

## **Improve the completeness of oral drug delivery procedure by emergency nurses**

### **Objective:**

The objective of this project is to improve the completeness of oral drug delivery procedure by emergency nurse in order to improve the safety of oral medication for emergency patients.

### **Methodology:**

The average emergency room attendance of this medical center in 2007 is 456 patients per day. Roughly 230 patients per day were either hospitalized for observation or waiting for hospitalization. Emergency service flow is the same as outpatient service flow, so the medication follows outpatient service because emergency patients are not inpatients. Injections medication will be conducted by nurses according to medication time. As for oral medication, patients will be first instructed by nurses according to the time and dosage appeared on drug bags, then they will be educated with drug effects and notes. Finally patients will keep the medicines and conduct self-medication. The investigation shows that, 75% of patients conduct self-medication correctly as medical order. For those who failed to do so, the reasons can be categorized into: Drugs are lost without proper care or taken home by family members, 20%; Patients, family members and foreign caregivers are not familiar with dosage and time of drug delivery, 20%; Finished all the drugs either without informing health care personnel for continuous prescription or without nurses actively tracking the situation, 28%; Patients stopped medication by themselves because they felt symptom free, 32%. According to the questionnaire and observation chart, the average completeness of oral drug delivery procedure conducted by nurses is 69.1%, the execution rate of medication instruction for patients is 76%, and the patients' satisfaction towards oral drug delivery procedure is 77.8%.

By the following approaches: (1)conducting single dose drug delivery procedure based on medical order; (2)setting up standard procedure for single dose drug delivery of emergency room; (3) holding on-job training courses of patients medication safety and single dose drug delivery procedure; (4) periodic audit for completeness of oral drug delivery by nurses;(5) established computerized inquiry system linking medical order and drug operation as instructions for patients' medication.We shall improve the completeness of oral drug delivery by nurses.

### **Results:**

By establishing and conducting single dose drug delivery procedure based on medical order, the correctness of patients' self medication according to medication order is raised from 75% to 100%; the patients' satisfaction towards oral drug delivery procedure conducted by nurses is raised from 77.8% to 98.4%; with periodic audit of oral drug delivery procedure by nurses, its completeness is raised from 69% to 100%; by establishing computerized inquiry system linking medical order and drug operation, nurses will be able to provide patients with correct medication instructions with the execution rate raised from 76% to 100%.

### **Conclusion:**

Emergency patients are mostly with sudden illness or in critical conditions; therefore we should be much more careful with medication procedure. Appropriate medication will cure or ease the illness, while inappropriate medication will worsen patients' conditions and even threaten their lives. So it's very important for nurses to execute appropriate drug delivery procedure. The investigation showed that the correctness of emergency patients' medication according to medical order was too low. So we set up a project team to thoroughly understand the cause, then through cross-department collaborations we conducted several measures for improvement such as conducting single dose drug delivery procedure based on medical order, setting up standard procedure for single dose drug delivery of emergency room, and holding on-job trainings. Now the correctness of patients' self medication according to medication order reaches 100%. The safety of patients' medication has been significantly improved, so has the satisfaction of patients and their family members towards the drug delivery procedure conducted by nurses.