

26788 - Learning and improvement of clinical reasoning

Información del Plan Docente

Academic Year	2018/19
Subject	26788 - Learning and improvement of clinical reasoning
Faculty / School	104 - Facultad de Medicina
Degree	304 - Degree in Medicine
ECTS	5.0
Year	5
Semester	First semester
Subject Type	Optional
Module	---

1.General information

1.1.Aims of the course

1. To improve medical students' competence on clinical reasoning.
2. To teach tools to maintain medical students' competence on clinical reasoning along their professional development as healthcare professionals.

1.2.Context and importance of this course in the degree

Clinical reasoning in clinical practice

Health care professionals need to be flexible in their approach to decision-making and ensure continuity of care. The health care professional's ability to provide safe, high quality health care can be dependent on their ability to reason, think and judge, which can be limited by lack of experience (Benner, Hughes, & Sutphen, 2008). Simmons (2010, p. 1155) states that 'clinical reasoning is a complex cognitive process that uses formal and informal thinking strategies to gather and analyse patient information'. This process is reliant on the health care professional using both their intuition and knowledge to influence decision-making for individual client circumstances. The experience and knowledge of the health care professional is an important consideration in the consolidation of clinical reasoning. Simmons (2010) considers this by suggesting that newly qualified nurses, for example, may identify fewer cues, have difficulty identifying complex diagnosis and may not re-evaluate data as often as experienced nurses. This has the potential to have a negative impact on patient care. Hamm (1991, cited in Round, 2001) agrees that the clinical situation and the practitioner's knowledge and clinical experience could impact on the clinical reasoning employed and its efficiency. However, an individual's extensive experience could be irrelevant if faced with a situation that they have not previously been exposed to. Thompson and McCaughan (2002) conclude that a good clinical decision is one that takes into account the current best practices, considers patient preferences and is undertaken by experienced medical students. Teaching clinical reasoning can be difficult to facilitate in an educational setting due to the lack of clinical context. Many of the traditional styles of teaching introduce decision-making processes as a method of 'pattern recognition'. This relies on the health care professional to draw upon past experiences to re-examine them in light of the 'new' clinical scenario (Boyd, 2011, p. 574). The concern with utilising some traditional decision-making processes is the use of 'checklists' to formulate clinical reasoning and decision-making and by doing so fail to apply critical analyses to evaluate outcomes (Boyd, 2011). The use of Clinical Reasoning Learning Situations (CRLS) has been increasingly adopted to address this criticism and to support the clinical

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teaching of necessary skills required for safe and competent practice. CRLS enables health care professionals to be exposed to clinical reasoning strategies and encourages them to explore the predisposing factors and draw upon interprofessional experience to enhance the decision-making process. This is all carried out with some prepared CRLS so that all issues can be openly explored without the time pressures that medical students face in the clinical setting. At the end medical students will develop their own CRLS.

1.3.Recommendations to take this course

This subject is taught through the University of Zaragoza teaching platform: <https://moodle2.unizar.es/add/>

It is available for students 24hs per day, the whole year.

It is recommended to select this subject for those students who are in their fourth or fifth year of the medical degree so as they could have previous clinical training experience.

2.Learning goals

2.1.Competences

Relationship skills basic that the student must acquire

CB1 - Students have demonstrated knowledge and understanding in a field of study that part of the basis of general secondary education, and is typically at a level which, although it is supported by advanced textbooks, includes some aspects involving knowledge of the forefront of their field of study

CB2 Students can apply their knowledge to their work or vocation in a professional manner and have competences typically demonstrated through devising and defending arguments and solving problems within their field of study

CB3 - Students have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments that include reflection on relevant social, scientific or ethical

CB4 - Students can communicate information, ideas, problems and solutions to an audience both skilled and unskilled

CB5 - Students have developed those learning skills necessary to undertake further studies with a high degree of autonomy

2.2.Learning goals

The course and its expected results respond to the following approaches and objectives:

1. To acquire skills to improve clinical reasoning process in the doctor-patient clinical interview.
2. To train students in the fallibility of their diagnostic process and to promote attitudes and habits that allow them to detect and reduce cognitive errors in the diagnostic-therapeutic process.

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3. To facilitate learning tools and continuous improvement of clinical reasoning along their diagnostic and therapeutic processes.
4. To build a grounded clinical reasoning method.
5. To train the student in the use of the clinical reasoning learning methodology so that they can integrate acquired medical knowledge and clinical experiences in the clinical stage as early and as effectively as possible.

