Nurses' experience establishing a nurse-led bladder cancer surveillance flexible cystoscopy service

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KEY WORDS

Bladder cancer surveillance, flexible cystoscopy, nurse cystoscopist, training tool, consent.

ABSTRACT

Objective
The aim of this article is to describe and evaluate the processes involved in setting up a nurse-led bladder cancer surveillance flexible cystoscopy service.

Setting
Day Surgery Unit, Royal Melbourne Hospital, Melbourne, Australia.

Subjects
Registered nurses, follow-up bladder cancer patients and the urological team.

Primary argument
As a result of inefficiencies in current practice including, waiting times, utilisation of doctors' time, poor documentation and communication and patients being lost to follow-up the existing system for bladder cancer surveillance was questioned.

Conclusion
This experience has resulted in the creation of a training-tool with competencies, patient pathways, guidelines and protocols. In turn there was a noticeable reduction in waiting times and improved communication and documentation resulting in a robust nurse- led bladder cancer surveillance service.

INTRODUCTION

The global incidence of bladder cancer is estimated at 356,600 new cases each year (Cancer Research 2002). Seventy-five to eighty-five percent are non-muscle invasive bladder cancers (NMIBC) (pTa, pT1, carcinoma in situ) confined to the mucosa or sub mucosa (Babjuk et al 2010; Sylvester et al 2006). The treatment and prognosis of bladder cancer depend upon its stage, grade, and other risk factors determining whether the cancer will recur or progress. Staging is based on how far the cancer has penetrated into the bladder wall tissues and tumours are classified as either low or high grade disease. Grading relates to how differentiated the cells are under a microscope.

Several factors are used to stratify whether a bladder cancer is low risk or high risk for recurrence and progression. These factors include the size, number, and appearance of the tumour(s), if it recurs early, and how deeply it invades into the bladder. Thirty to eighty percent of NMIBC cases will recur and up to 45% of cases will progress to muscle invasion within 5yrs (Babjuk et al 2010; Sylvester et al 2006). Due to the risk of recurrence and progression, patients with NMIBC need to have regular check cystoscopic surveillance usually by flexible cystoscopy, using a fibre optic cystoscope under local anaesthetic. The frequency of cystoscopies is tailored to the patient's degree of risk (Babjuk et al 2010). The first flexible cystoscopy should be three months after the original resection of bladder tumour as this is an important prognostic time to predict subsequent recurrence and progression (Sylvester et al 2006).

In September 2008 Melbourne Health (MH) approached the Department of Human Services seeking support to establish a urology service model involving the delivery of flexible cystoscopy procedures for bladder cancer surveillance, by nurses who have received training and preparation to undertake the procedure. Traditionally it had been the role of the urology registrar and visiting international fellows to perform cystoscopies. However it had not been possible for the medical staff to keep up with demand, with 13 flexible cystoscopy lists cancelled in 2007 due to doctor unavailability.

At the start of the project there were over 200 patients on the waiting list for surveillance cystoscopies. The current practice was being questioned due to inefficiency of the system coupled with a high turnover of medical staff, resulting in fragmented care and little ownership of this patient group or service. This affected; waiting times, utilisation of doctors' time, poor documentation, ineffective communication and patients lost to follow-up. MH received a one-off funding grant to support the employment of two part time nurses. The key deliverables within a year were:

- Development of a training package, competency standards and patient pathways and guidelines for nurse cystoscopy clinics for bladder cancer surveillance at the Royal Melbourne Hospital (RMH); and
- Development of establishment and evaluation of the nurse-led bladder cancer surveillance service at RMH.

Nurse-led clinics allow nurses to demonstrate advanced nursing practice involving assessment, diagnosis, treatment and patient management (Lane and Minns 2010). This offers role development but improves patient experience with a positive impact on quality of care (Loftus and Weston 2001). It has also been noted within the literature that by providing a nurse-led clinic within an outpatient setting, waiting times are cut with a more effective and efficient service (Lane and Minns 2010; Lipley 2001).

