



Hertfordshire and
West Essex Integrated
Care System



Hertfordshire and
West Essex
Integrated Care Board

Urinary Tract Infections



Working together
for a healthier future

18/10/2023

Aim of the session

- What is a urinary tract infection, UTI
- Signs and symptoms of UTI
- Preventing UTI
- Monitoring the wellbeing of residents and identify early signs of deterioration
- Communicating concerns to colleagues and outside agencies



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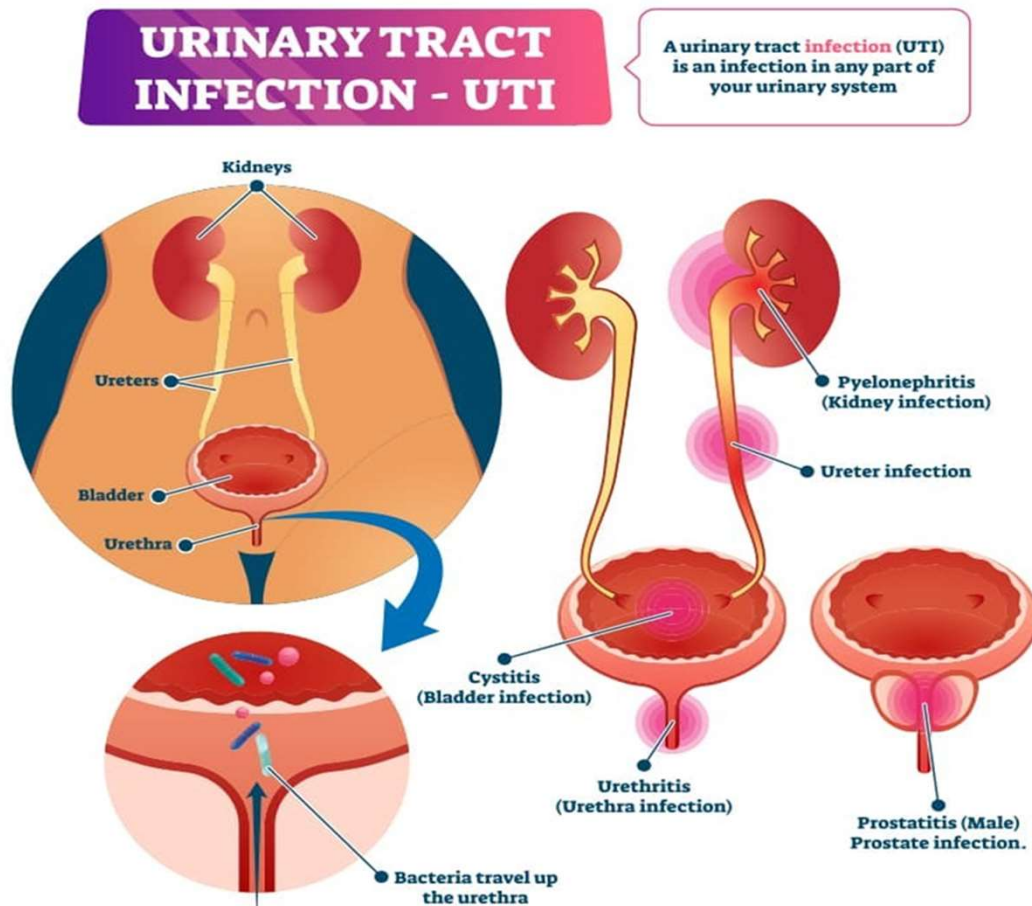
18/10/2023

UTI Background

- The reason for 1 - 3% of all GP appointments
- About one in three women will have at least one UTI by 24 years of age
- About 1 in 2 women will be treated for a UTI (with symptoms) during their lifetime
- The annual incidence of UTI in women increases with age
- E. coli (which normally live harmlessly in the bowel) account for about 80% of UTIs
- Blood stream infections are a potentially severe complication of a UTI
- Urosepsis is a term used to describe a type of sepsis that is caused by an infection in the urinary tract. It is a complication often caused by urinary tract infections that are not treated quickly or properly.

