COMPARISON OF NGN, NURSING PROCESS, AND TANNER / LASATER CLINICAL JUDGMENT MODELS (CJMs)

KEY TERMS: National Council of State Boards of Nursing (NCSBN); National Council Licensure Examination (NCLEX®); Next Generation NCLEX (NGN); clinical judgment (CJ); clinical judgment model (CJM); clinical judgment action model (CJAM); clinical judgment measurement model (CJMM); nursing process; ADPIE (Assess, Diagnose, Plan, Implement, Evaluate); ARRC (Assess, Act, Reassess, Communicate/Record); Tanner/Lasater CJM

PURPOSE

The purpose of this tool is to help you make informed decisions about teaching and curriculum changes related clinical judgment models (CJMs). Intended to be used as a guide for faculty discussions, this document gives the following:

- A table comparing the three major CJMs
- Supporting evidence of each CJM
- To what extent each model is likely to promote sound reasoning habits
- The relationship of each CJM to patient safety
- Summary / Teaching Considerations
- NGN Skill Resources

BACKGROUND

In 2023 or 2024, the NCSBN plans to launch a new NCLEX-RN® which includes NGN items, requiring educators to decide now how to best prepare students.[1, 2, 3]

Most educators are familiar with two major CJMs — Nursing process and Tanner/Lasater. Now, they must consider a new CJM — the NGN clinical judgment action model (CJAM ─ pronounced C-JAM).

The NCSBN encourages faculty to start integrating the CJAM across curricula immediately.[2] However, many educators are concerned that NGN items are being developed and analyzed using the *untested* CJAM. The *effect* on using the CJAM in education and clinical practice has not been studied; issues have been addressed by Alfaro-LeFevre and Benner, in open access documents.[4, 5] What started with good intentions on the part of the NCSBN ─ to test clinical judgment to improve patient safety,─ is now a point of confusion and contention.

As you review this tool, keep the following in mind:

1. Nurses use a *variety* of reasoning models, *depending on context*. For example, nurses use ADPIE together with the "ABC (airway, breathing, circulation)" model to guide assessment in emergency situations. The "shortened version" of nursing process — Assess, Act, Reassess — is often taught in clinical organizations.[6]

2. Reasoning models (e.g. CJMs) are usually presented as linear models that show logical step-by-step progression. These linear models are helpful for teaching and learning "the basics". However, students must soon learn that CJMs phases are *iterative*, meaning that the phases are inter-related and repetitive — they require paying attention to changing circumstances and continually reflecting and making changes until the best results are achieved. New graduate nurses often use CJMs in linear ways until they have numerous experiences in various contexts. To keep patients safe, they MUST have strong preceptor/educator support.

THREE MAJOR MODELS

The table below shows the uses and reasoning phases three major CJMs. Notice that using "phases" instead of "steps" implies that clinical reasoning is a *fluid* process rather than *step by step.*

CLINICAL JUDGMENT MODEL AND COMMON USES	REASONING PHASES				
Nursing Process (ADPIE*) (NCLEX; Education; Simulation; Clinical practice; Inter-professional communication; Documentation)	Assess	Diagnose or Analyze**	Plan	Implement	Evaluate
Tanner/Lasater (Education; Simulation; Minimal clinical practice use)		Noticing Interpreting	Responding		Reflecting
NCSBN CJAM* ** (NGN; Education use encouraged, but presently minimal use; No clinical practice use)		Recognize Cues Analyze Cues Prioritize Hypotheses	Generate Solutions	Take Action	Evaluate Outcomes

* Assess, Diagnose, Plan, Implement, Evaluate

** Clinical judgment requires ***more than analyzing*** — it requires ***bringing data together to come to conclusions*** (e.g. make decisions; determine priority risks and problems). Therefore, **Diagnose/Decide** may be a more appropriate label for this phase. Too many nurses spend too much time analyzing when there are *time pressures* to make decisions.

