

## CDNM Position Statement on the use of Artificial Intelligence in Nursing and Midwifery Education, Research and Practice

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**CDNM Position:** The Council of Deans of Nursing and Midwifery (Australia and New Zealand [CDNM]) supports Artificial Intelligence (AI) use in nursing and midwifery education in ways that balance learning outcomes with preparation for technology-enabled practice. Our principles to support AI integration focus on: educational outcomes; use of existing guidance and institutional protocols; regular review; ethical implementation; and investment in ongoing professional development and AI infrastructure. Given both the promise and the potential risks of AI, we support a considered approach to its adoption.

### Preamble

Generative Artificial Intelligence (AI) refers to systems that are capable of creating new content, based on their training data. The emergence of such technologies presents opportunities and challenges for nursing and midwifery education, practice and research.

AI technologies have the potential to boost existing educational approaches through realistic simulations, personalised learning paths, and enhanced resource access. At the same time, AI has various limitations. It can diminish – rather than expand – the learning experience, provide incorrect information, and may even be dangerous, particularly in clinical situations where nuanced clinical decision-making is required or when incorrect or inconsistent outputs are produced.

While AI shows promise in enhancing nursing and midwifery education, its limitations highlight the need for a careful, considered approach to its adoption.

As educators of future nurses and midwives, CDNM supports approaches to AI use that balance enhanced learning and preparation for practice with relevant security, critical thinking and integrity measures. The following principles outline our views.

### Principles for AI use in nursing and midwifery education

**Principle 1:** AI use must prioritise educational outcomes and integrity whilst appropriately preparing future graduates to use AI in health care delivery

While there is substantial evidence of the benefit of AI tools/technology in boosting productivity, there is a small but growing body of evidence showing that learning can be adversely affected by AI. For example, when the discovery and exploration process in researching assignments is undertaken by AI, the depth of student learning and retention is affected. As educators, it is critical that learning and analytical thinking is prioritised above familiarity with AI tools and/or productivity gains when decisions are made about when and how AI use is permitted.

One way to adequately prepare future graduates whilst prioritising education outcomes is to clearly distinguish areas where AI use diminishes or replaces the learning experience from those where its use actively amplifies learning and preparation for practice. This distinction can help educators to determine areas in which AI is best disallowed from that where its use is actively encouraged.

Innovative approaches to assessments should also be implemented to ensure authentic evaluation of student learning, while ensuring that students continue to develop critical thinking and reasoning skills. The University of Sydney's recently implemented 'two-lane approach provides a balanced model, incorporating:

1. Secure, in-person assessments to ensure graduates can demonstrate the knowledge, skills and attributes without external aids.
2. Appropriately designed 'open' assessments that support the use of AI and all available tools, to develop skills for contemporary environments.

**Principle 2: Refer to and use established AI guides to support learning and preparation for practice**

Multiple frameworks and resources already exist to guide the responsible use of AI in education, research and health practice. These include the following:

- Australian Commission on Safety and Quality in Health Care (ACSQH) – [AI Clinical Use Guide – Guidance for clinicians](#)
- Australian Digital Health Agency (ADHA) – [Resources | Digital Health Developer Portal](#)
- Australian Health Practitioner Regulation Agency (Ahpra) – [Meeting your professional obligations when using Artificial Intelligence in healthcare](#)
- Department of Health, Disability and Ageing (DoHDA) – [Safe and Responsible Artificial Intelligence in Health Care – Legislation and Regulation Review](#)
- Tertiary Education Quality and Standards Agency (TEQSA) – [Gen AI knowledge hub](#)

CDNM encourages and supports the adaptation of these frameworks to strengthen nursing and midwifery education by ensuring that AI aligns with professional, ethical, and safety standards.

**Principle 3: Institutional rules will continue to govern and guide AI use in education.**

CDNM acknowledges that higher education providers have existing institutional policies that govern AI application and use. Institutional frameworks are the primary authority for the application of AI in nursing and midwifery education. CDNM encourages the integration of principles specific to nursing and midwifery education into these policies where appropriate to ensure alignment with professional practice requirements, particularly in clinical situations.

**Principle 4: AI developments are highly dynamic. Regular review and update of guidance for its use is needed.**

As the field of AI is constantly changing and evolving, principles and guidelines for its use must be regularly reviewed and updated. New advances – such as progress in clinical simulation – as well as emerging risks need to be incorporated into updated guidance. It is also essential to maintain consistency with updates across national and international policies.

### Principle 5: Ethical governance and responsible use of AI is essential

Strong and adaptable governance structures are critical to overseeing AI implementation and use in nursing and midwifery education. Given the potential for mis-use and exploitation, especially in sensitive clinical situations, integration of AI into education must adhere to ethical standards. Robust data security measures must be implemented to protect the collection and analysis of sensitive data related to students, clinicians and patients in education, research and practice.

AI algorithms must be carefully designed and monitored to eliminate existing cultural and other prejudice. Incorporating relevant data sovereignty principles and rigorous oversight is essential to detect and minimise bias within algorithm development.

