



NextGen NCLEX

A Preparatory Series for Maryland Faculty



October 22, 2021

Reminders:

- Place questions in the chat for moderated Q&A.
- Audio should be muted to reduce background noise and feedback.
- You must complete a CE evaluation form following the workshop to receive credit. Instructions will be sent to the email used to register for the event.
- PPT and recording will be posted to the MNWC website following the event.


<https://nursing.umaryland.edu/mnwc/events>

1

Overview of Next Generation Questions

Desiree Hensel, PhD, RN, PCNS-BC, CNE, CHSE

2




UNIVERSITY of MARYLAND
SCHOOL OF NURSING

Disclosures


This educational event, has no relevant financial relationship(s) with ineligible companies to disclose.

None of the planners or speaker(s) for this educational activity have relevant financial relationship(s) to disclose with ineligible companies whose primary business is producing, marketing, selling, or distributing healthcare products used by or on patients.

The University of Maryland School of Nursing is accredited with distinction as a provider of nursing continuing professional development by the American Nurses Credentialing Center's (ANCC) Commission on Accreditation.



3



UNIVERSITY of MARYLAND
SCHOOL OF NURSING

Continuing Education (CE) for Nurses

- Nurses may receive 1.5 contact hour for attending this activity.
- To receive CE, submit the following:
 - ✓ Completed activity evaluation that will be sent to you via email and complete the acknowledgement section at the top of the evaluation
- Nurses will receive a CE certificate via email from the University of Maryland School of Nursing (UMSON) within two to four weeks after submitting the completed evaluation.

4

The Presentor



- CEO Hensel Nursing Education Consulting
- Former Dean at Curry College & Faculty at Indiana University
- Maternal-Child Nurse
- Certified Nurse Educator
- Certified Healthcare Simulation Educator
- Sigma Theta Tau Experienced Nurse Faculty Leadership Scholar
- Researches Nursing Education
- Co-editor of Lippincott Q&A 13e
- Contact henselnursinged@gmail.com

5

Learning Objectives

Session Description: In this session, the participant will review the 7 Next-Gen item types and consider their use in testing each step of a clinical judgment model. The session also includes information on scoring each item type.

Session Learning Objectives:

After engaging in this session, the participant will be able to:

1. Choose the appropriate test item type to measure a particular step of a clinical judgment model.
2. Calculate a score for each item type.

6

A project to evaluate how to assess the higher order construct of clinical judgment

Began with literature review that found 65% of errors could have been prevented with better decision making (Munteen, 2012)

Led to creation of a model for testing clinical judgment (Dickison et al., 2016)

Pilot testing of new item types began with special research section in NCLEX July 2017

Model revised 2019 in to show alignment with nursing process

Full implementation of NGN will begin no sooner than April, 2023

Next Generation NCLEX Project

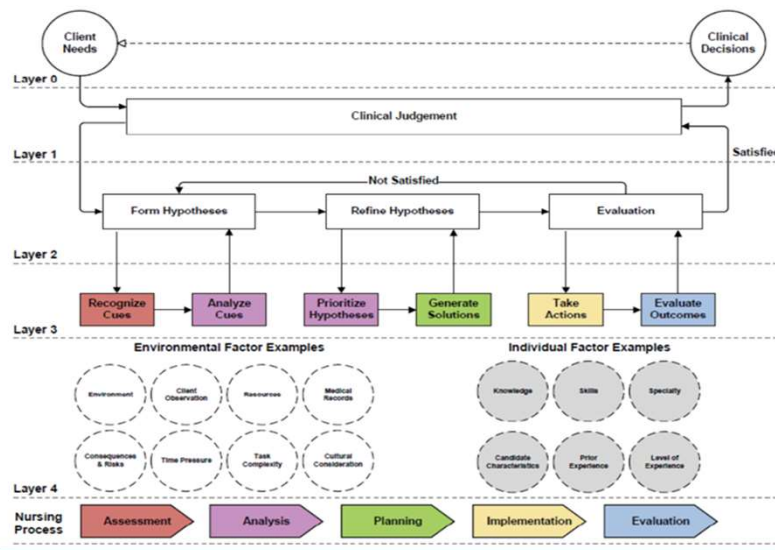


<https://www.ncsbn.org/next-generation-nclex.htm>

7

NCSBN Clinical Judgment Measurement Model

- Designed to test clinical judgment and decision-making in a largescale, high-stakes setting
- Supports NGN item development
- Can be adapted for teaching



NCSBN, 2019

Title of presentation

8

8

RN and PN NGN Test Plan

- Variable length computer adaptive exam with test length of 85-150 items
 - 15 unscored items in 1st 85 can be a mix of standalone and case study items
- First 70 graded question include:
 - 3 6-item NGN cases (18 questions)- exam does not adapt during a case
 - 52 standalone items
- Additional 65 items (86-150) will be all standalone items
 - 10% will be NGN stand alone items (trend/bow-tie) to test Clinical Judgment
 - Trends can be tested with any NGN item format except bow-tie
 - 90% will be to knowledge items to test Client Needs
 - Knowledge items can be tested with any item format except bow-tie and trend
- Test will be 5 hours
 - Cases are not anticipated to take extra time (about 2 minutes per question)
- New test plan anticipated April1, 2023; Beta testing will start in 2022

NCSBN 2021 NCLEX Conference

9

Stand Alone Items Used Throughout Test

Traditional Items	Extended Multiple response	Extended Drag-and-Drop	Drop-Down	Matrix /grid	Highlight (enhanced hot spot)	Clinical judgment standalone
Multiple Choice	Select all that apply(SATA)	Cloze	Cloze	Multiple response	Text	Bow-tie
Select all that apply(SATA)	Select N	Rationale	Rationale	Multiple choice	Table	Trend (any NGN type except bow-tie)
Ordered Response	Grouping		Table			
Fill-in the blank						
Graphic						
Exhibit						

