Securement Devices
Minimising the Risk in Urinary Catheterisation

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- Combined population across Calderdale & Kirklees is 643,000
- CHFT 119,000 IPT episodes
- 414,000 OPT episodes
- A & E attendances 141,000
- Cost of health and social care in Calderdale and Huddersfield is now more than £600 million a year
- High poverty and deprivation levels in Huddersfield
- Higher rates of unhealthy eating and levels of exercise and higher disease burden
- Expected 14% increase in population nationally over next 20 years
Calderdale Community Area

- Adult Community contacts 185,000 (CHFT)
- Child community contacts 90,000 (CHFT)
- Calderdale CCG = 26 GP practices
- 213,000 patients
- 2400 people in Calderdale with dementia
- Higher rate of long term nursing / residential home residents
- Priority areas include the management of long term conditions such as diabetes, asthma and epilepsy, mental health and the abuse of alcohol
History of Catheters

- The concept of draining the bladder using a hollow tube has been written about since the time of the ancient Egyptians (Nazarko 2012).

- The word “catheter” comes from Greek, meaning “to let or send down.”

- straw, rolled up palm leaves, hollow tops of onions, as well as, gold, silver, copper, brass, and lead
The History of Catheters

• Malleable catheters were developed in the 11th century.

• 18th century silver was used as the basis of catheters as it could be bent to any desired shape and was felt to have an antiseptic function.

• Benjamin Franklin (1706 – 1790) inventor and colonial statesman, fashioned silver catheters for use by his older brother John. John suffered from kidney stones and needed to undergo a daily ritual of placing a bulky metal catheter into his bladder. To make these daily requirements on his brother less painful, Franklin worked with his local silversmith on his design for a flexible catheter. Holes were bored into the sides of the catheter to allow for drainage
The History Of Catheters

• Coudé tip catheters developed in the 18th and 19th centuries to facilitate male catheterization and continue to be used for this purpose in current medical practice.

• Catheters made from rubber developed in the 18th century but were weak at body temperature, leaving debris in the bladder. The advent of rubber vulcanization, by Goodyear in 1844, improved the firmness and durability of the catheter, and allowed for mass production.

• Latex rubber became available in the 1930s.
The Foley Catheter

• Dr. Frederic E.B. Foley (a St. Paul urologist) introduced the latex balloon catheter at a urologic meeting in 1935. Though he lost a legal battle with Davol for the patent, this catheter has since been known as the “Foley.”

• The earliest self-retaining catheters had wing tips (called Malecot) or flexible shoulders (called Pezzer), and were tied to the male penis or sutured to the female labia.

• Not changed in design since its inception
Intermittent Catheters

• After World War II, Sir Ludwig Guttman introduced the concept of sterile intermittent catheterization in patients with spinal cord injury. For many years, sterile technique was used for catheterization.

• In 1971, Dr. Jack Lapides of the University of Michigan at Ann Arbor introduced the clean intermittent catheterization technique.

• Clean intermittent catheterization remains the preferred method to treat chronic urine retention and neurogenic bladder infections.
Statistics

• Over 1 million catheters are inserted within NHS care every year in the UK
• equating to @ 12% of hospital patients requiring a catheter at some point of their inpatient stay
• 9% - 40% of registered nursing home patients have catheters
  (Loveday et al 2014)

• 3% of older people over 65 years of age living in the community would have an indwelling urinary catheter, with @ 13% of the same age group in care homes also wearing long term indwelling catheters.

The Royal College of Physicians 2005
Statistics

• widely acknowledged that around \( \frac{1}{4} \) of all catheters are unnecessary and could be avoided (Loveday et al 2014)

• indwelling urinary catheters are the most invasive device used in Scotland. NHS Scotland in 2012
Please God, help me convince the doctor to keep the Foley catheter in until my shift is over.

--- said every nurse ever

Oh, you must work in a hospital too.

