Improving the Patient Experience with Simulation Education

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April 2015
Disclosure
Agenda

- Examine the use of high-fidelity simulation as an education intervention for patients

- Discuss the research findings on patient knowledge, anxiety, length of stay, and satisfaction with high-fidelity simulation education

- Reflect on other unique educational experiences to improve patient satisfaction
About Us

(All data provided by facility management and VA OIG)
Simulation

Imitation is the sincerest form of flattery.

Charles Caleb Colton
Background

• Organizations using Simulation.
  • Aviation, Military, and Healthcare
• CABG surgeries account for the largest number of open heart surgeries performed in the United States
  • In 2009, over 415,000 people received CABG surgery.
  • In 2013 VACT performed 75 CABG surgeries
• Patient specific education about care and treatment.
  • Lack of diverse teaching methods
• ICU experiences.
Heads you get a triple bypass and tails an aspirin and a follow up appointment.
Reflect

- [https://www.youtube.com/watch?v=am1-GW3k4U8](https://www.youtube.com/watch?v=am1-GW3k4U8)
Review of the Literature

- Knowledge
  - Importance of providing education of expected outcomes
  - Safer, in control and better informed

- Anxiety
  - Poor outcomes in surgical patients with increased anxiety
  - Some studies report educational interventions can reduce or increase anxiety

- Simulation
  - Use in military, aviation, physician, and nursing professions.
  - Reduces errors, improves communication and increases confidence and knowledge at no risk to patient
Gaps in the Literature

• Utilizing high-fidelity simulation education for patient education
Research Question

• What is the influence of a high-fidelity pre-operative CABG simulation education intervention, compared to usual CABG education, on Veteran knowledge, satisfaction, anxiety, and length of stay?
Procedures-Experimental Prepost

- IRB approval VACHS & Sacred Heart University.
- Prior to CABG surgery Veterans were asked to join the study.
- A written informed consent was obtained.
- The pretest knowledge quiz, State and Trait anxiety and demographics data was collected after consent.
- Veterans were then assigned to the control or intervention group.
- After both educational interventions the Veterans were given post knowledge quiz, State anxiety and a satisfaction evaluation.
Findings-Knowledge

- Pre-Knowledge
  - No difference in groups before educational intervention occurred ($t (18) = 0.50$, $p = .63$).

- Post-Knowledge
  - Scores of the high-fidelity intervention group were significantly higher than for the usual control education group ($t (10.25) = 7.09$, $p = .0001$).
Findings-Satisfaction

- The high-fidelity intervention group reported being significantly more satisfied with their educational intervention than Veterans attending the usual control educational group, $(t (9.24) = 2.66, p = .03)$. 
Findings—Anxiety

- No significant difference in Trait anxiety of the Veterans between the groups, \( t (18) = 0.47, p = 0.64 \).

- Groups of Veterans did not differ in State anxiety before the educational training session, \( t (18) = 0.73, p = 0.47 \).

- The difference in scores revealed a significant reduction in State anxiety for the Veterans in the high-fidelity intervention educational group in comparison to the usual control educational group, \( t (18) = -2.61, p = .02 \).
Findings-Length of Stay

• Length of stay data was calculated utilizing date of surgery to date of discharge or death.

• There was no significant difference in the length of hospitalization between the two types of educational groups, \( t(18) = .79, p=.44 \).

* Consideration for future studies should include the age of the patient and comorbidities. While no significant changes were noted in length of stay, the age of the simulation group was greater than that of the control group.
Veteran & Family Feedback

Veteran

- “Helped me understand much more than I knew before having this experience. Was well planned and implemented.”

- “Very interesting, need this all the time. A lot of people are scared, this can help them cope. All the nation should be doing this...this is great!”

Family

- “Excellent way to anticipate what is going to happen, it minimizes shock, this was terrific.” - Wife

- “Taking part in the simulation was very helpful in preparing for what to expect when my father comes out of surgery during recovery. It was educational!” - Son
Reflect
Future Recommendations

• Include Family members and significant others

• An additional item may include a cost analysis of utilization of simulation education for different surgeries compared to usual education practices and effects on patient readmission, complications and outcomes.

• Future researchers may also want to evaluate the confidence levels, pain and analgesics use of patients undergoing high-fidelity simulation interventions.
Benefits of Simulation Education

- Increased knowledge.
- Reduce psychological and physical post-operative complications.
- Patient satisfaction.
- Highly valuable means of meeting individual learning needs.
- As a cost savings, guides in illness management and disease prevention.
In Summary

• Diverse teaching methods in patient education benefit overall patient outcomes and satisfaction.
Questions

• Thank you 😊
References

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