NCSBN NCLEX Conference, 2021

10

13 Case Study Item Types

Traditional Items	Extended Multiple response	Extended Drag-and-Drop	Drop-Down	Matrix /grid	Highlight (enhanced hot spot)
Multiple Choice	Select all that apply(SATA)	Cloze	Cloze	Multiple response	Text
	Select N	Rationale	Rationale	Multiple choice	Table
	Grouping		Table		

NCSBN Publisher Summit, 2020

11

Case Study Writing Rules

- Items are scenario/case-based that include layer 4 (context)
- Cases always have 6 questions that address the layer 3 clinical judgment action steps in order (NGN News spring 2020)
 1. Recognize cues
 2. Analyze cues
 3. Prioritize hypotheses
 4. Generate solutions
 5. Take action
 6. Evaluate outcomes

CJM Step/ Bloom Verb	Recognize cues	Analyze cues	Prioritize hypotheses	Generate solutions	Take Action	Evaluate outcomes
Remember						
Understand	Identify* Interpret					
Apply				Choose	Choose Demonstrate* Use Prepare	
Analyze		Classify Compare Categorize Explain*	Select Prioritize* Connect	Select Differentiate	Prioritize	
Evaluate						Evaluate* Decide Judge
Create				Develop Plan Modify Organize*		

Focus on NGN step more than Bloom's taxonomy when writing questions clinical judgment questions

12

Scoring Rule: +/-

- Used when students may pick unlimited options
- Possible points are number of keyed items
- +1 for each correct item selected
- -1 penalty for each incorrect item selected
- Penalty prevents student from gaming system by selecting all
- Minimum score 0

➤ Which items are viruses? **Select all that apply.**

- Chlamydia
- Influenza [✓]
- Hepatitis B [✓]
- Lyme disease
- Pertussis
- Tuberculosis
- Varicella [✓]

+/- Scoring rule
3 points possible
+3 correct
-1 incorrect

2points

13

Scoring Rule: 0/1

- Used when students may select limited options
- Possible points are number of keyed items
- +1 for each correct item selected
- 0 points for incorrect response
- Minimum score 0

➤ Which 3 items are viruses?

- Chlamydia
- Influenza [✓]
- Hepatitis B [✓]
- Lyme disease
- Pertussis
- Tuberculosis
- Varicella [✓]

0/1 Scoring rule
3 points possible
+2 correct

2points

14

Scoring Rule: Rationale

- Used when question has linked responses (cause and effect) in the same sentence.
- Dyad worth 1 point
 - One cause and one effect
 - Both parts must be correct for credit
- Triad worth 2 points
 - One cause 2 effects
 - Cause must be right for any credit
 - Partial credit given (1point) if only 1 effect is correct ✓

15

Rationale: Dyad Scoring

Rule 1: both correct= 1point

- Complete the sentence from list of dropdown options.

To prevent night blindness the nurse would recommend

because they are rich in

Rule 2: Anything incorrect= 0 points

- Complete the sentence from list of dropdown options.

To prevent night blindness the nurse would recommend

because they are rich in

Rule 2: Anything incorrect= 0 points

- Complete the sentence from list of dropdown options.

To prevent night blindness the nurse would recommend

because they are rich in

Rule 2: Anything incorrect= 0 points

- Complete the sentence from list of dropdown options.

To prevent night blindness the nurse would recommend

because they are rich in

16

Rationale: Triad Scoring

Note: Consider triad scoring model may be difficult to replicate in current testing programs. Triad drop downs may be easier to score than drag and drop

Rule 1: Everything correct= 2 points

➤ Complete the following sentence by choosing from the list of options.

The client most likely has ✓
 evidenced by a ✓
 and the ✓

Rule 2: Cause correct; 1 effect correct=1point

➤ Complete the following sentence by choosing from the list of options.

The client most likely has ✓
 evidenced by a ✓
 and the ✗

Rule 3: Cause incorrect= 0 points

➤ Complete the sentence from list of dropdown options.

The client's most likely has ✗
 evidence by ✓
 and ✓

Rule 4: Cause correct; both effects incorrect=0points

➤ Complete the following sentence by choosing from the list of options.

The client most likely has ✓
 evidenced by a ✗
 and the ✗

17

Remember General Item Writing Rules

- All options must be plausible
- Options should be similar length and format
- Lead in questions end in a period
- Avoid negatively worded questions
- Avoid absolute terms
- Use plain English as much as possible
- Avoid using terms known only to dominant culture
- Key words may be bolded

18

Case Study Item Types

19

Multiple Choice

- Have 4 options
- May only select 1
- Radio button used to limit selections
- Worth 1 point
- Score 0/1
- 1 point for correct answer

20

Case Study Screen 2 of 6

The 9-year-old child with history of type I diabetes is brought to the school nurse's office.

Nurses' Notes

0900: The student was playing basketball when the teacher noted that he became sweaty and confused. He was out of school yesterday for flu like symptoms but came to school today because he was afebrile. The student has a 3-year history of type I diabetes that he manages with 2 planned injections a day of premixed 30% regular and 70% NPH which he took this morning at 0600. He takes additional regular insulin as needed. His blood glucose ran high yesterday while he was sick, and he needed 2 extra doses of regular insulin. This morning his BG was 120mg/dl before breakfast. His target morning glucose is 80-130mg/dl

➤ Which factors **best** explain the client findings?

- Increased insulin and illness.
- Physical activity and insulin peaks. [✓]
- Illness and physical activity.
- Dehydration and illness.

Incorrect response=0 points

21

Multiple Response Select All That Apply

- Have 5-10 options
- 1 to all may be correct
- Indicate with box
- Worth 1 point per correct responses possible
- NGN scoring +/-
- Total for question cannot be less than 0

The nurse reassess the client after implementing the treatment protocol and giving a second uterotonic agent.

