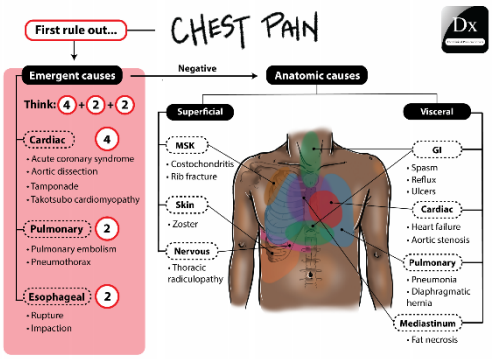
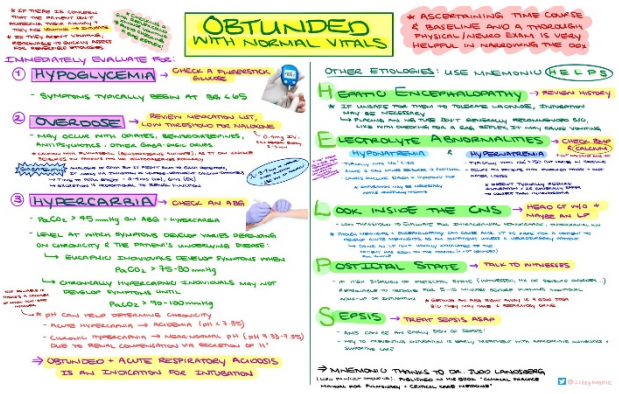
Clinical Reasoning – the basics

Language

1) **Problem Representation (one-liner)** – summary of the most salient features of a case
    a. Answers 3 questions:
        i. Who is the patient? (demographics, risk factors)
            1. "64-year-old man with metabolic syndrome…"
        ii. Time-course/tempo of illness (e.g. acute, episodic, waxing/waning, chronic)
            1. "…presents with *episodic*…"
        iii. Clinical syndrome (chest pain, polyneuropathy, sepsis)
            1. "…*typical angina*"
    b. Form it **early**
        i. the chief concern is the first PR!
    c. PR **identifies** the diagnostic schema/approach you deploy
    d. **Evolves** as case unfolds – e.g. add relevant exam/labs to clinical syndrome
        i. E.g., adding "elevated JVP, pitting edema, and elevated BNP" to a syndrome of exertional dyspnea
    e. OK to consider multiple PR in the same patient when dx is unclear
        i. "fever+rash" vs "spring water+diarrhea" vs "fever+ESR+liver injury"

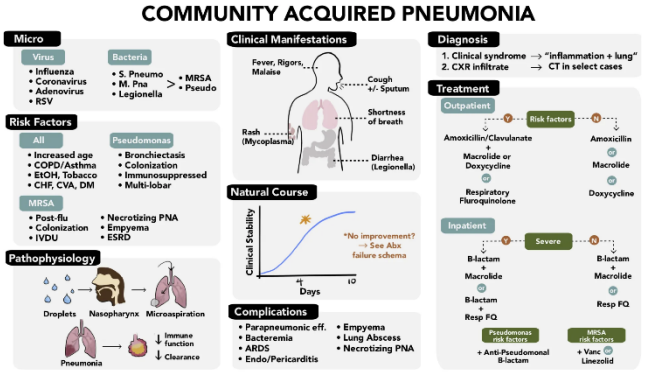
2) **Diagnostic Schema** – organizational tool to systematically approach to a problem/syndrome
    a. Categories or, "buckets" of disease – individual diagnoses populate each category
        i. E.g. AKI → pre-renal (CHF, shock), intra-renal (tubular, glomerular), post-renal (stone, tumor, BPH, meds)
    b. Organizational variety – anatomy vs pathophys mechanism vs mix → ***customizable!***
    c. Can be used as early as the first problem representation





3) **Illness Script** – mental flashcard for a specific diagnosis (knowledge storing tool/reference)
    a. WHO (epidemiology), HOW does it work (pathophys, clinical presentation/course), DX/RX (testing, treatment)
    b. Use it to test a particular diagnosis against your PR
    c. Improves with time/experience
        i. Reading, case conferences, pattern recognition

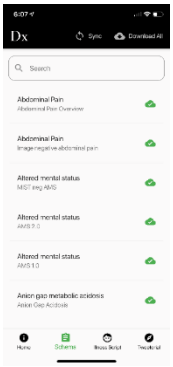
Appendicitis
Epidemiology: Ages 10-30, M>F, no other RFs
Pathophysiology: obstruction of lumen appendix
History: acute central abdominal pain→ RLQ, N, V
Exam: fever, marked tenderness RLQ
Imaging/Labs: Sometimes WBC, often CT+
Treatment: Appendectomy



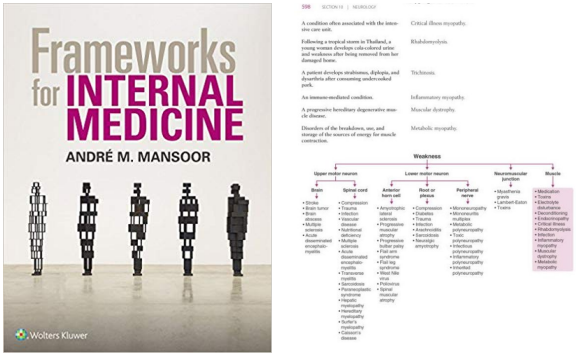
4) **Cognitive Autopsy** – active reflection on the reasoning process
    a. Ask yourself:
        i. What did I do correctly?
        ii. Any mis-steps?
        iii. What lessons did I learn?
        iv. What knowledge gaps did/can I fill?
        v. How is/was the patient affected?
    b. Do this periodically, regardless of whether you get or miss the diagnosis
        i. Reinforces good practices, course-corrects others
        ii. Can do this: solo vs w/co-resident vs w/attending vs w/team

Resources

1) **Exercises in Clinical Reasoning** https://clinicalreasoning.org/
    a. Concepts in detail w/examples

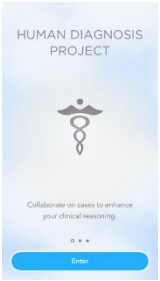


2) **The Clinical Problem Solvers** www.clinicalproblemsolving.com
    a. Schemas, illness scripts
    b. Podcast episodes – case solves and explanation of various schemas
    c. Virtual Morning Report – live morning reports 3x/week for case discussion
    d. App – consolidates schemas, scripts, other resources; GREAT for wards



3) **Frameworks for Internal Medicine**
    a. Excellent reference
    b. Case-based
    c. Step-wise building of detailed frameworks/schemas

4) **Human Diagnosis Project app**
    a. Daily cases to practice your reasoning
    b. Peer-reviewed, referenced teaching points
    c. 5-7 mins/case



5) **Other Podcasts**
    a. The Curbsiders
    b. CORE IM (specifically Hoofbeats thread)
    c. The Curious Clinicians
    d. The Cardio Nerds

6) **Twitter**
    a. Free Open Access Med-Ed (#FOAMed)
    b. Handles to check out:
        i. UCSD People: @ucsdim, @LizzyHastie, @DocScribbles, @DirkGainesMD, @photon_ick, @LukewebsterMD, @Darcy_ID_doc, @AnandJag1,
        ii. Other People: @rabihmgeha, @DxRxEdu, @sargsyanz, @tony_breu, @JenniferSpicer4, @AaronBerkowitz, @MedTweetorials
        iii. Podcasts: @CPSolvers, @COREIMPodcast, @thecurbsiders, @IMreasoning, @runthelistpod, @Curiousclinpod, @cardionerds