UTI Reduction & Hydration Workshop

Presented by Lancashire County Council - Infection Prevention & Control

Welcome!

Delivered to you today by

Lancashire County Council – Infection Prevention and Control.

Blackburn with Darwen Borough Council

Lancashire County Council

Introduction

Welcome/Housekeeping/Registration

Intro to the IPC Team.

Presentation/Activities

Evaluation forms (Paper or online); certificate of attendance

Aims of today's session are:

- **Improve practices in care settings.**
- **To understand what a urinary tract infection (UTI) is and how it should be managed/treated.**
- **To understand how to prevent UTI's, how to recognise one and when to escalate treatment.**
- **To understand the importance of reducing antimicrobial resistance (AMR).**
- **The infection prevention and control measures needed to deliver good catheter care.**
- **Gain and share knowledge of promoting hydration.**

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Background

- The **NHS** and **UKHSA** are raising awareness of urinary tract infections due to new data showing an increase in hospital admissions across the country over the past **5 years** (*NHS England, 2023*). Therefore, the IPC team has acknowledged this new data and developed a standardised UTI workshop for care home settings.
- We sent a survey to both Residential and Nursing homes across the **Lancashire** and **Blackburn with Darwen** footprint.
- The overall themes and trends of the survey were…

Themes and Trends of survey

Areas of good practice

- Settings are well organised and use "**HY5**" posters around the setting.
- Good use of hydration stations to encourage fluid intake.
- **IPC Care Champion** and education in place for most settings.
- Residents are regularly assisted to access fluids.
- All settings undertake some form of N&H training.
- Most settings ensure implementation of catheter care plans when required.

Areas of improvement

- Staff need to be made more aware of pathway management strategies (e.g. **To Dip or Not To Dip**), however some settings do not dipstick urine.
- Increase standardised education and training of dehydration and UTI symptoms.

Themes and Trends of survey

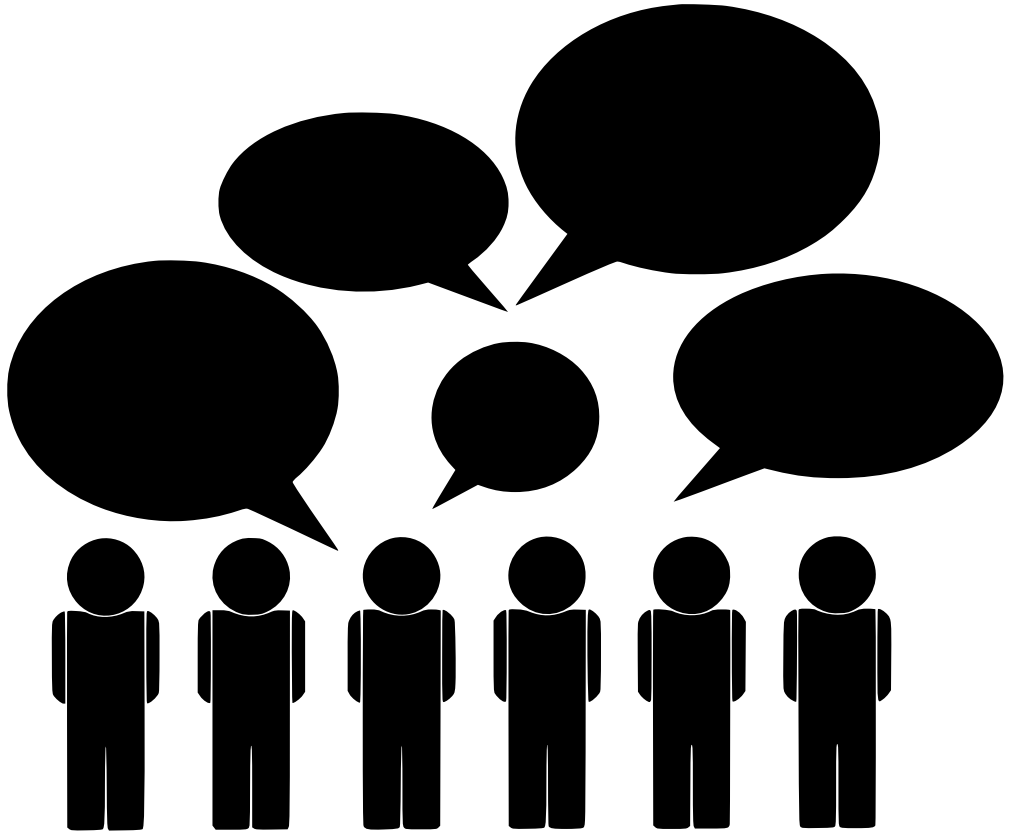
Common themes and trends

- Most settings were aware of UTI symptoms and dehydration, however further education is still required.
- Some settings do not have catheter care requirements, however basic knowledge and understanding of catheter care would be beneficial.
- An increase in IPC Champions across settings since their introduction.
- Whilst most settings undertake N&H training, this is variable in the content and delivery.

UTI Statistics

- Urinary tract infection (UTI) is one of the most common infections presenting in primary care (*UKHSA, 2019*).
- Approximately **half of healthcare-acquired infections** (Occurring in people in long-term care or a hospital setting) are due to an indwelling urinary catheter (*NICE, 2019*).
- UTIs are associated with a decrease in the quality of life of patients and a significant clinical and economic burden (*Frontiers, 2022*).
- Women get UTIs up to **30 times more often than men** due to anatomical differences (*VeryWell Health, 2022*).
- Most urinary tract infections (UTIs) are caused by E. coli bacteria, which can be treated with antibiotics (*Healthline, 2019*).

Table Exercise: What is a UTI?



What is a Urinary Tract Infection (UTI)?

- UTIs are infections that affect the bladder, kidneys, or urethra.
- A UTI is caused by bacteria or fungus entering the urinary tract via the urethra – the tube that allows the passage of urine from the bladder to outside the body.
- The bacteria/fungus can then move upwards through the urinary tract, infecting the bladder and sometimes the ureters and kidneys causing more severe infection.
- According to the National Kidney Foundation, **80** to **90 percent** of UTIs are caused by a bacteria called **Escherichia coli (E. coli)**. For the most part, E. coli lives harmlessly in your gut. But it can cause problems if it enters your urinary system, usually from stool that migrates into the urethra. *(Healthline, 2019)*

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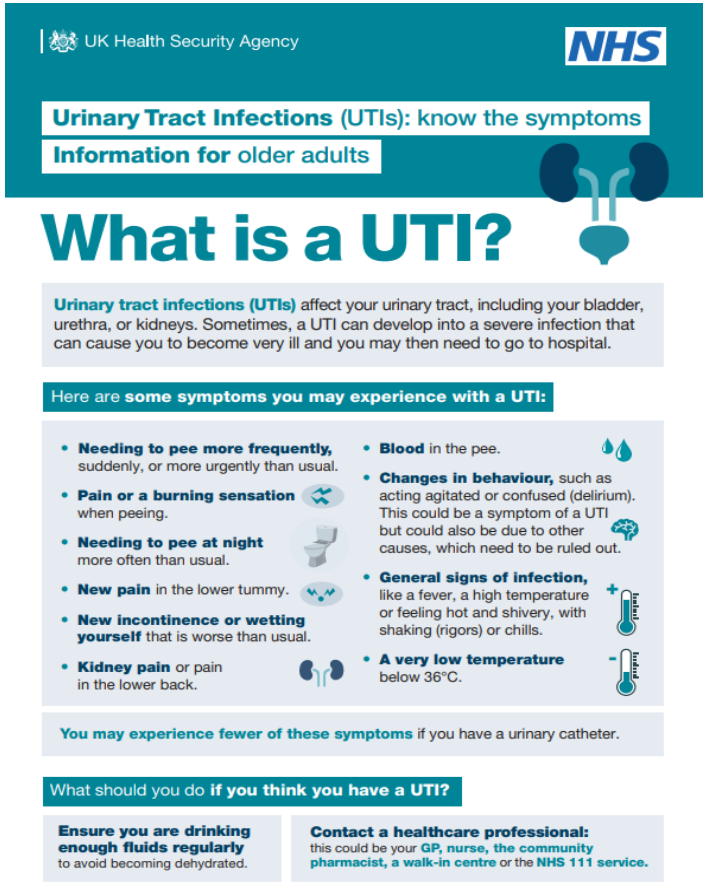
What is a UTI? - Posters from UKHSA/NHS



UK Health Security Agency

NHS

Urinary Tract Infections (UTIs): know the symptoms

Information for older adults

What is a UTI?

