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Data Item Quality for Biobanks:
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Vladimir A. Shekhovtsov, and Johann Eder

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Biobanks not only collect, store and provide biological material but also associated data. Therefore it is necessary to establish data quality management in biobanks.

In this article, the authors describe the concept of quality for biobank data.

For this they analysed which properties of biobanks are most important for an adequate data quality management system. They categorized the quality of biobank data into data item quality and metadata quality. They further defined data item quality characteristics, which are e.g. completeness, accuracy, reliability, consistency, timeliness, precision, and provenance. These definitions of data item quality characteristics are necessary for data quality representation and management. The definitions are also important, when data items derived from different sources have to be combined and integrated, which is often the case with larger medical studies.

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Autoren: Vladimir A. Shekhovtsov, Johann Eder

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Abstract
Biobanks collect and store items of biological material and provide these resources for medical research together with data associated with these items. In this paper, we contribute to the fundamentals necessary for establishing data quality management for biobanks. We analyse the properties of biobanks which are most important for an adequate data quality management system. We provide a comprehensive description of the concept of quality for biobank data. For this, we state that the quality of the biobank data can be categorized into data item quality and metadata quality and provide the detailed treatment of common data item quality characteristics, in particular, completeness, accuracy, reliability, consistency, timeliness, precision, and provenance. These definitions of data item quality characteristics are a necessary basis for data quality representation and management. The precise definition of these data quality characteristics also required as a necessary basis for integrating data items derived from different sources which is frequently needed for larger medical studies.

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