How to Write Standalone Items Bow-ties and Trends

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Disclosures

- CEO Hensel Nursing Education Consulting
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Learning Objectives

Session Description: In this session, the participant will write bow-tie and trend items

Session Learning Objectives:
After engaging in this session, the participant will be able to:
1. Determine a topic for a Bow-tie and Trend question.
2. Write a Bow-tie and Trend Question for their own test.

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Getting Ready

Session Preparation:

Prior to attending this session, participants should:

1) Review course learning objectives

2) Bring a topic that lends itself to writing a Trend and Bow-tie question, or revising an existing question to these item types.

3) Read NGN News Spring 2021, Stand Alone Items https://www.ncsbn.org/NGN_Spring21_Eng.pdf be

Readings

Betts, J., Muntean, W., Kim, D., Jorean, D., & Dickison, P. (2019). Building a method for writing clinical judgment items for entry-level nursing exams. *Journal of Applied Testing Technology, 20* (2).

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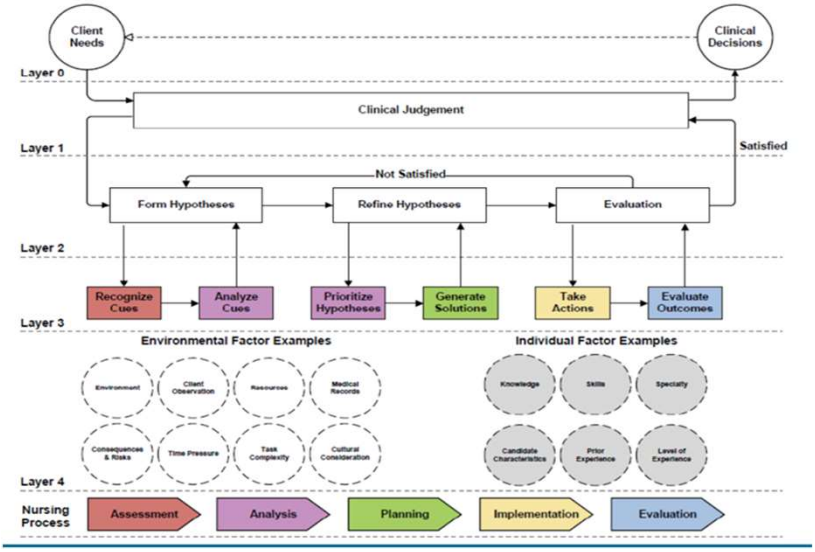
NCSBN Clinical Judgment Measurement Model

- 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

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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 anticipated to take 15 minutes each
- New test plan anticipated April1, 2023; Beta testing will start in 2022

NCSBN 2021 NCLEX Conference

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Standalone Items Used Throughout Test

- *NCSBN NCLEX Conference, 2021*

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						

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Cases Versus Stand Alone NGN Items

Cases

- Has clinical information in an EMR for one or more clients
- Is a group of six items that represents the CJM
  - Cueing says case study screen number of 6
- Requires the entry-level nurse to make multiple clinical decisions throughout the spectrum of the clinical judgment model
- Appear only in 1st 85 questions

https://www.ncsbn.org/NGN_Spring21_Eng.pdf

Standalones

- A single question based on information presented in an EMR
- Has a stated diagnosis or an implied diagnosis
- Includes clinical information for a specific client
- Provides components that require the entry-level nurse to make one or more clinical decisions

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Elements of NGN Style

- NGN uses military time.
- T,P,R,B/P or T,HR,RR, BP are acceptable abbreviations in text and table. Spell out pulse oximetry.
- Temperature should be given in Celsius and Fahrenheit.
- If weight is given in pounds also add kilograms.
- Terms “physician” or “healthcare provider” are both okay.
- Term “orders” is okay to use, “prescriptions” will mean medications.
- Only use generic names for medications.

➢ Arrow signals item lead in.

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Sample Bow-tie

Question on right

The nurse reviews the lab values for a primigravid client at the first prenatal visit.

