Involving nurses in developing new technology

In this article...

- Differences in public attitudes to nurses in the US and UK
- Why healthcare technology implementation often fails
- How nurses can use technology to improve practice

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Abstract
Hamer S, Cipriano P (2013)

Throughout history, nurses have been accepting of change and adapted to new ways of working. Despite this, nursing has a reputation of being obstructive to change, particularly around technology. Healthcare technology implementation is not always successful and we argue that this is because nurses and other frontline workers are not involved enough in the change process. Nurse leaders need to be actively involved in the debate over appropriate technology and resources.

Key points
1. In the UK and the US, nurse leaders have to justify any requests for resources.
2. The value of technology is determined by how it is used and whether it helps or hinders care.
3. There is a general belief that nurses are reluctant to accept change and resent new technology.
4. The US and UK share similar goals for technology innovation, but differ in economics and delivery system configurations.
5. Frontline staff are often not involved in the planning and implementation of health technology.

Technology and healthcare in the US and UK
Regardless of changing contexts, technology, and health needs of the population, nurses remain the foremost providers and coordinators of care. However, showcasing the caring aspects of nursing in a technologically dominated world can be challenging. Technology enables care and enhances safety by automating simple and complex functions, but it does not replace a nurse. Its value is determined by how it is used and whether it helps or hinders care.

For years, many healthcare leaders have believed nurses are too slow to embrace new technologies and are disruptive or even obstructive to change. There are many examples of how misguided this belief is, such as nurses’ work in neonatal or intensive care units. Despite this view frequently being inaccurate, it is believed by a wide variety of organisations, including technology system suppliers. This prevents these companies from understanding the practicalities of how nurses’ work in ICU shows they are not averse to adopting technology.

A round the world, no matter the setting, nurses want to provide safe care to patients and families. However, the resources that healthcare providers are able to afford do not always meet the standards nurses believe to be adequate to provide high-quality care. There is disagreement among healthcare leaders about how to allocate nursing resources and, despite research showing that the care provided by nurses has a direct impact on mortality and morbidity, nurse leaders continue to have to justify requests for resources (Aiken et al, 2011).

Universally, efforts have been made to ensure high-quality care is affordable, focusing on efficiency and effectiveness. To do this, all aspects of care are analysed to identify where costs can be reduced without quality being affected.

In the US, nurses are continuously ranked as the nation’s most trusted professionals (Newport, 2012) and tend to be supported by the public over issues of cost saving. However, in the UK, debate over resources has led to confusion and public uncertainty as to who to believe, which has undermined confidence in the system as a whole. Nursing has been affected by this negative view and has needed to reassure the public that caring and compassion are at the core of nursing practice (Cummings and Bennett, 2012).

Keywords: Technology/Change/Nurse leaders

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professions change and how they can support innovation in practice.

It is easy to overlook the fact that nurses have for generations changed practice and adapted to new demands such as rising acuity, new treatments and prevention of adverse events. This was happening even before general management and its associated theories were being used. At times throughout history, the need for change has been critical and the profession has responded quickly; however, in some areas, change has been resisted. As a profession, we have sought to build a strong evidence base to inform practice and have a good understanding of how to change practice safely and sustain this (Ward et al., 2009; Hamer and Collinson, 2009).

The US and UK share similar goals for technology innovation, but differ in economics and delivery system configurations (Table 1). Organisations have sought to add new systems rather than integrate existing ones. Many of these were put in place without first analysing whether they would increase workloads, change working practices and be acceptable to patients.

Technology implementation aims to achieve business goals, whereas nurses prioritise practice development. This focus on business has led to benefits in terms of managerial gains, but not directly in patient experiences and outcomes. Technology to help nurses deliver care has been treated separately and viewed as an additional cost rather than a mechanism to enhance care. There was, therefore, always a possibility that technology could not be sustained in the long term.

Increasingly, health technology projects use senior managers, who are often unfamiliar with the care setting, to advise on and set up processes. By failing to focus on supporting frontline practitioners in delivering care, they repeatedly fail to enable ordinary day-to-day care. The Technology Drill Down project of the American Academy of Nursing’s Workforce Commission showed the need to use technology to support practice; frontline nurses and other multidisciplinary team members stressed the importance of involving those giving direct care in the design, selection and testing of technology, steps that are often overlooked when new systems or devices are acquired (Box 1).

Technologies designed for and used by nurses at the point of care are not always easy to use. An international survey by Dowding et al. (2013) to identify priorities for research in nursing informatics acknowledged that, although there was a growing evidence base on the design and evaluation of health information technologies, it focused mainly on medical practice. This study found that the two most highly ranked areas of importance were developing systems to provide real-time feedback to nurses and assessment of technologies on nursing care and patient outcomes.

Leadership and technology

If the profession is encouraged to develop new forms of knowledge and opportunities, it will be able to develop practice rapidly (Plochg and Hamer, 2012). This is the route to successful, sustainable innovation.

It is important for nurses to address the professional leadership challenge of how we respond to and speed up the adoption of technology to support practice. We need nurse leaders to see technologies as a version of this article is also appearing in American Nurse Today in the US promising solutions, not barriers, and to integrate technology into their vision for meeting practice needs. Nurse leaders need to model and promote enabling technologies, and demand systems that meet practitioners’ needs. As technology advances, nurses and other professionals should only need to collect data once then be able to reuse it. If technology is relevant to direct care, nurses are likely to see its benefit and this will drive up standards.

The profession has made progress towards dispelling the myth that nurses are slow to adopt technology. With the help of nursing informatics experts, all nurse leaders must continue to actively debate the issues that will help us use technology to improve care and efficiency. NT

Box 1. Nurses’ views

The American Academy of Nursing’s Technology Drill Down study aimed to find technological solutions to workflow inefficiencies on medical-surgical nursing units. Multidisciplinary teams reviewed the situation, designed improvements and brainstormed technology solutions to fill gaps and make care safer and more efficient.

Most units used a range of technologies. Nurses wanted technology to eliminate or automate work, perform regulatory functions, and give access to resources.

They felt a lot of technology was not user friendly and required “workarounds”, and wanted companies to listen to them over this. They also said technology could improve efficiency.


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<th>TABLE 1. HEALTH SYSTEM COMPARISONS</th>
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<tr>
<td><strong>US</strong></td>
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<td><strong>Delivery system</strong></td>
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<td>● Hospital-centric – government or private</td>
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<td><strong>Technology vision</strong></td>
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<td>● Electronic health records for all by 2014</td>
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<td>● Improve information availability, quality, and safety</td>
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References


