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A REAL DIFFERENCE

INTERACTIVE TOOL FOR RECURRENT URINARY TRACT INFECTIONS IN PATIENTS WHO PERFORM INTERMITTENT CATHETERIZATION

Educational Material for Healthcare Professionals (HCPs), developed together with HCPs.

How to use this tool

Basic information about UTIs

Start here

How to use this tool

The presentation needs to be downloaded and in **presenter view** for full functionality *(meaning to be able to click hyperlinks AND read the information in notes at the same time)*

1. Start a slide show
2. Press the button with three dots
3. Choose **Show presenter view**

Useful shortcuts;

F5 = View in presentation mode

ESC = End presentation mode

Basic information about UTIs (the goal of this material)

The primary goal of this material is to devise an **interactive educational tool** about what to investigate and treat, when a person who catheterizes gets recurrent urinary tract infections.

It is intended to **function as a "checklist"** to find the best possible treatment path with suggested interventions to use in a stepwise way. Links to our user-friendly Wellspect's Education portal are included.

Basic information about UTIs (the goal of this material)

The secondary goal is to **provide improved, individualized UTI risk reduction and treatment** against recurrent UTIs, and **reduce the overprescribing of antibiotics** leading to antibiotic resistance.

Increased antibiotic use in the world causes bacteria to adapt and develop new ways to reduce antibiotic efficacy. When new antibiotic resistance develops, only the resistant bacteria survive and transfer their DNA with resistant patterns from generation to generation.

Resistance to specific antibiotics may require the use of broad-spectrum antibiotics and extend both treatment period and recovery with the risk of side effects.

Basic information about UTIs (the goal of this material)

All antibiotics affect the natural bacterial flora and the composition of different bacteria (those in symbiosis and those that are pathogenic), which leads to the **individual becoming more sensitive to bacterial invasion**. Repeated antibiotic treatments can therefore contribute to recurrent urinary tract infections. This is a vicious cycle that needs to be broken.

With the help of this checklist, we can ensure that all risk factors have been identified and managed. It's our hope to contribute to the patient getting a better IC therapy and a higher quality of life .

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Basic information about UTIs

Risk factors for UTIs divided into four domains

Kennelly et al 2019

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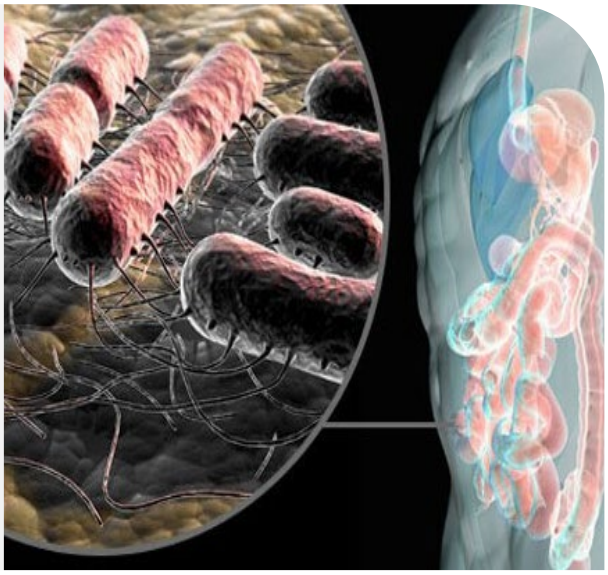
Basic information about UTIs



