Clinical Leadership in Nursing Education

Inspirational good practice

"Clinical reasoning: The Levett-Jones clinical reasoning cycle and the ABCDEF framework"

This example shows practical leadership skills that are applied in educational settings. These practices were identified and collected during the Erasmus+ KA220-HED project "Clinical Leadership in Nursing Education," co-funded by the Erasmus+ programme of the European Union. The content is based on existing practices, with good examples submitted by project partners and stakeholders, recognized as validated examples from professional practice.

UCLL RESEARCH & EXPERTISE
CESPU INSTITUTO POLITÉCNICO DE SAÚDE DO NORTE
LAU REA
Erasmus+
Funded by the European Union

Content

1. Contact Information

School / Programme: UCLL – Bachelor of Nursing (Leuven – Limburg)

Lecturer name: Peter Lowette (E-mail: peter.lowette@ucll.be)

2. Short description of the teaching method

Clinical reasoning is the backbone of nursing autonomy and patient safety. We do not present it as a linear checklist, but as a dynamic, cyclical process based on the eight phases of the Levett-Jones Clinical Reasoning Cycle.

Within this framework, the ABCDEF method serves as a leadership tool for structured observation and prioritisation, following the principle of "treat first what kills first." The process requires the nurse to safeguard the "5 rights": the right patient, the right signs, the right time, the right action, and the right reason.

By systematically processing information, subtle signs of clinical deterioration are detected and substantiated at an early stage. This helps prevent failure to rescue and transforms the nurse from an executor into a leader who, through situational awareness, takes control of the care process.

3. Why should colleagues use this method to strengthen clinical leadership?

- **Impact on patient safety:** Preventable hospital deaths remain a major challenge, this method provides the critical thinking skills needed to reduce them significantly.
- **Preventing failure to rescue:** This method trains nurses to escalate concerns in time ("speak up") when early signs of deterioration appear.
- **Breaking routine thinking:** By explicitly naming factual observations we prevent the nursing student from acting on an initial impression. This objective approach reduces assumptions and stereotypical perceptions, which is crucial for patient safety, as it helps prevent subtle signs of deterioration from being missed due to a biased view. In this way, the method ensures that care always starts from the unique person and their current needs.
- **Strengthening professional autonomy:** The method provides a structured framework for translating clinical key elements into evidence-based nursing care. This enables nurses to make independent decisions within their own scope of practice while also optimising interprofessional communication. By using the ISBARR structure, critical signs are

reported to the physician clearly and objectively, which improves the quality of collaboration and patient safety.

4 . Competencies related to clinical leadership

Primary competences – secondary competences addressed by this good practice.

Domain – ethics

- ✓ Ethical competence (***ethical principles and values; professional integrity and accountability***)

Domain – professional nursing

- ✓ Clinical competence (***clinical competence in specific clinical area; nursing process; health promotion***)
- ✓ Quality management competence (***quality of care; patient safety***)
- ✓ Evidence based practice competence (***evidence based practice***)
- ✓ Decision making competence (***critical thinking; decision making; problem solving***)
- ✓ Self-development competence (***continuous professional development***)

Domain – innovation and change

- ✓ Visioning competence (***future-oriented thinking; understanding the big picture; finding innovative approaches; questioning***)
- ✓ Change management competence (***initiating change; advocating change; implementing change***)

Domain – influencing and advocacy

- ✓ Influencing competence (***influencing others; motivating others***)
- ✓ Patient advocacy competence (***patient advocacy***)

Domain – team leadership

- ✓ Team leadership competence (***team formation, team coordination, positive working atmosphere***)
- ✓ Guidance competence (***supervision, mentoring***)

Domain – communication and collaboration

- ✓ Communication competence (***effective communication, dialogical competence***)
- ✓ Collaboration competence (***interprofessional collaboration; professional collaboration***)

Specific behaviors practiced:

(e.g., giving feedback, speaking up, handling conflict, setting priorities, situational awareness, etc.)

5. Timeline

Clinical reasoning is not viewed as a single course, but as a continuous cycle and a professional attitude for lifelong learning. Within the curriculum, this is taught through an integrated pathway throughout all years ranging from theoretical deepening to practical application in seminars, where students work with case studies, simulation-based learning and assessment during clinical internships.

