Online Peer Review during COVID-19 Pandemic

– Activities and Experience from APMP

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Abstract

APMP has adopted "on-site peer reviews" as a key element upon approving

CMCs within the region. However, due to the outbreak of the COVID-19

pandemic, conducting "on-site peer reviews" is not feasible.

This presentation provides information on how APMP is resolving the issue by

conducting "on-line peer reviews".

Outline Structure of this presentation

1. APMP's history adopting onsite peer review   By Dr. YAMAZAWA

                                               Kazuaki

2. Online Peer Review Guideline   By Dr. YANG Ping

3. Online Peer Review – NMIJ's Case and Experience   By Dr. YAMAZAWA

                                               Kazuaki

4. Online Peer Review Survey   By Dr. YANG Ping

Part-1. APMP's history adopting onsite peer review

By Dr. YAMAZAWA Kazuaki

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APMP's basic document: APMP-QS2

- A document setting the basic requirements for approving CMCs in the intra-RMO review phase

- Includes specific rules and formats of

  - Defining pathways for assuring quality systems

  - Required evidences for each pathway

  - Requirement on a "on-site" peer review

    - Approval rules and forms on the technical/quality expert (peer)

Through this approval process, the onsite peer reviews are conducted under the APMP's management.

APMP's history adopting onsite peer review

- A talk by Dr. Rohana Rohana Ediriweera, ex-NMIA,

"Early days of the CIPM MRA and implementation of the APMP QS Review Process"

Day 1 (Nov. 29)
Invited lectures
Over 100 participants

Paul McMullen (NATA)

Rohana Ediriweera (ex-NMIA, 1st TCQS Chair)

Andy Henson (BIPM)

Photo from:
Day 1 of the Joint BIPM-APMP Workshop "Important transitions in the CIPM MRA infrastructure" held on Nov. 29, 2019, at Sydney, Australia

This talk recalls the early days of the implementation of the CIPM MRA within the APMP. As the basic structure and processes developed during the early days still exist as the APMP rules, the lecture detailed the spirit and minds of the early days of building the quality system review process within the APMP. Suggestions to improve the review process to underpin the reliability of the monitoring of the Quality Managements System implemented at each NMI/DI within the APMP were given.

APMP's preparation in the early days

- Late 1990s – discussions within APMP.

- 2000 – APMP workshop in Singapore to introduce quality systems.

  - Recommended establishment of a Technical Committee for Quality Systems

- 2001 – TCQS was established at the GA in Tsukuba.

  - Discussed first draft of APMP QS review criteria

- 2002 – a formal version of the APMP QS Review Process was finalized at the GA in Vietnam. (= Original version of the APMP-QS2)

Note:

The approval process of CMCs in the present form at the JCRB level started since 2005 (after the transition period until December 2004) APMP's discussions were conducted during the transition period.

APMP-TCQS's position

- The essential components of quality systems must be in place and functioning properly to give confidence that the CMCs can be achieved.

- Each NMI should demonstrate that it has a system in place that covers all the components specified and it can achieve the claimed CMCs; now and into the future.

- Need to see objective evidence – facilities, records, results, personnel

- Therefore must have on-site reviews

- Applies to all APMP NMIs

The requirement for onsite peer reviews was formulated in the course of this position

APMP's requirements on onsite peer reviews

For the visits

- Recognised experts visiting the NMI,

- Interacting with the staff, checking the records and facilities,

and

- reporting on the quality system and technical competence.

Review/assessment visits for a given area must be conducted at least once every five years.

A photo from an onsite peer review and an accreditation assessment conducted at NMIJ, AIST (for capacitance, Feb. 2020)
Technical peers approved by the APMP and the professional assessor from IAJapan (an ILAC signatory) conducted the peer review/accreditation assessment simultaneously.

Part-2.   Online Peer Review Guideline

By Dr. YANG Ping yangp@nim.ac.cn

1. Background

- 2020 Outbreak of COVID-19 Pandemic.

- Many countries stop flight, close borders to prevent or slow the transmission.

  This make APMP on-site peer review quite impossible ~

- How to carry out the peer review ?

1. Background

Discussion:

This document is to provide guidelines for APMP Members unable to conduct their planned

Reviews due to travel restriction resulting from the spread of COVID-19.

