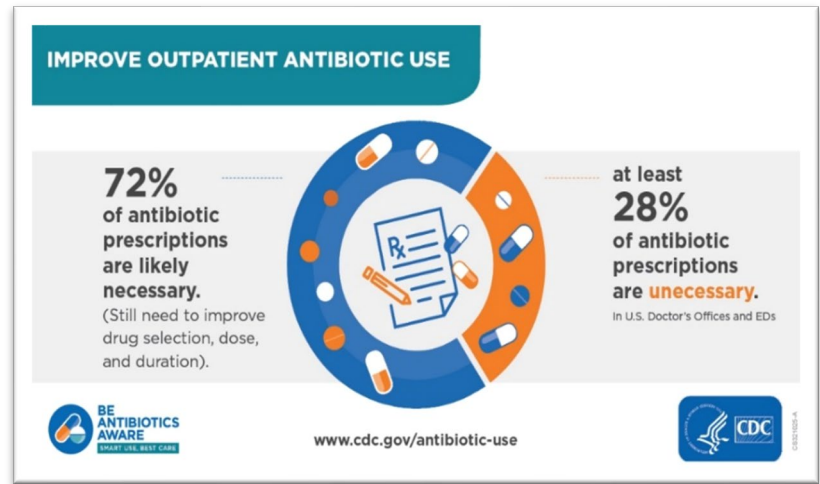


Tier 3 Respiratory Encounters Methodology Tip Sheet

Background: The CDC reports most antibiotic prescribing occurs in the outpatient setting (> 60% of antibiotic expenditures) where up to 30% of prescriptions are inappropriate. Evidence supports the use of billing data to identify stewardship targets in primary care, and as antibiotics are most commonly prescribed for acute respiratory encounters; it provides a great opportunity for stewardship antibiotic use optimization.

Target: Tier 3 Respiratory Encounters (T3R), which are outpatient acute respiratory visits for which antibiotics are not needed, such as rhinitis, bronchitis, non-streptococcal pharyngitis, unspecified URIs, and asthma.

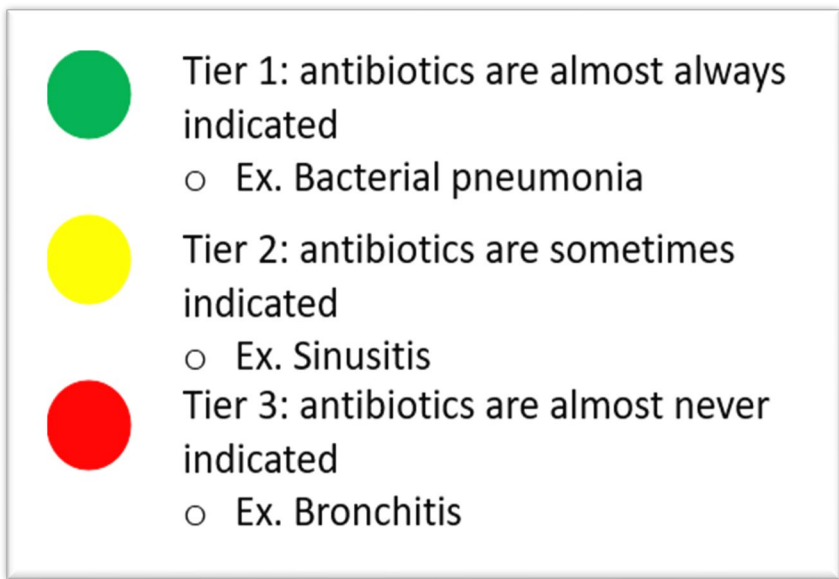


Definitions

Antibiotic Prescribing Rate: Number of encounters where an antibiotic was prescribed divided by the total number of encounters. An antibiotic is defined as an oral or intramuscular antibacterial drug of interest based on a data dictionary maintained and reviewed routinely by the Antimicrobial Stewardship Team. Examples of drugs on this list include: Azithromycin, Nitrofurantoin, Amoxicillin/Clavulanate, Cephalexin, Sulfamethoxazole/Trimethoprim, Amoxicillin, Doxycycline, Ciprofloxacin, Metronidazole, Clindamycin, and others.

Encounter Volume: Total number of office visit or telemedicine (including both telemedicine and telemedicine-phone) encounters. Other types of encounters like Orders Only, Refill, Phone, or Patient Message are excluded.

