

# It is time to review and revise ISO/IEC 17043:2010 ?

Michael A Noble MD FRCPC

Chair (soon Emeritus), Clinical Microbiology Proficiency Testing UBC Canada  
Medical Director for Microbiology EQA, Oneworld Accuracy, Canada

Chair, Microbiology Working Group, EQALM

# Note1:

The opinions being presented are MY opinions.  
You may or may not agree with them.  
My intend is NOT to convince you that I am right,  
but rather  
to open up the EQALM conversation  
on the current status and suitability of  
our international standard  
for general requirements of a  
**medical laboratory**  
**EQA scheme.**

# 35 years of history behind ISO/IEC 17043

- In **1984** ISO and IEC published ISO/IEC Guide 43 (*Development and operation of laboratory proficiency testing*)
- In **1997** the document was updated IEC Guides 43-1 and 43-2. (*Proficiency testing by interlaboratory comparisons*)
- In **2000** International Laboratory Accreditation Cooperation (ILAC) ISO adopted and adapted ILAC G13 (*Guidelines for the Requirement for the Competence of Providers of Proficiency Testing Schemes*)
- In **2005** at the request of ILAC Proficiency Testing Committee, ISO CASCO began the work on raising Guide 43 to the level of an international standard.
- In **2010**, ISO/IEC 17043:2010 (*Conformity assessment – general requirements for proficiency testing*) was published.

# Current status of ISO/IEC 17043:2010

**Eight years after publication  
the standard remains  
unreviewed\* and unrevised\*\*.**

This is inconsistent with ISO Secretariat Rules  
Which require a review every 5 years.

\*ISO CASCO may have done an internal review,  
but there has not been a stakeholders' review

\*\* There was an internal published revision to  
ISO13528 (**Statistical methods for use in proficiency  
testing by interlaboratory comparisons**)

# In my opinion...

We (EQALM) as the largest international and intercontinental organization committed to PT/EQA for the medical laboratory community have an **right and expectation and an obligation** to:

1. Create a committee of interested parties
2. Review the standard
3. Draft a report
4. Share the report with ISO CASCO
5. Insist that a formal review of the standard is undertaken, and our report is taken into consideration.
6. Apply for and insist on formal Liaison status with ISO CASCO for all future changes in ISO/IEC17043.

But even though nobody has asked, let me share *my* thoughts about this standard as applied to medical laboratory EQA

- First ...

I understand that ISO/IEC 17043 is intentionally NOT sector specific.  
and

*I do not think* that we are sufficiently different from Proficiency Testing programs in other sectors that would require a separate sector specific standard for EQA for medical laboratories.

# Laboratories with identical PT/EQA needs as medical laboratories

- Water testing
- Food testing
- Drug testing
- Veterinary laboratories
- Cannabis testing laboratories

- Multiple laboratory disciplines
  - Chemical
  - Microbiological
  - Target specific
- Varied testing techniques
  - Classical Quantitative/Qualitative
  - Microscopic
  - Immunodiagnostic
  - Molecular
- Multiple laboratory phases
  - Pre-Examination
  - Examination
  - Post-Examination
  - Peri-Examination

Following a “thorough and thoughtful (?)” personal review of ISO/IEC 17043:2010, I came to following conclusions...

1. Most of the document holds up and does NOT need revision.
2. There are parts of the standard that were way ahead of other laboratory standards, which are only now starting to catch up.
  2. Service to the Customer
  3. Causal Analysis
3. There are parts of the standard that I think should be revised.

# Service to the customer



**ISO/IEC is more focused on “customer service” than either ISO9001:2015 or ISO 15189:2012 or ISO/IEC17025:2017**

The proficiency testing provider ***shall be willing to cooperate with participants*** and other customers in clarifying customers' requests and in monitoring the proficiency testing provider's performance in relation to the work performed, provided that the proficiency testing provider assures confidentiality to its participants.

The proficiency testing provider ***shall seek feedback, both positive and negative***, from its customers. The feedback shall be used and analysed to improve the management system, proficiency testing schemes, and customer service.

The proficiency testing provider shall have a policy and follow a procedure for ***the resolution of complaints and appeals received*** from participants, customers or other parties.

Places where I think  
ISO 17043  
should be  
REVISED

## 4.4.1.3 Planning a “new scheme”

The proficiency testing provider shall document a plan before commencement of the proficiency testing scheme that addresses the objectives, purpose and basic design of the proficiency testing scheme, including the following information and, where appropriate, reasons for its selection or exclusion:

Name and Address of the PT Provider

Name and Address and Affiliation of the Coordinator and other personnel

Criteria to be met for participation.

Number and type of expected participants.

Reasonable precautions to prevent collusion between participants or falsification of results, and procedures to be employed if collusion or falsification of results is suspected

A detailed description of the statistical analysis to be used;

The origin, metrological traceability and measurement uncertainty of any assigned values;

Criteria for the evaluation of performance of participants

A description of the extent to which participant results, and the conclusions that will be based on the outcome of the proficiency testing scheme, are to be made public

## 4.4.1.3 Planning a “new scheme”

The proficiency testing provider shall document a plan before commencement of the proficiency testing scheme that includes the objectives and basic design of the proficiency testing scheme, where appropriate, reasons for its selection.

