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<th><strong>Title</strong></th>
<th>Continuing education for urology nurses: harnessing the potential of e-learning</th>
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<tr>
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<tr>
<td><strong>Publication Date</strong></td>
<td>2012-02-20</td>
</tr>
<tr>
<td><strong>Publisher</strong></td>
<td>Wiley</td>
</tr>
<tr>
<td><strong>Link to publisher's version</strong></td>
<td><a href="https://doi.org/10.1111/j.1749-771X.2011.01134.x">https://doi.org/10.1111/j.1749-771X.2011.01134.x</a></td>
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<td><strong>Item record</strong></td>
<td><a href="http://hdl.handle.net/10379/14808">http://hdl.handle.net/10379/14808</a></td>
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<td><strong>DOI</strong></td>
<td><a href="http://dx.doi.org/10.1111/j.1749-771X.2011.01134.x">http://dx.doi.org/10.1111/j.1749-771X.2011.01134.x</a></td>
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Abstract
The module ‘Living with cancer of the lower urinary tract’ was developed to address the learning needs of specialised urology nurses working in hospitals and generalist nurses caring for urology patients in practice settings. The module is also offered to oncology nurses undertaking specialist postgraduate education. The module is delivered by a ‘blended learning’ approach and supported by the technology offered on the Blackboard Learning System (Version 9.1), a virtual learning environment (VLE) that facilitates the delivery of on-line and flexible learning. While a number of challenges were faced during the module development and delivery, the positive benefits of collaborative working between university and expert nurse clinicians, and shared learning between urology and oncology nurses was evident.

Key words: blended learning, continuing education, e-learning, urology nurses, prostate cancer.
Introduction

The module ‘living with cancer of the lower urinary tract’ was developed initially to address the learning needs of specialised urology nurses in hospitals and generalist nurses caring for urology patients in practice settings. This learning need was identified following major developments in cancer screening services in Ireland. The National Cancer Control Programme (NCCP) was established in 2007 in response to the Strategy for Cancer Control in Ireland (Department of Health and Children 2006). As part of the NCCP’s programme, in June 2009 two pilot centres were established in Ireland for the early detection and diagnosis of prostate cancer with the intention of the NCCP develop these diagnostic units out to an additional six hospitals in the near future.

The module is delivered by what is described as a ‘blended learning’ approach. This approach combines on-line learning with face-to-workshops in college, and is popular in clinical education (Gray and Tobin 2010, Jonas and Burns 2010). It facilitates equity of access, flexibility, standardisation and sustainability (Office of the Nursing Services Director, 2008).

A blended approach to postgraduate nursing education has been used at the School since 2008. A recent evaluation of students’ experiences of blended learning at the school reports both benefits and challenges (Smyth et al., 2011). The blended approach is supported by the technology offered on the Blackboard Learning System (Version 9.1). This is is a virtual learning environment (VLE) that facilitates the delivery of on-line
and flexible learning (Kazaris 2010). Blackboard has many functions, including discussion boards and a centre for students to upload assignments and receive feedback. Blackboard’s software also helps communication processes through its lists of students, emailing facilities and so on.

Blended learning encourages students to engage with on-line learning in a meaningful and productive manner. On-line discussion boards and blogs foster a sense of mutual learning, whereby students can share their varied expertise and avail of opportunities to learn both with and from each other. However, in order to promote this, a shared feeling to engage with peers on a regular basis on-line must be engendered within the group. This is helped by the students attending an induction day at the university the week before the module begins where they meet each other and the module team who are the on-line moderators.

Students’ performance was assessed across a number of activities, which were spaced out over the module i.e. participation on the discussion board (10%), submission of two e-tivities (short written pieces of 400 words) (20%) and an essay (70%). Clinical outcomes of the module were assessed through students’ evaluation of two patient case histories on the second of their two workshop days in college.

**From idea to desk top publisher**

The module team brings together a unique mix of skills and experience, consisting of a nurse lecturer with a background in oncology nursing and considerable experience in
writing e-learning modules, an advanced nurse practitioner in urology, and a clinical nurse manager in radiotherapy. It was considered essential to have both urology and oncology expert nurse clinicians involved in the development and delivery of the module.

