

# Let's Get Digital

*Digital health is “the field of knowledge and practice associated with any aspect of adopting digital technologies to improve health, from inception to operation” (WHO 2019: 2).*

Throughout my writing for *CJNL*, I have proffered my perspectives on the importance of nurse leaders being knowledgeable and engaged in digital health initiatives (Nagle 2016; 2008a; Pringle & Nagle 2009). Additionally, in the context of digital health solutions such as electronic health/medical records (EHR/EMRs), I have discussed the need to redesign clinical nursing documentation and integrate clinical data standards (Nagle 2007), consider the human factor (Nagle 2008b), and recognize critical factors for the successful deployment of these emergent tools designed to support clinical practice (Nagle 2008c). I have also written expressly about the opportunities to extend access to healthcare and support aging in place through the use of technologies (Nagle 2008d). For the most part, these perspectives were presented over a decade ago and we should have moved the yardstick considerably by now. While progress has been significant over the past decade, much foundational work remains to be done and there are now several new information and communications technologies (ICT) components coming to the fore. Given the rapid evolution of artificial intelligence, robotics, remote monitoring, mobile health, data science, personalized medicine, and Canadians being able to access and contribute to their health records, Digital Health 2.0 is a reality. For those yet to embrace the foundations of version 1.0, you are now officially a Luddite, and it's hard to imagine how you possibly function in today's world of all things digital.

According to Prensky (2001), those born before 1985 are considered “digital immigrants” as we have come to experience and embrace technologies by forfeiting our ways of the past. The generations that followed are considered to be “digital natives,” having grown up with technology as a central element of day to day life. Throughout our digital health journey, resistance to the use of certain technologies has been common and viewed as something to be overcome. However, what has become clear to most clinicians is that resistance is futile. What is clear to me is that remnants of the digital health “not me” mindset are gradually dissipating. Instead what is emerging is a view that going digital is inevitable if not essential to sustaining healthcare delivery in this country. Upcoming generations, the “digital natives,” will expect, if not demand, that contemporary ICT tools are present to support them in their provision of care in every setting. Furthermore, the responsibility for the “work” associated with digital health solution deployment can no longer be relegated to the identified experts in the field but should be seen as the work of all leaders and users alike. We have had entry-to-practice informatics competencies for Canadian nurses since 2012 (Canadian Association of Schools of Nursing 2012), and informatics competencies for Canadian nurse leaders have been recently identified (Strudwick et al. 2019). As a 2018 study of Canadian schools of nursing demonstrated (Nagle et al. 2019), we still have much work to do integrating the entry-to-practice competencies into undergraduate nursing curricula. Moreover, as Canada's nurse leaders become increasingly aware of the nurse leader informatics competencies, their development within the leadership collective will require focused learning and competency development activities.

In this issue, many of the emerging technologies of Digital Health 2.0 are discussed by our contributors. Peltonen and colleagues (2019) report on a panel discussion of opportunities and challenges in Nursing Informatics: “*ICT to Improve Quality and Safety at the Point of Care*” at

the 14th International Congress on Nursing and Allied Health Informatics. The discussion was synthesized and content analyzed and led to strategic recommendations for nurse managers to advance NI on local, regional and global levels.

Remus and Donelle (2019) describe how data science methods have the potential to inform strategies to address existing complex healthcare challenges. Equipped with the requisite informatics competencies, nurses using data science methods can uncover new evidence currently unavailable through traditional data analytic approaches. They highlight the persistent problem of the “data rich information poor” (DRIP) phenomenon which captures the current reality of little return for nurse time invested in the documentation of care and the possibilities for moving to practice-based evidence.

Risling (2019) describes the critical role of nurses to advocate for the *just and effective use* of artificial intelligence (AI) health solutions. Yet again, nurses will need to develop the know-how about the development, deployment, and evaluation of AI and ways in which they can be influenced. AI science will also require new nursing roles to support its application and the capacity to realize benefits for healthcare in the future. In the face of such future and current technologies, Deagle (2019) draws our attention to the potentially different perspectives and experiences of nurses versus patients. Her poetic approach reminds us of the prevailing importance of balancing high-tech care with a high touch approach.

Ronquillo and colleagues (2019) describe the development of the MOBILE Nurse Model which they designed to delineate the necessary practical skills and knowledge for nursing leaders when implementing mHealth initiatives. mHealth is at the early stages of development in Canadian hence the testing of this model may inform the effectiveness of current and future strategies used by nurse leaders. While the ready uptake and use of any technology are intrinsically tied to nurses’ perceptions of its value, most studies to date have been focused on acute care. Ibrahim et al. (2019) examined factors influencing nurses’ intention to use electronic documentation systems in home care. While Surani et al. (2019) describe their efforts to uncover the role of nurse managers in supporting point-of-care nurses to optimally use ICTs. Using a scoping review methodology, they identified the following areas of role responsibility: (1) decision-making, (2) implementation planning, (3) supporting staff and (4) evaluation.

A case study from long term care by Fei et al. (2019) describes nurses’ use and evaluation of an eMAR (electronic medication administration record). Their findings demonstrated a reduction in medication delivery time, more time for direct care and a decrease in medication incidents.

Overall, our contributors in this issue convey the important role nurse leaders play in realizing the best possible outcomes in ICT use and adoption by nurses in every setting. I encourage you to consider your current knowledge and skills in supporting the acquisition, implementation, and evaluation of technology solutions within your organization. While many continually lament the prevalence of ICT functionalities that do not effectively support practice, improvements to these tools will only ensue with key leaders and decision-makers being actively engaged in the associated processes – that would be you. It behooves us as a profession to be driving and informing ICT developments in every sector of care. The horse is out of the barn and it’s not turning around; in all likelihood, the horse of the future will not even be recognizable as Digital Health 2.0 quickly morphs into 3.0. For the sake of Canadian nursing and healthcare – if you haven’t done so yet – it’s time to get digital.

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