

# The male experience of ISC with a silicone catheter

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**I**ntermittent self-catheterisation (ISC) is a frequently recommended therapy for patients who are experiencing bladder-emptying problems, and it plays an important part in the management of the neuropathic bladder and the urological management of a range of lower urinary tract symptoms (Moore et al, 2007). For example, ISC may be required for incomplete bladder emptying, benign prostatic hyperplasia, urethral stricture, post-urethral or prostate surgery and post-reconstructive surgery (Logan, 2012). Since its introduction in the 1970s, ISC has become more common and should be considered the method of choice for draining retained urine for conditions as described above (Logan, 2012). ISC has been shown to have a number of advantages compared with the use of indwelling catheters, including helping attenuate the risk of indwelling catheter-specific complications, helping reduce the need for equipment and establishing a greater opportunity for individualised self-care and independence, helping foster optimal patient independence and self-care (Moore et al, 2007; Shaw and Logan, 2013). There are reported disadvantages of ISC which need to be discussed with the patient. These can include urinary tract infections (UTIs), urethral pain and negative impacts on aspects of quality of life which will be addressed in this article. There is an increased risk of UTIs if the principles of hygiene and sterility are not adhered to. *Figure 1* shows the procedure for male ISC.

This article describes a UK multi-centre patient satisfaction survey evaluating the features of a male ISC silicone catheter, the HYDROSIL® Gripper Male Hydrophilic Intermittent Catheter manufactured by C.R. Bard, Inc., (shown in *Figure 2*) with a further aim of gaining insight into the perception of male ISC users.

The Hydrosil Gripper is a single-use silicone catheter, utilising 'tri-core technology'. Silicones have properties of biocompatibility and biodurability (Curtis and Colas, 2012; Colas and Curtis, 2012). They are the industry standard for medical implants (Colas and Curtis, 2012). The catheter has three individual layers, each contributing to the overall properties of the catheter. The ultra-soft outer layer is designed to provide comfort at the interface between the catheter and the urethra; the firm middle layer provides firmness for better handling without sacrificing the comfort of the soft outer layer. The pliable innermost layer helps the catheter navigate the urethra without the use of unnecessary force. One of the key attributes of silicone is its low coefficient of friction (Curtis and Colas, 2012; Colas and Curtis, 2012). An additional property of silicone

## Abstract

**Since its introduction in the 1970s, intermittent self-catheterisation (ISC) has become more common and should be considered the method of choice for draining retained urine. The realisation for male patients that they require catheterisation can be associated with a significant physical and psychological burden (Shaw and Logan, 2013). This article describes a UK multi-centre patient satisfaction survey evaluating the features of a male ISC silicone catheter. The survey was aimed at determining patient preferences and perceptions of learning ISC with the intermittent catheter to evaluate if a silicone catheter is acceptable and user friendly. This information is intended to be used to expand the knowledge base around catheter selection and help guide nurses who offer a choice of catheters when teaching ISC to patients.**

**Key words:** Intermittent self-catheterisation ■ Quality of life ■ Male patient experience ■ Questionnaires

is that the catheter can be repeatedly folded without causing damage to the product. (Pre-clinical testing may not correlate to outcome in humans).

This multi-centre ISC patient satisfaction survey and evaluation of the use of Hydrosil Gripper was carried out in collaboration with urology nurse specialists from ten NHS locations across the UK (the urology recruitment sites). The survey was aimed at determining patient preferences and perceptions of learning ISC with the silicone ISC catheter to evaluate if a silicone catheter is acceptable and user friendly to male patients.

The primary aim of the survey was to explore the benefits and disadvantages of silicone catheters as an effective option for patients requiring ISC. The survey results are intended to help provide nurses with an insight into the male patients' perceptions about the use of the silicone Hydrosil Gripper. This information is intended to be used to expand the knowledge base around catheter selection and help guide nurses who offer a choice of catheters when teaching ISC to patients. Helping to identify the right product for the individual can lead to better patient compliance with ISC.