Urinary tract infections (UTIs) affect your urinary tract, including your bladder, urethra, or kidneys. Sometimes, a UTI can develop into a severe infection that can cause you to become very ill and you may then need to go to hospital.

Here are **some symptoms you may experience with a UTI:**

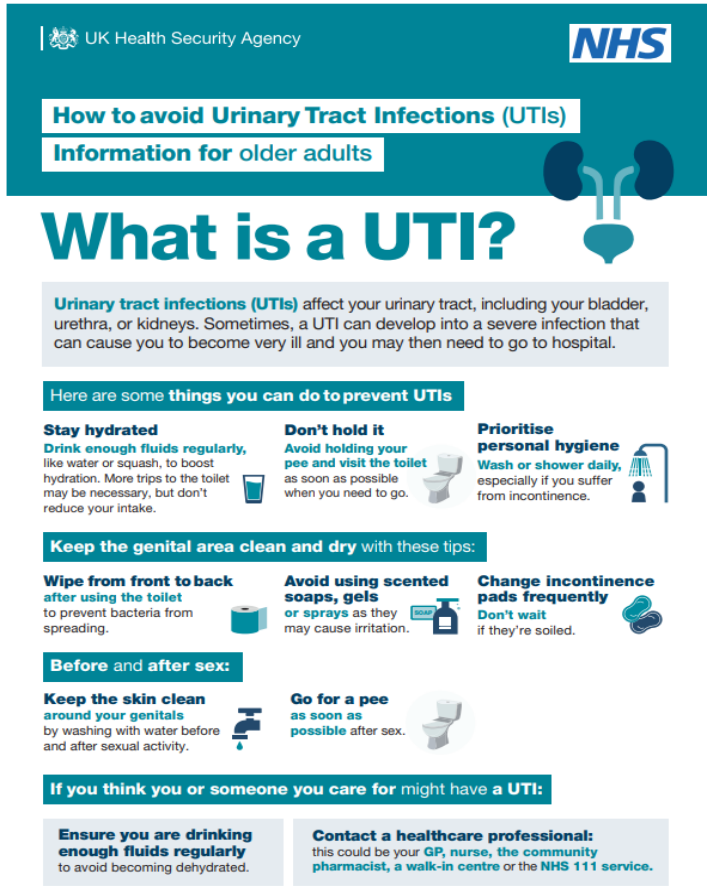
- **Needing to pee more frequently,** suddenly, or more urgently than usual.
- **Pain or a burning sensation** when peeing.
- **Needing to pee at night** more often than usual.
- **New pain** in the lower tummy.
- **New incontinence or wetting yourself** that is worse than usual.
- **Kidney pain** or pain in the lower back.
- **Blood** in the pee.
- **Changes in behaviour,** such as acting agitated or confused (delirium). This could be a symptom of a UTI but could also be due to other causes, which need to be ruled out.
- **General signs of infection,** like a fever, a high temperature or feeling hot and shivery, with shaking (rigors) or chills.
- **A very low temperature** below 36°C.

You may experience fewer of these symptoms if you have a urinary catheter.

What should you do **if you think you have a UTI?**

Ensure you are drinking enough fluids regularly to avoid becoming dehydrated.

Contact a healthcare professional: this could be your **GP, nurse, the community pharmacist, a walk-in centre** or the **NHS 111 service.**



UK Health Security Agency

NHS

How to avoid Urinary Tract Infections (UTIs)

Information for older adults

What is a UTI?

Urinary tract infections (UTIs) affect your urinary tract, including your bladder, urethra, or kidneys. Sometimes, a UTI can develop into a severe infection that can cause you to become very ill and you may then need to go to hospital.

Here are some **things you can do to prevent UTIs**

Stay hydrated
Drink enough fluids regularly, like water or squash, to boost hydration. More trips to the toilet may be necessary, but don't reduce your intake.

Don't hold it
Avoid holding your pee and visit the toilet as soon as possible when you need to go.

Prioritise personal hygiene
Wash or shower daily, especially if you suffer from incontinence.

Keep the genital area clean and dry with these tips:

Wipe from front to back
after using the toilet to prevent bacteria from spreading.

Avoid using scented soaps, gels or sprays as they may cause irritation.

Change incontinence pads frequently
Don't wait if they're soiled.

Before and **after sex:**

Keep the skin clean
around your genitals by washing with water before and after sexual activity.

Go for a pee as soon as possible after sex.

If you think you or someone you care for might have **a UTI:**

Ensure you are drinking enough fluids regularly to avoid becoming dehydrated.

Contact a healthcare professional: this could be your **GP, nurse, the community pharmacist, a walk-in centre** or the **NHS 111 service.**

- Available to online at:

https://elearning.rcgp.org.uk/pluginfile.php/172235/mod_book/chapter/803/2023.08.03_UTI_Symptoms_Poster_A4.pdf

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What is E.coli?

E.coli is a bacteria commonly found in the intestines of humans and other animals.

Courtesy: National Institute of Allergy and Infectious Diseases.

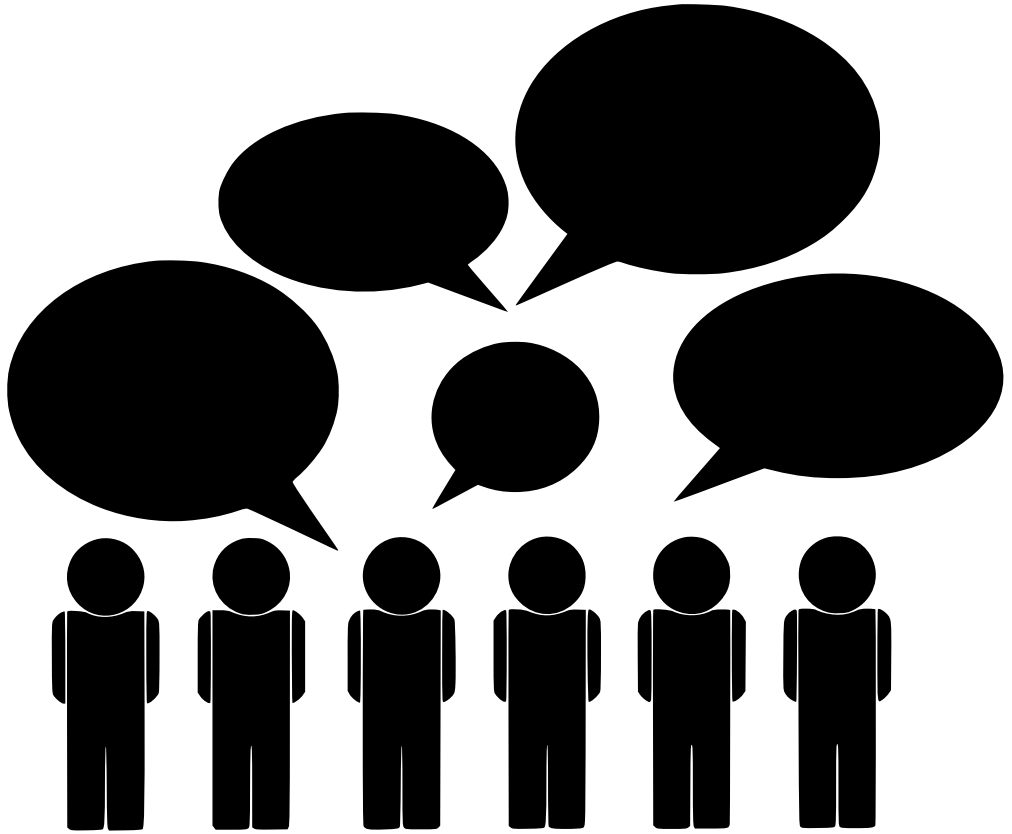
How does E.Coli get into the urinary tract?

