

## D2.1 Set of agreed learning goals and objectives (Elaborated version)

### Learning objectives for the clinical reasoning student curriculum

The overarching goals are to increase health professional students' awareness of and skills in clinical reasoning.

Gathering, interpreting, and synthesizing patient information.

The objective is that the student will be competent in gathering, interpreting, and synthesizing patient information.

- The student will be able to accurately and efficiently collect key clinical findings needed for analysis of the patient's problem.
- The student will be able to accurately and efficiently analyse and interpret the key clinical findings to plan patient treatment and patient care.

Developing a treatment/management plan

*The objective is that the student will be able to reason towards development of treatment/management plans*

- The student will be able to apply treatment, therapeutic and prophylactic procedures based on a holistic assessment of the patient, the diagnosis, the healthcare context, alongside with current best evidence,
- The student will know how to set treatment goals for the patient based on evidence, healthcare context and patient's needs and preferences.

Aspects of patient participation in clinical reasoning

*The objective is that the student will be able to appropriately involve the patient in clinical reasoning.*

- The student will be able to engage and collaborate with patients and families, in accordance with their values and preferences in the diagnostic and analysis of the patient's problem.
- The student will be able to involve and support the patient in a shared decision-making process about the treatment/management plan.

Collaborative aspects of clinical reasoning

*The objective is that the student will be able to collaborate with others in the clinical reasoning process.*

- The student will be able to make use of team members' (own and other professions) competencies regarding patient information, diagnostic and treatment/management .

Self-reflection on clinical reasoning performance and strategies for future improvement

*The objective is that* the student will be able to critically (self-) reflect on clinical reasoning performance and develop strategies for future clinical reasoning.

- The student will know how to use self-reflection and critical thinking to improve diagnostic, therapeutic and management performance.
- The student will be able to evaluate the outcomes of the clinical reasoning and plan for appropriate improvements together with patients and colleagues.

### Generating differential diagnoses including defining and discriminating features

*The objective is that* the student will be competent in identifying the most likely diagnoses/problems based on the interpretation and prioritization of different patient-relevant information.

- The student will be competent in generating differential diagnoses including their defining and discriminating features
- The student will know about the benefits and risks of using clinical decision support systems including AI in clinical reasoning.

### Errors in the clinical reasoning process and strategies to avoid them

*The objective is that* the student will have an understanding of common cognitive errors and biases in the clinical reasoning process and be able to apply strategies to avoid them.

- The student will have an understanding of the benefits of an open climate that allows sharing of reasoning errors for promoting continuous learning and patient safety.
- The student will be able to explain the occurrence of uncertainty in the clinical reasoning process under different circumstances and how to deal with them in a safe manner.
- The student will have an understanding of how emotions can influence the clinical reasoning.
- The student will be able to overcome common challenges and errors during the clinical reasoning process.

### Ethical aspects

*The objective is that* the student will be competent in applying ethical aspects of clinical reasoning.

- The student will be able to take legal, moral, diversity, gender-related, and ethical aspects into account in the clinical reasoning process.

### Interprofessional aspects of clinical reasoning

*The objective is that* the student will have awareness and competence in interprofessional aspects of clinical reasoning

- The student will be able to collaborate and communicate across professions in the clinical reasoning process to meet the needs of the patient.

- The student will understand how personal, professional and interprofessional values affect interprofessional care.
- The student will understand similarities and differences between the clinical reasoning of health professions.

### Theories of clinical reasoning

*The objective is* that the student will have an understanding of key theoretical models related to clinical reasoning.

- The student is able to relate selected theories and models of clinical reasoning (e.g. illness scripts, pattern recognition and dual theory) to clinical practice.

## Learning objectives for the clinical reasoning train the trainer course:

The overarching goals are to develop skills in teaching and assessing clinical reasoning in health professions education.

### (Interprofessional) Collaboration and exchange

*The objective is that* learners will develop competence in teaching interprofessional aspects of clinical reasoning

- The learner will be able to successfully teach about similarities, differences, and most common sources of errors in the clinical reasoning process of health professions

### Attitudes towards clinical reasoning teaching

The objective is that the learner will be aware of and critically reflect on the importance of clinical reasoning learning and teaching.

- The learner will be motivated and inspired to teach and assess clinical reasoning
- The learner will develop an awareness and openness to share errors in the clinical reasoning teaching.
- The learner will develop an awareness of why and how reasoning errors can be used in clinical reasoning teaching.

### Teaching, assessing, and evaluating clinical reasoning

*The objective is that* the learner will be able to choose appropriate teaching, assessment and evaluation methods for clinical reasoning and adapt these to the respective context.

- The learner will be able to implement aspects of the DID-ACT clinical reasoning student curriculum in their teaching.
- The learner will be able to use various methods of assessing clinical reasoning in relation to specific needs.

### Patient-related aspects

*The objective is that* the learner will be able to appreciate the patient's (including his/her relatives) roles in clinical reasoning

- The learner will be able to teach and assess patient involvement in clinical reasoning.