Glossary of Key Clinical Reasoning Concepts

Processing:
- Translates a patient's story/words (signs/symptoms) into precise medical terms
  - Days becomes 'acute;' shortness of breath becomes 'dyspnea'
- Uses compare/contrast words that add specificity to a given problem
  - Acute vs. chronic; monoarticular vs. polyarticular; dull vs. pleuritic
- Allows us to effectively communicate with other clinicians
- Allows us to map a patient's problem onto our stored medical knowledge

Problem Representation (PR):
- Succinct, processed summary of a patient's story (a 'tweet'); aids in the thinking process and helps us to build a differential diagnosis
  - Starts ***during the patient encounter*** as an <u>internal, **mental model**</u> for the patient's main problem; ***refined*** throughout the encounter as we learn more
  - Guides history-taking & the exam (by defining the problem & sparking ideas about the differential diagnosis or possible categories of disease, helps ID important questions to ask or exam maneuvers to do during the encounter)
  - We purposely externalize and share this normally internal, ***mental reasoning tool*** during case conferences to give us practice with this core skill
  - When we write our note or give an oral presentation, **we use the PR we've been building in our minds as a starting point to craft the sentence that starts the A/P (AKA the 'one-liner,' summary statement, assessment, or 'final problem representation')**
    - The PR is closely linked w/ the ID/CC statement at the beginning of the note or presentation (same core problem); **BUT,** the ID/CC statement is ***much*** more succinct/shorter than the sentence at the beginning of the A/P—i.e. ID/CC doesn't include details about the exam or test results and is focused on **briefly** describing the presenting symptom
    - Example:
      - ID/CC: 58yo woman with diabetes here with two days of fevers/chills
      - A/P: 58yo woman w/ poorly controlled diabetes presenting with acute fevers without other localizing symptoms of infection, found to have a leukocytosis and an elevated lactate.
- Includes:
  - **Who**: *Relevant* Epidemiology/Risk Factors for disease
  - **What**: Key/differentiating features of the clinical syndrome (signs/symptoms)
  - **When**: Time course/pattern/tempo (acute/progressive/waxing and waning)
- Excludes:
  - Non-specific information
    - Fatigue rarely helps to narrow our differential diagnosis
  - Irrelevant information
    - A patient's inguinal hernia is likely irrelevant to their exertional chest pain
- Allows experienced clinicians to use pattern recognition to quickly develop a differential diagnosis
- Allows us to develop our reasoning skills:
  - What is most relevant to a given clinical problem?
  - How do we specifically define a clinical problem in order to begin to solve it?

Illness Scripts:
- Mental representations of diseases (3x5 cards)
- Dynamic, change/develop with experience
- Unique to individual clinicians
- Include (same 3 categories in Problem Representation, plus add'l info):
  - **Who:** Who gets it?
    - Epidemiology, risk factors
  - **What:** Clinical syndrome (Signs/Symptoms)
    - When learning a new script, prioritize features that are most helpful in distinguishing related diseases
  - **When:** Time course/pattern/tempo
  - **Why:** Pathophysiology
    - Connecting pathophysiology with the Who/What/When in a script helps us truly 'understand' it and to retain/remember it; this knowledge will also form a foundation that will help us to understand the therapeutic options
  - *As scripts develop, additional categories are added: e.g. diagnostics and treatment*

Schema:
- A systematic approach to thinking through a given clinical problem
  - Can be considered **before** entering the room to interview a patient to plan out key historical questions to ask, and exam maneuvers to perform
    - Take a 'diagnostic time-out' before entering a patient's room to ask yourself if you have an approach to their symptom(s); if you've never encountered the problem before, you may want to take a few minutes to ask a colleague or do some brief targeted reading so you can enter the room with a framework in mind
    - **Key Caveat:** Always start with open-ended questions to draw out the patient's story, be prepared to let go of the schema/approach you considered before entering the room if you find the expected clinical problem (e.g., based on the triage info) is different from the patient's actual problem
  - Can be used to help clinicians build a differential diagnosis (diagnostic schema)
    - Can also use schema to systematically approach how to manage a particular clinical problem, approach a procedure, etc.
  - Often based on mechanistic thinking/pathophysiology
    - i.e. diagnostic schema for acute kidney injury = pre-renal, intrinsic, post-renal
  - May be unique to an individual clinician based on their experience
    - When starting out, it's OK to start with someone else's approach, just be sure this approach makes sense to you, and that you can connect it with your own knowledge and experience, and build from there

Core Concept Reasoning Videos:
You may find it helpful to refer to these brief videos:
- Problem Representation (8 min): https://youtu.be/ApSNehBFQak
- Diagnostic Schema (12 min): https://youtu.be/cbbj8eo6niQ