

Clinical Reasoning



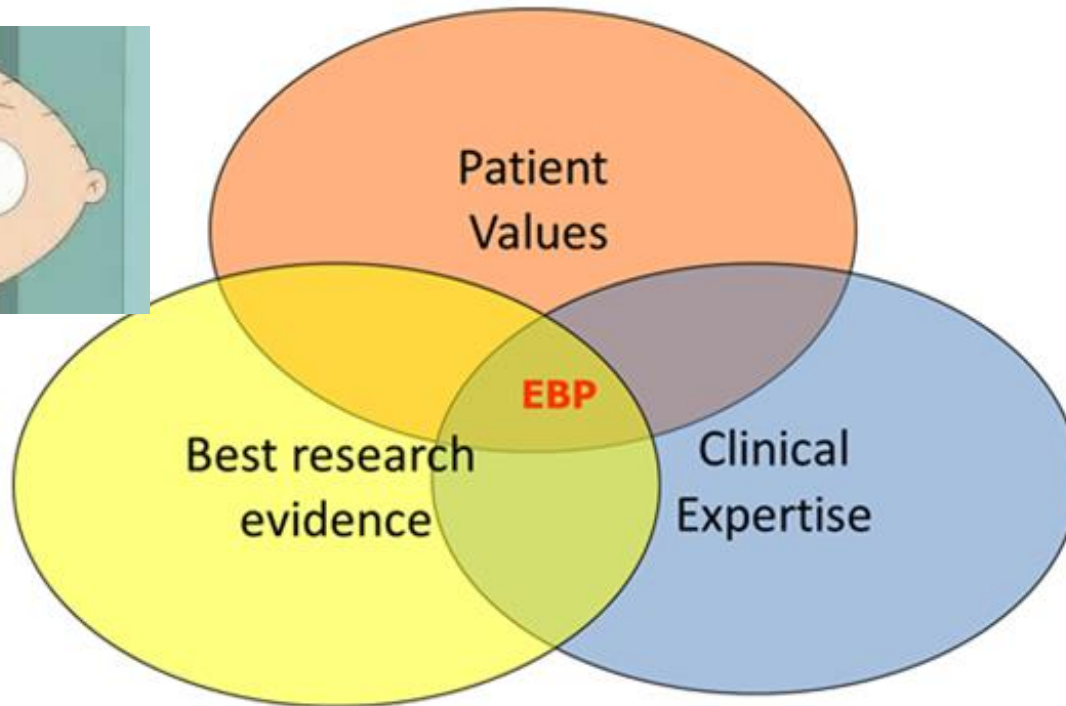
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Objectives



- Discuss the role of clinical reasoning in the framework of evidence based practice
- Analyze the clinical reasoning paradigm within the evolution of healthcare
- Utilize a suggested clinical practice model to successfully implement clinical reasoning concepts into the evaluation and management of your patient care
- Evaluate and choose from a handful of interviewing strategies to conduct an effective subjective examination

Evidence based medicine



Sackett D et al (2000): Evidence-Based Medicine. Churchill Livingstone

Dimensions of expert practice (Jensen '03)



- Accumulation of experience $\neq$ expert practice
- Experiential
 - ✦ requires intentional, critical reflective process
 - ✦ superior organization/accessibility vs large knowledge base
- Patient centered/collaborative problem solving venture

Intentionality (Wainwright '10)



- Hypothetical-deductive vs forward reasoning
- Reflection in action
 - during the encounter without interruption, modifying what is being done while it is ongoing
- Reflection on action
 - retrospective in order to discover how our knowing-in-action may have contributed to an unexpected outcome

Errors of bias



- Confirmation bias
 - assumptions without clarification
- Outcome bias:
 - overreliance on outcomes vs quality of reasoning when determining treatment decisions

Patient centered/collaborative



- Requires intensive listening
- Requires the patient to be an active participant
- Education is of prime importance to promote self-empowerment
 - ask patient 1st before telling
 - use their language

Self-Empowerment you say?



- Similar dynamic across patients, students, mentors
- Primary pitfall = work ethic/self-motivation
 - ✦ e.g. tell me what I did right/wrong vs. can you help me to figure out how/where/why?

Cont.



- Goal of a residency = capability to be your own mentor
- An ideal setting to cultivate reasoning
 - nonfatal (e.g. nsaid vs manipulation)
 - allowance to make mistakes and critically reflect



Why is clinical reasoning important?



