Maryland NextGen Test Bank Project

UNIVERSITY of MARYLAND
SCHOOL OF NURSING
MARYLAND NURSING
WORKFORCE CENTER

Presenters

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Disclaimer

- This project was funded through a Maryland Higher Education Commission Nurse Support II (NSPII) grant, # 20-125.

- Drs. Billings and Hensel served as colleague consultants on the project

Background

- The Maryland Nursing Workforce Center received a request from the Maryland Council of Deans and Directors of Nursing Schools to assist in providing training and resources to assist nursing school faculty in developing NextGen NCLEX exam questions.

- The overall goal of the project was to *Prepare nursing students in Maryland to pass the licensing exam and enter the workforce as Registered Nurses*

Goals of Project

◈ 1. Develop a test bank of NGN test items for use by the faculty and students at 28 schools of nursing in Maryland

◈ 2. Prepare one designated faculty from each school who would:

   ◈ Attend a remote workshop to learn how to write NextGen test items

   ◈ Write 3 NGN type items to be included in the test bank

   ◈ Attend an on-site workshop to obtain peer review, to revise and to finalize test items to be included in the test bank

   3. Integrate test questions into teaching, learning, and assessment activities of appropriate courses

Project Logistics

◈ Project goals, objectives and timelines developed with consultant colleagues

◈ Solicitation of limited number of faculty volunteers from all schools of nursing in Maryland

◈ Workshops provided to assist volunteer faculty members in understanding the NCSBN Clinical Judgment Measurement Model (NCJMM), how to write case studies, and, how to write assessment questions following the NCJMM

◈ Case studies and assessment questions reviewed by peers, posted to Maryland Nursing Workforce Center website (https://www.nursing.umaryland.edu/mnwc/)

◈ Mid-Project evaluation, Final-project evaluation

◈ Test bank case studies and questions open source for all to use

Developing the Test Bank

Train-The-Trainer Model

◈ 20 faculty from 13 Maryland RN programs trained as champions

◈ Champions wrote NGN-style items for the open access resource created to support teaching clinical judgment

◈ Training took place in 2 web and 1 face-to-face session followed by one-on-one mentoring from project team

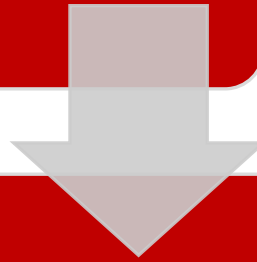◈ Champions then trained peers on item writing and test bank use

