"This is the peer reviewed version of the following article: [*Journal of Clinical Nursing, 2016*], which has been published in final form at [http://onlinelibrary.wiley.com/doi/10.1111/jocn.13470/abstract/]. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Self-Archiving."

Received Date : 20-Jun-2016

Revised Date : 23-Jun-2016

Accepted Date : 24-Jun-2016

Article type : Editorial

"Is technology responsible for nurses losing touch?"

Sue Dean RN MA[1,2], Joanne Lewis RN PhD[1], & Caleb Ferguson RN PhD[2]

1. Faculty of Health, University of Technology Sydney, Australia.
2. Graduate School of Health, University of Technology Sydney, Australia.

Twitter; @suedeandean; @UTS_Health; @calebferg

Email: Sue.Dean@uts.edu.au

EDITORIAL: Journal of Clinical Nursing

EDITORIAL: Journal of Clinical Nursing

"At best, technology supports and improves human life; at its worst, it alienates, isolates, distorts and destroys". — John Naisbitt, author of High Tech, High Touch (Naisbitt *et al.* 1999)

Touch by the laying – on of hands is an apparently simple but actually profoundly complex act. The therapeutic, comforting effects of touch have for centuries contributed to improving or maintaining health. Early studies showed us that therapeutic touch raised haemoglobin levels and more recent studies have shown that when people connect and especially when they touch each other, oxytocin *(the feel good hormone)* is released (Krieger 1975, Macdonald & Macdonald 2010, Pinker 2015). Since Florence Nightingale in the mid 1880's guided the teaching of massage as part of nurses' qualification at St Thomas Hospital, London, touch has been central to the work of a nurse (Krieger 1975).

We are nurses with many years of experience in settings where we have - too many times to count - eased some pain with a holding of a hand or a back rub or a massage, shared some grief or loss with a connection made by holding a hand, provided some much needed and absent tactile connection for an older person who has no opportunities anymore for tactile sensory experiences, encouraged a patient to squeeze our fingers to distract from a painful procedure, or simply just sat with someone and held their hand when there was nothing to be said or done to make a situation better. We have seen the value of touch. Touch in nursing is often associated with tasks in delivering physical care or clinical procedures but we know it is much more than that. It provides a deep connection with our

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/jocn.13470
This article is protected by copyright. All rights reserved.

Accepted Article

patients and can improve the patient experience (Bensing *et al.* 2013, Deledda *et al.* 2013, Parker *et al.* 2007, Stein-Parbury 2014, Wright *et al.* 2006). When used appropriately, touch is one of the most therapeutic non-verbal means of communicating and it is invaluable in enhancing the nurse-patient relationship (Arnold & Boggs 2003).

Person - centred care, the foundational basis of nursing, is characterised by care that is holistic, individualised, respectful and empowering. It is the environment in which this care takes place that has the greatest impact on patient health and wellbeing outcomes (Morgan & Yoder 2012). Social contact is described by Timson as "*a biological drive that online activity can't quite satisfy*" (Timson 2014). Therapeutic touch is a core component of interpersonal communication. Touch is a reassuring action that helps to convey messages irrespective of oral communication interaction. Four decades ago touch was identified as the *'imprimatur of nursing'* and in our experience, it continues to be so (Krieger 1975).

Increasingly, there is a move to integrate technology into the nursing environment. Reis and others have suggested that technology has generated many opportunities to enhance communication in healthcare through web - based communication training for healthcare professionals, access to healthcare providers irrespective of geographical boundaries, and social media networks for patient and caregiver support (Reis *et al.* 2013). An example of this would be connecting young people recovering in hospital with their *'social network'*, through provision of a tablet device, WiFi and access to their Facebook friends. There is evidence that this interpersonal social support improves wellbeing and aids physical recovery (Nabi *et al.* 2013).

Current and emerging health technologies can, however present a barrier to the creation of 'relationship' between clinician and patient which is essential for care that is compassionate and centred for the patient's needs (Weiner & Biondich 2006). Subtle patient cues and personal responses to them such as face-to face verbal communication or human touch embody what patients and healthcare providers perceive as caring. It is the interpersonal connection which determines much of the satisfaction for the healthcare role. Loss of relationship or distancing from the patients pose the risk for compassion fatigue and burnout in care providers (Bush 2009).

Developments in technology have increased rapidly over the last two decades but good health care practice remains firmly rooted in person - centred care. Studies indicate however, that nurses tend to concentrate more on the clinical psychomotor skills and technical aspects of their work at the expense of addressing patients' psychological and emotional needs (Baker & Melby 1996, Dean *et al.* 2015). We propose that the increasing use of a variety of technological supports for nursing work may be at the expense of offering a comforting touch to our patients. Technology is transforming nursing. Don't get us wrong, we are proponents of the use of technology in nursing. Technology is highly useful and can improve patient outcomes, business processes and clinical decision - making but nurses must pay careful attention to how they best augment and integrate technology into practice without risking the interpersonal relationship at the heart of our work.

There are a number of examples where the increasing use of technology in nursing may be of concern. Disruptiveness is the hallmark of technology. It is an inescapable aspect of daily life. Technology encourages us to multitask. This is disruptive and distracting to the unique and essential nursing interaction. An example of this is device alarms. Whilst alarms on devices have provided nurses with alert for attention; whether this is a ventilator, infusion pump or cardiac monitor, false

This article is protected by copyright. All rights reserved.

