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Consumer Protection: “Law and Pharmacy Perspectives”

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Deputy Health Minister of Republic Indonesia
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CURRENT PHARMACIST' ROLE IN PREVENTING MEDICATION ERRORS TO DEVELOP THE MEDICATION SAFETY SYSTEM

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ABSTRACT

Background. Medication error issues are often related to the medication safety and become the major concern in worldwide. Many factors are related to the medication safety system development and pharmacist is one of the factors which has significant contribution in building this system. This article was aimed to understand the role of pharmacist in preventing the medication errors and the role of pharmacist in developing the medication safety.

Method. The review of some free full text English articles which was found in the PubMed for the last five years with the key words of: pharmacist role and/or preventing and/or medication error and/or medication safety was done.

Results. There were 2 articles found with the keywords of pharmacist role, preventing, medication error and two more articles were found with the keywords of pharmacist role, preventing, medication error, medication safety. Pharmacist in the community and hospital has a very important role, especially in detecting, preventing and solving the prescription problems. Prescription problems could result prescription errors which is one of the type of medication errors. In some cases, the medication errors can lead to the unpreventable adverse events. Pharmacists can start some activities to prevent the medication errors and to participate in the development of medication safety system, such as: to review prescription, to make intervention to the prescription, to build the quality control and quality assurance system for pharmaceutical care and to start the report system of medication errors and adverse events.

Conclusion. Currently, medication safety system is a need for the patients during their treatment. If pharmacists can ensure that the patients are in this system, the patients do not need the law system to make judgment of their treatment failure.
Background. Medication error is defined as any preventable event which could cause inappropriate medication use or patient harm while the medication is under the control of the health care professionals, patient or consumer (Abdullah et al., 2004). Medication error issues are often related to the medication safety and become the major concern in worldwide. Many studies showed that medication errors are more common and significantly contributed in building the medication safety system (James et al., 2009). The previous study in British reported that in 35 community pharmacies prospective study, it was found that there were 22 near misses and four errors among 10,000 items dispensed (Ashcroft et al., 2005). Many factors are related to the medication safety system development, some of them are related to the sociotechnical factors. These sociotechnical factors are: relationship between pharmacist-customer, relationship between pharmacist-other health professionals, demands on the pharmacist, and management-governance factors (Phipps et al., 2009). This article was aimed to understand the role of pharmacist in preventing the medication errors and the role of pharmacist in developing the medication safety.

Method. The review of some free full text English articles which was found in the PubMed for the last five years with the key words of: pharmacist role and/or preventing and/or medication error and/or medication safety was done.

Results. There were 2 articles found with the keywords of pharmacist role, preventing, medication error (Phipps et al., 2009, Volmer et al., 2012) and two more articles were found with the keywords of pharmacist role, preventing, medication error, medication safety (Al-Dhawailie, 2011, Klopotowska et al., 2010). The study of Phipps et al explained about the sociotechnical context of medication safety in community pharmacy, the study of Volmer et al (2012) explained about the use of generic instrument to document the prescription problem. The study of Dhawailie (2011) showed the role of pharmacists’ intervention in to detect the prescribing errors and the study of and the study of Klopotowska et al.,(2010) showed the hospital pharmacists’ participation in reducing the prescribing errors and preventable adverse drug events in ICU settings (Al-Dhawailie, 2011, Klopotowska, et al., 2010, Phipps et al., 2009, Volmer, et al., 2012).

Discussion. Pharmacist in the community and hospital has a very important role, especially in detecting, preventing and solving the prescription problems. Prescription problems could result prescription errors which is one of the type of medication errors. In some cases, the medication errors can lead to the unpreventable adverse events. Adverse event is an injury due to the medication use. In the study of Hickner et al., there were around 70 % of medication errors, 27% of adverse event and 2.4% of both medication error and adverse events in the application of a medication error and adverse events reporting system (Hickner et al., 2010). This description showed that not all of the medication errors were ended with adverse event; there was small percentage of medication errors which was ended on adverse events. Regarding to these numbers, we should realize that medication errors were highly contributed to the medication safety and it has been become the pharmacists’ responsibility to promote the rational drug use, which are: maximize the therapeutic effect, minimize the risk or harm and minimize the cost. Adverse drug events and medication errors are very related with the high cost of treatment and the pharmacists’ intervention in preventing the medication errors and adverse events could save the €26-40 (Klopotowska, et al., 2010).

