Guidance on performing peer review

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1 PhenotypeLibrary & HADES

This document is a DRAFT guidance.

If you accept an invitation to perform a peer review on a cohort definition submitted to the OHDSI Phenotype Library, please review this guidance document.

1.1 Note

- OHDSI subscribes to open-peer review.
- Reviewers are invited from a pool of volunteers via the OHDSI Phenotype Development and Evaluation Workgroup. More than one reviewer may be asked to perform a peer review. All reviewers' review and identity will be open.
- You may perform a live or asynchronous review. A live review may be done in the OHDSI Phenotype Development and Evaluation Workgroup, where it will be video recorded and archived. An asynchronous review is a written review done as a forum post in the original thread started by the submitter on forums.ohdsi.org.
- Anyone in the community may engage in the conversation and provide input on both the contribution and the review.

1.2 Levels of Peer Review

The workgroup lead or designee moderator will interpret your review and assign a level of confidence to the submission. The levels are incremental, meaning a definition that has level 3 status should have also met levels 2, 1, and 0.

1.2.1 Level 0

All cohorts in this level have passed the minimum submission requirements detailed here. They are now ready for peer review. If rejected, the cohorts will remain in Level 0, with a withdrawn = TRUE status.

1.2.2 Level 1

These cohorts have completed at least one peer review, accepted based on a high-level summary of the evaluation contributed by the submitter. This level is the lowest level of review; we expect $> 90\%$ of definitions that have passed Level 0 to pass Level 1 review.

1.2.3 Level 2

These cohorts have completed at least one peer review, accepted by the reviewer. Acceptance requires: - Independent review of Cohort Diagnostics (and PheValuator when available) from the submitter. - Verification that errors such as sensitivity errors, specificity errors, and date misclassification errors are discussed and observed. - Independent evaluation for errors by reviewing submitted materials. - A recommendation to accept the definition with known errors.

1.2.4 Level 3

A peer reviewer has reviewed the definition and independently performed an evaluation on a new data source, accepting the definition with known errors. The second reviewer should use a data source not part of the original submission for the review. See evaluation guidance.

1.2.5 Level 4

The cohort definition has been used in multiple studies, publications, or workshops, and there is a general consensus that it is well-adopted. Its performance characteristics have been stable in different types of data sources. The definition has been referenced and used by others, and the output is considered high quality.