



AI in Nursing Education

Michelle Honey, PhD¹, Emma Collins, MN, BEd²

¹ Nursing, University of Auckland, ² Department of Nursing, University of Otago

Keywords: Artificial intelligence, nursing education, digital health, digital capability, online health literacy, registered nurses

<https://doi.org/10.36951/001c.132164>

Nursing Praxis in Aotearoa New Zealand

Vol. 41, Issue 1, 2025

Artificial intelligence (AI) is often highlighted in the media as having the potential to significantly influence various aspects of our lives. In 2023, AI was positioned on the peak stage of the Gartner Hype Cycle (a model explaining successive stages of technology innovations), with projections to reach transformational benefit in two to five years (Gartner, 2023). AI is defined as “the simulation of human intelligence processes by machines, especially computer systems” which can include applications including expert systems, natural language processing, speech recognition and machine vision (Burns et al., 2023, para.1). The World Health Organization (WHO) suggest caution, especially with the use of AI generated large language model tools, such as ChatGPT, that “imitate understanding, processing, and producing human communication” (WHO, 2023, para.2). The WHO emphasise the need for the ethical use and appropriate governance of AI through the following six core principles: 1) protect autonomy; 2) promote human well-being, human safety, and the public interest; 3) ensure transparency, explainability, and intelligibility; 4) foster responsibility and accountability; 5) ensure inclusiveness and equity; and 6) promote AI that is responsive and sustainable (WHO, 2023).

The use of AI and its potential for healthcare, including nursing, is already evident in literature (Booth et al., 2021; Chang et al., 2022; O'Connor et al., 2023). AI use in healthcare includes health service management, predictive medicine, patient data management, diagnostics, and to support clinical decision-making. More specifically for nursing, AI can support care through the use of AI tools to improve clinical workflow and by strengthening research and evidence-based practice such as ClinicalKey by Elsevier (Elsevier, n.d.).

Despite how novel AI might seem, competencies for the use of AI-based tools by health professionals have been identified and include basic knowledge of AI, social and ethical implications of AI, and evidence-based evaluation and workflow analysis of AI-based tools (Russell et al., 2023). The Nursing Council of New Zealand (NCNZ) new *Standards of competence for registered nurses* include explicit mention of digital health in descriptors 3.7 and 4.8 (NCNZ, 2025):

Descriptor 3.7

Uses appropriate digital and online communication.

Descriptor 4.8

Demonstrates digital capability and online health liter-

acy to support individuals, whānau and communities to use technology for managing health concerns and promoting wellbeing.

The NCNZ clearly expects nurses to understand and use digital health, which may include AI. The question then is what exactly do nurses and nursing students need to learn and how can this best be taught?

While AI has potential uses in nursing education, at undergraduate and postgraduate level, there are also concerns. Mollick (2025) provides a useful guide identifying uses as well as ‘some things to worry about’. Ideas for students using AI include to assist with writing assignments, using AI as a personal tutor, and using plug-ins, such as *Link Reader* and *Keymate*, which can generate summaries of articles, organise and prioritise readings, and provide estimates of reading times. Educators are increasingly seeing students use AI to generate content for their essays. A recent blog by Dr Philippa Hardman, Co-Founder of Epiphany, an AI instructional design company, stated that there is significant thinking and debate now that AI may actually have a detrimental effect on the development of a student’s knowledge and skills across a number of educational areas (Hardman, 2025). On the other hand, chatbots can work as study assistants and, for example, provide an overview of a topic. Other uses include AI creating practice questions and flashcards. The use of AI could increase student’s motivation to learn and make them more self-directed and in control of their learning.

For educators, AI can assist with drafting lecture or tutorial content, personalising learning guides, help in finding visual representations of content and to design lesson plans and assessments. To mitigate the risks of students submitting AI generated work, an alternative is to ask them to use AI and then use evidence to critique the result. Ideas such as this can be found online (see for example, Fox Valley Technical College, 2025).

The use of AI in nursing education, is dependent on nursing students having access to devices, connectivity to the internet, and the necessary skills to use the devices to access AI (InternetNZ, 2025). Poor digital literacy and technology skills, costs associated with buying a device (such as a smartphone, tablet or laptop) and connectivity fees are all barriers to the use of AI, which has the potential to increase the “digital divide” where some people have more access and others are excluded (InternetNZ, 2025). Other issues associated with AI use in nursing education include prob-

lems with detecting if AI has been used. No AI detection tools are currently fully reliable and there is potential for plagiarism and copyright infringements. Furthermore Liang et al. (2023) have suggested that AI detectors are biased against non-native English writers.

Through this editorial, we have indicated some uses and benefits of AI in nursing and nursing education. At the same time questions are being raised (see for example, Castonguay et al., 2023; O'Connor, 2023; Rony et al., 2024; Tam et al., 2023) for which we do not have answers, but suggest are worthy of debate:

- What do nurses, students and educators need to know to be prepared for the future?
- Is the use of AI tools, such as ChatGPT, cheating or helping student development?
- Can AI identify students needing academic support?

- How does nursing manage the risk of AI producing misinformation and ensuring there is diversity and cultural awareness in the results?

.....

Acknowledgements

The basis of this editorial was first presented as a panel at the International Nursing Informatics Conference (NI2024) (Honey et al., 2024) and also at the eHealth Nursing and Midwifery Workshop as part of the Health Informatics NZ (HiNZ) Conference (Honey & Collins, 2024).