*** based on the discussion between Angela and BIPM in March 2020.

BIPM Reply:

Times indeed are exceptional, and flexibility is clearly necessary.
It may not be possible to find that a 'once size fits all' solution across the region.
Consequently I'd suggest that you keep all three of the options, ideally with a preferential ordering. This is of course an APMP decision, you may come to the view that you can continue with two or even just one of the options.

I would suggest that APMP write this up into a one side procedure describing how it intends to maintain some level of continuity in these exceptional circumstances. This is then submitted to the JCRB, which can then be circulated amongst the other regions.

I have discussed and agreed my response with Martin (as JCRB Chair) and Sten (as JCRB Exec Sec).
 Andy

2. Progress

Progress:

In April 2020, TCC Chair, Dr Chu-shik KANG and TCQS Chair worked closely to draft the guidelines.

◆ 1. Some discussion with APMP Chair, Mr FANG. Offer some basic preferential orders for technical review, delay, online or local.

◆ 2. Close discussion within TCQS and with TCC Chair.

◆ 3. EC Member Comments and EC Approval.

◆ 4. Released at 1st, May 2020.

Title : APMP Guidelines for On-site Peer Reviews/Assessments under Unexpected Circumstances due to COVID-19

3. Key Points

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under Unexpected Circumstances due to COVID-19

Part 1:Introduction - Background and Some Key Points

◆ We draft the guidelines based on our three pathways, a, b and c in APMP

◆ Guideline structure: describe the QS review and technical review separately.

◆ Some basic interpretation for the review…

3. Key Points

Part 2: Recommendations and options

Pathway A

(third party accreditation)

…follow the Guidelines provided by the respective national accreditation body, or the International Laboratory Accreditation

Pathway B

(ISO 9001 and attestation by technical peers)

QS Review:

… follow the Guidelines provided by the respective national certification body, or the International Accreditation Forum (IAF).

Technical Review:

Option 1-Postponement

Option 2-Remote Review

Option 3-Review by Local

Pathway C

(attestation by a team consisting of quality system experts and technical peers)

QS Review:

Option 1-Review by Local Expert

Option 2-Remote Review

Technical Review:

Option 1-Postponement

Option 2-Remote Review

Option 3-Review by Local Expert

3. Key Points

Some Basic principles are based on risk consideration:

1 For the QS approved by pathway C, QS review by Local Expert or by Remote Mode before the 5-year, is safer, compared to just extend the validity of the Quality System.

  * Risk is the qualification Local expert or Remote Mode.

2 For the Technical Peer Review, which rely more on the on-site observation and communication, postponement is the top priority, to reduce the output risk, we also allow remote and local if very necessary.

3. Key Points

Other details should be considered, such as:

◆ Smooth Video Communication

◆ Access to necessary spot at laboratory

◆ Enough documents, evidence and review records

◆ Confidentiality.

Try our best to Make the Peer Review :

Feasible   — Overcome the international travel restrictions

More Flexible — Allow online and extension

Less Risk   — Online is better than just extension

…

4. Circulation and Explanation within APMP

Explain by online Workshop:

- More than 100 participants attended the 2020 Online Workshop.

- Introduce the policy of online peer review during the pandemic and had lot of online discussion.
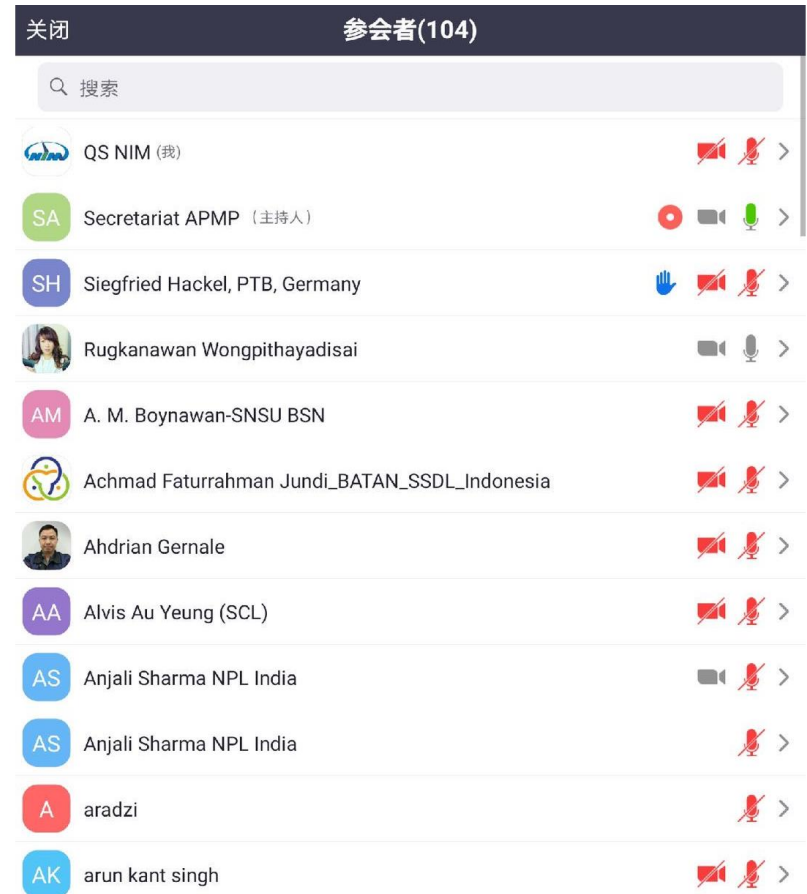
4. Circulation and Explanation within APMP

