SSHRC’s Imagining Canada’s Future initiative mobilizes social sciences and humanities research to address emerging economic, societal and knowledge needs for Canada, and help guide decision-making across all sectors toward a better future. This evidence brief addresses the Future Challenge Area of: Skills and Work in the Digital Economy

Ethical challenges regarding emerging digital technologies in virtual nursing care and practice

About the project

Emerging digital technologies (EDTs) used in virtual care—like AI, robots, virtual reality and 3D printing—are promising improvements in nursing and health-care access, uptake, equity and cost-effectiveness. Moreover, these technologies may reduce health inequalities, disparities in care, outcomes and social determinants of health. However, their relatively new, largely untested and unregulated nature raises pertinent ethical challenges that, as barriers are shown, can negatively impact care outcomes and the acceptance and use of these technologies in clinical nursing practice.

Leveraging the potential benefits of identified emerging digital technologies in virtual care in clinical nursing and health-care practice in ethical ways to improve care outcomes requires understanding the ethical challenges regarding EDTs and virtual care in clinical practice. Our research team conducted an integrative review of published literature to explore and describe the nature and scope of ethical challenges regarding EDTs in virtual care in clinical nursing practice. We used a comprehensive three-step sequential search strategy and inclusion and exclusion criteria to search and retrieve literature from reputable databases. For this review, our team used COVIDENCE (Extraction 2.0 version) as a gold-standard process and workflow platform to streamline our title and abstract screening and conduct a full-text review, data extraction, quality appraisal, data abstraction, evidence synthesis and interpretation to create high-quality systematic reviews.

Key findings

An integrative review of 64 peer-reviewed and grey literature documents revealed 12 emerging themes of ethical considerations mapped into three categories of ethical challenges regarding the use of EDTs in virtual nursing care.

1. Ethical concerns related to nursing’s moral horizon of significance comprised five key ethical challenges: the nurse-patient relationship and inauthentic care interaction; patient dignity, autonomy and [self]deception; patient safety; privacy and confidentiality; trust and integrity; and social justice and bias related to unrepresentative data, exclusion and stigmatization.

2. Ethical concerns related to the organizational imaginary comprised four key ethical challenges: informed consent, transparency and data management; [dis]trust in the health care system; job displacement, losses and fading professional competencies; and liability and accountability related to interpretability and conflict of interest.

3. Ethical concerns related to the societal imaginary arise from an overlap in ethical considerations but comprised explicitly three key ethical challenges: social isolation and depersonalization of human beings and care; surveillance related to exploitation, manipulation, and disciplining of human beings and society; and vulnerability and fading of human autonomy, moral authority and agency.

Various ethical approaches and strategies are described in the reviewed literature, and deemed effective to address the identified ethical challenges and support ethical practice amid digital ethical disruptions in virtual care. Firstly, The Dance of Living Care relational model as one approach offers an ethical framework to help understand “caring for and about” people using EDTs in virtual care. Secondly, another innovative approach offers a philosophical-ethical framework based on a socio-historical contextualization of the ethics of using socially assistive robots (SARs) and a rudimentary ethical decision-making process to critically reflect on ethical challenges regarding EDTs and to guide the design of ethically sensitive
Address the ethical culture of virtual care spaces and digital technology by:
• integrating ethics, culture and technology;
• updating ethical, professional and regulatory frameworks and standards guiding nurses’ ethical practice;
• leveraging social determinants of health guided by proactive, intersectional models and approaches to promote social justice;
• producing valid and representative data sets for use by autonomous decision-making systems;
• facilitating a deep understanding of human care needs and values;
• creating positive digital-friendly experiences and practice environment plus ethical, trustworthy EDTs for application and use in care.

Support empirical research to explore questions on the actual impact and effect of EDTs on ethical nursing-sensitive care and practice outcomes.

Support philosophical inquiries into traditional ethical concepts from multiple clinical stakeholders’ perspectives.

Adopt robust, collaborative and consultative processes of multilateral, multilevel health system stakeholder analysis and engagement on ethical governance and regulation of EDTs in care.

Update and strengthen legal-ethical and statute-based duties of care, principles and safeguard measures to reaffirm and promote shared ethical values in care when using EDTs.

Support health professionals’ digital literacy and ethical competency development by updating curricula and continuous professional development initiatives.

Policy implications
Policy implications point to the following recommendations:

• Support empirical research to explore questions on the actual impact and effect of EDTs on ethical nursing-sensitive care and practice outcomes.
• Support philosophical inquiries into traditional ethical concepts from multiple clinical stakeholders’ perspectives.
• Adopt robust, collaborative and consultative processes of multilateral, multilevel health system stakeholder analysis and engagement on ethical governance and regulation of EDTs in care.
• Update and strengthen legal-ethical and statute-based duties of care, principles and safeguard measures to reaffirm and promote shared ethical values in care when using EDTs.
• Support health professionals’ digital literacy and ethical competency development by updating curricula and continuous professional development initiatives.

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FURTHER INFORMATION
Read the full report

SSHRC is a funding agency of the Government of Canada. Through research grants, fellowships and scholarships, SSHRC supports research that provides key insights on the social, cultural, environmental and economic challenges and opportunities of our ever-changing world.

The Future Skills Centre (FSC) is a forward-thinking centre for research and collaboration, dedicated to preparing Canadians for employment success. As a pan-Canadian community, we are collaborating to rigorously identify, test, measure and share innovative approaches to assessing and developing the skills Canadians need to thrive in the days and years ahead.

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