Use of Artificial Intelligence in Neonatal Nursing Position Statement

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COINN (Council of International Neonatal Nurses, Inc) acknowledges that limited resources and/or personnel may restrict opportunities to implement the recommendations and action points. To improve health outcomes, the global neonatal care community must strive to uphold these recommendations. This position statement is applicable to any healthcare professional caring for the neonate and their family.

SUMMARY

In the evolving realm of healthcare communications, Artificial Intelligence (AI) is poised to bring about transformative changes. However, the incorporation of AI into healthcare practices should not deviate from the fundamental objectives of patient care; foundational principles such as compassion, trust, and caring form the core of relationships. The Council of International Neonatal Nurses, Inc. (COINN) strongly recommends that healthcare providers conscientiously assess how AI is integrated into their practice, considering its potential benefits and risks to both individual and population health outcomes.

BACKGROUND AND FACTORS

AI is a broad category encompassing algorithms guiding the behaviour of various entities such as software programs, machines, robotics, games, and hardware devices (Ali, et al., 2023), and plays a significant role in healthcare and education. It includes a diverse range of current, emerging, and future technologies designed to support healthcare professionals in patient care. Tools for monitoring vital signs, disease prediction (apnea of prematurity, bronchopulmonary dysplasia, respiratory distress syndrome), risk stratification (retinopathy of prematurity, intestinal perforation, jaundice), neurological diagnostic and prognostic support (electroencephalograms, sleep stage classification, neuroimaging), and novel image recognition technologies—which are especially helpful for early infection recognition—are among the current artificial intelligence applications in neonatology (Chioma et al, 2023). The ethical use of data, including big data, is crucial in influencing the functionality of AI and its impact on patients (O'Connor, et al., 2023). As novel AI technologies continue to emerge, it is imperative for healthcare professional to have guidance on the ethical, compassionate, safe, and evidence-based implementation of AI in healthcare. In fields like public health, research, and informatics nursing, an understanding of how AI can inadvertently overshadow minority health needs and perpetuate disparities is crucial.

The judicious application of AI in neonatal care must align with and strengthen the core values and ethical responsibilities of healthcare professionals (Van Bulck, et al., 2023). Nurses especially, bear the responsibility of ensuring that advanced technologies do not compromise fundamental human interactions and relationships (Fernandes, et al., 2023). Healthcare professionals should be well-informed about AI to provide suitable education to neonatal families, to support safe use of AI for improved health outcomes.

COINN RECOMMENDATIONS AND ACTION POINTS:

1. Stay abreast of AI advancements and acknowledge its revolutionary impact on scientific communication.
2. Engage in AI education and training initiatives available to enhance AI literacy and understanding of both its potential and associated risks.
3. Integrate AI responsibly, transparently, and equitably, with a steadfast commitment to confidentiality.
4. Ensure that AI practices align with the Code of Ethics.
5. Advocate for neonatal families where the use of AI is contraindicated or unsafe.
6. When AI is used, adaptation and nursing assessment individualized to the neonate and family is essential.

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