APMP NEWSLETTER
Asia Pacific Metrology Programme

Inside this issue

APMP Guidelines for On-site Peer Reviews / Assessments under Unexpected Circumstance due to COVID-19

The objective of the *Guidelines* is to provide guidance for APMP member institutes unable to conduct their planned reviews due to travel restrictions resulting from the spread of COVID-19. This document was drafted by APMP TCQS Chair Dr. YANG Ping and the then incumbent Lead TC Chair Dr. Chu-shik Kang based on discussion between APMP and the BIPM. According to the Guidelines:

• APMP member institutes following the pathway (a) (Third party accreditation) is to follow the guidelines provided by the respective national accreditation body or the ILAC;

• APMP member institutes following the pathway (b) (Certification to ISO 9001:2008 and attestation by technical peers) have 3 options:

• postponement of review, which is mostly recommended, and the maximum allowed is six months after the end of the pandemic;

• remote review, where reviewers must come from NMIs/DIs and be approved by TC Chair;

• review by local expert, where scope of services under review must not change from the last review and the review must be approved by EC;

• APMP member institutes following the pathway (c) (self-attestation) is allowed to conduct QS review remotely or by local expert, and to postpone the technical review until after the pandemic.

Besides, APMP QS documents are currently being updated to align with the new ISO/IEC 17025: 2017, ISO 17034: 2016, as well as the KCDB 2.0.