Original crude med-ecard humor from The Happy Hospitalist Blog
Reasons for IDC

• Post op retention
• Detrusor failure
• Monitoring urine output in acute environment (A & E or ITU)
• Theatre
• Bladder irrigation post prostatectomy surgery
• Relief of intractable incontinence to maintain skin integrity

EAUN 2012
Urinary Catheter - the risks

• Catheters place patients at significant risk of acquiring a Urinary Tract Infection (CAUTI)
• The presence and duration of urinary catheter contribute to CAUTI (Loveday et al, 2014)
• The longer the catheter is in place, the greater the danger
• Bacturia can develop in approx. 30% of catheterised patients in between 2-10 days (Loveday et al, 2014)
• 24 % will develop symptoms of CAUTI (Loveday et al, 2014)
• 4 % will develop sepsis with a mortality range 10-33% (Loveday et al, 2014)
Why Do CaUTIs occur?

- The catheter is a foreign body
- The catheter disrupts normal urine flow and the body’s natural defences
- Increased traction effect on a free drainage catheter increasing intravesical negative pressure
- Increased external traction on catheter, bag, clothing
- Biofilms form on the catheter, interfering with antibiotics and natural flora and can cause encrustation
- Catheters and drainage systems become a culture reservoir
Indwelling Catheters

- High risk of infection
- Biofilm formation within 48 hours
- CaUTI
- Pain, trauma, bypassing, blocking
- IDC last resort, only to be used when all other methods have been considered / tried & failed

Loveday 2014; Yarde 2015
Patient Impact

• It is estimated that the total number of Healthcare Associated Infections (HCAIs) in England per year is approximately 300,000 (National Audit Office 2009).

This equates to....... 
• A patient becoming infected every two minutes. 
• A patient dying every two hours. 
• And approximately 5,000 deaths per year (DH 2006).
Harm Free Care

- 281,296 hospital episodes coded as serious events relating to UTI in NHS care in England & Wales in 2012/13 [HES 2013]
- Current cost of CaUTI @ £2000
- £99 million pounds spent every year on UTIs
- Safety thermometer data

NHS Outcomes

- EPIC 3
- Saving Lives Bundles
- Promote harm free care
- Reduce use of IDC
- Improve patient outcomes

[Zero Tolerance to Hospital Acquired Infections]

This is why ZERO is Money in the Bank.
High Impact Interventions

Saving Lives Bundle

- Savings lives bundles which were updated 2010: guidelines for preventing hospital-acquired infections
- Based on EPIC 2 guidance from DoH 2007 (now EPIC 3)
- Local practice reflects national guidance
- New – intermittent catheter projects

Urinary Catheter Care Bundle

- To reduce the incidence of UTI’s related to short and long term urinary catheters.
- With regular auditing, care bundle actions will support cycles of review and continuous improvement in the assurance of high quality patient care.
- The care bundle is based on EPIC guidelines (Pratt et al 2007)
- Elements of the care process are concerned with both insertion and ongoing care
- Saving lives is integral throughout insertion and care of urinary catheters and will be discussed further throughout the sessions today
Aim of Catheter Stabilisation

Catheter straps and suspension devices first developed in 1960’s

“To prevent the catheter or its retention balloon from exerting excessive force on the bladder neck or urethra”  WOCN 2012

“the catheter & attached drainage system should be well supported in a comfortable position for the individual at insertion to prevent complications”  HPS 2011 NHS QIS 2004
Non-stabilisation of Indwelling Catheters

- can cause movement of the catheter inside the bladder
- lead to unstable detrusor contractions & bladder spasms
- cause bypassing, pain and self-expulsion of the catheter with the balloon inflated (EAUN 2012).
- Can lead to significant urethral and bladder neck trauma
- Tissue necrosis
- Increased traction caused by full, heavy drainage bag
- Increased tension can cause urethral strictures
- significantly increase the risk of CaUTI (Hanchett 2002; Spinks 2013; Feneley 2015)
- Urine bypassing increases the risk of skin damage, cross contamination of existing pressure wounds or incontinence associated dermatitis (IAD), increasing the risk of secondary infections.
Benefits of Catheter Stabilisation

• Prevent excessive traction on catheter
• Prevent pain, swelling or bleeding caused by excessive catheter movement
• Minimise need for frequent, untimely catheter replacement
• Decrease risk of complications such as infection, trauma
• Reduce clinical time and costs spent on managing complications
• Improve patient comfort
• Reduce anxiety
• Decrease physical / psychological trauma
• Reduced internal & external trauma, meatal tearing, erosion, inflammation, cleaving
• Reduce risk of balloon migration into urethra
• Reduce potential obstruction caused by tube kinking