6. Student guidance

Clinical reasoning often begins as a seemingly chaotic collection of scattered data. To help structure this process, the student's thinking process is visualized and guided as follows:

- Mind mapping: Before class, students create a mind map from a case study, on paper or digitally, to systematically organize their observations and data using the ABCDEF framework.
- Identifying connections and clustering: In their mind map, students literally draw arrows to link observations and reveal relationships (for example, a direct link between low blood pressure and perioperative blood loss). In doing so, they proactively consider possible patient outcomes.
- Recognizing knowledge gaps: By marking missing information or abnormal values in a different color, students make it visually clear where there are gaps in their data collection or understanding.

Students work through the full Levett-Jones cycle together with the lecturer, from identifying actual, potential, and risk diagnoses to formulating SMART goals and carrying out evidence-based actions. The process concludes with an evaluation of the effectiveness and a reflection using Korthagen's reflection cycle.

Focus points for lecturers during class:

- Lecturers encourage students to maintain a broad and critical perspective. This helps prevent "anchoring" to a first impression or the tendency to stop observing too soon in routine situations.
- Lecturers continually assess students' applied knowledge of physiology, pathophysiology, and pharmacology. Without this step, the reasoning process stalls: for example, a student must be able to interpret elevated creatinine as a risk for renal failure to link it to appropriate nursing actions such as monitoring fluid balance.

- The entire clinical reasoning cycle is applied to a case and reviewed collectively in class. The lecturer facilitates this by asking targeted questions (“What data am I still missing?”, “What is a sound line of reasoning?”, “What are the connections?”) to stimulate broad and reflective thinking.

7. Required materials / Conditions

Mind mapping tools: Digital (e.g., www.mindmeister.com) or on paper/whiteboard.

Supporting materials: ABCDEF cards, Modified Early Warning Score (MEWS) cards and ISBARR reference cards.

Case studies: Realistic, practice-based scenarios.

8. Evaluation / Follow-up

Clinical reasoning is assessed through summative integrated examinations, in which students are given a case and asked questions about it. They may be required to work through specific steps of Tracy Levett-Jones’s Clinical Reasoning Cycle using data from the case in response to open-ended questions.

In addition, assessment may also take place during an oral exam, where students are expected to explain their reasoning process verbally in response to questions.

9. Results / effects on students

Students make a clear and meaningful progression during their learning process. They develop a sharper clinical eye, recognize at-risk patients more quickly and are able to intervene in a timely and well-considered manner. In doing so, they increasingly move away from stereotyping and act with greater awareness and evidence-based judgement.

This development is accompanied by growing professional self-confidence, which translates into a stronger and more active position within the multidisciplinary team.

Students feel more confident in their decision-making and are better able to detect subtle signs of deterioration.

There is also a clear shift from simply ticking off tasks to developing a deeper understanding of the

clinical situation: students not only act, but also understand why they act.

10. Tips for colleagues

Focus on the why question by encouraging students to substantiate their observations with relevant knowledge. The ABCDEF structure should be applied consistently throughout the process. During the full information phase, the six domains of Positive Health should be used to examine the situation broadly: bodily functions, mental well-being, meaningfulness, quality of life, participation and daily functioning.

Students should continuously be asked, “What information am I still missing?” In this way, they are prompted to reflect on which data are still lacking in order to develop a well-founded clinical reasoning process.