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Figure 1. Male intermittent self-catheterisation procedure



Figure 2. HYDROSIL® Gripper Male Hydrophilic Intermittent Catheter

burden (Shaw and Logan, 2013). When learning ISC, patients become aware that they require a better understanding of their anatomy and how it works in order to carry out this procedure for themselves; a situation which can induce additional anxiety and fear. Despite anecdotal reports about the pros and cons of ISC, there are limited published data on ISC for both men and women, and the majority of published studies are small. Kessler et al (2009) studied patients' views and acceptability of ISC and concluded that 80% perceived ISC to be easy, resulting in little interference in daily activities. Another study indicated that for home-care patients who regularly used ISC, 70–80% of them experienced anxiety and encountered difficulties (Kyuji et al, 2011). Logan et al (2008) investigated patient experiences of learning ISC and impacts on quality of life (QoL), and found that once the initiation and learning issues were overcome, patients generally adapted well to ISC and eventually reported improvement to QoL. However, their study demonstrated that a wide variety of issues affect the QoL of patients undergoing ISC (Logan et al, 2008). These issues are shown in Figure 3.

A further very small study (Logan and Shaw, 2012) specifically explored patients with spinal injuries who required ISC (11 men and 4 women, aged 24–68 years). By taking both cohorts together and extrapolating the male data from both studies, it provides a valuable insight into the perceptions of male patients undergoing ISC, showing that both physical and psychosocial issues are prominent.

For example, men experienced distress when first informed that they were required to self-catheterise in the long term. While carrying out the procedure, some men were prone to pain and discomfort, occurring either on insertion or withdrawal. One man developed a severe muscle spasm on insertion which necessitated a delay before insertion could be attempted again.

Some patients struggled with integrating ISC into their daily lives; for example, finding it harder to perform when outside of the home and having to seek out appropriate and clean facilities. From a psychological perspective, patients worried about the stigma associated with carrying out ISC and therefore were particularly concerned about disposing of catheters in other people's homes or public toilets. For others, anxiety about the entire procedure was encountered, with specific concerns expressed about the fear of developing UTIs, fear of pain, fears about harming themselves while carrying out the procedure and apprehension about the need to sustain ISC for a long period of time. However, despite concerns, in the patients' opinion ISC offered them a more acceptable alternative to indwelling catheters that was welcomed as being more akin to normal bladder function, promoting independence and elevating self-esteem. Overall, the qualitative data provided by these two studies showed that despite some concerns and anxieties about performing ISC, expert teaching and good nursing support can help patients normalise and subsequently accept the procedure, develop coping strategies and integrate it into their daily lives.