*** The NCSBN created two CJMs — **the Clinical Judgment Measurement Model (CJMM)** and the **Clinical Judgment Action Model (CJAM**). NCSBN leaders recommend teaching only the CJAM. You can find up-to-date images of the CJAM and the CJMM in the handouts from the December, 2019 NCSBN Educator Webinar (https://www.ncsbn.org/NGN-Educator-Webinar.pdf)

SUPPORTING EVIDENCE / EFFECT ON REASONING HABITS AND SAFETY

Recognizing that gaining CJ skills requires developing *reasoning habits* that promote accuracy and safety — and that nursing is a science that must be evidence-based — the following shaded sections summarize the supporting evidence for each CJM, and the likely effect of each CJM on reasoning habits and patient safety.

NURSING PROCESS (ADPIE)

Supporting Evidence:

- Follows problem-solving and scientific methods
- American Nurses Association (ANA) Standards state that "the nursing process is a critical thinking tool that promotes a competent level of care".[7]
- Acknowledged by the NCSBN as "valuable tool for nursing throughout it's history"; forms the foundation for the Clinical Judgment Measurement Model (CJMM); and will remain a major part of NCLEX.[8]
- Aligned with research principles (e.g., ensuring factual and complete data; forming and testing hypotheses, using evidence-base solutions).
- Decades of use as the basis for clinical care standards, legal care standards, documentation standards, decision support tools, and electronic health records

Effect on developing reasoning habits that promote sound CJ:

- Promotes structured, organized thinking — five deliberate easy-to-remember phases, readily applied to many contexts — helps develop *mental models* that become *habits of the mind*
- Explicit focus on *Assessment* – stressing the need for *direct patient assessment* at every phase – creates sound assessment habits (e.g. ensuring factual, complete data before drawing conclusions, thereby preventing jumping to conclusions)
- Specifically addressing *Diagnosis* helps create habits of *differential diagnosis* (always considering the possibility that data may represent more than one problem; ensuring that the *most specific problem is identified* (e.g. whether chest pain indicates a cardiac or lung problem).
- Fosters using an iterative approach – every phase begins and ends with Assessment/ Evaluation.
- *Evaluation* phase promotes the habit of continual reflection.
- Facilitates communication with other healthcare professionals, providing many opportunities to learn from other experts' reasoning habits.
- Creates habits that facilitates learning other CJMs and care models

Relationship to Patient Safety:

- Focuses on prevention and early detection and management of problems and risks
- Stresses the need for ongoing assessment (studies show that errors and omissions in *assessment* are major causes of diagnostic and patient safety errors)[9, 10]
- Calls out the importance of *planning* before acting and *evaluating* care outcomes to ensure patient safety.

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TANNER / LASATER

Supporting Evidence:

- Created by Christine Tanner after a literature review of 200 articles addressing what nurses do; additional work by Kathie Lasater[11, 12]
- Numerous published articles on beneficial outcomes of use with students, particularly in simulation[12, 13]

Effect on developing reasoning habits that promote sound CJ:

- Four easy-to-remember phases offer an organized, consistent approach to teaching and learning clinical reasoning habits
- Guides thinking-in-action, creating habits of focusing on patient needs and concerns
- Promotes the habit of reflecting on both patient responses and learners' own abilities
- Facilitates teacher-learner communication and debriefing discussions, re-enforcing key habits.

Relationship to Patient Safety:

- Missing explicit focus on ensuring sound assessment (e.g. validating data to ensure that it's factual and complete).
- Strong focus on paying attention to patient responses, prioritizing data, clear communication, early detection of deviations from expected patterns, and well-planned interventions to avoid adverse outcomes.

CLINICAL JUDGMENT ACTION MODEL (CJAM)

Supporting Evidence:

- The CJAM is *lifted from the third layer* of the CJMM, created by NCSBN interdisciplinary team, after a practice analysis, literature review, and years of research from NCLEX testing.[1, 2]
- The NCSBN did not validate the CJAM with qualitative studies before creating CJAM-based NGN questions. This means that when they announced that responses to NGN questions indicate that they are testing CJ, they used *circular reasoning* (with *circular reasoning*, "the argument uses its own conclusion as one of its premises….instead of offering proof, it simply asserts the conclusion in another form, thereby inviting the listener to accept it as settled when, in fact, it has not been settled").[14]
- The NCSBN continues to gather evidence from CJAM-based questions in a research section that's taken by NCLEX candidates after completion of the *actual* license exam. NCSBN leaders stress that they have a lot of evidence from their own studies.[3]
- No NCSBN communications or publications, address what studies were done to determine whether ADPIE could be used as a framework for measuring CJ.
- The NCSBN and current publications and programs do not address evidence issues described above; Alfaro-LeFevre and Benner have informed the NCSBN about these issues in emails to Dr. Dickinson.[4, 5]