- Improper wiping after using the bathroom
- Sex
- Pregnancy

Antibiotic resistant UTI's

- Resistance occurs as bacteria naturally change to breakdown or avoid the antibiotics typically used to fight them. Overuse and misuse of antibiotics makes this problem worse.
- A UTI left untreated or undertreated can spread to the bladder and kidneys which can cause urosepsis.
- Urosepsis is one of the most common causes of sepsis. Up to **30%** of all sepsis cases begin in the urinary tract.

Table Exercise: Signs and Symptoms

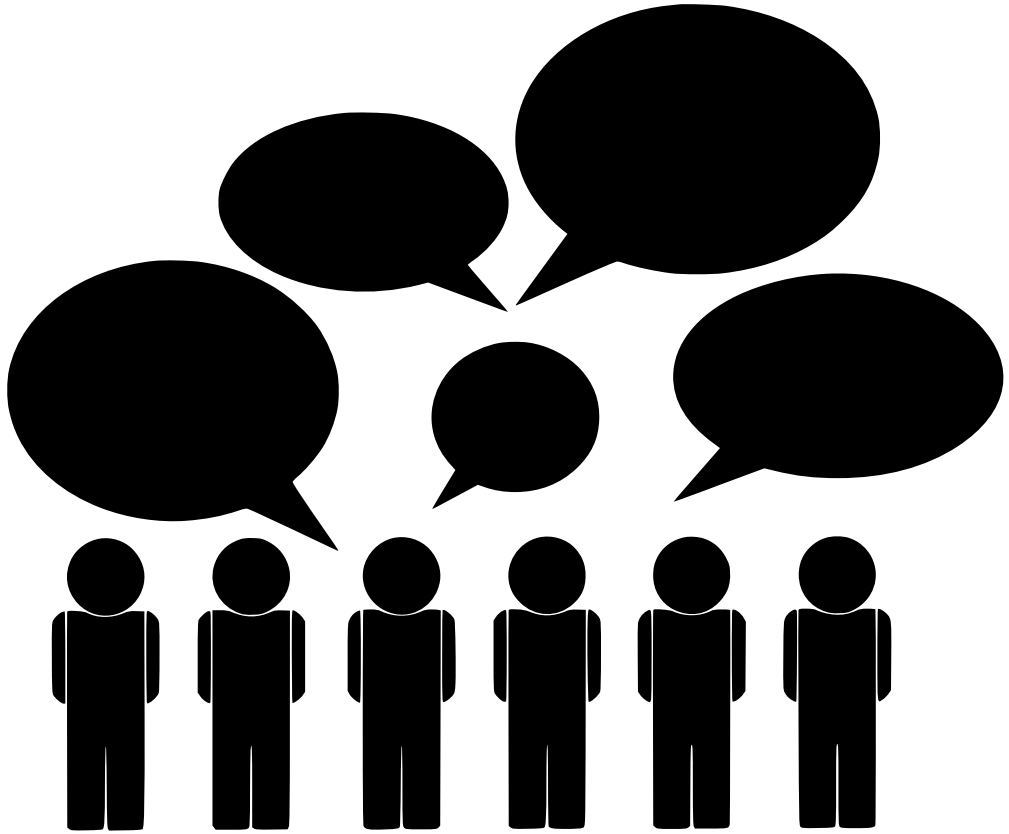


Signs and symptoms of UTI

- Pain on passing urine
- High (>38^{o}C) or low (<36^{o}C) temperature
- Pain in lower abdomen or in the lower back
- New or worsening confusion or agitation
- Needing to pass urine more frequently or urgently
- New incontinence or worse than usual

However, smelly or dark urine alone does not always mean infection, it could mean dehydration!

Table Exercise : Design the *Chain of Infection* for UTI



Urinary Tract Infection

Break the Chain

Courtesy: National Institute of Allergy and Infectious Diseases.

Infectious Pathogen
Bacteria such as E-Coli.

Reservoir
Gut, Urethra, Bladder, Kidneys, Vagina

Portal of Exit
Gastrointestical Tract, Urinary Tract

Mode of Transmission
Direct Contact via Hands, Contaminated Environment/Equipment, Faecal/Oral

Portal of Entry
Urethra, Urinary Catheters

Susceptible Host
Immunocompromised patients, Age, Malnutrition, Dehydration, Patients with Indwelling Devices (Catheter)

CHAIN OF INFECTION

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Hydration

2024

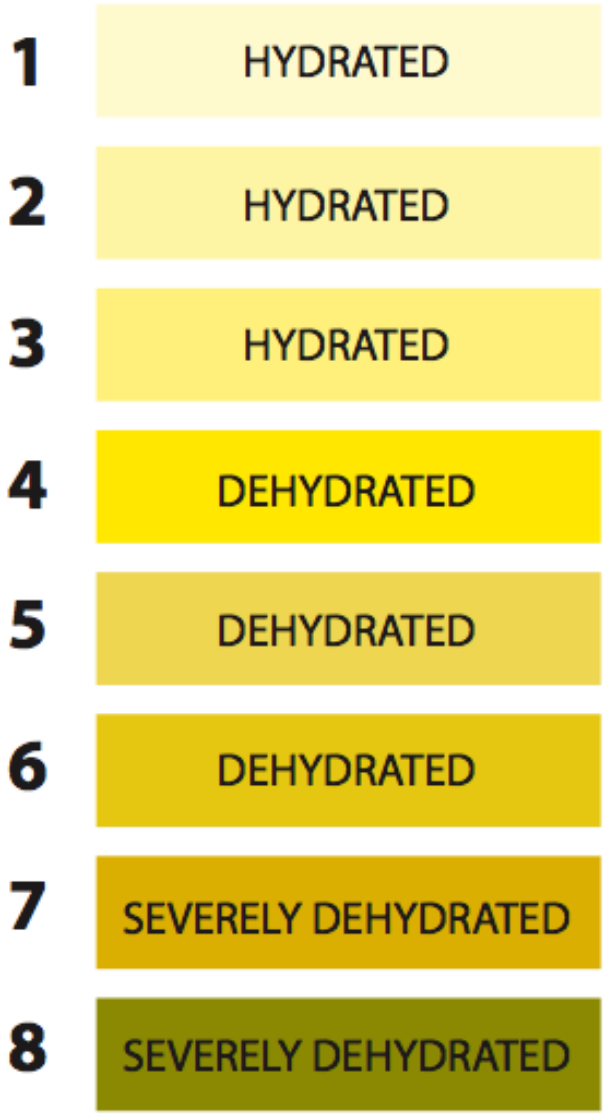
What is hydration?

