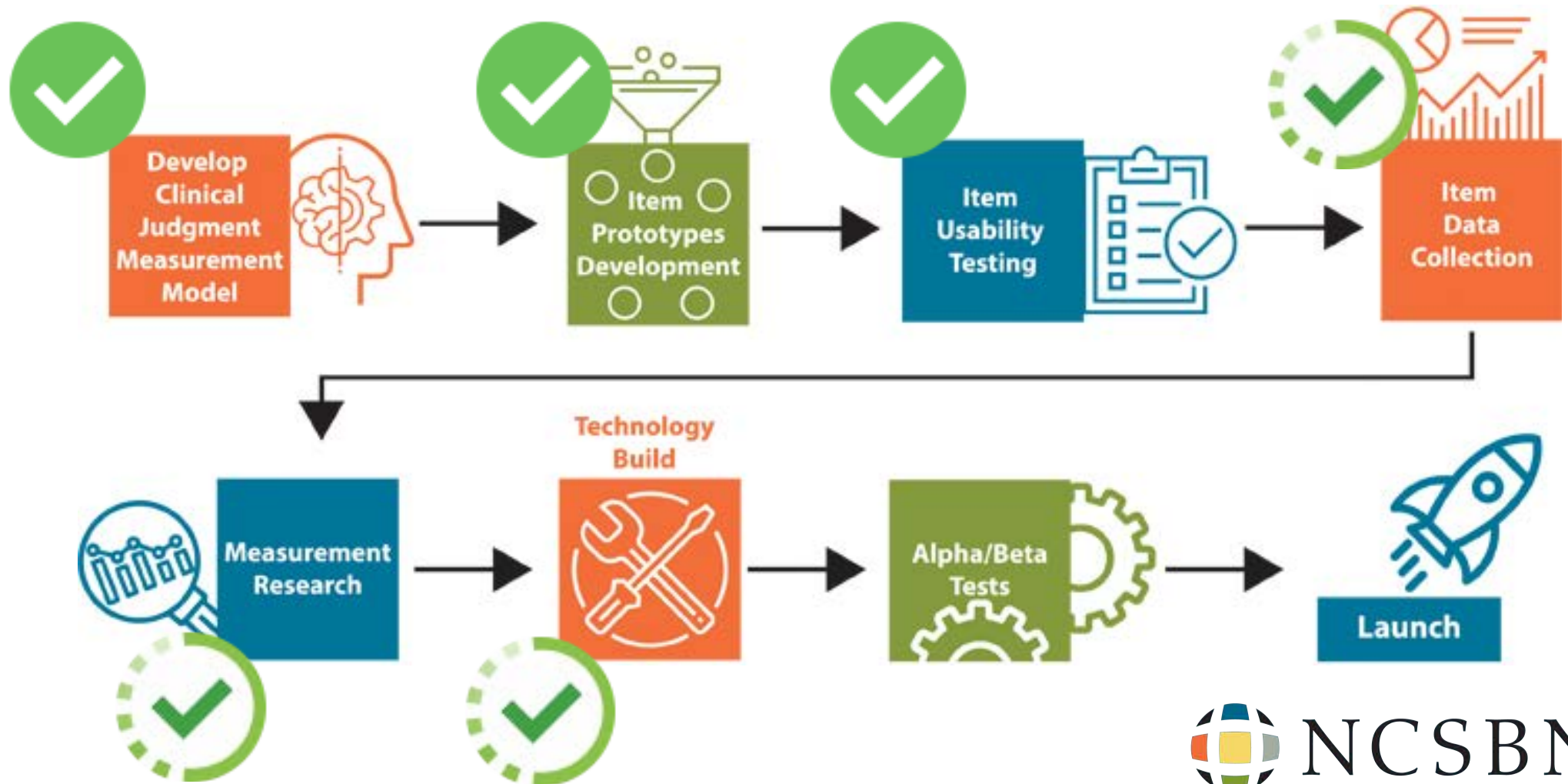# Next Generation NCLEX Update

Phil Dickison, Ph.D., RN
Chief Operating Officer, NCSBN

Overview

- Where are we
- Item development update
- Scoring update
- Test design update
- Beta testing update

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Where Are We?