Project Framework
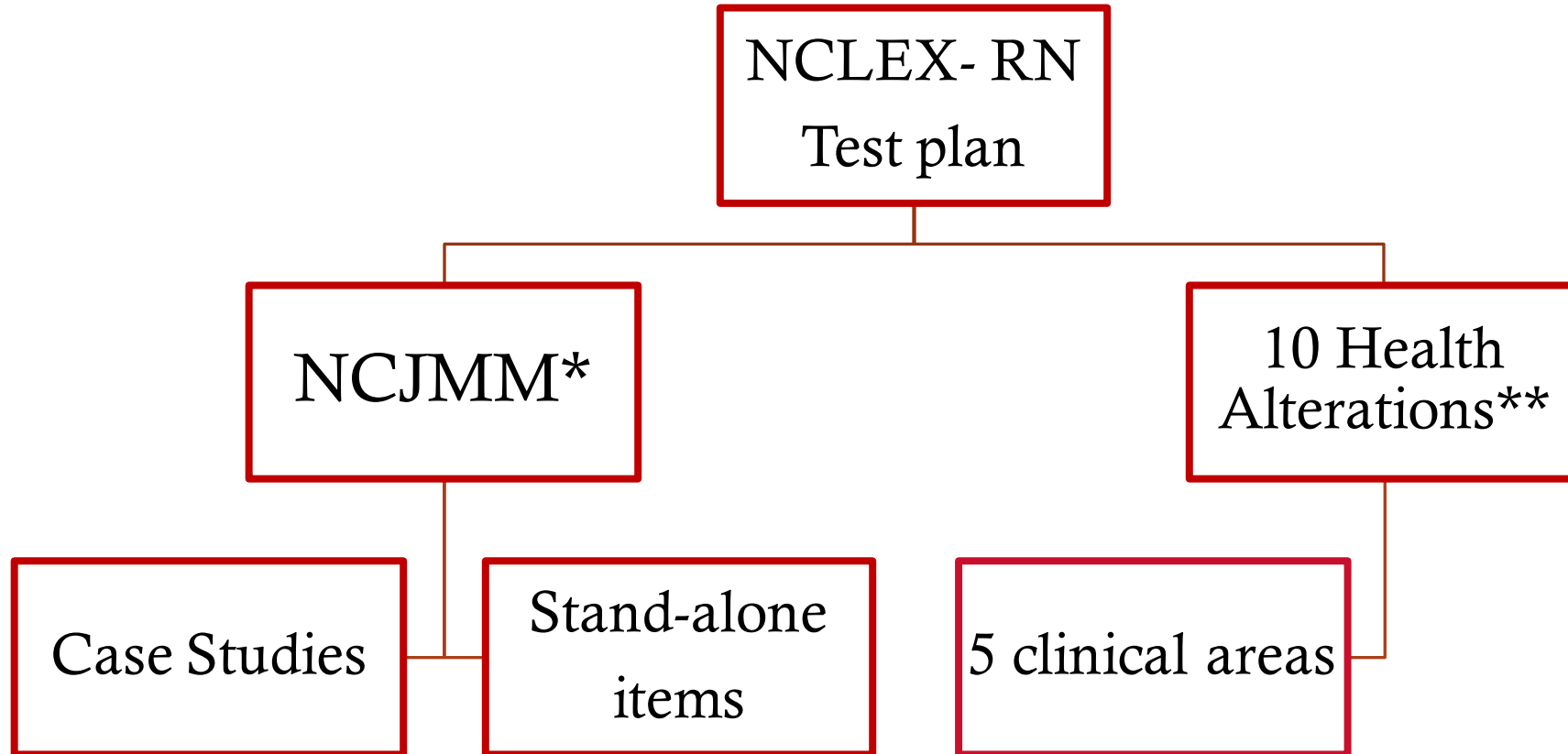
* NCSBN Clinical Judgment Measurement Model (NCSBN, 2019)
** Health alterations reported in NCLEX Reports Mountain Measurement Inc.

Project Tools

Clinical Judgment Case Study
Template for Prelicensure Programs

Qualtrics® TM (Provo, Utah)

Template Components

Planning

EMR

Item options

CJCST template (Hensel 2022) was developed based on multiple sources including NGN news and NCBSN Publisher Summit (Peterson et al., 2020)

Item Displays

Multiple Response Matrix

☐ For each client finding click to specify whether the finding is consistent with compartment syndrome, inhalation injury, or distributive shock. Each assessment may support more than one condition. Each column must have at least one. finding

	Compartment syndrome	Inhalation injury	Distributive shock
Urine output	☐	☐	☐
Tachypnea	☐	☐	☐
Blood pressure	☐	☐	☐
Peripheral edema	☐	☐	☐
Pain	☐	☐	☐

Multiple Response Grouping

Select the orders from each of the category the nurse anticipates including in the plan of care. Each category may have more than one order.

NURSING

☐ discard blood tubing
☐ insert indwelling catheter
☐ obtain blood cultures
☑ stop transfusion

MEDICATIONS

☐ acetaminophen
☐ diphenhydramine
☐ epinephrine
☐ furosemide

Drop-down

Complete the sentence from the list of drop-down options.

The client is at most risk for complications associated with

[inhalation injury. ▾]

The client care priority is to

[▾]

assist with intubation.
increase fluids.
relieve compression.

More Item Displays

Highlight

University of Maryland Baltimore

Case Study Question 1 of 6
A 26-year-old woman presents in the emergency department with a sudden onset of lightheadedness and generalized weakness of the left lower and upper extremities.

Click to highlight the findings that require immediate follow-up.

