The EQALM Guidelines for publishing on interlaboratory studies (PubILC) - a proposal -

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Background I

Preparation of a manuscript on

„Design of external quality assessment schemes and definition of the roles of their providers in future epidemics“

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included a literature review for epidemiologically relevant information contained in articles on SARS-CoV-2 virus genome detection EQA schemes.

Background I

22 „epideiologically relevant“ criteria were defined as a summary of information provided by all 17 articles; they included information about the underlying procedures and results, e.g.:

- Types and numbers of registered assays
- Counts and categories of participant laboratories
- Sample specifications – origin, matrix, homogeneity, stability, ...
- Detection rates, false positive and false negative results
- Inter-assay variability

Background I

In each article, several relevant information about the underlying EQA scheme was missing.

Background II

Another literature review on publications on „EQA“, „PT“ and „interlaboratory comparison“ from 2022 revealed 50 articles of different laboratory disciplines; again, in most articles some relevant information on the underlying EQA schemes was missing.

The use of the terms „EQA“, „PT“ and „interlaboratory comparison“ seemed to be unclear.

Background II

EQALM Scientific Committee was approached to support writing of recommendations on the content of publications.

Goal:

To provide guidance for authors, reviewers and publishers who are writing, reviewing and publishing articles on interlaboratory activities, including EQA and PT.

Background III

A “core group“* of the EQALM Scientific Committee drafted

„Guidelines for publishing on interlaboratory comparisons“

* Stéphanie Albarède, Tony Badrick, Christoph Buchta, Dina Patel, Dalius Vitkus

Guidelines (draft)

1. Description of the activity

a) Definition of the activity

b) Additional information on the activity reported on

c) Initiator and executor of the activity

d) Purpose of the activity

e) Time of the activity

f) Number of samples included

Guidelines (draft)

2. Information on items (samples) used

a) Origin and manufacturer

b) Ethics (if applicable)

c) Detailed specification and intended purpose of each sample

d) Matrix

e) Homogeneity

f) Stability

g) Physical properties of samples and transport conditions

h) Activities required by participants to prepare samples before analysis

Guidelines (draft)

3. Information and instructions for participants

a) Statement that participants were instructed to analyze the samples in the same way as routine clinical samples (not applicable for all kinds of interlaboratory comparison)

Guidelines (draft)

4. Information on participant entities

a) Number of participants / respondents

b) Types of participants

c) Location (state(s), countries, regions)

Guidelines (draft)

5. Information on participant test systems

a) Designation of devices and reagents used (measurement systems)

Guidelines (draft)

6. Submission of results by participants

a) Way of reporting results to the initiator

b) Unitage and format of quantitative results

Guidelines (draft)

7. Evaluation and assessment of results

a) Determination of the target / assigned value(s)

b) Acceptance criteria

Guidelines (draft)

8. Assessment results reporting and feedback

a) To participants

Guidelines (draft)

9. Findings

a) Information gained according to the purpose of the activity

Guidelines (draft)

10. Limitations of the activity

a) Limitations according to EQA/PT activities (completeness of laboratories, ...)

Guidelines (draft)

11. Impact of the outcome of the activity

a) Educational aspects for participants

b) Knowledge gain for other interested parties

Guidelines (draft)

Terminology

a) Interlaboratory comparison (ILC)

b) External quality assessment (EQA)

c) Proficiency testing (PT)

d) Sample exchange (SE)

EQALM PubILC Guidelines

The guidelines should be re-evaluated regularly and be open for change requests by interested parties.

Once adopted by authors and journals, the EQALM PubILC Guidelines will prevent missing essential information in publications on interlaboratory comparison activities and thus improve literature on such activities.

EQALM PubILC Guidelines

Please support this initiative!

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Thank you for your attention!