Introductory sentence

Laboratory

Test	Result	Reference
ABO/RH	0/negative	
Antibody Screen	Negative	Negative
Rubella AB IgG	Non-immune	Immune
Hepatitis B Surface Ag	Negative	Negative
Syphilis Total Ab Screen	Negative	Negative
WBC	5.23	4.5-10.5 K/CMM
RBC	3.5	3.70-5.30 M/CMM
HGB	11.5	12.0-15.5 GM/DL
HCT	35.0	36.0-46.0 %

EMR on left

After reviewing the client’s labs, the nurse prepares the plan of care for the priority concern.

➢ 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.

Actions to take		Parameters to monitor
	Condition Most Likely Experiencing	
Actions to take		Parameters to monitor

Actions to Take	Potential Conditions	Parameters to Monitor
Provide nutrition counseling✓	Iron deficiency✓	Weight gain✓
Schedule vaccinations	Active rubella	Presence of fever
Begin iron supplementation✓	Rh incompatibility	Activity tolerance✓
Administer Immunoglobulin	Hepatitis B risk	Skin rashes
Provide disease prevention counseling		Evidence of jaundice

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Writing Bow-tie Items

- Bow-tie items address multiple clinical judgment steps in one item.
- Contain one or more EMR tabs on the left
- Drop & drag format with 5 targets
- Item responses fall into 3 categories.
  - Conditions most likely experiencing/potential conditions
  - Actions to take
  - Parameters to monitor
  - Headers may differ in future NCLEX test plans
- 5 options in the left and right wells; 4 options in the middle well.
- All targets must be utilized for the student to move forward.
- 0/1 Scoring rule
- Earn 1 point for each correct response
- Earn 0 points for each incorrect response
- The sum of all correct responses is the total score for a multi-point item
- Max score for a bow tie item is 5 pts

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Bow-ties Have One or More EMR Tabs

- Nurses' Notes
- History and Physical
- Laboratory Results
- Vital Signs
- Admission Notes
- Intake and Output
- Progress Notes
- Medications
- Diagnostic Results
- Flow sheet

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Breaking it Down Even More

Potential condition

- 1 multiple choice question

Actions to take

- 1 multiple response question
- 5 options/ 2 correct

Parameters to monitor

- 1 multiple response question
- 5 options/ 2 correct

- NCLEX will color code 3 sections
- Actions and parameters to monitor should align with the potential condition options
  - Don't put neuro-checks if none of the conditions have a neurologic connection
- Think of this as a care plan
  - Consider writing these with a care plan book close by!

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Lead-in

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

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More Bow- ties

The nurse cares for a client admitted for a manic episode on his third day in the inpatient unit.

Nurse's Notes

1430: Client has been taking lithium and olanzapine with good effect. Out of room with limited participation in unit activities. Appetite increased.

1440: Client was observed sitting in the dayroom watching. UAP reported that when she went to take the client's VS, client was stiff. UAP was unable to move client's arms. Client was unable to respond coherently to questions. Skin hot and diaphoretic. VS: T 102.4F (39.1 C), HR 110, RR 18, BP: 136/90.

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

- Complete the diagram by dragging from the choices below to specify what condition the client is most likely is 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		Parameter to monitor
	Condition Most Likely Experiencing	
Action to take		Parameters to monitor

Actions to Take	Potential Conditions	Parameters to Monitor
Give antibiotics	Anaphylaxis	Urine output
Apply cooling blanket	Meningitis	Breath sounds
Administer epinephrine	Neuroleptic malignant syndrome	Vital signs
Start IV fluids	Lithium toxicity	Deep tendon reflexes
Administer a neuroleptic		Intracranial pressure

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Scoring

The nurse cares for a client admitted for a manic episode on his third day in the inpatient unit.

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1440: Client was observed sitting in the dayroom watching. UAP reported that when she went to take the client's VS, client was stiff. UAP was unable to move client's arms. Client was unable to respond coherently to questions. Skin hot and diaphoretic. VS: T 102.4F (39.1 C), HR 110, RR 18, BP: 136/90.