Nurses' Notes
1100: A 26-year-old female of Latin descent presents to the emergency department with lightheadedness, generalized weakness of the left lower and upper extremities, and a sudden headache after completing a 2.5-mile sprint. Reports some nausea but no vomiting. Thinking she was dehydrated from her exercise, she drank about a liter of water and self-administered 500 mg of acetaminophen for pain with no improvement. She reports the symptoms began at approximately 0900. No significant previous medical or surgical history. Takes an oral combined hormonal contraceptive. Occasionally drinks 3-4 glasses of wine a week and vapes with e-cigarettes daily.
Continuous cardiac monitoring initiated, per protocol. Heart rate is 99 bpm, blood pressure is 160/100. She is awake and alert and can make her needs known. Voiding clear-yellow urine; abdomen is soft with bowels sounds in all quadrants. Reports increasing numbness to the left side and upper and lower extremities.

Drag-and-drop

The client is diagnosed with an ischemic stroke.

Drag the 1 most appropriate word phrase from the choices to fill in the blank of the following sentence.

Items

Improving fluid and electrolytes

Supporting proper body alignment

Promoting nutrition and dietary needs

The top priority for this client is
① Restoring cerebral perfusion

Bowtie (Modified)

From the list of choices drag the 1 condition that the client is most likely experiencing to the box on the right.

Items	**1 condition most likely experiencing**
Hypoperfusion syndrome	
Hypovolemic shock	
Ischemic stroke	
Meningitis	

Drag 2 actions the nurse should take to address that condition to the box on the right.

Items	**2 Actions to take**
Administer morphine	
Bolus intravenous fluids	
Give supplemental oxygen	
Initiate code stroke	
Initiate seizure precautions	

Drag 2 parameters the nurse should monitor to assess the client's progress to the box on the right.

Items	**2 Parameters to monitor**
Blood pressure	
Level of consciousness	
Patency of airway	
Serum glucose	
Range of motion	

Item Development Process

Champions select 2 topics → Write a case study & stand-alone for each during 2 web sessions → Submit to project team for feedback → Revise

Submit for peer-review At face-to-face session → Revise → Submit to project team → Revise as needed

Project team uploads to Qualtrix → Final check by champion → Posted on MNWC website → Corrections made as needed
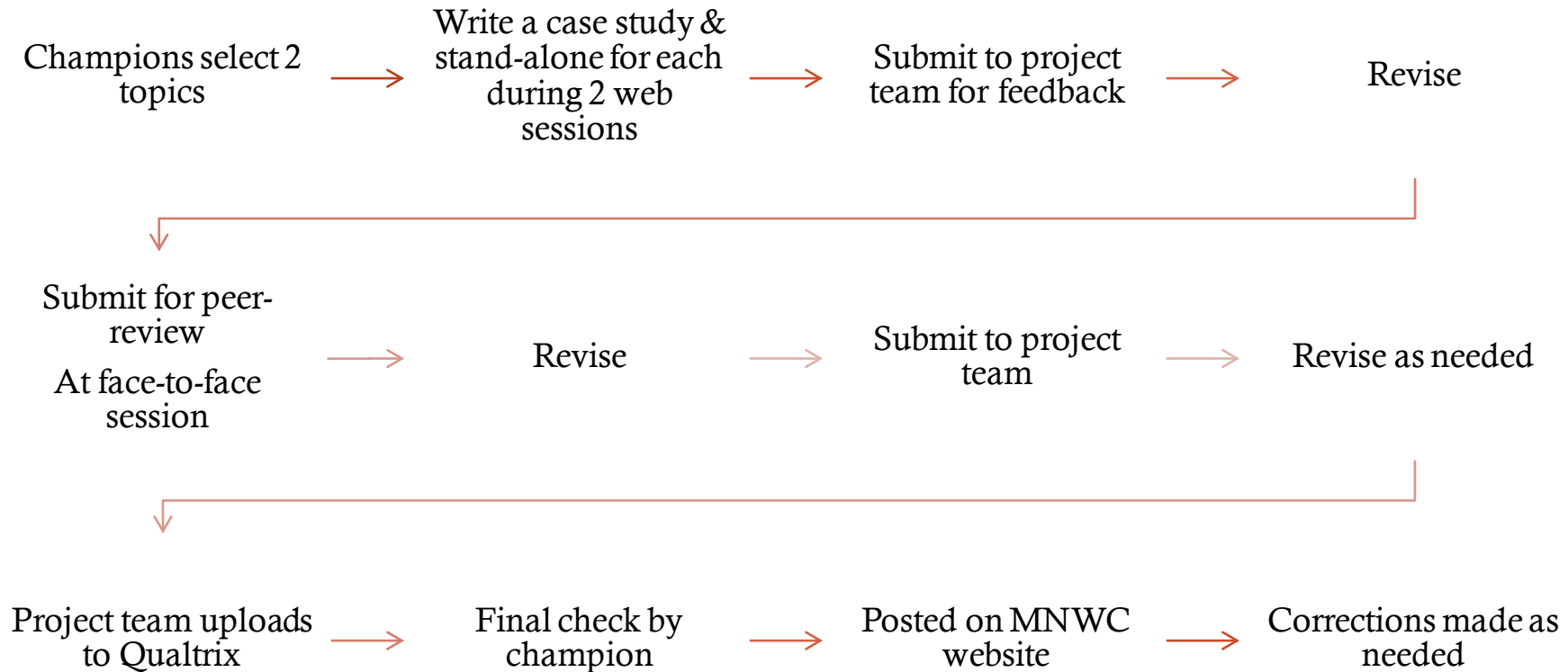
Final 54 Topic Distribution