Diagnosis Tier: A custom tier defined by the Antimicrobial Stewardship Team to rate each priority diagnosis based on the likelihood an antibiotic is appropriate treatment for a given diagnosis. Tier 1 is defined as a diagnosis usually requiring antibiotic therapy. Tier 2 is defined as a diagnosis that may or may not require antibiotic therapy. **Tier 3 is defined as a diagnosis that usually does not require antibiotic therapy.**

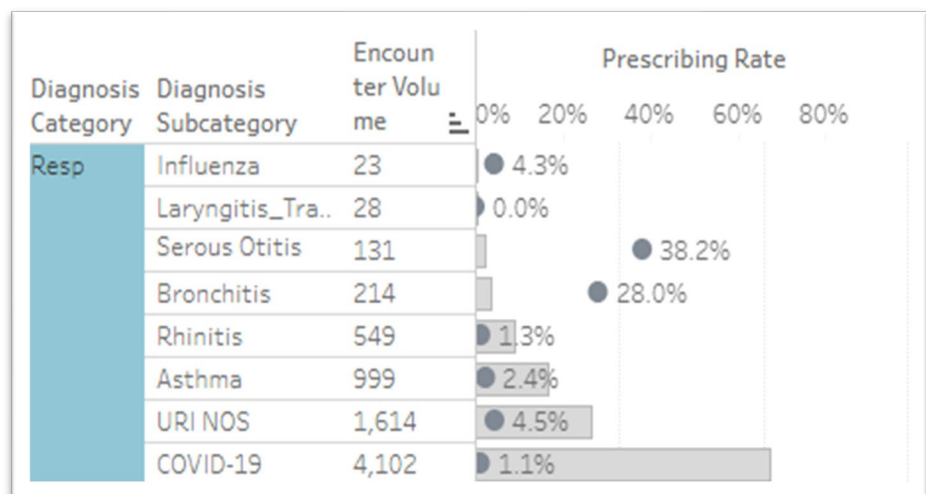


Priority Diagnosis: The associated encounter ICD-10 diagnosis code that most likely relates to antibiotic prescribing and defines the encounter Diagnosis Tier, Category, and Subcategory. The Priority Diagnosis for each encounter is determined by the following algorithm: For each individual encounter, all associated ICD-10 codes are assigned a Diagnosis Tier, Category, and Subcategory based on a validated ICD-10 dictionary maintained by the Antimicrobial Stewardship Team. If a single Tier 1 code is present it is assigned as the priority diagnosis. If multiple Tier 1 codes are present, the first code listed that is within a named category (specifically GI, GU, Respiratory, or Skin) is assigned as the priority diagnosis. If no named categories exist, then the first Other category diagnosis is assigned as the priority diagnosis. If no Tier 1 codes are present, then the same logic is applied to any Tier 2 codes. If no Tier 2 codes are present, then the same logic is applied to any Tier 3 codes. If no Tier 1-3 codes are present, the encounter is not categorized and will not appear in the dashboard, but remains in the system. It should be noted that the priority diagnosis is not determined by the "primary" diagnosis indicated by the provider during the encounter since this may or may not relate directly to antibiotic prescribing.

Tier 3 Respiratory Diagnosis: Group of respiratory diagnoses that usually do not require antibiotic therapy.

Tier 3 Respiratory Diagnoses Subcategory

- Bronchitis
- Asthma
- Covid 19
- Influenza
- URI NOS
- Rhinitis



ICD 10 Codes included in Tier 3 Respiratory Diagnoses

ICD10 Code	ICD 10 Description
B08.5	Enteroviral vesicular pharyngitis
B97.29	Other coronavirus as the cause of diseases classified elsewhere
B97.4	Respiratory syncytial virus as the cause of diseases classified elsewhere
B97.81	Human metapneumovirus as the cause of diseases classified elsewhere
C34.11	Malignant neoplasm of upper lobe, right bronchus or lung
C34.90	Malignant neoplasm of unspecified part of unspecified bronchus or lung