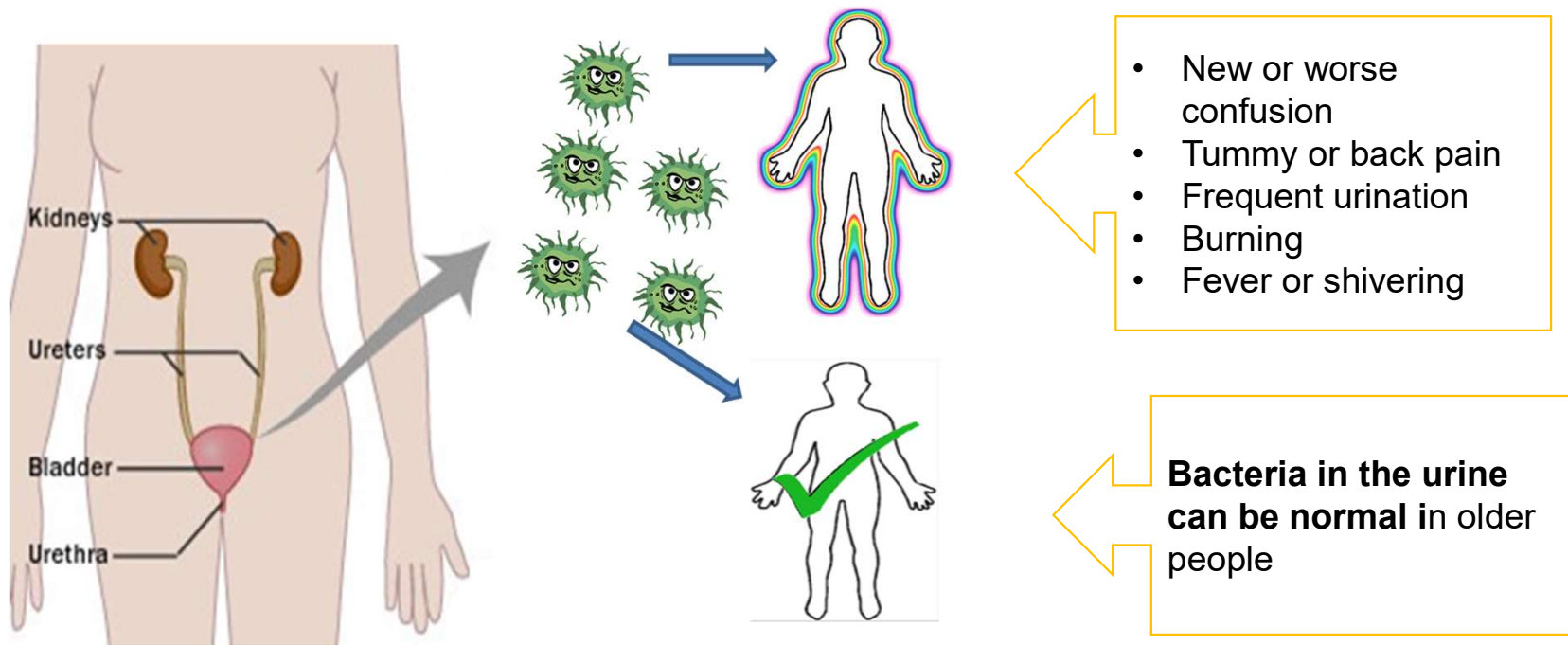


UTI can be an infection in any part