Accepted Article

Accepted Article

alarms have desensitised nurses, and have led to poor patient outcomes and adverse events (Sendelbach 2012). Within some contemporary health settings, nurses are failing to manually palpate patients' radial pulses, and instead opting to apply an oxygen saturation probe to a finger. Not only does this impact the overall quality of the cardiovascular assessment (such as assessment of the strength, rate and rhythm of the pulse), but is worrying in terms of a lack of touch.

Globally, nurses are transitioning to use computers to access prescriptions, administer medications and document in the clinical setting. Frequently these computers are known as COWs (computers on wheels). These machines more often than not are attached to a large wheel trolley, presenting a physical barrier with patients when providing care or consultation. Such physical barriers of nurses working in front of monitors and on mobile computers may impact the quality of an interpersonal relationship. This may be a distraction to the nurse, a priori of developing a therapeutic relationship with the patient. This may be similar for nurses who sit behind desktop computers as there may be reduced time spent actively observing and interacting with patients.

Nurses are increasingly encouraged to use smartphones in practice. Nurses may use tablet devices for patients to complete questionnaires. This is in substitution, or augmented as a component of a nurse interview. The nursing interview is an important contributor to developing rapport with a patient and it often sets the scene for the relationship which follows. Computerised questionnaires may well save costs as it is less time consuming for nurses but how does this impact quality of care and patient outcomes? Patients are freer to focus on the relationship with their health care provider if they are not limited to pre-structured questionnaires. Personal attention, warmth and empathy can develop when a nurse sits down with a patient to conduct an interview (Bensing *et al.* 2013b). Furthermore, clinics are now providing patients with a tablet device to help them understand surgical procedures; learn about their care plan and explore all the care pathways and understand recovery or illness trajectory. Whilst this appears exciting to be enhancing patient knowledge using on screen narrated animations, we need to be cautious in terms of how patients receive this educational intervention.

Finally, shared decision making is a paradigm shift in nursing, and a process of arriving at a clinical decision through nurse and patient partnership. This involves bidirectional conversation, consensus building and agreement on a pathway of care including the patient and nurse. Shared decision making may incorporate a technological component with a device, to support patients with risk and benefit information through an electronic decision aide. However this may potentially mean less interpersonal interaction with a nurse, over an electronic device that may present a risk of cognitive dissonance.

Human touch is and always will be the imprimatur of nursing. The technological revolution in nursing is inevitable. In embedding technology in nursing practice, it is imperative that we consider how this impacts nurse-patient relationships. We must not lose touch.

This article is protected by copyright. All rights reserved.

REFERENCES

Arnold E & Boggs K (2003) *Interpersonal relationships: professional communication skills for nurses*, 4th edn. WB Saunders Co, Phillidelphia.

Baker C & Melby V (1996) An investigation into the attitudes and practices of intensive care nurses towards verbal communication with unconscious patients. *Journal of Clinical Nursing* **5**, 185-192.

Bensing J, Rimondini M & Visser A (2013) What patients want. *Patient Education and Counseling* **90**, 287-290.

Bush NJ (2009) Compassion fatigue: are you at risk? *Oncolology Nursing Forum* **36**, 24-28.

Dean S, Williams C & Balnaves M (2015) Practising on plastic people: Can I really care? *Contemporary Nurse* **51**, 257-271.

Deledda G, Moretti F, Rimondini M & Zimmermann C (2013) How patients want their doctor to communicate. A literature review on primary care patients' perspective. *Patient Education and Counselling* **90**, 297-306.

Krieger D (1975) Therapeutic Touch: The Imprimatur of Nursing. *The American Journal of Nursing* **75**, 784-787.

Macdonald K & Macdonald TM (2010) The peptide that binds: a systematic review of oxytocin and its prosocial effects in humans. *Harvard Review of Psychiatry* **18**, 1-21.

Morgan S & Yoder LH (2012) A concept analysis of person-centered care. *Journal of Holistic Nursing* **30**, 6-15.

Nabi RL, Prestin A & So J (2013) Facebook friends with (health) benefits? Exploring social network site use and perceptions of social support, stress, and well-being. *Cyberpsychology, Behaviour and Social Networking* **16**, 721-727.

Naisbitt J, Naisbitt N & Philips D (1999) *High Tech High Touch: Technology and Our Search for Meaning*. Broadway.

Parker SM, Clayton JM, Hancock K, Walder S, Butow PN, Carrick S, Currow D, Ghersi D, Glare P & Hagerty R (2007) A systematic review of prognostic/end-of-life communication with adults in the advanced stages of a life-limiting illness: patient/caregiver preferences for the content, style, and timing of information. *Journal of pain and symptom management* **34**, 81-93.

Pinker S (2015) *The Village Effect: Why Face-To-Face Contact Matters*. Atlantic Books, London.

Reis S, Visser A & Frankel R (2013) Health information and communication technology in healthcare communication: the good, the bad, and the transformative. *Patient Educ Couns* **93**, 359-362.

Sendelbach S (2012) Alarm Fatigue. *Nursing Clinics of North America* **47**, 375-382.

Stein-Parbury J (2014) *Patient and Person*. Churchill Livingstone, Sydney.

Timson J (2014) It takes a village to find a friend. In *The Toronto Star*.

Weiner M & Biondich P (2006) The influence of information technology on patient-physician relationships. *Journal of General Internal Medicine* **21 Suppl 1**, S35-39.

Wright KB, Bylund C, Ware J, Parker P, Query JL & Baile W (2006) Medical student attitudes toward communication skills training and knowledge of appropriate provider-patient communication: a comparison of first-year and fourth-year medical students. *Medical Education Online* **11**, 1-10.

Accepted Article

This article is protected by copyright. All rights reserved.