

Call for Papers for “Methods of Information in Medicine - Focus Theme”

Quality of Data in Health Research and Health Care

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Data are the capital of health research. The knowledge gained from clinical trials, health services research and epidemiology depends on data collected according to well-elaborated research designs. Alternative approaches to extracting knowledge from data such as Big Data analysis or the application of artificial intelligence methods also rely on the available material, the data. From a methodological point of view, Russell Lincoln Ackoff summarized the challenge in his sequence from data via information, knowledge, and understanding to wisdom. From a poetry point of view, Thomas Stearns Eliot highlighted the relationship in his play *The Rock*: “Where is the Life we have lost in living? Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?” If nothing else, the Corona pandemic has revealed that the sequence from data to wisdom is not self-fulfilling.

If data are the capital of health research, the quality of health research is strongly bound to the quality of the data. Surprisingly, health research results are frequently published without explicit attention to the quality of the data used. Out of the broad dimensions of data quality - case completeness, data completeness, and validity - case completeness might be addressed as recruitment rate and data completeness as the amount of missing values. Validity usually remains unmentioned.

It looks simple, ISO 8000-2:2020 defines data quality as “the degree to which a set of inherent characteristics of data fulfils requirements”. However, manifold questions arise from this definition, starting with the constraint of “inherent characteristics” as opposed to a context dependent “fit-for-purpose” and, last but not least, the consideration of new sources such as sensors and social networks.

This Focus Theme aims to summarize the state-of-the art concerning data quality issues as well as to present new paradigms and applications that go beyond the current state, for example, in addressing the coincidence of health research and health care. Then, data quality is simultaneously relevant for the generation of new evidence but also for the immediate application of appropriate diagnostic and therapeutic procedures.

We are looking for innovative and novel papers, showing interesting and useful results and interpretations in the following areas, with applications in health research:

- Definition and dimensions of data quality
- Differentiation of data quality from other aspects of quality in health research
- Novel methods and approaches for measurement of data quality

- Metadata and frameworks for data quality measures
- Reporting and acceptance of data quality measures
- Costs and benefits of data quality measurement
- Links between data quality measurement, data management, and data quality improvement
- Relationship between levels of data quality and application scenarios
- Education, role and profile of data stewards
- Influence of structural and procedural aspects of health research on data quality measures
- Experiences with the application of data quality measures in health research
- Studies about the effect of data quality assessment and/or improvement procedures

We welcome original and high-quality papers, which are not under consideration by other journals or conferences. Submitted manuscripts need to follow the submission guidelines of "[Methods of Information in Medicine](#)" journal (JCR IF 2020: 2.176), and will be rigorously reviewed by at least three reviewers. Please submit them electronically at <http://mc.manuscriptcentral.com/methods> and select "Original Article for a Focus Theme" as manuscript type. Please mention the title of this Focus Theme in the cover letter. Methods offers two separate submission tracks: a) print only, free of charge for articles including ≤ 22.000 characters, and b) open access with an APC fee of 1,650 € per article. Authors may choose their submission method of preference and the Focus Theme will be bundled online at the journal's website.

Submission deadline: **30.06.2022**

Current Journal metrics

Accept ratio: 25.6%

Avg. days from submission to first decision: 31.4 days

Avg. days from submission to final decision: 42.5 days

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