

Pneumonia
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The problem

Pneumonia is dangerous

**Tens of thousands of deaths
per year**

**What is the most common
cause of CAP?**

**40% strep pneumoniae
30% atypicals
30% viruses**

What is the most common cause of lobar pneumonia?

Strep Pneumoniae

Who cares?

**Pneumonia
Otitis Media
Sinusitis
Meningitis
Sepsis**

10%

**What's the most commonly
used abx for CAP?**

Z-pak

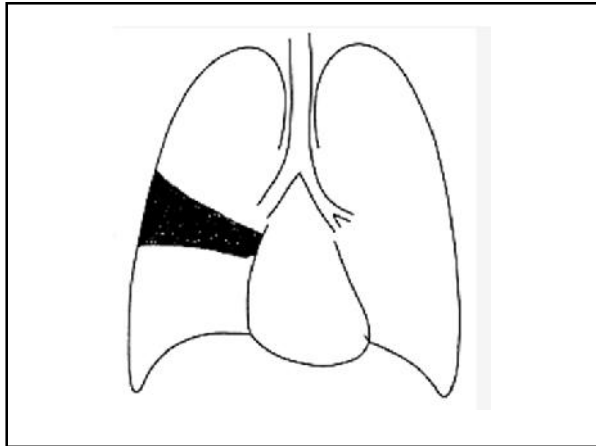
What's the problem with that?

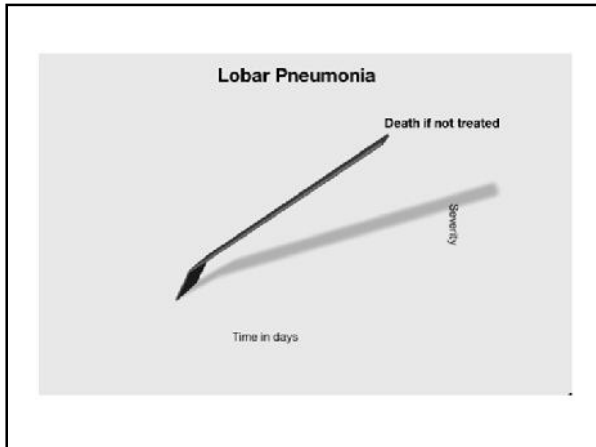
Increasing resistance

**IDSA guidelines
> 5 years old
Data > 12 years old**

**Z-Pak is decreasingly
effective for the most
dangerous type of infection**

**What is the definition of lobar
pneumonia?**

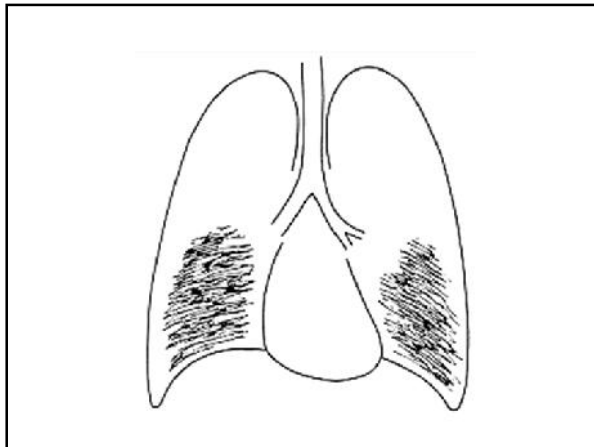


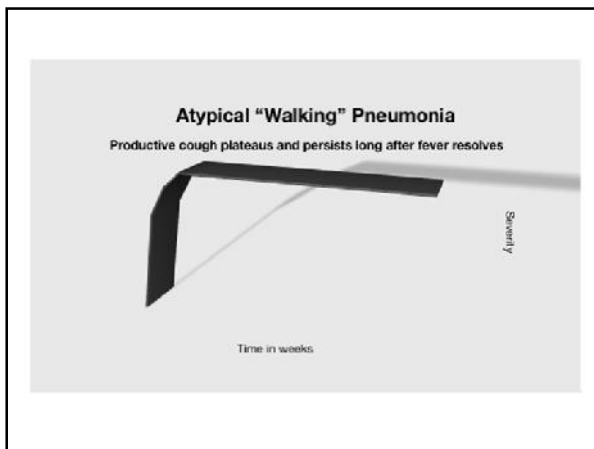


No routine sputum cultures

A small glass jar with a white lid, labeled "CLEVE'S Phlegm". The label features a cartoon illustration of a person coughing into a handkerchief.

What is walking pneumonia?





What are the bacterial causes of "walking" or atypical pneumonia?

Mycoplasma Pneumoniae

**Chlamydophila Pneumoniae
Psittacosis
Legionella Pneumophila**

Which are 3 categories of medicines that work for atypical pneumonia?