For health purposes this means:

Replacing the fluids our body loses through sweating, exhaling and waste elimination.

What is dehydration?

When the body loses too much water and other fluids that is needs to function properly.



Why do we need water in the body?

- Aids eating and digestion – Saliva, absorption of minerals and nutrients, digestion of soluble fibre
- Circulation – Nutrients and oxygen
- Keeps tissues moist - Protects the spinal cord and brain function - lubricant and cushion for joints
- Aids in cognitive function - Focus, alertness, and short-term memory
- Boosts energy – Activates metabolism
- Improves mood
- Maintains a constant body temperature
- Waste removal - Perspiration, urination, and defaecation (prevents but will not cure constipation)

Theory!

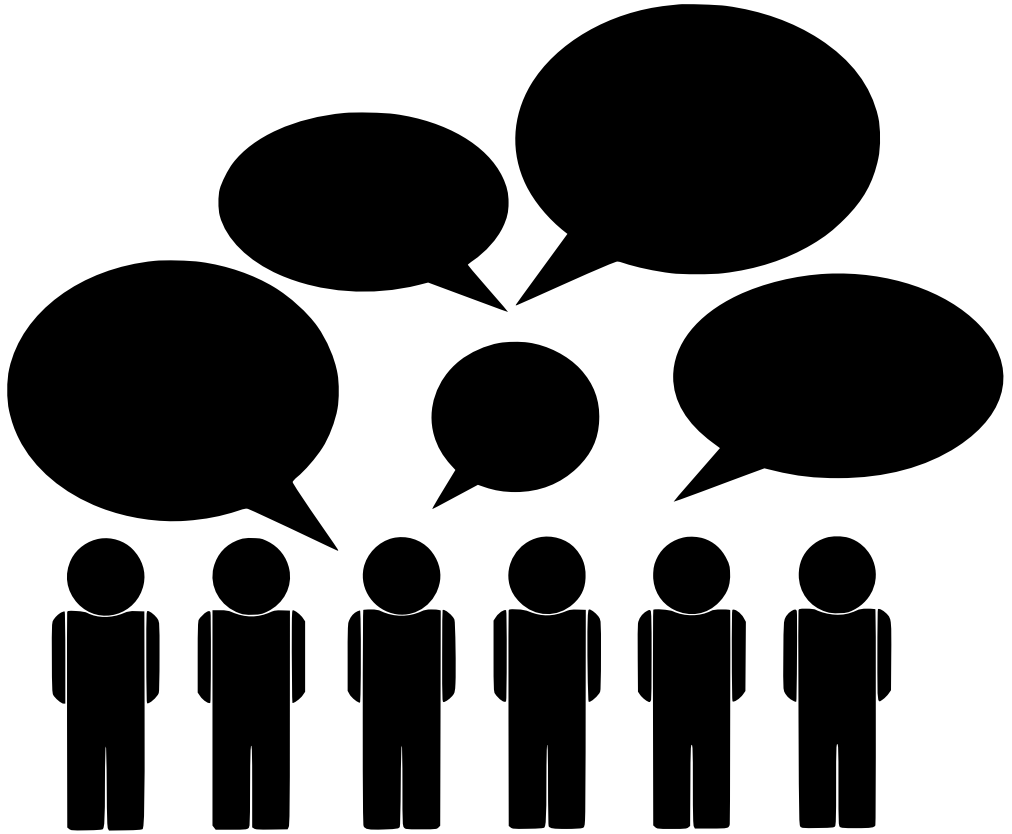
Drinking water

More urine production

Flushes out bacteria in the bladder

Prevents infection

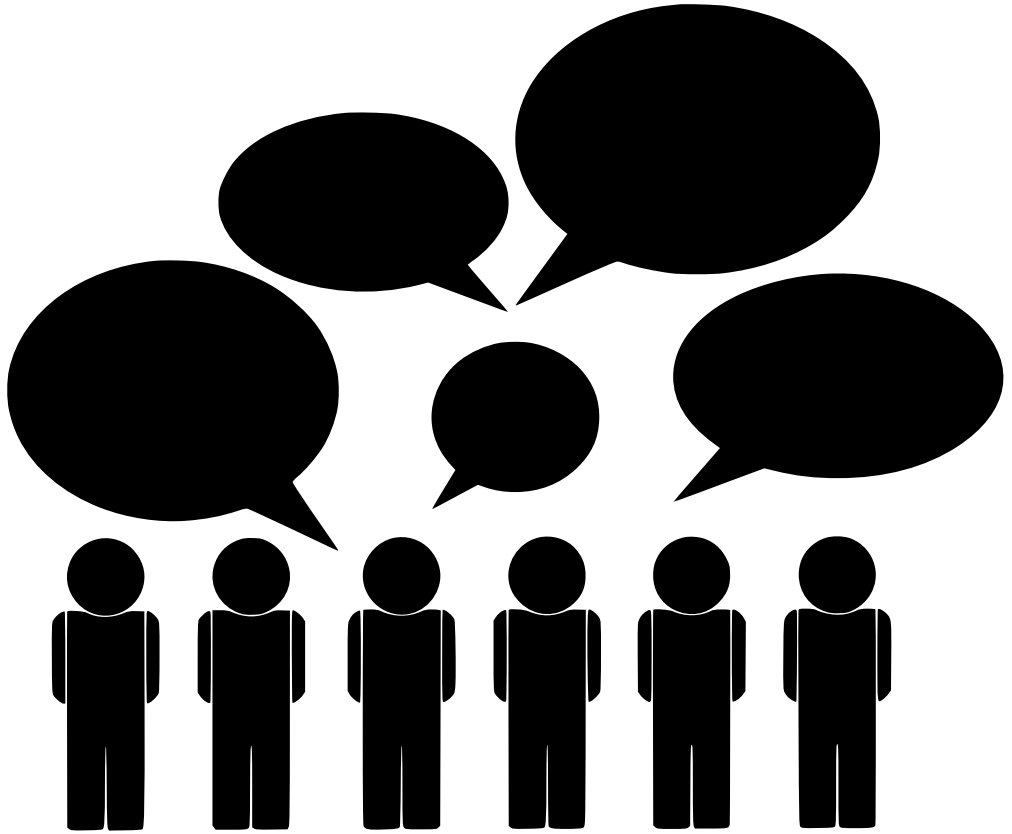
Table Exercise: Who is at risk of dehydration?



