

Quality improvement and cost control in hospitals – how e-learning can help

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Introduction

Hospitals are currently operating under enormous pressures. They face both rapidly rising demands and strict financial restrictions. These twin forces are now being felt at the frontline of healthcare. And this trend is international.

In Australia, hospitals in many territories have struggled to cope as a result of a year-on-year increase in the number of patients attending emergency departments.¹ In Ireland there has been a 6.5% annual increase in the number of emergency presentations to hospitals and waiting lists for inpatient procedures and outpatient appointments have also risen over the past year.² The picture in the UK is no different; hospitals have had to cope with 54,000 extra Emergency Department visits in the past twelve months.³ In June 2016 over 3.8 million people were waiting for treatment – the highest level for over eight years.³ And at the same time the financial situation for many hospitals continues to deteriorate. Forty seven percent of hospitals are currently predicting end of year deficits.³ With no new funding for the NHS, this situation is likely to continue into 2017.

So what should hospitals do?

Although it might be tempting to cut certain parts of the budget, these cuts could have a direct impact on patient care. There is consensus that the system has already been slimmed down by doing the obvious things – and that there are no further “easy” reductions to be made.

Health services “should continually and forever reduce patient harm by embracing wholeheartedly an ethic of learning.”

Professor Don Berwick

Healthcare education budgets are always at risk at times of economic restraint, but cutting back on education would have both immediate and long term impact. The impact would be on quality of care and patient safety.

According to Professor Don Berwick, writing in the report by the Commission on Education and Training for Patient Safety 2016, health services “should continually and forever reduce patient harm by embracing wholeheartedly an ethic of learning.”⁴ Hospitals must continue to provide education – regardless of budgetary pressures.

The only way forward is to do things differently. In this regard, e-learning has a key role to play. E-learning can help to deliver education that will satisfy the needs of healthcare professionals, hospitals and patients.

Most importantly e-learning can drive clinical quality improvement and at the same time save costs.

This paper outlines the role that e-learning can play in the delivery of better care for patients.

E-learning for knowledge, skills and behaviours

It is over thirty years since Peter Drucker popularised the phrase “the knowledge economy”. Since then there has been a growing realisation that all workers need knowledge as much as any other asset in order to fulfil their potential. Nowhere is this more true than in healthcare.

All healthcare professionals need to ensure that their knowledge is continually updated so that they can deliver the best possible care to their patients. The evidence has clearly shown that online learning is effective at improving the applied knowledge of healthcare professionals.^{5,6}

Knowledge on its own is not enough however. Healthcare professionals also need skills that will help them to put their knowledge into practice. These skills might include problem solving or procedural skills. Once again the evidence is unequivocal with regard to the effectiveness of e-learning in improving skills.⁷

Continually improving technologies mean that skills that would have seemed impossible to learn online are now accessible to learners. These even include cardiopulmonary resuscitation skills – the accelerometers on mobile phones or tablets can capture the speed and depth of chest compressions and guide the learner with real time feedback until they learn how to do the procedure correctly.⁸ Healthcare professionals also need communication skills and team working skills. The modern working environment of well informed patients and interprofessional team-based care has increased the importance of these skills. However e-learning can help with these important competences also.⁹

The last step in developing competent healthcare professionals is the development of improved behaviours. This is about putting learning into action for the benefit of patients. In the past, healthcare professional education has been almost an academic exercise but reforms to education have brought learning and clinical care much closer together.

E-learning has been shown to be an effective way of encouraging healthcare professionals to improve their performance by putting their learning into practice.^{10,11}

Cost and value in e-learning

E-learning can thus help doctors and other healthcare professionals to achieve a number of important outcomes. However the evidence doesn't show that e-learning is likely to be better than other modalities in achieving these outcomes. So why then should we use e-learning? The answer lies not in its effectiveness but in its cost effectiveness and convenience. But these in turn can only be delivered if e-learning is implemented as it should be. Discussions about different forms of learning have moved on from what works to what works for a given cost. When viewed from this perspective, e-learning offers a number of unique gains - and there is strong evidence for these gains.¹²

E-learning has been shown to be a cost effective and time efficient way of educating healthcare professionals.^{13,14} The following are a few considerations hospitals should take that will ensure value and also save costs in educating the workforce.