of the urinary system



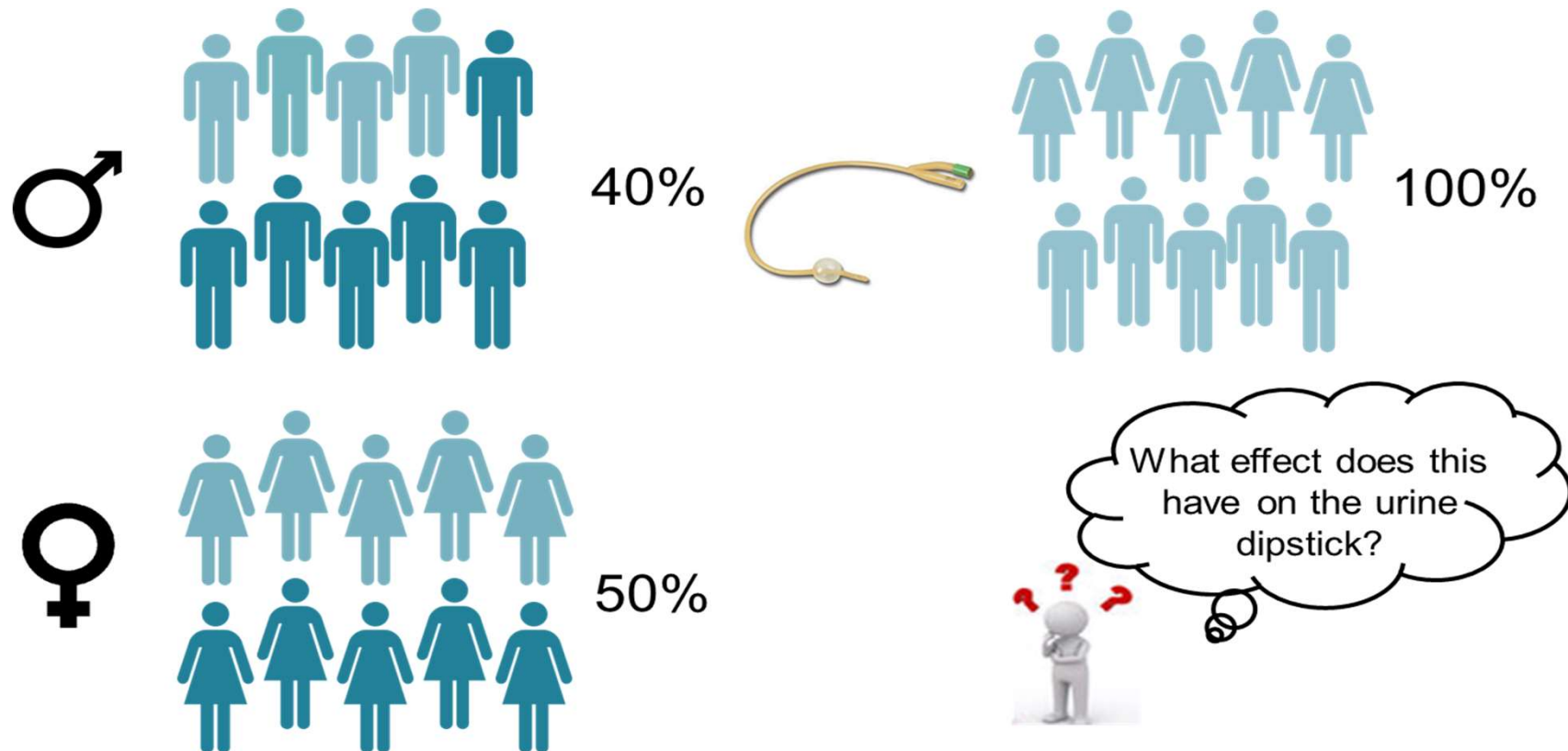
What is a UTI?