Health Alteration	Fundamentals	Pediatrics	Maternity	Med/surg I	Med/surg II	Mental Health
Cardiovascular	DVT I	Sickle-cell	Postpartum hemorrhage	Heart failure DVT II	Chest pain/MI	
Endocrine/ Metabolic		Diabetes/ hypoglycemia	Neonatal Jaundice	Ketoacidosis	Thyroid storm	Neuroleptic malignant syndrome
Gastro-intestinal		Diarrhea		GERD	Liver failure	Eating disorders
Reproductive			Ectopic pregnancy	Prostate cancer		
Integumentary/ Musculoskeletal	Pressure ulcer Home safety/fall risk (I&II)			Compartment syndrome Spine surgery	Burns	Tardive dyskinesia
Immune	Transfusion reaction	Anaphylaxis		Tuberculosis	HIV	
Nervous/Sensory		Febrile seizures	Preeclampsia		Stroke	Depression/ECT Substance withdrawal
Psychosocial Behaviors	Post-op pain	ADHD	Intimate partner violence			Suicide prevention PTSD Alzheimer's/ dehydration
Renal/Urinary	CAUTI			Dialysis COPD (I &II)	UTI with delirium Pneumothorax	
Respiratory	Post-op atelectasis		Neonatal RDS	Asthma	ARDS	Opioid overdose

Using Case Studies & Stand-alone Items

Faculty select case from MNWC website → Faculty decide how to use the case → Faculty give students QR code or URL

Students answer items → Students download response summaries → Faculty give students answers

Maryland Nursing Workforce Center Web

Template Posted on MNWC Website

Maryland Next Gen NCLEX Test Bank Project
September 1, 2022

Case Study Topic: (& stand-alone trend)	Acute respiratory failure	Author:	Kadriyya Clark DNP, RN, CNE Community College of Baltimore County

Case Summary

The case involves a 78-year-old female who is admitted to the ICU in respiratory distress and ultimately needs mechanical ventilation. The nurse monitors the client's vital signs, selects appropriate interventions and evaluates outcomes of care to determine if the client is improving or not.

Objectives

1. Recognize signs and symptoms of respiratory failure
2. Recognize trends and changes in client's condition and intervene as needed
3. Monitor and care for clients on a ventilator
4. Implement interventions to manage recovery from an illness
5. Evaluate outcomes of care

Case Study Link	Case Study QR Code
https://umaryland.az1.qualtrics.com/jfe/form/SV_efwJseK51WitIIm	
Trend QR Code	**Trend Link**
	https://umaryland.az1.qualtrics.com/jfe/form/SV_6ruyAZEcS7fU7pI

Case References

Hinkle, J., & Cheever, K. (2018). *Brunner & Suddarth's textbook of medical-surgical nursing.* (14th ed.). Philadelphia, PA: Lippincott, Williams, & Wilkins.

Case Study Question 1 of 6

The nurse cares for a 78-year-old female admitted to the medical intensive care unit in respiratory distress.