Yates 2014
Cautions with Fixation Devices

- Catheter too taut, causing traction at the site of the fixation device
- Catheter too loose, increasing risk of catching on clothing and creating physical trauma
- Skin irritation from the material of the fixation device

Nazarko 2013
Catheter Fixation = Essential component of catheter care, part of key competencies (RCN 2008)

Recommended in several guidelines that all indwelling catheters are secured to the thigh or abdominal skin to minimise the risk of trauma, catheter tugging, urethral traction, all of which increase the risk of infection (NHS Scotland 2004; Yarde 2015; EAUN 2012)

Rarely used routinely – how many of you have them written into your catheter policy?
Types of Fixation Devices

- several devices designed specifically for catheter retaining
- chosen to suit the patient’s lifestyle, be comfortable and easy to use (Yarde 2015).
- Stabilisation techniques vary from adhesive tape, to straps and are available in a variety of sizes to be used on both urethral and supra pubic catheters.
Adhesive Tape

- used for many years
- Loosen frequently
- Increased risk of extra luminal contamination = increased risk of infection
- Adhesive build up – sticky residu & increased risk of bacterial colonisation
- Too much / not enough traction on catheter
- may increase the risk of infection
- Difficult for some patients to handle
- Skin integrity compromised – ripping, tearing
- no validated clinical evidence to suggest tape alone is effective in catheter stabilisation and the reduction of complications associated with a catheter (Hanchett 2002).
Retaining Straps

- several strap type products that wrap around the thigh or abdomen with an integral smaller strap that wraps around the catheter.
- Non latex, solvent free
- silicone strip to help grip the skin and reduce any movement.
- can cause some skin discomfort in patients with sensitivity to the silicone material.
- Risk of Vascular / lymphatic impairment
- Hygiene – washing of straps
- Contraindicated in phlebitis, advanced diabetes, poor circulation
Adhesive / Hydrocolloid Foam Plasters

- either a plastic clamp or hook and loop section that enables the user to fix the catheter at the bifurcation point
- restricting movement but allowing sufficient sway to avoid the catheter being held too tightly.
- designed to stay in place for up to seven days
- some may require an alcohol based wipe to help remove the adhesive.
Principles

- Catheter fixation devices are recommended for use in all patients requiring an indwelling catheter.
- Few contraindications.
- Careful assessment will ensure the correct device is chosen for an individual’s needs.
- Should be fit for purpose, easy to apply, easy to maintain and remove and able to secure the catheter without placing tension on the indwelling urethral or suprapubic catheter. **RCN (2012)**
Ugo Fix Gentle

• purpose designed medical device used to effectively fix and support patients’ catheters at the catheter bifurcation.
• suitable for use with urethral or suprapubic catheters which are attached to urine drainage bags or catheter valves.
• can reduce the risk of trauma, CaUTI and minimise discomfort caused by the catheter pulling or repeatedly rubbing on the bladder neck and urethra.
• provides patients with effective fixation
• the freedom to move around comfortably with it in place.
Ugo Fix Gentle

• atraumatic soft silicone gel pad can be applied to the patient’s skin without any complex skin preparation required.
• the ‘tack’ layer is re-adhesive, enabling the Ugo Fix Gentle to be easily repositioned without the use of solutions to remove it.
• can be repeatedly applied over the same area of skin without leaving any sticky residue behind
• will remain in place for up to 7 days, allowing patients to remove and reposition with ease during this time.
• effectively conforms to all skin types through multiple points of contact, especially beneficial for elderly patients or those with damaged skin integrity.
Benefits

• can maintain their usual hygiene regime as the device is shower proof.
• hypoallergenic and breathable – great for patients with sensitive skin.
• Translucent soft gel pad enables inspection of the skin underneath the device (without removing it)
• revolving clip designed to move in natural unison with the body
• Contrasting coloured clip makes it easier for patients with visual impairments to use the device without assistance
• easy open catch and a positive sensory click to close
Case Study A

• Miss S is a 37 year old lady with complex and multiple health issues.
• She has no detrusor function and is unable to empty her bladder without the use of a catheter.
• She is unsuitable for Intermittent Catheterisation for a number of reasons and requires her urethral catheter to be on free drainage due to a high pressure bladder causing high risk of reflux.
• She has declined the use of a supra pubic catheter
• She has had multiple episodes of UTIs resulting in lengthy hospital inpatient stays and several courses of antibiotics leading to a resistance to many of the bacteria causing the infections.
Case Study A

