This Next Generation NCLEX (NGN) Item Development Worksheet is to support educators in the creation of NGN items.

Step 1: Next Generation NCLEX (NGN) Item Development Worksheet
Use the Scenario Outline to begin writing an NGN item. The purpose of this outline is to identify the content being tested and to gather the information related to the exemplar or health alteration being tested.

Step 2: Chart
The chart tabs are representative of a client's medical chart. In this step you will need to name the "Chart Tab". There can be one to six chart tabs per item. Use the Clinical Scenario Outline to populate the information under each chart tab.

Step 3: Item Development Template(s)

CASE STUDY ITEM

When creating a Case Study Item use the 6 clinical judgment functions in order: recognize cues, analyze cues, prioritize hypotheses, generate solutions, take actions, and evaluate outcomes.

STANDALONE ITEM (BOWTIE AND TRENDS)

When creating a Bowtie item all 6 clinical judgment functions are represented in one item. See template below for writing a bowtie item.

When creating a Trend item one or more clinical judgment functions may be included in a single item. Information provided in the chart must trend over time. Any of the NGN item types can be used when developing a trend item.

You will need to fill in additional information in the chart tabs to trend information over time to unfold the clinical scenario in the item. For example, you may have entered nurses notes at 0900 that was needed to answer the question presented for recognize cues. However, additional information may need to be added to the nurses notes at 1300 for the student to be able to answer the item related to take actions. There may also be additional information added to vital signs for the 6th item for student to determine effectiveness of the nurse's action to determine if the client outcome was met or not met.

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Step 1: Scenario Outline

Working Outline

Writing template

Concept / Health Alteration (Exemplar)	
History and Physical	
Potential Nurse's Notes	
Vital Signs	
• **Temperature**	
• **Heart Rate**	
• **Respiratory Rate**	
• **Blood Pressure**	
• **Oxygen Saturation**	
• **Pain Score**	
Laboratory Results	
I & O	
Diagnostic Exams & Procedures	
Medications	
Nursing Actions	
Potential Complications	

Stage 2: Chart

Chart Tabs

Can have between one and six chart tabs per item. Add rows to tab tables as needed.

Chart tab labels can change based upon item scenario such as:

- History and Physical
- Nurse's Notes
- Vital Signs
- Laboratory Results
- Diagnostic Results
- Provider Orders
- Intake and Output
- Medical Administration Record
- Client Education,
- Admission Assessment,
- Medical Procedure Report,
- Immunization Record.

History & Physical

Nurse's Notes

Time	Note

Vital Signs

	Time	Time	Time
Temperature:			
Heart Rate:			
Respiratory Rate:			
Blood Pressure:			
Oxygen Saturation:			
Pain:			

Laboratory Results

Time	Test	Results	Reference range

Provider's Orders

Intake and Output

Time	Intake	Time	Output

Medication Administration Record

Time	Medication Administered

Client Education

Stage 3: Item Development

Clincial Judgment Functions

There are 6 clinical judgment functions that must be covered in the case study item.

Clinical Judgment Behaviors

RECOGNIZE CUES

- Identify relevant information related to the client's condition.
- Use knowledge, experience, and evidence to assess clients.
- Use verbal, nonverbal, written, and electronic modes of communiction.
- Recognize relevant subjective/objective client data.
- Identify subtle and apparent changes in client condition and related factors.

ANALYZE CUES

- Compare client findings to evidence-based resources and standards of care.
- Analyze expected and unexpected findings in health data.
- Anticipate illness/injury and wellness progression.
- Identify client problems and related health alterations.
- Analyze client needs.
- Identify potential complications.
- Identify how pathophysiology relates to clinical presentation.
- Identify data that is of immediate concern.

PRIORITIZE HYPOTHESES

- Organize client assessment information according to changes, patterns, and trends.
- Use standards of care and empirical frameworks for priority setting.
- Establish and prioritize client problems/ needs based on the analysis of information and factors.

GENERATE SOLUTIONS

- Collaborate with members of the interprofessional health care team to establish client outcomes and the plan of care.
- Collaborate with client and care partners to establish client outcomes and the plan of care.
- Identify optimal client outcomes based on information and factors.