A nurse working within the department had previously had experience in the United Kingdom (UK) in establishing a nurse-led flexible cystoscopy service. This knowledge and experience was utilised to achieve the desired key deliverables. Within the flexible cystoscopy setting it has been acknowledged that nurses are safe, accurate and can improve services with consistency (Gidlow 2000; Gidlow et al 2000; Taylor et al 2002) including regular audit (Kilburn 2002). This article gives the authors an opportunity to share experiences, enlighten the work behind the scenes and create awareness into setting up nurse-led clinics and encourage fellow nurses to do similar.

DISCUSSION

Gaining approval

First, it is essential to have the medical support of the department, prior to embarking upon this advanced nursing skill (Taylor et al 2002). In combination with support, a training tool needed to be developed. In 2000, the British Association of Urological Surgeons (BAUS) realised the need to create guidelines to ensure consistency amongst nurses learning to utilise flexible cystoscopy within the UK. A working party identified a theoretical, observational and supervision guide for nurses to complete training which was published (BAUS 2000). Incorporating these guidelines, the New Zealand experience (Osbourne 2007) and previous experience from the UK – a suitable training program was created for use within Victoria, Australia, adhering to the Nursing Board of Victoria scope of professional practice. Prior to the tool being utilised it needed to be endorsed. A meeting was organised with the Executive Director of Nursing, Head of Clinical Governance, Professor of Urology and the Divisional Director of Nursing. Subsequently, project planning began with realistic timelines; integrating process mapping, networking, training, data collection, consent and governance.

Process mapping comprehensively considers every relevant detail needed for a producer to deliver a final product/outcome to its clients (Patterson 2008). A process mapping meeting was arranged, with the key members of staff involved within the flexible cystoscopy patients' journey including: the urology consultant, pre-admission nurse, admissions officer, urology nurses and day surgery nurses. The meeting involved dissecting the patients' pathway from referral to diagnosis, treatment and surveillance flexible cystoscopy. These are an unusual cohort of patients as they are very rarely discharged from follow- up due to the continuing long-term risk of recurrence of bladder cancer, resulting in most patients on lifelong annual surveillance.

Two key areas were highlighted from this meeting and identified for improvement. Firstly, there was no system of determining how many patients were on the waiting list for surveillance flexible cystoscopy as the lists were all amalgamated with the diagnostic cystoscopies. With no structured management for follow-up this led to patients being lost to follow-up; if patients did not attend their appointment or cancelled, this resulted in some not being rebooked. In order to create a nurse-led surveillance flexible cystoscopy service the number of patients waiting needed to be ascertained, with regards to demand and capacity of the new service. The elective surgery access manager was advised to instigate a separate code for the designated bladder cancer surveillance flexible cystoscopy to create a more efficient management for follow-up. Sequentially patients can now be audited with ease, including volume of patients waiting and scheduling of requested follow-up dates to ensure no delays in surveillance.

Secondly it emerged that not every doctor was generating a letter to the GP. This inconsistency identified no or lack of correspondence. It was imperative to re-educate the doctors to ensure all patients had a letter dictated both for the notes and for the GPs to improve communication and follow-up.

Training Tool

Appropriately qualified nurses should be empowered to undertake a wider variety of clinical tasks (Lane and Minns 2010). It is recommended that the nurse will have had two years' experience in urology and additionally complete a comprehensive in-house training program with the support of a urology consultant, to undertake flexible cystoscopies independently (BAUS 2000). Also stipulated by the BAUS (2000) guidelines; there must always be an experienced and designated urologist immediately available within proximity in the event of complications and the need for technical or diagnostic advice.

The assessment of the potential nurse cystoscopist is agreed using competencies. The nurse cystoscopist is then required to demonstrate competence through assessment using the training tool. The assessors should include the supervising consultant urologist plus one other experienced urologist, to enable nurses to achieve a high standard of safe practice (Lane and Minns 2010).

The training tool created was divided into four sections: theoretical, observational, practical (supervised) and consolidation of practical competence (unsupervised).

Theoretical competencies cover the following key topics; anatomy and physiology of the lower urinary tract, management and pathology of NMIBC, principles and complications of cystoscopy and documentation, coding and audit.