UTIs are caused by bacteria entering the bladder through the urethra, and multiplying within the urine in the bladder



Bacteria in the urine of older people

Bacteria can harmlessly live in the bladder of an older person



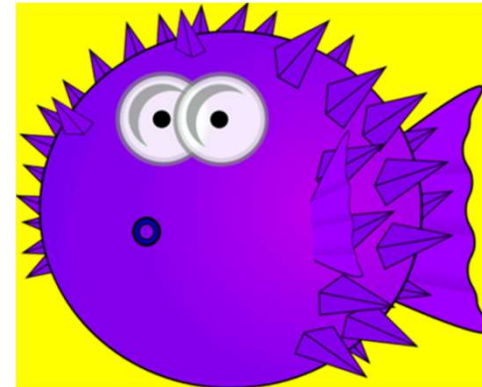
Causes of UTI's

- Poor hygiene – not wiping from front to back
- Constipation
- Poor Hydration
- Not emptying the bladder properly
- Urine staying in the bladder too long, holding onto urine
- Catheter in-situ



Possible Signs and Symptoms

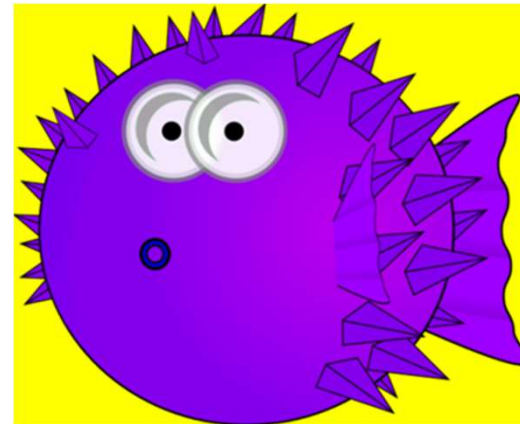
- Pain/ burning when passing urine
- Need to urinate more often
- Pain in lower part of abdomen or back
- Cloudy urine
- Blood in urine may be detected
- Unpleasant smelly urine
- Feeling generally unwell



Contact the GP or usual out of hours pathway

Possible worsening Signs and Symptoms

- Uncontrollable shivering
- Irritable
- Urine output reduces
- New onset confusion
- Raised temperature
- Nausea/ vomiting/ diarrhoea



Possible symptoms in a dementia resident

- Agitated /Restless – more than usual
- Poor concentration/ Dazed
- Hallucinations/ Delusions
- Becoming sleepy/ withdrawn
- Refuses diet and fluids



Suspecting a UTI

What does the Test strip test for?

The presence of bacteria, does **NOT** show whether the bacteria are causing an infection.

CANNOT prove UTI



TESTING AND READING TIME

Rev. 08/2010

Glucose 30s	Neg.		5 Trace	15 +	30 ++	60 +++	110 ++++	mmol/l
Protein 60s	Neg.		Trace ±	0.3 +	1.0 ++	3.0 +++	≥20.0 ++++	g/l
pH 60s	5.0	6.0	6.5	7.0	7.5	8.0	8.5	
Blood 60s	Neg.	Non hemolyzed 10 Trace		Hemolyzed 10 Trace	25 Small	80 Moderate	200 Large	cells/μl



Suspecting a UTI

A positive dipstick is more likely to lead to antibiotic treatment which may not be appropriate.

Giving an older person antibiotics when they don't really need them can lead to:

- Side-effects **such as rashes & stomach upsets**
- C. diff diarrhoea **which can be life-threatening**
- Antibiotic resistance **so antibiotics won't work when the person really does need them**

1 in 3 older people will suffer side-effects from antibiotics if given them when they don't need them



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Suspecting a UTI



Urine dipstick will be positive for bacteria
But doesn't tell us if it is an infection or not!