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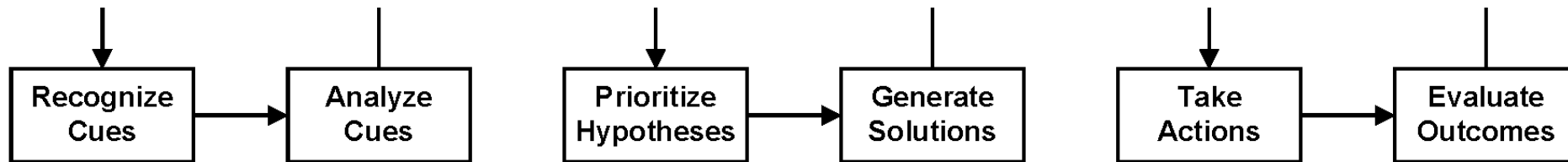# Item Development

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Measuring Clinical Judgment

Clinical judgment will be measured two ways on the NGN

1. **Case Studies:** A real-world nursing scenario accompanied by multiple test items

2. **Standalone Items:** Individual items not part of a case study

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Measuring Clinical Judgment

- Standalone items target **one or more** of the six "Layer 3" clinical judgment elements

- Case Studies target **multiple** elements using a scenario and multiple items

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Sample NGN Case Study

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Case Study
Screen 1 of 6

The nurse is caring for a 78-year-old female in the emergency department (ED).

Nurses' Notes

1000: Client was brought to the ED by her daughter due to increased shortness of breath this morning. The daughter reports that the client has been running a fever for the past few days and has started to cough up greenish colored mucous and to complain of "soreness" throughout her body. The client was recently hospitalized for issues with atrial fibrillation 6 days ago. The client has a history of hypertension. Vital signs: T 101.1° F (38.4° C), P 92, RR 22, BP 152/86, pulse oximetry reading 94% on oxygen at 2 L/min via nasal cannula. Upon assessment, the client's breathing appears slightly labored, and course crackles are noted in bilateral lung bases. Skin slightly cool to touch and pale pink in tone; pulse +3 and irregular. Capillary refill is 3 seconds. Client is alert and oriented to person, place, and time. The client's daughter states, "Sometimes it seems like my mother is confused."

➤ Select the 4 findings that require **immediate** follow-up.

- ☐ vital signs
- ☐ lung sounds
- ☐ capillary refill
- ☐ client orientation
- ☐ radial pulse characteristics
- ☐ characteristics of the cough

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➤ Select the 4 findings that require **immediate** follow-up.

☐ vital signs

☐ lung sounds

☐ capillary refill

☐ client orientation

☐ radial pulse characteristics

☐ characteristics of the cough

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➢ For each client finding below, click to specify if the finding is consistent with the disease process of pneumonia, a urinary tract infection (UTI), or influenza. Each finding may support more than 1 disease process.

Client Findings	Pneumonia	UTI	Influenza
fever	☐	☐	☐
confusion	☐	☐	☐
body soreness	☐	☐	☐
cough and sputum	☐	☐	☐
shortness of breath	☐	☐	☐

Note: Each column must have at least 1 response option selected.

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Initial close-up view of third item

➢ Complete the following sentence by choosing from the lists of options.

The client is at highest risk for developing [Select...] as evidenced by the client's [Select...].

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➢ Complete the following sentence by choosing from the lists of options.

The client is at highest risk for developing [Select...▼] as evidenced by the client's

Select...
vital signs
neurologic assessment
respiratory assessment
cardiovascular assessment

Select...
hypoxia
stroke
dysrhythmias
a pulmonary embolism

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The nurse is caring for a 78-year-old female in the Emergency Department (ED).

Nurses' Notes

1000: Client was brought to the ED by her daughter due to increased shortness of breath this morning. The daughter reports that the client has been running a fever for the past few days and has started to cough up greenish colored mucous and to complain of "soreness" throughout her body. The client was recently hospitalized for issues with atrial fibrillation 6 days ago. The client has a history of hypertension. Vital signs: T 101.1° F (38.4° C), P 92, RR 22, BP 152/86, pulse oximetry reading 94% on oxygen at 2 L/min via nasal cannula. Upon assessment, the client's breathing appears slightly labored, and course crackles are noted in bilateral lung bases. Skin slightly cool to touch and pale pink in tone; pulse +3 and irregular. Capillary refill is 3 seconds. Client is alert and oriented to person, place, and time. The client's daughter states, "Sometimes it seems like my mother is confused."

