

Revised McGreer Criteria for Infection Surveillance Checklist

Patient Name: _____ **MRN:** _____ **Location:** _____

Date of Infection: _____ **Date of Review:** _____ **Reviewed by:** _____

UTI: evaluated criteria met

RTI: evaluated criteria met

SSTI: evaluated criteria met

GITI: evaluated criteria met

Table 1. Constitutional Criteria for Infection			
Fever	Leukocytosis	Acute Mental Status Change	Acute Functional Decline
Single oral temp >37.8 °C (100 °F), <i>OR</i> Repeated oral temp >37.2 °C (99 °F), <i>OR</i> Repeated rectal temp >37.5 °C (99.5 °F), <i>OR</i> Single temp >1.1 °C (2 °F) from baseline from any site	>14,000 WBC / mm ³ , <i>OR</i> >6% band, <i>OR</i> ≥1,500 bands / mm ³	Acute onset, <i>AND</i> Fluctuating course, <i>AND</i> Inattention, <i>AND</i> Either disorganized thinking, <i>OR</i> altered level of consciousness	3-point increase in baseline ADL score according to the following items: 1. Bed mobility 2. Transfer 3. Locomotion within LTCF 4. Dressing 5. Toilet use 6. Personal hygiene 7. Eating [Each scored from 0 (independent) to 4 (total dependence)]

Table 2. Urinary Tract Infection (UTI) Surveillance Definitions		
Syndrome	Criteria	Selected Comments*
UTI without indwelling catheter	<p>Must fulfill both 1 AND 2.</p> <p><input type="checkbox"/> 1. At least one of the following sign or symptom</p> <ul style="list-style-type: none"> <input type="checkbox"/> Acute dysuria or pain, swelling, or tenderness of testes, epididymis, or prostate <input type="checkbox"/> Fever or leukocytosis, and ≥ 1 of the following: <ul style="list-style-type: none"> <input type="checkbox"/> Acute costovertebral angle pain or tenderness <input type="checkbox"/> Suprapubic pain <input type="checkbox"/> Gross hematuria <input type="checkbox"/> New or marked increase in incontinence <input type="checkbox"/> New or marked increase in urgency <input type="checkbox"/> New or marked increase in frequency <input type="checkbox"/> If no fever or leukocytosis, then ≥ 2 of the following: <ul style="list-style-type: none"> <input type="checkbox"/> Suprapubic pain <input type="checkbox"/> Gross hematuria <input type="checkbox"/> New or marked increase in incontinence <input type="checkbox"/> New or marked increase in urgency <input type="checkbox"/> New or marked increase in frequency <p><input type="checkbox"/> 2. At least one of the following microbiologic criteria</p> <ul style="list-style-type: none"> <input type="checkbox"/> ≥ 10⁵ cfu/mL of no more than 2 species of organisms in a voided urine sample <input type="checkbox"/> ≥ 10² cfu/mL of any organism(s) in a specimen collected by an in-and-out catheter 	<p>The following 2 comments apply to both UTI with or without catheter:</p> <ul style="list-style-type: none"> • UTI can be diagnosed without localizing symptoms if a blood isolate is the same as the organism isolated from urine and there is no alternate site of infection • In the absence of a clear alternate source of infection, fever or rigors with a positive urine culture result in the non-catheterized resident or acute confusion in the catheterized resident will often be treated as UTI. However, evidence suggests that most of these episodes are likely not due to infection of a urinary source. <ul style="list-style-type: none"> • Urine specimens for culture should be processed as soon as possible, preferably within 1-2 h • If urine specimens cannot be processed within 30 min of collection, they should be refrigerated and used for culture within 24 h
UTI with indwelling catheter	<p>Must fulfill both 1 AND 2.</p> <p><input type="checkbox"/> 1. At least one of the following sign or symptom</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fever, rigors, or new-onset hypotension, with no alternate site of infection <input type="checkbox"/> Either acute change in mental status or acute functional decline, with no alternate diagnosis and leukocytosis <input type="checkbox"/> New-onset suprapubic pain or costovertebral angle pain or tenderness <input type="checkbox"/> Purulent discharge from around the catheter or acute pain, swelling, or tenderness of the testes, epididymis, or prostate <p><input type="checkbox"/> 2. Urinary catheter specimen culture with ≥ 10⁵ cfu/mL of any organism(s)</p>	<ul style="list-style-type: none"> • Recent catheter trauma, catheter obstruction, or new onset hematuria are useful localizing signs that are consistent with UTI but are not necessary for diagnosis • Urinary catheter specimens for culture should be collected after replacement of the catheter if it has been in place >14 d

UTI criteria met

UTI criteria NOT met

* Refer to original article (Stone ND, et al. Infect Control Hosp Epidemiol 2012;33:965-77) for full comments

