

MDRO Risk Factors based on indication

Community Acquired Pneumonia: Pseudomonas risk factors	<input type="checkbox"/> Bronchiectasis Structural lung disease (chronic bronchitis, COPD, emphysema, interstitial lung disease, pulmonary fibrosis) AND taking chronic steroids/ history of repeated antimicrobial use <input type="checkbox"/> Chronic systemic steroids <input type="checkbox"/> Repeated antimicrobial use																		
HAP/VAP: MDRO risk factors	<input type="checkbox"/> Late onset—occurs after ≥ 5 days of hospitalization <input type="checkbox"/> Antimicrobial therapy within the last 90 days (consider broad spectrum, multiple courses, etc.) <input type="checkbox"/> Immunosuppressive disease and/or therapy <input type="checkbox"/> History of infection or colonization with a multidrug resistant organism <input type="checkbox"/> Chronic dialysis within 30 days																		
VAP: MDRO risk factors	<input type="checkbox"/> Antimicrobial therapy within the last 90 days (consider broad spectrum, multiple courses, etc.) <input type="checkbox"/> Septic shock at the time of VAP <input type="checkbox"/> ARDS preceding VAP <input type="checkbox"/> 5 or more days prior to the occurrence of hospitalization <input type="checkbox"/> Acute renal replacement therapy before VAP																		
Catheter related blood-streaminfection:Pseudomonas Risk factors:	<input type="checkbox"/> Neutropenic <input type="checkbox"/> septic patients <input type="checkbox"/> Previously colonized with Pseudomonas Aeruginosa																		
Febrile Neutropenia: Antipseudomonal beta-lactam monotherapy(including carbapenem)	<input type="checkbox"/> MASCC score (<21) High risk patients Criteria below: <table border="1" data-bbox="509 890 1172 1331"> <thead> <tr> <th>Characteristics</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>Burden of febrile neutropenia with no or mild symptoms^a</td> <td>5</td> </tr> <tr> <td>No hypotension (systolic blood pressure >90 mmHg)</td> <td>5</td> </tr> <tr> <td>No chronic obstructive pulmonary disease^b</td> <td>4</td> </tr> <tr> <td>Solid tumor or hematologic malignancy with no previous fungal infection^c</td> <td>4</td> </tr> <tr> <td>No dehydration requiring parenteral fluids</td> <td>3</td> </tr> <tr> <td>Burden of febrile neutropenia with moderate symptoms</td> <td>3</td> </tr> <tr> <td>Outpatient status</td> <td>3</td> </tr> <tr> <td>Age <60 years</td> <td>2</td> </tr> </tbody> </table>	Characteristics	Score	Burden of febrile neutropenia with no or mild symptoms ^a	5	No hypotension (systolic blood pressure >90 mmHg)	5	No chronic obstructive pulmonary disease ^b	4	Solid tumor or hematologic malignancy with no previous fungal infection ^c	4	No dehydration requiring parenteral fluids	3	Burden of febrile neutropenia with moderate symptoms	3	Outpatient status	3	Age <60 years	2
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Diabetic foot infection: Pseudomonas risk factors:	<input type="checkbox"/> Residence in a warm climate <input type="checkbox"/> High local prevalence <input type="checkbox"/> History of pseudomonal infection <input type="checkbox"/> Use of carbapenem is indicated Meropenem 1 g Q8h or imipenem/cilastatin 500 mg Q6h (use only when required; extended-spectrum β lactamase [ESBL]– producing pathogens expected)																		
UTI: Risk factors for MDRO	<input type="checkbox"/> Residence long-term care facility and presence of invasive devices <input type="checkbox"/> Long term catheterization <input type="checkbox"/> Broad spectrum antibiotics exposure within the past 90 days <input type="checkbox"/> History of MDRO <input type="checkbox"/> Recurrent UTI <input type="checkbox"/> Nosocomial UTI <input type="checkbox"/> History of ESBL producing agents within the past 60 days																		
Colorectal surgery	<input type="checkbox"/> Infected with MDR/ESBL <input type="checkbox"/> Colonized with MDR/ESBL <input type="checkbox"/> Hospitalized for more than 7 days <input type="checkbox"/> Multiple hospital admission within the past 3 months <input type="checkbox"/> Antibiotic treatment of a systemic infection within the last month																		

References:

- IDSA guidelines (For each indication mentioned above)
- ASHP/ASP Pharmacist guide on the use of antimicrobial
- John Hopkins medicine on the empirical use of antibiotics
- IHS guidelines on the empiric use of antibiotics
- Antimicrobial prophylaxis on HIS