Nurses' Notes

0900. Client was admitted to the ICU in respiratory distress after minimal response to high flow oxygen for a pulse oximeter reading of 83% in room air. Crackles heard bilaterally in lower lobes with diminished breath sounds in right middle lobe; S1S2 auscultated; bowel sounds positive in all 4 quadrants; skin warm dry and intact. VS T 99.8F(37.7C); HR 110; RR 30 bpm; B/P 168/90; pulse oximeter is 87% on 100% non-rebreather; pain-0/10.

Laboratory Report

Lab	Results	Reference range
ABG pH	7.2	7.35-7.45
ABG PO_2	75 mm Hg	75-100 mm Hg
ABG PCO_2	51 mm Hg	35-45 mm Hg
ABG HCO_3	28 mEq/L	22-26 mEq/L
WBC	35,000 cells/mm³	$4.5 - 10.5 \times 10^3$ cells/mm³
Platelets	250,000/ mm³	140,000 to 450,000/ mm³
Potassium(serum)	4.0 mEq/L	3.5 to 5 mEq/L
Sodium (serum)	140 mEq/L	135 to 145 mEq/L
Magnesium	1.5 mEq/L	1.5 to 2.1 mEq/L
Lactate level	4.5 mEq/L	0.5 to 2.2 mEq/L
Blood culture	Gram negative cocci	negative
Urine culture	pending	negative
Sputum culture	pending	negative

> Which 4 findings are **most urgent**?
- ☐ B/P 168/90
- ☐ WBC 35,000 cells/mm³
- ☐ Lactate 4.5 mEq/L
- ☐ Ph 7.2*
- ☐ PCO2 50 mm Hg*
- ☐ PO2 75 mm Hg
- ☐ Respiratory rate 30 bpm*
- ☐ Gram negative cocci
- ☐ Pulse oximeter 87%*

Scoring Rule: 0/1

Rationale: The client has signs and symptoms of infection and respiratory failure. The most urgent findings are related to respiratory failure. Those include a pH of 7.2 indicating an acidic state, PCO2 > 50, tachypnea (rr 30 bpm), and a pulse oximeter reading of 87% on high flow oxygen. The blood pressure is elevated but is not yet critical.

Faculty give permission to modify items for teaching purposes.

Using Qualtrics

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In this case study, you will answer 6 Next Generation NCLEX style questions. Click the Next arrow at the bottom of the screen to advance to the next question. You must answer each question before advancing to the next question. Backtracking is not allowed. Download your answer summary after answering the last question. Follow instructions you have been given for reviewing or submitting the answer summary.

→

Qualtrics survey tool includes options for multiple response, matrix, highlight, drag-and-drop, & drop-down items.
Items can be taken by anyone with a URL or QR code

UNIVERSITY *of* MARYLAND
BALTIMORE

Case Study Question 1 of 6

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WBC	35,000 cells/mm^3	4.5 – 10.5 x 10^3 cells/mm^3
Platelets	250,000/ mm^3	140,000 to 450,000/ mm^3
Potassium(serum)	4.0 mEq/L	3.5 to 5 mEq/L
Sodium (serum)	140 mEq/L	135 to 145 mEq/L
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Which 4 findings are most urgent?

- ☐ B/P 168/90
- ☐ WBC 35,000 cells/mm3
- ☐ Lactate 4.5 mEq/L
- ☑ Ph 7.2
- ☑ PCO2 50 mm Hg
- ☐ PO2 75 mm Hg
- ☑ Respiratory rate 30 bpm
- ☐ Gram negative cocci
- ☑ Pulse oximeter 87%

→

Student Download Final Response Summary

Below is a summary of your responses   Download PDF

You will answer 1 Next Generation NCLEX style standalone clinical judgment question. Download your answer summary after answering the last question. Follow instructions you have been given for reviewing or submitting the answer summary.

The nurse is caring for a 67-yr-old male with history of alcohol use disorder and cirrhosis admitted to the medical-surgical unit.

