**Loeb Minimum Criteria for the Initiation of Antibiotics in Long-Term Care Residents**

Quick Reference Chart

Loeb, et al. developed minimum criteria for the initiation of antibiotic of Long-Term Care (LTC) residents in 2001. These criteria were developed to provide prescribers with clinical guidance on when a LTC resident should have antibiotics initiated for 4 suspected infectious disease syndromes: urinary tract infections, skin and soft tissue infections, lower respiratory tract infections, and fever with an unknown source. The criteria are summarized below and provided as a quick reference guide.

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| **Loeb Minimum Criteria for the Initiation of Antibiotics in Long-Term Care Residents** | | | | | |
| **Suspected Infectious Disease Syndrome** | | | | | **Criteria to Meet** |
| *Skin and Soft-Tissue Infection (SSTI)* | | | | | **One of the following:**  New or increasing purulent drainage  **OR**  Two or more of the following:  Fever (Temp >37.9°C/100°F or ≥1.5°C/2.4°F above baseline)  Redness (erythema) of the affected site  Tenderness of the affected site  Warmth of the affected site  New or increased swelling of the affected site |
| Notes  - The above criteria does NOT apply to residents with burns  - Timely surgical consultation or hospitalization are required for select SSTIs (e.g. necrotizing fasciitis, gas gangrene, etc.) | | | | | |
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| **Suspected Infectious Disease Syndrome** | | | | | **Criteria to Meet** |
| *Lower Respiratory Tract Infection (LRTI)* | | | | | |
|  | | | *With temp >38.9°C (>102°F)* | | **One or more of the following:**  Productive cough  Respiratory rate >25 breaths per minute |
|  | | | *With temp >37.9°C (>100°F)*  *or ≥1.5°C (≥2.4°F) above baseline* | | **Both of the following:**  Cough  **AND**  One or more of the following:  Pulse rate >100 beats per minute  Respiratory rate >25 breaths per minute  Rigors  New onset delirium |
|  | | | *Afebrile with COPD and >65 Years old* | | **Both of the following:**  New or increased cough  **AND**  Purulent sputum production |
|  | | | *Afebrile without COPD* | | **All of the following:**  New onset cough  **AND**  Purulent sputum production  **AND**  One or more of the following:  Respiratory rate >25 breaths per minute  New onset delirium |
|  | | | *With new infiltrate on chest x-ray consistent with pneumonia* | | **One or more of the following:**  Productive cough  Fever (Temp >37.9°C/100°F or ≥1.5°C/2.4°F above baseline)  Respiratory rate >25 breaths per minute |
| Notes:  - Consider ordering a chest x-ray and complete blood count with differential for residents with cough, fever, and any of the following: heart rate >100 beats per minute, worsening mental status, or rigors  - Consider delaying antibiotic for up to 24 hours after large-volume aspiration in residents without COPD, but with a temp ≤38.9°C (102°F) and a non-productive cough. Chemical pneumonitis is most common with large volume aspirations and antibiotics are not recommended for treatment unless symptoms persist >48 hours.  - Altered mental status does not automatically constitute delirium. (See delirium criteria below) | | | | | |
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| **Suspected Infectious Disease Syndrome** | | | | | **Criteria to Meet** |
| *Urinary Tract Infection (UTI)* | | | | |  |
|  | | | Without indwelling urinary catheter | | **One of the Following:**  Acute dysuria  **OR**  Fever (Temp >37.9°C/100°F or ≥1.5°C/2.4°F above baseline)  **PLUS**  One or more of the following:  Urinary urgency  Suprapubic pain  Urinary incontinence  Urinary frequency  Gross hematuria  Costovertebral angle tenderness |
|  | | | With indwelling urinary catheter | | **One or more of the following:**  Fever (Temp >37.9°C/100°F or ≥1.5°C/2.4°F above baseline)  Rigors  New onset delirium  New costovertebral angle tenderness |
| Notes:  - Residents with a condom catheter or undergoing intermittent catheterization should be considered as being without indwelling urinary catheter.  - Cloudy and/or foul smelling urine are not valid criteria for initiating antibiotics for urinary tract infections  - A urine analysis with urine culture should be obtained prior to initiating antibiotics, if criteria for UTI are met.  - A positive urine analysis and/or urine culture WITHOUT demonstrated symptoms constitutes asymptomatic bacteriuria, and residents should not generally be treated with antibiotics.  - Altered mental status does not automatically constitute delirium (See delirium criteria below). | | | | | |
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| **Suspected Infectious Disease Syndrome** | | | | | **Criteria to Meet** |
| *Fever where the focus of infection is unknown* | | | | | **Both of the following:**  Fever (Temp >37.9°C/100°F or ≥1.5°C/2.4°F above baseline)  **AND**  One or more of the following:  Rigors  New onset delirium |
| Notes:  - Consider delaying antibiotics in residents with fever and altered mental status that does not meet delirium criteria. | | | | | |
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| ***Delirium Criteria*** | | | | | |
|  | A | Disturbance in attention and awareness | | | |
|  |  | |  | - Reduced ability to direct, focus, sustain, and/or shift attention | |
|  |  | |  | - Reduced orientation to the environment | |
|  | B | Disturbance that develops of a short period of time and represents an acute change from baseline attention and awareness, and tends to fluctuate in severity during the course of the day | | | |
|  |  | |  | - Develops in hours to a few days | |
|  | C | Disturbance in cognition | | | |
|  |  | |  | - Memory deficit, disorientation, language, visuospatial ability, or perception | |
|  | D | Disturbances in Criteria A and C that are not better explained by a pre-existing, established, or evolving neurocognitive disorders and do not occur in the context of a severely reduced level of arousal, such as coma. | | | |
|  | E | Disturbance is a direct physiological consequence of another medical condition, substance intoxication or withdrawal, exposure to a toxin, or is due to multiple etiologies | | | |
|  |  | |  | - Intoxication or withdrawal due to a drug of abuse or to a medication | |
|  |  | |  | - Evidence of disturbance is from history, physical examination, and/or laboratory findings | |
| References:   1. Loeb M, Bentley DW, Bradley S, et al. Development of minimum criteria for the initiation of antibiotics in residents of long-term-care facilities: results of a consensus conference. *Infect Control Hosp Epidemiol*. 2001;22(2):120-124. <https://doi.org/10.1086/501875> 2. American Psychiatric Association Diagnostic and statistical manual of mental disorders: DSM-5. 5th ed2013; Arlington, VA: American Psychiatric Association | | | | | |