5 points possible
0/1 grading rule applies
2 points awarded

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

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

Administer a neuroleptic		Vital signs ✓
	Lithium toxicity	
Apply a cooling blanket✓		Intracranial pressure

Actions to Take	Potential Conditions	Parameters to Monitor
Give antibiotics	Anaphylaxis	Urine output✓
	Meningitis	Breath sounds
Administer epinephrine	Neuroleptic malignant syndrome✓	
Start IV fluids✓		Deep tendon reflexes

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Where to Begin

Write	Identify	Select	Determine	Consider	Write
Write an entry level case that requires the nurse to form a hypothesis	Identify the correct answer (condition)	Select 2 important interventions (actions to take)	Determine 2 ways to evaluate outcomes (parameters to monitor)	Consider 3 other conditions that a new nurse might think the client is experiencing based on history or symptoms	Write 1 intervention and 1 parameter to monitor for each that would be different than ones for the correct condition

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Bow-tie Practice

The nurse cares for 92-year-old female admitted to the medical-surgical unit from home with a urinary tract infection.

Admission Note

The client is accompanied by her daughter who found her at home this morning disoriented, lying in a pool of urine, and unable to get out of bed. Prior to today, the daughter reports that her mother was living independently though her memory was starting to fade, and she cried frequently since her spouse died 6 months ago. The client is incontinent of urine and oriented to person only. She answers questions only by saying yes or no indiscriminately. She is very agitated and appears to be swatting at objects in the air. VS: T102.2°F (39°C), HR 100, RR 20, BP 92/60, pulse oximetry reading 98% in room air.

The nurse reviews the client's admission data to begin the plan of care.

- Complete the diagram by dragging from the choices below to specify what condition the client is most likely is 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		Parameters to monitor
	Condition most likely experiencing	
Action to take		Parameters to monitor

Actions to Take	Potential Conditions	Parameters to Monitor
Administer antibiotics		
	Delirium	Attention
Administer antipsychotics		Levels of consciousness

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Possible Options

The nurse cares for 92-year-old female admitted to the medical-surgical unit from home with a urinary tract infection.

Admission Note

The client is accompanied by her daughter who found her at home this morning disoriented, lying in a pool of urine, and unable to get out of bed. Prior to today, the daughter reports that her mother was living independently though her memory was starting to fade, and she cried frequently since her spouse died 6 months ago. The client is incontinent of urine and oriented to person only. She answers questions only by saying yes or no indiscriminately. She is very agitated and appears to be swatting at objects in the air. VS: T102.2°F (39°C), HR 100, RR 20, BP 92/60, pulse oximetry reading 98% in room air.

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Action to take		Parameters to monitor
	Condition most likely experiencing	
Action to take		Parameters to monitor

Actions to Take	Potential Conditions	Parameters to Monitor
Administer antibiotics	Dementia	Short-term memory
Administer antidepressants	Delirium	Attention
Administer antipsychotics	Depression	Levels of consciousness
Administer lithium	Psychosis	Mood
Administer benzodiazepines		Self-concept

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More Practice

The nurse cares for 80-year-old client in the emergency department.

History & Physical | **Vital Signs**

1500: The client has a history of type 2 diabetes treated with metformin and glipizide. He was healthy, alert, and active until he developed a pressure ulcer on his right great toe about 5 weeks ago. He was treated at home with moist saline dressings daily, and family thought it was improving. They last visited him 5 days ago. Today, his son found him in bed and confused and brought him to the emergency department. His foot is red and edematous and much worse according to his son. Point of care blood glucose 78mg/dL.

History & Physical | **Vital Signs**

Vital Signs	1500
T	100F/37.8C
P	92
R	28
B/P	116/64
Pulse oximetry	92% on room air

The nurse reviews the client's admission data to begin the plan of care.

- Complete the diagram by dragging from the choices below to specify what condition the client is most likely is 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		Parameters to monitor
	Condition most likely experiencing	
Action to take		Parameters to monitor

Actions to Take	Potential Conditions	Parameters to Monitor
Administer antibiotics		Serum lactate
Administer a fluid bolus	Sepsis	Levels of consciousness

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Possible options

The nurse cares for 80-year-old client in the emergency department.

History & Physical | Vital Signs

1500: The client has a history of type 2 diabetes treated with metformin and glipizide. He was healthy, alert, and active until he developed a pressure ulcer on his right great toe about 5 weeks ago. He was treated at home with moist saline dressings daily, and family thought it was improving. They last visited him 5 days ago. Today, his son found him in bed and confused and brought him to the emergency department. His foot is red and edematous and much worse according to his son. Point of care blood glucose 78mg/dL.