Types of Urinary Tract Infections

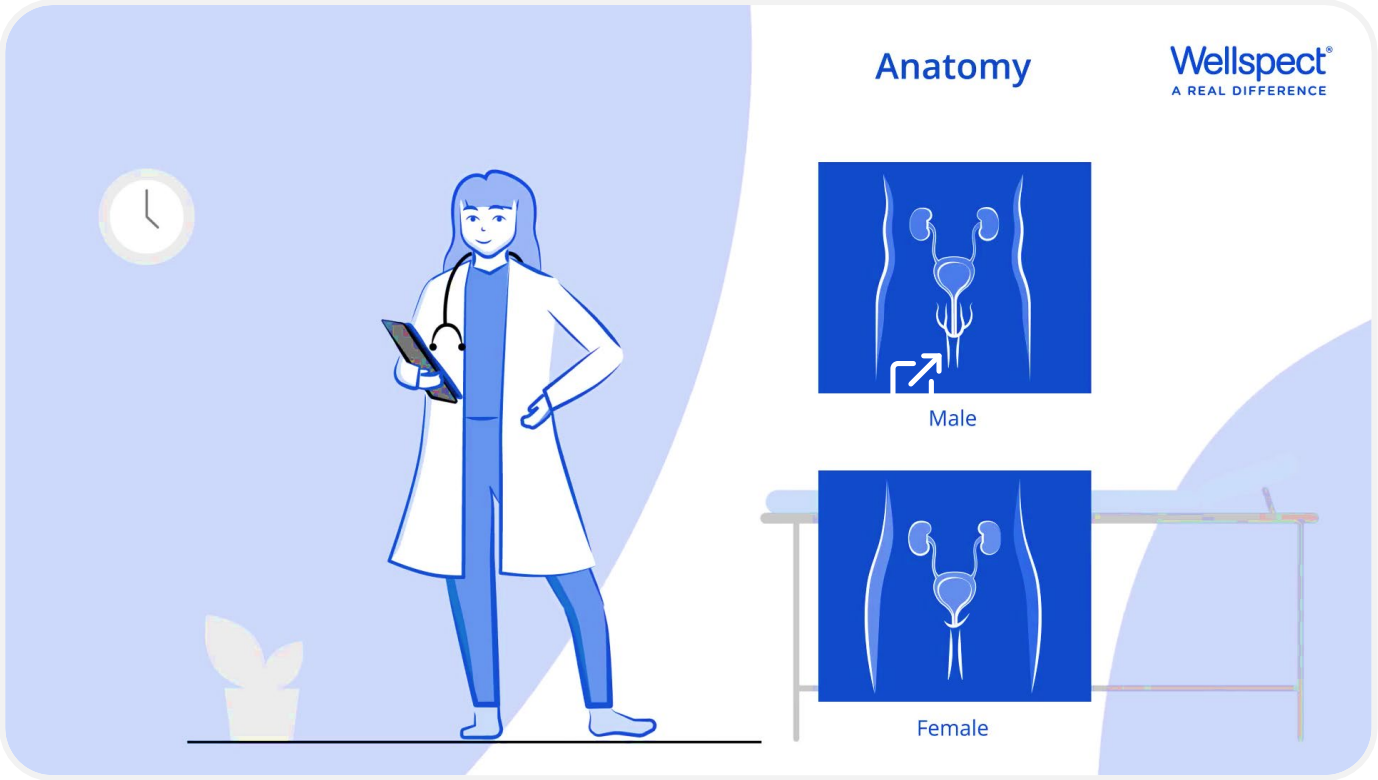
Urinary tract infections can be divided according to location and severity:

Lower urinary tract infections (cystitis)

Upper urinary tract infections (impact kidneys)

Complicated UTI: Structural or functional disturbance in the urinary tract or in cases of underlying disease