Nurses' Notes

DAY 1 1000. Admitted with ascites and confusion; oriented to person only. Has 25-yr history of alcohol use disorder, mild hypertension, and gastroesophageal reflux disease. Drowsy and dozing off and on, mildly dyspneic, appears thin and malnourished; somewhat agitated answering questions. States has not had a drink in a few weeks; sister who accompanied him notes recent drinking binge a week ago. Placed on oxygen 2 L per nasal cannula. Bulging flanks and peripheral edema noted. Bloodwork sent to lab. Admission weight 142 lbs (64.5 kg).

Vital Signs

Time	Day1: 1000
Temp	98.4F/36.8C
P	85
RR	22
B/P	142/72
Pulse oximeter	92% on 2L NC
Glasgow Coma (3-15)	12
Abdominal girth	95 cm/37.5in

Medications

Medication	Dosage/Frequency/ Route	Time		
metoprolol XL	50 mg daily	1000		

Laboratory Report

Lab	Results	Reference range
BUN	22 mg/dL	10-20 mg/dL
Glucose (fasting)	70mg/dL	Normal ≤ 99 mg/dL
Ammonia	94 mcg/dL	10-80 mcg/dL
Albumin	3.2g/dL	3.4-5.4 g/dL

From the list of choices drag the 1 condition that the client is most likely experiencing to the box on the right.

Items
- Esophageal varices
- Acute cholecystitis
- Acute alcohol intoxication

1 condition most likely experiencing
- 1 Hepatic encephalopathy

Drag 2 actions the nurse should take to address that condition to the box on the right.

Items
- Request order for sedative
- Administer IV furosemide
- Educate patient about alcohol cessation

2 Actions to take
- 1 Administer lactulose
- 2 Institute safety precautions

Drag 2 parameters the nurse should monitor to assess the client's progress to the box on the right.

Items
- Serum glucose
- Serum creatinine
- Blood pressure

2 Parameters to monitor
- 1 Neurologic status
- 2 Serum ammonia

Faculty Give Answers

The parent brings a 6-year-old male child to the emergency department with new symptoms after completing treatment for strep throat.

Nurses' Notes

0800: Parents report the child developed fatigue, loss of appetite, and a headache yesterday. Today they noticed the child's face was swollen, and his urine output was decreased. History includes recently completing 8 days of amoxicillin for strep throat but ended treatment 2 days early when symptoms improved. Child was previously healthy, taking only multivitamins daily. Parent tried having the child increase his intake of fluids, but the output did not change, and his urine is now tea-colored. Vital signs: T-98.2 F (36.78C), HR 110, RR 22, B/P 128/80, pulse oximeter 99% on RA, pain scale of "3." Periorbital edema present. Child placed in treatment room. Connected to cardiac and pulse oximeter monitor. Labs drawn.

The nurse suspects poststreptococcal glomerulonephritis and considers the child's risks.

➢ Which of the following complications is the client at risk for experiencing? Select all that apply

☐ Bowel obstruction
☐ Heart failure*
☐ Diabetes
☐ Liver failure
☐ Fluid overload*
☐ Acute renal failure*
☐ Adrenal insufficiency
☐ Hypertension*

+/-. This question is worth 4 points. Give yourself 1 point for each correct response AND subtract 1 point for each incorrect response you selected. The least you can score is 0.

Rationale

◈ The child is at risk for fluid overload leading to hypertension and cardio-pulmonary congestion leading to heart failure. Untreated the decreased urine output, hematuria, and high blood pressure can lead to renal failure. Gastrointestinal, endocrine, and hepatic complications are not known ramifications of poststreptococcal glomerulonephritis.

Mini Reviews

- Created after mid-project evaluation

- PowerPoint presentations of case studies and standalone items with answers and rationales
  - Fundamentals
  - Pediatrics
  - Mental health
  - Maternity
  - Medical-surgical
  - Combined

Case Study # 1

URL	QR Code
https://umaryland.az1.qualtrics.com/jfe/form/SV_8cQvohVkmgfi6Wy	
Take about 10 minutes	

Rationale

The blood pressure for an 8- year-old should be less than 120/80. The history of recent strep throat, blood pressure, periorbital edema and changes in urine output are the most significant findings because they suggest the child has...