History & Physical | Vital Signs

Vital Signs	1500
T	100F/37.8C
P	92
R	28
B/P	116/64
Pulse oximetry	92% on room air

The nurse reviews the client's admission data to begin the plan of care.

- Complete the diagram by dragging from the choices below to specify what condition the client is most likely is 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		Parameters to monitor
	Condition most likely experiencing	
Action to take		Parameters to monitor

Actions to Take	Potential Conditions	Parameters to Monitor
Administer antibiotics	Dehydration	Serum lactate
Hold metformin	Dementia	Blood glucose
Administer a fluid bolus	Metformin reaction	Levels of consciousness
Obtain psych consult	Sepsis	Blood urea nitrogen
Force PO fluids		Short-term memory

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Bow-Tie Workarounds

- If your testing product is not ready to do bow- ties, consider 3 different drop and drag questions

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Workaround Question #1

The nurse cares for 92-year-old female admitted to the medical-surgical unit from home with a urinary tract infection.

Admission Note

The client is accompanied by her daughter who found her at home this morning disoriented, lying in a pool of urine, and unable to get out of bed. Prior to today, the daughter reports that her mother was living independently though her memory was starting to fade, and she cried frequently since her spouse died 6 months ago. The client is incontinent of urine and oriented to person only. She answers questions only by saying yes or no indiscriminately. She is very agitated and appears to be swatting at objects in the air. VS: T102.2°F (39°C), HR 100, RR 20, BP 92/60, pulse oximetry reading 98% in room air.

The nurse reviews the client's admission data to begin the plan of care.

- Complete the sentence by dragging the best option from the word choices.

The client is most likely experiencing [ ]

Word Choices
Dementia
Delirium
Depression
Psychosis

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Workaround Question #2

The nurse cares for 92-year-old female admitted to the medical-surgical unit from home with a urinary tract infection.

Admission Note

The client is accompanied by her daughter who found her at home this morning disoriented, lying in a pool of urine, and unable to get out of bed. Prior to today, the daughter reports that her mother was living independently though her memory was starting to fade, and she cried frequently since her spouse died 6 months ago. The client is incontinent of urine and oriented to person only. She answers questions only by saying yes or no indiscriminately. She is very agitated and appears to be swatting at objects in the air. VS: T102.2°F (39°C), HR 100, RR 20, BP 92/60, pulse oximetry reading 98% in room air.

The nurse reviews the client's admission data to begin the plan of care.

- Complete the sentence by dragging the best option from the word choices.

To address the condition the nurse should [ ]

and [ ]

Word Choices
Administer antibiotics
Administer antidepressants
Administer antipsychotics
Administer lithium
Administer benzodiazepines

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Workaround Question #3

The nurse cares for 92-year-old female admitted to the medical-surgical unit from home with a urinary tract infection.

Admission Note

The client is accompanied by her daughter who found her at home this morning disoriented, lying in a pool of urine, and unable to get out of bed. Prior to today, the daughter reports that her mother was living independently though her memory was starting to fade, and she cried frequently since her spouse died 6 months ago. The client is incontinent of urine and oriented to person only. She answers questions only by saying yes or no indiscriminately. She is very agitated and appears to be swatting at objects in the air. VS: T102.2°F (39°C), HR 100, RR 20, BP 92/60, pulse oximetry reading 98% in room air.

The nurse reviews the client's admission data to begin the plan of care.

- Complete the sentence by dragging the best option from the word choices.

To assess the client's status, the nurse should monitor

[ ] and [ ]

Word Choices
Short-term memory
Attention
Levels of consciousness
Mood
Self-concept

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Questions on Bow-ties?

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Standalone Item: Trend

A client has been admitted through the emergency department with alcohol withdrawal.

Introductory sentence

Flow Sheet

Vital Signs	2100	0100	0500	0900
	T 99°F /37.2°C P110 R18 B/P 140/90 Pulse Oximetry 97%	T 99.2°F /37.3°C P90 R14 B/P 130/80 Pulse Oximetry 98%	T 99°F /37.2°C P70 R14 B/P 126/80 Pulse Oximetry 97%	T 99°F /37.2°C P50 R10 B/P 100/60 Pulse Oximetry 95%
Nurses' Notes 2100: IV D5W@ 60mL/hr started in Lt hand. Diazepam administered. Oriented x 3 0100: Resting quietly 0500: Oriented X 3 0900: Client is confused				

EMR on left with data at different time points

Question on right

The nurse reviews the last 4 client assessments.