1200: Called to bedside by the daughter who states that her mother "isn't acting right." Upon assessment, client difficult to arouse, pale, and diaphoretic in appearance. Vital signs: T 101.5° F (38.6° C), P 112, RR 32, BP 90/62, pulse oximetry reading 91% on oxygen at 2 L/min via nasal cannula.

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The nurse has reviewed the Nurses' Note entries from 1000 and 1200 and is planning care for the client.

➢ For each potential nursing intervention, click to specify whether the intervention is indicated, or contraindicated for the care of the client.

Potential Intervention	Indicated	Contraindicated
Prepare the client for defibrillation.	○	○
Place client in a semi-Fowler's position.	○	○
Request an order to increase the oxygen flow rate.	○	○
Request an order to administer an intravenous fluid bolus.	○	○
Request an order to insert an additional peripheral venous access device (VAD).	○	○

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The nurse has reviewed the Orders from 1215.

➤ Click to highlight below the 3 orders that the nurse should perform right away.

1215:
- insert an indwelling urinary catheter
- vancomycin 1 g, IV, every 12 hours
- computed tomography (CT) scan of the chest
- 0.9% sodium chloride (normal saline) 500 mL, IV, once
- laboratory tests: blood culture and sensitivity (C & S), complete blood count (CBC), arterial blood gas (ABG)

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The nurse has reviewed the Orders from 1215.

➤ Click to highlight below the 3 orders that the nurse should perform right away.

1215:
- insert an indwelling urinary catheter
- <mark>vancomycin 1 g, IV, every 12 hours</mark>
- computed tomography (CT) scan of the chest
- <mark>0.9% sodium chloride (normal saline) 500 mL, IV, once</mark>
- <mark>laboratory tests: blood culture and sensitivity (C & S), complete blood count (CBC), arterial blood gas (ABG)</mark>

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The nurse has performed the interventions as ordered by the physician for the client.

➢ For each assessment finding, click to specify if the finding indicates that the client's condition has improved, has not changed, or has declined.

Assessment Finding	Improved	No Change	Declined
RR 36	○	○	○
BP 118/68	○	○	○
pale skin tone	○	○	○
pulse oximetry reading 91%	○	○	○
interacting with daughter at bedside	○	○	○

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New Item Types

Case studies and standalone items will include several new item types introduced specifically for the NGN—

- Highlighting
- Cloze (Pull-Down Menu)
- Matrix/Grid
- Extended Multiple Response
- Trend Item
- Extended Drag and Drop, including Bowtie

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Summary – Sample NGN Case Study

Item	Clinical Judgement Focus	Item Type
1	Recognize Cues	Multiple Response
2	Analyze Cues	Matrix/Grid – Select All
3	Prioritize Hypotheses	Cloze (Pull-Down Menu)
4	Generate Solutions	Matrix/Grid – Select One
5	Take Action	Highlighting
6	Evaluate Outcomes	Matrix/Grid – Select One

