

# Studies on nursing risks and measures of clinical medication

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**Abstract:** To investigate the cause analysis of clinical medication nursing risks and propose relevant nursing measures, so as to control and reduce the clinical nursing risks and reach the physical and mental safety of patients and nurses. Clinical nursing risk events with 30 cases in TCM Hospital of Zhengzhou City from June 2010 to April 2012 were underwent statistical analyses. The risk of medication error ranked the first in the direct reasons of nursing risks, accounting for a higher ratio. Moreover, the reasons of nursing risks were also involved in nonstandard operation, disease observation and other relative factors. Nurses must fully understand the relative factors of medication nursing risks, regarding the patients as their own family and always permeating the consciousness of nursing risks into the working process.

**Keywords:** Medical medication; Nursing risks; Measures

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## INTRODUCTION

Nursing risks refer to the unsafe incidents, which may occur in the nursing process for patients in hospital (Zhao, 2014). In the daily medical work, the deed that medical staffs or medical institutions are required to be responsible for legal liability and economic compensation on the condition of causing medical torts for patients due to certain reasons is called medical risk. The most common nursing risk issues are associated with medication issue, blood drawing issue and pressure sore. Medication risks among the medical risk events of clinical nursing are accounting for about 30% in nursing risks, ranking the highest ratio (Li and Zou, 2005), which causes a certain unstable factors toward the nursing security environment for patients. As to the control of risk events in clinical nursing, safe medication is directly related to the patients themselves, showing a very important practical significance (Harris and Schmitt L, 2004).

### *In-depth understanding of the nursing risks for clinical medication*

#### *Important role of medication nursing risks on nursing risk events*

There are mainly four types in the medical risk events, that is, nursing lapsus, complaint, accident and nurses' problem. The brief statistical analysis on the data of 30 cases of nursing risk events in TCM Hospital of Zhengzhou City from June 2010 to April 2012 indicated that the clinical medication nursing risk accounted for 33.3% of nursing risk events, shown in table 1.

#### *Categories of medication nursing risks*

The clinical medication nursing risks are mainly involved in wrong medication, unreasonable medication and adverse drug reaction.

### *Wrong medication*

Statistics of medical risks underwent on patients hospitalized in America showed that only wrong medication accounted for 7% of occurred events. Five-year investigation for medication error in British hospitals displayed that nearly 60% wrong medication was caused by nurses. Wrong medication was also very prominent in the medical nursing risk events in China, reaching 33.5% in the ratio of medication issues among all nursing risks, which was close to the ratio value of medication nursing risk events in TCM Hospital of Zhengzhou City. Analysis performed by Jiang YF (Jiang, 2011) on 229 cases of medication error presented that omission and 5 R (right patients, right medicine, right measurement, right time and right pathway) errors were the major categories of medication error, in which omission had the highest medication incident rate, similar to the results of overseas studies (Cornish *et al.*, 2005). Omitted medication always occurs on the shift exchange for nurses, with time often at 14 o'clock, 20 o'clock and 24 o'clock and with omission often of memorable medication error and errors on medication times. 5R error are the errors on recognizing the information of patients' identifications, drug varieties and dosages.

### *Unreasonable medication*

Rational drug use in clinic is the issue extensively concerned and noticed at present. However, hospital managers always pay much attention to the education of clinicians and pharmacists, ignoring the role of nurses on the rational drug use in clinic. The factors of unreasonable medication is often caused by nurses during clinical working, For example, nurses are not familiar with patients' allergic history, and the drugs probably inducing patients' allergy or the drugs producing cross allergy are used without skin test on patients. Some nurses have the convenient compatibility objects. They take all drugs into the same injector and added into infusion bottle and the selection deviation of infusion solvent can lead to

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turbidity and cotton-like in the infusion dropper. On medication time, some nurses take the medication by their personal preference and behavior, but ignoring that if drugs can produced the expected concentration in patients' body. The above unreasonable medication can give rise to a very serious results on patients, so the medication education for nurses is very important.

### ***Adverse drug reaction***

In recent years, as the development and usage of new drugs increase, due to the usage of various trade names on the same drug and the augment of drug combination, the cases about adverse drug reaction (ADR) become more and more. In China' hospitals, the death cases caused by ADR accounted for about 8% in death cases. The usage of new drugs and the frequency of drug combination induce the increase of the occurrence rate of ADR. Although this is incident event, it is related to that medication nurses fail to distinguish ADR in time. Moreover, nurses are not familiar with the effects and adverse reaction of many new drugs. The capacity of emergency processing after ARD is weak, which leads to serious results.

### ***Causes of producing clinical medication nursing risks***

#### ***Subjective factors***

There is a very close relation between the occurrence of clinical medication nursing risks and the usage of new drugs. Many scholars in medical field pay much attention to the contradiction between new drug and medication risks, but the first-line medication nurses do not pay much attention to this. Nurses mostly take what doctors tell as standard to conduct medication, which means that doctors are the decision makers while nurses are only the performers. This subjectively causes that nurses put doctors' words on the first place on medication issues, without active defense consciousness on the medication risk defenses, which is difficult to recognize whether the medication risk events occur. Professors (Lv and Lin, 2005) have considered that the potential safety hazard existed during clinical medication process for nurses, to a large extent, is due to the lack of senses of responsibility and constraint. Both medication regimens made up by doctors and doctors' advice scientifically performed by nurses are very critical. If nurses do not perform doctors' advice rationally, it can cause the hidden danger of medication. Nurses' lack of a certain theoretical knowledge on drugs and professional work will cause the occurrence of unscientific and unsafe phenomena in clinical nursing. For example, there is method of oral medication three times each day in clinic, that is, taking medication at 8 o'clock, 12 o'clock and 16 o'clock. This traditional method is not scientific in the interval choice and 8-hour medication is only used on the drugs with 8-hour biological half-life, but not suitable to all drugs. Wrong medication time and dosage also have a great influence on the effectiveness of drugs, which is easy to the occurrence of uncomfortable medication on patients (Zhang and Hu, 2008). The events of medication error due

to communicating deviation by nurses are not small. Medication omission and fault are also caused by unclear or wrong understanding to the content of doctors' advice.