Group Feedback

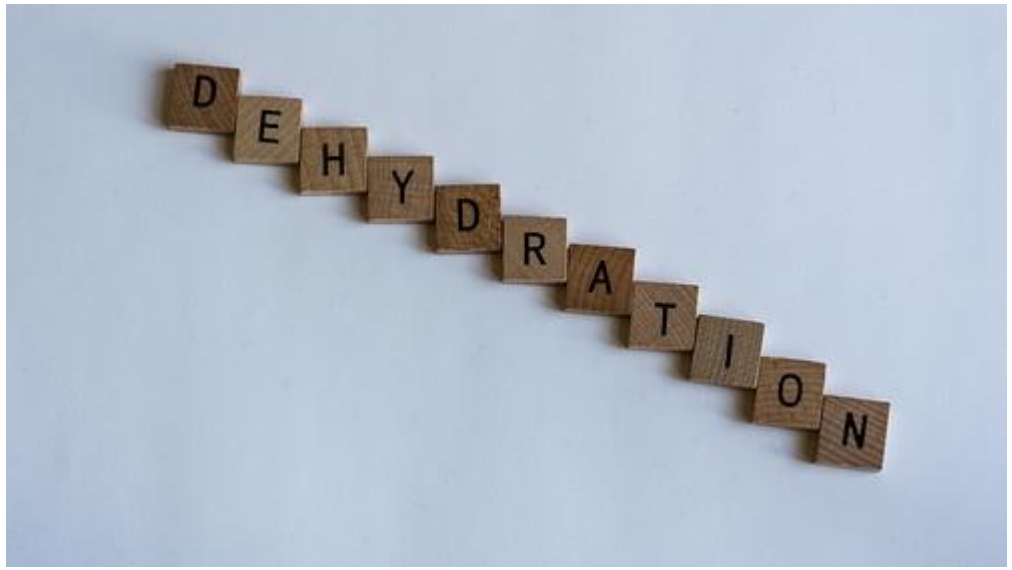
- Water/body ratio decreases – Less muscle mass – less storage
- Thirst reflex weakens
- Kidneys concentrate urine less effectively
- More fluid is lost – Increased incontinence
- Difficulty swallowing
- Frailty – Needing help with day-today tasks – Assistance with food and drink
- Dementia – Forget to keep hydrated
- Multiple medications - Due to the medication itself or side effects such as D&V
- Increased likelihood of acute illness
- Concerns about incontinence

Table Exercise: Signs of Dehydration



Signs of dehydration: print and laminate

- Headache
- Feeling thirsty
- Dry lips and mouth
- Sunken eyes
- Bad breath
- Feeling dizzy
- Reduced energy/concentration
- Dark and strong smelling urine



It may be difficult to spot mild dehydration in older adults therefore monitoring hydration is essential

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Hy5 ~ Identifying dehydration in care home residents using the 5 senses

Does the resident's – legs, hands, forearms look dry? (flakes of skin can look grey, or ashy).
Some medications, including diuretics, and antihistamines, may dry out the skin.
Are they drowsy?
Do they have:
Few or no tears?
Low urine output which is more yellow/orange than normal?

Do they have a dry mouth, cracked lips, rough and dry tongue, and sores around the mouth?
Is eating and swallowing difficult?
Lack of salivation can make the tongue burn.
Saliva helps to taste and digest food.
A dry throat makes choking more common.
Is there increased thirst?
Are there food cravings for chocolate, a salty snack, or sweets?

Do they have bad breath?
Dehydration can prevent the body from making enough saliva.
Saliva flushes food particles from the teeth and washes acid away.

Does the resident's skin feel dry?
Dry skin is often felt more than it's seen.
Do the skin test
Using 2 fingers gently pinch the skin on the back of the hand and then let it go. The skin should spring back to its normal position in less than a couple of seconds.
If it takes longer they may be dehydrated.

Is the resident:
Confused, complaining of a headache?
Feeling dizzy?
Complaining of being itchy?
Do they have a dry mouth? (makes it difficult to talk).

How dehydrated are they?

A quick way to test how well the resident is hydrated is to check the colour of their urine.
Use this colour chart as a guide.

Preventing dehydration

Food

Swap dry snacks with prepared fresh/frozen fruit (melon, watermelon, strawberries, tomatoes).
Provide snacks of cut vegetables with a high water content – cucumber, celery, lettuce and leafy greens, courgettes, and peppers.
Eat yogurt or drink smoothies.
Aim to make half their plate fruit and vegetables.
Sip drinks during meals.

Drink

Offer a drink at least every half hour.
Increase cup size – using a sports bottle may be easier to hold for some residents.
Avoid alcohol, including beer and wine.
Consider flavoured ice lollipops and popsicles.
Have a drink handy – if the cup is nearby it is easier to sip without even realising it.
Adding fruit juice to water can make it more enjoyable to drink.
Try different flavoured teas.
Drink room temperature or cooler water.

Clothing in hot weather

Wearing one layer of lightweight, light-coloured clothing reduces the risk of dehydration.
Change into dry clothing as soon possible if clothes get wet.

Activity

Active people get dehydrated quicker so make sure that the residents who walk a lot are hydrated.
Discourage activity if feeling dizzy, lightheaded, or very tired.

For more information

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infectionprevention@lancashire.gov.uk Twitter @LancsIPC
http://www.lancashire.gov.uk/practitioners/health/infection-prevention-and-control.aspx

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DRINKING FOR A HEALTHY BLADDER

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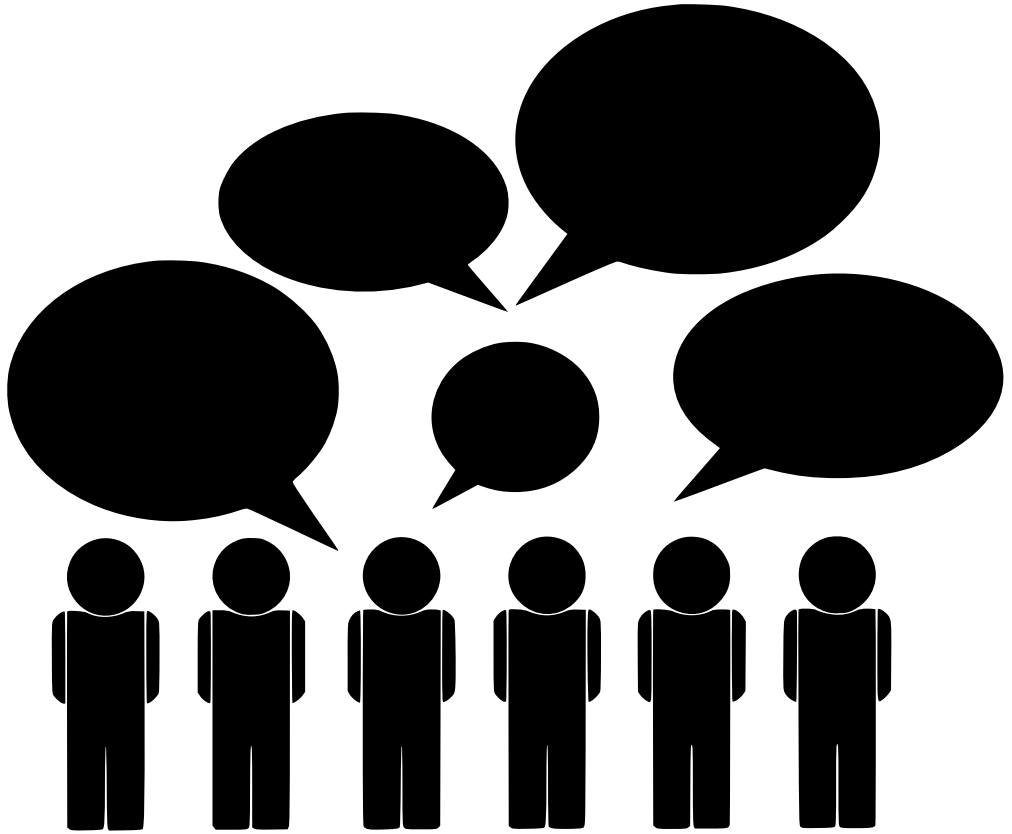
Table Exercise:
What can we do to promote and support hydration?



What can we do?

- Education
- Get everyone involved - Family/visitors
- Choices, vessel preferences and access (hydration stations)
- Communicate any concerns at handovers
- Noticeboards
- Nutrition and Hydration champions
- Ensure care plans and risk assessments are up to date
- Referrals (SALT, GP, Bladder and Bowel)


GOOD HYDRATION

Infection. Prevention. Control.
You're in safe hands

NHS

Are you drinking enough?