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Sample NGN Standalone Item

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The nurse in the emergency department (ED) is caring for a 79-year-old female client.
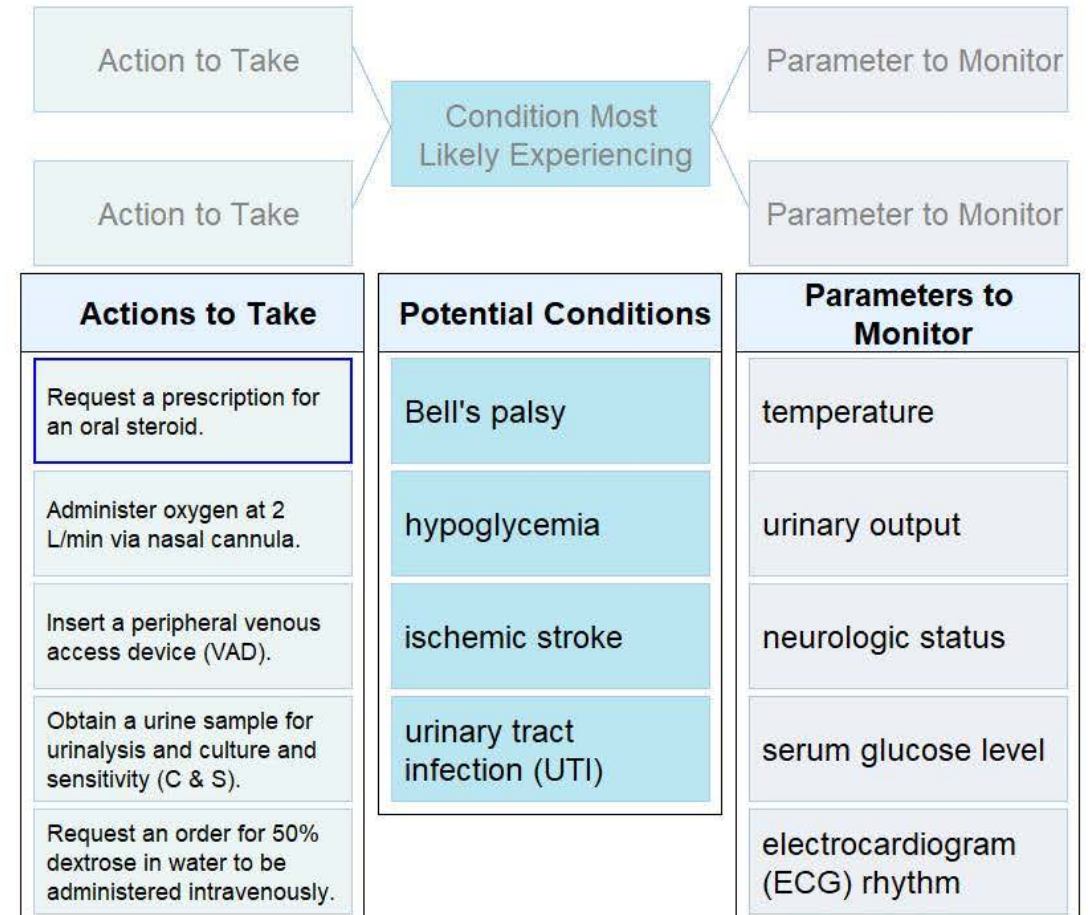
Nurses' Notes | **History and Physical**

1215: Client accompanied to ED by daughter, right-sided ptosis with facial drooping noted. Right-sided hemiparesis and expressive aphasia present. Daughter reports client recently had an influenza infection. Lung sounds are clear, apical pulse is irregular. Bowel sounds are active in all 4 quadrants, skin is warm and dry. Incontinent of urine 2 times in the ED, daughter reports that the client is typically continent of urine. Capillary refill sluggish at 3 seconds. Peripheral pulses palpable, 2+. Vital signs: T 97.5° F (36.4° C), P 126, RR 18, BP 188/90, pulse oximetry reading 90% on room air. Capillary blood glucose obtained per protocol, 76 mg/dL (4.2 mmol/L). ED physician notified.

"Bowtie" Item

The nurse is reviewing the client's assessment data to prepare the client's plan of care.

➤ Complete the diagram by dragging from the choices below to specify what condition the client is most likely experiencing, 2 actions the nurse should take to address that condition, and 2 parameters the nurse should monitor to assess the client's progress.

Action to Take — Condition Most Likely Experiencing — Parameter to Monitor

Action to Take — Parameter to Monitor

Actions to Take	**Potential Conditions**	**Parameters to Monitor**
Request a prescription for an oral steroid.	Bell's palsy	temperature
Administer oxygen at 2 L/min via nasal cannula.	hypoglycemia	urinary output
Insert a peripheral venous access device (VAD).	ischemic stroke	neurologic status
Obtain a urine sample for urinalysis and culture and sensitivity (C & S).	urinary tract infection (UTI)	serum glucose level
Request an order for 50% dextrose in water to be administered intravenously.		electrocardiogram (ECG) rhythm

Status of Item Development

- Clinical judgment item sets.
  - RN work began in 2017. Nearing launch goal.
  - PN work began in Jan 2020. Primary focus of current efforts.

- Clinical judgment standalone items.
  - In progress for RN and PN.

- Item development is **on track** to support a 2023 launch.

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Scoring

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A New Approach to Scoring

- **NCLEX Today**: A candidate response to an item is either correct or incorrect—i.e., **dichotomous** scoring
  - Points possible: 0 or 1

- **NGN**: A candidate response may be partially correct and receive partial credit—i.e., **polytomous** scoring
  - Points possible: 0, 1, 2, 3, etc.

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Different Types of Polytomous Scoring

Partial credit can be assigned in three different ways

- Candidates receive a point for correct responses and **lose a point** for incorrect responses. We call this **+/-** scoring.
    - See example

Which of these countries is in North America? Select all that apply.

