



Creating a Rapid Response Simulation for Nursing Students

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Introduction

- Nurses have a crucial responsibility to initiate appropriate treatments in Rescuing A Patient In Deteriorating Situations (RAPIDS)
- American Association of Colleges of Nursing (2008) acknowledged simulation experiences can increase confidence in psychomotor skills, communication, and professional role development.
- The purpose of thesis is to develop a rapid response simulation for nursing students.



Literature Recommendations

- Research suggest simulations can provide students additional experience with managing deteriorating patients. This experience may be recalled in future clinical practice which can better patient outcomes
 - Schools should implement rapid response simulations in all nursing programs to prepare students for clinical practice.
- Debriefing should occur after each simulation to strengthen the knowledge of students.
- Additional research is needed to examine if simulation with a deteriorating patient can lead to changes in an actual clinical setting.



Sepsis

- Patient deterioration often begins with subtle physiological indicators (Odell, Victor, & Oliver, 2009).
- Sepsis is a life-threatening condition that affects more than 1 million patients a year and is a leading cause of death in the United States (De Backer & Dorman, 2017)
- Surviving Sepsis Campaign released guidelines to assist health care clinicians in managing sepsis through early recognition and treatment, and to improve patient outcomes to decrease mortality rates
- Care bundles may increase patient safety for nursing students (Goodstone, 2015)

**Suspect Sepsis.
Save Lives.**





Approach

- National League for Nursing (NLN) Jeffries Simulation Theory will be the framework for this thesis
- Prepare Pre-Simulation Materials
 - SIRS and Sepsis criteria/definitions
 - Surviving Sepsis Campaign; Hour 1 bundle
- The California Simulation Alliance (2020) simulation template will be utilized to develop the simulation
- Expert Review
- Trial Rapid Response Simulation (unable to trial due to COVID)
 - Plan was simulation would be optional for students in their capstone quarter to count for preceptorship hours
- Evaluation: Simulation Effectiveness Tool - Modified (SET-M),

Simulation Design

Simulation Design Template

(Matt Smith) Simulation # 2021

Date:
Discipline: Nursing Students
Expected Simulation Run Time: 15
Location: BIMSON
Today's Date:

File Name: Sepsis Rapid Response
Student Level: Final quarter MEPN
Guided Reflection Time: Twice the amount of time that the simulation runs (30)
Location for Reflection:

Brief Description of Client

Name: Mr. Matt Smith
Date of Birth: 2/17/1950
Gender: Male **Age:** 70 **Weight:** 210 **Height:** 5'7"
Race: TBD **Religion:** TBD (We usually allow faculty to assign race & religion)
Major Support: Wife (Susan) **Support Phone:** (883)465-2934
Allergies: Morphine **Immunizations:** UTD, has not received pneumococcal vaccine
Attending Provider/Team: Dr. Grey/Hospitalist
Past Medical History: Hyperlipidemia, Type 2 Diabetes Mellitus, Hypertension
History of Present Illness: Pt came in for 3 days of shortness of breath (SOB) and chills.
Social History: Lives at home with wife, two adult children.
Primary Medical Diagnosis: Community Acquired Pneumonia in the Lower Left Lobe (LLL)
Surgeries/Procedures & Dates: Right knee replacement (2010)

Insure consistency of data that should not change (e.g. birth date) and change patient data when appropriate (e.g. weight of patient if it is expected to increase or decrease as case unfolds.)