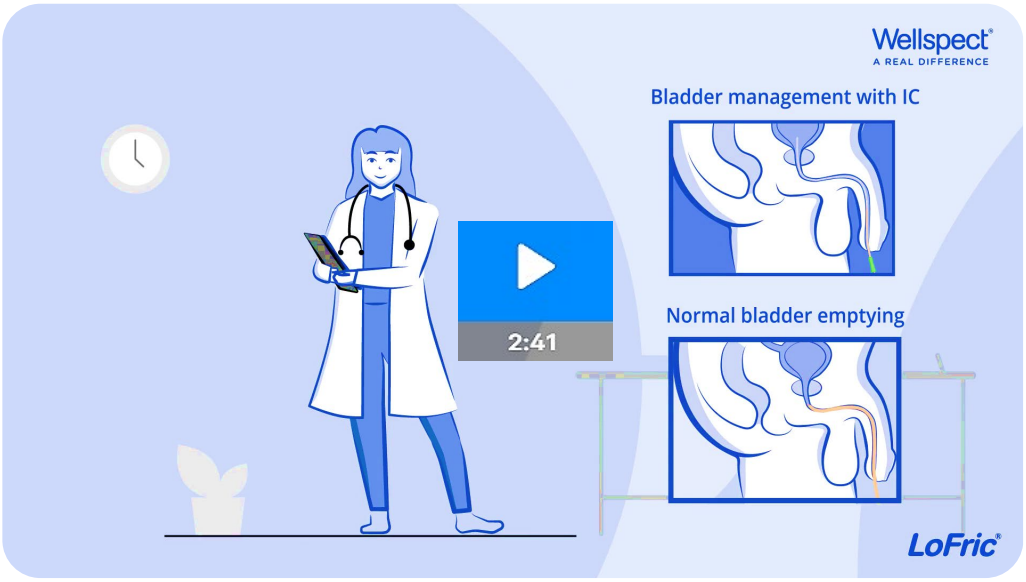
How does a UTI occur?



Watch animation

Urinary Tract Infections –
a sequential explanation

Watch this descriptive stepwise animation for a clear understanding of the sequential process of how a UTI occurs.



Important aspects to consider for reducing risks of UTIs in catheter users

Intermittent catheterization is the gold standard for bladder management, however there is an increased risk for urinary tract infections (UTIs) compared to natural bladder emptying.

Watch this short, descriptive animation demonstrating the optimal conditions for gentle and successful catheterization to avoid complications such as UTIs.

Read more

Common Symptoms of Urinary Tract Infections

- Stinging/burning sensation when emptying the bladder
- Urinary incontinence
- Increased micturition frequency
- Foul-smelling urine and or cloudy urine
- Leakage/increased leakage
- Pain over lower part of abdomen or back
- Fever and/or impaired general condition
- Increased spasticity
- Confusion (for elderly)
- Hematuria

The difference between the following terms

Bacteriuria is the presence of bacteria in the urine and can be classified as **symptomatic** or **asymptomatic**.

A patient with **asymptomatic** bacteriuria is defined as having colonization with one or more organisms in a urine specimen without symptoms or infection. This should normally not be treated with antibiotics.

UTI is defined as bacteriuria or funguria (presence of fungi in urine) together with urinary tract symptom, such as dysuria and fever with a count of > 103 CFU/ml.*

* (EAUN IC Guidelines 2024)

The difference between the following terms

About a decade ago the urine was believed to be sterile, this is not true, and the urine contains bacteria (both the good ones and the bad ones) living in symbiosis with us.

UTIs are divided into **asymptomatic** and **symptomatic**: Asymptomatic UTI means that you have bacteria in the urine without symptoms from the urinary tract.

This is the definition that is now most often stated in literature and which healthcare also strives towards. If there is a need for antibiotics, this should be judged by a HCP and in conjunction with bacterial culture, to choose the correct type of antibiotics.

(EAUN IC Guidelines 2024)

Firsthand investigation

1. Product and catheterization technique

- 1.1 Catheter Choice – factors to consider
- 1.2 Catheter Choice – factors to consider, cont.
- 1.3 Non-touch Technology – factors to consider
- 1.4 Hygiene – factors to consider
- 1.5 Incomplete bladder emptying

2. Urine analysis dipstick/Urine culture

- 2.1 Urine analysis dipstick – factors to consider
- 2.2 Urine culture – factors to consider

Firsthand investigation

3. Micturition list

- 3.1 Micturition / voiding frequency
- 3.2 Micturition – factors to consider

4. Bowel Emptying

- 4.1 Bowel Emptying
- 4.2 Bowel emptying – factors to consider
- 4.3 Bowel emptying – resources
- 4.4 Bowel emptying – resources

Further investigation

5. Assisted IC

- 5.1 Assisted IC – factors to consider
- 5.2 Assisted IC – factors to consider

6. Advanced investigation

- 6.1 Advanced investigation

- Summary
- Further reading

1.1 Catheter Choice – factors to consider

Is the catheter length correct?

