Using Essence of Care benchmarking to develop clinical practice

An ultrasound scan of the bladder using a portable bladder scanner is a reliable, non-invasive way of estimating the volume of residual urine that remains in the bladder after voiding (the post-void residual) (Addison, 2000a). Nurses now use bladder ultrasound scanners in a variety of clinical settings (Lewis, 1995).

It has been argued that ultrasound should be a standard investigation for the assessment of patients with bladder problems (Addison, 2000a), in particular when emptying their bladder. Older people, particularly men and those with a neurological disorder, including stroke, are most at risk of having a problem emptying their bladder effectively (Addison, 2000b; Brittain et al, 1998).

Health professionals have a responsibility to provide safe and effective care (NMC, 2002) and nurses need to gain appropriate competences in any activity they are going to carry out. When the assessment of bladder problems is required they need to know how to perform a portable bladder ultrasound correctly. Ness and Addison (2000) discuss how formal training based on a competency framework can meet this need.

**Measuring a post-void residual volume**

A post-void residual volume is considered to be significant if it is greater than 100ml (Anderson et al, 1992). There are a number of possible causes (Box 1).

It is often associated with a variety of symptoms and complications, together with related psychosocial problems (Box 2).

Wagg and Malone-Lee (1999) suggest that a volume of 150ml in an older person is acceptable and unlikely to be problematic. Treatment may not be required even when a significant volume of urine is discovered – 300ml or over (Addison, 2000a). Nurses require clinical decision-making skills to facilitate an accurate review and assessment of their findings (Addison, 2000a).

Poor bladder emptying may be asymptomatic and if it remains undiagnosed the patient may not receive appropriate treatment and therefore may experience complications (Box 2).

**Transient symptoms**

A post-void residual volume may occur at varying times of the day and in varying amounts. The problem is particularly associated with multiple sclerosis (DasGupta and Fowler, 2003; Namey, 1997). Transient symptoms may be due to a detrusor sphincter dyssynergia (the urethral sphincter is unable to relax as the bladder contracts). This means that complete bladder emptying is not always possible.

Addison (2000a) suggests that all patients with multiple

**Box 1. Causes of poor bladder emptying/retention of urine**

- A physical or neurological obstruction to the flow of urine; for example, prostatic enlargement, urethral stricture, trauma, constipation, faecal impaction, prolapse, sphincter dyssynergia
- A neurological disorder/injury preventing the detrusor muscle (the muscle of the bladder wall) from contracting effectively
- Drug therapy; for example, strong analgesics/opioids, anaesthetic agents, anticholinergics/antimuscarinics, antihistamines, antidepressants
- Surgical procedures; for example, gynaecological, urological, orthopaedic

**Box 2. Symptoms and problems related to poor bladder emptying**

**Symptoms**

- Recurrent urinary tract infection (UTI)
- Systemic and localised symptoms related to a UTI: for example, pain, discomfort, headache, lethargy, confusion, pyrexia, flushing, stinging/burning when passing urine, frequency, urgency
- Hesitancy, poor stream, intermittent stream, terminal dribble
- Frequency and/or urgency of micturition;
- Incontinence – day and/or night
- Nocturia
- Lack of sleep/rest and related symptoms such as tiredness, irritability, headaches
- Falls associated with urgency and getting up at night
- Enlarged, hypotonic bladder; detrusor failure
- Renal damage – hydronephrosis, renal failure and associated problems

**Psychosocial problems**

- Depression
- Difficulties associated with sexuality affecting relationships
- Unemployment/financial problems
- Pad use, requiring extra laundry, affecting socialisation and causing altered body image
- Anxiety, fear, isolation

Note: Patients may be asymptomatic

**References**


sclerosis should be offered bladder ultrasound at least once a year as a means of monitoring bladder emptying (see p49).

**Scanning verses urethral catheterisation** The use of bladder scanning is now challenging urethral catheterisation as the best method of confirming post-void residual (Fader and Craggs, 2003; DasGupta and Fowler 1997; Wilson, 2003). It has the advantage of being a non-invasive procedure and there is no risk of introducing infection to the urinary tract. The advantages of bladder scanning are listed in Box 3.

**Indications for ultrasound scanning** A nurse should perform a portable bladder ultrasound as part of a continence assessment. The procedure should be used to assess those at risk of poor bladder emptying even if they have no symptoms. Such patients would include men with symptoms of prostate enlargement, those with a neurological disorder, patients taking anticholinergic medications and any patients with associated symptoms. Indications for scanning the bladder by ultrasound are listed in Box 4 (Addison 2000a, 2003).

