MEDINFO 2007
HISA Ltd Australia
© 2007 The authors. All rights reserved.

Information Needs Associated with Hazard and Near Miss Reporting

Po-Yin Yen, MS[a], Suzanne Bakken, RN, DNSc[a,b]

[a] *School of Nursing, Columbia University, USA*
[b] *Department of Biomedical Informatics, Columbia University, USA*

Abstract

The purpose of this study was to understand the information needs of APN students related to hazards and near misses in order to expand a reporting system to provide Just-in-Time learning.

Keywords:

information needs, patient safety, adverse event

Introduction

As part of a patient safety curriculum for Advanced Practice Nurse (APN) students, a Hazard and Near Miss Reporting System (HNMRS) was developed for reporting of information on hazard (dangerous situations) and near misses (close calls) that occurred during students' clinical shifts. HNMRS includes 13 types of hazards and near misses: Accident (non-fall), Environment Hazard/Safety, Equipment/Device, Fall, Food/Nutrition, Infection, Laboratory, Medication, Patient Disappearance, Procedure/ Treatment, Restraint, Transfusion, and Other. We plan to extend the functionality of HNMRS beyond reporting to Just-in-Time learning by providing context-specific links to internal and external knowledge sources related to the type of hazard or near miss reported. Context-specific links have demonstrated utility in meeting information needs at the point of care. [1, 2] The purpose of this study was to understand the information needs of APN students related to hazards and near misses.

Methods

A focus group was conducted with four APN students in the baccalaureate year of a BS/MS curriculum. Students were asked to provide information about the hazards and near misses they had reported and their information needs related to particular types of hazards and near misses. Students were asked to express their information needs as questions. They were then analyzed and organized into the thirteen categories. Questions were classified into three information types: (S) subject-specific (i.e., patient-related data), (D) domain-specific, or (I) institution-specific.[3]

Results

The information needs were classified into the hazard and near miss categories and by type of information need (Table. 1). Information needs related to patient-specific data are not included because they would typically be answered by consulting an electronic health record, not through context-specific links to knowledge sources.

Conclusion

APN students experienced information needs related to hazards and near misses. Context-specific links to knowledge sources may help to prevent adverse events through Just-in-Time learning when a hazard or near miss occurs.

Table 1 - Information needs

Equipment/Device	Type
• How do I use the device?	D
• Who do I contact for replacement? (e.g., broken)	I
• How long should the device be in? Any protocol?	D
• Is there an institutional protocol for this device?	I
• How do I know if it placed correctly?	D
• What are normal and abnormal signs of function? (e.g., NG tube)	D
Fall	
• How do I prevent patient falls?	D
• Who do I contact for incident report?	I
Food/Nutrition	
• How can I get a meal for my patient?	I
• How can I get a menu in another language?	I
Medication	
• What do I do if a medication error occurs?	I
Patient Disappearance	
• What is the procedure for reporting elopement?	I
Procedure/Treatment	
• How do I do the procedure?	D
• Is there any manual I can follow?	I
• Does the procedure need patient consent?	I
• How do I educate the patient about the procedure?	D
Transfusion	
• What is the official protocol related to transfusion?	I

Acknowledgement

This study was supported by grants from the Health Services Resources Administration and the National Institutes of Health (P20 NR007799).

References

[1] Cimino JJ. Use, Usability, Usefulness, and Impact of An Infobutton Manager. AMIA Annual Symposium Proceedings/AMIA Symposium. 2006.

[2] Maviglia SM, Yoon CS, Bates DW, Kuperman G. KnowledgeLink: impact of context-sensitive information retrieval on clinicians' information needs. Journal of the American Medical Informatics Association. 2006;13(1):67-73.

[3] Currie LM, Mellino LV, Cimino JJ, Bakken S. Development and representation of a fall-injury risk assessment instrument in a clinical information system. Medinfo. 2004;11(Pt 1):721-5.