

Establish and implement the process of information-based drug delivery of Chinese herbal medicine under ACHS

Introduction The Australian Council on Healthcare Standards (ACHS) certification points out that medication safety should be reflected in the whole process of medical. The principle also emphasizes the systematic management and support, and regards continuous quality improvement as a routine work based on data. Our hospital, based in the Metropolitan City of Shenzhen and the Greater Bay Area in China, is an ACHS accredited hospital and contains all the relevant Departments for promoting such high quality care. Our hospital uses intelligent and convenient close-loop management of medication, through human-machine standard checking, intelligent reminder, and recording of whole process of medication prescription, dispensing and administration, to ensure medication safety. But information system for traditional Chinese herbal medicine is notoriously difficult to design due to its particularity. One safety event of traditional Chinese herbal medicine administration happened because of error identification in 2021. From October 2021 to September 2022, we established and implemented Chinese herbal medicine information drug delivery process based on ACHS certification.

Methods 1.Clinical status investigation through Chinese herbal medicine administration audit, record each time of administration and the interviews by doctors, nurses and traditional Chinese pharmacist. 2.Set up a multidisciplinary team for designing the intelligent traditional Chinese medicine (TCM) administration system comprising TCM doctors, nurses and pharmacists, and professional staffs in the IT Department. 3. Design the intelligent Chinese herbal medicine delivery system and improve the existing HIS system including adjusting the form of prescription to comply with the requirement of bits, selecting the drug pre-start and pre-stop time, setting reminder function, printing alphanumeric code for transfer tracking and the patient's QR code for identification. 4.Record the administration time, administration audit and satisfaction after implementing the new process.

Results Optimized the Chinese herbal medicine administration process saves nurses' time and improves work efficiency. From May 1 to August 31, 2022, TCM were administered for a total of 20,546 times, saving 335.2 hours. Through PDA scanning, the identification of patients and the verification of Chinese herbal medicine information can be carried out and be verified with the doctor's order in real-time, resulting in reduction of human errors in the verification process. The results of TCM distribution audit showed that the rate of timely signature reached 100% after administration, and the situation of non-effective check order before administration decreased from 9.1% to 0. None safety events occurred during the new process implement. Increase the satisfaction of nurses from 82/100 to 96/100 while leveling up the satisfaction of patients from 94/100 to 98/100.