Colours 1-3 suggest normal urine

1		Check the colour of your urine against this colour chart to see if you're drinking enough fluids throughout the day.
2		
3		If your urine matches 1-3, then you're hydrated.

Colours 4-8 suggest you need to rehydrate

4		If your urine matches 4-8, then you're dehydrated and you need to drink more.
5		
6		If you have blood in your urine (red or dark brown), seek advice from your GP.
7		Please be aware that certain foods, medications and vitamin supplements can change the colour of urine.
8		

Community Infection Prevention and Control, Harrogate and District NHS Foundation Trust
www.infectionpreventioncontrol.co.uk September 2018

Continence Care

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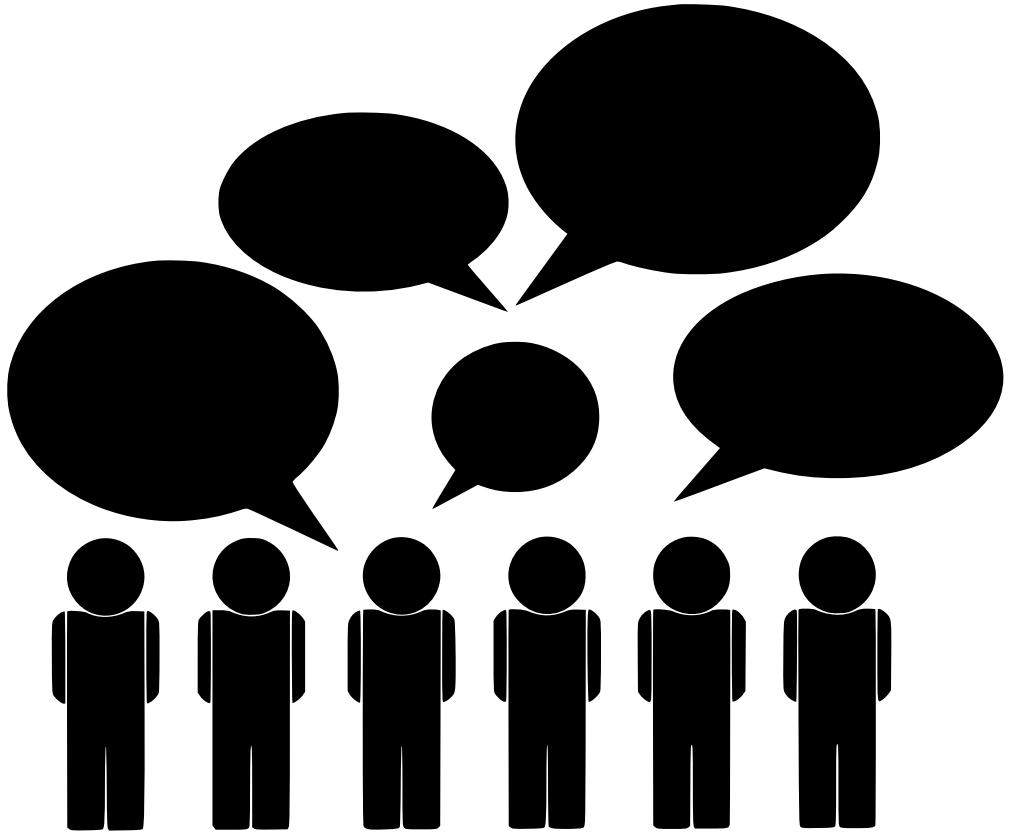
Table Exercise:
What does good continence care look like?

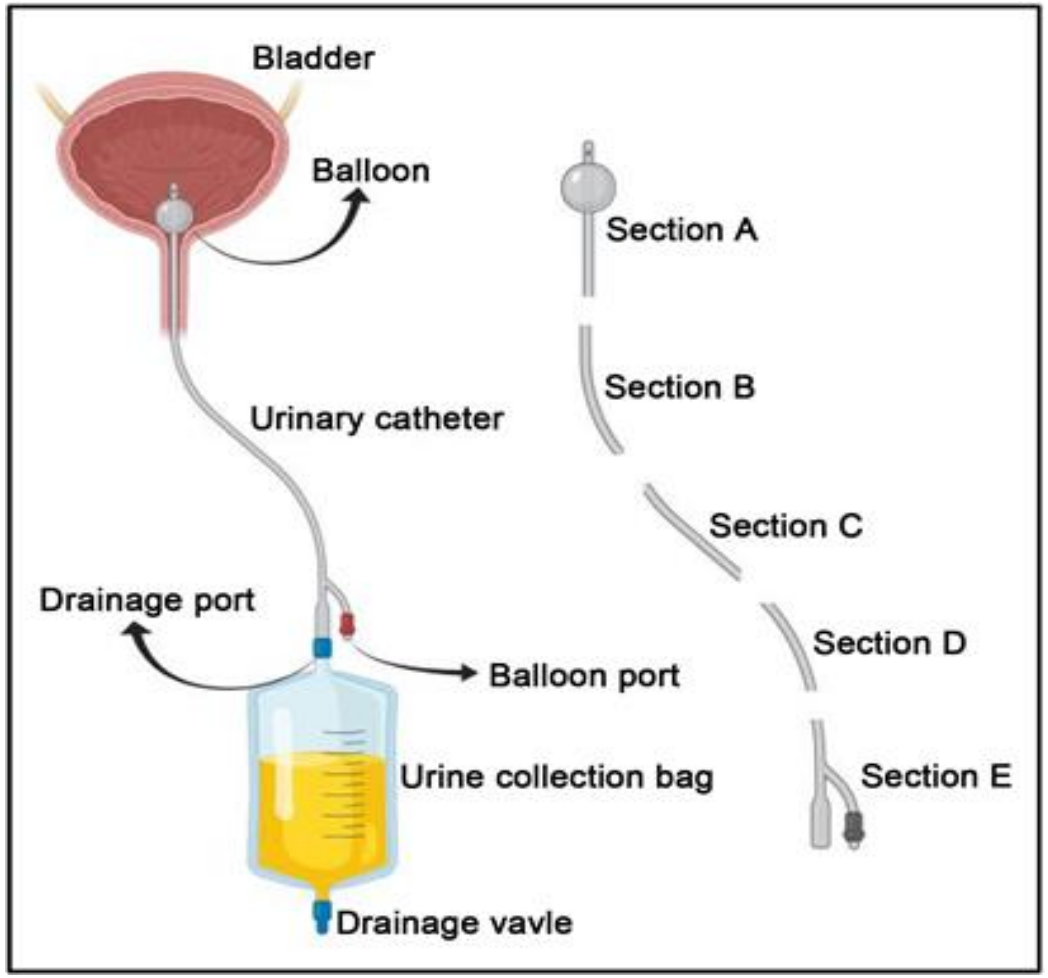


Group Feedback

- Regular review and assessment (need for and product type)
- Regular checks and prompt pad changes to prevent infection and skin damage
- Wash or shower **daily** if incontinent
- Avoid products that may irritate (neutral soap/wash, talc, creams)
- Wiping front to back
- Hand hygiene (residents included)
- PPE
- Hydration promotion
- Preventing and managing constipation

Infection hotspots

Around 14 days after insertion it is likely the bladder will be colonised with bacteria



LANCASHIRE & SOUTH CUMBRIA

Social Care Training Hub

Both clinical and non-clinical catheter training is available via the LSCFT social care training hub:

[Social Care Training – Lancashire and South Cumbria Training Hub (lscthub.co.uk)]

