**Pulse oximetry**
- Strongly recommended for all patients in whom the diagnosis of pneumonia is considered.

**Chest xray**
- Not routinely required for outpatient.
- Strongly recommended for all inpatients with moderate to severe pneumonia.

**Blood Cultures**
- Not recommended in fully immunized outpatient pneumonia.
- Recommended in patients failing to demonstrate clinical improvement, worsening symptoms, or deterioration after antibiotic therapy.
- Strongly recommended for children requiring hospitalization for moderate to severe bacterial pneumonia.

**CBC**
- Weak recommendation against using CBC in the aid of diagnosis of pneumonia. However, may provide useful information in children with more serious disease for clinical management.

**Atypical Bacterial Testing**
- Weak recommendation for *Mycoplasma pneumonia* if diagnosis is uncertain and would change clinical management.

**Viral Testing**
- Strongly recommended for all patients with CAP during influenza season as it may decrease need for additional tests and antibiotic use and inform community health officials.
- Weak recommendation for other respiratory viruses if it will modify clinical management. Antibiotics are not required in the absence of findings suggestive of bacterial co-infection.

**Antibiotics (OUT PATIENT)**
- 3mo-5 years: Antibiotics NOT routinely required because viral pathogens most prevalent. If bacterial pathogen suspected Amoxicillin is first line therapy. (Strong recommendation)
- School Age: Amoxicillin (80-90mg/kd/day) if previously healthy and immunized. Azithromycin if findings compatible with atypical pathogens.
- Alternatives for amoxicillin are 2nd/3rd generation cephalosporin, clindamycin and levofloxacin
- Alternatives for Azithromycin are Doxycycline (>7yrs) and Levofloxacin.
- Duration more frequently studied is 10 days.

**Antibiotics (IN PATIENT)**
- 3mo- School Age: First line-Ampicillin. (300mg/kg/day) Second line 3rd generation cephalosporin (ceftriaxone) for non-immunized, regions with high PCN resistance, or other complications
- Non-beta lactam agents are NOT needed for treatment of pneumococcal pneumonia.
- Atypicals Azithromycin
- Vancomycin/clindamycin only if clinical and imaging are characteristic of *Staph aureus*

**Bottom line:** Viruses most common cause of pediatric pneumonia. Viral testing can aid in therapy selection. Pneumococcus is most common bacterial pathogen. Strong evidence that penicillin resistant strains of pneumococcus ARE DECREASING ➔ Ampicillin is IDSA and AAP recommended first line therapy for inpatient CAP. Amoxicillin is first line for outpatient CAP.