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eHealth for neonatal nurse education despite Covid-19

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ABSTRACT

Aim: The aim of this contemporary issue paper is to challenge the premise that the term "eHealth" is relatable to patient or service users only. It will be critically explored if the term can be broadened to include neonatal nurse education interventions.
Design: A review of current literature will form the basis for the critical discussion of the term eHealth, and why it can be associated with neonatal nurse education.
Methods: The critical discussion will identify and review past and current literature relating to eHealth and its origins. It will portray the viability of the term eHealth as more than just a patient associated intervention, and why it should also be encompassed as a neonatal nurse education option.
Conclusion: eHealth is traditionally identifiable as a service user intervention or source of information. The term should be broadened to encompass neonatal nurse education and used as a resource that is easily accessible and user friendly. This will in turn encourage the personal and professional development of neonatal nurses and should ultimately contribute to evidence based best practices in the clinical environment, despite the current global pandemic.

1. Introduction

The current Covid-19 pandemic has affected continuous neonatal nurse education. Traditional blended learning or classroom based programmes are in the majority, no longer temporarily being run. Clinical duties have taken a front seat in the fight against this pandemic, and educational strategies must now take second place. However, it is unknown how long this pandemic will continue to have an effect on everyday life. A "new normal" must be adapted to and personal and professional development must be upheld, as we continue to evolve neonatal nursing care to suit the problematic times. Can eHealth strategies evolve to include neonatal nurse education?

1.1. Background

In the early 1990's industry and marketing leaders began to investigate the internet. The term eHealth (electronic health) first emerged around this time and was being explored as an electronic means in which health arenas could become involved in information systems. Eysenbach (2001) described the term eHealth as a commitment for networked global thinking to improve healthcare worldwide by using information communication technology (ICT). eHealth is in the main, associated with healthcare service users and health care institution information systems. The term offers many and varied interventions. eHealth electronic records are becoming widespread internationally as a form of recording patient information. eHealth apps are in the mainstream in the form of fitness trackers, dietary recommendations and information sources for chronic conditions. eHealth is also associated with virtual consultations with specialists for those unable to visit centres of excellence, and through patient information interfaces through which medical teams can share images and data, in order to network and collaborate on a patient's care plan. The term is rarely used in the guise of an educational intervention for health care professionals.

Searching and exploring the term "eHealth" will at first direct the

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investigator towards patient orientated education platforms that have been designed by healthcare professionals, institutions and multinational business companies. eHealth is a hugely successful venture in the form of health apps, virtual consults and patient information websites. In the early days of eHealth development, Eyesenbach (2001) described it as the education of consumers of health through education and tailored information, but also as an educational opportunity for healthcare professionals. He also wrote a report titled "the 10 e's of eHealth", and in it identified the education of health care professionals (HCPs) as a key feature. This education not only encompassed that which would be designed for patients and service users, but also highlighted the importance of the development of knowledge for those who would disseminate it in the informing of evidence based best practices in the clinical setting. Although the developments of the late 1990s and early 2000s in eHealth were particularly patient information driven, this new and exciting internet based opportunity could, through the use of any form of electronic technology, be used to improve the quality of healthcare services and outcomes (Staudenmeir 2003). In a systematic review of eHealth definitions in 2005, (Oh et al., 2005) suggested that the term eHealth, although in the main patient focused, referred to services and systems as a whole, and not just that of the health of people. Pagliari et al. (2005) agreed with these findings, identifying eHealth as an educational aid for HCPs, amongst many other viable functions and settings. While eHealth is in the main regarded as a patient focused strategy, the World Health Organisation (WHO) (World Health Organisation, 2012) reported it as an important platform for professionals in research and practice. WHO (2013) has defined eHealth as the use of information and communication techniques in the health domain. It described how eHealth will impact on high quality distance learning and will make professional education readily available for healthcare workers through health education, knowledge and research. The European Union (EU) launched an eHealth "Action Plan" 2012–2020 in order to benefit patients and healthcare professionals by delivering targeted and efficient information through access to services and information on an IT platform. Healthcare is evolving and changing and becoming more futuristic in its developments. It is therefore timely that eHealth educational platforms for neonatal nurses are also considered.

2. Discussion

Wager et al. (2017) wrote about the identification of a shift in the operations, strategies, finances and care planning of healthcare delivery worldwide. Service users demand high standards of evidence based care to ensure better outcomes and value for money. Providers of healthcare must therefore offer new and innovative means of supporting such demands and meeting the standards expected by the service users. ICT in the form of eHealth education, is a major potential influencer in these expected healthcare delivery challenges. Educational initiatives for healthcare professionals have traditionally been offered as classroom based instruction and evaluation, however, staff shortages and attendance difficulties are identifiable as barriers to training days (Ten Ham-Baloyi et al., 2017). These systems can offer strategic education through the ease of access to targeted material for the HCP and reduced financial burden for the healthcare organisation (Wager et al., 2017). In a literature review of eHealth in healthcare, Ossebrand & Van Gemert-Pijnen (2016) advised the design of continuous education in eHealth platforms for staff. This would allow continuous education regardless of where or when the individual's study would take place. They recommended this education be enriched with workplace insight and scientific theory. The educational content would be standardised material and could be applicable to many other settings internationally. Carbonaro (2008) reported that nurses have found eHealth platforms beneficial in providing learning and professional development opportunities and for time saving. They are described as flexible and allow interest in the subject for longer periods.

