

Nursing Informatics: Consumer-Centred Digital Health

Diane Skiba ^{1,*} and Michelle Honey ² ¹ School of Nursing, University of Colorado, Aurora, CO 80045, USA² School of Nursing, University of Auckland, Auckland 1010, New Zealand; m.honey@auckland.ac.nz

* Correspondence: Diane.Skiba@CUAnschutz.edu

1. Introduction

In the past, nursing informatics has tended to focus on the implementation of systems. In 2020, the World Health Organisation International Year of the Nurse and Midwife [1], we saw the onset of the COVID-19 pandemic. This brought a focus on the essential work of nurses and midwives who support patients and consumers to maintain and regain their health. An international concern was on how technology could support health and wellbeing. We have seen the expansion of consumer-centred digital health tools within a digital health ecosystem that have used virtual support and consumer participation to good effect. Consumer-centred care is built upon the concept of patient centred care, in which the patients are “partners with their care providers,” and “encourages the active collaboration of and shared decision-making between patients, families, and providers to design and manage a customized and comprehensive care plan” [2]. Consumer centred care occurs within the digital health ecosystem. According to the Health Information Management Systems Society, “Digital health connects and empowers people and populations to manage health and wellness, augmented by accessible and supportive provider teams working within flexible, integrated, interoperable, and digitally-enabled care environments that strategically leverage digital tools, technologies and services to transform care delivery” [3]. Integral to consumer-centred digital health is communication, and this is a central tenet of all submitted papers.

2. Communication

A key feature of the COVID-19 pandemic has concerned the information available to health professionals and consumers and with that, also misinformation and disinformation. The article by Procter [4] provides a discourse exploring the important role of communication, including digital communication, and considers the influence of social media. She reminds us “It is unlikely that there is a way of halting the infodemic, but there are ways of managing it”, with thought-provoking ideas of the challenge this means for nurses and midwives as they communicate with consumers.

Obtaining consumer input is another aspect of communication. The systematic review by Ozkaynak, Sircar, Frye, and Valdez [5] considers how design workshops, using participatory methods, can lead to effective communication and sharing of ideas. In this context, a design workshop is defined as “a codesign environment opportunity for a team to cohesively disentangle a specified problem by undergoing a series of group exercises to either initiate or finalize a design, or to ameliorate an obstacle on an existing design” [5]. Of note, for the workshop to work as a design and research activity in the health informatics domain, there is a need to carefully consider how the workshop is conducted.

An example of the use of digital health tools by nurses to provide care at a distance was the use of digital educational support for new adolescent mothers in the Dominican Republic [6]. This study highlights excellent use of technology, which, in this case, was the use of WhatsApp Messenger for communication, with a demonstrated improvement in health outcomes. Telehealth, a component of digital health is another mode of communicating and providing care at a distance. The Taiwanese cross-sectional survey by

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Chang et al. [7] identifies factors that affect the intention of nursing staff to practice telenursing. This study indicates that support and encouragement from nursing supervisors, in addition to education and training and the provision of appropriate technologies, are important factors.

The last article in this Special Issue involves communication from a wearable device, an activity monitor [8]. Part of this was understanding consumers' barriers to using such a device, and not having a smart phone was one of these barriers.

3. Conclusions

The range of papers in this Special Issue on consumer-centred digital health illustrates the importance of communication, both in itself and as a means to provide information, either to the consumer, to other consumers or to a health professional. Although technology can offer opportunities, it can also present barriers and challenges.

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References

1. World Health Organization. Year of the Nurse and the Midwife 2020. Available online: <https://www.who.int/campaigns/annual-theme/year-of-the-nurse-and-the-midwife-2020> (accessed on 29 September 2021).
2. NEJM Catalyst. What Is Patient-Centered Care? 2017. Available online: <https://catalyst.nejm.org/doi/full/10.1056/CAT.17.0559> (accessed on 29 September 2021).
3. Snowdon, A. Digital Health: A Framework for Healthcare Transformation. 2020. Healthcare Information and Management Systems Society (HIMSS). Available online: https://www.gs1ca.org/documents/digital_health-affht.pdf (accessed on 29 September 2021).
4. Procter, P.M. Patient Care, Information, communication and social media influencing bias—A discourse. *Informatics* **2021**, *8*, 28. [CrossRef]
5. Ozkaynak, M.; Sircar, C.M.; Frye, O.; Valdez, R.S. A systematic review of design workshops for health information technologies. *Informatics* **2021**, *8*, 34. [CrossRef]
6. Stonbraker, S.; Haight, E.; Lopez, A.; Guijosa, L.; Davison, E.; Bushley, D.; Peguero, K.A.; Araujo, V.; Messina, L.; Halpern, M. Digital educational support groups administered through WhatsApp Messenger improve health-related knowledge and health behaviors of new adolescent mothers in the Dominican Republic: A multi-method study. *Informatics* **2020**, *7*, 51. [CrossRef] [PubMed]
7. Chang, M.-Y.; Kuo, F.-L.; Lin, T.-R.; Li, C.-C.; Lee, T.-Y. The intention and influence factors of nurses' participation in telenursing. *Informatics* **2021**, *8*, 35. [CrossRef]
8. Orstad, S.L.; Gerchow, L.; Patel, N.R.; Reddy, M.; Hernandez, C.; Wilson, D.; Jay, M. Defining valid activity monitor data: A multimethod analysis of weight-loss intervention participants' barriers to wear and first 100 days of physical activity. *Informatics* **2021**, *8*, 39. [CrossRef]