Pharmacology Classroom to Simulation: A Case Study Approach

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Core Concepts

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Learning Objectives:

- Discuss case studies as an evidenced based learning strategy to increase critical thinking.
- Create simulations based on classroom case studies, derived from program outcomes and learning objectives (LO).
- Discuss the relationship between the Nursing Process (NP) and simulation.
- Develop critical thinking through case studies, pre-simulation activities, and evolving scenario.
- Generate anticipatory thinking/planning with unexpected scenario events.
- Integrate simulation objectives with post-simulation evaluation.
A 70-year-old female came to the hospital 2 days ago for recurrent exacerbation of heart failure. She weighs 158 lbs and is 5’8” tall. She has IV access in her left forearm and is on oxygen at 2 L per nasal cannula. When you assess the patient, she is sitting on the side of the bed and appears to be short of breath. She tells you that she has just returned from the bathroom. She is sweating and her nasal cannula is laying on the bedside table.

Which action should you take first?
A. Replace the oxygen.
B. Take his vital signs.
C. Call the Rapid Response Team.
D. Sit him up in a bedside chair.
During the evening shift, the patient has a bedside echocardiogram which reveals an ejection fraction of 30%.

Based on this finding, which medications might the provider order? (Select all that apply.)

A. Lisinopril (Zestril) 5 mg PO daily
B. Ibuprofen (Advil) 200 PO mg twice daily
C. Multivitamin 1 PO each day
D. Furosemide (Lasix) 20 mg IV push daily
E. Digoxin (Lanoxin) 0.25 mg PO daily

The doctor orders a treatment plan for this patient:
• Start dobutamine 3mg/kg/hr IV
• Furosemide (Lasix) 40 mg IV stat
• Digoxin 0.5 mg orally now, then 0.125 mg every six hours for 3 doses
• ECG before last two doses
• Morphine 2 mg IV now, then every 2 hours PRN
• Oxygen 4L/min NC

Birth of Pharmacology Simulation
Dr. orders: Change furosemide to IV 60 mg/Bid
Continue carvedilol, lisinopril, and K+, all orally with little improvement and in fact this am had
HR: R
Wt. gain 7lbs., 3+ pitting edema, pulse ox @ 91%

Case Study
Julia a 70 year old female, has been in the hospital for 1 wk. for treatment of HF. She is on
carvedilol, lisinopril, furosemide, and K+, all orally with little improvement and in fact this am had
HR: R
Wt. gain 7lbs., 3+ pitting edema, pulse ox at 91%

Group 1
Describe the effects of the medications Julia is receiving for HF.

Group 2
What lab values will you monitor while on Milrinone?

Group 3
Julia is better but c/o “skips”. Is there a concern? What should the RN do?

Pharmacology Simulation: Tailored
- Case Study
- Outcomes
- Transformation
Pharmacology Scenario: CHF

- Julia Insee is a 70 year old female who presents to the Emergency Room with a 2 week history of increasing shortness of breath. Doctor has seen her. She is sitting on the exam table and is short of breath with edematous lower extremities. Telemetry floor has been notified of admit, and they ask if we can wait until after shift change to bring the patient. In the meantime, RN can reassure patient, review medications and history, initiate patient teaching, and discuss reasons for admission. Review Lab values, and medication interactions recommended as topics for inclusion in discussion with patient. It is Saturday at 1430.

- RN report: Need to call report to floor after change of shift.
Questions, Comments???

Conclusions

Elements of Critical Thinking
Critical Thinking Chart Review Form

Simulation Critical Thinking Chart Review

1. What is your focused assessment and what questions do you need to ask?
2. Analyze the patient's labs. List and interpret abnormal findings.
3. Trend the patient's vital signs and I and O. What do you conclude based on the information?
4. Based on the information you have obtained from the chart (flow sheet, medication record, nurse's notes, physician's orders, labs and diagnostic reports, and admission), list and prioritize the concepts.

Chart Review Form Continued

5. Based on the patient's information, what are your assumptions and what is your plan of care for the day?
6. What psychosocial issues affect the patient's discharge? Be specific. Who do you need to involve with the discharge planning?
7. Review the patient's medications. Include mode of action, safe dose, side effects and nursing actions.

Questions, Questions, Questions

Thank You!
References

- Education Management Solutions (2014); info@SIMULATIONIQ.com.