11. Practical example / anecdote

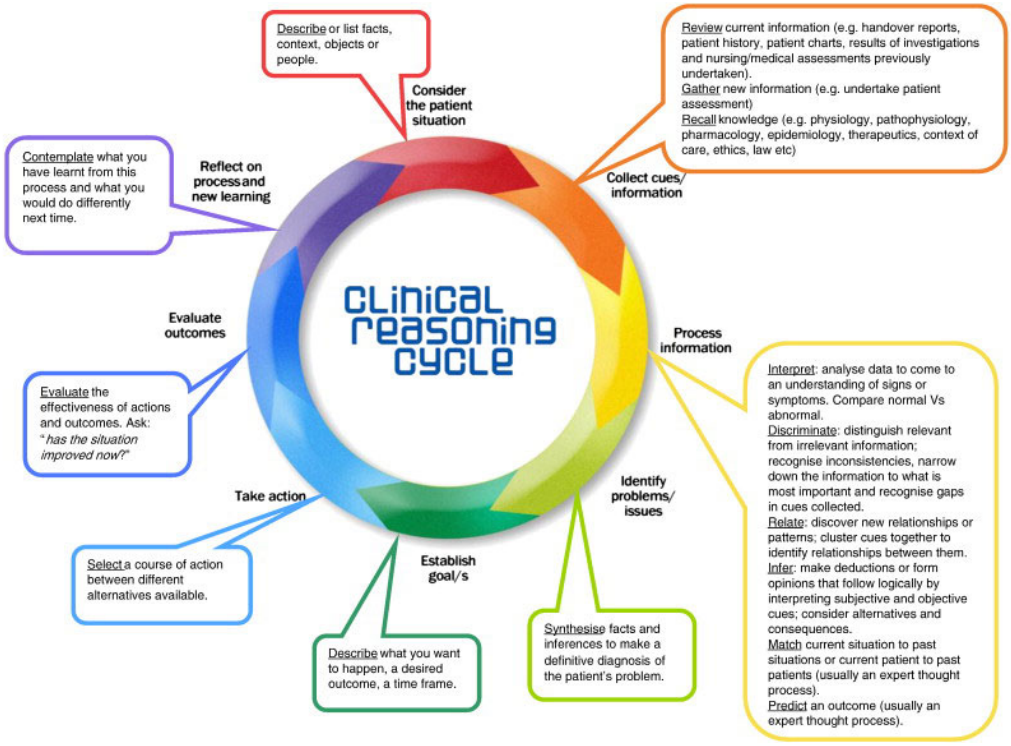
A young patient presents with restlessness and pain shortly after knee surgery. Without applying the clinical reasoning cycle, these symptoms might be incorrectly attributed by the nurse to the surgical wound, resulting in a misinterpretation.

By systematically following Tracy Levett-Jones’s clinical reasoning cycle, however, the student carries out an ABCDEF assessment. Through targeted data collection and abdominal palpation, an overdistended bladder is identified. Further evaluation reveals urinary retention of 1100 cc, most likely caused by spinal anesthesia.

This example illustrates how a methodical approach to clinical reasoning contributes to a more in-depth analysis of the clinical situation and helps prevent an early and incorrect assumption from leading to avoidable complications.

Visual material (optional)

Space for a photo, diagram, or attachment.



Levett-Jones, T., Hoffman, K., Dempsey, J., Jeong, S. Y. S., Noble, D., Norton, C. A., Roche, J., & Hickey, N. (2010). *The 'five rights' of clinical reasoning: An educational model to enhance nursing students' ability to identify and manage clinically 'at risk' patients*. *Nurse Education Today, 30*(6), 515–520. https://doi.org/10.1016/j.nedt.2009.10.020

Phase 1: Describe the patient's situation

Purpose: Describe or list by: facts, context, objects, people,... Are there any aspects in this data that concern me or that I should pay particular attention to when I go to see the patient?

.....

.....

.....

.....

.....

.....

.....

.....

Phase 2: Collect signals/data

Purpose:
- Study current signals/data in all its manifestations. - Collect new signals/data through assessments, among other things. - Study related knowledge from different fields

First observation: ABCDEF methodology (looking - listening - feeling - measuring)

ABCDEF Methodology	
Airway	
Breathing	
Circulation	
Disability (consciousness)	
Exposure/environment	
EARLY WARNING SCORE	

