

The Need for Standardization of Allergy Information in Electronic Medical Record Among Japanese Hospitals

Masaharu NAKAYAMA ^{a, b, 1} and Ryusuke INOUE ^b

^a*Disaster Medical Informatics, International Research Institute of Disaster Science, Tohoku University*

^b*Medical Informatics Center, Tohoku University Hospital*

Keywords. allergy, adverse drug event, medical safety

Introduction

Among potentially fatal adverse drug events (ADEs), 6%-10% are due to allergies. Thus information of such events is critical.

1. Method

A Japan nationwide survey with a 43-item questionnaire about allergy was conducted in 213 hospitals with 600+ beds between Oct. 2012 and March 2013, including 50 public university, 40 private university, 59 public and 64 private hospitals.

2. Results and Discussion

Of the 213 hospitals, 76 (35.7%) responded: 29 public and 11 private universities, 18 public and 18 private hospitals. The mean ($\pm$ standard deviation) number of beds was 796 ± 191 . EMR was implemented in two-thirds hospitals. The others relied on CPOE with paper-based records. Allergy information was displayed as an icon with text in 50% of the cases and icons only in one fourth. The severity of ADE was not described in the database of 72% of the hospitals, while 12% ranked the severity in two categories, heavy or mild, and 16% in multiple categories. Around 25% of the hospitals had a system preventing doctors from ordering incorrect drugs, whereas the others had only an alert. The alert parameters were replaceable according to the severity of the allergy in only 6% of the responding hospitals.

We hope that this report will serve as a foundation on which a consensus can be established for standards on how to represent, code, handle and interact with such alerts.

¹ Corresponding Author: Masaharu Nakayama, MD, PhD. Disaster Medical Informatics, International Research Institute of Disaster Science, Tohoku University. 1-1 Seiryō-machi, Aoba-ku, Sendai, Miyagi, 980-8574, Japan; E-mail: nakayama@cardio.med.tohoku.ac.jp