

Pre-defined Headings in a Multi-professional Electronic Health Record System

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Introduction

Applying multi-professional electronic health records (EHRs) is expected to improve the quality of patient care and patient safety. Both EHR systems and system users depend on semantic interoperability to function efficiently. A shared clinical terminology comprising unambiguous terms is required for semantic interoperability. Empirical studies of clinical terminology, such as pre-defined headings, in EHR systems are scarce and limited to one profession or one clinical specialty. The aim was to study pre-defined headings applied by users in a Swedish multi-professional EHR system.

Materials and Methods

This was a descriptive study of pre-defined headings (n=3 596) applied by 5 509 users in a Swedish multi-professional EHR system. When the EHR system was implemented headings pre-defined by each profession based on their perceived clinical-specific or profession-specific needs were developed. Pre-defined headings in an EHR system in a county council, applied by health care professionals obligated to document according to the Swedish Patient Data Act, were included. Pre-defined headings applied by dietitians, medical social workers, occupational therapists, physicians, physiotherapists, psychologists, registered nurses, and speech and language pathologists were included. The pre-defined headings were classified into categories to reflect the ambiguity of each heading. The headings were classified by the first author according to three categories, employed by Melander Marttala in a study of mutual understanding between physicians and patients, and an additional category. Pre-defined headings that occurred in the Swedish Academy Glossary (SAG) without any explanation were classified as “common words”. “Terms for specific purposes” had one or more explanations in SAG. Pre-defined headings not found in the SAG, but in a medical health care dictionary, were classified as “specialist terms”. Pre-defined headings not found in the SAG or in a medical health care dictionary were classified into an additional fourth category; “unclassified headings”.

Results

Less than half of the pre-defined headings were shared by two or more professional groups. All eight professional groups shared 1.7% of the pre-defined headings. The distribution of pre-defined headings across categories yielded 46% “terms for

specific purposes” 28% “common words”, 13% “specialist terms”, and 13% “unclassified headings”

Discussion

Nearly 60% of the pre-defined headings were not shared at all. It indicates that each professional group had incorporated their own specific clinical terminology as pre-defined headings into the multi-professional EHR system. However, registered nurses and physicians, and medical social workers and psychologists, pair wise mutually shared more than 50% of their pre-defined headings between themselves. There is a conflict between ambiguity and comprehension of terms and words used as pre-defined headings. “Specialist terms” can, because they are unambiguous, support mutual understanding within a professional group or a specialty. At the same time they can be incomprehensible and thus exclusionary to patients and other professional groups. Whereas “common words” can, despite the fact they are ambiguous, be inclusionary because they are comprehensible and familiar to patients and all professional groups. The pre-defined headings in the multi-professional EHR-system studied did not constitute a joint language for specific purposes. The improvement of the quality and usability of multi-professional EHR systems requires attention.

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