Bridging knowledge gaps between evidence and practice is an important part of evidence-based practice to ensure high-quality patient care. Cochrane produces systematic reviews of primary research so health practitioners can base treatment decisions on the best available health evidence from worldwide research. This article reports on a Cochrane Library search to explore the evidence (or lack of it) behind nursing decisions in catheter care. It looks at what practitioners can do when evidence is ambiguous or unclear, and explores how they can bridge the evidence gap.

The evidence
Indwelling catheter change frequency
A recent Cochrane Review looked at frequency of catheter change (Cooper et al., 2016); only one all-male study from 1982 was identified (n=17). When considering incidence of symptomatic catheter-associated urinary tract infection (CAUTI), no statistically significant difference was found between patients whose catheters were changed only when clinically indicated and those whose catheters were also changed monthly.

Is one type of catheter better?
Jahn et al (2012) considered the relative merits of different types of urinary catheter at reducing infection. They identified three small and relatively old studies: one from 1996, in which 12 patients tested silver- and silicone-impregnated catheters, swapping catheter types every two weeks; a 1979 randomised controlled trial (RCT) of 21 patients using PVC, latex or silicone catheters; and a 1991 trial, randomising 69 patients to hydrogel- or silicone-coated catheters. The review found that in all studies:
- All participants had CAUTI;
- No type of catheter reduced infection rates significantly.

However, the 1991 study suggested hydrogel-coated catheters might afford more protection than those with a silicone
Box 1. Learning from patients

Patient stories can be disseminated through nursing experience or websites such as Healthtalk (healthtalk.org), in which people share their experiences on film of what it really is like to have a health condition, including living with a urinary catheter (Bit.ly/HealthTalkCathereter). Patient forums and magazines, such as Forward by the Spinal Injuries Association (spinal.co.uk), also publish stories by people with lived experience of issues such as incontinence and catheterisation.

Research by the Health Experiences Research Group at the University of Oxford revealed that common concerns of catheter users included recurrent infections, blockages, leakages and bladder spasms; another common question was whether sex was painful or even possible with a catheter, as highlighted by Prinjha and Chapple (2013). Bypassing, discomfort, blockage, infection, bleeding and, in men, painful erections are mentioned elsewhere (Royal College of Nursing, 2019).

Coating. The authors concluded the studies were too small to provide reliable evidence. Importantly, only rates of CAUTI were considered, not adverse events such as bleeding or discomfort.

Catheter washouts

Opinion is still divided about catheter washouts. A review undertaken by Shepherd et al (2017) identified three crossover studies and four RCTs, comparing catheter washout with no washout, or looking at the relative merits of different washout regimens (saline, weak acid, strong acid and antimicrobial solutions). However, the studies had methodological problems, some were small and one had mixed results for both suprapubic and urethral catheters. None considered patient satisfaction or comfort. The authors concluded that “insufficient data existed providing reliable evidence about the benefit or harms of washout policies”.

If washouts are proven beneficial, there are further questions around necessary frequency, timings and volumes.

Prophylactic antibiotics

A Cochrane review by Niël-Weise et al (2012) looked at the benefits of prophylactic antibiotics, but this mainly related to intermittent catheterisation. The only study considering indwelling urethral catheters showed antibiotic prophylaxis did reduce rates of CAUTI, but the study was small (34 participants, with 11 of these not completing the study protocol). The authors also warned of the antibiotic-induced development of resistant organisms.

Bridging the evidence gap

Evidence-based healthcare is defined as “a systematic approach to clinical problem solving by the integration of best research evidence with real-world clinical expertise and patient values” (Schlegl et al, 2017).

Listening to patients

As health professionals, how often do we forget to go back and ask patients about their views on care they received? This is especially important when the evidence is inconclusive. The saying, “to know the road ahead, ask those coming back” is particularly pertinent when supporting people travelling the journey of disease and disability, who have a wealth of experience to share (Box 1).

It is also important to ask patients what has worked for them in the past as catheter experience spanning several decades is not always evident from a patient’s medical history. For example, it is worth asking if the patient has had a previous adverse experience with a particular type of catheter. The design of indwelling Foley catheters has not changed significantly since 1937 and, although this is frustrating, it does mean patients with long-term catheters are likely to have tried and tested most types.

