Abstract

The objective of the dissertation thesis has been the information-lexical analysis of Czech medical reports and the usability of international classification systems in the Czech healthcare environment. The analysis of medical reports has been based on the attributes of the Minimal Data Model for Cardiology (MDMC). Narrative medical reports and structured medical reports from the ADAMEK software application have been used. For the thesis SNOMED CT and ICD-10 classification systems have been used. There has been compared how well attributes of MDMC are recorded in narrative and structured medical reports. The language analysis of the Czech narrative medical reports has been made. A new application for measuring diversity in medical reports written in any language is proposed. The application is based on the general concepts of diversities derived from f-diversity, relative f-diversity, self f-diversity and marginal f-diversity. The thesis has come to the conclusion that using a free text in medical reports is not consistent and not standardized. The standardized terminology would bring benefits to physicians, patients, administrators, software developers and payers and it would help healthcare providers as it could provide complete and easily accessible information that belongs to the process of health care and it would result in better health care. The use of international classification systems is a necessary first step to enable semantic interoperability of heterogeneous electronic health records.