

TOWARDS BRIDGING THE GAP BETWEEN PRE-MEDICINE STUDENT ARTIFICIAL INTELLIGENCE TECHNOLOGIES CAPABILITIES AND THEIR FUTURE MEDICAL PRACTICES

M. Sarah-Jane Gregory^a, Siska Dupont Berry^b, Alfred Dai^b, W. Darcy Barlow^b, Ethan Cao-Lee^b, Anna Balzer^a, Romeo Batacan^a, Suzzane Burgess^a, Roslyn Clapperton^a, Andrew Fenning^a, Maddie Higgins^a, Emma Hodge^c, Charmaine Ramlogan-Steel^a, Alannah van Waveren^a

Presenting Author: M. Sarah-Jane Gregory (m.s.gregory@cqu.edu.au)

^aCollege of Health and Medical Science, Central Queensland University, Bundaberg, Qld, 4670, Australia

^bBachelor of Medical Science (Pathway to Medicine), School of Medical & Applied Science, CQUni, Qld, Australia

^cBundaberg Hospital, Wide Bay Hospital & Health Service, Bundaberg, Qld, 4670, Australia

KEYWORDS: artificial intelligence, pre-medicine students, career-readiness

SUBTHEME: Modes of learning

PROBLEM

In recent years, the healthcare industry has witnessed a rapid integration of artificial intelligence technologies (AI-Ts) as they provide a wide variety of benefits (Baddal et al., 2024). "Future physicians will need a broad range of skills to adequately use AI in clinical practice" (Paranjape et al., 2019, p.16048). Thus, it is imperative we develop an understanding of key stakeholder capabilities to ensure effective training of future medical practitioners in the AI-Ts space. Currently whilst there is willingness there is lack of sufficient understanding or supportive education (AlZaabi et al., 2023).

PLAN

We planned to benchmark the perceptions, understanding and expectations of rural medical pathway stakeholders (pre-medicine undergraduate students, academics, medical practitioners in university-affiliated rural hospitals) regarding AI-Ts in current and future medical practice. Knowledges gained would allow for modification of medical training, provision of targeted professional development for academic staff and mechanisms for better AI-T solutions in rural medical practice in the future.

ACTION

Initial work from a collaborative research project has identified these different stakeholder knowledges and has prototyped educational opportunities to better support pre-medicine undergraduate capabilities to support and develop AI-T solutions for rural health care in their future career pathway.

REFLECTION

There remains much work to do in this space but the rapid changes to AI-Ts will change how our future medical practice. There is an urgent need to ensure that appropriate training, collaboration and distributed leadership capabilities are developed in our future medical practitioners.

REFERENCES

- AlZaabi, A., AlMaskari, S., & AalAbdulsalam A. (2023) Are physicians and medical students ready for artificial intelligence applications in healthcare? *Digit Health*, 9:20552076231152167. <https://doi.org/10.1177/20552076231152167>.
- Baddal, B., Taner, F., & Ozsahin, D. U. (2024). Harnessing of artificial intelligence for the diagnosis and prevention of hospital-acquired infections: A systematic review. *Diagnostics*, 14(5), 484. <https://doi.org/10.3390/diagnostics14050484>.
- Paranjape, K., Schinkel, M., Nannan Panday, R., Car, J., & Nanayakkara, P. (2019). Introducing artificial intelligence training in medical education. *Journal of Medical Internet Research Medical Education*, 5(2): e16048. <https://doi.org/10.2196/16048>.

Proceedings of the Australian Conference on Science and Mathematics Education, The University of Canberra, 18 – 20 September 2024, page 42, ISSN 2653-0481.