GENERATE SOLUTIONS (CONTINUED)

- Identify evidence-based nursing actions to effectively address the clinical situation of the client's health problem
- Prioritize plan of care to achieve optimal client outcomes.
- Prioritize nursing care when caring for multiple clients.
- Re-prioritize nursing actions as the client's condition changes.
- Modify a plan of care to assure achievement of optimal client outcomes when indicated.
- Determine the potential impact of selected interventions.

TAKE ACTIONS

- Promptly and accurately perform nursing actions based on prioritized client problems.
- Implement a plan of care in collaboration with members of the interprofessional health care team.
- Implement a plan of care in collaboration with the client and care partners.
- Accurately document client care data and information
- Incorporate client preferences and needs when performing nursing actions.
- Provide education to the client and/or care partner(s) regarding their health condition and care management.
- Participate in coordination of care with the client and healthcare team.
- Monitor the client's response to interventions.

EVALUATE OUTCOMES

- Reassess client condition to determine achievement of expected outcomes.
- Evaluate efficacy of nursing actions determine if client outcomes were met.
- Modify client outcomes and/or nursing actions based on the client's response and clinical findings when indicated.
- Update and revise the plan of care.

Environmental and Individual Factors

Include applicable environmental and individual factors while referring to your scenario.

Adjust scenario/item stems to provide information as needed for each factor completed.

Possible environmental and individual factors include the following.

- Client Demographics
- Client Findings
- Consequences & Risks
- Cultural Considerations
- Medical Record Cues
- Resources
- Setting
- Task Complexity
- Time Pressures
- Abilities Required
- Knowledge Required
- Skills Required

Environmental Factors	Individual Factors
Setting, Situation, and Environment (i.e., safety considerations, equipment, surroundings)	Nurse factors: (i.e., knowledge, skills, specialty)
Client observation (i.e., age, symptoms of health alteration)	Nurse Characteristics (i.e. attitudes, prior experiences, level of experience)
Resources (i.e. staffing, supplies, beds, care partners, etc.)	Cognitive load (i.e. demands on the nurse, stress, problem solving, memory)
Health Record (i.e., history, labs, vs, diagnostic tests, I&O, medications, treatments)	
Time pressure (i.e., pager, STAT medication, change in client condition)	
Cultural Consideration (i.e., language, literacy, religion, diet)	
Task complexity (i.e., level of difficulty, complicated versus simple action, number of people involved, sound delegation)	
Risk assessment (i.e., identifying and finding ways to remove or minimize harm to promote safety and health)	

Sample NGN questions related to clinical judgment functions

Recognize Cues	• The nurse has just completed the on-coming shift assessment for their client. • Select the "N" findings that require immediate follow-up (MULTIPLE RESPONSE SELECT N) • Which of the following assessment findings requires immediate follow-up? Select all that apply (MULTIPLE RESPONSE SELECT ALL THAT APPLY) • The following [assessment findings] require immediate follow-up. (DRAG AND DROP CLOZE) • The nurse in the medical-surgical unit is caring for a 23-year-old male client. Click the findings below that would require follow-up (HIGHLIGHT TEXT OR HIGHLIGHT TABLE)
Analyze Cues	• For each client finding below, click to specify if the finding is consistent with the disease process of (1), a (2), or (3). Each finding may support more than 1 disease process (Matrix Multiple Response) • Which of the following issues is the client at risk for developing? Select all that apply (Multiple Response select all that apply) • The client is at risk for developing _____ and _____. (DRAG AND DROP CLOZE) • The client is a risk for developing _____due to _____. (DRAG AND DROP RATIONALE)
Prioritize Hypotheses	• The client is at highest risk for developing _____ as evidenced by the client's _____. (DROP DOWN RATIONALE) • The nurse should address the client's _____ followed by the client's _____. (DROP DOWN CLOZE) • Select the "N" complications the client is at risk for developing. (MULTIPLE RESPONSE SELECT N) • The nurse is reviewing the client's health history and assessment data. Which of the findings should the nurse address first _____ followed by _____? (DRAG AND DROP CLOZE)