**Benchmarking** Benchmarking, as defined in Essence of Care (Modernisation Agency, 2003a), is an integral part of clinical governance. It is a valuable tool for developing clinical practice and can enhance patient services.

Benchmarking can be used to quantify the need for a change in clinical practice, and can also provide measurable outcomes for clinical services. The Modernisation Agency (2003a) has identified how the process provides a foundation on which to develop and advance practice. The process can lead to continuous improvement through comparing practice with other services and sharing ideas (Mason and Brady, 2003) (Box 5).

**Benchmarking bladder ultrasound** As a clinical nurse specialist in continence care, I questioned whether nurses were regularly performing a portable bladder ultrasound scan as part of a continence assessment, and the benchmarking process provided a framework to examine this. I anticipated that benchmarking bladder ultrasound would help to identify any specific areas for education and development. To find out, I looked at this area of clinical practice using the stages identified in the Benchmarks for Continence and Bladder and Bowel Care document (Modernisation Agency, 2003b).

**Stages of the benchmarking process** Stages One and Two – Agree best practice and assess the clinical area against best practice These two stages involved comparing and sharing practice with the continence service of a neighbouring trust. The service is led by a nurse consultant in bladder and bowel dysfunction and agreed statements on what constitutes best practice in portable bladder ultrasound had been developed by the trust.

I attended its bladder ultrasound scanning course, which proved to be extremely valuable when I was developing a local training programme, as it helped me to identify areas for practice development.

Attendance at the course also enabled me to be aware of potential problems, such as:

- **An inadequate number of bladder ultrasound scanners** A small audit was completed to measure how often bladder ultrasound scanning was used in a continence assessment. The audit highlighted that scanning rates were low in comparison to the number of continence assessments taking place. One reason was that nurses had limited access to portable ultrasound scanners in the clinical areas. There was also a lack of knowledge about the use of ultrasound in bladder assessment.

**Box 3. Advantages of bladder ultrasound compared with catheterisation**

- **No risk of a urinary tract infection related to the procedure (this is a complication of urethral catheterisation)**
- **Non-invasive**
- **Helps to maintain privacy – there is no need to expose the genital area**
- **No pain/discomfort, although this may depend on the skill of the operator/degree of urinary retention**
- **Portable**
- **No need to attend hospital department**
- **The scanner is reusable**
- **No need to wear protective clothing**
- **Quick and easy**
- **Reliable – depending on the skill of the operator/volume of residual urine (volumes <50ml and >1000ml may not be stated or shown)**
- **Suitable for use with children and vulnerable adults**
- **Provides instant results**
- **Aids decision-making and diagnosis**
- **Provides instant biofeedback to the patient**

Source: Addison, 2000a; 2000b; 2003

**REFERENCES**


Supplement

Lack of access to information

My trust did not have local guidelines or procedures for the use of portable bladder ultrasound. A guideline can help to provide clinicians with information and clarify best practice (National Institute for Clinical Excellence, 2003). Furthermore, resource files containing relevant research about bladder ultrasound, literature, equipment manuals, and maintenance records had not been developed.

Inadequate training

Reflection on current practice indicated that there was a gap between theory and practical experience. Staff had watched a manufacturer’s training video that showed how to use bladder ultrasound scanners, and they had received further information on the topic if they attended a continence promotion study day.

However, this training was not based on a competency framework that met with formal standards, such as the documents from the Medicines and Healthcare products Regulatory Agency (2000, 2001).

Stage Three – Produce and implement an action plan

An action plan was developed and specific outcomes and measurable criteria for success were set (Box 6). The action plan aimed to meet staff training needs and encourage more widespread use of the portable bladder ultrasound scanner in continence assessments.

Formal training sessions based on an agreed competency framework were planned, developed and started. Manufacturers supported these training sessions by providing literature and equipment, and they have proven to be a valuable source of advice and information. The action plan included the purchase of extra bladder ultrasound scanners to improve access to equipment.

Stage Four – Review achievements

Reviewing progress is an important element in the benchmarking process. Specific learning outcomes and success criteria had emerged during the action planning stage and these will be measured. We have found that bladder ultrasound scanning has become an integral part of continence assessment and access to the scanning equipment is being requested more frequently. This needs to be substantiated with further clinical audit, which will also help to quantify the outcome of the training.

Nurses are now completing a structured, competence-based training package. They are expected to prove and defend their competence by completing competency statements and gaining supervised practice. The course evaluation has been extremely positive.

A formal bid for funding to purchase more portable ultrasound scanners is to be submitted. It is anticipated that this will be successful as a result of the benchmarking project.

