Comparison and Reconciliation of Tuberculosis Data Elements

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Abstract

A unified set of standards must be available for use in Tuberculosis (TB) diagnosis, treatment, and reporting to help achieve a global control of TB. A systematic review of literature identified a lack of a comprehensive tool to serve as a resource to guide authors in the development of documents. A process was developed to systematically compare the American Thoracic Society (ATS) guideline document with the current version of the HL7 TB DAM. Document analysis methodology has been developed to identify gaps between the guidelines and the standards. Additionally, the document analysis methodology used in this process can be refined and may serve as a framework for developing other domain models.

Introduction

Tuberculosis, one of the silent recorded diseases, continues to kill almost 2 million people annually with 8.8 million new cases reported each year. It is estimated that 1/3 of the world’s population is latently infected. TB continues to be a major public health problem for patients and other scientific disciplines involved in the diagnosis, treatment, and control of TB. It is the integration, dissemination, and implementation of diagnostic and treatment data. One of the most critical needs is the development of interoperable data standards in TB healthcare data with the ability for health care organizations, governments, and other stakeholders to use consistent terminology and definitions nationally and internationally.

Process Methodology

Document analysis principles were applied to the 458 guidelines to determine if data elements used in the guideline and classification at multiple pulmonary TB. Two independent raters read the guideline and documented each mention of a possible data element. Differences were adjudicated in a consensus list of data elements by both raters. Afterwards the consensus list was compared to the existing version of the TB DAM data element list. Data elements not represented in the TB DAM, or (ii) not represented in the TB Data Elements.

DE Comparison Rating: 1

DE Comparison Rating: 2

Results

The analysis revealed 60 data elements within the ATS guidelines which were not listed in the HL7 TB DAM. Additionally, 23 represented elements were identified to have semantically equivalent data elements.

Conclusion

This process has identified gaps that exist between the clinical guidelines and the current version of the HL7 TB DAM. Document analysis methodology has been developed to identify gaps between the guidelines and the standards. Additionally, the document analysis methodology used in this process can be refined and may serve as a framework for developing other domain models.

References


2. Diagnostic Standards and Classification of Tuberculosis in Adults and Children. This Offi- cial Statement of the American Thoracic Society and the Centers for Disease Control and Preven-