Effect on developing reasoning habits that promote sound CJ:

- Effect unknown
- Six phases with vague conceptual terms are likely to add complexity to developing reasoning habits; while they say nursing process is foundational, they say that the CJAM can be used at any point in ADPIE (which seems redundant and confusing).[2, 3, 8]
- Missing an explicit focus on assessment (validating that information is factual and complete)
- Missing the important phase of forming and refining hypotheses, a major necessary reasoning habit (addresses *prioritizing* hypotheses, but skips *forming and refining* them)

Relationship to Patient Safety:

- The goal of NGN is to ensure patient safety by testing CJ using the CJAM.
- No evidence the CJAM is a solution to issues with CJ and patient safety

SUMMARY / TEACHING CONSIDERATIONS

This section is divided into four sections:

1. CJAM validity Issues
2. Common points of confusion
3. CJAM curricular placement
4. Teaching considerations

CJAM Validity Issues

- NCSBN leaders state that their CJMs have been developed to "explore new ways of testing clinical judgment in the nursing profession as part of the licensure examination".[1] Yet, their communications telling faculty to integrate the models imply that the NGN CJMs have been validated and are ready for implementation.
- The *process* of developing the CJMs was inadequate ─ studies to gain information from large numbers of educators and clinicians were not done (most educators are blind-sided by this change).
- The *outcomes* of phase one of the NGN project ─ the CJMM and CJAM ─ were not validated before using the model for NGN item-writing. They now state that their data that shows that using the NGN CJM is consistently testing CJ (this is *circular reasoning)*.
- If the CJAM is invalid, then we are faced with having "an invalid model that is reliably invalid". This refers to the fact that *reliability* just means *consistency of measures*. If the tool is invalid then the reliability is meaningless. For example, if you tried to measure patient temperatures by holding a block of wood to their foreheads, it would be *invalid*. But, it would be *extremely reliable* because you would get the same reading every time.
- No information on the *effect* of the CJAM on nursing education, creating more validity questions.
- Programs and publications with examples of how to implement and integrate the CJAM are giving hypothetical solutions that have not been tested for their own validity.

- The CJMM is like having a design for a house that's not up to code (there are problems with structure and foundation). We all know what happens when we build homes and add floors, based on designs that aren't up to code.
- More testing is needed. When NCSBN leaders tell educators to integrate the CJAM into teaching across curricula ─ and to use the CJMM to evaluate CJ ─ they are telling them to do pilot-testing that the NSCBN, itself, has not done. As of now, the CJAM may best be described as a hypothetical model.

Common Points of Confusion

Because various NCSBN presentations and communications address only pieces of "the big picture", the following points of confusion are common:

- Many nurses are under the impression that NGN means a whole new exam. In fact, most NCLEX questions will remain the same ─ based on nursing process ─ with only very few questions based on the CJAM.[2, 8]
- Some nurses do not realize that there are two NCSBN CJMs ─ the CJMM (which the NCSBN states should not be taught) and the CJAM (which the NCSBN states must be taught). [2, 3,]
- While the NCSBN states that the CJMM should not be taught, they recommend using it to evaluate CJ.[2, 3, 8] Teaching one way and evaluating another is confusing because it violates principles of teaching and evaluation (teaching and evaluation methods must be aligned).
- According to the NCSBN, "*Adoption of the CJAM does not necessitate any additional changes in how clinical judgment or nursing process are taught. Evidence based curricula that teach clinical judgment effectively will prepare students for the new components of the exam.*" [8] The NCSBN continues to send two conflicting messages: 1) There is no need to change current approaches to teaching clinical judgment, and 2) Faculty should begin to integrate the CJAM immediately. Not only are these statements confusing, the idea is absurd ─ integrating the CJAM *completely changes* how CJ is taught.
- There is confusion about whether *forming and refining hypotheses* is addressed in the CJAM. *Forming and refining hypotheses* is NOT in the CJAM. When the NCSBN lifted the *third layer* of the CJMM to make the CJAM,they left *forming and refining hypotheses* behind, in the second layer (see images in handouts at https://www.ncsbn.org/NGN-Educator-Webinar.pdf)
- In one NCSBN Webinar, a presenter tell us that candidates taking NGN will not be using nursing diagnoses or making medical diagnoses. Later, the same presenter mentions that candidates will be doing differential diagnosis.[2]
- Many educators ask, *If we don't have to change how we teach clinical judgment, why do we have a new model to teach?*

It seems that the NCSBN is completely focused on *psychometric testing*, and has no understanding of the issues created when educators try to use a model that has never been used in clinical practice.