C34.91	Malignant neoplasm of unspecified part of right bronchus or lung
C34.92	Malignant neoplasm of unspecified part of left bronchus or lung
C78.00	Secondary malignant neoplasm of unspecified lung
E84.9	Cystic fibrosis, unspecified
H65.00	Acute serous otitis media unspecified ear
H65.01	Acute serous otitis media, right ear
H65.02	Acute serous otitis media, left ear
H65.03	Acute serous otitis media, bilateral
H65.04	Acute serous otitis media recurrent right ear
H65.05	Acute serous otitis media recurrent left ear
H65.06	Acute serous otitis media recurrent bilateral
H65.07	Acute serous otitis media recurrent unspecified ear
H65.111	Acute and subacute allergic otitis media (mucoid) (sanguinous) (serous), right ear
H65.112	Acute and subacute allergic otitis media (mucoid) (sanguinous) (serous), left ear
H65.119	Acute and subacute allergic otitis media (serous), unsp ear
H65.191	Other acute nonsuppurative otitis media, right ear
H65.192	Other acute nonsuppurative otitis media, left ear
H65.193	Other acute nonsuppurative otitis media bilateral
H65.194	Other acute nonsuppurative otitis media recurrent right ear
H65.195	Other acute nonsuppurative otitis media recurrent left ear
H65.196	Other acute nonsuppurative otitis media recurrent bilateral
H65.197	Other acute nonsuppurative otitis media recurrent unspecified ear
H65.199	Other acute nonsuppurative otitis media unspecified ear
H65.23	Chronic serous otitis media, bilateral
H65.90	Unspecified nonsuppurative otitis media, unspecified ear
H65.91	Unspecified nonsuppurative otitis media, right ear
H65.92	Unspecified nonsuppurative otitis media, left ear
H65.93	Unspecified nonsuppurative otitis media, bilateral
H68.109	Unspecified obstruction of Eustachian tube, unspecified ear
H69.80	Oth disrd of Eustachian tube, unspecified ear
H69.81	Other specified disorders of Eustachian tube, right ear
H69.82	Other specified disorders of Eustachian tube, left ear
H69.83	Other specified disorders of Eustachian tube, bilateral
H69.90	Unspecified Eustachian tube disorder, unspecified ear
H92.01	Otalgia, right ear
H92.02	Otalgia, left ear
H92.03	Otalgia, bilateral
H92.09	Otalgia, unspecified ear
I27.82	Chronic pulmonary embolism
J00	Acute nasopharyngitis [common cold]
J04	Acute laryngitis and tracheitis
J04.0	Acute laryngitis
J04.1	Acute tracheitis
J04.10	Acute tracheitis without obstruction
J04.11	Acute tracheitis with obstruction
J04.2	Acute laryngotracheitis
J05.0	Acute obstructive laryngitis [croup]
J06	Acute upper respiratory infections of multiple and unspecified sites
J06.9	Acute upper respiratory infection, unspecified
J09.X1	Influenza due to ident novel influenza A virus w pneumonia
J10.1	Flu due to oth ident influenza virus w oth resp manifest
J11.1	Flu due to unidentified influenza virus w oth resp manifest
J11.2	Influenza due to unidentified influenza virus w GI manifest
J11.81	Flu due to unidentified influenza virus w encephalopathy
J11.89	Influenza due to unidentified influenza virus w oth manifest
J12.0	Adenoviral pneumonia
J12.1	Respiratory syncytial virus pneumonia
J12.3	Human metapneumovirus pneumonia
J12.82	Pneumonia due to coronavirus disease 2019
J12.89	Other viral pneumonia
J12.9	Viral pneumonia, unspecified
J20	Acute bronchitis
J20.3	Acute bronchitis due to coxsackievirus
J20.4	Acute bronchitis due to parainfluenza virus
J20.5	Acute bronchitis due to respiratory syncytial virus
J20.6	Acute bronchitis due to rhinovirus
J20.7	Acute bronchitis due to echovirus