Generate Solutions	• For each potential nursing intervention, click to specify whether the intervention is indicated, nonessential, or contraindicated for the care of the client (MATRIX MULTIPLE CHOICE)
	• For each potential order, click to specify whether the intervention is anticipated, nonessential, or contraindicated for the care of the client (MATRIX MULTIPLE CHOICE)
	• The nurse is reviewing the client's assessment data at the beginning of the shift.
	  • The nurse should include _____ and _____in the plan of care. (DROP-DOWN CLOZE)
	  • The client is at risk for developing _____ and _____ (DRAG AND DROP CLOZE)
	• The nurse is preparing to speak with the provider regarding the client's condition. Which of the following orders should the nurse anticipate? (MULTIPLE RESPONSE SELECT ALL THAT APPLY)

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Take Actions	• The nurse has been asked to prepare the client for immediate surgery. Which of the following actions should the nurse take? Select all that apply (MULTIPLE RESPONSE SELECT ALL THAT APPLY)
	• Click to highlight the below "N" orders that the nurse should perform right away (HIGHLIGHT TEXT OR HIGHLIGHT TABLE)
	• The nurse should insert _____. It would be a priority for the nurse to request a prescription for _____. The nurse should prepare the client for surgery within _____. (DROP DOWN CLOZE)
	• For each body system below, click to specify the potential nursing intervention that would be appropriate for the care of the client. (MULTIPLE RESPONSE GROUPING OR DROP-DOWN TABLE)
	• The nurse is reviewing the client's medical record. The nurse should perform _____and _____ to promote achievement of optimal outcomes. (DROP-DOWN CLOZE)
	• The nurse is reviewing the client's medical record. The nurse should hold the following medication _____ related to _____. (DROP DOWN RATIONALE)
	• The nurse is reviewing the client's medical record. The action should the nurse take first is _____ as evidence by _____. (DROP DOWN RATIONALE)
Evaluate Outcomes	• For each assessment finding, click to specify if the finding indicates that the client's condition has improved, has not changed, or has declined. (MATRIX MULTIPLE CHOICE)
	• Click to highlight the findings below that would indicate the client is not progressing as expected (HIGHLIGHT TEXT OR HIGHLIGHT TABLE)
	• Which of the following findings in the nurses' notes at [xxxx] would indicate the effective outcome? Select all that apply (MULTIPLE RESPONSE SELECT ALL THAT APPLY)
	• Based on the client's response to nursing actions. What modifications need to be made to the plan of care? (MULTIPLE RESPONSE SELECT ALL THAT APPLY)

Drop Down Cloze

Trend items need to be over time in the medical record.
- Stem wording can change to address the content being tested.
- Structure
  - 1 to 5 sentences
  - 2 to 5 drop downs per item
- Drop downs
  - 3 to 5 option in each drop down
  - Options need to be different in each drop down

Examples
- The nurse should address the client's _____ followed by the client's _____.
- The nurse should insert _____. It would be a priority for the nurse to request a prescription for _____. The nurse should prepare the client for surgery within _____.

Writing template
Below is the writing template to be used in the word document.

Drop Down Cloze

Complete the following sentence by choosing from the list of options.   The nurse should first address the client's [DROPDOWN 1] followed by the client's [DROPDOWN 2]

		Key
Options for Dropdown 1		☐
		☐
		☐
		☐
		☐
Options for Dropdown 2		☐
		☐
		☐
		☐
		☐

Drop Down Rationale

Trend items need to be over time in the medical record.

- Stem wording can change to address content being tested.
- Structure
  - Dyad: 1 sentence with 2 drop down
    - 1 sentence with 1 cause and 1 effect
  - Triad: 1 sentence with 3 drop downs
    - 1 sentence with 1 cause and 2 effect
- Drop downs
  - 3 to 5 option in each drop down
  - Options need to be different in each drop down

Example
- The client is at highest risk for developing _____ as evidenced by the client's _____.

Writing template
Below is the writing template to be used in the word document.