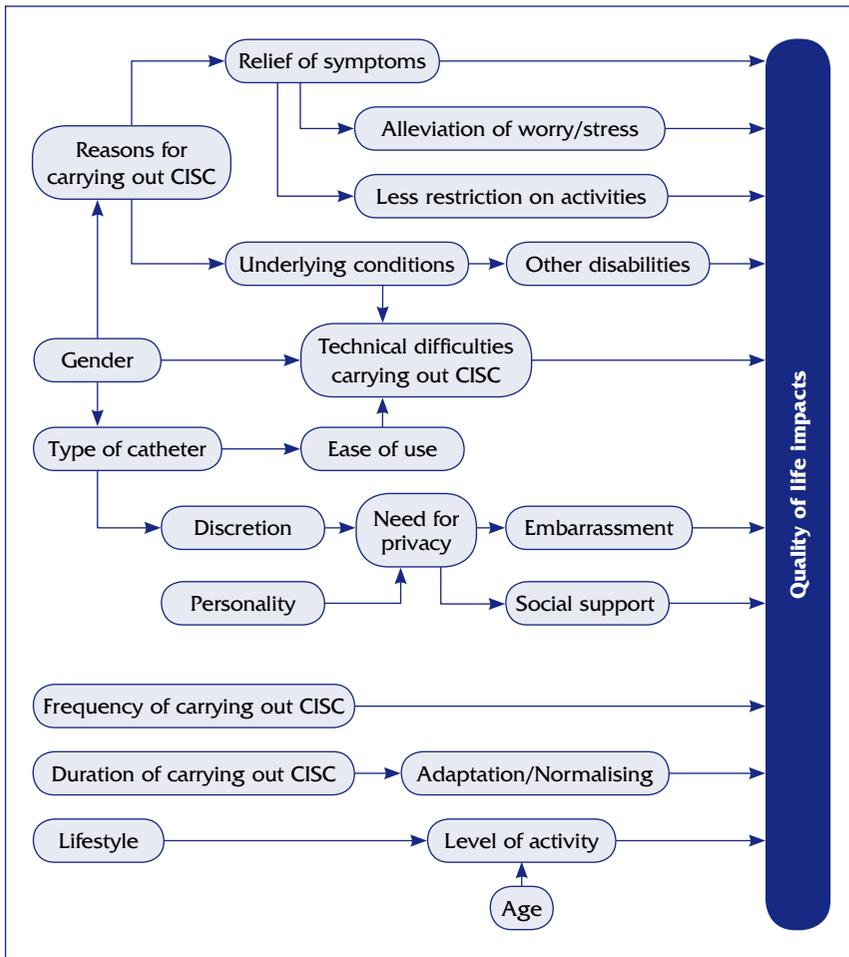


Figure 3. Factors affecting quality of life in people carrying out clean ISC (Shaw et al, 2008)

### Quality of life issues for men using ISC

The realisation for male patients that they require catheterisation can be associated with a significant physical and psychological

### Materials and methods

Urology nurse specialists from ten selected UK NHS sites (covering England, Wales and Scotland) were invited to recruit and to interview male patients who were new to

learning ISC. In total, 99 male participants were recruited, aged between 37–94 years with an average age of 65 years. NHS ethical approval was not required for this evaluation because it is a patient satisfaction survey. Instead, internal Research and Development panel permissions were sought within the NHS health boards/trusts to ensure that both clinical and research governance protocols were met. A structured patient satisfaction questionnaire was completed to record the data both at induction (when they first learnt about ISC) and at follow up after 4–6 weeks. The inclusion criteria for the survey is shown in *Box 1*.

The first part of the survey captured information and initial impressions of the Hydrosil Gripper by patients and data were collected at the first consultation. The information collected was recorded on the questionnaire. A demonstration of two routinely used non-silicone catheters was given and discussed with the participants in order for them to compare material and texture. The questionnaire and a Likert scale were used to rate and score preference and impressions.

The second part of the survey captured information and impressions 4–6 weeks later and participants were asked additional questions which explored experiences with the usage of the Hydrosil Gripper at home. The general themes covered in the follow-up questionnaire included the length of time it took patients to learn and master ISC with Hydrosil Gripper; how they found the catheter packaging to open, and handle; the sensation of the catheter during insertion/removal; the comfort factor of catheterisation; the helpfulness of the non-touch gripper component for the catheter during insertion and removal, confidence levels performing catheterisation and the discretion aspects of the catheter, including foldability and portability.

## Results

The data were analysed to look for trends in patient satisfaction and experience. All 99 patients completed the initial and follow-up survey questionnaires. The results are shown in *Box 2*.

## Discussion

The results of this survey indicate that, for patients who are required to carry out ISC, the Hydrosil Gripper is both user friendly and well received by men starting self-catheterisation for the first time. It is clear from the literature reviewed that patients who have been told they are required to self-catheterise have anxiety with regards to carrying out this procedure, and nurses who teach ISC know only too well how frightening and daunting the first self-catheterisation can be. The findings in this survey reveal issues around patient perceptions of a catheter and how it can influence choice before use when catheterising for the first time. It is recommended within the international best practice guidance document (European Association of Urology Nurses (EAUN), (Vahr et al, 2013) on ISC that catheter choice is important and consideration must be given to patient preference, limitations or disabilities, cost–benefit, and ease of use. The EAUN document (Vahr et al, 2013) concedes that the patient should be guided

### Box 1. Inclusion criteria for the survey

- Patients were required to be 18 years or older
- Using a minimum of two catheters per day
- Not previously conducting intermittent self-catheterisation (ISC)
- No urethral hypersensitivity
- No major urethral strictures or congenital abnormalities in the urinary tract
- No urinary tract infections or history of urinary tract infections
- No patients with urostomies
- Able to respond to the survey/provide feedback

### Box 2. Themed results from the UK multi-centre male ISC patient-satisfaction survey using HYDROSIL® Gripper Male Hydrophilic Intermittent Catheter

#### First impressions

- 80% thought that the Hydrosil Gripper looked more comfortable than a non-silicone catheter
- Three quarters of patients found that the Hydrosil Gripper looked less intimidating than a non-silicone catheter
- 81% had a degree of confidence in performing intermittent self-catheterisation

#### Learning ISC

- 88% said that it only took them 2 days to master ISC with the Hydrosil Gripper
- 93% of patients had some degree of confidence in performing the catheterisation procedure

