

388: The study of medication service quality in hospitals in Taiwan

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Objective:

- To investigate the current status of medication errors in hospitals in Taiwan.
- To monitor the medication service quality by verifying the rates of consistency throughout the medication delivery processes.
- To discuss the causes of error, or the potential causes of error, in the medication delivery system process.
- To propose modifications to the standard operating procedures in order to improve patient safety.

Methods:

A checklist method was used in developing the worksheet for the study. A random cluster sampling method was employed in selecting the study samples. There were 3 layers in the sampling process, by shift, by ward, and by bed. Excluding the intensive care units, there were 10 acute wards which administered drugs included in the study. The total number of cases selected was 210. Both the consistency of the medication sheet and the patient chart and the accuracy of the medication cart were recorded on each of our study worksheets.

Results:

The gender distribution was 112 men and 98 women. There were 70 cases in each shift.

- *The Consistency of medication sheet:* The rate of consistency of the medication sheet and patient's chart was 88.8 %. The medication sheet includes both the computer medication sheet (CMS) and the nurse treatment sheet (NTS). The inconsistency rate was 11.2% which included sixteen documentation errors. As for the potential errors, there were 4.9% (7) in CMS, and 6.3% (9) in NTS.
- *The accuracy of the medication cart:* The accuracy of the medication cart, that matched with the patient's name, kind of drugs, name of drugs, the form of drugs, dosage of drugs, and amount of drugs, were 100% (210), 99.5% (209), 99.5% (209), 99.5% (209), 99.5% (209), and 97.62% (205) respectively. The accuracy of the record of NTS that matched with the patient's name and bed number, kind of drugs, name of drugs, dosage of drugs, route of drugs, delivery time of drugs, and amount of drugs were 98.1% (206), 99% (208), 99.5% (209), 98.6% (207), 98.6% (207), 74.3% (156), and 100% (210) respectively.

Conclusions:

The analysis of the causes of error revealed that they were mainly artificial. After an order was prescribed by a physician it was transferred to the administrative staff to transcribe into the computer system. The most significant errors occurred during this process, because they may be verified by a pharmacist or nurse, and result in a critical incident. The computerised physician order entry system (CPOE) is expected to be implemented by the end of 2004 or early 2005.

Although we did not find any no-harm event and near miss case in this study, it is necessary to be proactive. In pursuing a high standard of patient safety, a patient safety committee was set up in the hospital to avoid further critical incident. We developed a non-punitive error-reporting system, set performance standards and created a culture of safety in our hospital. Adoption of the root cause analysis (RCA) method to analyse the events, helps to prevent the recurrence of incident.