Drop Down Rationale

Write a sentence below with [DROPDOWN #] to indicate where the dropdown should be. Write all the options, then identify the correct option in the Key column

Complete the following sentence by choosing from the list of options. The client is at highest risk for developing [DROPDOWN 1] as evidence by the client's [DROPDOWN 2]

		KEY
		☐
		☐
Options for Dropdown 1		☐
		☐
		☐
Options for Dropdown 2		☐
		☐
		☐
		☐

Drop Down Table

Trend items need to be over time in the medical record.

- Stem wording can change to address content being tested.
- Table
  - Minimum 1 column (not including the header) and 3 rows
- Options
  - 3 to 5 options in each row
  - 1 correct option per row
  - Options need to be different in each drop down

Example
- For each body system below, click to specify the potential nursing intervention that would be appropriate for the care of the client.

Writing template
Below is the writing template to be used in the word document.

Drop Down Table		
For each body system below, click to specify the potential nursing intervention that would be appropriate for the care of the client. column.		
Body System	Potential Nursing Interventions	KEY
	Options	☐
		☐
		☐
		☐
		☐
	Options	☐
		☐
		☐
		☐
		☐
	Options	☐
		☐
		☐
		☐
		☐

Highlight Text

Trend items need to be over time in the medical record.

- Stem wording can change to address content being tested.
- Options/tokens
  - Can be paragraph or bulleted
  - Tokens can be a complete sentence or partial.
  - Up to 10 options/tokens
  - Not all sentences need to be tokenized.
  - 1 to 10 keys

Examples
- The nurse in the medical-surgical unit is caring for a 23-year-old male client. Click the findings below that would require follow-up.
- Click to highlight the findings below that would indicate the client is not progressing as expected.
- Click to highlight the below "N" orders that the nurse should perform right away.

Writing template
Below is the writing template to be used in the word document.

Highlight Text Provide the written information in a paragraph or bullet format in options section. Identify the correct answer by highlight the key(s) in yellow.	
Stem	Click to highlight the statement in the transfer report that require action by the nurse prior to the client's arrival
Options	

Highlight Table

Trend items need to be over time in the medical record.
- Stem wording can change to address content being tested.
- Table
  - 2 columns (one being the header)
  - Up to 5 rows
- Options/tokens
  - Tokens can be a complete sentence or partial
  - Up to 10 options/tokens
  - Not all sentences need to be tokenized

Examples
- The nurse in the medical-surgical unit is caring for a 23-year-old male client. Click the findings below that would require follow-up.
- Click to highlight the findings below that would indicate the client is not progressing as expected.
- Click to highlight the below "N" orders that the nurse should perform right away.
- For each body system below, click to specify the potential nursing intervention.

Writing template
Below is the writing template to be used in the word document.

Highlight Table	
List the body systems in the left column. The findings can be in text or bullet format. Identify the correct answer(s) by highlight the key(s) in yellow.	
Stem	Click to highlight the findings that require Immediate follow-up.
Body System	Findings
	Options
	Options
	Options

Drag and Drop Cloze

Trend items need to be over time in the medical record.
- Stem wording can change to address content being tested.
- Structure
  - 1 to 5 sentences
  - 5 total response targets
  - Responses are in no specific order
- Options
  - 4 to 10 tokens

Examples
- The following [assessment findings] require immediate follow-up.
- The client is at risk for developing _____ and _____.

Writing template
Below is the writing template to be used in the word document.

Drag and Drop Cloze Write a stem below and then all the options. Identify the correct options in the KEY column.		
Stem	The client is at risk for developing [BLANK 1] and [BLANK 2].	
		KEY
Options		☐
		☐
		☐
		☐
		☐
		☐
		☐
		☐

Drag and Drop Rationale

Trend items need to be over time in the medical record.

- Stem wording can change to address content being tested.
- Structure
  - Dyad: 1 sentence with 2 drop down; 1 cause and 1 effect
  - Triad: 1 sentence with 3 drop downs ;1 cause and 2 effects
- Options
  - 2 different box word choices
  - 5 word choices per box
  - 1 key per response target
- Unique word choices in both boxes

Example
- The client is at risk for developing_____ due to _____.

Writing template
Below is the writing template to be used in the word document.