The NCSBN continues to send persuasive communications, publications and videos to stress the need to align curricula with the CJAM.[15, 16] NCSBN leaders do not seem to understand that the CJAM needs to be aligned with clinical practice. They have placed themselves in the position of

driving practice and education. I have studied and written on clinical reasoning and judgment since 1995. When I first studied the CJMM, I thought, *Something is wrong here….how did they get to this point?* Then I spent a year revisiting the models, hoping to make them work. I find that the CJMM and the CJAM violate key clinical reasoning principles that have been addressed in the literature for years.

Changing high-stakes testing and curricula based on weak evidence threatens nursing education and practice. All of this is has brought great personal distress ─ I want so much to make the NGN CJMs work. But, these models are not sound. I find myself in the distasteful position of questioning the NCSBN's work. Nursing education matters to me. There are parents and students paying for tuition today, without knowing they will need to learn *an untested* CJM that's not used in the clinical setting. I will continue to speak out about validity and usability issues, and do what I can to help educators move forward.

Having said the above, the next section gives suggestions for CJAM curricular placement and teaching.

CJAM Curricula Placement

Since only very few NCLEX items will change and the *effect* of using the CJAM is unknown, educators should carefully consider how to proceed. Nursing science calls for caution and evidence before leaping to costly curriculum changes. Consider some of the following suggestions:

- Wait until 2022-2023 before teaching and testing the CJAM. Instead of integrating the CJAM *across the curriculum* ─ as suggested by the NCSBN and many consultants ─ introduce it in *a single course that applies the model in context of how it will be used* ─ in NGN. Place this course in the senior year, for the following reasons:
  - Introducing the CJAM in a single course will be a learning process that helps you identify issues. If the CJAM creates problems, you do not want to create the same problems across the curriculum, until you find solutions.
  - It's possible that some issues with CJAM use may be resolved in the next two years
  - Giving students a strong foundation in nursing process principles will facilitate the learning of the CJAM
  - It is likely to be confusing for beginners to deal with several CJMs at once (developing thinking habits requires repeated use of the same model).
  - Faculty and students may be discouraged by the disconnect between the CJAM and what's used in actual clinical practice.
  - Motivation for learning the new CJMs is likely be higher in the senior year because students will have NGN on their radar.
  - Resources (e.g. publications and programs) are likely to improve based on user and participant feedback; more NGN test-prep resources are likely to become available.
  - NGN launch has already been delayed several times; students should not be taught the CJAM until it is more clearly defined and the launch date is clear.

Teaching Considerations

Remember that NCSBN leaders tell faculty to continue teaching clinical judgment *using the evidenced-based strategies they have been using.* Encourage educators to choose the CJM they find works *best in each context*. It's what the *teacher brings to the tool* that matters most.