- **Parallels the healthcare evolution**
 - WHO ICD → ICF disablement model
 - Diagnostic → biopsychosocial model
 - Paternalistic → informed/consumer → shared decision making model

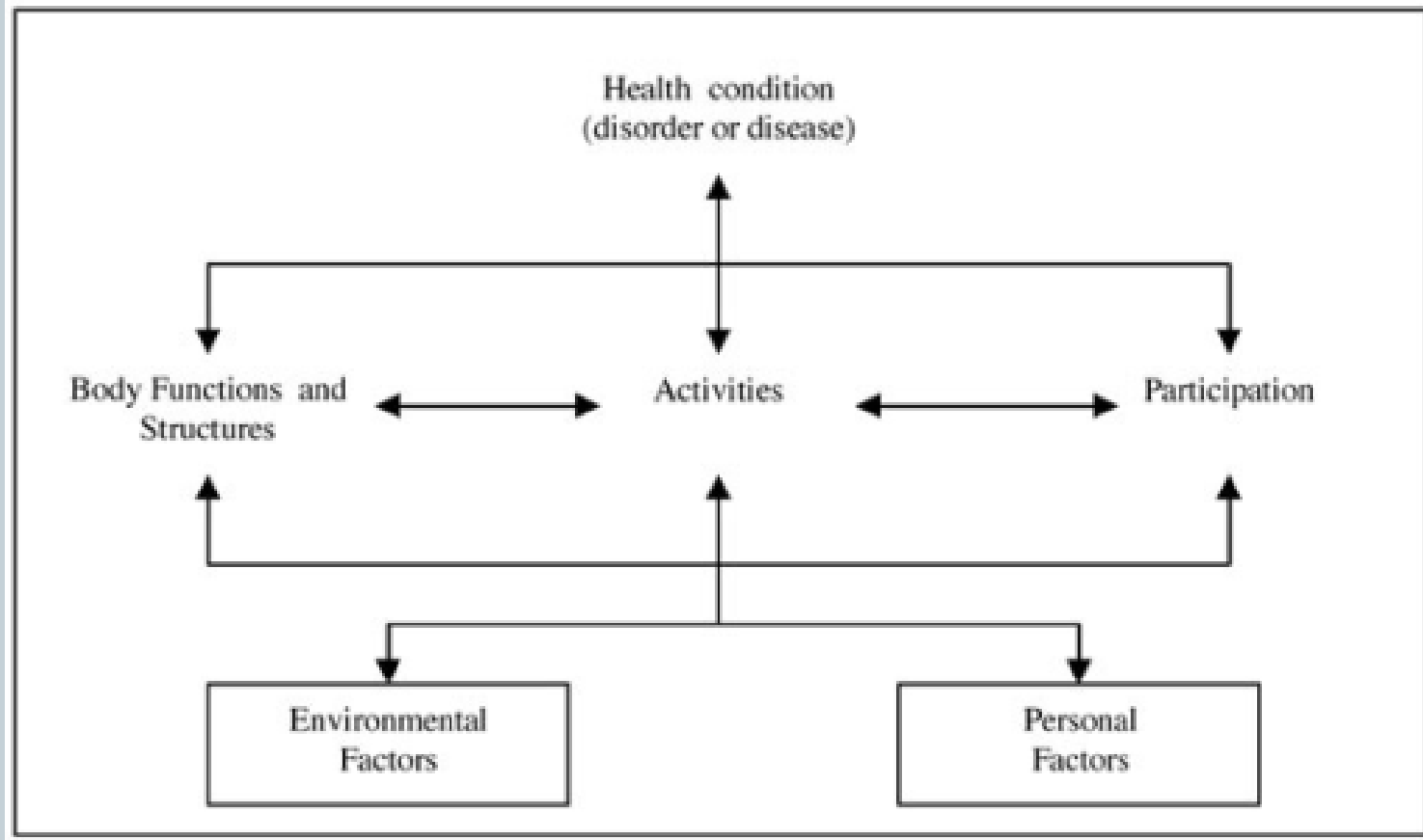
WHO's ICD → ICF

(World Health Organization International Classification of Functioning, Disability, and Health)

- Universal language
 - acknowledges disability as a universal human experience
 - focused on function as opposed to disease → standardized metric
- Integrative
 - inclusive of environmental, contextual, and biopsychosocial factors



The ICF model: interaction between ICF components



Body

Function:

Mental Functions
Sensory Functions and Pain
Voice and Speech Functions
Functions of the Cardiovascular, Haematological, Immunological and Respiratory Systems
Functions of the Digestive, Metabolic, Endocrine Systems
Genitourinary and Reproductive Functions
Neuromusculoskeletal and Movement-Related Functions
Functions of the Skin and Related Structures

