

# Digital Nursing: enhancing the human touch through technology

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## Abstract

The ‘human touch’ is a fundamental part of the nursing practice. In the current healthcare environment which rapidly changing under the impact of new digital technologies, the way that healthcare practitioners and especially nurses are providing care to those who need it in a variety of environments, is being challenged, adding pressure to their knowledge, skills and beliefs. The poster will

- a) Introduce the idea for the development of a new future nursing workforce, called Digital Nursing with the necessary skills to address the challenges and
- b) Will ‘debate’ the fear of losing the advantage of human interaction and the ‘human touch’

## Introduction

Within nursing, human touch has been recognized as a fundamental human need<sup>1</sup>. In critical care settings, it was established that touch can slow heart rate, lower the incidence of cardiac dysrhythmias, decrease diastolic blood pressure, and reduce anxiety<sup>2</sup>. On the other hand there is the fear that technology is negatively affecting the human interaction and/ or ‘human touch’<sup>3</sup>. Is this a reality and if yes is there a way to address it?

## Main Body

In the current, rapidly changing due to technology innovation, environment, healthcare practitioners and patients are bombarded and introduced continuously to new developments of digital technologies<sup>4-6</sup>. As a result the divide between humans and digital technologies is widening with potential impact on patient safety<sup>7-11</sup>. A survey conducted by the Royal College of Nursing in 2012, demonstrated among others that while awareness of telehealth has increased slightly since a 2010 survey, levels of experience do not appear raised. More than one-third of respondents were unsure about the properties and benefits of telehealth and other emerging technologies<sup>12</sup>. Additionally the current academic curricula globally, are missing out on following the fast pace of these developments<sup>13</sup>.

A proposed solution for filling this gap in education is the development of an educational programme with a content focused on the development of specific digital skills for healthcare practitioners and especially nurses at the bedside. Through education and research engagement, we will manage to develop a workforce with those digital skills

that will enable nurses to use digital technologies, identify risks, protect patients and furthermore engage in the research and development of these new technologies.

The main argument for this proposal is based on the fact that nursing has the uniqueness of a 24 hours presence, not only in the hospital but also in a variety of different health care environments (nursing homes, hospices and community). Adding these skills on this workforce will transform them to enablers of technology and educators, on this subject, for their patients with a potential huge impact on reducing the human technology divide and contributing to an accelerating access of technology in healthcare.

The poster among others will refer to the development of a university module for post graduate healthcare professionals at the University of Brighton in UK. The uniqueness of this module is that refers to professionals working in different environments (hospital, community) with no prior knowledge or education on health informatics with the aim to provide them with specific digital skills for their everyday practice on caring for patients.

A key aspect of the content will focus on Clinical Digital Health, referring to what type of technologies are currently available and which are emerging (eg telemedicine, Internet of Things, data analytics, personalized and precision medicine, wearables, mhealth, electronic medical records, health information exchange and interoperability), where can these be applied, what are the implications and dangers of their use and what are the opportunities for future innovation.

The aim of this new educational development is to develop a workforce called Digital Nursing that will be able to bridge the gap between health care and innovation and reduce the patient-technology divide through having skills of Digital Safety/ Safety, Digital Use, Digital Communication.

## Conclusion

Whilst the introduction of digital technologies in healthcare initially shows a decline of human interaction, developing a new workforce with the necessary skills will eventually enhance the human interaction and 'human touch'.

## References

1. Dominion, J. The psychological significance of touch. *Nursing Times* 1971; 67, 896-898.
2. Weiss, S. J. Psychophysiological effects of caregiver touch on the incidence of cardiac dysrhythmia. *Heart & Lung* 1990; 15, 495-504.
3. 11. Morris C. Is technology killing the human touch [Internet]. *CNBC Disruptor* 50. 2015 [cited 3 January 2017]. Available from: <http://www.cnb.com/2015/08/15/gy-killing-the-human-touch.html>
4. Houston C. The Impact of Emerging Technology on Nursing Care: Warp Speed Ahead. *OJIN: The Online Journal of Issues in Nursing* [Internet]. 2013 [cited 3 January 2017];18(2). Available from: <http://nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-18-2013/No2-May-2013/Impact-of-Emerging-Technology.html>
5. Mytton O, Velazquez A, Banken R, Mathew J, Ikonen T, Taylor K et al. Introducing new technology safely. *Quality and Safety in Health Care*. 2010;19(Suppl 2):i9-i14.
6. Poon E, Cusack C, McGowan J. Evaluating Healthcare Information Technology Outside of Academia: Observations from the National Resource Center for Healthcare Information Technology at the Agency

- for Healthcare Research and Quality. *Journal of the American Medical Informatics Association*. 2009;16(5):631-636.
7. Sarringhaus MM. The Great Divide: Social Media's Role in Bridging Healthcare's Generational Shift. *Journal of Healthcare Management* 2011 Jul;56(4):235-44.
  8. Stellefson M, Chaney B, Chaney D. The Digital Divide in Health Education. *American Journal of Health Education*. 2008;39(2):106-112.
  9. Bernhardt J. Health education and the digital divide: building bridges and filling chasms. *Health Education Research*. 2000;15(5):527-531.
  10. Hsu J. Use of e-Health Services between 1999 and 2002: A Growing Digital Divide. *Journal of the American Medical Informatics Association*. 2004;12(2):164-171.
  11. Neter E, Brainin E. eHealth Literacy: Extending the Digital Divide to the Realm of Health Information. *Journal of Medical Internet Research*. 2012;14(1):e19.
  12. Royal College of Nursing. Positioning nursing in a digital world/ RCN eHealth survey 2012 report. London: Royal College of Nursing; 2012.
  13. Vassar L. How to equip new doctors for the digital health frontier [Internet]. *AMA Wire*. 2015 [cited 2 January 2017]. Available from: <https://wire.ama-assn.org/education/how-equip-new-doctors-digital-health-frontier>