**Supplement**

Documents included

eTable 1. Non-recommended CAP antibiotics for ward patients with CAP

eTable 2. Variable definitions included in the model

*eTable 1. Non-recommended CAP antibiotics for ward patients with CAP*

|  |  |
| --- | --- |
| **Generic Names (as providers entered in study forms)** | **Class** |
| Amikacin | Aminoglycoside |
| Gentamicin | Aminoglycoside |
| Kanamycin | Aminoglycoside |
| Streptomycin | Aminoglycoside |
| Tobramycin | Aminoglycoside |
| Chloramphenicol | [Amphenicol](https://www.google.com/search?espv=2&biw=1617&bih=883&q=amphenicol&stick=H4sIAAAAAAAAAGOovnz8BQMDgyEHnxCHfq6-gWF5RpESF4hlVG6UYZyuJZ6dbKWfm5qSmZyZl6qfUlSabpWck1hcbNWn8YfjkVXE_3Cb9-lMc_YFuMhLAgDHYaxvTgAAAA&sa=X&ei=bNK2VM_SNcmoNuX7geAL&sqi=2&ved=0CJoBEJsTKAEwEA) |
| Carbenicillin | Beta-lactam |
| Aztreonam | Beta-lactam |
| Cefepime | Beta-lactam |
| Ceftazidime | Beta-lactam |
| Dicloxacillin | Beta-lactam |
| Nafcillin | Beta-lactam |
| Oxacillin | Beta-lactam |
| Penicillin | Beta-lactam |
| Piperacillin | Beta-lactam |
| Piperacillin/Tazobactam | Beta-lactam |
| Ticarcillin | Beta-lactam |
| Ticarcillin/Clavulanate | Beta-lactam |
| Doripenem | Carbapenem |
| Imipenem | Carbapenem |
| Imipenem/Cilastin | Carbapenem |
| Loracarbef | Carbapenem |
| Meropenem | Carbapenem |
| Trimethoprim | DHFR inhibitor |
| Vancomycin | Glycopeptide |
| Lincomycin | Lincosamide |
| Daptomycin | Lipopeptide |
| Nitrofurantoin | Nitrofuran |
| Metronidazole | Nitroimidazole |
| Norfloxacin\* | Non-resp fluoro |
| Methenamine | Other |
| Linezolid | Oxazolidinone |
| Colestimethate | [Polymyxin](https://www.google.com/search?espv=2&biw=1617&bih=883&q=polymyxin&stick=H4sIAAAAAAAAAGOovnz8BQMDgxEHnxCXfq6-QUZhWYqJqRIniG1UUVGWpSWenWyln5uakpmcmZeqn1JUmm6VnJNYXJy2XTltg-P3aRe1EzKPNjuw7N42Ux4AV-38E08AAAA&sa=X&ei=xNK2VJDnOYS6ggTjtYPQDQ&sqi=2&ved=0CKEBEJsTKAEwDw) |
| Colistimethate | [Polymyxin](https://www.google.com/search?espv=2&biw=1617&bih=883&q=polymyxin&stick=H4sIAAAAAAAAAGOovnz8BQMDgxEHnxCXfq6-QUZhWYqJqRIniG1UUVGWpSWenWyln5uakpmcmZeqn1JUmm6VnJNYXJy2XTltg-P3aRe1EzKPNjuw7N42Ux4AV-38E08AAAA&sa=X&ei=xNK2VJDnOYS6ggTjtYPQDQ&sqi=2&ved=0CKEBEJsTKAEwDw) |
| Colistin | [Polymyxin](https://www.google.com/search?espv=2&biw=1617&bih=883&q=polymyxin&stick=H4sIAAAAAAAAAGOovnz8BQMDgxEHnxCXfq6-QUZhWYqJqRIniG1UUVGWpSWenWyln5uakpmcmZeqn1JUmm6VnJNYXJy2XTltg-P3aRe1EzKPNjuw7N42Ux4AV-38E08AAAA&sa=X&ei=xNK2VJDnOYS6ggTjtYPQDQ&sqi=2&ved=0CKEBEJsTKAEwDw) |
| Polymyxin B | Polymyxin |
| Rifampicin | Rifamycin |
| Rifampin | Rifamycin |
| Quinupristin/Dalfopristin | [Streptogramin](https://www.google.com/search?espv=2&biw=1617&bih=883&q=streptogramin+antibacterial&stick=H4sIAAAAAAAAAGOovnz8BQMDgxEHnxCnfq6-gbllUnqVEheImVFYZWpkrCWenWyln5uakpmcmZeqn1JUmm6VnJNYXPxUeafrVZ_8_b36Z67e3rqWvU_xrAMAtfDCBk8AAAA&sa=X&ei=Jxu4VPT9H8m8ggTH9YHIBw&sqi=2&ved=0CIsBEJsTKAEwEA) |
| Sulfacetamide | Sulfonamide |
| Sulfadiazine | Sulfonamide |
| Sulfamethoxazole/Trimethoprim | Sulfonamide |
| Sulfasalazine | Sulfonamide |
| Sulfisoxazole | Sulfonamide |
| Demeclocycline | Tetracycline |
| Minocycline | Tetracycline |
| Tetracycline | Tetracycline |
| Tigecycline | Tetracycline |