“Recognising what we do not know about catheter care (because of a lack of evidence) is as important as recognising what we do know”

It is also worth asking how important self-image, a sense of control and an active sex life are to the patient. In one qualitative study of 36 catheter users, some expressed a positive self-image in spite of the catheter, while others lost confidence in their body (Chapple et al, 2014). The importance of positioning for suprapubic and urethral catheters during sex was a recurring theme in those interviewed, and users described a lack of information and discussion from health professionals. Cochrane UK’s blog series (Bit.ly/CochraneSex) also considers health professionals’ reluctance to talk about sex with patients.

Sometimes, the type of catheter or how often it is changed will matter less to the user than the person undertaking the catheter care. For example, does the patient wish to be independent or is an informal carer involved? When catheters are changed by district nurses, users felt some were more capable than others and preferred seeing the same nurses rather than a different one every time; some patients thought district nurses and GPs lacked experience in changing suprapubic catheters and needed more training (Prinjha and Chapple, 2013). This raises the issues of:

- Are nurses asking the right questions?
- Is research addressing the questions that matter most to patients?

Real-world clinical expertise

As a nurse, it is also important to ask yourself what you have seen work in catheter care; questions that might be helpful in this regard are outlined in Box 2.

Sharing stories with colleagues or on social media (while maintaining patient confidentiality) can help shape and refine understanding among nurses. Seeking out expert members of the multidisciplinary team can also be invaluable; for example, I learned about autonomic dysreflexia from working alongside an advanced nurse practitioner in neurogenic bladder management.

Clinical expertise in catheter care can be especially important for catheter users who are unable to communicate what works best for them because their illness or disability has affected their speech or cognition. The Royal College of Nursing (2010) identified that 10% of care home residents are catheterised; dementia and frailty can make people dependent on others to provide a management plan, so it is important to be aware of this.

For some other patients, capacity to make decisions about catheter care may be harder to judge and nurses must refer to the Mental Capacity Act 2005. Even if a patient is deemed to have capacity, they may still make unwise decisions. The nurse can make best-interest decisions but doing so can be difficult when evidence is equivocal. It is important to remember that the long-term carer may be considered an expert member of the decision-making team (Cowan, 2018).

Discussion

As nurses, recognising what we do not know about catheter care (because of a lack of evidence) is as important as recognising what we do know. Such awareness instils
Clinical Practice
Discussion

Box 2. Questions to ask yourself based on clinical experience
- Can leakages be addressed by using a larger catheter size?
- Do some catheter types seem to block more commonly than others?
- Does oxybutynin reduce the sensation of bladder spasms or have no effect?
- Does fluid balance affect the likelihood of blockages and infection?
- Are catheter washouts helpful?
- Is strict adherence to a three-monthly change policy sufficient?

vigilance and encourages research, as well as guarding against overconfidence. Patient opinion and preferences are important and often likely to prevail, especially when the evidence is unclear. It is not acceptable to base clinical decision making on a ‘that’s the way we’ve always done it’ attitude. Look at the research, listen to your patient and liaise with others in the multidisciplinary team.

Recent guidelines are helpful in bringing ‘known knowns’ to the fore. For example, National Institute for Health and Care Excellence (2018) guidance on CAUTI states that antibiotic treatment is not routinely needed for asymptomatic bacteriuria and describes an antimicrobial prescribing strategy for CAUTI. RCN (2019) guidelines highlight the importance of local policies, nurse competence and patient consent for any catheterisation procedure, but make no recommendations on frequency of catheter change or choice of catheter type. Bladder washouts are also viewed with caution, highlighting the lack of evidence in these areas.

The RCN’s (2019) powerful take-home message is: “always challenge the need for catheterisation and catheter usage”. NICE returns the focus to patient-centred care, recommending that practitioners consider its guidelines “alongside the individual needs, preferences and values of patients”, and consult with patients and their families, carers and guardians (NICE, 2018). NT

References
National Institute for Health and Care Excellence (2018) Urinary Tract Infection (Catheter-associated); Antimicrobial Prescribing. nice.org.uk/NG113

For more on this topic online
- Meatal cleansing with chlorhexidine reduces catheter-associated Bit.ly/NTMeatalCleansing

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