■	France	incorrect	-1 point
■	Mexico	correct	+1 point
■	Canada	correct	+1 point
❑	New Zealand		
❑	United States		

*Using **+/-** scoring this candidate earns 2 − 1 = **1 point** out of a maximum of 3 points possible (Mexico, Canada, United States).*

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Different Types of Polytomous Scoring

Partial credit can be assigned in three different ways

- Candidates receive a point for correct responses and **lose a point** for incorrect responses. We call this **+/-** scoring.

- Candidates receive a point for correct responses but **do not lose points** for incorrect responses. We call this **0/1** scoring.
    - See example ➡️

Which **three** of these countries are in North America?

- ■ France   incorrect   0 points
- ■ Mexico   correct   +1 point
- ■ Canada   correct   +1 point
- ❑ New Zealand
- ❑ United States

*Using **0/1** scoring this candidate earns **2 points** out of a maximum of 3 points possible (Mexico, Canada, United States).*

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Different Types of Polytomous Scoring

Partial credit can be assigned in three different ways

- Candidates receive a point for correct responses and **lose a point** for incorrect responses. We call this **+/-** scoring.

- Candidates receive a point for correct responses but **do not lose points** for incorrect responses. We call this **0/1** scoring.

- Candidates receive "all or nothing" credit for linked units within an item.
  - See example ➡️

Drag and drop the tokens below to complete the paragraph correctly.

TOKENS

Japan	Cairo	Egypt
Paris	Okinawa	Tokyo
Rome	France	Madrid

PARAGRAPH

The capital of [France] is [Paris].
The capital of [Egypt] is [Japan].

*The candidate earns **1 point** for France/Paris pair but **no points** for Egypt/Japan. In this example country and city are **linked** for scoring. Total score: **1 point**.*

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Benefits of Partial Credit Scoring

- Partial credit scoring allows for more precise measurement and is appropriate to the complexity of the new item types

- Having multiple ways to assign partial credit, such as +/-, reduces impact of random guessing or "gaming the items"

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Test Design

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NGN Test Design

What is meant by NGN Test Design?

- How long is the exam (hours/minutes)?
- How long is the exam (items)?
- What is the mix of current knowledge items and new Clinical Judgment items?
- How will items and case studies be selected for delivery?

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NGN Test Design

Length of exam will vary by candidate ability

- Minimum Length Exam – Candidates with very low or very high ability estimates
  - 3 scored case studies (18 items)
  - 52 scored knowledge items
  - TOTAL: 70 scored items + 15 unscored (pretest) items

- Maximum Length Exam – Candidates with ability estimates very close to cut score
  - 3 scored case studies (18 items)
  - 117 other scored items – Most will be knowledge items but ~10% will be Clinical Judgement standalone items
  - TOTAL: 135 scored items + 15 unscored (pretest) items

- Candidates will have up to **5 hours** (more if time accommodations apply) to complete the exam

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NGN Test Design

Design Specification	NCLEX Today	NGN Minimum Length Exam	NGN Maximum Length Exam
Time Allowed	5 hours	5 hours	5 hours
Case Studies	N/A	3 (i.e., 18 items)	3 (i.e., 18 items)
Clinical Judgment Standalones	N/A	0	Approx. 7 *
Knowledge Items	60-130	52	Approx. 110
Total Scored Items	**60-130**	**70**	**135**
Unscored (Pretest) Items	15	15	15
Delivery method	CAT	CAT **	CAT **

* Approximately 10% of the final 65 items on the exam
** Items within a Case Study are static, not adaptive

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Beta Testing

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Beta Testing

- End-to-end testing of all elements of NGN prior to launch
  - Registration/scheduling
  - Test publication and administration
  - Functioning of items and case studies (e.g., presentation, scoring)
  - Functioning of CAT algorithm (selection, stopping rules)
  - Pass/fail decision
  - Data and reports

- Follows the "alpha testing" of individual elements that occurs as they are developed

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Two phases

- "Friends and Family" (est. April 2022)
  - Participants selected by NCSBN
  - Will include NRB staff and other stakeholders but not actual students/candidates
  - Administered at PPCs similar to today's Member Board Reviews
  - Review of maximum length exam

- "Live" Beta Test (est. December 2022)
  - Participants will be nursing students expecting to graduate after April 2023
  - Fully functional exam but scoring/results will not count
  - Reports generated but for internal NCSBN QC only

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Thank You.

If you have questions, please share those with us during the live Next Generation NCLEX Q&A session at the NCSBN Midyear Meeting.

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