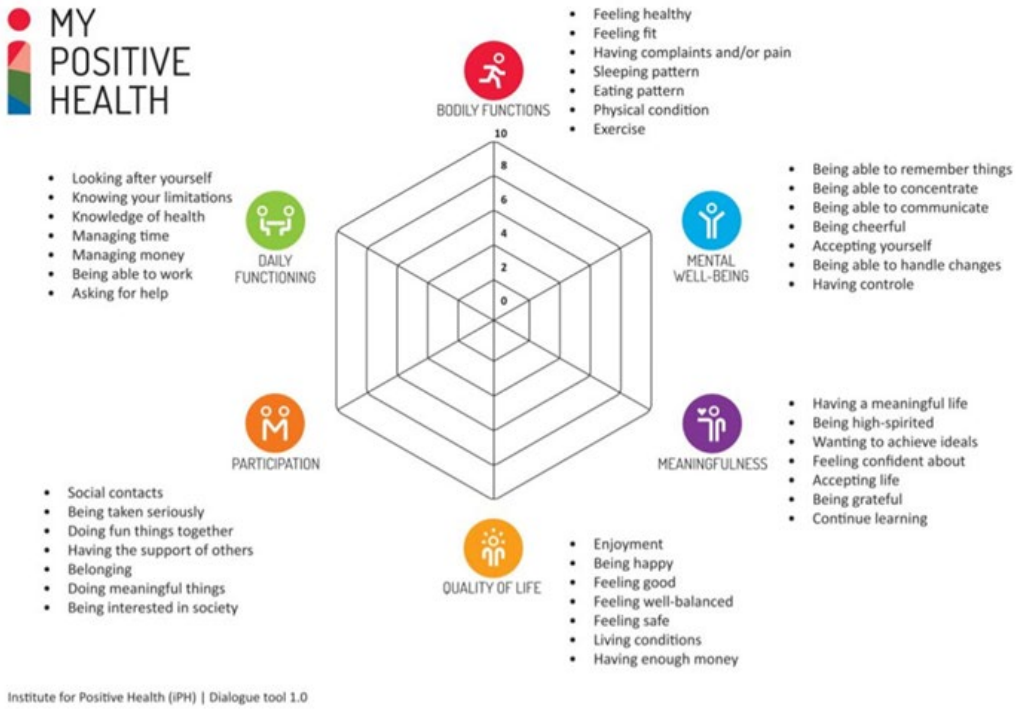
New signals/data by assessments

Full set of vital signs Collect additional relevant data from the following sources. Take into account **6 health indicators** of positive health (physical functions, mental well-being, meaning, daily functioning, participation and quality of life): - History - Conversation - Nursing file - Medical file - Attachments	

Study related knowledge from different fields

Start your **mind map** on paper or online (e.g.: https://www.mindmeister.com/)

- Provide structure
- Just write down the observations and check which health indicator they belong to. For each observation, you write down the corresponding number of the health indicator. If it relates to multiple health indicators, write down all the numbers.
- Look up things you don't know (e.g. what is a correct glycemic value?)



Huber, M. (2014). *Towards a new, dynamic concept of health: Its operationalisation and use in public health and healthcare, and in evaluating health effects of food* (Doctoral dissertation, Maastricht University). Maastricht University.

1. Body functions
2. Mental well-being
3. Meaningfulness
4. Quality of life
5. Participation
6. Daily functioning

Phase 3: Information process

Interpretation

The next step in the cycle of clinical reasoning is to interpret the collected data and the signals that have been collected and find them in your **mind map**.
In this step, normal values/things are compared with abnormal values/things.
Indicate what is a good value and what is not a good value.

Distinguishing

The information and signals must now be limited to the most important information.
Research has shown that novice nurses tend to identify the problem first before looking for information. More experienced nurses work more proactively, looking up a large amount of information and thus preventing possible complications.
Indicate what is important information.

Making connections/relationships

It is important to cluster the information and signals you have so far and identify relationships. Here, you start by putting the pieces of the puzzle together to create a coherent whole.
Use arrows to visualize which connections/relationships there are.

Distract

Now you have to think about the signals you have so far from the patient, and make a deduction based on the interpretations of those signals. Check the literature to see if your claim is correct.
E.g.: how can you confirm that someone is lonely?

.....

.....

.....

.....

.....

.....

.....

.....

Matching

Have you already experienced a similar situation. If so, what do you take away from this. If not, skip this step.

.....

.....

.....

.....

.....

Forecasting

What is the consequence if you do or do not respond to the performance you have made. You think about the possible outcome for the patient.

.....

.....

.....

.....

.....

.....