➤ Which findings indicate that the client's status is declining. **Select all that apply.**

- Fundus [✓]
 - Peripads
 - Skin [✓]
 - Pulse [✓]
 - Respirations
 - Blood pressure [✓]
 - Nausea
 - Hemoglobin
- 4 points possible
+ 3 correct
-2 incorrect

Score 1 point

22

Case Study Screen 1 of 6

The 33-year-old client is being seen in the clinic for a postpartum follow-up appointment.

Vital Signs

Nurses' Notes

6 Weeks Postpartum:

The client is breastfeeding exclusively and taking her prenatal vitamin. She does not have lochia and notes she has not had a period since delivery. She reports not sleeping and crying constantly. She is a single mother and states she feels isolated from family. She has a 2-year-old at home but the father of the baby is not involved. She needs a note to go back to work in the next week and is still trying to find daycare. She feels she is a horrible mother.

➤ Which client findings need immediate follow-up? **Select all that apply**

- Childcare
- Menstrual cycles
- Mood [✓]
- Vitals signs
- Sleep [✓]
- Weight loss

- How many points possible?
- What is the score?

2points possible
+1 correct
-1 incorrect

0 points

23

Multiple Response Select N

- Have 5-10 options
- Indicate number of responses to select
- Indicate with box
- Can select less but not more than question indicates
- Worth 1 point per correct responses possible
- NGN Scoring 0/1

The nurse reassess the client after implementing the treatment protocol and giving a second uterotonic agent.

➤ Which 4 findings indicate that the client's status is declining.

- Fundus [✓]
- Peripads
- Skin [✓]
- Pulse [✓]
- Respirations
- Blood pressure [✓]
- Nausea
- Hemoglobin

4 points possible

+ 3 correct

Score 3 point

24

Case Study Screen 1 of 6

The 33-year-old client is being seen in the clinic for a postpartum follow-up appointment.

Vital Signs

Nurses' Notes

6 Weeks Postpartum:

The client is breastfeeding exclusively and taking her prenatal vitamin. She does not have lochia and notes she has not had a period since delivery. She reports not sleeping and crying constantly. She is a single mother and states she feels isolated from family. She has a 2- year-old at home but the father of the baby is not involved. She needs a note to go back to work in the next week and is still trying to find daycare. She feels she is a horrible mother.

➤ Which 2 client findings need immediate follow-up?

- Childcare
- Menstrual cycles
- Mood [✓]
- Vitals signs
- Sleep [✓]
- Weight loss

- How many points possible?
- What is the score?

2points possible
+1 correct

1 points

25

Technology Enhanced Items

26

Matrix Multiple Choice

Write

- Items have 4-10 rows.
- Items have 2 to 3 options/columns.
- Options are marked with radio dials.
- Each row has one correct response
- Each row must have 1 response option selected.
- Students cannot continue next item until responding to all rows.

Score

- Treat each row as an independent multiple-choice question
- Earn 1 point for the correct response
- Earn 0 points for the incorrect response
- Sum the score of the rows to get the total score of the item
- Maximum score = N rows (4-10)

27

- For each assessment click to specify if the finding indicates that interventions for preeclampsia have been effective, ineffective, or unrelated to treatment.

Assessment Finding	Effective	Ineffective	Unrelated
Urine output	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fetal heart rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hemoglobin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cervical dilation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deep tendon reflexes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Platelets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nausea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wheezing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Correct
3 columns
4-10 rows



28

➤ For each assessment click to specify if the finding indicates that interventions for preeclampsia have been effective, ineffective, or unrelated to treatment.

Assessment Finding	Effective	Ineffective	Unrelated
Urine output	○	○	○
Fetal heart rate	○	○	○

incorrect
<4 rows



29

➤ For each assessment click to specify if the finding indicates that interventions for preeclampsia have been effective, ineffective, or unrelated to treatment.

Assessment Finding	Effective	Ineffective	Unrelated
Urine output	● [✓]	○	○
Fetal heart rate	○ [✓]	●	○
Hemoglobin	○ [✓]	○	●
Cervical dilation	○	○	● [✓]
Deep tendon reflexes	● [✓]	○	○
Platelets	○	● [✓]	○
Nausea	○	● [✓]	○
Wheezing	○	○ [✓]	●

Score-
Total of 8 points (8 rows)
Row 1= +1
Row 2= 0
Row 3= 0
Row 4= +1
Row 5= +1
Row 6= +1
Row 7= +1
Row 8 =0

Total 5

30

Some Possible Columns

- Effective, Ineffective, Unrelated
 - Improved, Declined, Unchanged
 - Understanding / No understanding
 - Helpful/ Not helpful
 - Anticipated/ Not anticipated
 - Indicated/ Not indicated
 - Essential/ contraindicated
 - Risk factor/ Not risk factor
- **ALERT:** Early examples from NCSBN show 3 categories with:
 - Essential
 - Nonessential
 - Contraindicated
 - Based on review, NCSBN now suggests avoiding “soft categories” or those that the nurse can do that don’t hurt the patient, but don’t address the problem.

31

Case Study Screen
4 of 6

The nurse care for a client immediately after a spontaneous vaginal birth.

Nurses' Note

1200: The 37-year-old G5, P4, Ab0, client delivered a 9-pound, 4-ounce (4.2 kg) female at 42 weeks gestation. Membranes were ruptured for 20 hours, and her amniotic fluid was meconium stained. The patient had an unmedicated birth with a 4-hour labor. She has a grade 3 perineal tear repair. She does not have an IV. The client is bottle feeding.

1215: Fundal height 1cm below umbilicus, Fundus firm. Lochia is moderate rubra. T99.7°F(37.6°C), P 88, RR 16, BP 120/70, Pain 4/10.

1230: Fundal height at the umbilicus, Fundus is boggy. Peripad is saturated. T99.7°F(37.6°C), P 94, RR 18, BP 116/66, pulse oximetry 97% on room air, Pain is 5/10.

➤ For each possible intervention click to specify if the interventions is essential or contraindicated.

