Should I Collect Urine for Bacterial Culture?  
Algorithm for Inpatients with or without a Urethral Catheter*

*This algorithm does NOT apply to patients with neurogenic bladder, pregnant women or patients undergoing urologic procedures where mucosal bleeding is expected

START HERE →

Does the patient have any of the following symptoms that may suggest urinary tract infection?
• Burning sensation with urination
• Suprapubic or flank pain
• Frequent urination or urinary urgency
• Acute urinary retention

YES

Could a non-UTI diagnosis explain the signs and symptoms?
• Frequency/incontinence: diuretic treatment or urinary incontinence at baseline
• Fever: known or suspected alternative source of infection (e.g., fever and O2 requirements suggest pneumonia; do not send urine) OR non-infectious cause of fever (e.g., post-op fever within 48 hours does not usually require workup)
• New hematuria: trauma due to recent urethral catheter placement

YES

NO/CAN'T GIVE HISTORY

YES

NO

Does the patient have any of the following signs present?
• Fever or rigors
• New hematuria not related to catheter insertion
• Clinical instability (e.g., hypotension, tachycardia, diaphoresis)

NO

Do not collect urine, communicate with ordering provider

Is there a urine culture pending or resulted within last 48hrs that was sent to work up urinary symptoms?

YES

Do not collect urine, communicate with ordering provider

NO

Collect urine for culture

Do not collect urine specimen for bacterial culture for:
• Isolated dark, cloudy urine
• Isolated foul-smelling urine
• Pyuria in asymptomatic patients
• Bacteriuria in asymptomatic patients
• Bacteriuria in asymptomatic patients
• After treatment to document cure
• “Weakness”
• Falls
• History of UTI
• Routine on admission
• After urethral catheter change
• Mental status changes without evidence of systemic infection or UTI symptoms

Developed by The Johns Hopkins Hospital Department of Antimicrobial Stewardship

Nicolle et al., Clinical Practice Guideline for the Management of Asymptomatic Bacteriuria: 2019 Update by the Infectious Diseases Society of America