5 August 2020

Kanny Ooi
Senior Policy Adviser and Researcher
Medical Council of New Zealand
PO Box 10509
Wellington 6143

By email: consultation@mcnz.org.nz

Discussion Paper on When Artificial Intelligence is Involved in the Care of Patients

Dear Kanny

Thank you for inviting the New Zealand Medical Association (NZMA) to provide feedback on the above consultation. As you know, the NZMA is New Zealand's largest medical organisation, with more than 5,000 members from all areas of medicine. The NZMA aims to provide leadership of the medical profession, and to promote professional unity and values, and the health of all New Zealanders. Our submission has been informed by feedback from our Board and Advisory Councils.

We welcome Council's discussion paper on Artificial Intelligence (AI) in the care of patients. We note that the paper is a first step towards the development of further guidance for doctors in this area. We understand that one of Council's key sources when developing the discussion paper was the resource *Ethical Principles for AI in medicine* by the Royal Australian and New Zealand College of Radiologists.[1] Our feedback takes the form of some general comments on AI in healthcare before providing specific responses to the questions raised in the discussion paper.

General Comments

AI in healthcare encompasses a very broad range of potential clinical tools. There is a view that a guidance document that applies to everything that falls under the umbrella of AI is ambitious. Nevertheless, we believe it would be useful for Council to develop guidance that reflects the principles of Good Medical Practice and outlines the factors that doctors should consider when using AI in healthcare.

Currently, AI in the practice of medicine is most helpful for single disease states where it can contribute to accurate diagnosis / investigation / prognosis / management. It is less helpful where there are multiple issues or conditions to be considered as part of the social and belief system of

---

[1] Available from https://www.ranzcr.com/college/document-library/ethical-principles-for-ai-in-medicine

Doctors leading in health

26 The Terrace, PO Box 156, Wellington 6140 | Tel: (04) 472 4741 | Fax: (04) 471 0838 | Email : nzma@nzma.org.nz | **www.nzma.org.nz**

individual patients. It is therefore important not to oversell AI and/or under deliver its added value. Nevertheless, it is inevitable that deep learning underpinning the evaluation of investigations such as x-rays and ECGs will be able to match (if not outperform) specialists in radiology and cardiology, respectively. Ultimately, whether or not such types of AI are embraced comes down to having quality research with good quality evidence. This evidence could be used to develop tools that have been robustly validated in the same way that clinical scores such as the Wells criteria for DVT have been. Clinicians using these tools should be aware of their strengths and pitfalls, as well as the populations they have been validated in.

We suggest that in addition to the principles of Good Medical Practice, a guidance document regarding AI should be focussed around encouraging clinicians to be educated around, and understand, the AI tools that they choose to use. Colleges should also be encouraged to develop clear guidelines regarding relevant AI tools that show promise for their particular specialties.

Responses to main questions in the discussion document

Question 1.   With the growth and increasing use of AI in healthcare, we consider that doctors will need clear guidance on the appropriate use of AI. If we develop guidelines that reflect the principles of Good medical practice[2] by outlining a number of factors that doctors should consider when using AI in healthcare, how effective will that be as a starting point?
We believe this is an excellent approach.

Question 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 healthcare?
We suggest that patient autonomy should be prioritised and the principles in any guidance on the appropriate use of AI in healthcare need to be congruent with those in the NZMA Code of Ethics.[3]

Question 3.   What role do you think the Medical Council should have in relation to the use of AI by doctors?
We envisage the role of the Medical Council in relation to the use of AI by doctors should be that of educator, producer of guidelines, and regulator.

Question 4.   What role does the medical profession have to ensure the safe and effective use of AI in patient care? What are a doctor's obligations?
We believe the role of the medical profession to ensure the safe and effective use of AI in patient care, as well as a doctor's obligations, are encapsulated in the principles of the NZMA Code of Ethics. We draw particular attention to principle 1 (Consider the health and well-being of the patient to be your first priority) and principle 2 (Respect the rights, autonomy, relationships, and freedom of choice of the patient).

Question 5.   Is there anything else you would like to tell us about our discussion paper or that you would like us to consider?
We suggest that patient autonomy should be added as an important factor for consideration when AI is involved in the care of patients. While the discussion paper refers to "meeting cultural safety standards" as an example of good medical practice, we suggest that more than safety is needed. We prefer the terminology used in our Code of Ethics which refers to the need for culturally sensitive, culturally competent and culturally safe care.

---

[2] https://www.mcnz.org.nz/assets/standards/85fa1bd706/Good-Medical-Practice.pdf
[3] https://www.nzma.org.nz/documents/code-of-ethics-2020

Responses to questions about risks of overtreatment

How can AI be used in a way that does not encourage or worsen overtreatment, or widen disparities? For example, if precision and diagnoses increase and improve with the use of AI tools, could that:

- *expand the definition of diseases? If so, what are the flow-on effects of that?*

Yes, it could expand the definition of diseases. This should be beneficial by improving diagnosis, prognosis and management, and helping define further research to develop treatments.

- *make it harder to manage patients' expectations especially if the results generated by the AI tool was unexpected or led to an adverse outcome?*

No. Having more information should help by being able to give patients more information about their condition and prognosis as well as management.

- *encourage more people to undergo tests and screening even when there is no clinical basis or advantage in doing so?*

No. Testing should be ordered as appropriate by doctors. If tests are not necessary, they should not be ordered and patients should be informed accordingly.

- *increase the demand and use of healthcare services?*

No, not if doctors choose wisely by ordering tests appropriately and practicing evidence-based medicine.

- *divert health resources and funding from where health needs are higher to invest in developing more AI tools and applications?*

No, not if doctors choose wisely by ordering tests appropriately and using evidence-based medicine for management.

Responses to difficult ethical and practical questions that the use of AI in healthcare raises

Are there certain areas of medicine where it would not be appropriate to use AI tools for clinical recommendations or for making a prognosis? For example, if the patient is terminally ill, how would patients and their families/whānau respond to suggestions by AI that care should be withheld or withdrawn?

If this occurs, it should always be between the patient and the doctor. While AI could inform such discussions, the patient's autonomy must be maintained.

Is there a risk of automation or over-reliance on technology in that AI could encourage complacency, reduce human vigilance, and de-personalise healthcare?

Ideally AI should free up time so that doctors have more time for listening, compassion, giving advice about health preventative measures, and undertaking opportunistic screening.

To what extent should doctors using AI in their care of patients understand the technology behind AI tools and systems that are used?

It is not practical to expect doctors to have a detailed understanding of the technology behind AI tools and systems that are used. As such, a minimal understanding should suffice.

If AI systems and the doctor disagrees, who will be perceived as correct?
In such instances, we suggest that the doctor should be perceived as correct as they will have more contextual information including about social factors and whether the AI is applicable to the particular patient.

Should a doctor have an automatic right to over-rule a machine's diagnosis or decision? Should the reverse apply as well?
A doctor should always have the right to override a machine's diagnosis or decision as there will be limitations to AI when applied to an individual patient. For example, the data set used in the AI system may be incomplete and exclude the profile of the individual patient concerned. Patient autonomy should always be taken into account independent of the AI that is being used.

We hope our feedback is helpful and look forward to the development of further guidance in this important and rapidly evolving area.

Yours sincerely

K. Baddock

Dr Kate Baddock
NZMA Chair