

# Intermittent Catheterisation

## What do we need to know?

### Workshop

**Hanny Cobussen-Boekhorst, PhD, MANP, RN**  
Continenence and Urostomy care  
Radboud University Medical Center  
Department of Urology  
Nijmegen, The Netherlands



**Radboudumc**

---

# Let me introduce myself...

- 29 yrs working at Radboudumc; department of Urology
- 4 yrs Urology ward; 25 yrs outpatients clinic
- Courses / trainings / studies
  - Stoma / continence courses
  - Nurse practitioner
  - PhD traject > 28 jan 2016 defence thesis
- Board member/ member workinggroups / member guidelines
- Research; presentations; education





Surface: 41.543 km<sup>2</sup>  
Inhabitants: 16.947.904 (2015)



---

# Content workshop

- State of the art / Current standard of Intermittent Catheterisation/ IC (15 min.)
- Workshop (15 min.)
  - 5 groups of 6 persons
  - Discuss cases >> chairman
- Plenary discussion (15 min.)
  - Chairman discuss the case and group outcome



# Do you have a protocol / guideline and patient leaflet for teaching IC ?

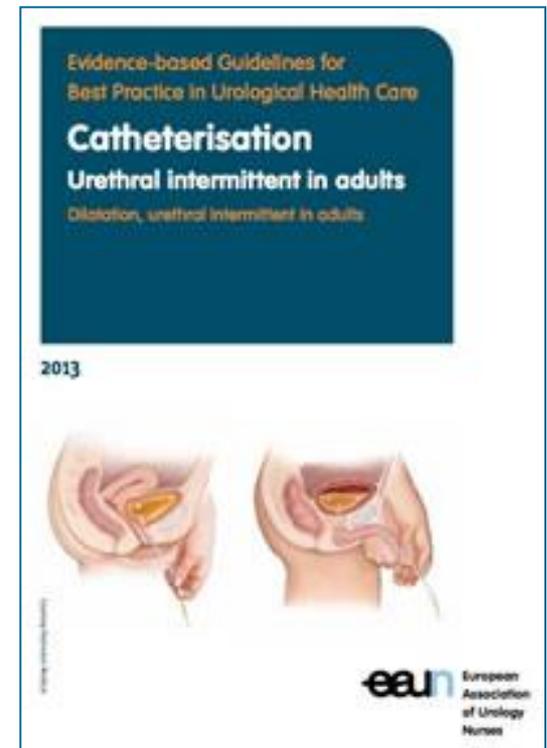


---

# State of the art/ Current standard

## What are we talking about???

- Definition
  - EAU / ICS/ EAUN/ others???
  - Important to use same definition!
- Literature search
  - Different definitions are described
  - In the method part: often bad or not described how the teaching was done, which catheters were used and how follow up was organised
  - Most literature retrospective



---

# Definitions

- Intermittent (in/out) catheterisation (IC)<sup>1</sup>
  - Drainage or aspiration of the bladder or a urinary reservoir with subsequent removal of the catheter
- Often used abbreviations for the techniques used by patients<sup>2</sup>
  - ISC: Intermittent Self Catheterisation
  - CISC: Clean Intermittent Self Catheterisation
  - CIC: Clean Intermittent Catheterisation (technique used by caretakers)
- Dilatation
  - Condition of an anatomical structure being dilated beyond its current dimensions

1. Abrams P, Cardozo L, Fall M, et al. The standardisation of terminology in lower urinary tract function: report from the Standardisation Sub- committee of the International Continence Society. *Neurourol Urodyn* 2002;21(2):167-178.
2. Vahr S, et al “Evidence-based Guidelines for Best Practice in Urological Health Care Catheterisation Urethral intermittent in adults Dilatation, urethral intermittent in adults 2013

---

# Definitions

- Urethral stricture/stenosis
  - A single or multiple narrowing(s) along the length of the urethra
  - More common in men than in women
- Bladder neck stenosis
  - Abnormal narrowing of the bladder neck
- Catheter-associated urinary tract infection (CAUTI)
  - Bacteriuria or funguria with a count of more than  $10^3$  CFU/ml

Vahr S, et al "Evidence-based Guidelines for Best Practice in Urological Health Care Catheterisation Urethral intermittent in adults Dilatation, urethral intermittent in adults 2013