Building the medication safety system need multidisciplinary collaboration, especially among the health professionals and the management system. The first sociotechnical role of pharmacists in building the medication safety system are; development of relationship with prescriber and the customer especially in conducting the administration, pharmaceutical and clinical screening of the prescription. Pharmacist should develop the patients’ trust to him/her, this trust will be useful during the assessment process, giving the safety issues of medication and monitoring the treatment. The second roles of the pharmacists are demand on the pharmacists. As we know that in the perspective of hospital and community pharmacy, medications showed the major contributions in
the finance and budgetary. Thus the issues of profitability vs safety, following the law vs meeting the demands are need pharmacists’ wisdom and responsibility to be applied. The last role of pharmacists in building the medication safety are developing and arranging the culture, quality control, quality assurance and designing the workflow to ensure the preventive of medication errors and adverse event (Phipps, et al., 2009).

Prescribing errors was known as common cause of preventable medication errors and adverse events in primary settings. In the setting of building the generic protocol to document the prescription errors, the study of Volmer et al., concluded that the electronic prescription could reduce the prescription errors and the feasibility of the pharmacists’ access to the patient’s medical record could increase the possible detection of adverse drug events and drug-drug interaction (Volmer, et al., 2012). The other study by Dhawailie et al. (2011), showed that pharmacists’ intervention in detecting the medication errors could protect the patients from the impact of medication errors. There were 7.1% prescribing errors were detected among 1580 medication orders. The most recorded prescribing errors were on the medication strength errors and medication frequency errors. Many factors related to the prescribing errors, which are; ineffective communication among the health care professionals, work load, stress, less experience and lack of training for medical students (Tully et al., 2009). These factors could be overcome by routine program of patients prescriptions monitoring which should be done by pharmacists (Classen & Metzger, 2003). By using the electronic medical records and permitting the pharmacists to access patients’ medical record could decrease the medication errors and adverse events which mean that it will help the development of medication safety system.

Intensive Care Unit (ICU) ward is one of the wards with the most possible medication errors occurred. The number of medication errors is quite high due to the polypharmacy, high risk drug and also high frequency change of treatment (Mansour et al., 2012). The study of Klopotowska et al (2010) showed that when the pharmacist could review the patients prescription in ICU then made some recommendations due to the potential prescribing errors in the ICU wards, the incidence of prescribing errors was significantly lower than the baseline period. The most frequent recommendations from the pharmacists were start the new drug, change the drug dosing and change the dosing frequency. Not only reduce the prescribing errors, the pharmacists’ interventions also could save the medication cost due to the adverse event.

Currently, not all of the pharmacists who work in community and hospital realize that their role is very important in preventing the prescribing error and adverse event. They can start from reviewing the medication prescription, giving intervention to the avoid the potential prescribing errors and adverse event, building the culture and system of quality control and quality assurance of pharmaceutical care and starting the reporting system of medication errors and adverse events. By starting the above roles, pharmacist can participate in the development of medication safety system. If patients feel safe during their treatment, they will not use the law system to make judgment of their treatment failure.

**Conclusion.** Pharmacists can start some activities to prevent the medication errors and to participate in the development of medication safety system, such as: to review prescription, to make intervention to the prescription, to build the quality control and quality assurance system for pharmaceutical care and to start the report system of medication errors and adverse event.

**References**


Proceeding of International Conference on Restorative Justice January 04th 2014
Current Pharmacist' Role
in Preventing Medication Errors
to Develop the Medication Safety System

Dyan A. Fauziati
Faculty of Pharmacy, Universitas Ahmad Dahlan Yogyakarta
Presented at International Conference of Restorative Justice

Hospital "X" in Indonesia
- Patient safety team
- 11 Medication Errors
  - 5 in ED
  - 6 in Ward

Wrong Drug in Yogyakarta
- ADR
  - 1. Inadequate pre-surgery preparation
  - 2. Wrong drug
  - 24% by nurses
- HIV patient (2010)
  - Nevirapine
  - Duviniral and Efavirenz
Most Frequently Reported Causes of Medication Errors:
(Percentage of Reports with a Chief Cause)
- Performance def./neg. 28
- Procedure/protocol not followed 17
- Transcription inaccurate/inconsistent 13
- Computer entry 12
- Documentation lacking/inaccurate 12
- Knowledge deficit 10
- Communication 9

Pharmacist?
- Culture of Safety
  - Non-punitive systems
  - Multidisciplinary error prevention
  - Involve parents and families
  - Executive walk rounds
  - Medication Safety Initiative
  - Strong, clear, visible attention to safety
- Avoid fatigue
- Minimize distractions
- Independent double checks
  - 2nd checker will detect 90% of errors made by first checker
  - HIT: Alert system, electronic prescribing, electronic label system

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