

Building an automated structural information system to shorten the shift time of nursing staff and improve their satisfaction

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Purpose To establish a standardized process for the shift handover information system, an automated integration of structured electronic communication platforms will be utilized to present shift handover details. This aims to enhance the accuracy, comprehensiveness, and consistency of the exchanged information among nursing personnel during shift transitions. Simultaneously, an automated, simplified, and integrated cross-team approach will be developed to facilitate a comprehensive, team-wide, end-to-end shift handover process. This initiative aims to enhance the immediacy and convenience of medical team shift handovers, ensuring the continuity of high-quality patient care.

method Applying the principles of team resource management and leveraging the ISBARD shift handover tool content, the design of the handover interface and establishment of the system architecture aim to automate the retrieval and consolidation of shift handover data through digitization. This minimizes the need for nursing staff to manually transcribe information, leading to a significant reduction in handwritten input errors. Simultaneously, it eliminates the need for nursing personnel to navigate various medical systems, streamlining the handover process and alleviating workload burden. The implementation has yielded positive results.

Result 1. Key Innovations:

- (1) Rapid integration of diverse systems to offer comprehensive patient data,
- (2) reducing verification time. Visual design for swift grasp of handover information. Automated consolidation of handover data, (3) with over 99% of information being automatically imported by the system. (4) Detailed data retrieval using the 'more' function, ensuring no handover information is overlooked. (5) Utilization of reverse handover mode to review handover matters.

2. Effectiveness of Healthcare Team Handover Procedures:

- (1) Completion rate of nursing staff handovers increased from 66.5% to 96.6%.
- (2) Reduction of nursing staff handover time from 30 minutes to 1.62 minutes.
- (3) Improvement in nursing staff satisfaction with the handover process from 60.2% to 94.8%.

conclusion

By applying healthcare team resource management, we foster effective communication between teams, enhance organizational consensus, reduce clinical errors, improve patient outcomes, and elevate healthcare quality. Embracing a patient-centered approach, we utilize automation, integrated interfaces, and structured design to bolster the quality of patient care and advance patient safety.