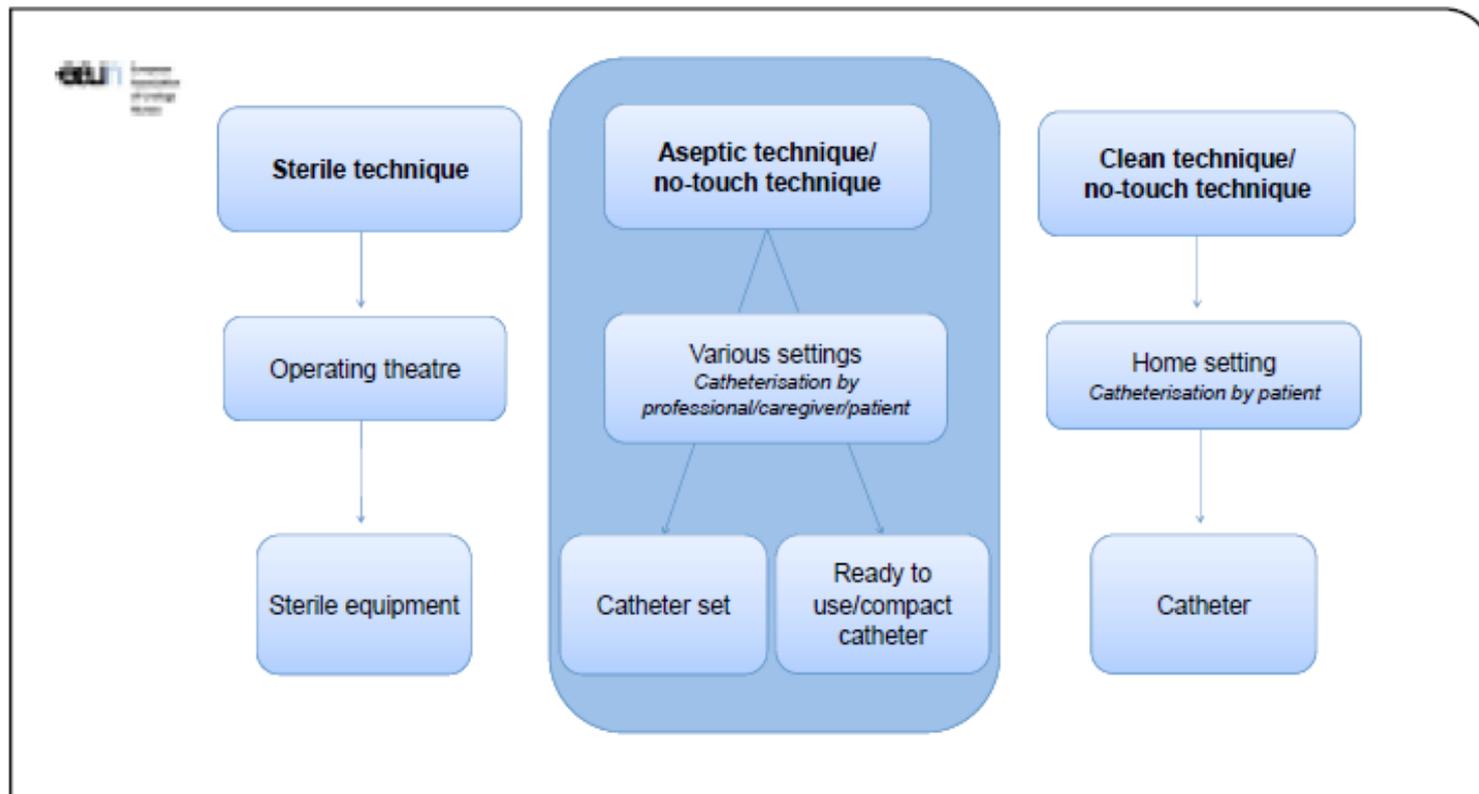
---

# Definitions

- Acute retention of urine
  - Painful, palpable or percussable bladder, when the patient is unable to pass urine
- Chronic retention of urine
  - Non-painful bladder, which remains palpable or percussable after the patient has passed urine. Such patients may be incontinent
- Post Void Residual (PVR)
  - The volume of urine left in the bladder at the end of micturition

1. Abrams P, Cardozo L, Fall M, et al. The standardisation of terminology in lower urinary tract function: report from the Standardisation Sub-committee of the International Continence Society. *Neurourol Urodyn* 2002;21(2):167-178.
2. Vahr S, et al "Evidence-based Guidelines for Best Practice in Urological Health Care Catheterisation Urethral intermittent in adults Dilatation, urethral intermittent in adults 2013