**Macrolides
Respiratory FQs
Tetracyclines (Doxy)**

**What age group usually
doesn't get walking
pneumonia?**

Below the age of 5

**How do you distinguish
between lobar vs. atypical
pneumonia on exam?**

**What are the clues to
mycoplasma?**

**fever for at least 3 days
productive cough-- not
improving
no nasal symptoms
posterior HA
mild sore throat**

**Wheeze or rales or rhonchi
hypoxia
tachycardia
tachypnea**

**How do you treat community
acquired pneumonia?**

**The goal is to cover Strep
Pneumoniae and
Mycoplasma**

**Only a few antibiotics do
both**

Stats

Strep Pneumoniae resistance to Macrolides: 19 - 44%
Strep Pneumoniae resistance to Doxy: 10-28%
Strep Pneumoniae resistance to Levaquin, Avelox: 1 - 6%
Strep Pneumoniae resistance to Augmentin: 6%



Using Z-pak for empiric treatment of pneumonia

Clarithromycin?

**There are two levels of
empiric treatment for
pneumonia**

Level 1:

**Cheap
Works for atypical or lobar**

Which antibiotic?

Doxy

Level 2:

**Really sick
co-morbidities
Unclear or confirmed lobar
2nd line for tx failure**

respiratory FQ

**Which are the respiratory
fluoroquinolones?**

What percent of pneumonias are missed based on the physical exam alone?

20 - 40%

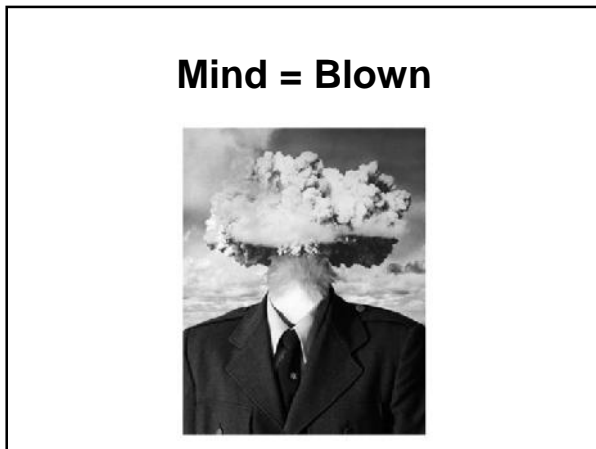
When should I get a chest x-ray?

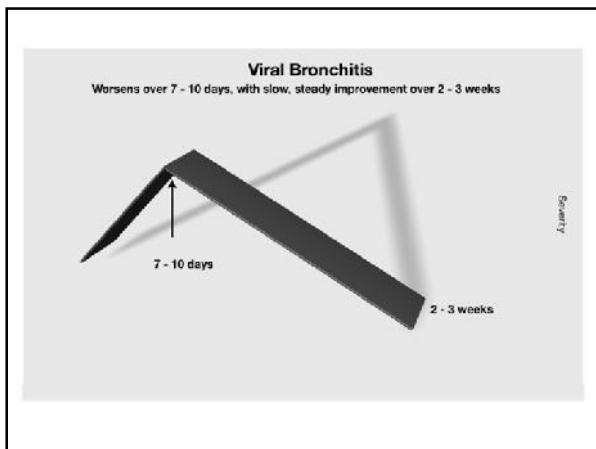
Often

**What is the definition of
bronchitis?**

**Acute bronchitis is a cold
virus in the lung**

Acute bronchitis
Walking pneumonia





Does viral bronchitis show up with a fever?

almost never

What is the significance of rhonchi?

rhonchi are nonspecific

Identify the patterns in these cases:

Case 1:

Patient comes in with fever of 101, productive cough, wheeze no h/o asthma

What is it and how do you treat it?

Case 2:

Patient comes in with fever of 101, productive cough, unilateral rales

What is it and how do you treat

Case 3:

A patient comes in with sudden onset body aches, fever to 102, and a dry cough

What questions do you ask?

Case 3:

A patient comes in with sudden onset body aches, fever to 102, and a dry cough

What do you examine?

Case 3:

A patient comes in with sudden onset body aches, fever to 102, and a dry cough

What do you do now?

Take Home Points:

- 1. Stop using Z-pak for empiric tx**
- 2. Instead use Doxy or Levaquin**
- 3. If there's a unilateral component, cover for Strep Pneumoniae**
- 4. A fever + cough requires: pos. flu test, chest x-ray, or sby**

References

File TM. Community-acquired pneumonia. *Lancet* 2003;362:1991.

Mandell LA, Wunderink RG, Anzueto A, et al. Infectious Diseases Society of America/American Thoracic Society consensus guidelines on the management of community-acquired pneumonia in adults. *Clin Infect Dis* 2007; 44 Suppl 2:S27.

Marie TJ, Poulin-Costello M, Becroft MD, Heman-Grijdic Z. Etiology of community-acquired pneumonia treated in an ambulatory setting. *Respir Med* 2005; 99:60.

Musher D. Resistance of *Streptococcus pneumoniae* to the macrolides, azalides, lincosamides, and ketolides. *UpToDate*, written 2007, last reviewed 2012.

Legacy Health System Microbiology Department: Antibiogram Data 2008, 2011

Virginia Mason Medical Center Microbiology Department: Antibiogram Data, 2010

Sanford Guide 2011 - 2012

FPNotebook.com article on Bacterial Pneumonia and Atypical Pneumonia, 2012