Name and Address

Name and Address

Criteria to be met

Number and type

Reasonable protection

results, and protection

A detailed description of the statistical analysis to be used;

The origin, metrological traceability and measurement uncertainty of any assigned values;

Criteria for the evaluation of performance of participants

A description of the extent to which participant results, and the conclusions that will be based on the outcome of the proficiency testing scheme, are to be made public

This section needs TWO revisions including ONE Deletion and ONE Addition

panel

or falsification of results is suspected

A description of the extent to which participant results, and the conclusions that will be based on the outcome of the proficiency testing scheme, are to be made public

## 4.4.1.3 Planning a “new scheme”

The proficiency testing provider shall document a plan before commencement of the proficiency testing scheme that addresses the objectives, purpose and basic design of the proficiency testing scheme, including the following information and, where appropriate, reasons for its selection or exclusion:

Name and Address of the PT Provider

Name and Address and Affiliation of the Coordinator and other personnel

Criteria to be met for participation.

Number and type of expected participants.

Reasonable precautions to prevent collusion between participants or falsification of results, and procedures to be employed if collusion or falsification of results is suspected

A detailed description of the statistical analysis to be used;

The origin, metrological traceability and measurement uncertainty of any assigned values;

Criteria for the evaluation of performance of participants

A description of the extent to which participant results, and the conclusions that will be based on the outcome of the proficiency testing scheme, are to be made public

## 4.4.1.3 Planning a “new scheme”

The proficiency testing... commencement of the  
proficiency testing... design of the  
proficiency testing... appropriate,  
reasons for...

It is **NOT** the responsibility or authority of  
EQA providers to prevent participant collusion.

That is the task of

Laboratory Accreditation Bodies

Laboratory Licencing Bodies

Authorized (Governmental) Oversight Bodies

EQA **may** have some responsibility to **REPORT** evidence  
of known or highly probable  
of intermember collusion

The... designed  
values,  
Criteria for  
A description of... decisions that will be  
based on the outcome... be made public

#### 4.4.1.5

Technical expertise shall be used in the following matters such as the following:

- a) planning requirements as listed in 4.4.1.4;
- b) preparation of detailed instructions;
- c) comments on any technical difficulties encountered during proficiency testing rounds;
- d) provision of advice in evaluating the performance of participants, where appropriate, groups of participants or individuals;
- e) comments on the results and performance of participants, where appropriate, groups of participants or individuals;
- f) provision of advice for participants (within the report);
- g) responding to feedback from participants; and
- h) planning or participating in technical meetings with participants.
- i) identification and resolution of any difficulties expected in the preparation and maintenance of homogeneous proficiency test items, or in the provision of a stable assigned value for a proficiency test item;

**Recommend addition:  
Insert after (c )**

**Technical expertise SHALL ensure that the selection and timing and complexity of samples is appropriate to the laboratories receiving the samples**

**EQA Providers must accommodate customer needs**

# **There are 16 references with in the document to “interlaboratory comparisons”**

The Introduction starts...

“Interlaboratory comparisons are widely used for a number of purposes and their use is increasing internationally. Typical purposes for interlaboratory comparisons include:”

Places where I think that ISO 17043: 2010 should be improved.

There are several places in the standard that refer to "interlaboratory comparison".

It is time to retire the archaic term **"Interlaboratory Comparison"** for the purposes of the standard.

# What is a *comparison*

- Examination of two or more items to establish similarities and dissimilarities
- Denoting different levels of quality, quantity, or relation
- ***To classify or categorize one versus another.***

We do NOT compare one laboratory performance.  
We MEASURE competence .

- We usually measure laboratory performance against a known objective standard or expected target.
- We do NOT measure performance by pitting one laboratory against another.

# What is a *comparison*?

When we have a class of students and we give them a Quiz,  
we DO NOT CALL it an “Interstudent Comparison”

When a person is being tested for their Driver’s Licence  
We don’t call that an  
“Interdriver Comparison”

We call them assessments of performance.

**A Comparison is what they do at  
Beauty Contests**

# Annex A.4 should be revised

- Many EQA programmes are designed to provide insight into the complete path of workflow of the laboratory, and not just the testing processes.
- ***A typical feature of EQA programmes is to provide education to participants and promote quality improvement. Advisory and educational comments comprise part of the report returned to participants to achieve this aim.***
- ***Some EQA programmes assess performance of pre-analytical and post-analytical phases of testing, as well as the analytical phase.***
- Alternatively, pre-analytical information may accompany the proficiency test item, requiring the participant to select an appropriate approach to testing or interpretation of results, and not just to perform the test.

# Annex A.4 should be revised

- Many EQA programs provide insight into the complete process, not just the testing process.
- *A type of promotion to provide educational, advisory or informative information should be a **NORMATIVE REQUIREMENT.***
- *Some programs should be extended to include Pre-Examination and Examination and Post-Examination phases. **and phase.***
- Alternative programs should be a **NORMATIVE REQUIREMENT** to provide appropriate results, and not just to perform.

## In summary ...

- Many EQA providers have benefited through the application of ISO/IEC 17043:2010
- In **MY** opinion the document has “opportunities for improvement”.
- Regardless, EQALM as the largest (?) international, intercontinental organization committed to EQA performance and improvement, should be *actively* involved in any and all review and revision of standard.

# And ...

We (EQALM) as an international organization committed to PT/EQA for the medical laboratory community have an **obligation** to:

1. Create a committee of interested parties
2. Review the standard
3. Draft a report
4. Share the report with ISO CASCO
5. And if necessary insist that a formal review of the standard is undertaken, and our report is taken into consideration.
6. REQUEST formal Liaison status with ISO CASCO