Structure:

Structure of the Nervous System
The Eye, Ear and Related Structures
Structures Involved in Voice and Speech
Structure of the Cardiovascular, Immunological and Respiratory Systems
Structures Related to the Digestive, Metabolic and Endocrine Systems
Structure Related to Genitourinary and Reproductive Systems
Structure Related to Movement
Skin and Related Structures

Activities and Participation

Learning and Applying Knowledge
General Tasks and Demands
Communication
Mobility
Self Care
Domestic Life
Interpersonal Interactions and Relationships
Major Life Areas
Community, Social and Civic Life

Environmental Factors

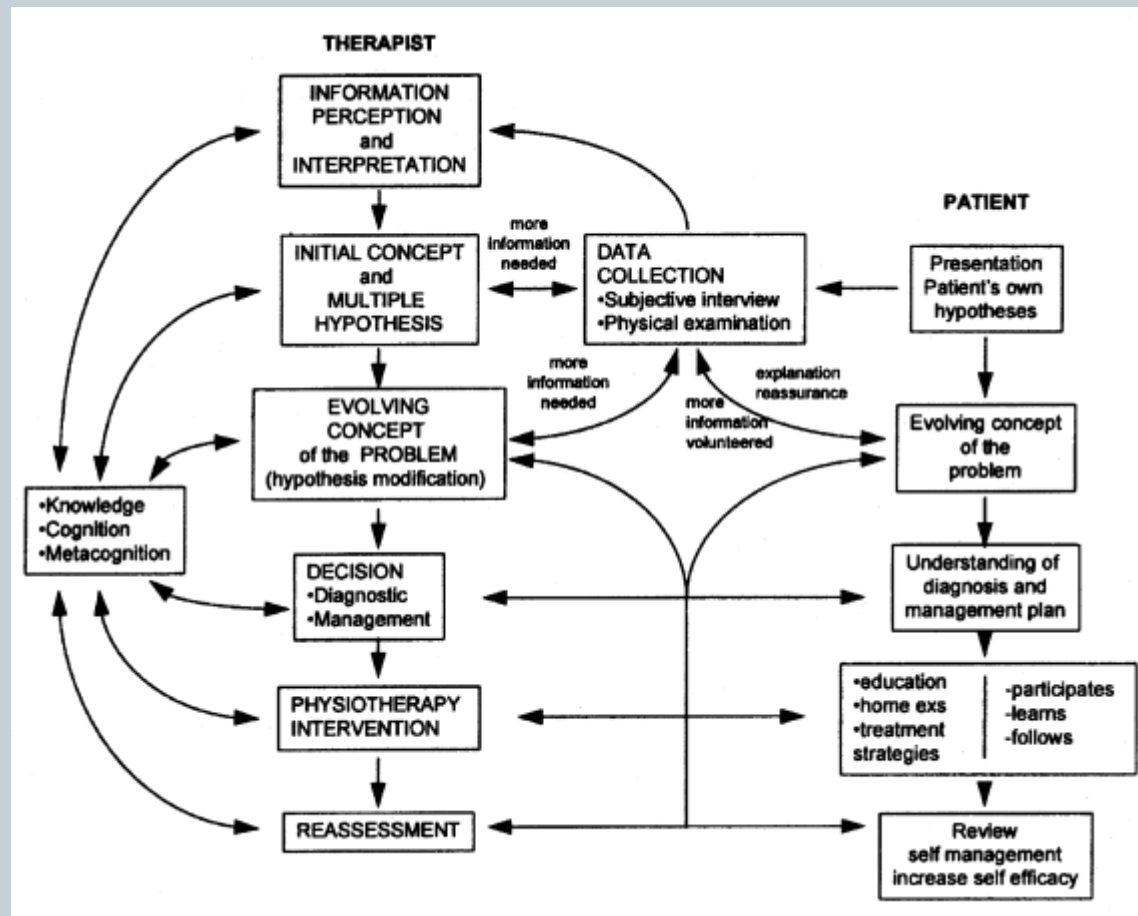
Products and Technology
Natural Environment and Human-Made Changes to Environment
Support and Relationships
Attitudes
Services, Systems and Policies