Evaluation of Project

Stufflebeam's CIPP Model
as Framework for Evaluation

◈ **C**ontext evaluation= Clarifies the needs of intended beneficiaries (faculty and students)

◈ **I**nput evaluation = evaluates how the project plan worked (design of the study)

◈ **P**rocess evaluation= monitoring program activities and progress (mid project evaluation)

◈ **P**roduct evaluation= determines program's impact, effectiveness and sustainability (findings and outcomes)

Evaluation Questions

1. Were Champions and their faculty and students able to access the questions in the Maryland Next Gen Testbank?

2. Did students know how to use a clinical judgment model to answer NexGen test questions?

3. Did Champions teach their faculty to write NextGen questions for use in their own courses?

4. Which strategies did the *faculty* at the Champion's school use to integrate NextGen test items into their courses and student preparation for the NCLEX exam?

5. Were the NextGen Testbank questions integrated into "student success programs" or "licensing exam preparation programs"?

6. Do faculty believe their students are prepared to take the NCLEX?

Methods

- **Data Collection**: Survey with closed- and open-ended questions; informal communication; ongoing monitoring of the project

- **Data Analysis**:

  - 1. Descriptive statistics (frequencies, percentages, means)

  - 2. Qualitative data: open ended responses; personal communication from champions;

- **Limitations**:

  - 1. 15/20 (75%) responded. Small numbers of participants, but acceptable rate.

  - 2. Some schools had more than 1 champion potentially responding.

  - 3. Participants responding from their experience with only the faculty they were working with.

Findings and Implications

Access to NGN Testbank

Were Champions and their faculty and students able to access the questions in the Maryland Next Gen Testbank?

◈ Findings

◈ Directions were clear.

◈ Holding information sessions was a helpful strategy

◈ Link was easily accessible.

◈ Students could access and use as instructed by faculty.

◈ Implications

◈ Ease of access increases likelihood of using the questions.

Students Knowledge of a Clinical Judgment Model
Did students know how to use a clinical judgment model to make clinical judgements?

◈ Findings

◈ 22% faculty believed students knew how to use a CJ Model; 66% faculty believed students somewhat knew how to use a CJ model; 11% were uncertain.

◈ Implications

◈ Knowing how to make clinical judgment is foundation for answering questions and for safe nursing practice

◈ Faculty must know the NCJMM and teach FULL process

◈ Many models of CJ, but students need to know the NCJMM.

◈ Step 3 (prioritizing hypotheses) is an important step and difficult to write and answer.

Students Knowledge of Answering NGN Questions

Do students at your school know how to answer NextGen type questions using a Clinical Judgment Measurement Model?

⬥ Findings

- 78% faculty believed that students knew how to answer NGN questions to some extent; 11% did not know; 11% believed students did NOT know how to answer NGN Questions

⬥ Implications

- Faculty should understand the extent of their students' ability to answer NGN questions and implement preparation strategies as needed.

- Teaching CJ and test taking strategies is a curriculum issue; ability to make CJ is a program outcome

Did Champions Teach Their Own Faculty How to Write NGN Questions

Did Champions teach their faculty to write NextGen questions for use in their own courses?

◈ Findings

◈ All champions taught their faculty to write questions.

◈ Most used a test item peer review process consistently (27%) or some of the time (47%)

◈ Implications

◈ 1. Train-the-trainer models are efficient and cost effective for teaching NGN item writing.

◈ 2. Peer review of test questions improves validity and accuracy

◈ 3. Writing NGN test questions is time consuming….~ 20 hours/case study

Integration of Teaching Strategies

Which strategies did the *faculty* at the Champion's school use to integrate NextGen test items into their courses and student preparation for the NCLEX exam?

◈ Findings

◈ Strategies (*=most used)

◈ As a pre-class/clinical assignment

◈ During a lecture, discussion, or clinical post conference ***

◈ In class as collaborative group work *

◈ In class/clinical using teaching prompts *

◈ Having students write their own questions from a case scenario or clinical experience

◈ As a follow up to an in-class session **

◈ In class to teach students how to answer them **

◈ Using matrix questions to help students learn to organize client data *

◈ Using a care plan or concept map

◈ Using visual aids/visual prompts to teach students the clinical judgment model **

◈ Debriefing in simulation

Integration of Teaching Strategies

Which strategies did the *faculty* at the Champion's school use to integrate NextGen test items into their courses and student preparation for the NCLEX exam?

