

Thursday 25 July 2024

09:00-12:30 Mini Symposium 2 (Room 2)

STRengthening Analytical Thinking for Observational Studies (STRATOS) initiative – recent progress and foci for the future

Organizers: Willi Sauerbrei and Els Goetghebeur in collaboration with the STRATOS Steering Group

Building blocks of Efficient Initial Data Analysis and Data Quality Assessments – Best practice examples

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Rigorous statistical analyses require an adequate understanding of the underlying data. Gaining such an understanding is the main goal of Initial Data Analysis (IDA) (1) and data quality assessments (DQA) (2). IDA and DQA overlap strongly, but differ in that the former being more focused on assessing the fulfillment of prerequisites for the intended substantive analysis, whereas the latter has a more generic focus on data properties. Several works provide guidance on the building blocks for comprehensive and efficient implementation of IDA and DQA. These building blocks range from the setup of metadata to the assessment algorithms used for IDA and DQA. This talk provides best practice examples on the conduct of IDA and DQA in the context of observational health studies, using data from the Study of Health in Pomerania (SHIP) and the Survey of Health, Ageing and Retirement in Europe (SHARE). It will be illustrated, how a comprehensive information management supports automated assessments to increase the scope and quality of IDA and DQA related analyses.

1. Huebner M, le Cessie S, Schmidt CO, Vach W. A. Contemporary Conceptual Framework for Initial Data Analysis. *Observational Studies*. 2018;4(1):171-92. doi:10.1353/obs.2018.0014

2. Schmidt CO, Struckmann S, Enzenbach C, et al. Facilitating harmonized data quality assessments. A data quality framework for observational health research data collections with software implementations in R. *BMC Med. Res. Methodol.* 2021;21(1):63. doi:10.1186/s12874-021-01252-7