Is the bladder emptied completely?

Is the charrière size and tip type, correct?

Is the choice of the catheter adapted to the patient's lifestyle (function and handling)?

Is the catheterization frequency correct?

Is the catheterized volume of urine less than 500 ml?

Are there clinical evidence regarding the safety of the product (e.g. clinical studies regarding long-term use)?

ARTICLE

Long-Term Safety of Intermittent Catheterisation

Single-use hydrophilic catheters were developed in the early eighties to address long-term complications of intermittent catheterisation seen when reusing plastic catheters with add-on lubrication. As reported by Wyndaele and Maes and Perrouin-Verbe et al.

Explore | Bladder

2 min

Read more

1.2 Catheter Choice – factors to consider, continued

Is the product used according to given instructions?

Does the patient need another type of catheter?

Is the catheter maintained clean before and during insertion?

Was a hydrophilic or non-hydrophilic catheter used?

There is strong evidence showing that hydrophilic catheters are associated with fewer complications compared to non-hydrophilic.

ARTICLE

Hydrophilic Catheters and Lower Risk of Hematuria

A lubricated catheter is recommended to reduce damage to the urethra and lower the risk of hematuria which is a common complication. A cross-over study comparing different hydrophilic catheters showed an even lower frequency of hematuria in patients who chose LoFric.

Explore | Bladder

5 min

Read more

1.3 Non-touch Technology – factors to consider

Does the product enable non-touch technology?

- Meaning the catheter has an easy-to-grip handle that helps the user to hold the catheter without having to touch the catheter surface.

For patients and caregivers in the community setting, clean/non-touch rather than aseptic IC is agreed to be a safe and effective procedure with no increased risk of symptomatic UTI.

(EAUN IC guidelines 2024)

Scientific Review of No-Touch Catheter Technique

Introduction of a no-touch catheter/technique for intermittent catheterisation seems to be well accepted both by caregivers and patients and it is not necessarily associated with higher costs.

Explore | Bladder

2 min

Read more

1.4 Hygiene – factors to consider

Hand wash before and after IC

Genital hygiene with water and soap
1 time/day or when needed

- Do not use antibacterial soap
- Women: wash from front to back
- Men: pull back the foreskin

1.5 Incomplete bladder emptying – factors to consider

Catheterization technique such as pulling out the catheter slowly etc

- Need for longer catheter
- Increase charrière size
- Performing IC in the correct position to ensure complete bladder emptying.
- A greater body weight may require a longer catheter.
- When required use bladder scanner to ensure the bladder is completely empty after IC.

EAUN IC guidelines 2024

2.1 Urine Analysis / Dipstick – factors to consider

- Positive nitrite
- Leukocytes
- Glucose in the urine
- Hematuria
- Bacteria

2.2 Urine culture – factors to consider

- Correctly completed urine culture collection
- Check outcome from previous urine culture
- Type of UTI pathogens
- Correct urine sampling for the person using IC
- Stone-forming bacteria in the urine

See notes for further details

3.1 Micturition/ voiding frequency

Bladder emptying frequency

- Regular emptying during the day, 4-6 times/day

Should not exceed 500 ml of urine
in total for each occasion (EAUN IC guidelines 2024)

- This accounts for both the catheterized volume of urine + spontaneous micturition.

Total volume urine approx. 1000-2000 ml/day

- Fluid intake per day should be 1500-2000 ml

Download a Voiding Diary

3.2 Micturition – factors to consider

- Does fluid intake need to be increased/decreased based on the micturition list?
- Does the catheterization frequency need to be increased/decreased?
- Is there a need for extra support from caregivers/family members about fluid intake?
- Can a reminder, such as an alarm via mobile phone help?

