Clinical Spectrum
- Chest pain, shoulder pain, neck pain, abdominal pain, headache
- Links with smoking, pollen count, FH of asthma (“forme fruste”)

Bronchitis dx and etiology
- Cough (< 1 wk), normal pulse ox, normal lung exam; no sinusitis, no pneumonia, no COPD/asthma; +/- sputum, +/- fever
- Viruses. More and more and more viruses.
- Maybe some COPD, a touch of asthma, some occupational exposure.
- Bordatella pertussis.

Bronchitis Treatment
- Albuterol inhaler decreased cough by 1.5 days compared to antibiotics; randomized all patients with dx of bronchitis in a FP setting. [Hueston WJ. Albuterol delivered by metered-dose inhaler to treat acute bronchitis. J Fam Pract 1994;39:437-440.]
- Do antibiotics help acute bronchitis? No. So, only give antibiotics, if at all, to:
  - smokers/older/immunocompromised
  - fever
  - râles (1/20/98 J Club)
Labs and X-rays

X-rays:
- Do kids who look well and have a normal pulse ox need a CXR? No.
- Does hilar adenopathy in a kid with "pneumonia" require a neoplastic workup? No. Kids get nodes everywhere all the time. Don't worry.
- Round infiltrate, or lobar infiltrate: pneumococcus

Gram Stains in the ED? Passe.

Blood cultures:
- useless in peds, don’t order them (only 10-20% of kids pneumonia is bacterial anyway)
- useless in adults, DO order them (internists expect it, and there are some very stupid but nonetheless authoritative recommendations to go ahead and get them)

Who to Admit? (EDCAP study)

- under 50
- don't have respirations (not PULSE as in H-N) of 30 or more
- don't have a temperature of 40 or more (or hypothermic)
- don't have an altered mental status
- (detailed calculator based on this paper available at NCEMI.org for those not class I)
- But as Dave Talan writes in H-N: not a substitute for good judgment, there will be exceptions.

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🔧 Bugs
🔧 Most common adult CAP bugs?
- August 2001 Med Ltr: NOT pneumococcus) but Mycoplasma, Chlamydia, Viral (esp. influenza: amantadine, rimantadine, inhaled ribavirin)
- Tintinalli p 453: pneumococcus still most common; also note 40-60% have NO pathogen by testing! Why different? (pneumococcal vaccine?)
- Harwood-Nuss: pneumococcus > H flu > others
🔧 Most common infant/child/adolescent bugs:
- viral (RSV; cherche la nasal swab, consider ribavirin aerosol)
- Mycoplasma (in adolescents; also up and coming in younger ages, passed around like RSV)
🔧 COPD bugs: above, + pseudomonas, H. flu, Aspergillus, Strongyloides, TB
DM bugs: more staph, gram negatives, TB, mucormycosis; worse pneumococcus, Legionella, influenza

- Pregnancy: aspiration, Immunosuppression: above + many viruses (mumps, VZ, influenza, EBV, swine flu); PCNs, cephs, macrolides OK in pregnancy; sulfa OK before third trimester.

- HIV: PCP “hairdresser with interstitial infiltrates and a pO2 of 60”: Bactrim

- Transplant patients: just think about Presby ED experience.

**Drugs**

- Does antibiotic timing matter? Yes. (Meehan et al, JAMA 1997: 8 hrs.)

- Four competing guidelines (none from ACEP)

- Reflex drugs, inpatient adult:
  - Azithro 500 mg daily PLUS:
  - EITHER Ceftriaxone: (some resistant pneumococcus at Mercy, 15% nationwide in 2001 per Med Ltr), so 1 g STAT, more if
    - > 100 kg
    - empyema
    - may have meningitis, osteo, or endocarditis
  - OR Tequin 400 mg daily
- Reflex drugs, inpatient kid:
  - Cefuroxime (Ceftin, Zinacef) or cefotaxime (Claforan)
- Reflex drugs, likely aspiration:
  - Azithro 500 + Clinda 600 Q8 OR
  - Unasyn 1.5 Q6 (?+ Erythro)
- Reflex drugs, outpatient adult:
  - Can also give a gram of ceftriaxone first, and then Augmentin, Ceftin, or Cipro+ PCN
  - Azithromycin: good compliance, long tissue half-life
  - or doxy, or newer quinolones for 7-10 (maybe 21 for atypicals) though Levaquin/Tequin more and more from doxy/macrolide-resistant pneumococcus

Extra credit:
- Does an infiltrate diagnose pneumonia? No, could be PE, atelectasis, tumor, chronic.
- Is an x-ray needed to diagnose pneumonia? Yes, officially. Is it needed to treat a patient as if he or she has an outpatient pneumonia? No.
- Which is more important, an x-ray or a pulse ox?
- Pneumonia +
  - bullous myringitis = ? (mycoplasma most likely, but could be suppurative otitis with some other bug)
- maculopapular eruption on trunk = ? (mycoplasma or viral)
- recovering from viral URI, has a pulmonary abscess and PTX = ? (staph)
- pleuritic chest pain = ? (PE, pneumococcus, Klebsiella)
- patchy nonsegmental unilateral infiltrates, diarrhea and bradycardia = ? (Legionella)
- currant-jelly sputum = ? (pneumococcus Type 3 or Klebsiella)
- elderly, decreased mental status, falling a lot, normal temp = ? (any of the above)