Phase 4: Identifying problems

In this step, you will bring together all the facts and conclusions you have made to make a definitive nursing diagnosis. Nursing diagnoses can, for example, be consulted via the handbook of nursing diagnoses (Carpenito,2024).[1]

CURRENT NURSING PROBLEMS (DIAGNOSES)

.....

.....

.....

.....

POTENTIAL (RISK) NURSING PROBLEMS (DIAGNOSES)

.....

.....

.....

.....

OTHER PROBLEMS (DIAGNOSES)

[1] Carpenito-Moyet, L. J. (2024). *Handboek verpleegkundige diagnosen* (7e ed.). Noordhoff.

.....

.....

.....

.....

Phase 5: Setting goals

Describe what needs to be done, a desired goal within a specific time span. A charity is specific, measurable, achievable, realistic, and time-bound.

.....

.....

.....

.....

.....

Phase 6: Take actions

A nursing intervention can concern direct or indirect care, autonomous nursing treatment, delegated medical treatment or treatment prescribed by other care providers.

1. Look at the patient, the context and yourself
2. Describe HOW you are going to do it and WHY
3. Then check the following elements:
    a. Use the relevant colour to indicate whether it is an independent **(yellow),** dependent **(red)** or multidisciplinary **(green)** action
    b. Use the corresponding letter to indicate whether the action is aimed at observation **(O),** prevention **(P),** nursing treatment **(B)** and/or health promotion **(G)?**
    c. Write behind the action what activities they contain: physical care, instructions, promoting health, psychosocial support, ADL activities, care for the context, referral,...

.....

.....

.....

.....

.....

.....

Fill in the thinking scheme to see if all possible types of nursing actions have been considered.

	Observation	Prevention	Nursing treatment	Health promotion
Physical care				
Instructions				
Promoting health				

Psychosocial support				
ADL activities				
Provide the context				
Referrals				
…				

Phase 7: Evaluate

Check whether the actions and outcomes were effective and whether the process you went through was effective and efficient. Ask yourself the following question: Is the situation better now? Do this on the basis of the following questions: Was this the right patient?; Have you picked up the right signals? Did you take the right action at the right time and for the right reason? Explain.

……

……

……

……

……

……

……

……

……

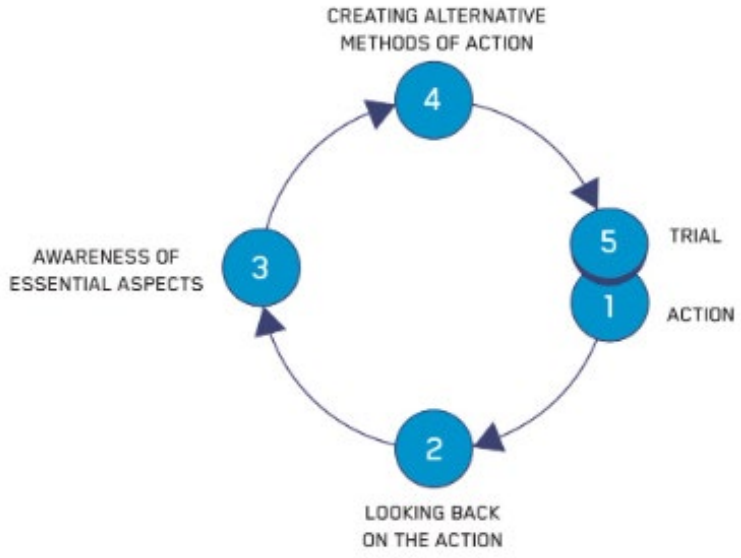
……

……

……

Phase 8: Reflect

Discuss the clinical reasoning process (right and/or wrong reasoning) along with the personal, interpersonal, contextual, and situational factors that have influenced your thinking. In addition, you also reflect on the current and potential impact of your reasoning on the patient and yourself. Do this using the cycle of Korthagen.



The ALACT model of reflection

Korthagen, F. A. J., & Vasalos, A. (2005). Levels in reflection: Core reflection as a means to enhance professional growth. *Teachers and Teaching: Theory and Practice, 11*(1), 47–71. https://doi.org/10.1080/1354060042000337093