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Table 3. Respiratory Tract Infection (RTI) Surveillance Definitions		
Syndrome	Criteria	Selected Comments*
Common cold syndrome or pharyngitis	<p>Must fulfill at least 2 criteria.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Runny nose or sneezing <input type="checkbox"/> Stuffy nose or nasal congestion <input type="checkbox"/> Sore throat, hoarseness, or difficulty in swallowing <input type="checkbox"/> Dry cough <input type="checkbox"/> Swollen or tender glands in the neck (cervical lymphadenopathy) 	<ul style="list-style-type: none"> • Fever may or may not be present • Symptoms must be new and not attributable to allergies
Influenza-like illness	<p>Must fulfill both 1 AND 2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Fever <input type="checkbox"/> 2. At least three of the following criteria <ul style="list-style-type: none"> <input type="checkbox"/> Chills <input type="checkbox"/> New headache or eye pain <input type="checkbox"/> Myalgias or body aches <input type="checkbox"/> Malaise or loss of appetite <input type="checkbox"/> Sore throat <input type="checkbox"/> New or increased dry cough 	<ul style="list-style-type: none"> • If both criteria for influenza-like illness and another upper or lower RTI are met, only record diagnosis of influenza-like illness
Pneumonia	<p>Must fulfill 1, 2, AND 3.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Chest X-ray with pneumonia or a new infiltrate <input type="checkbox"/> 2. At least one of the following criteria <ul style="list-style-type: none"> <input type="checkbox"/> New or increased cough <input type="checkbox"/> New or increased sputum production <input type="checkbox"/> O₂ sat <94% on room air, or >3% decrease from baseline O₂ sat <input type="checkbox"/> New or changed lung exam abnormalities <input type="checkbox"/> Pleuritic chest pain <input type="checkbox"/> Respiratory rate ≥25 breaths/min <input type="checkbox"/> 3. At least one of the following criteria <ul style="list-style-type: none"> <input type="checkbox"/> Fever <input type="checkbox"/> Leukocytosis <input type="checkbox"/> Acute mental status change <input type="checkbox"/> Acute functional decline 	<ul style="list-style-type: none"> • Conditions mimicking the presentation of RTI (e.g., congestive heart failure or interstitial lung diseases) should be excluded
Bronchitis or Tracheo-bronchitis	<p>Must fulfill 1, 2, AND 3.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Chest X-ray not performed, or negative for pneumonia or a new infiltrate <input type="checkbox"/> 2. At least two of the following criteria <ul style="list-style-type: none"> <input type="checkbox"/> New or increased cough <input type="checkbox"/> New or increased sputum production <input type="checkbox"/> O₂ sat <94% on room air, or >3% decrease from baseline O₂ sat <input type="checkbox"/> New or changed lung exam abnormalities <input type="checkbox"/> Pleuritic chest pain <input type="checkbox"/> Respiratory rate >25 breaths/min <input type="checkbox"/> 3. At least one of the following criteria <ul style="list-style-type: none"> <input type="checkbox"/> Fever <input type="checkbox"/> Leukocytosis <input type="checkbox"/> Acute mental status change <input type="checkbox"/> Acute functional decline 	<ul style="list-style-type: none"> • Conditions mimicking the presentation of RTI (e.g., congestive heart failure or interstitial lung diseases) should be excluded
<input type="checkbox"/> RTI criteria met		<input type="checkbox"/> RTI criteria <u>NOT</u> met

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Table 4. Skin and Soft Tissue Infection (SSTI) Surveillance Definitions		
+++Syndrome	Criteria	Selected Comments*
Cellulitis, soft tissue, or wound infection	<p>Must fulfill at least 1 criteria.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Pus at wound, skin, or soft tissue site <input type="checkbox"/> At least four of the following new or increasing sign or symptom <ul style="list-style-type: none"> <input type="checkbox"/> Heat (warmth) at affected site <input type="checkbox"/> Redness (erythema) at affected site <input type="checkbox"/> Swelling at affected site <input type="checkbox"/> Tenderness or pain at affected site <input type="checkbox"/> Serous drainage at the affected site <input type="checkbox"/> At least one of the following <ul style="list-style-type: none"> <input type="checkbox"/> Fever <input type="checkbox"/> Leukocytosis <input type="checkbox"/> Acute changed in mental status <input type="checkbox"/> Acute functional decline 	<ul style="list-style-type: none"> • More than 1 resident with streptococcal skin infection from the same serogroup (e.g., A, B, C, G) may indicate an outbreak • Positive superficial wound swab culture is not sufficient evidence to establish a wound infection
Scabies	<p>Must fulfill both 1 AND 2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Maculopapular and/or itching rash <input type="checkbox"/> 2. At least one of the following criteria <ul style="list-style-type: none"> <input type="checkbox"/> Physician diagnosis <input type="checkbox"/> Lab confirmation (scraping or biopsy) <input type="checkbox"/> Epidemiologic linkage to a case of scabies with lab confirmation 	<ul style="list-style-type: none"> • Must rule out rashes due to skin irritation, allergic reactions, eczema, and other non-infectious skin conditions • Epidemiologic linkage refers to geographic proximity, temporal relationship to symptom onset, or evidence of common source of exposure
Oral candidiasis	<p>Must fulfill 1 AND 2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Presence of raised white patches on inflamed mucosa or plaques on oral mucosa <input type="checkbox"/> 2. Medical or dental diagnosis 	
Fungal skin infection	<p>Must fulfill 1 AND 2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Characteristic rash or lesions <input type="checkbox"/> 2. Physician diagnosis or lab confirmation of fungal pathogen from skin scraping or biopsy) 	
Herpes simplex or Herpes zoster infection	<p>Must fulfill 1 AND 2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. A vesicular rash <input type="checkbox"/> 2. Physician diagnosis or lab confirmation 	<ul style="list-style-type: none"> • Reactivation of herpes simplex (cold sore) or herpes zoster (shingles) is not considered a healthcare-associated infection
Conjunctivitis	<p>Must fulfill at least 1 criteria.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Pus from one or both eyes for ≥ 24 h <input type="checkbox"/> New or increased conjunctival erythema +/- itching <input type="checkbox"/> New or increased conjunctival pain for ≥ 24 h 	<ul style="list-style-type: none"> • Conjunctivitis symptoms (pink eye) should not be due to allergy or trauma
<input type="checkbox"/> SSTI criteria met		<input type="checkbox"/> SSTI criteria <u>NOT</u> met