Scenario Development

Scenario Progression Outline

Patient Name: Matt Smith

Date of Birth: 2/17/1960

Timing (approx.)	Manikin/SP Actions	Expected Interventions	May Use the Following Cues
0-5 min	<p>-Pt is sleeping in bed with increased work of breathing, respiratory rate is 22-24 per minute.</p> <p>-Vitals: O2:86% on 2L NC, HR 90. Temp 37.4, BP 101/60. R 22</p> <p>-Patient is hard to awaken. Only arouses once students gently move patient.</p> <p>-Crackles in LLL (Left Lower Lobe)</p> <p>-Pt only knows name and the year when asked orientation <u>questions</u>. "Matt Smith... it is 2020".</p>	<p>Learners should begin by:</p> <p>-Performing hand hygiene</p> <p>-Awaken patient for assessment</p> <p>-Confirming patient ID/assess orientation (Can you tell me your name and date of birth? Do you know what today is? Where are we at right now?)</p> <p>-Ask how the patient is feeling</p> <p>-Take vital signs, place patient on oxygen monitor once they notice decreased oxygen levels, increase flow of NC (Students can increase to 4L, max is 6L)</p> <p>-Auscultate breath sounds</p> <p>-Administer prn albuterol</p> <p>-Students can call Respiratory Therapy if they need assistance</p>	<p>Role member providing cue: Facilitator – cue only if needed</p> <p>Cue:</p> <p>"You can wake the patient for an assessment"</p> <p>"How are his breath sounds?"</p> <p>"He seems to be breathing fast, are his vitals stable?"</p>
5-10 min	<p>-Pt starts to further deteriorate mentally, requires more stimulation for patient to respond.</p> <p>-HR increases to 105 Oxygen level now 92% after additional oxygen (whichever amount student chose to apply) RR 24, BP 98/62. Temp 38.2</p> <p>-Increased rate of respirations and labored</p>	<p>Learners are expected to:</p> <p>-Identify abnormal vital signs as SIRS criteria (Increased HR, RR, Temperature)</p> <p>-Call for assistance from RRT, give SBAR</p> <p>-SBAR to provider (facilitator) with concerns, student recommend initiating the SIRS protocol and drawing labs including lactic acid</p> <p>-Draw labs for SIRS alert</p>	<p>"What do you think is going on with this patient?"</p> <p>"Should a new set of vital signs be taken?"</p> <p>"The SIRS alert fired once vitals were entered in the chart"</p> <p>"Has the provider and RRT been notified?"</p>

	<p>breath sounds and from mannequin</p> <p>-Pt coughs intermittently.</p>	<p>(CBC, BMP, Lactic Acid, and Venous Blood Gas)</p> <p>-Notify Charge Nurse about patient's status</p>	<p>Provider asks for recommendations</p>
10-20 min	<p>(Facilitator states 30 minutes has passed since the labs were drawn)</p> <p>-Pt now somnolent, not responding to touch.</p> <p>Vitals: HR 121, RR 30 O2 91%, Temp 38.5 BP 94/59 (MAP 71)</p> <p>-Phone call from lab: Lactic Acid 3.1, and WBC 17.4</p>	<p>Learners are expected to:</p> <p>-Identify patient meets Sepsis criteria</p> <p>-SBAR to notify provider and RRT of results</p> <p>-Students recommend elements in Sepsis 1 hour Bundle</p> <ul style="list-style-type: none"> Administer IV fluids bolus Draw blood cultures x2 Start IV antibiotics Monitor Vitals-place on continuous pulse oximetry Repeat Lactic Acid in 2 hours <p>-Students can also recommend urinalysis, chest X-ray</p> <p>-Administer Tylenol prn fever</p> <p>-Bedside nurse calls report to ICU nurse</p>	<p>-Provider on the phone asks student if they have any recommendations</p> <p>-RRT nurse calls, "I saw the lab result, this patient has met sepsis criteria. What interventions have been started?"</p> <p>- "Have blood cultures been drawn before the IV antibiotics are started?"</p> <p>-Facilitator states a bed is ready in an ICU and to call report</p> <p>Scenario ends when all interventions are completed.</p>



Expert Panel Review

- Included:

- A rapid response nurse responsible for assisting nurses with unstable patients on acute care floors
- Intensive Care Unit (ICU) nurse
- Clinical resource nurse (CNIII) on an acute care floor with over ten years of experience and assists with staff education
- ICU nurse who has created simulations for nursing students



Next Steps

- The next step is for faculty to implement the simulation for Master's Entry Program in Nursing (MEPN) students.
- The completed simulation bundle will be provided to the Instructor of Record (IOR) for the graduate nursing course.



Simulation Bundle

- Includes:
 - Pre-simulation materials to distribute to students prior to the simulation
 - Facilitator tools for pre-briefing,
 - Completed simulation template,
 - Recommended debriefing tools,
 - Checklists to evaluate the simulation from a student and facilitator perspective.

Conclusion

- Thesis: Create rapid response simulation for UCD MEPN students





References

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Questions?