Cost savings

One of the main advantages of e-learning is that it saves on the costs associated with face-to-face education. These include classrooms, equipment and print costs. When the learner has to travel to attend education, the costs of travel, accommodation and subsistence need to be taken into account. So if a hospital is providing e-learning, then it should think about which elements of face-to-face education it will no longer need. The hospital should think about how to blend e-learning with face-to-face instruction – because at least some element of face-to-face education will always be needed. But cost savings will not be achieved if e-learning simply reproduces what happens in face-to-face settings.

Making e-learning scalable

Hospitals should also think about how to promote and enable usage. A key factor in the cost effectiveness of e-learning is its scalability – but this will only happen if institutions successfully drive healthcare professionals to use the resources. The cost of purchasing e-learning will remain fairly static and most e-learning resources are priced based on the potential number of users. However if enough learners are high users, then the cost per module completed will fall dramatically and therefore a hospital will achieve a better return on its investment.

There are a number of ways to drive usage – from outreach campaigns to making the e-learning mandatory. However at a more strategic level, there is no question but that usage will be much more sustainable when the content that is offered meets the needs of the learners. These might be clinical or non-clinical needs but there can also be a number of incentives offered alongside these basics.

For example healthcare professionals will usually want to work through clinical resources that might help them fulfil a curriculum or gain continuing professional development points. They will also expect the best that the web can offer – interactive, multimedia resources that will work on any device – from desktop computer to tablet. They also like the convenience of resources they can dip in and out of and fit around their working day. With face-to-face events, it's not just the travel expense but also time spent away from the hospital that can pose a challenge.

The concept of scalability also works in terms of the learning. It is worth thinking in terms of packages of resources rather than single, stand-alone online learning modules. If it is worth investing in e-learning, then it is worth investing in a course that will meet a range of needs or fulfil a significant part of a curriculum. The evidence shows that this strategy will deliver results and at the same save time and costs.¹⁵

To buy or build?

Cost also comes into the equation in deciding whether to build or buy. Both choices have advantages and disadvantages.

Hospitals can create their own e-learning: this will mean that their own needs will be met, but this particular option can be slow and expensive. It can also be a challenge to keep "home grown" resources updated in the light of new evidence or guidelines. And the volume of new guidelines and new evidence is considerable. An audit of doctors caring for 18 hospital inpatients showed that the doctors could have identified "3679 pages of national guidelines" relevant to their patients' immediate care.¹⁶ With this volume of information it is very difficult for a hospital to keep its content current.

By contrast, licensing in e-learning that is continually updated will be faster and lower cost – and might meet the vast majority of user needs in any case. If a decision is made to license in, then providers should be chosen on the basis of their "editorial quality, evidence-based methodology, and volume of diseases and medical conditions covered."¹⁷ Organisations might want to add some of their own guidelines or protocols and this can be easily done with the content on a Learning Management System.

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Kwag et al

Evidencing outcomes

Investment in e-learning will only be worthwhile if users work through the resources and put their learning into practice for the benefit of patients. So it is vital to continually evaluate the e-learning and track learners' progress. This is essential if hospitals want to know what outcomes have been achieved by their investment in e-learning. Some providers offer this functionality on their own e-learning platforms.

Alternatively hospitals can import content to be hosted on their own Learning Management System. A growing number of institutions are interested in content that is compliant with their own systems and so can be imported into these systems. Hospitals should ultimately choose a way of working that will help them achieve their goals: these will likely be much better management and control of the learning and the practice that results.

Conclusion

Healthcare is changing rapidly. Changes are needed to ensure that care is accessible, high quality and safe, and, at the same time, remains within budget. Healthcare professional education needs to also change to keep up.¹⁸ It needs to provide learning that is evidence based, current, and about the practical application of relevant knowledge. E-learning can provide these outcomes and at the same time enable hospitals to achieve significant cost savings.

E-learning is now a necessity to have a workforce that is fit for the future.

Competing interests

Dr Kieran Walsh works for BMJ Learning - the online learning service of the BMJ.

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