# Intermittent catheterisation (IC)



Vahr S, et al "Evidence-based Guidelines for Best Practice in Urological Health Care Catheterisation Urethral intermittent in adults Dilatation, urethral intermittent in adults 2013

# Diagram IC - EAUN

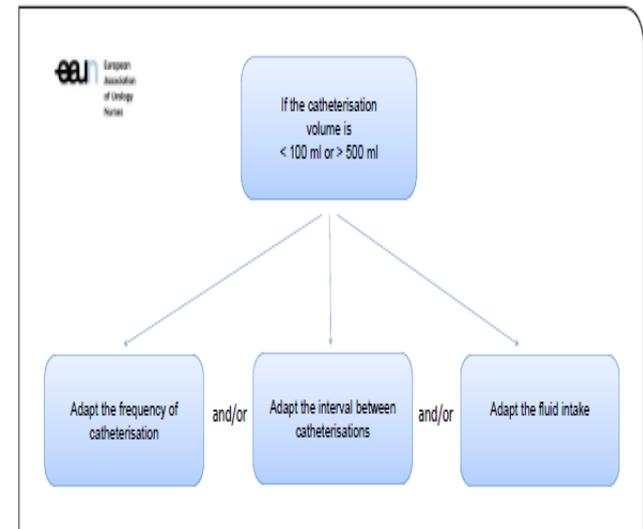
	Sterile	Aseptic* (EAU definition)	Aseptic* (EAUN definition)	Commonly called "Aseptic"			Clean
Environment	Sterile	Non-sterile	Non-sterile	Non-sterile	Non-sterile	Non-sterile	
Catheter	Sterile	Sterile	Sterile	Sterile single use	Sterile no-touch	Sterile	Reusable
Lubricant	Sterile	Sterile/Antiseptic*	Sterile	Sterile	Anti-septic (chlorhexidine)	No lubricant	Sterile, antiseptic, clean or no lubricant
Gloves	Sterile	Sterile	Sterile	Sterile	Non-sterile	No gloves	No gloves
Care of the catheter							Rinse with water, store in dry place
Hand hygiene	Sterile gloves	Sterile gloves	Sterile gloves	Gloves	Water and soap	Water and soap	
Genital hygiene	Disinfectant	Disinfectant	Disinfectant or water and soap	Disinfectant	Water or water and soap	Water or water and soap	
Touch catheter and genitals	Touch with gloves	Touch with gloves	Touch with gloves or gloves and tweezers	Touch with gloves	No-touch Touch catheter with glove or tweezers, pull in aid, package, etc. Touch genitals with glove.	Touch catheter without gloves, but never touch the catheter part that is inserted	

\*Asepsis is the state of being free from disease-causing contaminants. Antiseptics are antimicrobial substances that are applied to living tissue/skin to reduce the possibility of infection.

Vahr S, et al "Evidence-based Guidelines for Best Practice in Urological Health Care Catheterisation Urethral intermittent in adults Dilatation, urethral intermittent in adults 2013

# Frequency of IC

- In the early days of establishing IC, observation and management of bladder emptying and residual (PVR) / retention are important to measure
  - Completing a voiding diary can be helpful
  - The diary can be used to decide whether amendment to IC frequency is necessary<sup>1</sup>
- In general:
  - IC frequently enough to avoid PVR > 500 ml
  - Retention: 4–6 daily (vol: 300–500 ml)
  - Other measures also important such as bladder volume, detrusor pressures on filling, presence of reflux, and renal function



Vahr S, et al "Evidence-based Guidelines for Best Practice in Urological Health Care Catheterisation Urethral intermittent in adults Dilatation, urethral intermittent in adults 2013

---

# Important issues regarding IC

- Coaching and teaching skills
  - How to motivate a patient
  - How to give the instruction and follow up care
    - Time / place
    - Men, woman, child, care-giver
    - Leaflets/ book/ website
    - Different kind of catheters and aids
    - Patients with different kind of diagnoses
    - Most common complications
- IC in everyday life / compliance
  - IC as much as needed (frequency)
  - Quality of life
  - Follow up care

# Patient information



## Individueel zorgplan

Datum: .....

Verpleegkundige: .....

Katheter

- Merk .....
- Naam .....
- Maat (Ch) .....
- Lengte .....