Drag and Drop Rationale		
For each blank, identify the distractors and key. Add [BLANK 3] for a triad. Add more rows as needed.		
Stem	The client is at risk for developing [BLANK 1] due to [BLANK 2]	
Blank 1: Conditions		KEY
Options		☐
		☐
		☐
		☐
		☐
Blank 2: Client findings		
Options		☐
		☐
		☐
		☐
		☐

Matrix Multiple Choice

Trend items need to be over time in the medical record.

- Stem wording can change to address content being tested.
- Options
  - 4 to 10 rows
  - 2 to 3 columns
  - Each row must have 1 key

Examples
- For each potential nursing intervention, click to specify whether the intervention is indicated, nonessential, or contraindicated for the care of the client.
- For each potential order, click to specify whether the intervention is anticipated, nonessential, or contraindicated for the care of 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.

Writing template
Below is the writing template to be used in the word document.

Matrix Multiple Choice			
Provide the potential orders. Identify the correct response by clicking on the box associated with Anticipated, Nonessential, or Contraindicated for each potential order.			
Stem	For each potential providers prescription, click to specify if the potential prescription is anticipated, nonessential, or contraindicated for the client.		
Potential Order	Anticipated	Nonessential	Contraindicated
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐

Matrix Multiple Response

Trend items need to be over time in the medical record.

- Stem wording can change to address content being tested.
- Options
  - 4 to 7 rows
  - 2 to 10 columns
  - Each column must have 1 key
  - A row can have 0 to all keys

Example
- For each client finding below, click to specify if the finding is consistent with the disease process of (1), a (2), or (3). Each finding may support more than 1 disease process.

Writing template
Below is the writing template to be used in the word document.

Matrix Multiple Response For each client finding below, click to specify if the finding is consistent with the disease process of health alteration 1, health alteration 2, and health alteration 3		
Assessment findings	Health Alteration 1	Health Alteration 2	Health Alteration 3
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐

Multiple Response Grouping

Trend items need to be over time in the medical record.
- Stem wording can change to address content being tested.
- Group
  - 2 to 5 groups
- Options
  - 2 to 4 options per group
  - Number of options are the same for each group
  - 1 to all options can be correct in a group

Example
- For each body system below, click to specify the potential nursing intervention that would be appropriate for the care of the client.

Writing template
Below is the writing template to be used in the word document.

Multiple response grouping		
For each body system below, click to specify the potential nursing intervention that would be appropriate for the care the of the client. Each body system may support more than one potential nursing intervention.		
Body System	Potential Nursing Interventions	Key
		☐
		☐
		☐
		☐
		☐
		☐
		☐
		☐
		☐
		☐
		☐
		☐

Multiple Response Select all that apply

Trend items need to be over time in the medical record.

- Stem wording can change to address content being tested.
- Options
  - 5 to 10 options
  - 1 to all options can be correct

Examples

- Which of the following assessment findings requires immediate follow-up? Select all that apply.
- Which of the following issues is the client at risk for developing? Select all that apply.
- Which of the following findings in the nurses' notes at [xxxx] would indicate the effective outcome? Select all that apply.
- The nurse has been asked to prepare the client for immediate surgery. Which of the following actions should the nurse take? Select all that apply.

Writing template

Below is the writing template to be used in the word document.

Multiple Response Select all that apply	
Which of the following assessment findings require follow-up by the nurse? Select all that apply	
Assessment findings	**Key**
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐

Multiple Response Select N

Trend items need to be over time in the medical record.
- Stem wording can change to address content being tested.
- Options
  - 5 to 10 options
  - Number of keys is designated in the stem

Examples
- Select the "N" findings that require immediate follow-up.
- Select the "N" complications the client is at risk for developing.

Writing template
Below is the writing template to be used in the word document.

Multiple Response Select N	
Select the "*N*" findings that require immediate follow-up	
Assessment findings	**Key**
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐

Stand Alone Bow Tie Item

- Stem wording can change to address content being tested.
- Options
  - 5 options in the left and right wells
  - 4 options in the middle well
- 1 key per target (2 keys in the first well, 1 key in the second well, and 2 keys in the third well)

Writing template
Below is the writing template to be used in the word document.

Bowtie

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. Indicate the key by highlighting the correct response(s).

Actions to take		Parameters to Monitor
	Potential Condition	

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