#### ***Objective factors***

Specific to the medical risk events, many hospitals have the mandatory reporting system of medical damage events. Reporting the serious nursing risk events can make cause analysis to events and avoid the occurrence of similar events. However, in the practical medical work, nursing safety is linked together with hospital management test, which make the nurses hide or try to hide the nursing risk events, which directly cause the increase of re-occurrence possibility for medical nursing risk events and hide dangers for the later medication risks. At the same time, many people show an ignoring attitude toward the system and technological process in hospital. None effective accountability system and management mode directly cause the results that nurses cannot treat doctors' advice correctly and they adopt their experiment to perform nursing work. Nurses in clinic seldom learn medication knowledge actively and positively and relevant departments in hospital do not pay much attention this part of content, which directly induce the scarcity of drug accounts and the lag of operating skills for clinical nurses (Zhang and Hu, 2008). The occurrence of medication risks is leaded by nurses' scarcity on the content of drugs and pharmacology in materiality, which is the reason of blind compatibility of medicines and adverse drug reaction. For pharmaceutical administration and storage, pharmaceutical management department in hospital also exists some problems, such as nonstandard operations in classifying different drugs, separating hazardous chemicals and placing drugs' positions. Overdue drugs and mixed phenomena often occurred in pharmacy, as well as fuzzy drug labels. Nurses' medication environment also easily induce medication error, because no all nurses abide by the standard process to perform medication nursing, the communicating process between nurses and patients also invisibly augment the working load for nurses and pressures of external environment easily lead to clinical medication error by nurses. Interference in medication environment has been the major factor of medication error, which easily occurs in drug check and medication phases (Trbovich *et al.*, 2010). Although from professional views, nurses should abide by the standard process and avoid interference, the time pressure in reality and overloaded workload make the error happen occasionally, moreover, the augment of patients' dependency and scarcity of human resources invisibly enhance the workload for clinical nurses (Song *et al.*, 2011).

#### ***Measure advice to clinical medication nursing***

***Improvement of management and supervision mechanism***  
Toward medication nursing risks, hospitals should establish and improve the medication management and supervision mechanism, constantly monitor whether the

**Table 1:** Nursing risk events constitute (n=30)

Nursing Risk Events	Time	Percentage (%)
Dosing error events	10	33.3
Error in performing doctor's instruction	5	16.7
Blood taken problem	5	16.7
Service complaints	2	6.7
Falling down from bed	2	6.7
Tumble	3	10.0
Infusion adjustment error	1	3.3
Infusion withdraw mistake and mistake infusion	1	3.3
Other	1	3.3

process of medication nursing is rational and conclude the risk issues through the form of risk assessment meetings, so as to put forward corresponding measures to reduce medication risks. Meanwhile, hospitals should encourage patients and nurses to report medication risk events, thus protocol ling corresponding prevention medication measures pointing at different patients or high-risk patients, strictly managing the drugs with higher risks and strictly using and operating according to technological process. While involving new drugs, the same drug with different trade names and changes in dosage forms and specifications, nurses should reported to head nurse in time and make records during working in order to ensure the conduction of regulating work. Specially-assigned persons manage and check the classifications and positions of drugs and the hazardous chemicals such as chemotherapeutic drugs are solely stored with red warning signs. Medication time, dosage and toxic and side effects should be publicized to patients, reaching the purpose of joint monitoring.

#### ***Improvement on nurses' work level***

As the subjective factor producing medication risks, nurses are required to take part in assessments on their professional levels by hospitals regularly and trains on the legal liability of nursing risks, risk treatment regimens and contents of drug knowledge in order to comprehensively enhance the personal responsibility of nurses, ensure the basic knowledge storage in work for nurses, scientifically take medications during the familiar usage on drugs and deal with simple nursing disputes. In a good hospital cultural atmosphere, hospital should advocate nurses' rational wok consciousness to ensure that the principle errors such as 5R do not happen and truly take the clinical medication nursing work to their hearts. At the same time, hospital should render proper relaxing holiday to nurses in order to reduce their working pressures and keep their working enthusiasm. Some scholars (Mohr and Batalden, 2002) have considered that harmonious working environment can reduce the occurrence of medication errors. Meanwhile, through educating and encouraging patients to participate medication security management, it can improve patients' medication health education process, improve check

process and increase the check steps before and after patients take part in medication, thus effectively preventing and reducing medication risks (Shao *et al.*, 2012).

#### **CONCLUSION**

In order to have a correct understanding on clinical medication nursing risks, the potential or existed medication risks are performed timely correction and revision. Both a sound nursing risk mechanism and nurses having a stronger legal consciousness can put the medication nursing risk events reduce the minimum, which is not only a guarantee for patients' medical security rights and interests, but also an embodiment for hospital scientific, systematic and institutional management, as well as a manifestation of increases of nurses' nursing risk prevention consciousness and nursing capacity. China started late on studies of hospital risk management in, later applied in clinic and mainly focused on the prevention of medical nursing disputes and treatments of events. Therefore, how to make the nursing risk management apply in the whole process of clinical medication and effectively reduce the occurrence rate of medication risk events needs more scientific, profound and comprehensive studies.

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