Katheterisatie advies

- 1 x per dag bij opstaan
- 1x per dag voor de nacht
- 2 x per dag: bij opstaan en voor de nacht
- 3 x per dag: bij opstaan, in de middag, voor de nacht
- 4 x per dag: bij opstaan, rond 12.00 uur, rond 17.00 uur, voor de nacht
- 5 x per dag: bij opstaan, rond 11.00 uur, rond 15.00 uur, rond 19.00 uur en voor de nacht
- vaker dan 5 x per dag, namelijk: ..... keer. Tijdstippen in overleg met verpleegkundige.
- anders, namelijk .....

NB:

- Bij buikpijn of aandrang eventueel eerder katheteriseren.
- In principe hoeft u 's nachts niet te katheteriseren, tenzij u wakker wordt en het gevoel heeft dat uw blaas gevuld is.
- In uitzonderingsgevallen krijgt u het advies om wel 's nachts te katheteriseren.
- Als het plassen weer op gang komt en de hoeveelheid bij katheteriseren neemt af, kunt u minder vaak gaan katheteriseren. Als u hierover vragen heeft, neemt u dan contact op met de verpleegkundige continenzorg.
- Als u regelmatig bij katheteriseren meer dan 500 ml urine verwijdert, kan het zinvol zijn om vaker te gaan katheteriseren. Als u hierover vragen heeft, neemt u dan contact op met de verpleegkundige continenzorg.

## Patients need to know

- Why IC is necessary
- Basic anatomical knowledge about the urogenital tract
- How to perform the IC procedure
- The number of times to perform IC
- Which difficulties may occur during or after the catheterisation procedure
- Name, size and length of catheter
- How to store the catheters correctly
- To check the expiry date of the material before use
- How to prepare the catheter for use
- How to dispose of the catheters safely
- How to obtain supplies of the catheter [69]
- That the technique of IC may vary in different settings (e.g., hospital, outpatient clinic, and home)
- Importance of fluid intake
- Importance of a healthy diet to avoid constipation
- Importance of good hygiene
- How to avoid UTI
- How to recognise symptoms or the common signs of UTI
  - burning on urination
  - frequency and/or urgency
  - pain
  - offensive smelling urine
  - cloudy/dark urine
  - feeling tired or shaky
  - fever or chills
  - haematuria [17, 69, 78]
  - difficulties with either insertion or removal of the catheter
- Availability of appropriate aids to help with catheterisation such as mirrors, hand grips, leg abductors, integrated drainage bags, and travel kits
- What to do when travelling abroad
- When to contact a health care professional
- Contact the health care professional in case of
  - pain during or after catheterisation
  - catheterisation becoming more difficult
  - haematuria
  - fever
  - problems in bowel movement
  - lower back pain
  - discoloured or malodorous urine



---

# IC in everyday life / compliance/ QoL

- Incorporation of IC into daily life is not considered easy<sup>1</sup>
  - Requires exercise, planning and location
  - Despite the act of IC is not difficult, most patients prefer to IC at home<sup>1 2</sup>
  - Small toilets, poor lighting, sink outside toilet (men) can make IC outdoors difficult<sup>1 2</sup>
- In everyday life, the preparation before is more difficult than IC itself. Patients felt constrained by the need to plan convenient times to IC themselves<sup>2</sup>
  - Patients keep frequency as low as possible
  - Building structure in the IC moments
  - Most patients are rigid towards frequency of IC
- Reimbursements of supplies differs per country

1. Vahr S, et al "Evidence-based Guidelines for Best Practice in Urological Health Care Catheterisation Urethral intermittent in adults Dilatation, urethral intermittent in adults 2013

2. Cobussen-Boekhorst H, et al 'Patients' experience with intermittent catheterisation in everyday life' Journal of Clinical Nursing 2016

---

# Follow up care

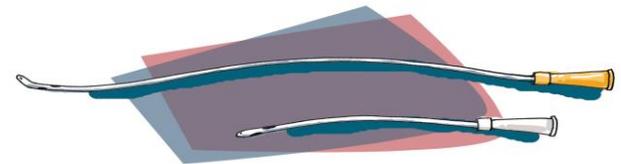
- Early follow up to ensure performing IC is successfully or offer help with any difficulties<sup>1 2</sup>
  - Telephone / digital
  - Outpatients consultation
  - Contact details in case professional help is needed
  - Contact details available support networks
  - Home visit by community nurse
- Ongoing support (by consultation or telephone) to improve
  - QoL
  - Prevent complications