Part-3. Online Peer Review – NMIJ's Case and Experience

By Dr. YAMAZAWA Kazuaki

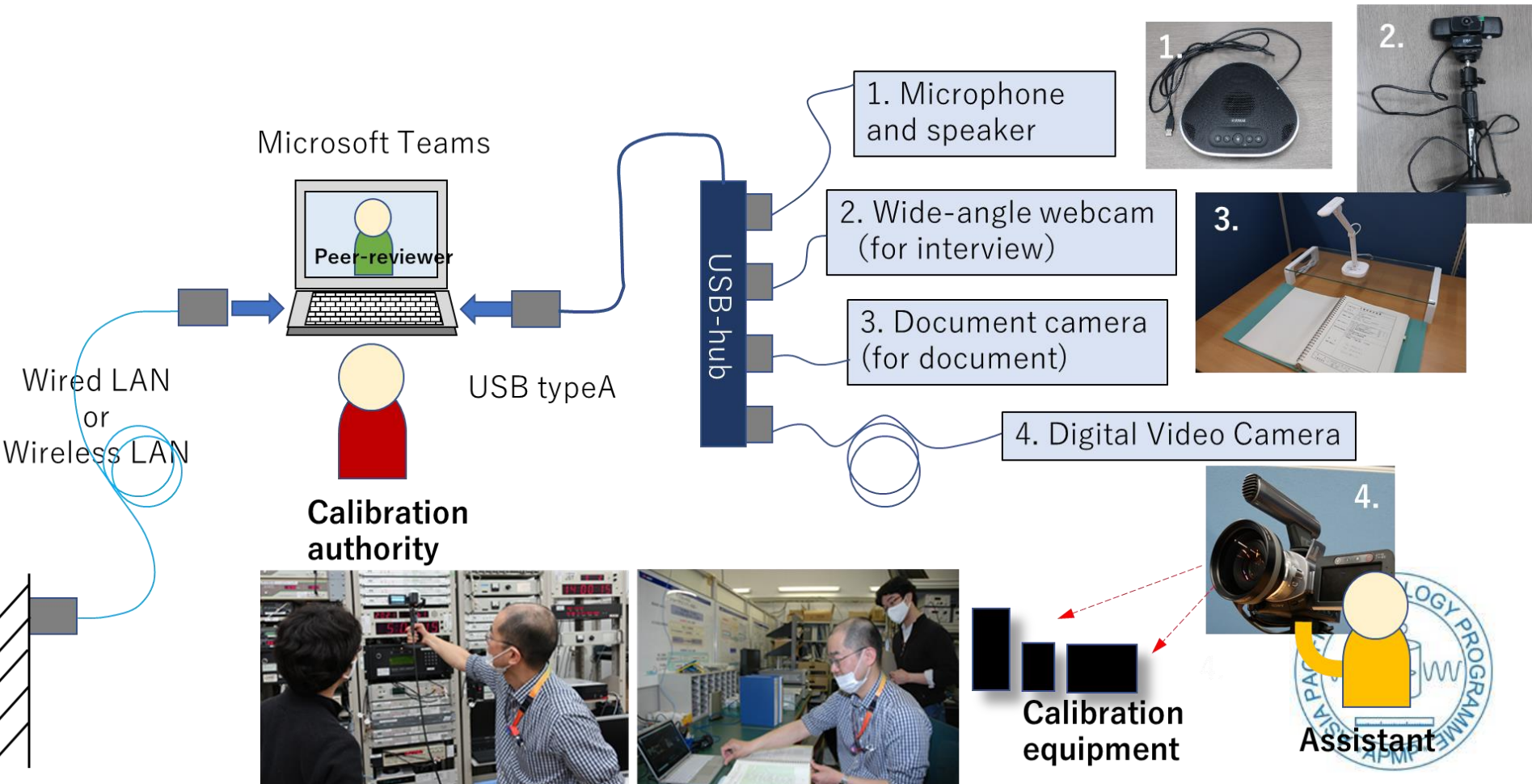**kazuaki-yamazawa@aist.go.jp**

Outline of the preparation schedule

- Steps to conduct the peer review as a review approved by the APMP

| Time	For the conventional ON-SITE peer reviews	For the novel ONLINE peer reviews
1 year – 6 months before	Request dispatch of the peer reviewer to the peer reviewer's institute.	
6 months before	Seek approval of the relevant Technical Committee	Seek approval of the relevant Technical Committee and in addition to the TCQS for the ONLINE
More than 3 months before	Reserve travelling arrangements for the peer reviewer. VISA application paperwork, if applies.	(No travelling arrangements needed.)
2 months – 1 month before	Provide the peer reviewer and the accreditation body documents relevant to the assessment.	
1 month before	Final communication on the preparation by post and e-mail.	Telecommunication test and briefing (joint with peer reviewer and accreditation body)
Peer review	Peer review and accreditation assessment conducted simultaneously	