The initial planning before writing the module began with deciding on how many units of learning in the module, what these units would focus on, and their sequence. At the school, blending learning modules with a specialised nursing and midwifery focus are typically ten weeks long addressing five units, each running over two weeks. This model was followed when planning the write-up of the module (Table 1). Setting a word limit is also required, and while approximately 10,000 words is a module average, this module was 18,000 words. The greater word count was because of the vast amount of information students required for one of the units on the module (Treatment options for prostate cancer). There are many treatment options for prostate cancer, therefore this unit addressed active surveillance, radical prostatectomy, radiotherapy (brachytherapy, external beam radiotherapy, intensity modulated radiotherapy (IMRT) and proton beam radiotherapy), other treatment options (cryotherapy, photodynamic therapy, high intensity focused ultrasound [as a therapeutic intervention]), treatments for recurrent prostate cancer after failure of primary radiotherapy, hormone manipulation, and chemotherapy.
Students were asked to read three papers per unit. Choosing the most appropriate articles for students to read, i.e. that would maximise their learning, was a challenge for the module team. From our experience, a mixture of primary research papers, discussion papers, literature reviews, and systematic reviews provide students with a broad range of reading experiences. This variety also introduces students to sometimes unfamiliar research and theoretical terminology, which further widens their learning experience. However, one paper in particular (Abrahamsson 2009), was viewed by students as ‘too technical and medical in nature’, and has been replaced with a different paper for the next cohort of students.

Another challenge is writing the module information in a way that is clear and meaningful for students. While providing hyperlinks to internet sites for students to access and read is an option for some aspects of information discussed, e.g. the use of proton beam radiotherapy, we chose not to take this option because of the added workload it places on students. Instead, we sourced information from textbooks, internet sites and journals and explained it succinctly to students on the module. In other words, we wrote what looks like a manual and remained cognisant of the need to keep the language we used clear and explain new terminology.
# Table 1: Module outline

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<th>Units</th>
<th>Learning outcomes</th>
<th>Examples of Learning activities</th>
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| 1: Epidemiology, screening and diagnosis of prostate cancer | Discuss the epidemiology of prostate cancer  
Discuss the difference between benign prostatic hyperplasia and prostate cancer  
Discuss screening approaches used that inform the diagnosis and staging of prostate cancer  
Discuss contemporary debates in the screening and diagnosis of prostate cancer | 1. Students were asked to read a paper by Emberton et al., (2008) and make notes on the following:  
-The presenting symptoms of BPH  
-The men’s health-seeking behaviour  
-Urologists’ approach to diagnosis and monitoring  
Students were then asked to share their views with each other and the e-moderators on the unit blog.  
2. Students were asked to read a paper by Sharifi and Kramer (2007), which outlines four major problems in screening for prostate cancer, and submit a 400 word e-tivity focusing on one of the problems outlined and critically analysing the issues raised. |
| 2: Rapid access prostate diagnostic units          | Explain the role of Rapid Diagnostic Prostate Units  
Explain the referral system to Rapid Diagnostic Prostate Units  
Explain the role of nurses working in Rapid Diagnostic Prostate Units | 1. Students were asked to think about the relevance of the International Prostate Symptom Score and Quality of Life (I-PSS and QoL) questionnaire to planning of patient care and share their views with each other. |
<table>
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<tr>
<th><strong>Prostate Units</strong></th>
<th><strong>Describe the tests undertaken at Rapid Diagnostic Prostate Units</strong></th>
<th><strong>other and the e-moderators on the blog.</strong></th>
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<td>2. Students were given information prostate biopsy and the guidelines that recommend the removal of ten to twelve cores, despite many centres continuing to use a six score template (Baxter 2010). Students were then asked to search for information on any other specific issues to be aware of in performing a prostate biopsy and share what information they found with others on the blog.</td>
<td>1. Students were asked to read the paper by Watts et al., (2009) and then share their views on the blog on what they learned about robotic-assisted prostate surgery and post-operative outcomes.</td>
<td>2. Students were asked to read a paper by Kimura et al., (2010) and asked to post a message on the blog summarising current approaches to salvage treatments for recurrent prostate cancer after failure of primary radiotherapy.</td>
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### 3. Treatment options for prostate cancers

Describe the following treatment options for prostate cancer: active surveillance, radical prostatectomy, and radiotherapy (brachytherapy, external beam radiotherapy, intensity modulated radiotherapy (IMRT) and proton beam radiotherapy).

Describe the role of hormone manipulation in the treatment of prostate cancer.