- Teach CJAM only in the context of NGN preparation.
- Do not try to *blend* the three models into circular images, as is now being seen in some publications. The CJMs have similar features — as you can see in the comparison table at the beginning of this document — but each one is used in a different context. Blending the three CJMs is like trying to blend using Windows, IOS, and a new un-tested operating system on the same computer. Blending the models in a circular image also makes it difficult to see relationships among the phases. Understanding relationships is a key feature of learning and critical thinking.
- Because many educators see the flaws in the CJAM and will struggle teaching it, assign faculty who *do* find it useful to lead the charge of teaching it.
- Prioritize what you teach. ADPIE is the major model for clinical practice and NCLEX. The CJAM is used only in NGN items. Tanner/Lasater is not used in NCLEX, in the clinical setting, or on NGN — but, if you have good results, continue to teach it. Experienced nurses see these three models as "saying the same thing using different words".
- Examine ways of improving how you teach ADPIE. For example:
  - Be proactive — make it routine to ask students questions such as, *What's the purpose of this assessment? What will you asses and why? How will you assess it? What signs, symptoms, or cues will cause you the most concern?* and *What additional information do you need to confirm your suspicions about what's happening with this patient?* Answers to these questions reflect clinical judgment (they require drawing conclusions).
  - For an action model use, "Assess; Act; Reassess; Communicate/Record (AARC)". An AARC rubric is under development (send an email to TeachSmartAlfaro@aol.com, with **AARC RUBERIC** in the subject line and you will get on the list to receive it).
  - Stress the importance of creating sound reasoning habits, such as always following rules of communication (e.g. using repeat back rules) and determining whether information is factual and complete.
  - Teach the need for *systematic assessment, cue recognition,* and *differential diagnosis.* (The new edition of Alfaro-LeFevre, Chapter 6, focuses on these critical skills and others that students must learn to use the nursing process effectively).
  - Realize the importance of completing structured, standard assessment tools (this promotes learning what data must be gathered in each context). *Reflecting on documentation* is a key part of clinical reasoning. Students and clinicians should not try to do this "all in their heads".
  - Find new ways of teaching nursing diagnosis, focusing on problem and risk identification. Nursing diagnoses aren't tested on NCLEX and no longer used in clinical care. (Alfaro-LeFevre, 7th ed, can also help with this).
- Stress that recognizing urgency and taking appropriate action is vital for in both clinical practice and NGN.
- Consider asking trusted educators and clinicians in your clinical affiliations to comment on the

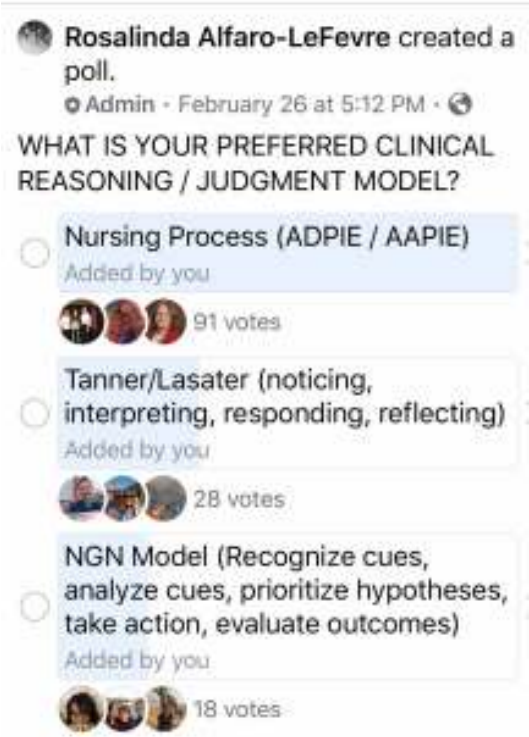
CJAM (if the CJAM is irrelevant to clinical practice, this re-enforces the likelihood that teaching it in a single course related to NGN may be a good idea).

- Move ahead with caution — decisions should not be "etched in stone". Keep in mind the "other" definition of iterative: "A process that should be used when a decision isn't easily revocable or where the consequences of revocation could be costly."[16]
- Learn to be comfortable with telling colleagues and students something like, *"This is evolving and changing….For now, we are…..because…"*

In March, 2020, NCSBN leaders announced their intention to inform the public about the benefits of NGN through a large scale media blitz across social media, schools of nursing, and publishing and communication partners.[17] Coming from a trusted source, many leaders and educators are likely to believe the benefits and be unaware of the issues. NGN "myths" will be perpetuated, just as the *North American Nursing Diagnosis – International* (NANDA-I) were.

Below, as a point of interest, is a screenshot of a Facebook poll asking, *What is your preferred clinical judgment model?* The poll ran for two weeks with reminders and postings on several nursing and educator groups. Surprisingly few educators participated (137). There seems to have been occasional technical issues; many may have distracted dealing with other priorities, especially Covid-19.