4.1 Bowel emptying

- Investigate the reasons behind the bowel emptying problems.
- Does the patient suffer from constipation, fecal incontinence or both?
- Ensure a good bowel emptying regime.
- Normal bowel movements:
  3 times a day to 3 times a week.
- Remember to review the toilet position – use a foot stool to raise legs and change angle.

4.2.1 Bowel emptying – factors to consider

Constipation leads to pressure on the bladder and urethra, which affects function. Both the storage and the emptying capacity of the urine deteriorate.

At least two criteria are needed to define it as constipation (ROME IV criteria):

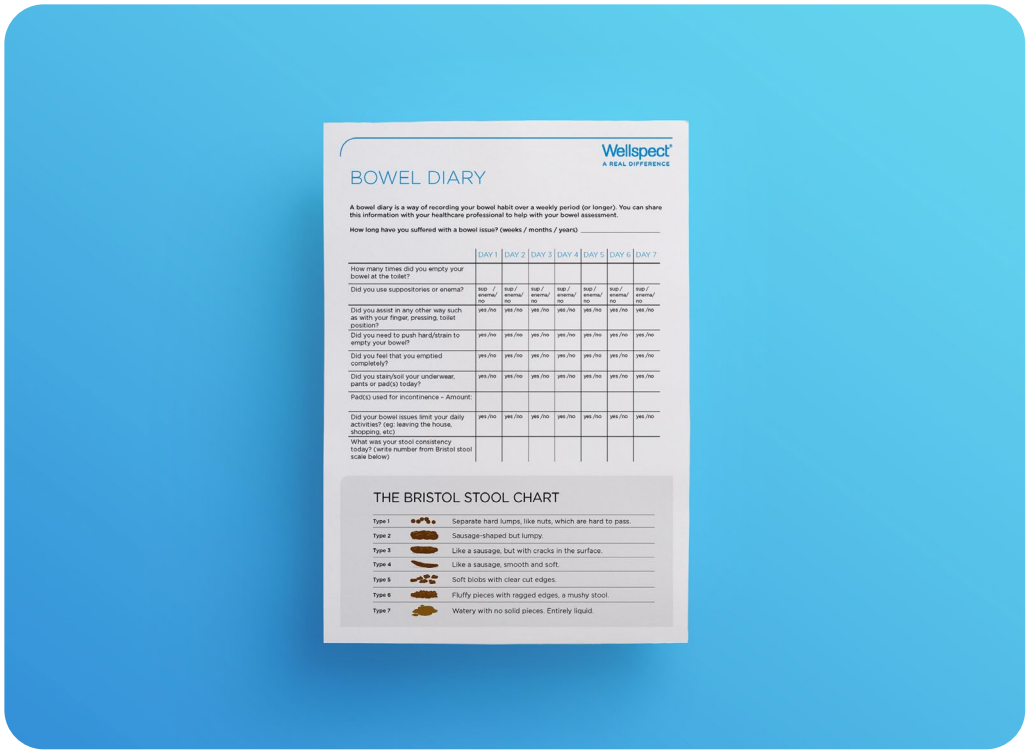
- Stools less than three times per week.
- Hard stools more often than 1/4 of the stool occasions.
- Pronounced crouching more often than 1/4 of the stool occasions.
- Feeling of incomplete emptying more often than 1/4 of the stool occasions.
- Complete list in notes.

4.2.2 Bowel emptying – factors to consider

Fecal leakage

There are 3 classifications of fecal incontinence symptoms:

- Passive incontinence: defined as involuntary emptying of the bowels without a previous feeling of urgency or the need to defecate,
- Urge incontinence: defined as involuntary emptying of the bowel despite attempts to retain stool,
- Mixed incontinence: defined as both passive and urge symptoms.



4.3 Bowel emptying – resources

Bowel diary

A bowel diary can be a good tool for an initial investigation.