Often antibiotics are then prescribed inappropriately

UTI Prevention

Think Pink Drink

- Encourage fluids
- Treat constipation
- Encourage residents to sit on the toilet to ensure complete emptying of their bladder
- Check and change soiled pads frequently
- Good toilet hygiene
- Good catheter care



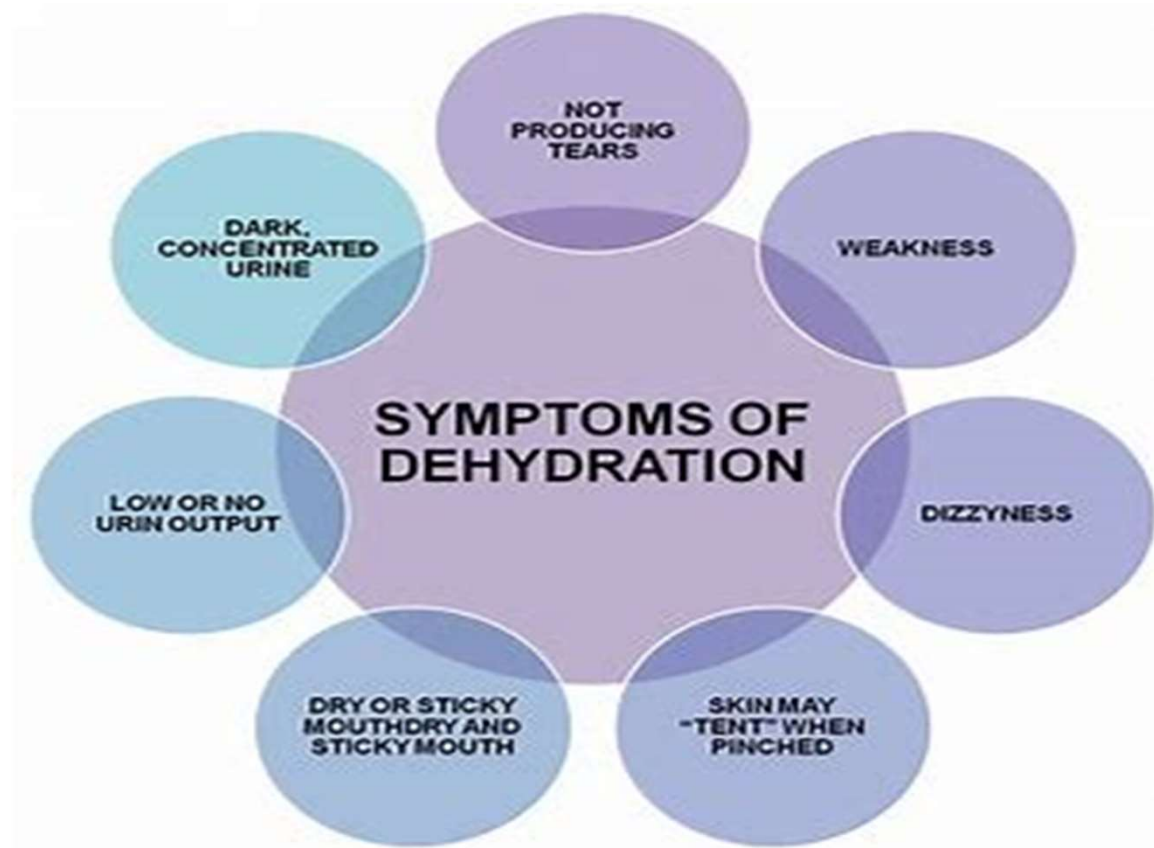
Prevention is better than cure



Ensure residents are drinking 1.5 – 2 litres of fluids per day*

***Some residents may have been advised to restrict fluid intake if they have a heart or kidney condition. Discuss with GP or Matron if unsure.**

Signs and symptoms of dehydration



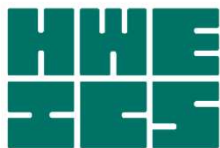
Complications of dehydration

Dehydration can also contribute to a number of other factors:

- Pressure sores
- Urinary Tract Infections
- AKI - Acute Kidney Infections
- Venous Thromboembolism – blood clots (DVT)
- Cognitive decline for those with dementia
- Dizziness
- Constipation
- Increased falls/ falls risk

