithms that proactively identify bias, health inequality and vulnerable people in our society to prevent inequity.
- AI is used to incorporate non-health but related data to help understand complex health and societal issues.

Roundtable members

With special thanks to our round table members for sharing their thoughts and insights:

Dr Annabelle Painter- A practicing clinician and AI & Workforce fellow at Health Education England and NHSx, looking at how we prepare the NHS workforce for the introduction of AI.

Dr James Kingsland - a primary care physician, former Senior Partner in a nationally renowned, award-winning general practice and an honorary clinical professor in the School of Medicine at the University of Central Lancashire.

Marie Gabriel – A NHS Board member with 20 years' experience, and Independent Chair Designate of the Northeast London Integrated Care System, Chair of Norfolk, and Suffolk NHS Foundation Trust and of the NHS Race and Health Observatory.

Wayne Farah - a full-time carer and non-executive director at Coventry and Warwickshire Partnership NHS Trust, working with the NHS Confederation as coordinator of the national BME Leadership network.

Aroon Baskaradas – An orthopaedic surgeon who cares deeply about the right use of technology, improving the way things run for the benefit of patients and clients as well as staff culture; efficiency; and respecting values.

Meredith Leston- A Oxford-MRC Enterprise iCASE Scholar who is completing her DPhil in Primary Health Care at the University of Oxford, clinical informatics and health outcomes research group.