\*As per 2007 guidelines, norofloxacin (i.e. non-resp. fluoroquinolone) and aztreonam (i.e. for penicillin allergies) were “non-recommended.” Ertapenem was the recommended carbapenem.

*eTable 2. Variable definitions included in the model*

|  |  |
| --- | --- |
| **Factor** | **Definition** |
| Hospital | Hospital sites: A, B, C, D, E |
| Age  | Age groups: 18-49, 50-64, 65-79, ≥80 years |
| Gender  | Female gender |
| Race and Ethnicity | Non-Hispanic white, black, Hispanic white, other |
| Education | High school education or less |
| Health insurance | No health insurance |
| Immunosuppression | Immunosuppression due to chronic condition, medication, or malignancy but not skin cancer |
| Chronic heart disease | Coronary artery disease or congestive heart failure but not hypertension |
| Diabetes mellitus | Diabetes mellitus |
| Chronic obstructive pulmonary disease | Chronic obstructive pulmonary disease |
| Chronic kidney disease | Chronic kidney disease with or without dialysis |
| Asthma | Asthma |
| Neurological disorders | Epilepsy, cerebral palsy, dementia, or history of stroke |
| Smoking | Current smoker (daily) |
| Long-term care facility resident | Functionally independent (score ≤7 according to Activities of Daily Living scale) long-term care facility residents |
| Known risk for healthcare-associated pneumonia | Immunosuppression, dialysis, and nursing home residents |
| Season | Illness onset by Winter (Dec-Feb), Spring (Mar-May), Summer (Jun-Aug), Fall (Sept-Nov) |
| Fever | Presence of fever at presentation |
| Cough | Presence of cough at presentation |
| Fatigue | Presence of fatigue at presentation |
| Shortness of breath | Presence of shortness of breath at presentation |
| Chills | Presence of chills at presentation |
| Chest pain | Presence of chest pain at presentation |
| Headache | Presence of headache at presentation |
| Myalgia | Presence of myalgia at presentation |
| Nausea/vomiting | Presence of nausea/vomiting at presentation |
| Diarrhea | Presence of diarrhea at presentation |
| Altered mental status/confusion | Presence of altered mental status/confusion at presentation |
| Abdominal pain | Presence of abdominal pain at presentation |
| Tachypnea | Presence of tachypnea at presentation |
| Radiologic findings | Consolidation, infiltrate, effusion |
| Influenza vaccination | Self-reported receipt of influenza vaccination |
| Antivirals | Documented receipt of antivirals during hospitalization |
| Outpatient antibiotic use | Self-reported antibiotic use within 24 hours before admission captured by interview and medical record review |
| Inpatient antibiotic timing | First hospital antibiotic dose delivered <6 hours post-admission |