2.3.Importance of learning goals

In clinical practice, many medical decisions are complex and are dependent on countless internal and external factors. Therefore it is useful for medical students to follow a formal decision-making tool.

Commonly used tools include the 'Decision Tree' (Round, 2001, p. 110) and the 'Clinical Reasoning Cycle' (Levett-Jones, et al., 2010) These tools allow the health care professional to make choices through a systematic process which considers many clinical predisposing and contributing factors.

Simmons (2010) relates clinical reasoning tools as following a forward chaining process that moves sequentially through a series of logical considerations to end at a final decision. According to Jones (1988), when working through the processes of clinical reasoning the health care professional will identify a specific health problem/care need and the adoption of a clinical reasoning cycle facilitates the 'thinking' behind the clinical management plan. This has been referred by Jones (1988) as 'goal driven' patient care. We reproduce CRLS with the implementation of the cycle.

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

6 Theoretical and practical modules: clinical reasoning and CRL (Clinical Reasoning Learning) sessions, learning clinical reasoning errors in the process of reasoning, clinical interview, use of diagnostic tests, rational prescribing

5 clinical cases with CRL session structure.

End of course work: developing an CRL session with a case itself

Teaching-learning methodology

Study of materials for each module. Participation in discussion forum, reading a scientific article and comment it into the forum in each module. Complete a test of 10 questions per module (8/10 min). To perform 5 CRL clinical cases and prepare and present a final case in CRL format. Therefore, to work on clinical cases and promote personal reflection to apply CRL methodology in any clinical case.

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Number of Credits

ECTS = 5 (150 hours)

18 hours a theoretical and practical module: 8 hours to study theory, 5 hours reading articles, web pages and preparation of summaries, 4 hours of participation in the forum, one hour for self-assessment test ($18 * 6 = 108$)

3 hours for each of the clinical cases ($3 * 5 = 15$).

27 hours of personal work for the final review of cases from previous years and design and development of the final event of ARC itself.

Clinical Reasoning (CR) is a cross competence for any medical-surgical speciality into the medical degree. The most efficient way to acquire this competence is when the specific knowledge of clinical subjects are acquired and these knowledge has to be used in the clinical patient contact through rotations in hospitals and health centres. As soon as the methodology is used, greater the benefit for the students to improve their competence in clinical reasoning.

The combination of CR methodology with the acquisition of knowledge allows students to begin to develop their own action scripts for the diagnosis and treatment process. Hence the temporary location should be between 4 and 6 grade year.

The course takes place in the Digital Teaching Ring. The course has 6 theoretical and 5 practical modules. The 5 clinical cases and a personal final work of developing a clinical case with ARC methodology (Learning Clinical Reasoning). There is a forum for discussion per module, a required reading per module with comment and self-assessment test for each module. It is essential to pass the test and send the summary of the articles in each module to move to the next one. Students must make 5 prewritten clinical cases and submit their own clinical case as final work.

4.2.Learning tasks

Personal study of materials

Personal Reflection on particular scientific papers

Forum discussions

CRL session: clinical reasoning learning sessions

Final CRL case created and performed by the students.

4.3.Syllabus

1. Development of theoretical and practical modules from 17 September to 21 December 2018

2. Development of a clinical cases with practical learning methodology of clinical reasoning from December 21

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until January 18, 2019.

5.4. Planning and scheduling

Scheduled sessions and presentation of works as follows:

THEORETICAL MODULE 1. Professor Maria Pilar Astier - pastier@unizar.es

Objective: 1. Clinical reasoning: concepts and models of knowledge organization.

Start date of this module: September 17, 2018

THEORETICAL MODULE 2. Professor Maria Pilar Astier - pastier@unizar.es

Objective: 1. Frequent Errors in the process of reasoning.

Start date of this module: September 24, 2018

THEORETICAL MODULE 3. Professor Maria Pilar Astier - pastier@unizar.es

Objective 1. To Know and enhance clinical tools to improve clinical reasoning process.

Start date of this module: October 1, 2018

THEORETICAL MODULE 4. Professor Maria Pilar Astier - pastier@unizar.es

Objectives: 1. To know the methodology of the clinical interview. 2. How to properly manage the clinical interview to improve clinical reasoning process.

Start date of this module: October 15, 2018

THEORETICAL MODULE 5. Professor Javier Sangrós e-mail: jsangros@unizar.es

Objectives: 1. Understand the basic interpretation of diagnostic tests to improve our clinical reasoning process.

Start date of this module: October 22, 2018

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THEORETICAL MODULE 6. Professor José Manuel Millaruelo - Email: millarue@unizar.es

Objectives: 1. Develop skills for the reasoning of the treatment decision.

