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EDITORIAL

## Artificial Intelligence and the future of nursing practice

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### Background

Artificial Intelligence (AI) is being cautiously heralded in healthcare. This generic term can cover health technology applications such as: *virtual avatar apps, smart homes, predictive analytics, virtual or augmented reality, and robots* (Buchanan *et al.*, 2021: p.2).

More recently the AI subfield of natural programming language and chatbots have emerged, ChatGPT (<https://openai.com/chatgpt>) for example. Some see this advancing technology as a springboard for the nursing profession, often characterised by its cultural resistance to digital systems, to transform it into a truly digitally enabled profession, embracing these new technologies to progress nursing practice and patient care (Booth, *et al.*, 2021). However, others call for caution and urgent reform of nursing education curricular to take account of these new technologies in the classroom and in practice settings (Buchanan *et al.*, 2021). Others highlight concerns over examination regarding plagiarism (O'Connor and ChatGPT, 2023) and AI's output propensity to inaccuracies such as erroneous and fictitious references (Sanchez-Ramos *et al.*, 2023).

### A ChatGPT perspective

In an experiment of the technology, a question is posed below to inform and enable a future retrospective appraisal of its response – in many ways burying a time capsule to be explored in years to come. The question and response are given in Table 1.

### Discussion

A professional debate has started in the academic world, but this debate needs to be shifted closer to the patient and into clinical areas and practice settings with practitioners who will increasingly be engaged with this new and advancing technology.

**Table 1: ChatGPT output from the question: How will AI change nursing practice in the next three years?**

Over the next three years, AI is poised to bring significant changes to nursing practice, revolutionizing the way healthcare is delivered. Here are some key ways in which AI is expected to impact nursing:

**1. Augmented diagnosis and treatment:** AI algorithms can analyze patient data, including medical records, lab results, and imaging studies, to provide nurses with more accurate and efficient diagnostic support. AI can help identify patterns and potential risks, enabling nurses to make informed decisions about treatment plans.

**2. Precision medicine:** AI can facilitate personalized care by analyzing large datasets and identifying specific patient characteristics, such as genetic factors or response to medications. This allows nurses to tailor treatments to individual patients, improving outcomes and reducing adverse reactions.

**3. Remote monitoring and telehealth:** AI-powered devices and systems can remotely monitor patients' vital signs, medication adherence, and overall health status. Nurses can access real-time data and provide timely interventions, enhancing patient care in remote or home settings.

**4. Workflow optimization:** AI can automate routine tasks, such as documentation, scheduling, and data entry, reducing nurses' administrative burden. This frees up more time for direct patient care and enables nurses to focus on complex and critical tasks.

**5. Intelligent decision support:** AI algorithms can analyze evidence-based guidelines and clinical literature to provide nurses with real-time recommendations for treatment options, medication dosages, and patient management. This assists nurses in making well-informed decisions aligned with the best practices.

**6. Patient education and support:** AI-powered chatbots and virtual assistants can provide patients with on-demand information, answer their questions, and offer guidance on self-care and disease management. This empowers patients to take an active role in their healthcare and improves their overall experience.

While AI holds immense potential for nursing practice, it is crucial to integrate it thoughtfully and ethically. Nurses will continue to play a vital role in providing compassionate care, critical thinking, and human connection, which cannot be replaced by AI systems. The successful implementation of AI requires ongoing collaboration, training, and an emphasis on patient-centered care.

## Conclusion

This editorial has started to explore the future of new and emerging technologies, broadly titled artificial intelligence or AI. It has planted a 'time capsule' where this AI has described how it will influence nursing practice and patient care in the future. It will be for others to come back and evaluate its predictions.

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