Possible Intervention	Essential	Contra-indicated
Fundal massage	<input checked="" type="radio"/> [✓]	<input type="radio"/>
Uterine tocolytic	<input type="radio"/>	<input checked="" type="radio"/> [✓]
Elevate HOB	<input type="radio"/>	<input checked="" type="radio"/> [✓]
Intravenous fluids	<input checked="" type="radio"/> [✓]	<input type="radio"/>

How many points? What is the score?

4 Points possible
0/1 scoring by row
3 correct
Totals 3 pts

32

Multiple Response Grouping

Write

- The table has a minimum of 2 groupings with a maximum of 5 groupings
- Each grouping row has a minimum of 2 options and maximum of 4 options.
- Number of options are the same for all groupings.
- Must select at least one option from each grouping.

Score

- Treat as a series of multiple response select all that apply items
- +/- Scoring for grouping
- No negative score per grouping
- Sum of all points per group is the item's total score
- Maximum score = N keys

33

- Select the anticipated provider orders from each of the following categories. Each category may have more than one potential order.

Categories	Potential Orders
Activity	<input type="checkbox"/> Bathroom privileges <input type="checkbox"/> Quiet environment <input type="checkbox"/> Seizure precautions
Medications	<input type="checkbox"/> Magnesium sulfate infusion <input type="checkbox"/> Magnesium sulfate bolus <input type="checkbox"/> Intrapartum antibiotics
Monitoring	<input type="checkbox"/> Intermittent fetal monitoring <input type="checkbox"/> CBC and clotting studies daily <input type="checkbox"/> Complete metabolic panel and magnesium levels

CORRECT!
Prompts tell student they have to select 1 in each group but may select more.

2-5 groups
2-4 options

All groups have same number of options

Note: Each category must have at least 1 response option selected



34

➤ Select the anticipated provider orders from each of the following categories. Each category may have more than one potential order

Categories	Potential Orders
Activity	<input type="checkbox"/> Bathroom privileges <input type="checkbox"/> Quiet environment <input type="checkbox"/> Seizure precautions
Medications	<input type="checkbox"/> Magnesium sulfate infusion <input type="checkbox"/> Magnesium sulfate bolus <input type="checkbox"/> Intrapartum antibiotics
Monitoring	<input type="checkbox"/> Intermittent fetal monitoring <input type="checkbox"/> CBC and clotting studies daily <input type="checkbox"/> Complete metabolic panel and magnesium levels <input type="checkbox"/> 24-hour urine <input type="checkbox"/> Telemetry

Incorrect CORRECT!

Missing prompts telling students to select 1 in each group

Groups have different number of options

Too many options in last group



35

Case Study Screen 4 of 6

The nurse cares for a client immediately after a spontaneous vaginal birth.

Nurses' Note

1200: The 37-year-old G5, P4, Ab0, client delivered a 9-pound, 4-ounce (4.2 kg) female at 42 weeks gestation. Membranes were ruptured for 20 hours, and her amniotic fluid was meconium stained. The patient had an unmedicated birth with a 4-hour labor. She has a grade 3 perineal tear repair. She does not have an IV. The client is bottle feeding.

1215: Fundal height 1cm below umbilicus, Fundus firm. Lochia is moderate rubra. T99.7°F(37.6°C), P 88, RR 16, BP 120/70, Pain 4/10.

1230: Fundal height at the umbilicus, Fundus is boggy. Peripad is saturated. T99.7°F(37.6°C), P 94, RR 18, BP 116/66, pulse oximetry 97% on room air, Pain is 5/10.

➤ Select the anticipated provider orders from each of the following categories. Each category may have more than one potential order.

Categories	Potential Orders
Activity	<input checked="" type="checkbox"/> Bathroom privileges <input checked="" type="checkbox"/> Quiet environment [✓] <input checked="" type="checkbox"/> Seizure precautions [✓]
Medications	<input checked="" type="checkbox"/> Magnesium sulfate infusion [✓] <input type="checkbox"/> Magnesium sulfate bolus [✓] <input type="checkbox"/> Intrapartum antibiotics
Monitoring	<input checked="" type="checkbox"/> Intermittent fetal monitoring <input type="checkbox"/> CBC and clotting studies daily [✓] <input type="checkbox"/> Complete metabolic panel and magnesium levels [✓]

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

How many points?

What is the score?

Scoring 6 points possible

Group 1
+2/-1= 1
Group 2
+1/-0= 1
Group 3
+0/-1=0 (no negative)

Total=2

36

Matrix Multiple Response

Write

- There can be between:
 - 2 to 10 columns
 - 4 to 7 rows
- Each column must have 1 correct response but could have multiple correct responses.
- Each **column** must have 1 response option selected.
- Can have no response in a row
- Candidate can select one or more check boxes per **column**.
- Check boxes can be selected and unselected.

Score

- Columns are a series of Multiple Response Select all that apply
- +/- Scoring for column
- No negative score per column
- Sum of all points per column is the item's total score
- Maximum score = N key

37

- For each finding click to indicate if the symptoms are consistent with alcohol, amphetamine or opioid overdose. Each finding may support more than one type of type of overdose.

Findings	Alcohol	Amphetamines	Opioid
Respiratory depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decreased LOC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pinpoint pupils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

CORRECT!
Prompts tell student they have to select 1 in each column but may select more.

2-10 columns
4-7 rows



38

➤ For each finding click to indicate if the symptoms are consistent with alcohol, amphetamine or opioid overdose.

Findings	Alcohol	Amphetamines	Opioid
Seizures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aggression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slurred speech	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tachycardia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respiratory depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decreased LOC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pinpoint pupils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Incorrect !
Prompts don't tell student each finding may be consistent with more than type of overdose and does not tell student to select at least 1 in each column but may select more.

More than 7 rows



39

Case Study Screen 2 of 6

The nurse cares for a college student in the emergency department with a suspected substance abuse.

