

Creative Simulation by Nursing Students in Community Education

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Abstract

Simulation is an educational strategy that is guiding students' ability to learn in a controlled environment. By using simulation in an educational environment learning is tailored to the students, and can also allow for outcomes that are not desired with an actual patient. Distracted driving campaigns have become popular in recent years that attempt to educate the public on the potential fatal outcomes of these behaviors. The authors have taken the concept of simulation and distracted driving education one step further by helping nursing students to educate high school students about the consequences of distracted driving. On stage at two different high schools, nursing students were able to practice nursing skills in attempts to save two victims in a pedestrian-automobile accident due to distracted driving. A total of three assemblies were performed by nursing students over a two year time period. High school students subjective input was obtained using a simple survey after each assembly to ascertain any impact on the student's perception of texting while driving. A majority of students indicated that they either don't text while driving, or that the assembly has made them aware of the consequences of distracted driving, and furthermore that they will not use their phone while driving. By extending simulation into the community it has benefited both the nursing students and the high school students. The nursing students had an opportunity to practice important skills during a live simulation, and also participate in educating high school students on the dangers of distracted driving. The high school students were exposed to a live simulation on the dramatic potential effects of distracted driving.

Background

Simulation is an educational strategy that is guiding students' ability to learn in a controlled environment. By using simulation in an educational environment, learning is tailored to the students, and can also allow for outcomes that are not desired with an actual patient (Nehring & Lehring, 2010). The authors have taken the concept of simulation, and distracted driving education, one step further by helping nursing students to educate high school students about the consequences of distracted driving.

Literature Review

Simulation in nursing education has become a standard throughout the United States and worldwide (Norman, 2012). High-fidelity patient simulation (HFPS) has become popular among nursing schools, but is also an expensive educational cost to programs (Nehring & Lashley, 2010). Dunn et al. (2014) has shown that HFPS can increase self-efficacy among nursing students and thus enhance a student's education. Hayden et al. (2014) recently boosted the confidence in simulation education by showing no significant difference in national pass rates, knowledge, clinical competency, or practice of students who had a substantial portion of their clinical experiences substituted for simulation experiences.

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Distracted driving has become a national concern in recent years with an emphasis on the education of teenage drivers (Decide to Drive, 2014). The CDC (2014) specifies some examples of distracted driving that include the use of cell phones while driving, texting while driving, eating while driving, or any other disturbance that would interfere with driving. Carter et al. (2014) recently found that 92% of teenagers admitted to frequent distracted driving behaviors (DDB), but adolescents think that parents and friends are more actively involved in DDB than themselves. Distraction.gov (2014) lists some compelling statistics regarding distracted driving; The number of people killed in distraction-affected crashes decreased slightly from 3,360 in 2011 to 3,328 in 2012. An estimated 421,000 people were injured in motor vehicle crashes involving a distracted driver, this was a nine percent increase from the estimated 387,000 people injured in 2011. Distracted driving campaigns have also become popular in recent years in attempt to educate the public on the potential fatal outcomes of these behaviors (Carter et al., 2014). There have been many national campaigns to curb the incidences of distracted driving throughout the United States. National campaigns have included government sponsored programs (Distracted.gov, 2014) and private organizations (Decide to Drive, 2014) that help educate drivers on the risks of distracted driving.

Objectives

The authors focused on two main objectives that included: A) How a live simulation on distracted driving in front of a high school audience affected high school students. B) Evaluate how simulation in a community environment impacted nursing students' education.

Methodology

On stage, at two different high schools, nursing students were able to participate in a simulation practicing skills in attempt to save two victims in a pedestrian-automobile accident due to texting while driving. A total of three assemblies in high schools, conducted in the springtime, were performed by nursing students over a two year time period. Nursing students involved in the simulation were interviewed regarding their experience, and high school students subjective input were also obtained using a simple survey immediately after each assembly to ascertain if the simulation had any immediate impact on the student's perception of distracted driving. IRB approval was obtained from the university where the students attended nursing school. All the participants on stage were volunteers consisting of nursing and paramedic students. The nursing students consisted of first and second year nursing students enrolled in an ADN program. The assembly script was created by the authors. Equipment was used to create an emergency room atmosphere on stage that included IV poles, IV tubing, phlebotomy supplies, wound dressing supplies, vital sign monitors, personal protective equipment, moulage, EKG monitors, defibrillators, and beds.

The scenario began with a video clip of an auto-pedestrian accident due to distracted driving. As the video clip ends, spot lights follow paramedics and a victim down the aisle to the stage where a report is given to emergency staff waiting. After the report, the staff assesses the patient and provides care as ordered by the physician. Another patient is also transported to the stage, who was the distracted driver of the vehicle. Emergency personnel assess this patient and provide care as ordered. Due to the extensive trauma to her leg, she receives a blood transfusion and is taken to the operating room for amputation of her leg. The final scene concludes with the patient who was the pedestrian in the accident. Due to the extensive injuries to his chest and internal bleeding, a blood transfusion is started. The patient's heart goes into a fatal dysrhythmia whereupon CPR and defibrillation are began in an attempt to save his life. After several minutes of interventions, the patient is pronounced dead, placed in a body bag and is taken off stage, up the aisle, and out of the auditorium.

The assemblies and news coverage can be found online at the following addresses:

<https://www.youtube.com/watch?v=GqXit7r4QEI>, and

<http://fox13now.com/2014/03/20/dramatization-demonstrates-dangers-of-distracted-driving/>

Results

The survey of high school students, immediately after the assembly, indicated that the assembly made them aware of the consequences of distracted driving, and furthermore that they will not use their phone while driving. The nursing students indicated that the simulation provided a real life medical situation for them to practice, and helped them see that they could make a difference. The nursing students also indicated that the simulation helped improve their skills by practicing in a high intensity simulated arena. These skills included starting IVs, participating in a code, administering simulated blood products, and changing dressings.

Conclusion

Medical simulation in the community is an untapped resource. This potential educational environment is not readily used to educate the public (Norman, 2012). This environment can be a positive reinforcement for medical education. By extending simulation into the community it has benefited both the nursing student and the high school students. The nursing students had an opportunity to practice important skills during a live simulation, and also participate in educating high school students on the dangers of distracted driving. The high school students were exposed to a live simulation on the dramatic potential effects of distracted driving.

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