◈ Implications

◈ 1. Practice questions can be used in a variety of ways.

◈ 2. Most strategies can be used the classroom, clinical or simulation; online or on campus.

◈ 3. Teaching strategies can be used before, during or after a class/clinical/simulation.

◈ 4. Teaching strategies can be "faculty-facilitated" or used by students in groups or alone.

◈ 5. Test questions can be assigned for students to complete on their own (give points or not).

◈ 6. Using "Mini Reviews" as available in the Maryland Testbank is an effective strategy for student individual use; could use as an assignment where students self-report use.

◈ 7. Test items used for teaching can also be used for assessment (feedback)

◈ 8. Teaching strategies must focus on the **full** NCSBN NCJM—it is a PROCESS

◈ 9. Test items in Maryland Test Bank are not secure; consider risk of using for grading

Integration of NGN Questions into Ongoing NCLEX Exam Prep Activities at the School

Were the NextGen Testbank questions integrated into "student success programs" or "licensing exam preparation programs"?

◈ Findings

◈ 1. 10/15 respondents have integrated questions into ongoing programs; 5 plan to do so.

◈ Implications

◈ 1. Questions now developed can be integrated into ongoing sessions to prepare students for test taking, making clinical judgments, learning to apply content to clinical thinking

◈ 2. Faculty can seek opportunities to embed questions in many ways (ok to use the same question many times!)

Estimate of Student Preparation for NCLEX Exam

Do faculty believe their students are prepared to take the NCLEX?

◈ Findings

◈ Students are well prepared (13%); somewhat prepared (33%)

◈ Implications

◈ 1. Important to monitor preparation

◈ 2. Use resources to gauge readiness for exam…student's own estimate; data for program planning

◈ 3. Review curriculum for opportunities to prepare students to make clinical judgments

Conclusions

What we learned

◈ The Maryland Next Gen Test bank is a groundbreaking, open access collection of case studies and stand-alone items based on the NCJMM

◈ The train-the-trainer model provided a way to embed expertise and resources within many of the Maryland schools of nursing

◈ This resource has given many faculty the ability to access teaching materials using the Next Gen NCJMM without extensive preparation time

◈ This resource is being used by faculty across the country

◈ This resource is being used by students across the country

References (1)

◈ Hensel, D. (2022). *The clinical judgment case study template for prelicensure programs version 2.1* [unpublished manuscript]. Hensel Nursing Education Consulting; Dorset, Vt.

◈ Hensel, D., & Billings, D. M. (2020). Strategies to teach the National Council of State Boards of Nursing clinical judgment model. Nurse Educator, 45(3), 128-132. https://doi.org/10.1097/NNE.0000000000000773

◈ Hensel, D., & Billings, D. M. (2023). Creating a peer review process for faculty-developed next generation NCLEX items. Nurse Educator, 48(2), 65-70. https://doi.org/10.1097/nne.0000000000001322

◈ Mountain Measurement, Inc. (2019). 301 Using the NCLEX® test plan & content dimensions to understand the challenges & opportunities identified by the NCLEX® program reports. Mountain Measurement Faculty Development Series. Author.

◈ National Council of State Boards of Nursing (Winter, 2019). Next generation NCLEX®: Clinical judgment measurement model. *Next Generation NCLEX News* Chicago, IL: Author. https://www.ncsbn.org/public-files/NEXT_GEN_Winter19.pdf

◈ Nielson, A, Gonzales L. Jesee, MA, Monagle J, Dickison P, Lasater K. (2023). Current practices for teaching clinical judgment: results from a national survey. Nurse Educator, 48(1): 7- 12. https://doi.org/10.1097NNE0000000000001268

◈ Petersen, E., Betts, J. & Muntean, W. (December 2020). Next Generation NCLEX® (NGN) Webinar. Chicago, IL: NCSBN

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◈ Stufflebeam, D. L. (2007). CIPP evaluation model checklist. https://wmich.edu/sites/default/files/attachments/u350/2014/cippchecklist_mar07.pdf