Nurses' Notes

1000: The client was brought to the emergency department by his friend when he became drowsy with slurred speech and vomited on the way to class. The friend reported that the client seemed okay when he picked him up. He reported that the client has a history of "partying hard," but did not know what he might have used this morning. Respirations are shallow, skin is pale and clammy. client is sleepy but responds when shaken. Pupils are pinpoint VS T 99.5°F (37.5°C), P 54, BP 100/52, RR10, pulse oximetry 88% on room air.

➤ For each finding click to indicate if the symptoms are consistent with alcohol, amphetamine, or opioid overdose. Each finding may support more than one type of type of overdose.

Findings	Alcohol	Amphetamines	Opioid
Respiratory depression	■ [✓]	<input type="checkbox"/>	■ [✓]
Vomiting	■ [✓]	■ [✓]	<input type="checkbox"/> [✓]
Decreased LOC	■ [✓]	<input type="checkbox"/>	■ [✓]
Pinpoint pupils	■	■	<input type="checkbox"/> [✓]

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

How many points?
 What is the score?

Scoring
 8 points possible
 Column 1 +3/-1=2
 Column 2 +1/-1=0
 Column 3 +2/-0=2
 4 points earned -

40

Drag- and- Drop Cloze

Write

- Complete sentence by dragging token(option) to target (blank).
- Minimum of 1 sentence with 1 target per sentence; maximum of 5 sentences with 1 target per sentence.
 - Sentence may have more than 1 target, but makes harder to grade if order does not matter.
- One box of word choices
- Minimum of 4 tokens (word choices) and a maximum of 10.
- Minimum of 1 and maximum of 5 response targets to drag a token to.
- Tokens may only be used once but may be moved until question is submitted.

Score

- 0/1 Scoring
- Sum across all target
- Maximum Score is the number of targets (1-5)

41

Drag- and- Drop Cloze

**Correct:1-5 sentences,
1-5 targets, 4-10 tokens**

The nurse prepares to give IV iron dextran.

- Drag words from the word choices below to fill in each blank of the following sentences.

IV dextran carries a high risk of .

To prepare for the infusion the nurse should .

Word Choices
Anaphylactic reaction
Nausea and vomiting
Administer antiemetics
Check resuscitation equipment



Incorrect: <4 tokens

The nurse prepares to give IV iron dextran.

- Drag words from the word choices below to fill in each blank of the following sentences.

IV dextran carries a high risk of .

To prepare for the infusion the nurse should .

Word Choices
Anaphylactic reaction
Nausea and vomiting
Administer antiemetics



42

Case study Screen 5 of 6

The nurse is caring for a client in the prenatal clinic with a history of Crohn's disease.

Nurses' Notes

- Admit to the outpatient clinic
- IV dextran per protocol

Laboratory

Orders

The nurse prepares to give IV iron dextran.

➤ Drag words from the word choices below to fill in each blank of the following sentences.

IV dextran carries a high risk of . ✓

To prepare for the infusion the nurse should . ✘

Word Choices
Nausea and vomiting
Check resuscitation equipment

How many points? Scoring
 What is the score? 2 points possible
 Target 1=+1
 Target 2=0

 Total 1

43

Drag- and- Drop Rationale

Write

- Complete 1 sentence by dragging token to target.
- Concepts require justification through a rationale
 - Often includes term "due to"
- Either 1 cause and 1 effect (dyad) or 1 cause and 2 effects (triad)
 - If the nurse does not do X the client may develop X
 - To prevent X the nurse should do Y and Z
 - The client has X as evidenced by Y and Z
 - The client is most at risk for X due to Y and Z
- 2 boxes of word choices.
- Tokens may only be used once but may be moved until question is submitted.

Score

- Score 1 point for dyad
 - Both options must be correct to receive credit
- Score 2 points for triad
 - Part 1 (cause) must be correct to get any credit
 - 2 points given if all three tokens are correct
 - 1 point given if cause and only 1 effect are correct

44

Drag and Drop Rationale

Dyad: 1 sentence with 2 linked targets

➤ Drag 1 condition and 1 assessment to fill in each blank of the following sentence.

The client is at highest risk for as evidenced by the client's .

Conditions
hypovolemic shock
kidney damage
nerve damage
pulmonary embolism

Assessments
neurovascular checks
laboratory values
breath sounds
intake and output



Triad: 1 sentence with 3 linked targets

➤ Drag 1 condition and 2 findings to fill in each blank of the following sentence.

The nurse is concerned the client is developing

based on the clients and .

Conditions
muscle necrosis
nerve damage
infection
shock
deep vein thrombosis

Client Findings
pain levels
urine characteristics
laboratory values
peripheral pulse
vital signs

Note: Triad drop- and- drag may be difficult to score on some systems because order will likely not matter.

45

Dyad Scoring

Both correct= 1 point

➤ Drag 1 condition and 1 assessment to fill in each blank of the following sentence.

The client is at highest risk for ✓ as evidenced by the client's

✓

Conditions
hypovolemic shock
kidney damage
pulmonary embolism

Assessments
laboratory values
breath sounds
intake and output

1 or both incorrect=0

➤ Drag 1 condition and 1 assessment to fill in each blank of the following sentence.

The client is at highest risk for ✗ as evidenced by the client's

✓

Conditions
kidney damage
nerve damage
pulmonary embolism

Assessments
laboratory values
breath sounds
intake and output

46

Drop-Down Cloze

Write

- Paragraph with a minimum of 1 sentence with 1 drop-down per sentence; maximum of 5 sentences with 1 drop-down per sentence.
- 3-5 options per drop-down
- All drop-downs should have same number of options

Score

- Score like drag and drop cloze
- 0/1 Scoring
- Sum across all drop-downs
- Maximum score is the number of drop-downs

Note: examples provide at publisher summit did show possibility of more than one drop-down per sentence.

47

Drop-down's show word select until opened

➤ Complete the following sentence by choosing from the list of options.

To be ready for discharge the client will need . The

client will also need . To continue antibiotic therapy

the expectation is that the client .

