



19 August 2020

### **Submission to Medical Council of New Zealand Te Kaunihera Rata o Aotearoa**

The New Zealand College of Public Health Medicine would like to thank the Medical Council of New Zealand Te Kaunihera Rata o Aotearoa for the opportunity to make a submission on the discussion paper on when Artificial Intelligence is involved in the care of patients.

The New Zealand College of Public Health Medicine (the College) is the professional body representing the medical specialty of public health medicine in New Zealand. We have 205 current members, all of whom are medical doctors, including 185 fully qualified Public Health Medicine Specialists with the majority of the remainder being registrars training in the specialty of public health medicine.

Public Health Medicine is the branch of medicine concerned with the assessment of population health and health care needs, the development of policy and strategy, health promotion, the control and prevention of disease, and the organisation of services. The NZCPHM partners to achieve health gain and equity for our population, eliminating inequities across socioeconomic and ethnic groups, and promoting environments in which everyone can be healthy.

#### **Background**

The NZCPHM supports the development of a discussion paper on Artificial Intelligence (AI) as a foundation for deciding what sort of guidance should be provided for medical practitioners when using AI in patient care. The NZCPHM wishes to provide specific feedback on the question under section 2: what other factors or principles should we include if we go on to develop guidance for doctors on the appropriate use of AI in health care?

#### **General points**

We support the Council of Medical College's suggestion in their submission on this discussion paper that "cultural safety and the impact of AI on equitable health outcomes for Māori, Pacific, and other under-served populations will need to be addressed in any guidance." The Council of Medical Colleges acknowledges the importance of recognising bias in data sets. This includes recognition that data sets are often collected without input from indigenous communities or patient populations and data fields may not capture relevant information for these different groups.

The NZCPHM proposes that recognition that AI is likely to perpetuate health inequity is not enough given our obligations under te Tiriti o Waitangi to achieve equity in health outcomes between Māori and non- Māori. The guidelines should go a step further and make explicit that a critical aim of deploying AI in the health context is that it should not create, sustain, or exacerbate health inequalities. Further, the guidelines should state that best practice in AI design and implementation for medical practice would actively work to redress or eliminate health inequities, or otherwise promote health equity.<sup>1</sup>

The NZCPHM's position is also underpinned by the view of the World Health Organization (WHO) that equity considerations need to be addressed in the use of AI in public health. The WHO identifies four equity considerations for the appropriate use of AI, which can be applied more broadly in the wider health context. Thought should be given to:<sup>2</sup>

- how AI will reinforce and remediate the gap between those who may benefit from public health and those who do not;
- what conscious or unconscious biases and/or value judgements exist;
- what extent do the explicit or tacit values and assumptions that inform AI technologies in public health cohere;
- what should fair processes for the development and implementation of AI look like; and
- how should diverse populations be engaged in designing them.

### ***Treaty of Waitangi/Te Tiriti and Māori Ethics Guidelines for: AI, Algorithms, Data and IOT***

The NZCPHM proposes that good practice in the development and use of AI and algorithms for use in clinical decision making would include that the technology should be co-designed, co-initiated and co-governed with Māori and or Iwi, and this should be included in guidance for doctors on the appropriate use of AI in health care.

The first indigenous guidelines for new technologies to be produced in the world, *Treaty of Waitangi/Te Tiriti and Māori Ethics Guidelines for: AI, Algorithms, Data and IOT*, published by Karaitiana Taiuru in May 2020, provide a useful way to strengthen digital inclusion through te ao Māori.<sup>3</sup>

- These ethical guidelines state that the three core Treaty principles commonly recognised by government (partnership, participation and protection) cover the need for: co-governance, co-design and co-innovation and should form the basis of an explicit Treaty of Waitangi clause for any government initiated and or procured Artificial Intelligence Systems and or Algorithms.
- The guidelines also outline a need to comply with Māori cultural protocols; the importance of digital development and use being guided by cross-cultural collaborative approaches; and the need for transparency that ensures that “Māori people, whānau, hapū, Iwi and organisations are clear about how AI learning is generated and why this information is used to inform decisions that affect Māori.”

### ***Case study: Precision Driven Health and A Deep Learning Platform for GP Referral Triage***

The NZCPHM wishes to highlight that AI is already being developed to address and counter against bias in healthcare referrals in New Zealand and therefore achieve equity in line with te Tiriti. [Precision Driven Health](#) (an award-winning research partnership between New Zealand's health IT sector, health providers and universities, aimed at improving health outcomes through data science) is developing a machine learning model that will assess and triage cardiology referrals. Through training the AI to recognise who needs to be seen first on medical information from multiple sources, patients should be referred based purely on their health need.

Data shows that the New Zealanders most susceptible to heart disease – Māori and Pasifika – may suffer from bias in the health system. This is partly due to inefficient triaging which may result in some patients being unnecessarily accepted for a hospital clinic appointment and consequently moving those more in need further down the queue. Precision Driven Health researchers state that the switch to electronic referrals has the potential for enhanced understanding of who is being prioritised for early referral from primary care to a cardiologist, a task that was impossible to really understand with a paper-based system. This team is working with Māori health researchers and [He Kamaka Waiora](#) to develop strategies to address and counter any implicit bias in terms of unequal access to specialists for key populations.<sup>4</sup>

Thank you for the opportunity for the NZCPHM to submit on the Discussion paper on when Artificial Intelligence is involved in the care of patients. We hope our feedback is helpful, and are happy to provide further clarification on matter covered in this submission.

Sincerely,



Dr Felicity Dumble, President, NZCPHM

#### References:

---

<sup>1</sup> Smith MJ; Axler R; Bean S; Rudzcicz F, Shaw J. Four equity considerations for the use of artificial intelligence in public health. *Bulletin of the World Health Organization*, 2020;98:290-2.

<sup>2</sup> Smith MJ; Axler R; Bean S; Rudzcicz F, Shaw J. Four equity considerations for the use of artificial intelligence in public health. *Bulletin of the World Health Organization*, 2020;98:290-2.

<sup>3</sup> Taiuru, K. Treaty of Waitangi/Te Tiriti and Māori Ethics Guidelines for: AI, Algorithms, Data and IOT. 2020. (<https://www.taiuru.maori.nz/tiritiethicalguide/>)

<sup>4</sup> Precision Driven Health. Statement on A Deep Learning Platform for GP Referral Triage. 2018. (<https://precisiondrivenhealth.com/a-deep-learning-platform-for-gp-referral-triage/>)