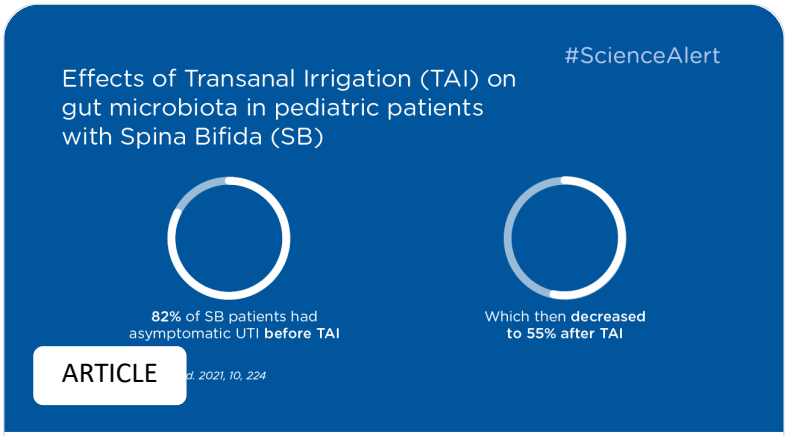
Bristol stool scale

Use the Bristol Stool Scale to facilitate the discussion with the patient, and estimate if the problems are mainly constipation of fecal incontinence

Download bowel diary

4.4 Bowel emptying – resources

Clinical studies have shown positive effects of transanal irrigation (TAI) for improved bowel habits and washing of the colorectal tract, for reduced risk of bladder contamination by E. coli.



Effects of Transanal Irrigation on Gut Microbiota in Pediatric Patients with Spina Bifida

Transanal irrigation influences gut microbiota in a way that could have a positive effect on the immune system, contributing to a reduction of urinary tract infections.

Explore | Bowel

5 min

Read more

ARTICLE

Bowel assessment

In order to determine the correct treatment pathway, it is essential to undertake a detailed assessment. Components must include an assessment of the persons general health, previous abdominal and colorectal surgery, medications, plus functional ability to reach the toilet, cognition and awareness of bowel sensations, and current bowel management.

Learn | Bowel

1 min

Read more

5.1 Assisted IC – factors to consider

Clean/non touch technique accepted procedure in community setting

IC competency training required for carers

Support individualized care plans related to needs of patient and IC requirements

- catheterization frequency
- documentation and monitoring
- environment/place where IC is carried out

(EAUN IC Guidelines 2024)

5.2 Assisted IC – factors to consider

Remit of the responsible nurse for the training of assistant carers

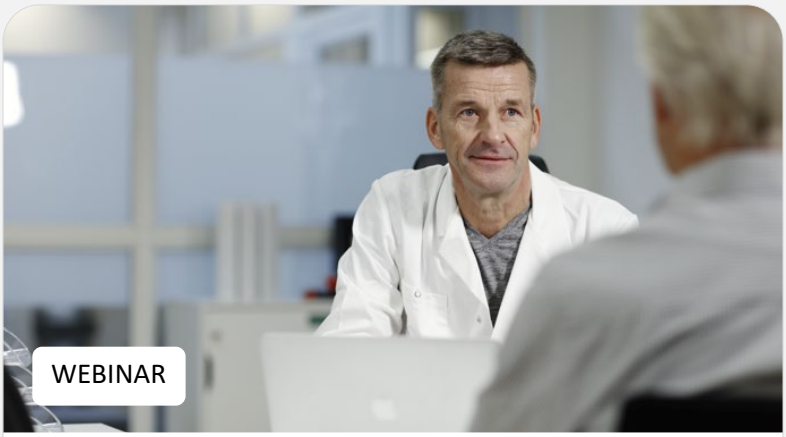
- Are many carers involved in the IC procedure?
- Ensure all carers have sufficient level of knowledge
  regarding IC therapy

In what environment/place is IC carried out?

- IC in bed: if possible, raise the bed's head end for better emptying or use a tube extension or catheter drainage bag.