The trust values the process of benchmarking as developed in Essence of Care (Modernisation Agency, 2003a) and the contribution it makes to the delivery of quality services for patients.

Stage Five – Dissemination and review of the action plan

A significant stage of the benchmarking process is the dissemination of change and practice development. This should be combined with a critique of the action plan and revision of it if necessary.

Future priorities include the development of a best practice guideline that incorporates the competency framework. This will be used as a basis for developing and improving continence care further, facilitating multidisciplinary learning and providing measurable criteria for clinical audit.

The advent of integrated, multidisciplinary continence services as required by the Department of Health (DoH, 2001) means that the training and competency

### Box 4. Indications for Ultrasound Scanning of the Bladder

- Identify/confirm poor bladder emptying;
- Confirm retention of urine;
- Provide biofeedback in bladder retraining;
- Assess the success of a trial without a catheter;
- Assess catheter malfunction;
- Assess the effect of anticholinergic medication;
- Identify the level of bladder sensation related to bladder volume.

The procedure can also be used as part of urodynamic investigations (Robinson, 2000a; 2000b)

### Box 5. Stages of Clinical Benchmarking

- Stage 1. Agree best practice
- Stage 2. Assess clinical area against best practice
- Stage 3. Produce and implement action plan aimed at achieving best practice
- Stage 4. Review achievement towards best practice
- Stage 5. Disseminate improvements and/or review action plan
- Stage 6. Agree best practice

Source: Modernisation Agency, 2003b
Supplement references

Association for Continence Advice 25th Anniversary conference.
Call for abstracts

The latest information on continence care

Update

The ACA conference will be held on 10–11 May 2005 at the International Centre, Telford.
Free papers given by delegates are a vital part of any conference; they are an opportunity for health care professionals to communicate their ideas and discuss projects and problems encountered in the field of continence care with fellow professionals.
The conference organisers welcome abstracts on a range of topics. For example:
- Public awareness of continence problems;
- Research into aspects of continence;
- Evaluation projects;
- Referral/Outcomes analyses;
- Case studies/Specialists group studies;
- Innovative practice/projects;
- Audit/Benchmarking;
- The work of multidisciplinary teams in continence care;
- Nurse prescribing.
Collaborative projects are also welcome.
Information on how to prepare your abstract can be obtained from the conference secretariat (see below). Entries should be marked ‘Conference Abstracts’, and sent to the ACA, care of Fitwise. Abstracts should arrive, via e-mail or post, by 7 March 2005.
There will be three awards of £200 each made at the conference for the following: best poster; best presentation; and best abstract.
Each is supported by an education grant from Astra Tech.
Further details are available from:
ACA, Fitwise Management Ltd, Drumcross Hall, Bathgate, EH48 4JF. Tel: 01506 811077; fax: 01506 811477; e-mail: info@fitwise.co.uk

Incontinence pads and pressure ulcers

Incontinence pads increase the risk of patients developing pressure ulcers. This is the finding of research that examined the effects of wet and dry absorbent pads on the pressure-relieving properties of a standard mattress and two types of pressure management mattresses.
A two-piece pad and pants system for moderate to heavy incontinence and an articulated model with simulated body tissue was used in the study. The authors concluded that a two-piece absorbent pad and pants system had a substantial adverse effect on the pressure-redistributing properties of the mattresses. The study showed that if creases in the pads were smoothed out, a lower peak pressure was achieved.

REFERENCE

BOX 6. CRITERIA FOR SUCCESS

- Nurses are aware of the role bladder ultrasound has to play in continence assessment
- Formal competence-based training is undertaken
- Increased skills and knowledge are attained
- Completion of competency framework document
- Increased use of bladder ultrasound
- Pathways of care following bladder ultrasound agreed
- Best practice guidelines in place
- Availability of a resource file
- More portable ultrasound equipment is available
- Competency-based training/framework extended to multidisciplinary team members
- Integration with local NHS and independent sector partners

Conclusion
Ultrasound scanning of the bladder is often under-used in a continence assessment.
The clinical benchmarking project described here identified the need to develop practice locally and has already brought about change. There are still goals to achieve, but the process has been inspiring.
It is now anticipated that when a patient presents with a bladder dysfunction, a scan to identify emptying problems will be offered routinely and performed by a competent practitioner.

Stage Six – Agree best practice
It can be a challenge to continue benchmarking activity once the desired outcomes have been reached.
However, it is vital to ensure that improvements are sustained and practice is reviewed in the light of any new evidence and guidelines.
The continence link groups have been identified as the most appropriate and motivated forums to ensure the process is ongoing.

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