



EXPLORING HOSPITAL STAFFS' INTENTION TO USE THE OPTIMIZING DRUG DELIVERY SYSTEM TO IMPROVE THE EFFICIENCY OF DAILY CLINICAL WORKS

Yu-Huei Huang^{1,2}, Wan-Ling Hsu², Ying-Chun Li²

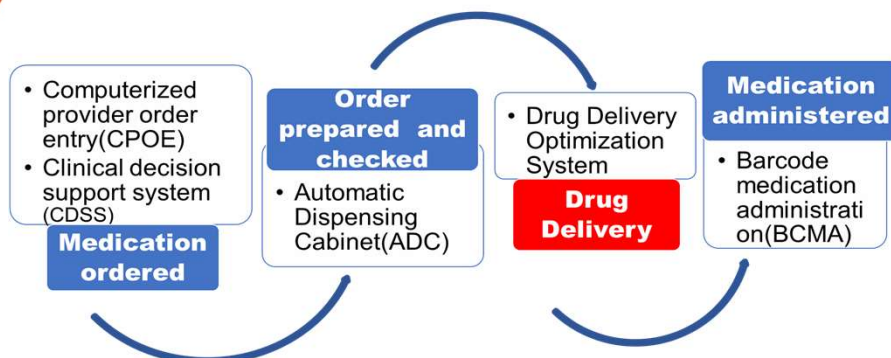
¹Department of Pharmacy, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan

²Department of Business Management, Institute of Health Care Management, National Sun Yat-sen University, Kaohsiung, Taiwan



INTRODUCTION

The quality and safety of medication for inpatients have long been received notice because medication-related errors account for a very high proportion of medical errors. A lot of medical information technology and equipment have been built into the correctness of the medical system, but the fast and smooth delivery of the medication prescribed by the physicians to the patient is an important issue that the organization often neglects or pays little attention to. How to improve the efficiency of medication delivery in daily clinical work becomes a critical research question.



AIM

With the support of hospital management, Barcode is used to link inter-departmental operations in the hospital information system to improve the drug delivery process. This study aims to explore hospital staff's intention of using a newly designed Barcode based drug delivery system.



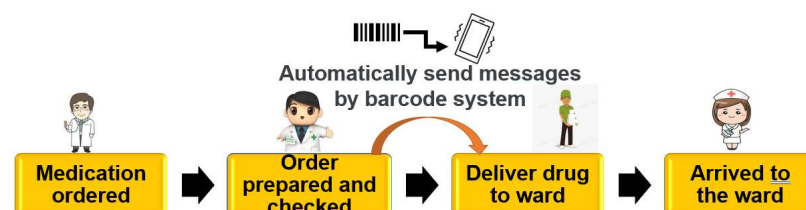
METHOD

The "Drug Delivery Optimization System" was designed to send an instant message notice to the hospital staffs once the medication is ready for delivery. Through the Barcode system, the pharmacists and ward nurses can track when and who picks up the medications. Thus, medications may be delivered to inpatients on time. The study test subjects are healthcare-related personnel who have the opportunity to use the system at a medical center located in Southern Taiwan.



RESULTS

The study result shows that "perceived usefulness" and "management support" have a significant positive effect on the intention to use the new system by both healthcare professionals and the drug delivery staffs. "Trust" also has a significant positive effect on the intention to use the new system by healthcare professionals.

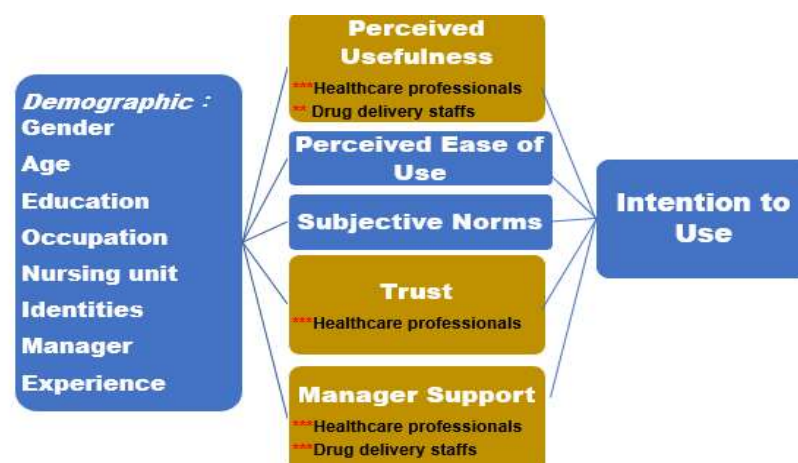


The Technology Acceptance Model was applied as a research framework for the questionnaire to explore the intention of the hospital staffs of using the new system. The questionnaire was distributed to the healthcare professionals and the drug delivery staffs. A total of 268 questionnaires were distributed with 180 and 58 valid returned questionnaires for the healthcare professionals and the drug delivery staffs, with an effective return rate of 90% and 85.5%, respectively. Statistical analyses include *t*-test, ANOVA, correlation, and multiple linear regression. This study received IRB approval from Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan



CONCLUSIONS

Combining creative ideas of automated notification systems and clinical workflows with Barcode to improve patient medication safety is the goal that makes the concept closer to the user needs. To achieve the expected benefits, in addition to the technology development, the most important thing is based on the study findings to enhance the willingness of medical personnel to participate in the system, so that the use of the system can be efficiently integrated into daily clinical work.



REFERENCES

Wu, J.-H., Shen, W.-S., Lin, L.-M., Greenes, R. A., & Bates, D. W. (2008). Testing the technology acceptance model for evaluating healthcare professionals' intention to use an adverse event reporting system. *International Journal for Quality in Health Care*, 20(2), 123-129. doi:10.1093/intqhc/mzm074