(10%) patients had HAS-BLED scores of more than 3 (high risk). Bleeding (cerebral, gastrointestinal, or hemoglobin <100 g/L) occurred in 32 (12.3%) patients; 12 (37.5%) of these patients had a HAS-BLED score of more than 3 (p=0.0001). TTR was not different between patients with or without bleeding (64.1+19.4% versus 66.3+16.1%). On the other hand, mean HAS-BLED and ATRIA scores were significantly higher in patients who had bleeding. Using multivariate analysis, ATRIA score followed by HAS- BLED score was the best predictor of bleeding. Age, sex, and TTR as a measure of INR variability did not show a significant difference between the two groups.

Conclusion Similar to previous reports of patients with atrial fibrillation, ATRIA and HAS-BLED scores were the best predictors of bleeding in our cohort of patients with mechanical heart valves, with no independent contribution of TTR to estimation of bleeding risk.

| 48 | USING SIMULATION TO ASSESS COMPETENCY IN NEW NURSES |

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Background Measuring competencies in nursing is critical to ensure safe and effective care of patients. Usually, new nurses struggle to cope with the demands of new roles and face difficulties in completing the required competencies on time. Being a clinical resource nurse based in the clinical areas and responsible for new nurses, I have observed that there is a gap in this area which may impact on patient safety. I work as a clinical resource nurse in Prince Mohammed Bin Abdulaziz Hospital in Madinah (PMBAH), Kingdom of Saudi Arabia. The focus of this paper is to assess the knowledge and confidence of newly hired nurses in PMBAH. Currently, new nurses are given 5 days of orientation in class and are then sent to clinical areas to start working under a senior nurse. The aim of this study was to assess the confidence and knowledge of new nurses hired by PMBAH.

Methods Simulation methodology was used to train new nurses in PMBAH. A 2-day training schedule was arranged with 2 hours for each competency session, with eight sessions in total. Each session included a short briefing about the scenario and introductory video followed by a demonstration by the simulation facilitator. The new nurse was then allowed to run the scenario with no interruption, followed by individual briefing directly to consolidate and transform the nurse's experience. Nurses were allowed to express their feelings in their own words. Pre and post self-assessment of participants' knowledge and confidence were later assessed.

Results There was a big difference in the pre- and post-assessment results; the majority of the nurses have shown increased knowledge and confidence after going through simulation sessions.

Conclusion We have identified that simulation positively impacts nurses' learning experiences by replicating the bedside setting in a mistake-free environment. Therefore, simulation sessions for new nurses are very helpful to raise knowledge, confidence, and the ultimate safe delivery of patient care. We can claim that simulation is an up-to-date and innovative learning strategy, especially when addressing direct patient care

aspects including nursing skills and procedures. With the current increase in medicolegal cases, we can conclude that simulation is both a safer and economically viable way of training nurses. Increased confidence and knowledge using simulation during orientation has been shown to reduce stress levels in clinical areas.

| 49 | PRESCRIBER BEHAVIORS THAT COULD BE TARGETED FOR CHANGE: AN ANALYSIS OF BEHAVIORS DEMONSTRATED DURING THE PRESCRIBING PROCESS |

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Background The prescribing process for children with cancer is complex, and errors can occur at any step. As a result, many interventions have been used to reduce errors. However, few of them have been designed based on an understanding of the prescriber behavior that can lead to errors. In order to design effective behavior change interventions, it is first important to understand the prescribing process and identify prescriber behaviors that could be targeted for change.

Methods This study used two sequential phases. First, the prescribing process was observed and then described using the hierarchical task analysis (HTA) method. Second, prescriber tasks were analyzed using the behavior change wheel (BCW) approach to identify promising behaviors for change. These identified behaviors were prioritized based on information collected from focus groups with prescribers and chart review of errors made in the ward. The hospital's Institutional Review Board approval has been granted.

Results The HTA results showed that the prescribing process was complex and involved multiple tasks performed in varying orders. Applying the BCW identified 32 candidate behaviors for potentially reducing prescribing errors. However, after prioritizing these behaviors, only two emerged as promising candidate behaviors for intervention: writing drug indications at the time of prescription and using a predefined order sentence when ordering medications.

Conclusion Applying the HTA and BCW methods was helpful in identifying potential behaviors for change. Having identified promising behaviors, future work could explore what needs to change with respect to individuals and their work environments to achieve the desired change in these identified behaviors.

| 50 | SUCCESSFUL IMPROVEMENT IN THE QUALITY OF CLEANING AND DISINFECTION AT A SPECIALIZED TERTIARY CARE HOSPITAL IN RIYADH, SAUDI ARABIA |

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Background Environmental cleaning is critical for reducing the burden of healthcare-associated infections and multidrug-resistant organisms. The objective of the current study was to improve the quality of cleaning and disinfection done by housekeepers.