Submitted: February 04, 2025 NZDT. Accepted: February 12, 2025 NZDT. Published: March 25, 2025 NZDT.



This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CCBY-4.0). View this license's legal deed at <http://creativecommons.org/licenses/by/4.0> and legal code at <http://creativecommons.org/licenses/by/4.0/legalcode> for more information.

References

- Booth, R. G., Strudwick, G., McBride, S., Connor, S., & Lopez, A. L. S. (2021). How the nursing profession should adapt for a digital future. *BMJ*, 373, n1190. <https://doi.org/10.1136/bmj.n1190>
- Burns, E., Laskowski, N., & Tucci, L. (2023). *Definition: Artificial intelligence (AI)*. TechTarget. <https://www.techtarget.com/searchenterpriseai/definition/AI-Artificial-Intelligence>
- Castonguay, A., Farthing, P., Davies, S., Vogelsang, L., Kleib, M., Risling, T., & Green, N. (2023). Revolutionizing nursing education through AI integration: A reflection on the disruptive impact of ChatGPT. *Nurse Education Today*, 129(105916), 1–3. <https://doi.org/10.1016/j.nedt.2023.105916>
- Chang, C. Y., Jen, H. J., & Su, W. S. (2022). Trends in artificial intelligence in nursing: Impacts on nursing management. *Journal of Nursing Management*, 30(8), 3644–3653. <https://doi.org/10.1111/jonm.13770>
- Elsevier. (n.d.). *ClinicalKey eases access to trusted, credible answers*. <https://www.elsevier.com/products/clinicalkey>
- Fox Valley Technical College. (2025). *Library Resources: Artificial Intelligence (AI), news, resources and tools*. Author. <https://library.fvtc.edu/AI/Assignments>
- Gartner. (2023). *Gartner places generative ai on the peak of inflated expectations on the 2023 Hype Cycle for Emerging Technologies*. Author. <https://www.gartner.com/en/newsroom/press-releases/2023-08-16-gartner-places-generative-ai-on-the-peak-of-inflated-expectations-on-the-2023-hype-cycle-for-emerging-technologies#:~:text=Emergent%20AI%20Will%20Have%20a,within%20two%20to%20five%20years>
- Hardman, P. (2025). *The Impact of Gen AI on Human Learning: a research summary*. Author. <https://drphilippahardman.substack.com/p/the-impact-of-gen-ai-on-human-learning>
- Honey, M., & Collins, E. (2024, December 3). *AI, digital health and nursing education*. eHealth Nursing and Midwifery Workshop as part of the Health Informatics NZ (HiNZ) Conference, Hamilton, New Zealand.
- Honey, M., Skiba, D. J., Procter, P., & Benavente-Rubio, A. (2024). *Harnessing the power of AI in nursing education*. 16th International Congress on Nursing Informatics (NI2024) “Innovation in Applied Nursing Informatics,” Manchester, United Kingdom.
- InternetNZ. (2025). *Digital inclusion*. <https://internetnz.nz/access-and-security-online/digital-inclusion/>
- Liang, W., Yuksekgonul, M., Mao, Y., Wu, E., & Zou, J. (2023). GPT detectors are biased against non-native English writers. *Patterns*, 4(7), 100779. <https://doi.org/10.1016/j.patter.2023.100779>
- Mollick, E. (2025). *How to use AI to do practical stuff: A new guide*. One Useful Thing. <https://www.oneusefulthing.org/p/how-to-use-ai-to-do-practical-stuff>
- Nursing Council of New Zealand. (2025). *Standards of competence for registered nurses*. Author. <https://www.nursingcouncil.org.nz/common/Uploaded%20files/Public/Nursing/Registered%20nurse/NCNZ031-Competencies-RN-11.pdf>
- O'Connor, S. (2023). Open artificial intelligence platforms in nursing education: Tools for academic progress or abuse? *Nurse Education in Practice*, 66(103537), 1–2. <https://doi.org/10.1016/j.nepr.2022.103537>
- O'Connor, S., Yan, Y., Thilo, F. J. S., Felzmann, H., Dowding, D., & Lee, J. J. (2023). Artificial intelligence in nursing and midwifery: A systematic review. *Journal of Clinical Nursing*, 32(13–14), 2951–2968. <https://doi.org/10.1111/jocn.16478>
- Rony, M. K. K., Parvin, M. R., & Ferdousi, S. (2024). Advancing nursing practice with artificial intelligence: Enhancing preparedness for the future. *Nursing Open*, 11(1). <https://doi.org/10.1002/nop2.2070>
- Russell, R. G., Lovett Novak, L., Patel, M., Garvey, K. V., Craig, K. J. T., Jackson, G. P., Moore, D., & Miller, B. M. (2023). Competencies for the use of Artificial Intelligence-based tools by health care professionals. *Academic Medicine*, 98(3), 348–356. <https://doi.org/10.1097/ACM.0000000000004963>
- Tam, W., Huynh, T., Tang, A., Luong, S., Khatri, Y., & Zhou, W. (2023). Nursing education in the age of artificial intelligence powered Chatbots (AI-Chatbots): Are we ready yet? *Nurse Education Today*, 129(105917), 1–4. <https://doi.org/10.1016/j.nedt.2023.105917>
- World Health Organization. (2023). *WHO calls for safe and ethical AI for health*. Author. <https://www.who.int/news/item/16-05-2023-who-calls-for-safe-and-ethical-ai-for-health#>