# Key Definitions

In order to make sure that every member of the team is clear about the definitions that will be used, we have provided a list of key terms in the next few pages along with commonly used defintions for each term.

Additionally, we define both the process (also known “intermediate outcome”) measures as well as the clinically-relevant outcome measures we will be using to evaluate how our program is working.

These definitions were provided to us from the North Carolina Center for Hospital Quality and Patient Safety, Centers for Disease Control and Prevention (CDC), and from a toolkit used by the Michigan Health and Hospital Association written by Mohamad G. Fakih, MD, MPH, Sanjay Saint, MD, MPH, Sarah Krein, RN, PhD., and Russ Olmsted, MPH, CIC. We have modified the definitions and the material as appropriate.

Finally, we also provide recent material and definitions used by the CDC’s National Healthcare Safety Network (NHSN) as a reference source.

**Key definitions (modified from the North Carolina Prevent Catheter-Associated Urinary Tract Infections Collaborative Tool Kit developed by the North Carolina Center for Hospital Quality and Patient Safety):**

1. Asymptomatic bacteriuria (a.k.a. ASB): the presence of bacteria in the urine, which is not causing symptoms of a UTI. 75% to 90% of patients with ASB do not develop a systemic inflammatory response or other clinical manifestations suggesting infection. Treatment of ASB has not been shown to be clinically beneficial in most patient populations and is associated with development of multi-drug resistant organisms. Of note, the National Healthcare Safety Network (NHSN) removed the ASB definition from its UTI definitions in 2009.

2. Biofilm: communities of different types of microorganisms that attach to environmental surfaces, such as medical devices. They enclose themselves in a protective matrix that is highly protective, and are typically far more resistant to antibiotics than free-floating organisms. They develop rapidly and may be found on any surface where moisture and nutrients are present.

3. Catheter-associated urinary tract infection (CAUTI): as defined by the NHSN, is divided into two classifications: symptomatic CAUTI and asymptomatic, bacteremic urinary tract infection (bloodstream infection secondary to a UTI). For details, see the NHSN definitions section at the end of this section. Of note, definitions of CAUTI vary between studies, making the appraisal of evidence very difficult. Unfortunately, investigators have used many different definitions for CAUTI, and have often not distinguished between symptomatic CAUTI and asymptomatic bacteriuria.

4. External catheter (a.k.a. condom catheter, Texas catheter.): a urine containment device that fits over the external genitalia and is attached to a urinary drainage bag. Used in men.

5. Indwelling urinary catheter: drainage tube that is inserted aseptically into the urinary bladder through the urethra, is left in place, and is connected to a closed collection system. (Frequently called a “Foley catheter.”)

6. Short-term catheterization: generally considered to be a period of less than 30 days of having an indwelling urinary catheter.

7. Straight catheterization (a.k.a. intermittent catheterization or in-and-out catheterization): brief insertion (and removal) of a catheter into the bladder via the urethra to drain urine at different time intervals.

8. Symptomatic UTI (SUTI): patients with a positive urine culture and experiencing, NHSN-defined UTI signs or symptoms with no other recognized cause of the symptoms.

**Process measures:**

1. Utilization ratio = Number of patients with a urinary catheter on the unit / Total number of patients on the unit

2. Prevalence rate = (Number of patients with a urinary catheter on the unit / Total number of patients on the unit) x 100

3. Rate of unnecessary urinary catheter use = (Days of unnecessary urinary catheters /Total number of patient days) x 1000

4. Unnecessary urinary catheter % = (Days of unnecessary urinary catheters/Total number of days of urinary catheters used) x 100

5. Discontinuation rate of unnecessary urinary catheter % = (Number of unnecessary urinary catheters discontinued/All urinary catheters without valid indications) x 100

**Outcome Measures**

1. Symptomatic CAUTI rate* = (Number of symptomatic CAUTIs/number of urinary catheter days) x 1000

2. Symptomatic CAUTI rate (using patient days) = (Number of symptomatic CAUTIs/Number of patient days) x 10,000

3. Bloodstream infection related to CAUTI* (NHSN rate) = (Number of bloodstream-related infections due to CAUTI/number of urinary catheter days ) x 1000

* Established rates used by the CDC's National Healthcare Safety Network