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Research Article

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Improving the Completion Rate of the Timeliness of Emergency PRN Orders Medication Administration in the Pediatric Intensive Care Unit

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Keywords: Improving the Completion Rate, Emergency PRN Orders, Smart Medicine Cabinets, Pediatric Intensive Care Unit

Background and Objective

Our unit is a pediatric intensive care unit (PICU), primarily admitting premature infants with unstable vital signs and patients under 18, necessitating frequent emergency medication therapy. Despite emergency medications available in ambulances, many must be administered within 30 minutes after doctor's issue emergency PRN orders orders. However, only 50% of these orders are completed on time. The current process involves nurses calling the pharmacy for medication dispensing times, leading to delays and two medication errors annually. Thus, this prompted the author to improve the timeliness of emergency medication administration aiming to facilitate urgent treatment and prevent errors.

Methods/Intervention

Methods The completion rate of emergency PRN orders medication administration was increased from 50% to 80%. Intervention After reviewing literature and consulting benchmark hospitals, smart medicine cabinets (ADCs) were introduced with the support of hospital authorities. Pharmacists, along with the unit head nurse and senior nurses, expanded the variety and quantity of emergency medications based on unit statistics. A standard procedure for medication retrieval from the ADCs was established by the nursing department. Upon doctors issuing emergency PRN orders, pharmacists must verify them. Once verified, nursing staff can access medications from the ADCs for administration. Pharmacists manage medication stocks in the ADCs, regularly checking expiration dates and adjusting inventory in consultation with the unit head nurse.

Results

Following the aforementioned intervention, the completion rate of medication administration within 30 minutes increased from 50% to 90%. Pharmacy medication errors causing medical safety incidents decreased from 2 cases annually to 0.

Relevance to Health Promoting Hospitals and Health Services
The implementation of the smart medication cabinet has indeed enhanced the quality of care and reduced medication error rates, ensuring optimal care for pediatric patients in a safe medical environment.

Subject

- Promoting health of children and young people
- Digitalization in health care and health promotion

Relation to Conference Main Theme

- Approaches for Health Promoting Hospitals and Health Services to improve health equity of their patients
- Relation to HPH Taskforce

Conclusions/Lessons Learned

The introduction of ADCs not only reduces administration time but also reduces medication errors, thereby improving care quality and ensuring optimal patient care in a safe medical environment.

Disclosure of Potential Conflict(s) of Interest

In clinical practice, after doctors issue the prescription, nursing staff must first call the pharmacy to inquire about the dispensing time for the medicine, and then call the escort to go to the pharmacy according to the dispensing time and retrieve the medication. This process not only takes time but has also led to two incidents of pharmacist medication errors within a year.