Describe the role of chemotherapy in the treatment of prostate cancer.
| 4. Epidemiology, diagnosis, staging and treatment options for urothelial cancers, with particular focus on bladder cancer | Discuss the pros and cons of these different treatment options | 1. Students were asked to read the paper by Creel (2007) and post a comment on the blog outlining their views on the treatment options for bladder cancer outlined in the paper and the consequences for patients.  
2. Students were asked to read the paper by Babjuk (2010) discussing neoadjuvant chemotherapy prior to chemotherapy and asked to post a comment on the blog outlining their views on their paper’s conclusions of the studies reviewed. |
| Discuss the epidemiology, diagnosis and staging of urothelial cancer | Discuss treatment options for urethelial cancers | 1. Students were asked to read a paper by Arrington (2008) which provides a wider perspective on men’s sexuality related to a diagnosis of prostate cancer, and then comment on the blog on what aspects of the paper challenged their current views on men’s sexuality.  
2. Students were asked to comment on the blog on |
| 5: Follow-up and quality of life issues for patients and their families | Discuss the quality-of-life issues that patients and their families experience as a result of cancer and its treatment  
Suggest ways that nurses can assist patients and their families to cope with these changes in quality of life. | 1. Students were asked to read a paper by Arrington (2008) which provides a wider perspective on men’s sexuality related to a diagnosis of prostate cancer, and then comment on the blog on what aspects of the paper challenged their current views on men’s sexuality.  
2. Students were asked to comment on the blog on |
Challenges encountered

Sourcing appropriate reading material for students on unit 2 (rapid access prostate cancer units) was difficult. Two of the papers chosen built on the learning on unit one by revisiting watchful waiting with active surveillance. However, a paper by Wareing (2003) on physical examination and history taking skills in a prostate clinic did provide a comprehensive overview for students, and no similar paper published more recently was found.

This module is also an optional module for students undertaking the postgraduate diploma in nursing (oncology) at the school. This presented two challenges. Firstly, the oncology students were also undertaking two other modules at the same time while this module was the only one being undertaken by the urology nurses. This meant that the urology nurses taking the module were not distracted by other modules and were engaging more on the discussion board and ‘driving’ the on-line discussions.

Another challenge was that the focus on surgical options for prostate cancer was not seen by some of the oncology students as relevant to them. This is reflected in one
oncology student’s comment when evaluating the module: “...I feel that the information covered was not relevant to the oncology programme because most of the prostate was related to the surgery side of care where we do not come across these patients and same applies to the bladder cancer...most of the course covered the surgery side of care and the blog often did not refer to the oncology aspects of these patients...we often do not come across these patients until the later stage therefore too much time was spent on the surgery side of care”. The team reflected on this student’s comment and concluded that the sequencing of topics in unit 3 (Treatment options for prostate cancer) probably contributed to her view. On unit 3, students were first introduced to surgical treatment options and radiotherapy options later. Moreover, on the first workshop day, surgical options were addressed and radiotherapy options were not addressed until the second workshop day (four weeks later). At the second workshop day, the challenge was also to engage the students working in surgical urology to consider that surgery may not always the more appropriate or ‘best’ first line treatment option for men with prostate cancer.

The second e-tivity asked students to read a paper by Koo et al., (2008) which discussed an outcome audit of a nurse-led lower urinary tract symptoms clinic. Students were then asked to provide a 400 word discussion on the role of nurse-led clinics in the management of patients with lower urinary tract symptoms. When reviewing the students’ submissions, it was clear to the team that the e-tivity’s focus was inappropriate. The students’ submissions were mostly descriptive in nature because the
paper was not challenging enough and the topic was not possible to discuss within a 400 word limit.

Some students feel uncomfortable engaging on the blog; this feeling is heightened when the rest of the group have already discussed a topic and there is a perception of nothing new to add. The pressure to post a comment on the module’s blog (up to a maximum of 10% of the module’s marks were assigned to this activity), may affect the quality of some students’ comments.

Finally, another challenge is organising the workshop days in college in such a way that makes them as meaningful as possible for students. While some revisiting and consolidation of issues already addressed on their readings and blog discussions is inevitable, too much repeating of topics already addressed should be avoided and the workshops should focus on further application of students’ learning to their practice.

**Conclusion**

The development and delivery of this module illustrates the benefits of close collaborative work between the university and expert nurse practitioners. This collaboration has resulted in a positive learning experience for the module’s team and further strengthening of links between the university and hospital.
Using e-learning technology creatively increases nurses’ engagement with learning (Wood 2010). The potential of blended learning as a creative and sustainable way of delivery continuing education to urology and oncology nurses is evident. We hope that by sharing our experiences, we will provide others involved in continuing education for urology nurses with some ideas for creative teaching and learning initiatives.

**WHAT IS KNOWN**

Continuing education for urology nurses is essential in a rapidly changing health care environment.

Continuing education for urology nurses in the United States is well established with accreditation programs in place. However, accreditation for European urology nurses is still in the development phase.

**WHAT THIS PAPER ADDS**

Illustrates a creative approach to the development and delivery of an e-learning module for urology nurses.

Illustrates the unique contribution provided by expert nurse clinicians in the development and delivery of e-learning modules.

Highlights the diversity of knowledge nurses require when caring for patients with urological cancer.
References

Abrahamsson PA (2009). Prostate cancer: To treat or not to treat?’, European Urology, Supplements; 8: 418-423.