Correct 1-5 sentences
each with 1 drop-down

48

Drop Downs Have 3 to 5 Options

Correct format: All drop downs have same number of options.

➤ Complete the following sentence by choosing from the list of options.

To be ready for discharge the client will need to be . The . The client will also need . To continue antibiotic therapy the expectation is that the client .

Select afebrile for 24 hours. taking oral fluids well. pain free.

Select normal electrolytes. negative urine cultures. normal renal X-rays.

Select tolerates po antibiotics. completes 5 days of IV antibiotics. has a PICC line placed.



Incorrect format: Different number less & than 3 options

➤ Complete the following sentence by choosing from the list of options.

To be ready for discharge the client will need to be . The . The client will also need . To continue antibiotic therapy the expectation is that the client .

Select afebrile for 24 hours. taking oral fluids well. pain free. compliant with therapy.

Select normal electrolytes. negative urine cultures.

Select tolerates po antibiotics. completes 5 days of IV antibiotics. has a PICC line placed.



49

Case study screen 6 of 6

The nurse cares for an 8- year- old female admitted to the pediatric ward with fever and dehydration.

Nurses' Notes
Laboratory
Orders

Day 2
0800
S: Rates right flank pains as 2 on scale of 10. Denies nausea.

O: Second dose of IV ceftriaxone given. D5W 1/2NS infusing in Lt arm at 66 mL/hr. Taking po fluids. Medicated with acetaminophen for mild pain. VS T99.2°F (37.3°C) P 90, RR 20, BP 92/60. Weight 59 pounds (26.5kg). Up 0.5kg. Morning labs drawn.

➤ Complete the following sentence by choosing from the list of options.

To be ready for discharge the client will need to be . The client will also need . To continue antibiotic therapy the expectation is that the client .

pain free ✘

negative urine cultures ✘

tolerates po antibiotics ✓

How many points?
What is the score?

Scoring

3 possible

Drop-down 1-0

Drop-down 2-0

Drop-down 3-1

Total 1 point

50

Drop- Down Rationale

Write

- 1 sentence
- 1 cause and 1 effect (dyads) OR one cause and 2 effects (triad)
 - The client is at risk for X due to Y
 - To prevent X the nurse should do Y and Z
 - The client has X as evidenced by Y and Z
- Drop downs have 3-5 options

Score

- Score same as drag- and -drop rationale
- Score 1 point for dyad
 - Both options must be correct to receive credit
- Score 2 points for triad
 - Part 1 (cause) must be correct to get any credit
 - 2 points given if all three tokens are correct
 - 1 point given if cause and only 1 effect are correct

51

Rationale Format

Dyad

- Complete the following sentence by choosing from the list of options.

The client is at risk for

due to

Triad

- Complete the following sentence by choosing from the list of options.

The client is at risk for

due to and



Drop downs open with 3 to 5 options

52

Dyad Scoring

Both correct= 1 point

➤ Complete the following sentence by choosing from the list of options.

To priority intervention for this client is to

decrease compression ✓

to prevent the serious complication of

tissue necrosis. ✓

1 or both incorrect=0

➤ Complete the following sentence by choosing from the list of options.

To priority intervention for this client is to

restore volume ✗

to prevent the serious complication of

tissue necrosis. ✓

53

Triad Scoring: Credit Awarded

Everything correct=2 points

➤ Complete the following sentence by choosing from the list of options.

To prevent the nurse should

and

Right cause; 1 correct effect= 1point

➤ Complete the following sentence by choosing from the list of options.

To prevent the nurse should

and

54

Triad Scoring: No Credit

Wrong cause=0 points

- Complete the following sentence by choosing from the list of options.

To prevent the nurse should
 and

Both effects wrong=0 points

- Complete the following sentence by choosing from the list of options.

To prevent the nurse should
 and

55

Case study Screen 3 of 6

The nurse cares for an adult client patient admitted to the unit from surgery following long cast placement for a right upper tibial fracture.

Nurses' Notes

Vital Signs

1615: Cast intact. Toes pink and warm to touch. Cap refill <2 seconds. Pedal pulse +1. States it hurts to wiggle toes. Rates pain 7 of 10. Leg elevated. Medicated with 1 mg morphine IV. Bowel sound present. IV of lactated Ringers at 120mL/hr in left arm.

1645: Cast intact. Swelling in Rt foot has increased. Toes are pink. Cap refill <3 seconds. Pedal pulse +1. States he can't wiggle his toes. Rates pain 8 of 10. Describes it as continuous, deep and throbbing. Leg elevated. Bowel sound present. Reports mild nausea. IV of lactated Ringers at 120mL/hr in left arm. Has not yet voided.

- Complete the following sentence by choosing from the list of options.

To priority intervention for this client is to
 to prevent the serious
 complication of .

How many points?

What is the score?

Rationale scoring
 1 point possible
 0 points earned

56

Drop- Down Table

Write

- A table with drop-down options in different parts of table
- Minimum 1 column and 3 rows; Maximum 5 rows and 4 columns
- 1 drop-down per row
- Drop-downs have 3-5 options

Score

- 0/1 Scoring
- Sum across all drop-downs
- Max score is the number of drop-downs

Note: The example provided at the Publisher's Summit had instructions that a category could have more than 1 intervention; but scoring examples and elaborations were not provided.

57

Drop Down Table Example 1

Select shows until opened

- For each client problem below, click to specify the appropriate nursing intervention.

Client problem	Potential interventions
Risk for suicide	Select
Social isolation	Select
Sleep disturbances	Select

3-5 options when expanded

- For each client problem below, click to specify the appropriate nursing intervention.

Client problem	Potential intervention
Risk for suicide	Mood management Family therapy Hope inspiration
Social isolation	Decision making support Support system enhancement Anxiety reduction
Sleep disturbances	Relation techniques Reality orientation Pain management



58

Drop Down Table Example 2

➤ Choose the most likely option for the missing information in the table below by choosing from the list of options.