- She was shown several types of catheter fixation device; she was unable to tolerate the strap versions due to sensitivity to silicone which caused significant skin damage, increased pain and risk of secondary infection.
- She chose to try the Ugo Fix Gentle as the product did not require any adhesive removing agent, did not leave any sticky residue on removal and the opposing colour of the clip made it easier for her to visualise the correct area to insert the bifurcation point of the catheter.
- She changes the fixation device every seven days, alternating the site to promote healthy skin.
- She has reported a reduction in the tension / tugging sensation she previously felt from her catheter and has seen a reduction in the incidence of UTIs although this may be attributed to several interventions.
Mr J is a 67 year old man with diabetes mellitus.

He has bladder emptying problems and has had a supra-pubic catheter to manage his symptoms.

He has always managed using a strap style catheter fixation device but recently has undergone high amputation of his legs due to vascular problems.

Following this he is unable to wear a strap as he finds this uncomfortable on his leg stump and does not want to wear an abdominal strap.

He was shown a variety of hydrocolloid fixation devices to manage his catheter, as he is trying to maintain his independence with caring for his catheter; he chose to try Ugo-Fix Gentle.
Case Study B

• He has poor eyesight and found the contrasting colour of the clamp easier to visualise, his fine finger dexterity and sensation have also been affected by his diabetes so having a plastic clamp makes it easier for him to remain independent than other versions of fixation devices.

• He is happy with the application and removal of the Ugo fix gentle as his skin has tolerated the device without any signs of damage – he has delicate easily damaged skin and was worried about an adhesive device causing him issues on removal of the plaster.

• He changes the Ugo fix gentle every 4-5 days and has not reported any tugging sensation from the catheter.
Case History C

- Mrs M is an 85 year old with significant cognitive impairment.
- She has an indwelling urethral catheter due to intractable incontinence and high risk of incontinence associated dermatitis.
- She lives in a nursing home and all her personal cares are managed by staff.
- She tolerates the catheter but staff reported it often became entangled in her clothing, on occasions causing it to be traumatically expelled from the urethra.
- The staff were advised to use a catheter fixation device to reduce the tension and risk of self-expulsion.
Case Study C

• The staff reported back that application and removal was easy with no evidence of discomfort or trauma to the skin.
• The device is changed every week and in the last three months there have been no episodes of traumatic expulsion or urethral trauma caused by catheter tugging.
• Staff found the device easy to use with no sticky residue, adherence to the skin appears to be consistent and comfortable, moulding to the patient’s shape.
Using the **Ugo Fix Gentle**:

http://www.optimummedicalsupport.co.uk/using-the-ugo-fix-gentle.html
• The evidence is clear, urinary Catheters are used for a wide variation of reasons and in a multitude of patient groups, some with significant long term or life limiting conditions (Spinks 2013).

• one size does not fit all and any choices regarding the use of a catheter or associated devices must be subject to careful patient assessment and include consideration for patient choice, lifestyle and activity.

• Catheter fixation devices help to secure urinary catheters without applying excess tension, and can dramatically reduce adverse events such as catheter displacement, expulsion or migration leading to less incidence of tissue damage and risk of infection.

• This will help to improve patient outcomes, promote dignity and comfort and reduce the health care costs associated with treating CaUtis and recurrent catheterisation replacement contacts
As Health care workers we are responsible for safe practice with regards to catheterisation. Pre-requisites for accountability are ability, knowledge, skills, values and the responsibility to perform the role or task and the authority to do so.
CODE OF CONDUCT

Code of Conduct for Healthcare Support Workers and Adult Social Care Workers in England
Key Statements

- Indwelling urethral and supra pubic catheters should be effectively secured to reduce urethral traction and tissue trauma.
- Migration of unsecured catheters significantly increases the risk of CaUTI.
- Individual and thorough patient assessment will ensure the right stabilisation device is chosen for the patient’s individual requirements.
- Local policies should include a reference to the risks and benefits surrounding catheter stabilisation.
Summary

• Effective catheter stabilisation reduces risk of complications associated with catheter migration
• Minimise physical trauma
• Device should be easy to apply
• Easy to maintain and change
• Fit for purpose
• Manual dexterity, eyesight, skin integrity, circulation
THANK YOU

Please feel free to ask questions