#### Handling the catheter

- 87% found the packaging easy or very easy to open
- 82% found handling the Hydrosil Gripper easy or very easy before insertion
- 82% found insertion of the Hydrosil Gripper easy or very easy
- 76% rarely or never touched the catheter surface during insertion (not the gripper)
- 92% found the gripper component helpful during the removal of the catheter
- 85% found withdrawal of the Hydrosil Gripper easy or very easy

#### Pain/comfort

- 93% experienced no pain during insertion of the catheter
- 82% found catheterisation with the Hydrosil Gripper comfortable or very comfortable
- 93% experienced no pain when removing the catheter
- 86% rarely or never experienced discomfort after catheterisation

#### Discretion

- 84% agreed that the Hydrosil Gripper is easily foldable and carriable
- More than three quarters of patients found the Hydrosil Gripper discreet or very discreet

#### Compliance and recommendation

- 91% are likely to continue using the Hydrosil Gripper
- 85% would recommend the Hydrosil Gripper

in selecting the best product for their individual needs, recognising that their requirements may alter over time and as medical conditions progress.

The information from this survey provides clinicians with insight into the thought processes and considered judgements men make around catheter choice, including the comfort factor of a potential catheter, which influences how confident or reticent they may be to proceed to insertion. The general appearance and softness of this silicone catheter was viewed as a positive feature. Participants believed it to be less intimidating to insert when compared with a non-silicone catheter.

In terms of discretion, handling and transporting of catheters, the packaging is also an important factor that

## KEY POINTS

- Learning intermittent self-catheterisation (ISC) can be physically and psychologically challenging for some men
- Initial perceptions about catheters and catheterising can be important in reducing anxiety
- Helping to identify the right product for the individual can lead to better patient compliance with ISC
- Nurses need to be more aware of patients' perceptions and requirements to successfully master and accept the treatment of ISC

influences patient decisions. Participants found the Hydrosil Gripper packaging easy to open and the flexible material enabled them to fold up the catheter and carry it in their pocket and, above all, to be unaware of it. This is important for patients when catheterising outside of the home.

UTI is a recognised disadvantage and the most commonly cited complication of ISC (Bakke and Vollset, 1993; Li et al, 2013). Precision, good catheterisation technique and careful handling of a catheter during urethral insertion is of great importance in order to help minimise contamination of a catheter. Patients used the gripper section to avoid handling the catheter surface directly, and found the gripper feature very useful to guide the catheter in and out, facilitating a touch-free insertion and removal.

Furthermore, the results confirmed that most patients found the experience of catheterisation with the Hydrosil Gripper to be comfortable. Overall, perceptions of this silicone catheter were positive, and patients would choose to continue to use it for ISC.

It is important that clinical practice in the use of intermittent catheterisation is continually challenged and advanced to provide optimal care for patients.

## Conclusion

For those patients who require catheterisation to fully empty their bladder, ISC is an effective treatment option but it can be associated with feelings of apprehension and anxiety, especially in the early adoption stages. It is clear that initial perceptions about catheters and catheterising can be important in reducing anxiety, and data from this UK patient survey indicate that the Hydrosil Gripper appeared less intimidating than non-silicone catheters. Alongside this positive impression, the silicone catheter was associated with little or no discomfort. This patient experience survey showed that the features of the catheter are user friendly and well received by men who are learning to catheterise for the first time. Therefore, nurses involved in teaching ISC can be confident that this catheter has the potential to be effective and provide a comfortable experience for their patients. The survey helps further understand the body of knowledge around the patient experience of learning ISC, enabling nurses to be more

aware of patients' perceptions and requirements to successfully master and accept the treatment of ISC. **BJN**

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*The Hydrosil® Gripper Male Hydrophilic Intermittent Catheter is known in other markets as Magic3 Intermittent Catheter with Sure-grip.*

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Ipswich Hospital, Ipswich, Suffolk, England  
Queen Elizabeth Hospital, King's Lynn, Norfolk, England  
Rotherham Hospital, Rotherham, South Yorkshire, England  
Royal Devon and Exeter Hospital, Devon, England  
Royal Gwent Hospital, Newport, Wales  
Scunthorpe General Hospital, Scunthorpe, North East Lincolnshire, England  
Southport and Formby District General Hospital, Southport, Merseyside, England  
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