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

The first action the nurse should take is to

Select
contact the health care provider.
increase the rate of the IV infusion.
attempt to arouse the client.
administer magnesium sulfate.

Note: This is drop-down cloze. Questions can be any NGN item type.

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Writing Trend Items

- Trend items address multiple steps of clinical judgment model by having the student review information over time.
- EMR data will include multiple time points.
- Trend standalones can feature any NGN item response type.
- Score based on item type selected.

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Trends May be any NGN response type

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

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Trends have One EMR Tab

- Nurses' Notes
- History and Physical
- Laboratory Results
- Vital Signs
- Admission Notes
- Intake and Output
- Progress Notes
- Medications
- Diagnostic Results
- Flow sheet

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Use Combined EMR Pages if Needed

Flow Sheets

- Nurses' notes under vital signs
- Vital signs and I & 0
- Labs under progress notes

Diagnostics

- Labs and Xrays

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Getting Lead in Sentence Correct

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

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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.

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More Trend Items

The nurse cares for a toddler at a well-child check.

Flow Sheet

Age	Height	Weight	BMI	BMI-for-Age
2 years/2months	36inches 91cm	32lbs 14.5kg	17.4	74th
2 years/7months	37inches 94cm	33.5lbs 15.2kg	17.2	78th
3 years	38.5inches 98cm	36.5lbs 16.6kg	17.3	85th

The nurse reviews the client's growth pattern.

- Complete the sentences from the list of drop- down option.

The nurse determines that the toddler's weight is

Select
healthy.
overweight.
obese.

The most appropriate intervention is to

Select
continue routine growth monitoring.
discuss healthy eating and activity guidelines.
discuss weight loss strategies.

Drop Down Cloze
2 points possible
0/1 grading applies

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Drop- Down Cloze are Great for Trends

- Drop downs cloze have 3 to 5 options.
- Drop downs can be a single sentence or up to 5 sentences.
- Multiple sentences can test different CJM steps.
- Probably the easiest way to convert a multiple-choice question into a technology enhanced NGN item is turning it into a drop-down.
- Three option questions are typically easier to write than 4 option questions.

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Multiple Response Trend

The nurse care for a neonate at 8 hours of age.

Flow Sheet

Time	0300	0700	1100
Color	acrocyanosis	acrocyanosis	central cyanosis
Respirations	50 breaths/minute, no nasal flaring retractions, or grunting	60 breaths/minute no nasal flaring retractions, or grunting	90 breaths/minute, no nasal flaring retractions, or grunting
Heart Rate	120	128	142
Temperature	97.7°F (36.5°C)	98.9°F (37.3°C)	98.°F (37.°C)

The nurse reviews the client's assessment data.

➢ What actions should the nurse take? **Select all that apply**

- ❑ Change the neonate's position.
- ❑ Encourage the baby to cry.
- ❑ Notify the health care provider. ✓
- ❑ Suction the nose and mouth.
- ❑ Obtain a pulse oximeter reading✓
- ❑ Obtain blood pressures in all 4 extremities ✓

Multiple response SATA

3 points possible

+/- grading rule

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Highlight Trend

The nurse care for a neonate at 8 hours of age.

- Click to highlight the assessment findings that need immediate follow up

Flow Sheet

Time	0300	0700	1100
Color	acrocyanosis	acrocyanosis	central cyanosis
Respirations	50 breaths/minute, no nasal flaring retractions, or grunting	60 breaths/minute no nasal flaring retractions, or grunting	90 breaths/minute, no nasal flaring retractions, or grunting
Heart Rate	120	128	142
Temperature	97.7°F (36.5°C)	98.9°F (37.3°C)	98.°F (37.°C)

Key

Flow Sheet

Time	0300	0700	1100
Color	acrocyanosis	acrocyanosis	central cyanosis[1]
Respirations	50 breaths/minute, no nasal flaring retractions, or grunting	60 breaths/minute no nasal flaring retractions, or grunting	90 breaths/minute, no nasal flaring retractions, or grunting[2]
Heart Rate	120	128	142[3]
Temperature	97.7°F (36.5°C)	98.9°F (37.3°C)	98.°F (37.°C)[4]

Highlight text
2 points possible
+/- grading rule applies

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Matrix Trend

The nurse care for a neonate at 8 hours of age.

