Pneumonia*	
Presentation	Fever, cough, dyspnea, pleuritic pain, respiratory distress
Etiology	• **Neonatal**: GBS, E. coli, K. pneumoniae, HSV • **Infants**: viral, S. pneumoniae, C. trachomatis • **Pre-school age**: viral, S. pneumoniae, S. pyogenes, S. aureus, B. pertussis • **School-aged**: M. pneumoniae, C. pneumoniae, S. pneumoniae, S. aureus
Differential	Asthma, pleural effusion/empyema, FB aspiration
Workup	CXR, respiratory viral panel including flu, blood culture if inpatient, ESR/CRP, procalcitonin
When to Hospitalize	Moderate-severe respiratory distress, SpO2 <90%, infants <6 mos, concern for virulent pathogen (MRSA), unable to tolerate PO intake
Treatment	• Outpatient: amoxicillin • Inpatient: ampicillin • Alternatives: add azithromycin if concern for atypicals, vancomycin if concern for s. aureus • Duration: 10 days, 2-4 weeks if parapneumonic effusion

Pleural Effusions	
Presentation	• Pain w/ inspiration, hypoxemia, hypercarbia • **Exam**: decreased breath sounds, dullness to percussion
Differential	**Transudative**: Decreased plasma oncotic pressure (nephrotic syndrome, cirrhosis, hypoal- **Exudative**: Increased capillary permeability (parapneumonic effusions, TB, AI disease, **Chylothorax**: Secondary to lymphatic abnormalities
Workup	• Imaging: CXR, US, CT • Diagnostic thoracentesis (consider if >10 mm fluid from lung to chest wall, need for definitive diagnosis, respiratory compromise) ▪ Light's Criteria: Exudative if 1+ of (1) Pleural fluid protein:serum protein ratio ≥0.5, (2) Pleural fluid LDH:Serum LDH ratio >0.6, (3) Pleural fluid LDH >66% ULN of normal serum LDH
Treatment	• Transudative: address underlying problem • Chylothorax: Drainage, restrict to medium chain TGs as main source of dietary fat • Paraneumonic effusions (pleural fluid + pneumonia, abscess or bronchiectasis) ▪ Uncomplicated: Antibiotics ▪ Complicated: Antibiotics + drainage +/- fibrinolytics +/- VATS • Consider chest tube if: persistent fever, toxic appearing, large effusion, complicated pleural effusion or empyema

Obstructive Sleep Apnea	
Presentation	• Snoring (>3 nights/wk), labored breathing, morning headaches, daytime sleepiness, learning difficulties • **Exam**: tonsillary hypertrophy, adenoidal faces, micrognathia, HTN, overweight
Differential	Central sleep apnea, narcolepsy
Workup	Polysomnography to assess severity via apnea-hypopnea index (AHI) → >5 AHI warrants treatment
Treatment	**CPAP,** adenotonsillectomy if adenotonsillar hypertrophy, topical intranasal steroids or montelukast