A systematic comparison of 12 emergency datasets

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Abstract In an emergency situation, patients are often unconscious. Emergency physicians have no information about the patient or his medical record. For this situation, several emergency datasets are available. They exist as printouts and as applications for smart phones. This analysis compares the data elements of 12 different emergency datasets.

Keywords. Emergency dataset, emergency care, mobile application

Introduction

In case of an accident or other emergency, it often is not possible for the patient to explain his medical history. Injuries or faints may reduce the memory or the ability to speak. In this situation, an emergency dataset could provide important information to the emergency physician. For instance, in Germany it is planned to implement an emergency information dataset on health insurance cards.

However, there are many different emergency datasets available, both in electronic and paper-based form. This evaluation compares typical datasets for emergency information and identifies similarities and differences between them.

1. Methods

For this evaluation we examined three datasets that may be printed and filled out to be kept in the wallet, eight free applications for android smart phones and the prototype for the new German health insurance card. All datasets were converted into Operational Data Model (ODM) format, enhanced with NCI Thesaurus Codes and compared with the compareODM-toolkit[1].

2. Results

10 common item groups were identified (see Table 1). Some data items occur in most datasets like the name, birth date, allergies, medication or blood group. Other information like photography of the patient is only available in some smartphone applications. Some datasets include a patient declaration for undesired procedures, a living will or an organ donor card. (see Table 1)
3. Discussion

Emergency information datasets have to make a compromise between handiness and presenting all necessary information. Electronic versions are often only readable at the hospital, while printouts may be too small to capture a complete medical record.

Furthermore, some information seems not to be necessary for emergency physicians like the blood group, due to the fact that instant tests are available and more reliable than a value filled in by the patient. Other data like a photo, the size, weight and gender may help to prevent mix ups between patients.

The german health insurance card contains information about previous diagnoses, but not about medication, the patient’s degree or size and weight, maybe due to the fact that these values are not editable by the patient. Further research should show with information has a benefit on treatment of patients in emergency situations.

Table 1. Comparison between the evaluated datasets

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4. References