



Category: Nursing Excellence Project

Title: The establishment and application of the "intelligent nursing risk prevention and control system"

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1.BACKGROUND

The key aim of risk management is to identify, evaluate and distinguish the possibility, severity and frequency of potential risks and take effective preventive measures so as to minimize the occurrence of risks.

Commencing operation in 2012, our hospital is a newly built 2,000 bedded major acute hospital in Shenzhen. Nurses from various provinces with different educational backgrounds and work experience use different assessment tools to identify high-risk patients or factors which is challenging to implement effective nursing risk management for patient safety.

The opportunity for improvement arose based on the establishment of risk assessment, prevention guidance and the intelligent nursing electronic medical record in 2017, we have developed a new "intelligent nursing risk prevention and control system" for clinical use. By assessing risk factors such as fall, pressure injury, nutrition, Modified Early Warning Score (MEWS), Barthel Activity of Daily Living (BADL), and Multiple Drug-Resistant Organism (MDRO) infections, the system can assist in identifying high-risk patients, warning through different signs, generating a series of knowledge-based prevention and control measures for different risk levels to provide decision support for nursing staff for formulation of appropriate nursing care plan.

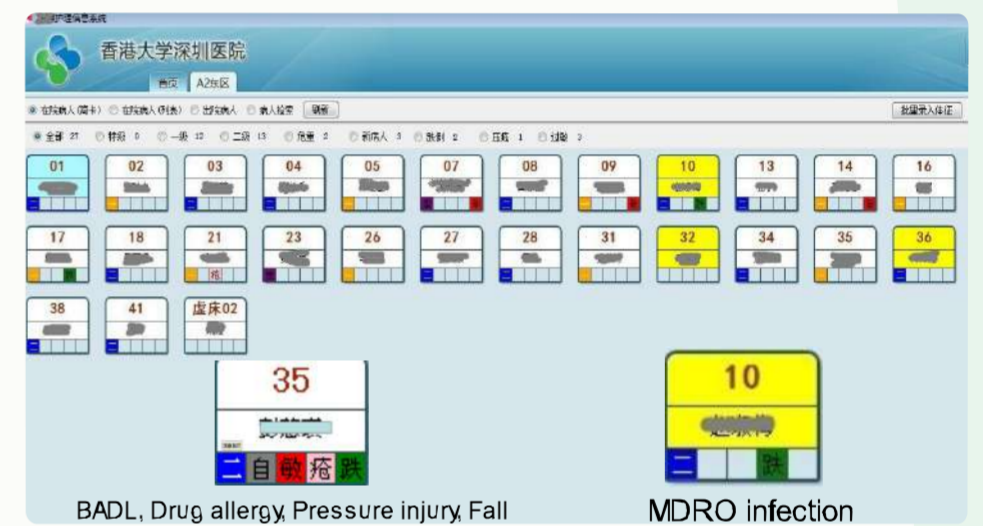


2.MEASUREMENT

Set up a core team including nursing manager, APN, and IT engineers with the following goals:

- Establish risk assessment, prevention guidance and decision-making knowledge base.
- Develop the system.
- Provide decision-making support for nursing staff to formulate nursing care plan.
- Reduce the occurrence rate of falls, pressure injury and hospital acquired MDRO infections, and enhance patient safety.
- Replace paper assessment forms and warning signs

Following the use of system, we conducted nursing audits, monitored changes in nursing quality indicators, collected feedbacks of nurses on system.



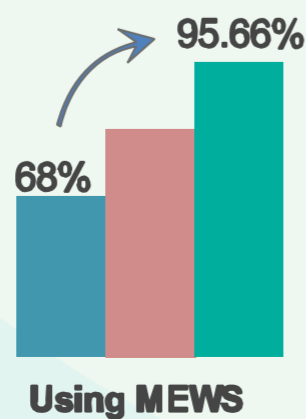
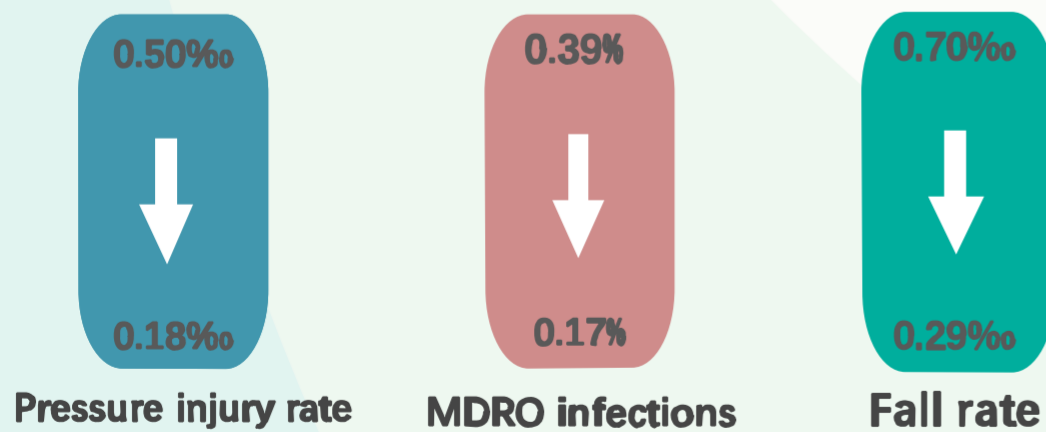
3.ACTIVITY



- Step 1. Establish risk assessment, prevention guidance and decision-making knowledge base.
- Step 2. Develop intelligent system including systematic assessment at the bedside, automatic identification, extraction, warnings of high risk patients by color codes and symbols spontaneously according to nursing assessment result, and prompt preventive measures to support formulation of nursing care plan.
- Step 3. Implement to clinical settings
- Step 4. Optimize and promote the intelligent system.



4.RUSULT



5.CLOSING

Advantages

- Ensure accuracy of warnings via the system's risk identification and automatic alerting.
- Ensure timeliness and effectiveness of nursing risk prevention and control
- Patients can truly benefit from bedside risk assessment and prevention to help reduce the incidence of pressure injuries and falls.
- Nurses find the system to be easily operable, highly acceptable and extremely effective.

Achievements

- Well recognized by Chinese National Class 3A Hospital Accreditation in October 2017
- Awarded "Extensive Achievement" in the Periodic Review of the Australian Council on Healthcare Standards (ACHS) In March 2018
- Awarded third prize in "Nursing Management Innovation" by the Guangdong Nursing Institute In April 2019