

Using observational video simulation to improve quality health outcomes

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Background

With a focus of patient safety, Buderim Private Hospital partnered with the University of the Sunshine Coast to develop a staff development educational package incorporating observational simulation. Central to the design were the National Quality Health Service Standards (NSQHS). These were used as framework for development of a series of patient journey simulation videos used to address ISO audit data findings.

Research was conducted in 2 phases to evaluate the impact of mandatory professional development focused on patient safety that used observational simulation.

- Phase 1 - Optimal and sub-optimal versions of video simulation scenarios reflecting patient encounters were recorded. The focus of these were: medication administration, infection control and prevention, patient identification and procedure matching, clinical handover and preventing falls.
- Phase 2 - Building on Phase 1 further video simulations were developed to incorporate additional standards. These focused on pressure injury prevention and managing difficult conversations associated with complaints



Objectives

The objective of this project was to improve patient safety relating to the NSQHS through the use of video scenarios utilised at staff annual clinical training.

Research Questions were:

- Compared to pre-reported quality data, has patient safety been positively impacted by the simulation education strategy in relation to medication administration, infection control and falls?
- What are staff perceptions, satisfaction and learning outcomes regarding the professional development experience?

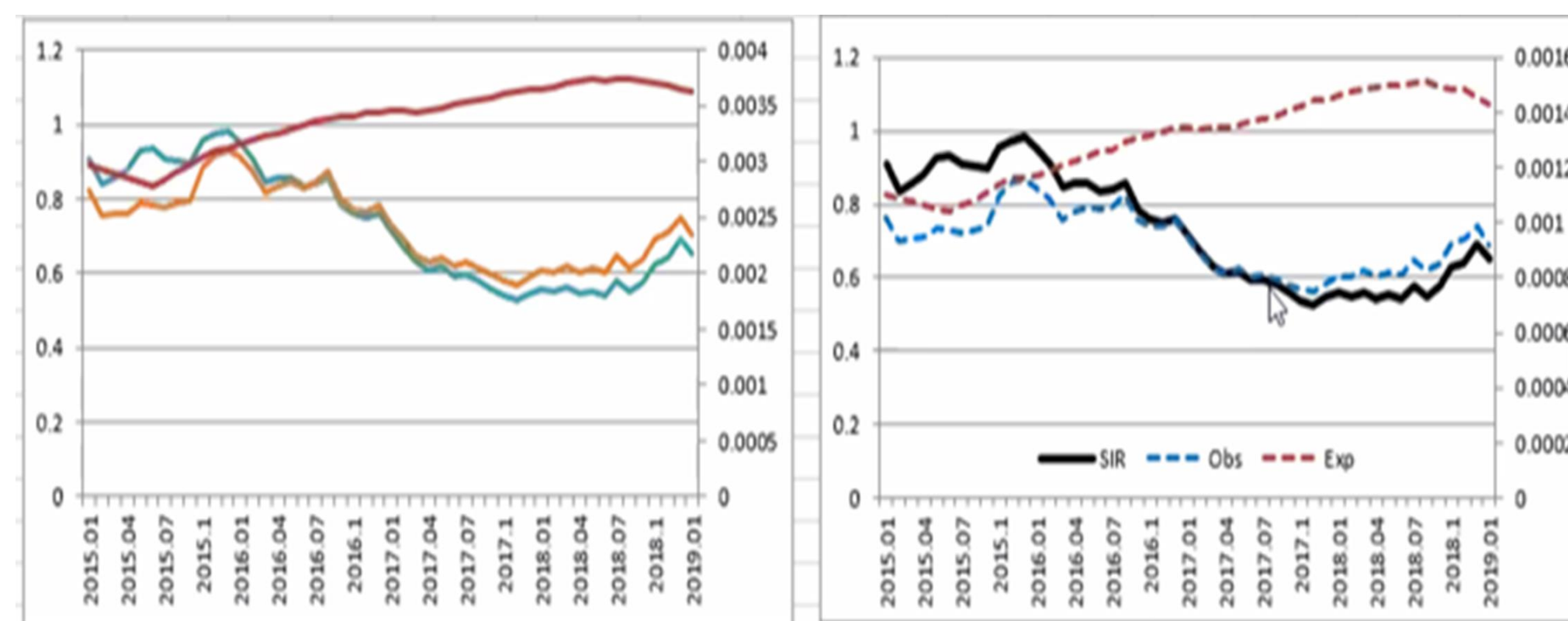
Methods

A mixed-method study utilising, quality data (pre and post-education intervention). Analysis was based on per 1000 bed days. Staff surveys and focus groups interviews were used to evaluate the effectiveness of the education programme

Results

Quantitative Data

Positive results were demonstrated in all areas with a decrease in: falls with injury (73%) HAMS (34%), infection (61%). As an example Figure 1 shows the overall impact on falls with injury across the entire project. The red lines on both figures indicated predicted falls based on development of risk model which took into consideration case mix changes that would have impacted data over the four year time frame in which the study was conducted. This illustrates that the risk has steadily increased across the time period of the study and would tend to counteract any impact of the program put in place (or at least make it appear to perform less well), however, the SIR supports the drop in the rate in falls.



Qualitative Data

Six focus group interviews were conducted with a total of 22 participant volunteers. A content analysis (Creswell, 2002) proposed four key categories related to quality standards addressed in mandatory training: falls, medication, patient identification and procedure matching; and infection control. There were many perceived positive impacts on practice. Examples are: confirming the patient identification number with documentation, the name and the date of birth was believed to occur more frequently post-simulation education. One participant said:

"Everyone's checking the MRN numbers now ... after the exposure to the simulation videos nurses are more diligent in carrying out their checks".

Another positive trend was that nurses were encouraging patient hand hygiene by taking hand gel to the patients and encouraging the removal of rings and watches by staff.

Conclusions

This quality of care and patient outcomes driven initiative using videos and observational simulation pedagogy for staff development is a novel pedagogical approach for mandatory training (Andersen et al. 2020). Engaging in critical thinking and clinical decision making when discussing the scenarios and implementing actions required active participation and reinforced learning. Because the simulation videos were created in the hospital environment, the education was relevant, it is believed that this contributed to improved practice and patient safety outcomes. The quality outcomes for patients and the reduction of incidents following staff development shows that this initiative has been of great value in training hospital staff.

References:

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