Medication	Dose, route	Frequency
Magnesium sulfate	4 grams, IV	Select
Magnesium sulfate	select	3ml/ hour
Select	10mg, IM	PRN for RR< 12

➤ Choose the most likely option for the missing information in the table below by choosing from the list of options.

Medication	Dose, route	Frequency
Magnesium sulfate	4 grams, IV	Select Over 1 minute, Now Over 5 minutes, Now Over 30 minutes, Now
Magnesium sulfate	Select 1g/500 mL LR IV 20g/500 mL LR, IV 100g/500 mL LR	3ml/ hour
Select Calcium gluconate Flumazenil Naloxone	10mg, IM	PRN for RR< 12

With options opened.



59

The nurse admits a 25- year-old primigravid client at 35 weeks gestation to the maternity unit.

Case study Screen 5 of 6

Nurses' Notes

Orders

1000: The client was admitted to the maternity unit from the clinic for elevated blood pressure of 156/100. The client reported that she developed a headache this morning accompanied by seeing flashing lights that did not respond to acetaminophen. Her weight gain was 2 kg since the 34- week visit and urine dipstick was +3 for protein. A cervical exam revealed that she was dilated 1cm. Her Group B Beta strep screen came back positive. Admitting VS T 97.9°F (36.6°C), P 88, RR 20, B/P 160/ 105. Fetal Heart Rate (FHR) is 165.

The nurse reviews the client's medication list.

➤ Choose the most likely option for the missing information in the table below by choosing from the list of options.

Medication	Dose, route	Frequency
Magnesium sulfate	4 grams, IV	Over 30 minutes, Now ✓
Magnesium sulfate	20g/500 mL LR, IV ✓	3ml/ hour
Naloxone*	10mg, IM	PRN for RR< 12

How many points?

What is the score?

Scoring
Possible points =number of drop downs
Score like a multiple choice matrix 0/1
Row 1 +1 point
Row 2+1
Row 3 0Total 2points

60

Highlight Text

Write

- Candidate must select parts of the text to determine what is critical for the action.
 - Can be entire rows
- Possible responses are tokenized.
 - Can only select tokenized options
- There can be a maximum of 10 options.
 - **Treat like a multiple response question**
- Candidate can select and unselect options.

Score

- +/- Scoring rule
- +1pt for correct response
- -1pt for incorrect response
- No negative total scores
- Maximum points = N Keys

61

The nurse cares for a client brought to the hospital on a 48- hour emergency detention.

Case study Screen 6 of 6

➤ Click to indicate the findings that indicate that the client is ready for discharge.


Example 1:
Highlight Text in a paragraph
Note: When highlight text only involves only the scenario, it appears on the left and is not duplicated to the right.

Nurses' Notes

Orders

Day 3

The client is alert and oriented. He denies any urges to harm self or others. He is showering without being told. He is eating 75% of meals. He slept 4 hours last night. The client states that he is ready for discharge. He reports that he has the names and phone numbers of two divorce lawyers. He also has a list of support persons and community resources.



62

**Case
study
Screen
5 of 6**

The nurse cares for a client immediately after a spontaneous vaginal birth.

➤ Click to highlight the orders the nurse should implement immediately.

Nurses' Notes	Orders
1215: Fundal height 1 cm below umbilicus, fundus is firm and midline. Lochia is moderate rubra. T99.7°F(37.6°C), P 88, RR 16, BP 120/70, Pain 4/10.	
1230: Fundal height is at the umbilicus, fundus is boggy. Peripad is saturated. T99.7°F(37.6°C) P 94, RR 18, BP 116/66, pulse oximetry 97% on room air, Pain is 5/10.	
1300: Oxytocin given. IV started in L arm. Labs sent. The uterus fails to firm after massage. Misoprostol given.	
1330: Fundal height is at the umbilicus, fundus is firm and midline. Saturating 1 peripad/hour, Client is diaphoretic. VS T99.7°F(37.6°C); P100, RR18, B/P 104/50, pulse oximetry 97% on room air. Admission hemoglobin was 12g/dL and is now 11.5g/dL[reference range 11.5-13g/dL].	

Nurses' Notes	Orders
	Postpartum Hemorrhage Protocol Phase I <ul style="list-style-type: none"> Establish IV and begin lactated Ringers 1000mL at 500mL/hr Administer Oxytocin 10 units IM Vigorous fundal massage for at least 15 seconds Administer oxygen to maintain O2 sats at >95% Type and Crossmatch for 2 units Red Blood Cells STAT Empty bladder with straight cath or place indwelling catheter Postpartum Hemorrhage Protocol Phase II <ul style="list-style-type: none"> Give misoprostol 200mcg/tab 0.8 mg PR

Example 2:
Highlight text rows. Case appears on the left if it is necessary to see scenario to answer the question



63

Nurses' Notes	Orders
Day 3 [The client is alert and oriented] ✓. [He denies any urges to harm self or others] ✓. [He is showering without being told] ✓. He is [eating 75% of meals] ✓. He [slept 4 hours last night]. The client [states that he is ready for discharge]. He [reports that he has the names and phone numbers of two divorce lawyers]. He also [has a list of support persons and community resources] ✓.	

64

The nurse cares for a client brought to the hospital on a 48- hour emergency detention.

➤ Click to indicate the findings that indicate that the client is ready for discharge.

Case study Screen 6 of 6

Nurses' Notes
Orders

Day 3

The client is alert and oriented. ✓ He denies any urges to harm self or others. ✓ He is showering without being told. ✓ He is eating 75% of meals. ✓ He slept 4 hours last night. The client states that he is ready for discharge. He reports that he has the names and phone numbers of two divorce lawyers. He also has a list of support persons and community resources. ✓

Clicking will change the color of highlighted items to use for scoring.