How to support hydration

- Monitor your residents' urine output
- Monitor the colour of your residents' urine
- Ensure drinks are available/ encouraged/ supported
- Use food alternatives to fluids
- Encourage those who may need prompting to drink regularly
- Different coloured cups/ beakers
- Ensure appropriate drinking equipment is available to suit the resident
- Set drinks routines instead of relying on thirst alone
- Ensure fluids are encouraged at night



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Identifying dehydration

Hydrated

These colourations 1 – 3, show that you are fully hydrated. However if you have reached level 3 (pale yellow) you are beginning to show the signs of dehydration, and should up your water intake.

1

2

3

De-hydrated

Level 4 (a darker yellow than level 3), indicates that you have started the dehydration process and need to drink more water. From level 5 upwards to level 8, you are in fact dehydrated. Whilst not critical at level 5, more water is necessary to prevent symptoms worsening.

At Level 8, you are seriously dehydrated and in need of rapid hydration to increase your electrolytes.

4

5

6

7

8



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What is urine made of?

Urine is mostly water (about 95% water), however, the rest of the contents of urine can vary depending of what you've eaten, drank, breathed in or been exposed to.

The remainder of urine usually consists of urea, uric acid, ammonia, hormones, dead blood cells, proteins, salts and minerals, and toxins.



What affects urine colour?

Eating certain foods can affect the colour of urine though this doesn't happen in everyone. Taking certain medications and certain vitamin supplements may also change the urine to a particularly bright colour. These changes are harmless and are due to colours in the food, supplements or medication. How much the colour of your urine changes will depend on how much food you eat or supplements or medication you take, how hydrated you are and on your own body chemistry.

Sometimes a change in urine colour is an indication of a medical problem such as a urinary tract infection, or kidney, bladder or liver problem.

Dark yellow or orange: Carrots

Green: Asparagus

Pink or red: Beetroot, Blackberries, Rhubarb, Dark red berries

Brown: Fava beans, Broad beans, Rhubarb

Orange: Rhubarb



Identifying dehydration

“When you
feel thirsty,
you are already
dehydrated.”



Encouraging Hydration

- Have drinks on offer at all times and offer drinks that your residents enjoy.
- It can be more effective to offer a drink/high fluid fruit and vegetables rather than ask if your resident would like one.
- Encourage individuals to take each tablet of medication separately with fluid to maximize fluid intake.
- Reassure an individual that carers and staff have time to help them drink.
- Time spent preventing inadequate hydration = less time dealing with the associated problems arising from dehydration.
- Emphasise the importance of good hydration to your residents.



Prevention is better than cure

Prevent dehydration = Prevent UTIs

Why?

Forget to drink

**Sense of thirst
lessens with age**

Warm environment

**Longer periods
sitting down**

Continence
problems



Effects?

Puts strain on kidneys

Bacteria not flushed out
of bladder regularly

Causes constipation

Makes it harder for body
to fight infection

**Increase risk of
UTI**



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 UTI’s in older people living in care homes.

Urine dipstick results are **NOT** very helpful in older people and using signs and symptoms are a more accurate way of assessing possible UTI.

Best practice guidance states:

- ‘Do **NOT** use dipstick testing in the diagnosis of older people with possible UTI’ (SAPG UTI older people)
- ‘Do **NOT** use dipstick testing to diagnose UTI in adults with urinary catheters (NICE QS90)
- ‘People >65 years should have a clinical assessment prior to being diagnosed with a UTI (NICE QS90)



UTI Proforma



Resident:.....
 DOB:.....
 Care Home:.....
 Date:.....
 Carer:.....