J20.8	Acute bronchitis due to other specified organisms
J20.9	Acute bronchitis, unspecified
J21	Acute bronchiolitis
J21.0	Acute bronchiolitis due to respiratory syncytial virus
J21.1	Acute bronchiolitis due to human metapneumovirus
J21.8	Acute bronchiolitis due to other specified organisms
J21.9	Acute bronchiolitis, unspecified
J30.0	Vasomotor rhinitis
J30.1	Allergic rhinitis due to pollen
J30.2	Other seasonal allergic rhinitis
J30.89	Other allergic rhinitis
J30.9	Allergic rhinitis, unspecified
J31.0	Chronic rhinitis
J31.1	Chronic nasopharyngitis
J31.2	Chronic pharyngitis
J33.0	Polyp of nasal cavity
J33.9	Nasal polyp, unspecified
J34.2	Deviated nasal septum
J34.3	Hypertrophy of nasal turbinates
J34.89	Other specified disorders of nose and nasal sinuses
J34.9	Unspecified disorder of nose and nasal sinuses
J35.1	Hypertrophy of tonsils
J35.8	Other chronic diseases of tonsils and adenoids
J38.1	Polyp of vocal cord and larynx
J38.6	Stenosis of larynx
J39.2	Other diseases of pharynx
J39.8	Other specified diseases of upper respiratory tract
J40	Bronchitis, not specified as acute or chronic
J41.0	Simple chronic bronchitis
J41.1	Mucopurulent chronic bronchitis
J41.8	Mixed simple and mucopurulent chronic bronchitis
J42	Unspecified chronic bronchitis
J43.2	Centrilobular emphysema
J43.8	Other emphysema
J43.9	Emphysema, unspecified
J44.9	Chronic obstructive pulmonary disease, unspecified
J45.20	Mild intermittent asthma, uncomplicated
J45.21	Mild intermittent asthma with (acute) exacerbation
J45.22	Mild intermittent asthma with status asthmaticus
J45.30	Mild persistent asthma, uncomplicated
J45.31	Mild persistent asthma with (acute) exacerbation
J45.32	Mild persistent asthma with status asthmaticus
J45.40	Moderate persistent asthma, uncomplicated
J45.41	Moderate persistent asthma with (acute) exacerbation
J45.42	Moderate persistent asthma with status asthmaticus
J45.50	Severe persistent asthma uncomplicated
J45.51	Severe persistent asthma with (acute) exacerbation
J45.52	Severe persistent asthma with status asthmaticus
J45.901	Unspecified asthma with (acute) exacerbation
J45.902	Unspecified asthma with status asthmaticus
J45.909	Unspecified asthma, uncomplicated
J45.990	Exercise induced bronchospasm
J45.991	Cough variant asthma
J45.998	Other asthma
J47.9	Bronchiectasis, uncomplicated
J67.9	Hypersensitivity pneumonitis due to unspecified organic dust
J68.3	Other acute and subacute respiratory conditions due to chemicals, gases, fumes and vapors
J69.0	Pneumonitis due to inhalation of food and vomit
J82.83	Eosinophilic asthma
J84.10	Pulmonary fibrosis, unspecified
J84.112	Idiopathic pulmonary fibrosis
J84.89	Other specified interstitial pulmonary diseases
J84.9	Interstitial pulmonary disease, unspecified
J90	Pleural effusion, not elsewhere classified
J92.9	Pleural plaque without asbestos
J98.01	Acute bronchospasm
J98.09	Other diseases of bronchus, not elsewhere classified

J98.11	Atelectasis
J98.4	Other disorders of lung
J98.8	Other specified respiratory disorders
J98.9	Respiratory disorder, unspecified
P27.1	Bronchopulmonary dysplasia originating in the perinatal period
R04.0	Epistaxis
R04.2	Hemoptysis
R05	Cough
R06.00	Dyspnea, unspecified
R06.02	Shortness of breath
R06.03	Acute respiratory distress
R06.09	Other forms of dyspnea
R06.1	Stridor
R06.2	Wheezing
R06.81	Apnea, not elsewhere classified
R06.82	Tachypnea, not elsewhere classified
R06.83	Snoring
R06.89	Other abnormalities of breathing
R07.0	Pain in throat
R07.81	Pleurodynia
R09.02	Hypoxemia
R09.1	Pleurisy
R09.81	Nasal congestion
R09.82	Postnasal drip
R09.89	Oth symptoms and signs involving the circ and resp systems
R49.0	Dysphonia
R91.1	Solitary pulmonary nodule
R91.8	Other nonspecific abnormal finding of lung field
R94.2	Abnormal results of pulmonary function studies
T17.908A	Unspecified foreign body in respiratory tract, part unspecified causing other injury, initial encounter
T86.818	Other complications of lung transplant
U07.1	COVID-19
Z11.1	Encounter for screening for respiratory tuberculosis
Z20.822	Contact with and (suspected) exposure to COVID-19
Z85.118	Personal history of other malignant neoplasm of bronchus and lung
Z86.711	Personal history of pulmonary embolism
Z87.09	Personal history of other diseases of the respiratory system
Z96.22	Myringotomy tube(s) status
Z99.81	Dependence on supplemental oxygen
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Z86.711	Personal history of pulmonary embolism
Z87.09	Personal history of other diseases of the respiratory system
Z96.22	Myringotomy tube(s) status
Z99.81	Dependence on supplemental oxygen

Have Questions/Feedback? Use the QR code/link below to send us your input:



<https://app.smartsheet.com/b/form/c0dfc874acf846b59a0404ffdc06feb2>

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