Handling of product

Find more resources



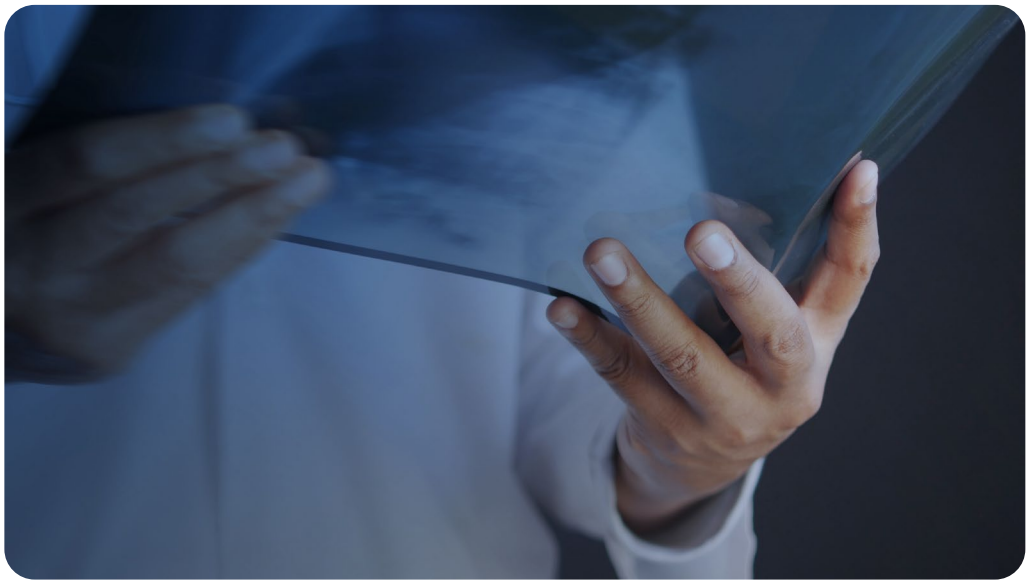
Intermittent Catheterization (IC) Webinar

This webinar about intermittent catheterisation (IC) is divided into 3 different parts. Part 1 covers the fundamentals about IC therapy. Part 2 expands further about catheters and clean intermittent catheterization and the importance of education. Part 3 covers the procedure and follow-up and discusses patient cases.

Teach | Bladder, 3 part webinar

60 min

Read more



6.1 Advanced investigation

X-ray examination or ultrasound

Cystoscopy

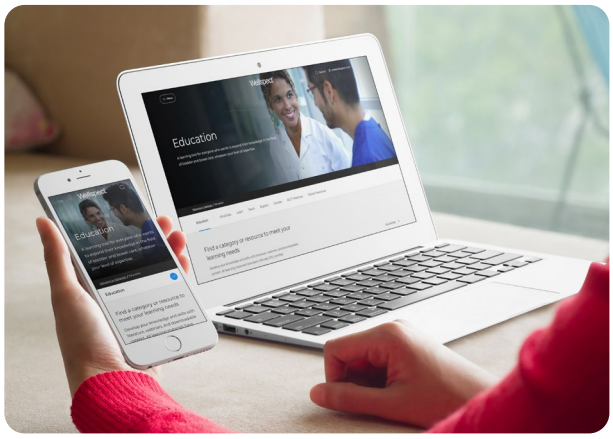
Summary

This educational material, developed in conjunction with HCPs, helps identifying the optimal treatment pathway for rUTIs.

Using CPD accredited tutorials and additional reading, you can keep yourself updated and instruct new colleagues as well as patients who self-catheterize.