IPC precautions

- Wash hands thoroughly before touching any parts of the catheter/equipment
- Apply clean gloves
- Maintain the connection between the catheter and drainage bag
- Regularly check that the catheter position is correct (Below bladder level), and drainage bag is secure (On a catheter stand)
- Catheter site should be cleaned **at least** once a day gently with neutral soap and water to avoid irritation
- Only disconnect the bag/valve when necessary
- Avoid talcum powder and creams

Catheter related UTI (CAUTI)

Anatomy and Physiology game

Week commencing:							Resident Name:					
Date and initials of staff member completing	**Indication-** Haematuria Obstruction Urology Decubitus sacral ulcer Input/output Not for Resus Immobility	**Hands washed and gloves worn- Y/N**	**Meatal cleansing performed- Y/N**	**Urine emptied into a clean container (asepsis) - Y/N**	**Is the catheter secure and drainage bag/ flip flow valve positioned correctly- Y/N**	**Did the sterile connection remain intact (drainage bag or flip flow valve)- Y/N**	**Was the leg bag changed? (asepsis) Y/N**	**Was a urine sample obtained * (asepsis) Y/N**	**Was hydration encouraged? Y/N**	**Are there any concerns with constipation? (if yes please implement Bristol stool chart) Y/N**	**TWOC date:**	**Any other comments/observations/ concerns or escalation?**
Mon:												
Tues:												
Wed:												
Thurs:												
Friday:												
Sat:												
Sun:												
Catheter change date:												

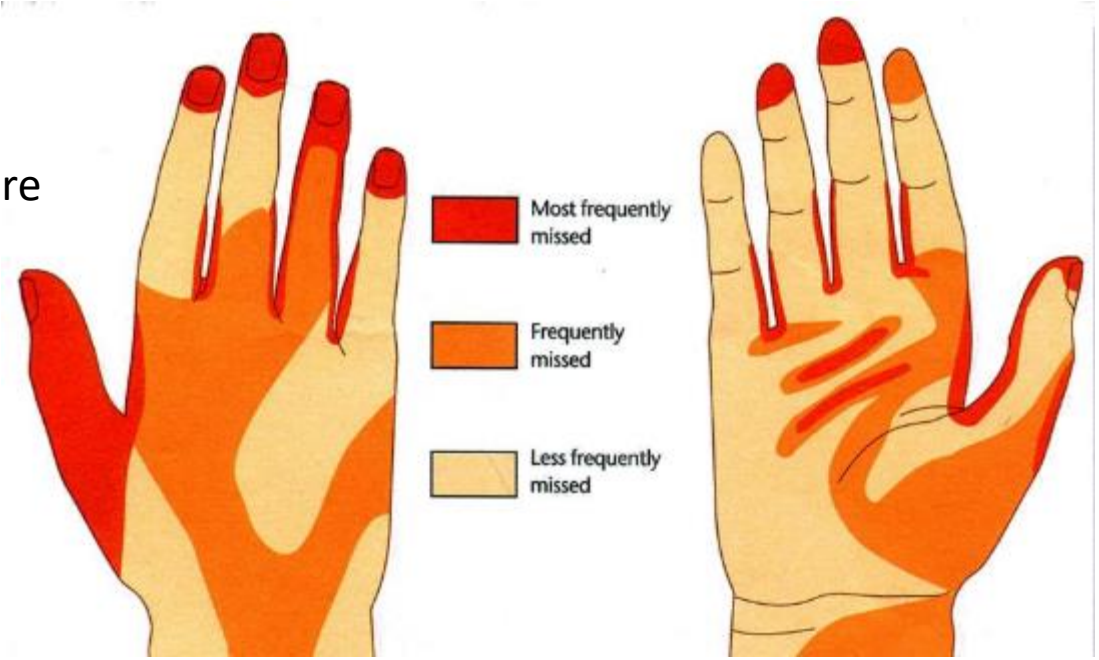
Hand hygiene

The importance of Hand Hygiene

Washing hands can keep you healthy and prevent the spread of infections. Microbes can spread from person-to-person or from surfaces when you prepare or eat food/drinks with unwashed hands.

IPC is essential and relevant in all health and social care settings, including domiciliary and supported living services. All service users are susceptible to acquiring infections. We need to work together to understand the risk factors and implement the measures required to prevent infections.

We need to strengthen our engagement across the health and social care sector to prevent and control infections more effectively. Good practice in hand hygiene is a simple but effective way.



[Infection prevention hand hygiene resources - Lancashire County Council]


STEP 9:Dry hands thoroughly with a single use towel.

PPE

- PPE can protect individuals and staff from cross contamination of micro-organisms when delivering personal care and dealing with blood or bodily fluids.
- It is important that PPE is used in line with an appropriate risk assessment, proportionate to the risk identified.
- When delivering personal care (i.e. toileting, catheter care), contact precautions are required, which includes:
  - Good hand hygiene
  - Gloves and an apron

Gloves must be:

- Used appropriately, fit for purpose and well fitted.
- Changed when damaged or torn or punctured.
- Changed immediately after each contact with a resident or upon completion of task.
- Worn when there is risk of exposure to blood or bodily fluids.

Aprons must be:

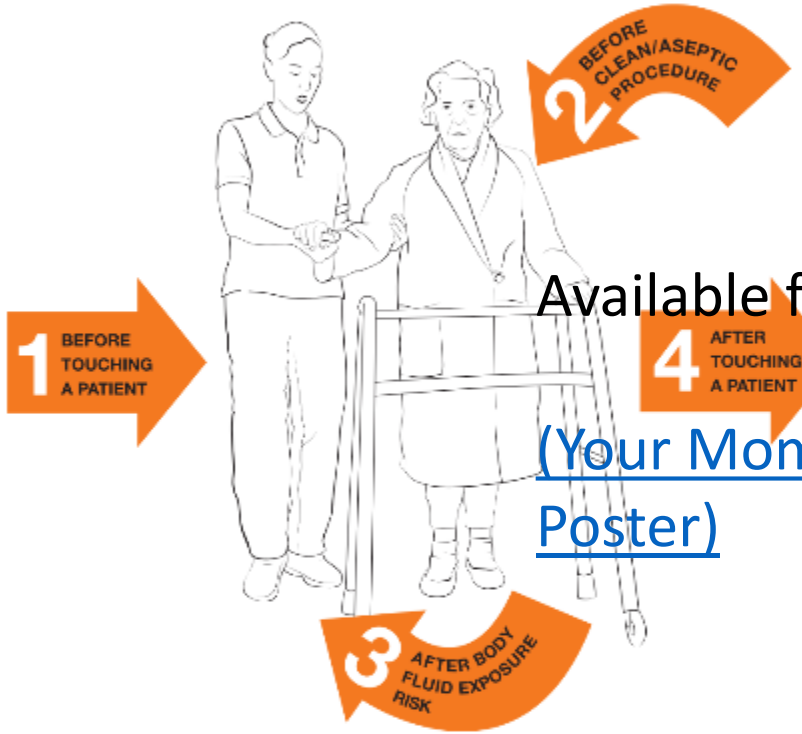
- Changed between residents or on completion of a task.
- Worn to protect uniform or clothes when contamination is anticipated.

