

Introduction: This is a short toolbox talk to give you some information on Catheter Associated Urinary Tract Infection (CAUTI). Use this toolbox talk to share information at huddles, safety briefs and meetings to introduce changes and increase awareness with your staff. This toolbox talk is in relation to CAUTI associated with urethral urinary catheter (UUC).

What is CAUTI?

A CAUTI occurs when microorganisms, usually bacteria, enter the urinary tract through a UUC and cause infection. CAUTIs can be associated with increased morbidity, mortality and can increase the patient's length of stay in hospital.

What is Catheter Associated Asymptomatic Bacteriuria (CA-ASB)?

CA-ASB is defined as the presence of bacteria in the urine without clinical signs and symptoms indicative of CAUTI. CA-ASB is essentially colonisation of the urine with microorganisms.

CA-ASB is always a precursor to CAUTI, however not all patients with CA-ASB will develop CAUTI. CA-ASB should not be treated with antibiotics as the bacteria are either unlikely to be eradicated or they will return quickly. In addition, the risks of treatment outweigh the benefits, such as the risk of adverse reactions to the antimicrobial drug, development of antimicrobial resistance and *Clostridioides difficile* infection (CDI).

What are the symptoms of CAUTI?

Classical signs of UTI such as discoloured and foul smelling urine, with or without the presence of debris in the urine drainage bag, must not be used to diagnose CAUTI.

For a patient to be diagnosed with CAUTI, they will have a UUC in-situ or removed within the previous 48 hours.

CAUTI are defined by the following:

- temperature less than 36° or greater than 37.9° **OR** 1.5> baseline on two occasions in the last 12 hours and one or more of the following:
 - Shaking chills (rigors)
 - New costovertebral (central lower back) tenderness
 - New onset or worsening delirium (confusion)
- And on antibiotics for treatment of UTI

What are the risk factors for developing CAUTI?

UUC is a risk factor for developing a CAUTI. Careful consideration should be given prior to catheterising a patient, ensuring that all other alternatives to urethral urinary catheterisation have been considered. Once a patient has a UUC in-situ, the on-going requirement should be assessed daily and the catheter should be removed as soon as possible.

Diagnosis of CAUTI

Urine dipstick testing is contraindicated in patients with a UUC *in-situ* as it has no predictive value and therefore cannot be used to differentiate between CAUTI and CA-ASB.

If CAUTI is suspected, obtain a catheter specimen of urine (CSU) from the sampling port for urine culture and send to Microbiology for culture and sensitivity testing.

How is a CAUTI treated?

CAUTI are treated with antibiotics as per NHS GGC Empirical Antibiotic Therapy clinical guideline. Consider removing and replacing urinary catheter.

What can you do to prevent CAUTI?

- Consider all other available continence aids prior to inserting a catheter
- Remove the catheter as soon as it is no longer required
- Compliance with hand hygiene, including 5 key moments and 6 steps for hand hygiene when undertaking UUC care.
- Adherence to NHS GGC Adult Urethral Urinary Catheter Insertion and Maintenance care checklist and ensure documentation is kept up to date
- Provide patients who have invasive devices with infection prevention advice and patient information leaflet

Teachback Questions

1. What are the risk factors for developing a CAUTI?
2. Describe the differences between CA-ASB and CAUTI?
3. What are the symptoms of CAUTI?
4. How can you prevent a patient developing a CAUTI?