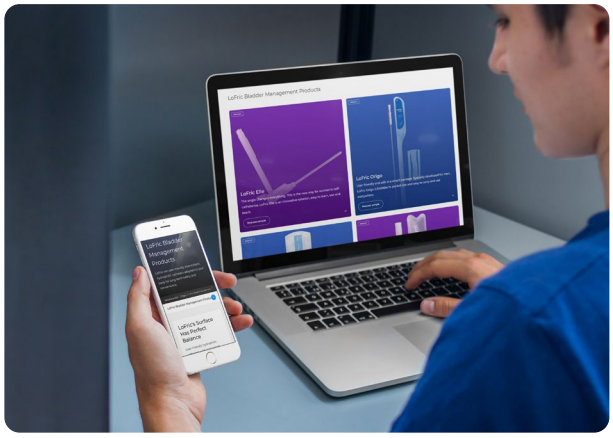
There are ways to reduce risks of getting UTIs for IC users – if you are aware of them.

Wellspect provides both products and educational material to reduce risks of UTIs



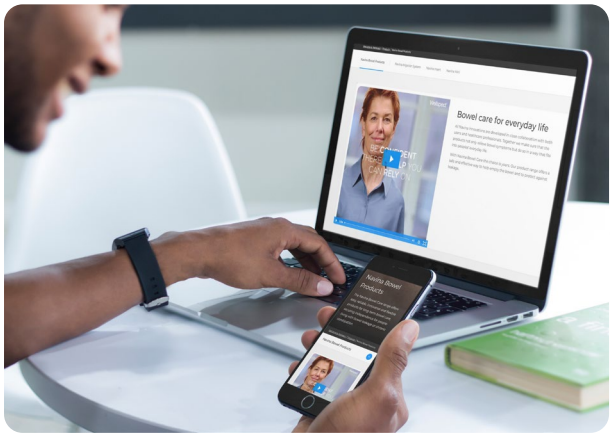
Find more resources

Wellspect Education



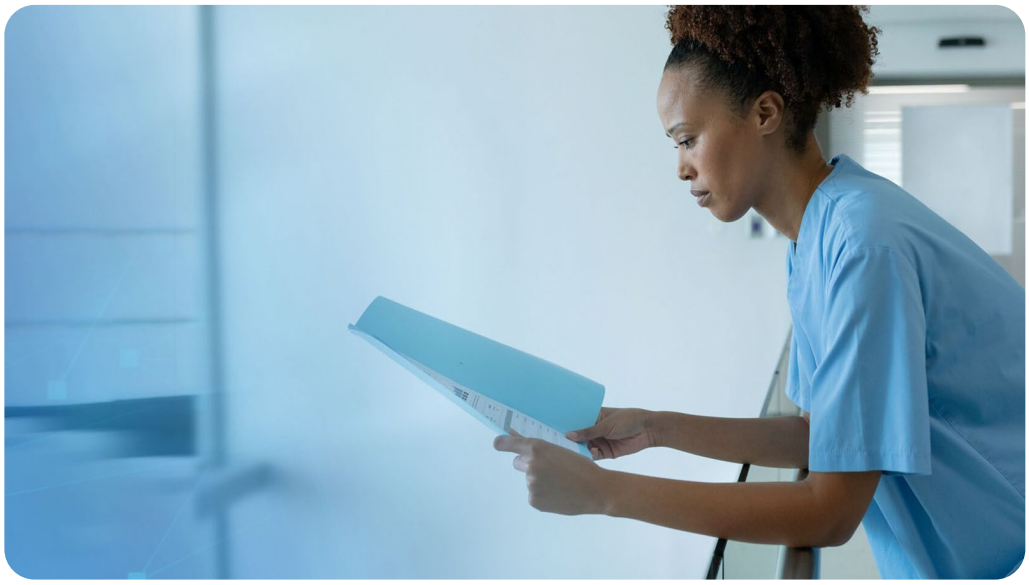
Read more and order a sample

LoFric catheters for IC



Read more and order a sample

Navina products for TAI



This material has been developed in collaboration with the following HCPs

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References

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EAUN IC guidlines 2024: Urethral intermittent catheterisation in adults - Including urethral intermittent dilatation | European Association of Urology Nurses - EAUN (uroweb.org)

Furuta et al, 2021: Effects of Transanal Irrigation on Gut Microbiota in Pediatric Patients with Spina Bifida - PubMed (nih.gov)

https://www.wellspect.co.uk/education