Older Residents (>65) with Suspected UTI (Urinary Tract Infection)

Guidance for Care Home staff:

- Complete sections 1 to 4 and residents details and fax to GP
- Add the original form to the residents notes
- DO NOT PERFORM URINE DIPSTICK – NOT recommended in patients >65 years
- CLEAR URINE – UTI highly unlikely
- Send MSU if treatment failure or ≥ 2 signs of infection (especially dysuria, fever or new incontinence)



1) Catheter: N / Y

2) Signs of any other infection source? N / Y

*Cough *Shortness of Breath *Sputum Production

Reason for catheter:.....

Circle any NEW symptoms:

*Nausea/Vomiting *Diarrhoea *Abdominal Pain *Red/warm/swollen area of skin

3) Can the resident communicate symptoms? N / Y

4) Tick the signs and symptoms present in the two tables below:

NEW ONSET - Sign/Symptom	What does this mean?	Tick if present	Sign/Symptom	Tick if present
Dysuria	Pain on urinating		New onset or worsening confusion or agitation	
Urgency	Need to pass urine urgently/new incontinence		Temperature above 37.9°C or 1.5°C above baseline on two occasions during 12 hours (if able to measure)	
Frequency	Need to urinate more often than usual		Heart Rate >90 beats/min (if able to measure)	
Suprapubic tenderness	Pain in lower tummy/above pubic area		Respiratory rate >20 breaths/min (if able to measure)	
Haematuria	Visible blood in urine		Diabetic ? Y / N (if able to measure)	
Polyuria	Passing bigger volumes of urine than usual		If N - Blood glucose >7.7 mmol/L	
Loin pain	Pain either side of spine between ribs & pelvis		Bloods taken? N / Y	
			If Y - WCC >12/μL or <4/μL	

Any other information:.....

5) GP Management Decision - circle all which apply and notify home of decision made:

- (a) Review inhours (d) Arrange trial without catheter
 (b) Mid Stream Urine specimen (MSU) – particularly if ≥ 2 symptoms (e) Antibiotic Prescribed:.....
 (c) Give person specific hydration advice

NB. Urine should be sent in case of suspicion of complicated infection, symptoms suggestive of pyelonephritis, failure to respond to initial therapy or recurrent symptoms after treatment of previous UTI.

Other action:..... Name:..... Signed:..... Designation:..... Date:.....

[ENHCCG Prescribing Guidance](#) (follow link)

[HVCCG Prescribing Guidance](#) (follow link)

Download the [Herts Antibiotic Guidelines App](#) by visiting the appropriate app store for your device and searching for 'Herts Antibiotic'.

Version: December 2017

Adapted from 'To Dip or Not To Dip' BaNESCCG



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Question 4 – complete the 2 signs and symptom boxes.

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Training Video

(15 minutes long)

<https://www.youtube.com/watch?v=rZ5T1Cz7DHQ&feature=youtu.be>



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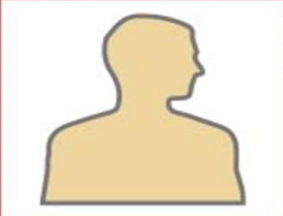


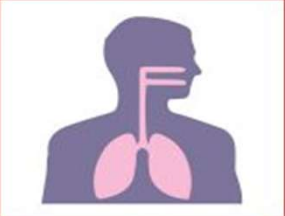
What is Sepsis?



- Anyone can develop sepsis after an injury or infection, some people will be more vulnerable than others
- Sepsis is sometimes called septicaemia or blood poisoning
- Sepsis is a life-threatening condition that arises when the body's response to infection causes injury to its own tissues and organs
- Sepsis is when your body fights too hard against an infection
- When the body has an infection present and goes into over-drive, this causes inflammation within the body, swelling and blood clotting
- **Residents that have suspected sepsis need urgent medical attention**