### Principle 6: Ongoing AI professional development and infrastructure resourcing are critical

To keep pace with the rapid developments in this field, educators, researchers and practitioners must be provided with regular, quarantined time to update their AI knowledge. As emphasised in the *Our Gen AI Transition: Implications for Work and Skills* report by Jobs and Skills Australia, all educators and trainers will require at least a baseline level of AI skills and literacy to enhance education delivery, ensure effective assessment and remain current with emerging industry practice.

Educational institutions will need to invest in continuous professional development for academics and administrators to enable them to effectively use and oversee AI technologies. This includes education in AI tools, data management, and ethical aspects of AI use.

Robust technical infrastructure, including high-performance computing resources and reliable internet connectivity, is also important for effective AI implementation.

We strongly encourage institutions to invest in the associated technological and security infrastructure to support effective AI use in nursing and midwifery education.

## Conclusion

CDNM supports the thoughtful integration of AI into nursing and midwifery education to prepare our students for rapid and ongoing change in healthcare delivery. By carefully evaluating its potential and validation, AI technologies can be harnessed to enrich learning experiences. However, it is essential that their implementation prioritises learning outcomes, supports the development of safe, competent and knowledgeable practitioners and upholds the qualities of responsible, ethical and equitable healthcare education delivery.

## Important Disclaimer

*This position statement provides general guidance on the use of AI in nursing and midwifery education. Individual institutions will have their own specific policies, procedures, and guidelines regarding AI use. All academics and staff are required to familiarise themselves with – and adhere to – their institution’s relevant policies and procedures when implementing AI technologies in educational settings.*

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## **Appendix 1: More detailed information**

### **Relevance of AI to Nursing and Midwifery Education**

The integration of AI technologies in healthcare education continues to evolve, driven by the need to enhance learning experiences and support evidence-based practice. In nursing and midwifery, AI may complement existing educational approaches through simulations and personalised learning paths, while recognising that traditional hands-on clinical experience remains essential for developing core competencies.

### **Benefits of Generative AI in Nursing and Midwifery Education**

#### ***Enhanced Learning Experiences***

- **Personalised Learning:** AI can supplement educational content delivery by adapting to individual student learning needs and paces.
- **Adaptive Learning Paths:** Generative AI can suggest learning paths that adjust based on student performance.
- **Simulation-Based Training:** AI-powered simulations can complement clinical scenarios, allowing students to practise certain skills in a controlled environment.

#### ***Efficiency in Educational Administration***

- **Automation of Administrative Tasks:** AI can assist with routine administrative tasks, enabling nursing and midwifery academics to dedicate more time to teaching and mentoring students.

#### ***Support for Evidence-Based Practice***

- **Evidence Integration:** AI can help organise and present current evidence-based practices, supporting students' learning of contemporary healthcare methods.

### **Ethical Considerations**

#### ***Privacy and Data Security***

- **Handling Sensitive Data:** The use of AI in education can involve the collection and analysis of sensitive data related to students, clinicians or and patients. It is crucial to implement robust data security measures to protect this information from unauthorised access and breaches.

#### ***Bias, sovereignty and equity***

- **Risks of Bias:** AI algorithms may perpetuate existing biases if not carefully designed and monitored. Indigenous data sovereignty principles must be incorporated to detect and minimise bias within algorithm development. Development of AI tools must prioritise fairness and inclusivity.

#### ***Transparency and Accountability***

- **Guidelines for AI Decisions:** Clear guidelines are required to support a consistent approach to how AI decisions are made within educational tools. Transparency in the documenting of data sources, algorithms, and decision-making processes used by AI systems reinforces accountability.

## **Implementation Strategies**

### ***Infrastructure Requirements***

- **Technical and Institutional Infrastructure:** Successful AI integration requires robust technical infrastructure, including high-performance computing resources and reliable internet connectivity. Institutions must also establish governance structures to oversee AI implementation and use.

### ***Professional Development***

- **Training for Educators and Administrators:** Continuous professional development is essential to equip academics and administrators with the knowledge and skills needed to effectively use and oversee AI technologies. This includes training on AI tools, data management, and ethical considerations.

### ***Policy and Regulation***

- **Frameworks for Policy Development and Implementation:** Institutions are required to develop policies that ensure the ethical use and effective integration of P AI in diverse educational contexts. These policies should address data privacy, bias mitigation, and accountability.

## **Challenges and Limitations**

### ***Academic Integrity***

- **Detection and Prevention:** Institutions must develop robust strategies to maintain academic integrity when using AI tools
- **Assessment Design:** New approaches to assessment may be needed to ensure authentic evaluation of student learning
- **Clear Guidelines:** Students and staff need clear guidelines on appropriate AI use in academic work

### ***Technological Limitations***

- **Complex Clinical Scenarios:** Current AI technologies have significant limitations in handling nuanced clinical decision-making
- **Reliability Concerns:** AI systems may produce incorrect or inconsistent outputs

### ***Resistance to Change***

- **Managing Change:** Educators and students may resist the adoption of new technologies. Effective change management strategies, including clear communication and training, are essential to support students overcome resistance to the adoption of new technologies.

### ***Cost Implications***

- **Financial Investment:** Implementing AI technologies requires significant financial investment in infrastructure, training, and ongoing maintenance. Institutions must carefully consider cost implications and seek sustainable funding sources.

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