Useful training link for donning and doffing:

[COVID-19: personal protective equipment use for non-aerosol generating procedures - GOV.UK (www.gov.uk)]

Your Moments for Hand Hygiene

Health care in a residential home



1	BEFORE TOUCHING A PATIENT	WHEN? Clean your hands before touching a patient. WHY? To protect the patient against harmful germs carried on your hands.
2	BEFORE CLEAN/ ASEPTIC PROCEDURE	WHEN? Clean your hands immediately before performing a clean/aseptic procedure. WHY? To protect the patient against harmful germs, including the patient's own, from entering his/her body.
3	AFTER BODY FLUID EXPOSURE RISK	WHEN? Clean your hands immediately after a procedure involving exposure risk to body fluids (and after glove removal). WHY? To protect yourself and the environment from harmful patient germs.
4	AFTER TOUCHING A PATIENT	WHEN? Clean your hands after touching the patient at the end of the encounter or when the encounter is interrupted. WHY? To protect yourself and the environment from harmful patient germs.

World Health Organization

SAVE LIVES
Clean Your Hands

March 2012

Your ;iene

Available from the WHO at:

(Your Moments for Hand Hygiene Poster)

To dip or not to dip

- ‘To Dip or Not to Dip’ is a quality improvement initiative which aims to improve the diagnosis and management of UTIs in older people living in care homes.
- This pathway uses an assessment tool for suspected UTIs without using a urine dipstick.
- The UTI Assessment Tool is to be used by care home staff in residents over 65 years with suspected UTI.
- This pathway has shown to improve and reduce antibiotic use and hospital admissions due to a UTI.
- For more information on the pathway, please access the NHS training handbook here: [To-Dip-Or-Not-To-Dip Training Handbook (wchc.nhs.uk)]

Protect our Antibiotics!

We need to protect our antibiotics!

- If a UTI is suspected, then a urine sample should be collected and sent for culture – This will show if there is an infection and what the correct antibiotics are to treat the UTI with.
- E. Coli bacteraemia rates have increased in recent years and are becoming more difficult to treat, due to the increasing resistance of the bacteria to antibiotics.

What can you do?

- Educate your staff around the NICE guidance and the 'To Dip or Not To Dip' initiative.
- Become an Antibiotic Guardian – Can help prevent or minimise the real issues surrounding antibiotic resistance.
- As an Antibiotic Guardian, you can encourage others to join you in protecting antibiotics against the growing threat of antibiotic resistance.

Click the link to make your pledge: [Become an Antibiotic Guardian (publishing.service.gov.uk)]

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Case study

Doris is a 79-year-old lady who has just returned to her residential setting following a recent hospital admission.

Whilst in hospital Doris was catheterised due to retention, however prior to discharge, the catheter was removed as it was no longer required.

Doris is immobile and frequently refuses to drink, as she worries about bothering staff to help her to the toilet.

A staff member has noticed today that Doris has foul smelling urine. She can only pass a few drops of urine at a time and complains of pain when passing.

- How would you manage this?
- What other signs would you expect to see?
- How would you escalate this?
- What would you consider to prevent this?

Case study

Henry is 84 years old living in a residential setting and is self-caring.

He has an intermittent catheter that he uses daily as he cannot empty his bladder properly.

He has recently just recovered from diarrhoea and vomiting but has expressed that he has not retained many fluids in the last 3 days.

He is not passing urine often and reports that it is dark in colour.

His eyes are sunken and reports having a dry mouth.

- Please consider what is the cause?
- How would you manage this?
- What would you consider to prevent this?

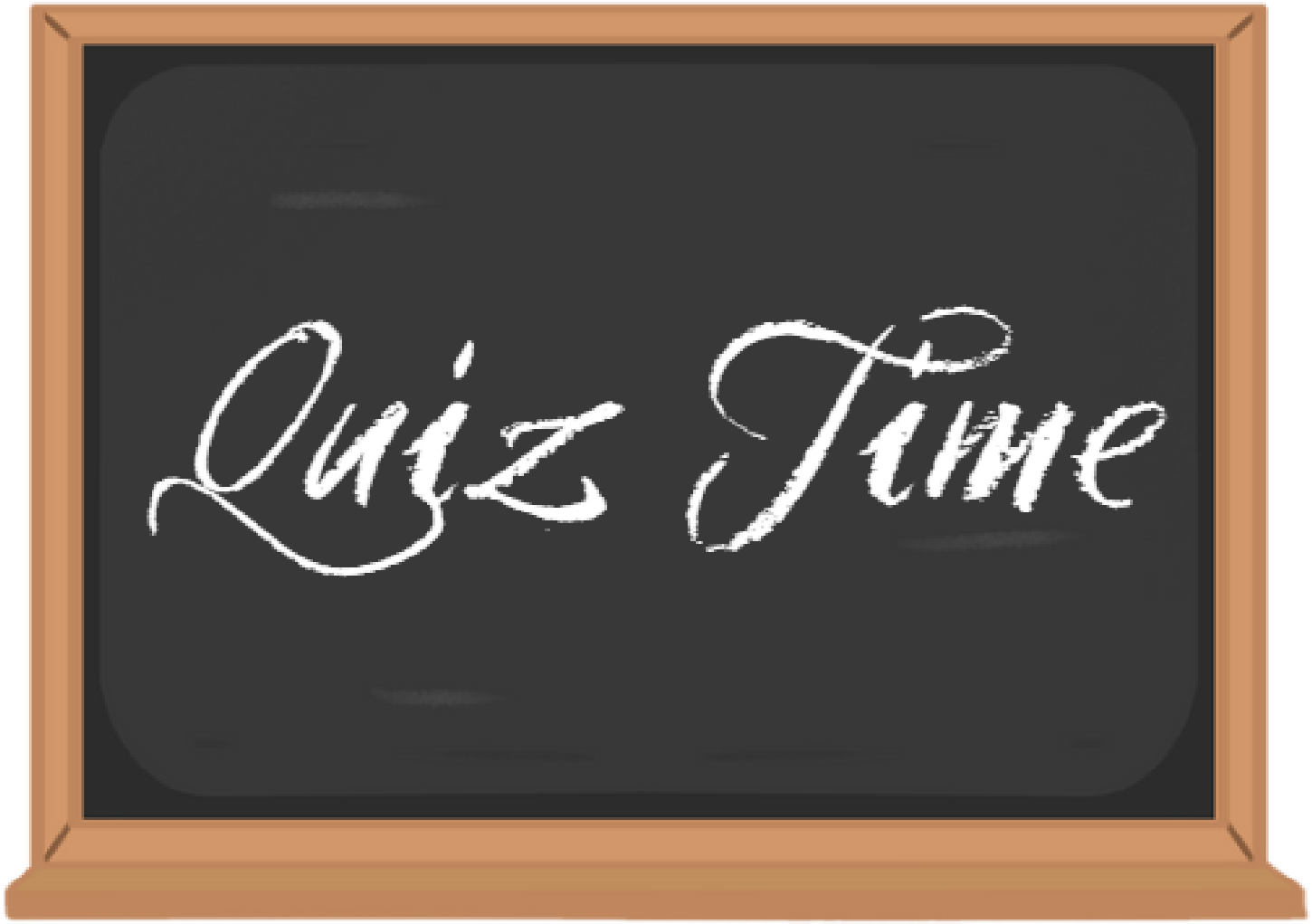
Case study

Bernard is 78 years old, living in a residential setting and needs assistance. He has dementia and needs his fluid input monitoring as he forgets to drink.

The nurse looking after him today notices that his fluid chart seems to have gaps in, indicating that he hasn't been drinking much in the last 2 days.

He doesn't seem to be going to the toilet very often and when he does only passes a small amount of urine. He is not complaining of any pain when urinating but does appear more confused than his usual baseline.

- Please consider what is the cause?
- How would you manage this?
- What would you consider to prevent this?


Quiz Time

Q & A Session

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References

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