FACEBOOK POLL RESULTS



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NGN SKILL RESOURCES

- **While little was known about NGN during manuscript writing of Alfaro-LeFevre, 7th Ed, a review of Chapters 4 and 6 shows that these chapters will help students gain virtually ALL of the skills needed for NGN** (Chapter 2, *Becoming a Critical Thinker*, offers a solid foundation as well). You can find worksheets that detail all chapter headings at http://www.alfaroteachsmart.com/textbooktools.htm.

- **Links to NCSBN NGN Resources:**

  - **NGN Project:** https://www.ncsbn.org/next-generation-nclex.htm
  - **NGN FAQs:** https://www.ncsbn.org/11449.htm
  - **NGN Resources:**https://www.ncsbn.org/ngn-resources.htm

- **Additional NGN Skill resources**

  - https://www.us.elsevierhealth.com/developing-clinical-judgment-for-professional-nursing-and-the-next-generation-nclex-rn-examination-9780323718585.html
  - https://evolve.elsevier.com/cs/product/9780323358415
  - https://evolve.elsevier.com/cs/product/9780323581943
  - https://evolve.elsevier.com/cs/product/9780323582445
  - https://evolve.elsevier.com/education/next-generation-nclex/resources/continuing-nursing-education/
  - www.kaptest.com/NCLEX/Prep

REFERENCES

1. Dickison, P., Haerling, K. & Lasater, K. (2019). Integrating the National Council State Boards of Nursing-Clinical Judgment Model (NCSBN-CJM) into Nursing Educational Frameworks. *Journal of Nursing Education*, 58(2), 72-8.
2. Brenton, A. and Peterson, E. (December, 2019) Next Generation NCLEX® (NGN) Educator Webinar: Part One (Recording). https://www.ncsbn.org/14177.htm
3. NCSBN. (2019). FAQs for educators. Retrieved from https://www.ncsbn.org/11447.htm
4. Alfaro-LeFevre, R. (2019) POSITION PAPER: The National Council of State Boards of Nursing Must Pause the Next Generation NCLEX® Project and Re-examine Phase One (Develop Clinical Judgment Model). Available: http://www.alfaroteachsmart.com/ngn.html

5. Benner P. (2019) Commentary on Alfaro-LeFevre Position Paper (The National Council of State Boards of Nursing Must Pause the Next Generation NCLEX® Project and Re-examine Phase One). Available: http://www.alfaroteachsmart.com/benner.html
6. R. Alfaro-LeFevre (2020). *Critical thinking, clinical reasoning, and clinical judgment: A practical approach, 7th Ed.* Philadelphia: Elsevier Publishers
7. American Nurses Association. (2015). *Nursing scope and standards of performance and standards of clinical practice.* Washington, DC: American Nurses Publishing.
8. Dickison, P. (2019) Philip Dickison National Faculty Meeting Presentation NLN Summit 2019. Available at: https://www.youtube.com/watch?v=qs94dkvDqho
9. Kalisch, B. and Landstrom (2009). Missed nursing care: Errors of omission. Nursing Outlook.57(1): 3-9. https://doi.org/10.1016/j.outlook.2008.05.007
10. Mushta, J., Rush, K., & Anderson, E. (2018). Failure to rescue as a nurse-sensitive indicator. Nursing Forum, 53(1), 84-92.
11. Tanner, C. (2006). Thinking like a nurse: A research-based model of clinical judgment in nursing. *Journal of Nursing Education*, 45(6), 204-211
12. Lasater, K. (2007). Clinical judgment development: Using simulation to create an assessment rubric. *Journal of Nursing Education*, 46, 496-503.
13. Gonzalez, L. (2018). Teaching clinical reasoning piece by piece: A clinical reasoning concept-based learning method. *Journal of Nursing Education*, 57(12), 727-735.
14. Circular reasoning and examples. Available at https://www.thoughtco.com/circular-reasoning-petitio-principii-1689842
15. NCSBN. NGN resources. Available at https://www.ncsbn.org/ngn-resources.htm
16. NCSBN. NGN talks. Available at www.ncsbn.org/ngn-talks.htm
17. Iterative process. http://www.businessdictionary.com/definition/iterative-process.html
18. NCSBN. (2020) Lights, Camera and Action! NCSBN Partners with CBS Community Partnership Program to Educate the Public About the Next Generation NCLEX ® Project. *InFocus* (Winter Edition). Available: https://www.ncsbn.org/InFocus_Winter_2020.pdf