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Table 5. Gastrointestinal Tract Infection (GITI) Surveillance Definitions		
Syndrome	Criteria	Selected Comments*
Gastroenteritis	<p>Must fulfill at least 1 criteria.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Diarrhea: ≥ 3 liquid or watery stools above what is normal for the resident within 24 h <input type="checkbox"/> Vomiting: ≥ 2 episodes in 24 h <input type="checkbox"/> Both of the following sign or symptom <ul style="list-style-type: none"> <input type="checkbox"/> Stool specimen positive for a pathogen (e.g., <i>Salmonella</i>, <i>Shigella</i>, <i>E coli</i> O157:H7, <i>Campylobacter</i> species, rotavirus) <input type="checkbox"/> At least one of the following criteria <ul style="list-style-type: none"> <input type="checkbox"/> Nausea <input type="checkbox"/> Vomiting <input type="checkbox"/> Abdominal pain or tenderness <input type="checkbox"/> Diarrhea 	<ul style="list-style-type: none"> • Exclude non-infectious causes of symptoms such as new medications causing diarrhea, nausea, or vomiting or diarrhea resulting from initiation of new enteral feeding • Presence of new GI symptoms in a single resident may prompt enhanced surveillance for additional cases • In the presence of an outbreak, stool specimens should be sent to confirm the presence of norovirus or other pathogens (e.g., rotavirus, <i>E coli</i> O157:H7)
Norovirus gastroenteritis	<p>Must fulfill both 1 AND 2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. At least one of the following criteria <ul style="list-style-type: none"> <input type="checkbox"/> Diarrhea: ≥ 3 liquid or watery stools above what is normal for the resident within 24 h <input type="checkbox"/> Vomiting: ≥ 2 episodes in 24 h <input type="checkbox"/> 2. A stool specimen positive for norovirus detected by electron microscopy, enzyme immunoassay, or molecular diagnostic testing 	<ul style="list-style-type: none"> • In the absence of lab confirmation, a norovirus gastroenteritis outbreak (≥ 2 cases in a LTCF) may be assumed if all of the Kaplan Criteria are present <ul style="list-style-type: none"> ○ Vomiting in >50% of affected persons ○ A mean or median incubation period of 24-48 h ○ A mean or median duration of illness of 12-60 h, and ○ No bacterial pathogen is identified in stool culture
<i>Clostridium difficile</i> infection	<p>Must fulfill 1 AND 2.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. At least one of the following criteria <ul style="list-style-type: none"> <input type="checkbox"/> Diarrhea: ≥ 3 liquid or watery stools above what is normal for the resident within 24 h <input type="checkbox"/> Presence of toxic megacolon (radiologic finding of abnormal large bowel dilatation) <input type="checkbox"/> 2. At least one of the following diagnostic criteria <ul style="list-style-type: none"> <input type="checkbox"/> Stool sample positive for <i>C difficile</i> toxin A or B, or detection of toxin-producing <i>C difficile</i> by culture or PCR in stool sample <input type="checkbox"/> Pseudomembranous colitis identified in endoscopic exam, surgery, or histopathologic exam of biopsy specimen 	<ul style="list-style-type: none"> • Individual previously infected with <i>C difficile</i> may continue to be colonized even after symptoms resolve • In the setting of an outbreak of GI infection, individuals could be <i>C difficile</i> toxin positive because of ongoing colonization and also be co-infected with another pathogen. Other surveillance criteria should be used to differentiate between infections in this scenario
<input type="checkbox"/> GITI criteria met		<input type="checkbox"/> GITI criteria <u>NOT</u> met

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