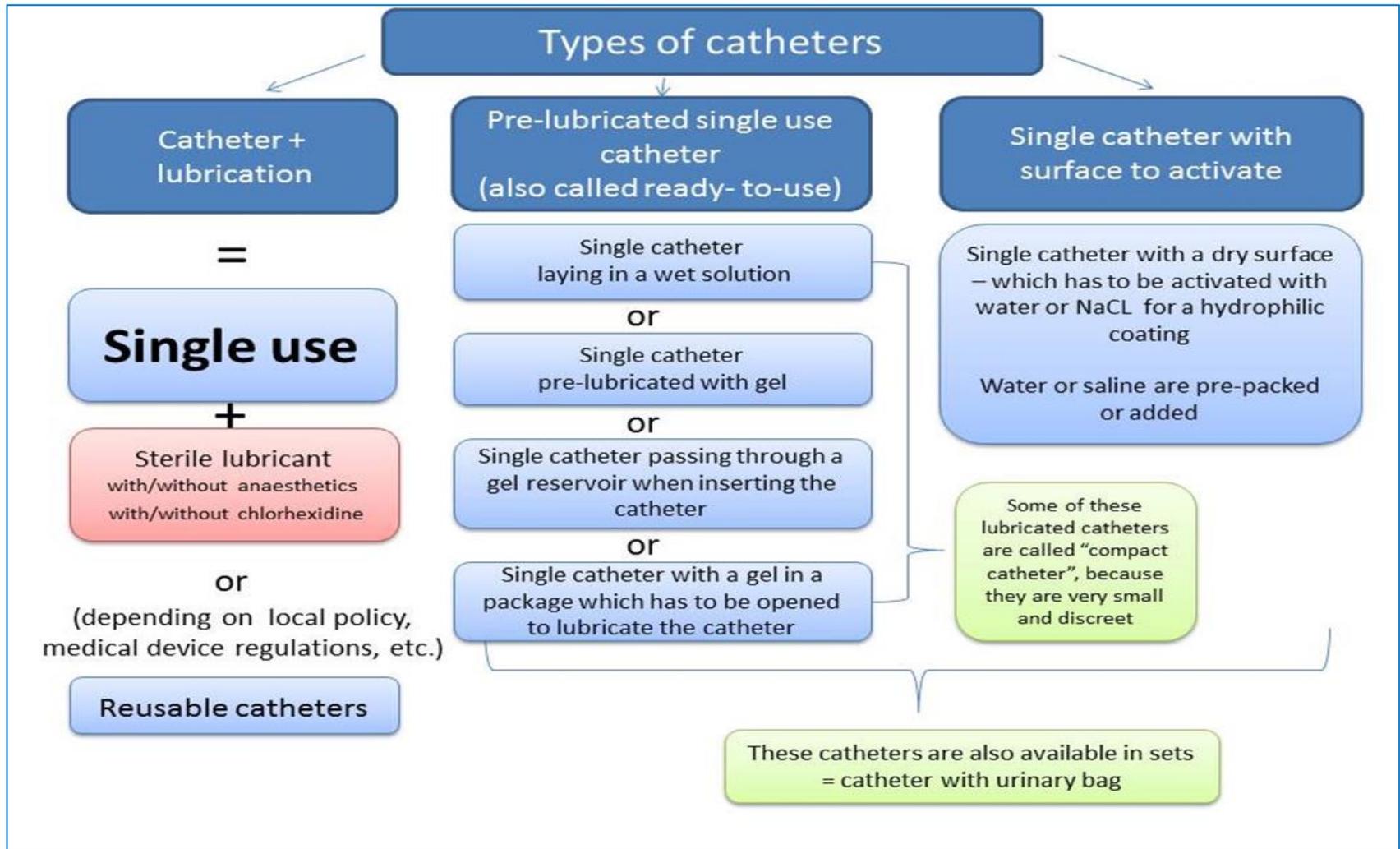
1. Vahr S, et al "Evidence-based Guidelines for Best Practice in Urological Health Care Catheterisation Urethral intermittent in adults Dilatation, urethral intermittent in adults 2013

---

# Materials

- Catheters for intermittent catheterisation
  - Disposable/ non-disposable
  - Man / women / child
  - Coated / non-coated
  - Ready to use catheters
  - Specific aids





Vahr S, et al “Evidence-based Guidelines for Best Practice in Urological Health Care Catheterisation Urethral intermittent in adults Dilatation, urethral intermittent in adults 2013