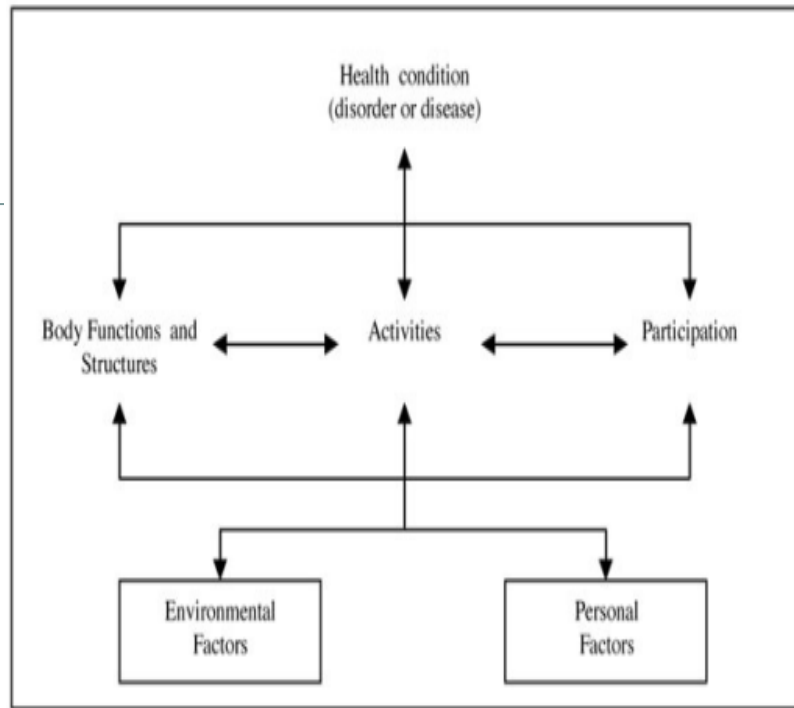
What is clinical reasoning?



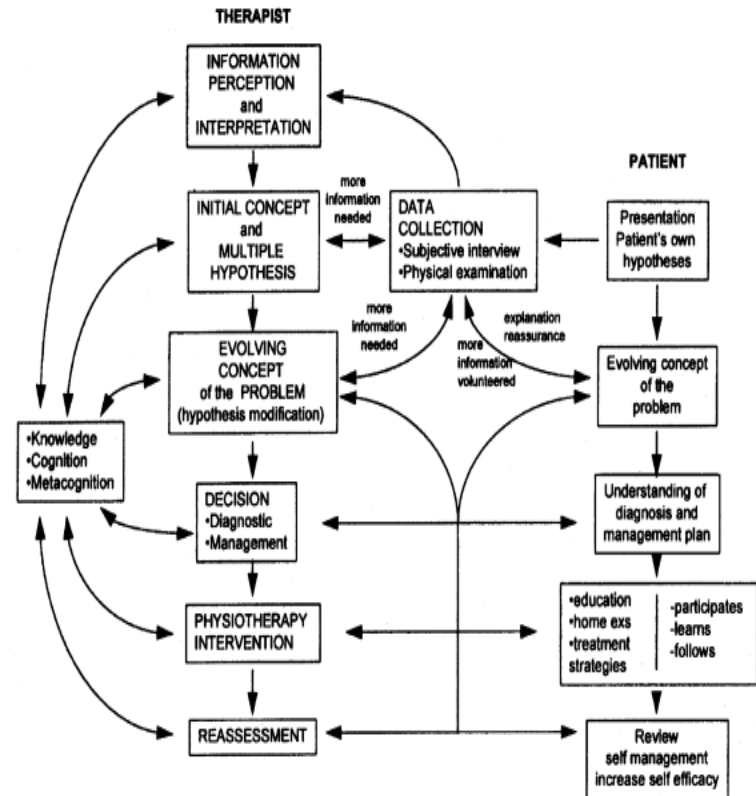
- “... the process in which the clinician, interacting with significant others (patient, caregivers, health care team members) structures meaning, goals, and health management strategies based on clinical data, patient choices, and professional judgement and knowledge.” (Jones ‘00)

Collaborative clinical reasoning model (Edwards and Jones '95)





- What is the overlap?



How to cultivate clinical reasoning?



- **Shared language**
 - Vocabulary: 8 domains of reasoning
 - Sentences: practice using it with your mentors and self
 - Story: can I see the forest apart from the trees?
- **“Intention with every interaction”**



Clinical reasoning strategies (8)



- Evaluation (2)
 - Diagnostic
 - ✦ formation of a diagnosis related to activity and participation restrictions and physical impairment with full consideration of associated pain mechanisms, tissue pathology, and the broad scope of relevant contributing factors
 - Narrative
 - ✦ understanding a patient's illness experience within the context of their own 'story', beliefs, and culture

Clinical reasoning strategies (cont.)