Bandura (1997) defined self-efficacy as the belief in one's abilities needed to exercise control over one's work. The level of confidence the nurse has in their abilities will directly impact on the quality of care given to the patients/service users in everyday nursing care. Barriers to using evidence based practices in the clinical setting have been identified as a lack of critical appraisal skills, preferring practical skills to information seeking and time constraints (Fink et al., 2005; Melnyk and Fineout-Overholt 2005). Developing education programmes has been identified as a means to bridge evidence-based practice implementation (Tucker et al., 2009). The "research-practice gap" is an international phenomenon, causing patients to not receive quality nursing care (Squires et al., 2011). Kajermo et al. (2010) found that by identifying barriers to change, and developing strategies to overcome them, the research-practice gap will be addressed. Barriers in individual healthcare institutions through cultural and traditional practices, will also hinder nurses use of knowledge in their personal practices (Chinosmo and Folusa 2014). Level of education and seniority may also attribute to inconsistent practices, thus affecting quality in the delivery of care. Addressing new and innovative forms of nurse education to allow availability and ease of facilitation is paramount to the success of closing the "research-practice gap". In the early years of its evolvement, eHealth interventions were described by Kirshbaum (2002) as an enabling innovation to deliver better health care in more efficient ways. Beaulieu and Beinlich (2003) concurred with this description by emphasising how eHealth through ICT would act as a forum to educate and inform HCPs, thus stimulating innovation in care delivery and health systems management. Providing accessible educational interventions and resources on a continuous, easily accessible basis, should benefit nurses personally and professionally in the development of their practices. It will contribute to traditional practice change and "move with the times", hopefully encouraging a mind shift and acceptance of change that will enhance the personal development of these HCPs. Education and training in these new, innovative information communication systems will also benefit professional development. Amongst the advantages of eHealth education in a healthcare setting, is the creation of networks between healthcare facilities and the sharing of results and practices (Cattaneo 2018).

Staff shortages and attendance difficulties are identified as barriers to training days for neonatal nurses. Ten Ham-Baloyi et al. (2017) reported that healthcare institutions struggle to release staff to attend study days and programmes. A number of studies have described how the use of an online learning programme such as an eHealth platform would allow a nurse's geographical location not to impact on the ability to have access to education. The RCN (2019) reported that eHealth enhances professional practice through the use of information communication technology (ICT). It would also combat the problem of health service commitment limiting attendance for training and a shortage of trained instructors would no longer be an issue (Brown and Adler 2008; Greenhalgh and Russel 2006; Fisher et al., 2005). eHealth initiatives for neonatal nurses would be a cost effective method of training and instruction for the healthcare institute (Petty 2014; Brandt et al., 2018). Ossebrand & Van Gemert-Pijnen (2016) advised the design of continuous education be enriched with workplace insight and scientific theory. It is important to remember that this new technology should complement and enhance traditional clinical practices, as culture to differing nationalities is an individual experience and should not be replaced (Dutile 2011; Harder 2010).

Other advantages of eHealth education in a neonatal healthcare setting is the creation of networks between healthcare facilities and the sharing of results and practices (Cattaneo 2018). eHealth learning provides nurses with an opportunity for regular learning and reduces professional isolation. It builds a rapport between healthcare institutions irrespective of the tier of the institution and ensures that educational resources are readily available (Gulzar et al., 2013). Benefits also include reduced costs to the healthcare facility, ease of access and efficiency of learning (Botha et al., 2014). There is also the added benefit of the facilitation of learner independence and self-direction (Dennison,

2011). In India in 2012, Thukral et al., 2012 launched a distance learning programme online in conjunction with workshops at a local level. They aimed to increase knowledge of new-born neonatal care amongst nurses. The programme was successful and the group concluded that on-line forums for teaching were feasible and enhanced professional development for the nurses involved. Altimier (2009) concurs with this following on from a successful online neonatal nurse orientation programme. The nurses fit the education in with their own personal schedules and concluded that the online learning increased their learner satisfaction and learning outcomes.

Some disadvantages to eHealth have also been identified in the literature. Barriers perceived to its use are lack of confidence and competence in the use of ICT (Janardhanan et al., 2008; King et al., 2007). Botha et al. (2014) cited a lack of IT resources in some countries as a challenge along with difficulty using the software and poor quality data. This form of education may not be a realistic goal for those countries without networks, computer access and skills. This "digital divide" was justifiably identified by Eyesenbach (2001) as a disadvantage of this form of education. Petty (2014) described how that no matter the hospital setting, some students are traditional and will have limited personal means to technology. It is therefore important to identify those who will not be familiar and provide extra training where needed. It is also important for the designer and facilitator of the ICT based education to be sufficiently qualified in the implementation of the intervention. The education being offered must be applicable to clinical practice.

3. Conclusion

The term eHealth can be justified as all that is digital or electronic in the healthcare industry, be it for patient or HCP use. Defining eHealth as a specific entity is many and varied in the literature and therefore this new dynamic environment can be justifiably labelled as either a healthcare user or healthcare professional source of ICT information and education. eHealth strategies are a viable means of continuing neonatal nurse education despite the ongoing restrictions of the current global pandemic.

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Conflict of interest statement

There is no conflict of interest to be declared.

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