Training encompasses a thorough knowledge of bladder anatomy and the conditions likely to be detected by cystoscopy so that the nurse can accurately and confidently discuss diagnostic issues with patients and medical colleagues. The theoretical assessment completion includes a self-directed learning package (created in-house with the support and collaboration of the urology consultants) with an oral assessment by a consultant urologist. Self – directed learning is an excellent way of taking your own initiative by identifying learning needs, goals, create competencies and evaluate learning outcomes (Knowles 1975; Levett-Jones 2005). The following topics were included; anatomy and physiology of the bladder, investigation of haematuria, bladder cancer overview, workings of a cystoscope, principles of cystoscopy, complications and antibiotic prophylaxis guidelines, bladder cancer follow – up protocol, Olympus equipment and nurse cystoscopy literature.

It is imperative that the nurse has the knowledge to plan further management for conditions detected by or resulting from cystoscopy, guided by clearly written protocols, which are reviewed on a regular basis (BAUS 2000). Clear consultant-led directives must guide the nurse's practice in particular with regards to antibiotic prophylaxis to reduce the patient's risk of urinary tract infection post-cystoscopy. There is always a urology doctor available during the nurse cystoscopy list who can attend the clinic if antibiotics are required to be prescribed.

The observation period specifically focused on meeting learning competencies which is an important skill (Gaberson and Oermann 1999). In addition the observation of another person performing a skill provides an image of how that skill should be performed (Reilly and Oermann 1992). Learning by observing the correct technique, initiates learning to accurately communicate with patients by observing the whole consultation with the consultant urologist from the start, recommending a minimum of 10 patients. This allows the nurse to build an initial understanding of normal and abnormal anatomy through observation while having the opportunity to seek clarification of the findings with the consultant urologist. This is best observed using videoscopes through closed circuit television.

The practical element incorporates supervision of the passage of the cystoscope in a minimum of 50 consecutive cases of surveillance cystoscopy with confirmation of the accuracy of findings by the supervising urologist. Confidence and competence will be achieved by individual nurses at varying rates (Taylor et al 2002; Radhakrishnan et al 2006) and may be related to prior experience with equipment similar to a cystoscope, previous exposure to cystoscopy and hand-eye/video coordination skills. For this reason 50 is suggested purely for guidance purposes.

Once the observational, theoretical and practical competencies had been accomplished, consolidation was necessary. The additional consolidation allows the nurse to conduct the entire patient consultation and cystoscopy procedure as if they were in independent practice, with the security of knowing that their clinical findings and decision making are closely scrutinised for accuracy. A minimum of 30 consecutive cases of surveillance cystoscopy, unsupervised, with confirmation of the accuracy of findings by the supervising urologist are retrospectively reviewed using video data. These specific patients are also given a patient satisfaction questionnaire to evaluate the service and a 48hour post cystoscopy telephone call to discover whether there were any complications.

After completion of the training tool it is recommended reassessment should take place after a period of six months of practice or at the discretion of the individual nurse or supervising consultant. It is important as nurses to have evidence of the flexible cystoscopies within the training period (BAUS 2000), a report was devised specifically for the nurses' portfolio.

Data Collection

Data was collected from the commencement of the project by establishing a bladder cancer database from the outset within the urology department. A data management system, ENDOBASE, was purchased with some of the grant. It integrates with the existing RMH cystoscopy equipment within day surgery allowing examination reports to be generated. To construct a surveillance bladder cancer examination report, this involved intensive training and time for the urology team, capturing relevant information and data with a high degree of standardisation. As data accumulates it can be extracted and examined as necessary for audit and data trails.

The examination report is divided into five sections: Indication (bladder cancer surveillance), Urological History (incl. initial diagnosis of bladder cancer, histology, recurrences, and treatment), Investigations (urinalysis, cytology, radiological), Findings (cystoscopic appearance) and Follow-up. Still pictures can be taken and produced on the report with specific mapping on a picture of the bladder. The convenience of this report is that data can be preloaded and subsequently generated in real time. The benefits of this include: improvement of communication as the patient can take home a copy; be filed directly into the patient's notes and one sent to the GP immediately. The data entered is available at the next surveillance flexible cystoscopy which saves time re-entering previous history; it also reduces time wasted navigating through poorly filed notes. It creates a bladder cancer tumour chart that fundamentally improves practice in bladder cancer with accurate notes, histories and data management. Good record keeping; safeguards, promotes and empowers nursing practice to the highest standard of care (Callaghan 2006).