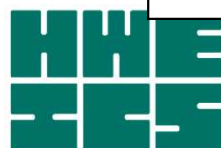


Sepsis symptoms

SEPSIS SYMPTOMS					
					
S	E	P	S	I	S
SHIVERING, FEVER, OR VERY COLD	EXTREME PAIN OR DISCOMFORT	PALE OR DISCOLORED SKIN	SLEEPY, DIFFICULT TO ROUSE, CONFUSED	"I FEEL LIKE I MIGHT DIE"	SHORT OF BREATH

SBAR tool - to support you to structure your conversations when discussing your residents with professional colleagues

S	SITUATION <ul style="list-style-type: none"> Your name and Care home name Name of patient , age, DOB What is the concern, what has happened? Describe symptoms which are different than normal. Does the patient have capacity to tell you what is wrong? 	Examples of symptoms you might describe: <ul style="list-style-type: none"> Falls – are there injuries? Confused, disorientated, dizzy, unsteady Drowsy or hard to rouse Hot / flushed /sweating. Cold / clammy / shivering / pale Breathing harder or faster, slower or shallower Complaining of pain, grimacing, posture indicating pain if unable to communicate - describe where pain is Weakness in legs or arms / facial differences Coughing / bringing up phlegm / wheezing Vomiting / nausea - how long for Change in urinary continence / Smelly urine, blocked or problem with catheter Change in bowel habit /Diarrhoea Not eating or drinking / loss of appetite Bleeding from what area?
B	BACKGROUND <ul style="list-style-type: none"> How long have symptoms been present? Did they come on suddenly? Does the person have any other long term illness? Have they already been seen by the GP for this change? If so was any medications started? What instructions were given to the home? Have you got a list of their current medication? Has the patient recently been into hospital? If so what for? Does the patient have a current DNAR in place? If yes be clear why you are ringing 	
A	ASSESSMENT <ul style="list-style-type: none"> What actions have you already taken? Is the patient in a safe place? Has the person lost consciousness? Be very clear is it a true loss of consciousness? If yes how long for in minutes. Are there any obvious signs of injury or bleeding? 	Examples of assessment actions you might describe: <ul style="list-style-type: none"> First aid options used /Recovery position Pressure on bleeding area BP, Pulse, respiration rate, temperature, urine analysis - give results
R	RECOMMENDATION <ul style="list-style-type: none"> Explain what you need - be specific about the request and timeframe Make suggestions i.e. ECP or Dr or advice only Clarify expectations <p>Note: an ambulance can take from 9 – 60 minutes depending on urgency</p>	Examples of recommendations you might describe: <ul style="list-style-type: none"> Review by GP urgently Ambulance Call back from Clinical Advisor Clarify what is happening as a result of call – when you can expect a visit or ambulance



SBAR COMMUNICATION TOOL- AIDE MEMOIRE

FINAL

If an ambulance is sent these are suggestions of what to do whilst waiting for the ambulance to arrive?

Reassure the resident and stay with them, continue to monitor for signs of deterioration which may mean a further call to the service. Ask another staff member to follow the check list. Do you need an escort? Do you need to ask senior management to attend the home?

In no particular order:-

1. Inform relatives.
2. Prepare the RED BAG; Photocopy medication charts and bag all medication. Is there any in the fridge, room or cupboards?
3. Photocopy main care plan details or grab sheet making sure the details are up to date. Especially where you have allergies or special instructions around other medical conditions. Include copy of DNAR form. Is there any special information which may help staff to communicate or deliver care for the resident, (i.e. strategies to adopt when the patient is anxious especially with dementia residents)? Are there any triggers which are not recorded?
4. Prepare an overnight bag for the resident. Remember to take items that may offer reassurance. Maintaining the residents' dignity is paramount so having their own belongings may help.



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SBAR link to assist in e-learning

[SBAR Communication in Care Homes - e-Learning for Healthcare \(e-lfh.org.uk\)](https://www.e-lfh.org.uk/programmes/sbar-communication-in-care-homes/)

<https://www.e-lfh.org.uk/programmes/sbar-communication-in-care-homes/>



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Thank you

Any questions?



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