dialectical reasoning:  an interplay between the different paradigms of knowledge and reasoning processes that are expressed in each of the various clinical reasoning strategies Edwards I, Jones M, Carr J, Braunack-Mayer A, Jensen G. Clinical reasoning strategies in physical therapy. Physical Therapy. 2004;84(4):312-30.

critical thinking: “purposeful, self-regulatory judgement which results in interpretation, analysis, evaluation and inference as well as explanation of the evidential, conceptual, methodological, criteriological or contextual considerations upon which that judgment is based Facione P. Critical Thinking: A statement of expert consensus for purposes of educational assessment and instruction. Berkeley; 1998.

Collaborative reasoning: the nurturing of a consensual approach towards the Interpretation of examination findings, the setting of goals and priorities, and the implementation and progression of treatment Edwards I, Jones M, Carr J, Braunack-Mayer A, Jensen G. Clinical reasoning strategies in physical therapy. Physical Therapy. 2004;84(4):312-30

Narrative Reasoning: the apprehension and understanding of patients’ illness experiences, ‘‘stories’’, contexts, beliefs and cultures Edwards I, Jones M, Carr J, Braunack-Mayer A, Jensen G. Clinical reasoning strategies in physical therapy. Physical Therapy. 2004;84(4):312-30

Procedural reasoning: the determination and implementation of treatment procedures

schema Edwards I, Jones M, Carr J, Braunack-Mayer A, Jensen G. Clinical reasoning strategies in physical therapy. Physical Therapy. 2004;84(4):312-30

Ethical reasoning: the apprehension of ethical and practical dilemmas that impinge on both the conduct of treatment and its desired goals, and the resultant action towards their resolution Edwards I, Jones M, Carr J, Braunack-Mayer A, Jensen G. Clinical reasoning strategies in physical therapy. Physical Therapy. 2004;84(4):312-30

illness scripts: scripts are goal-directed knowledge structures, adapted to perform tasks efficiently (Charlin B, Tardif J, Boshuizen HPA. Scripts and medical diagnostic knowledge: Theory and applications for clinical reasoning instruction and research. ACAD MED. 2000;75(2):182-90.)

hypothetico-deductive reasoning: diagnostic problems are found by generating a limited number of hypotheses early in the diagnostic process and using them to guide subsequent collection of data. Each hypothesis can be used to predict what additional findings ought to be present if it were true, and the diagnostic process is a guided search for these findings Elstein A, Shulman, L Sprafka, S. Medical problem solving: An analysis of clinical reasoning: Cambridge, MA, Harvard University Press; 1978.

analytical reasoning:

non-analytical reasoning: role of experience in medical diagnosis, and the application of an exemplar model of categorization to the process of clinical reasoning Norman G, Young M, Brooks L. Non-analytical models of clinical reasoning: the role of experience. Medical Education. 2007;41(12):1140-5.

system 1 and 2: system 1 fast, automatic, intuitive and largely unconscious, system 2: slow, deliberate, analytical, requires conscious effort (Kahneman)

cognitive load theory: assumes a limited working memory that stores about 7 things but operates on just 2-4 elements. Can deal with information for no a few seconds, information is lost within about 20 seconds unless refreshed with rehearsal. van Merrienboar JJG, Sweller J. Cognitive Load Theory in Health Professions Education: Design Principles and Strategies. Medical Education. 2010;44:85-93.

deliberate practice: Deliberate practice is a highly-structured activity engaged in with the specific goal of improving performance Ericsson KA. Deliberate practice and the acquisition and maintenance of expert performance in medicine and related domains. Academic Medicine. 2004;79:S1-12.

Pattern recognition: direct automatic of information from a well-structured knowledge base, characterized by speed and efficiency Barrows HS, Feltovich PJ. The clinical reasoning process. Medical Education. 1987;21:86-91.

Forward Reasoning: inductive reasoning in which data analyses results in hypothesis generation or diagnosis, more likely to occur in familiar cases Patel VL, Groen GJ. Knowledge Based Solution Strategies in Medical Reasoning. Cognitive Science. 1986;10:91-116.

Backward Reasoning: re-interpretation of data or the acquisition of new clarifying data invoked to test a hypothesis Patel VL, Groen GJ. Knowledge Based Solution Strategies in Medical Reasoning. Cognitive Science. 1986;10:91-116.

Intuitive reasoning:  related to past experience with specific cases which can be used unconsciously in inductive reasoning, similar to heuristics (Fonteyn & Fisher, 1992)

Meta cognition: higher-order thinking that enables understanding, analysis, and control of one’s cognitive processes, especially when engaged in learning.

Cognitive apprenticeship: Collins, Allan, Cognitive Apprenticeship In The Cambridge Handbook of the Learning Sciences <http://assets.cambridge.org/97805218/45540/frontmatter/9780521845540_frontmatter.pdf>