Flow Sheet

Time	0300	0700	1100
Color	acrocyanosis	acrocyanosis	central cyanosis
Respirations	50 breaths/minute, no nasal flaring retractions, or grunting	60 breaths/minute no nasal flaring retractions, or grunting	90 breaths/minute, no nasal flaring retractions, or grunting
Heart Rate	120	128	142
Temperature	97.7°F (36.5°C)	98.9°F (37.3°C)	98.°F (37.°C)

The nurse reviews the client's current assessment data.

- For each assessment finding, click to specify if the finding is anticipated or not anticipated.

Findings	Anticipated	Not anticipated
Color	o	o
Respirations	o	o
Heart Rate	o	o
Temperature	o	o

Multiple choice matrix
5 points possible
0/1 grading rule applies

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Drag and Drop Trend

The nurse care for a neonate at 8 hours of age.

Flow Sheet

Time	0300	0700	1100
Color	acrocyanosis	acrocyanosis	central cyanosis
Respirations	50 breaths/minute, no nasal flaring retractions, or grunting	60 breaths/minute no nasal flaring retractions, or grunting	90 breaths/minute, no nasal flaring retractions, or grunting
Heart Rate	120	128	142
Temperature	97.7°F (36.5°C)	98.9°F (37.3°C)	98.°F (37.°C)

The nurse reviews the client's assessment data.

- Drag from the word choices to fill in the blanks of the following sentence.

The client most likely is displaying symptoms of [ ] evidenced by the [ ] and the [ ]

Conditions	Findings
Sepsis	Color changes
Pneumothorax	Heart rate increase
Congenital heart	Tachypnea without distress
Respiratory distress syndrome	Elevated respiratory rate

Drag- and –drop rationale

2points possible

Rationale rule applies

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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, R10, BP 100/52, pulse oximetry 88% on room air.

10:15 Naloxone nasal spray given in rt nostril. P 56, R10, BP 96/54, pulse oximetry 90% on room air. Oxygen started at 2L per nasal cannula.

10:18 Naloxone nasal spray given in Lt nostril. P66, R12, BP 100/60, pulse oximetry 95% on on 2L O2. Client is more alert.

10:35 Client is alert, oriented, but anxious. States he feels achy. Pupils moderately dilated. Slight tremors noted. Skin is warm and dry. Weaned off oxygen. T 98.6°F (37°C), P 105, R 16, BP 120/80, pulse oximetry 96% on room air.

The nurse monitors the client after administering two doses of naloxone.

Practice: What questions might you ask for this trend item?

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Nurses' Notes

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10:15 Naloxone nasal spray given in rt nostril. P 56, R10, BP 96/54, pulse oximetry 90% on room air. Oxygen started at 2L per nasal cannula.

10:18 Naloxone nasal spray given in Lt nostril. P66, R12, BP 100/60, pulse oximetry 95% on on 2L O2. Client is more alert.

10:35 Client is alert, oriented, but anxious. States he feels achy. Pupils moderately dilated. Slight tremors noted. Skin is warm and dry. Weaned off oxygen. T 98.6°F (37°C), P 105, R 16, BP 120/80, pulse oximetry 96% on room air.

The nurse monitors the client after administering two doses of naloxone.

- Which findings would indicate the client may be experiencing opiate withdrawal after receiving naloxone? **Select all that apply.**

1. Anxiety [✓]
2. Pain [✓]
3. Pupils [✓]
4. Tremors [✓]
5. Heart rate [✓]
6. Blood pressure
7. Skin

Practice: Possible Answer

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Questions about Trends?

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Practice

- There are 3 case studies with data at 2 time points
  - Newborn with congenital heart
  - Mental Health client who develops neuroleptic malignant syndrome
  - Young adult with compartment syndrome
- In your group, select 1 case and use the template to write.
  - 1 bow-tie question
  - 1 trend drop-down rationale question

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Debrief

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