Scoring
Possible points number of key 5 points possible

+/- Scoring rule
+1pt for correct response
-1pt for incorrect response

4 correct
1 incorrect

Total 3 points

65

Highlighting Table

Write

- Candidate must select parts of the text within the table to determine what is critical for the action.-
 - May be part or entire row
- Responses are tokenized.
- There can be a maximum of 10 options.
- Individual responses start in the second column.
- Table includes 2 columns (one being a header) and up to 5 rows.
- Candidate can select and unselect options.

Score

- Score same as text
- +/- Scoring rule
- +1pt for correct response
- -1pt for incorrect response
- No negative total scores
- Maximum points = N Keys

66

Case study Screen 1 of 6


The nurse admits a newborn to the mother baby unit one hour after birth.

- Click to indicate the findings that indicate that need immediate intervention.

Correct
2 columns
Up to 5 rows
including header

Admission Notes

System	Findings
Vital signs	T 97.8°F(37°C), heart rate 100 beats per minute, RR 52
Respiratory effort	Strong cry
Neuromuscular	Loose and floppy
Color	Pale blue



67

Case study Screen 1 of 6

The nurse admits a newborn to the mother- baby unit one hour after birth.

- Click to indicate the findings that indicate that need immediate intervention.

Scoring
Possible points number of key 2 points possible

+/- Scoring rule
+1pt for correct response
-1pt for incorrect response

2 correct
1 incorrect

Total 1 point

Admission Notes

System	Findings
Vital signs	T 97.8°F(37°C), heart rate 100 beats per minute, RR 52
Respiratory effort	Strong cry
Neuromuscular	Loose and floppy✓
Color	Pale blue✓

How many points?
What is the score?

68

Recommendations for Using Item Types

Step	Ideal	Consider Avoiding
Recognize Cues	Highlight text or table Select all that apply or Select N	Multiple choice Rationale or Cloze Matrix
Analyze cues	Select all that apply or Select N Matrix (SATA or multiple choice) Rationale or Cloze	Highlighting
Prioritize Hypotheses	Rationale or Cloze Multiple choice	Multiple response Highlighting Matrix
Generate solutions	Grouping Select all that apply or Select N Multiple choice matrix	Multiple response matrix (SATA) Multiple choice
Take action	Highlight or drop-down table Select all that apply or Select N Rationale or Cloze Multiple choice matrix	
Evaluate outcomes	Highlight Text or table Rationale Multiple choice matrix Select all that apply or Select N	Multiple response matrix(SATA) Cloze

69

Getting Lead in Sentence Correct

- Matrix: For each X, click to specify
 - If multiple response Matrix include. Statement "Each category may have more than one XX.
- Highlighting: Click to indicate
- Drop down: Complete the following sentence by choosing from the list of options.
- Drag & Drag: Drag from the word choices to fill in the blanks of the following sentence.
- Multiple response select N: Select the N findings
- Multiple response SATA: Select the findings----. **Select all that apply**

70

NGN Scoring Rule Summary

0/1	+/-	Rationale scoring
Multiple choice Multiple response N Drop-down table Drop down cloze Drag and drop cloze Matrix multiple choice	Highlight text Highlight table Multiple response SATA Multiple response grouping (by group) Multiple response matrix (by column)	Drop-down rationale Drag and drop rationale

This is rule NCSBN uses. Programs should use rule that makes sense for them.

71

Group Practice Instructions

- The following 3 cases include a multiple-choice question to test clinical judgment step 3, prioritize hypotheses, and a multiple response question to test step 4, generating solutions.
- Using the template provided select 1 case
- Turn the multiple-choice question into an NGN drop-down rationale question.
 - You may delete the second effect if desired.
- Then turn the multiple response question into a multiple-choice matrix.
 - You may add more rows if desired.

72

Other Testing Considerations

- Case study test items should appear 1 at a time with no backtracking.
 - Unfolding cases frequently give answers to previous questions as they unfold.
- Technology enhanced item types should be given in electronic format.
 - Screen readers may not work with enhanced item types.
 - Need to work with institutional disability services.
- Focus on implementing item types that testing platform allows first.
 - Items types not possible on testing platform, consider for in class cases.
 - Multiple response questions can later be converted into matrix or highlight formats
 - Multiple choice questions can turn into drop-and-drag or drop- down formats
- NCSBN scales scores
 - 8-point items are still only considered 1 item.
 - Implement a consistent grading policy that works with your testing platform.

73



74

References

- Betts, J., Muntean, W., Kim, D., Jorion, N., & Dickison, P. (2019). Building a Method for Writing Clinical Judgment Items for Entry-Level Nursing Exams. *Journal of Applied Testing Technology*, 20.
- Dickison, P, Luo, X., Kim, D, Woo. A., Muntean, W. & Bergstrom, B. Assessing higher-order cognitive constructs by using and information-processing framework. (2016). *Journal of Applied Testing Technology*, 17(1), 1-19.
- Muntean, W. (2012). Nursing clinical decision making: A literature review. Available at <https://www.ncsbn.org/11507.htm>
- NBME(2021). Item writing guide.<https://www.nbme.org/item-writing-guide>
- NCSBN (Fall 2019). Next Generation NCLEX news: Approved NGN item types study. <https://www.ncsbn.org/14156.htm>
- NCSBN (2021).NCSBN Midyear Meeting - Next Generation NCLEX (NGN) Forum <https://www.ncsbn.org/15336.htm>
- NCSBN (2021). NCSBN NCLEX conference
- NCSBN (Spring 2020). Next Generation NCLEX News: The NGN case study. https://www.ncsbn.org/NGN_Spring20_Eng_02.pdf
- NCSBN (Summer 2021). Next Generation NCLEX News: Scoring models. https://www.ncsbn.org/NGN_Summer21_ENG.pdf
- NCSBN (Summer 2021). Next Generation NCLEX News: Stand-alone Items. *Next Generation NCLEX News*. <https://www.ncsbn.org/15800.htm>
- NCSBN. 2019 NCLEX-RN Test Plan https://www.ncsbn.org/2019_RN_TestPlan-English.pdf
- NCSBN (2020). Publishers' Summit Next Generation NCLEX® (presentation).