- Management (6)
 - Procedural
 - ✦ determination and carrying out of the treatment procedures
 - Collaborative
 - ✦ nurturing a consensual approach towards the interpretation of examination findings, the setting of goals and priorities and the implementation and progress of treatment
 - Reasoning about teaching
 - ✦ planning, carrying out and evaluating individualized and context sensitive teaching

Clinical reasoning strategies (cont.)



- Predictive
 - ✦ envisioning future scenarios with patients and exploring their choices and implications (“if, then...”)
- Interactive
 - ✦ establishing therapist-patient rapport
- Ethical
 - ✦ apprehension and resolution of ethical and pragmatic dilemmas

Goals of a subjective exam (4)



- Hypothesis
 - e.g. pathoanatomic, ICF, movement diagnosis
 - body chart: area, type, depth, intensity, C/V vs I/M, relationship of symptoms (if there are multiple locations)
- Dependent variable
 - specific, consistent, measureable
- Tissue irritability
 - how long it takes to aggravate?
 - How long to ease?
 - Level of pain?
- Patient expectations/goal

Objective exam (3)



- **Objective asterisk**
 - meaningful, holistic, comparable?
- **Reoccurring theme/movement-pain relationship**
 - based on static posture and dynamic gait/function
 - you should be able to predict specific impairments contributing to the problem
- **Assess/reassess**
 - most powerful predictive tool for a novice PT
 - search for the magic bullet (I.e. one impairment to affect all)

Resident milestone/progress markers	Subjective examination	Objective exam/evaluation	Efficiency
3 months	able to consistently be self-aware of missing data and proffer suggestions for improvement without prompting	able to consistently be self-aware of missing data and proffer suggestions for improvement without prompting	able to be self-aware of the time taken and proffer suggestions for improvement without prompting
6 months	able to consistently collect four data pieces and start to prioritize likely hypotheses	able to consistently collect three data pieces, prioritizing likely hypotheses, and selecting relevant tests/measures	able to consistently complete an initial evaluation of a simple patient, including subjective, objective, treatment, hep/education in 60'
9 months	able to have a better understanding of the patient's story/beliefs regarding their condition and start using clinical pattern recognition with simple cases	able to more thoroughly complete an examination sequenced from standing-sitting-lying positions	able to consistently complete an initial evaluation of a simple patient, including subjective, objective, treatment, hep/education in 45'
12 months	able to complete the interview without a clipboard/computer, having a conversation with the patient, attempting to address both the mechanical and psychological components of their pain process	able to more accurately reflect ongoing assessment through relevant treatment modifications and educate/collaborate with the patient accordingly	able to inconsistently complete an initial evaluation of a complex patient, including subjective, objective, treatment, hep/education in 60'

Interviewing skills



- Good history taking results in ~76% of the final differential diagnosis
 - 1/2 of the total symptoms are mentioned in the 1st 3 minutes
- Goal of the initial interviewing phase is to show empathy and reflect understanding
- Nondirective style
 - yields accurate and reliable data
 - facilitates patient/therapist rapport

Interviewing 101



- Open vs closed ended inquiries
 - “do, are, have, has, is”
 - “what, how, tell me, describe, could you”
 - skilled interviewers tend to avoid “why” inquiries



Reflective statements



- Skill of either paraphrasing 1 or 2 responses or summarizing a number of patient statements
- Reflection of content and feeling
 - reflects that the therapist is able to listen, understand, and identify the emotion being communicated
- Not only what is being said but how
 - 80% of communication is nonverbal

Structuring the interview



- Your demeanor
 - natural, consistent eye contact, facial expressions,
 - warm tone
 - relaxed, attentive posture
- Martini glass analogy
 - open ended inquiries initially
- Minimal encouragements
 - e.g. “um-hmm, go on, yes, tell me, explain for me, please clarify”
 - use their language
- Silence is okay

Piglet:
“how do You spell love?”
Pooh:
“You don’t spell it,
You feel it.”

Focusing the wandering interview



- Gently increase the number of closed ended questions
- Avoid minimal encouragements
 - try the “stare down”
- Limit tangents with redirection
 - “for a moment let’s focus on”, “this is an important detail to me”, “can you explain”
- Begin movement/manual examination
- If all else fails, “we have a limited amount of time, consequently...”

In summary



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