Start date of this module: October 29, 2018

THEORETICAL MODULE 7. Professor María Pilar Astier Peña - Email: pastier@unizar.es

Objectives: 1. Overdiagnosis, overtreatment, overuse in healthcare systems.

Start date of this module: November 5, 2018

SCENARIO No. 1. Professor Maria Teresa Delgado Email: maitedelgadam@gmail.com

Objectives: Apply the clinical reasoning process in a sequence considering urinary symptoms

Start date of this module: November 12, 2018

SCENARIO No. 2. Professor Maria Teresa Delgado Email: maitedelgadam@gmail.com

Objectives: Apply the clinical reasoning process in a sequence considering dyspnoea

Start date of this module: November 19, 2018

SCENARIO No. 3. Professor Javier Sangros E-mail: jsangros@unizar.es

Objectives: Apply the clinical reasoning process in a sequence considering dizziness

Start date of this module: November 26, 2018

SCENARIO No. 4. Professor Maria Pilar Peña Astier. Email: pastier@unizar.es

Objectives: Case to deepen the clinical reasoning of abdominal pain

Subjects: Clinical Reasoning acute abdominal pain

Activities: Answering the questions of the case make learning personal reflection

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Start date of this module: December 3, 2016

SCENARIO No. 5. Professor Maria Pilar Peña Astier. Email: pastier@unizar.es

Objectives: Case to deepen on joint pain clinical reasoning versus somatic pain

Topics: Clinical Reasoning joints pain versus somatic pain

Activities: To answer the questions of a case. To make learning personal reflection

Start date of this module: December 10, 2016

SCENARIO No. 6. Professor Maria Pilar Peña Astier. Email: pastier@unizar.es

Objectives: Case to deepen on headache.

Topics: Clinical Reasoning headache presentations

Activities: To answer the questions of a case. To make learning personal reflection

Start date of this module: December 17, 2018

FINAL CASE:

Objectives: To create and conduct a clinical case explaining the clinical reasoning process that has been followed in the diagnostic phase, application of testing and a more likely approach to diagnosis and treatment.

Start date of this module: December 21, 2018

DATE OF COURSE WILL BE ENDING 18 JANUARY 2019.

DATE OF COMPLETION OF SEPTEMBER WILL CALL FOR SEPTEMBER 5, 2019.

ALL MODULES DEVELOPED IN THE RING DIGITAL TEACHING (ADD) ZARAGOZA UNIVERSITY
THROUGH platform MOODLE: <https://moodle2.unizar.es/add/>

4.4.Course planning and calendar

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CALENDAR 2018-2019

WEEKS

17/09 al 24/09/2018

24/09 al 1/10/2018

1/10 al 8/10/2018

9/10 al 15/10/2018

15/10 al 22/10/2018

22/10 al 29/10/2018

29/10 al 5/11/2018

5/11 al 12/11/2018

12/11 al 19/11/2018

19/11 al 26/11/2018

26/11 al 3/12/2018

3/12 al 10/12/2018

10/12 al 17/12/2018

17/12/2018 to 21/11/2018

21/12/2018 to 18/01/2019

18/01/2019

TASKS

Module 1: concepts and models in clinical reasoning

Module 2: clinical reasoning and patient safety

Module 3: activities to improve clinical reasoning

LOCAL FESTIVITIES

Module 4: clinical reasoning in clinical setting: documentation

Module 5: clinical reasoning and complementary therapies

Module 6: prudent prescription

Module 7: Overdiagnosis and overtreatment

Clinical Reasoning Learning Situation (CRLS) 1

Clinical Reasoning Learning Situation (CRLS) 2

Clinical Reasoning Learning Situation (CRLS) 3

Clinical Reasoning Learning Situation (CRLS) 4

Clinical Reasoning Learning Situation (CRLS) 5

Clinical Reasoning Learning Situation (CRLS) 6

Developing Students' Clinical Reasoning Learning Situation

Deadline to complete tasks and CRLS.

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The subject is organized in 7 theory courses and 6 clinical cases, Clinical Reasoning Learning Situations (CRLS)

Every student have to prepare a final clinical case with clinical reasoning methodology.

The subject will start on the 17 th Septiembre 2018.

Deadline to send tasks and Final CRLS will be 18th January 2019.

Those who were not able to finish de subject at that time, will have a new deadline to send tasks and final CRLS on the 5rd Septiembre 2019.

4.5.Bibliography and recommended resources

<http://psfunizar7.unizar.es/br13/eBuscar.php?tipo=a>