Follow-up appointments are now generated at the time of cystoscopy using the system. Patients are given their next appointment by the nurse cystoscopists before they leave. Two weeks before their next appointment a reminder is sent, so with improved communication this avoids loss to follow-up, delays in waiting lists and prevents non-attendees.

An important aspect of data management is quality assurance (Koch 1992), with the seamless documentation of all the work flow steps it is possible to retrace all videos and images captured at the time of the cystoscopy. This is particularly helpful for achieving the training tool competencies as it enables the urology consultant to review the video data and ensure appropriate management of the patients is consistent throughout the nurse cystoscopists' practice. Furthermore, each week the nurses have the opportunity to discuss their findings and waiting list patients with a doctor if there are any concerns.

Retrospective data is entered into a database to accumulate a spreadsheet to assess the percentage of positive pathology from patients admitted for general anaesthetic surgery. Future improvements could involve booking the theatre lists more effectively using these detailed reports, by estimating the approximate length of the operation and utilising the allocated theatre slots resourcefully.

Consent

Consent for flexible cystoscopy within the day surgery unit is incorporated on the request for admission and consent form using the terms, doctor, surgeon and clinician. Advance nursing skills are associated with legal and professional issues (Greenwood 2003). This is something that needs to be addressed prior to commencing nurse–led cystoscopies, to ensure the patient is aware a nurse is doing the cystoscopy and a legitimate consent form is signed. Informed written consent should enable the patient to be involved with their care and reduce unnecessary anxiety and improve the patient's understanding of the procedure and common risks (Burke et al 2002).

As specified within the BAUS (2000) working document, a patient expects that any operation is carried out with a good standard of skill and care and that appropriate action is taken on the findings. It is not strictly relevant whether the individual performing the procedure is a nurse or doctor when deciding what action needs to be taken, as the training skills and experience must be adequate for good care to be delivered, regardless of professional background .

A nurse will be held to the standard of a competent cystoscopist and inexperience will not excuse either the doctor or nurse from liability in the case of negligent or unacceptable care. It is deemed both appropriate and acceptable for a nurse to gain patient consent when performing flexible cystoscopies (BAUS 2000). Nevertheless patients are allowed to refuse treatment by a nurse and given the opportunity to discuss the procedure with the team involved (Nursing and Midwifery Council 2010).

It is important that the nurse makes it clear to the patient that they are not a trained urologist. This is communicated verbally and in writing. The consent form may be invalid and a battery committed if the patient is led to believe that the person performing the procedure is a doctor rather than a nurse. Unlike cases of negligence, the patient need not show harm to be entitled to bring legal action.

The nurse cystoscopy protocol should be agreed between the nurses and medical staff involved. It has to be subject to regular review and updating. The vicarious liability of MH extends to all procedures performed by a nurse acting within the course of their employment. Thus it is essential that the hospital is aware of these nursing role developments and agrees to accept responsibility should a claim arise.

Advice was gained from Senior Legal Counsel with the recommendation to create a Patient Information and Consent Form. This was endorsed by Legal counsel, Clinical governance, Executive Director of Nursing and the forms committee meeting.

CONCLUSIONS

A specific designated flexible cystoscopy bladder cancer surveillance list ensures the nurse cystoscopist sees follow-up bladder cancer patients only; it also enables audit and data management to be more readily available within an established bladder cancer surveillance service.

The new data management equipment generates real time reports, which automatically improves the communication, within the notes and notifying GPs. Appointment times are staggered and patients are given the appointment of their next surveillance cystoscopy before leaving the department to ensure a robust, seamless service is delivered. Urology consultants/registrars have been released to meet clinical demand and focus on diagnostics and one stop haematuria clinics allowing nurses to optimise advance skills. Between June 2009 and June 2010 the average number of patients waiting per month for diagnostic cystoscopy has been reduced from 57 to 16 which is a 72% improvement. There is currently no waiting list for surveillance flexible cystoscopy.

NMIBC patients are bound to lifelong surveillance, whilst the junior doctors and registrars are highly pressurised and regularly rotating. Initial auditing of this new service has shown that patients value the added time given to each consultation, the same point of contact and appreciate the continuity of care provided by the nurse cystoscopist.

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