Equipment for the online peer review

- Careful preparation needed to keep our peer reviewers confident in reviewing

Microsoft Teams

Peer-reviewer

Wired LAN
or
Wireless LAN

USB typeA

Calibration authority

USB-hub

1. Microphone and speaker

2. Wide-angle webcam (for interview)

3. Document camera (for document)

4. Digital Video Camera

Calibration equipment

Assistant

Snapshots from an online peer review in time & frequency, March 2021

Screenshots from the online peer review

- Technical competence
    - Equipment
    - Demonstrations on calibration procedures
    - Management system
- Technical and quality records
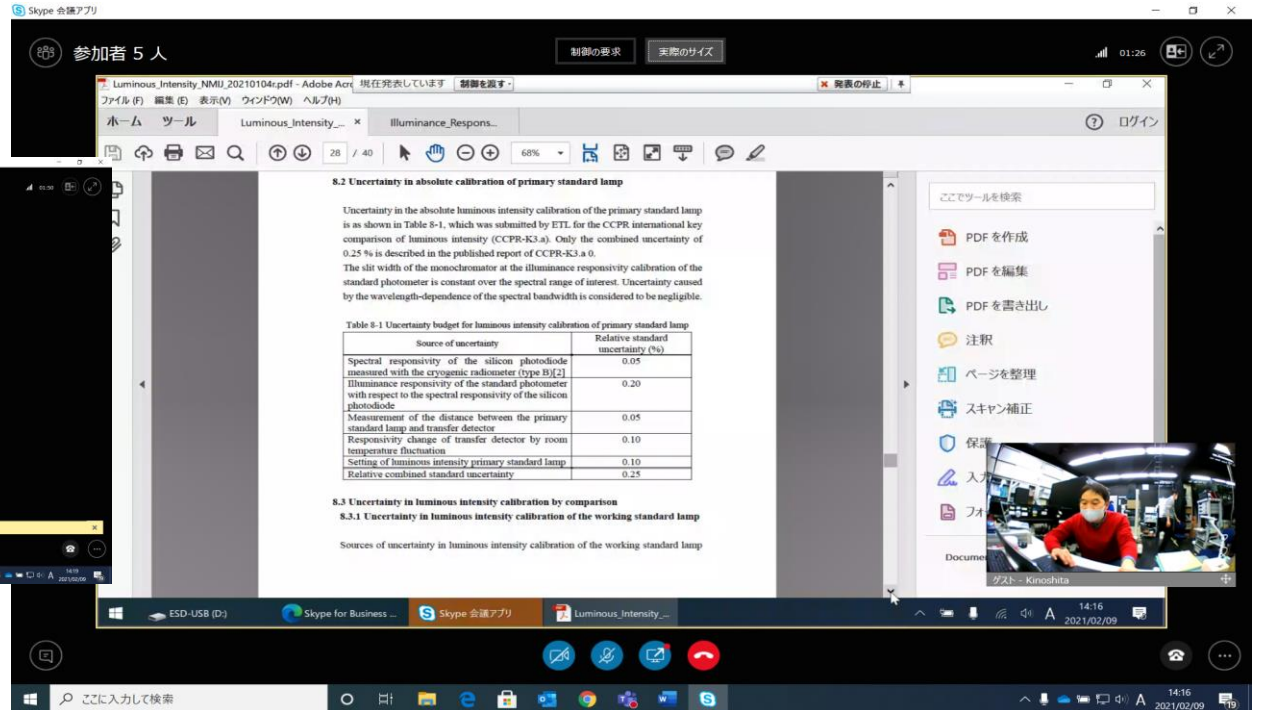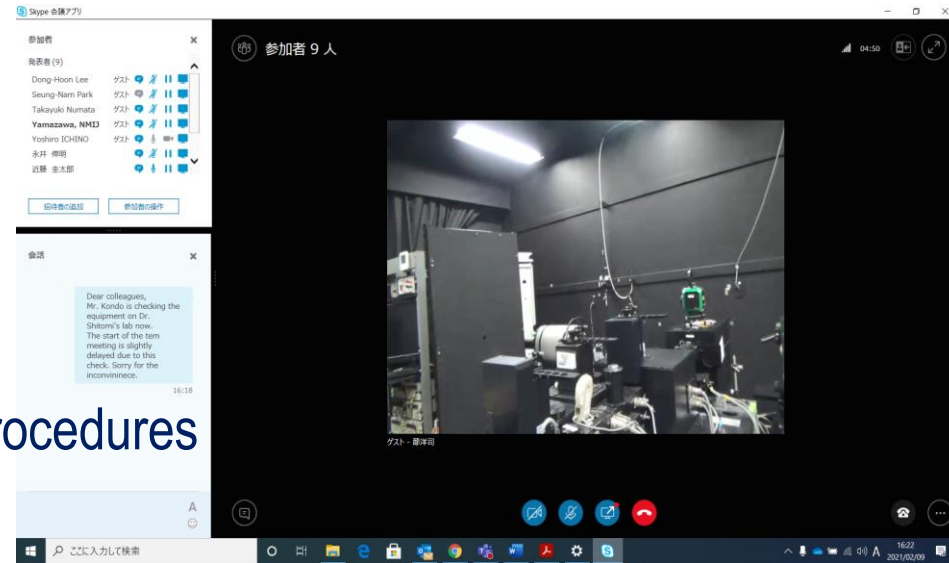
Snapshots from an online peer review in photometry, February 2021

Online peer reviews conducted at NMIJ

- Photometry and radiation, laser: February 2021
- Time & frequency: March 2021
- Pressure & Vacuum: May 2021

Part-4. Online Peer Review Survey

By Dr. YANG Ping yangp@nim.ac.cn

From the middle of 2020, some NMIs/DIs finished or planned online peer review, also a few choose postponement.

Online Peer Review (Finished or Planned)

NMIA,   Flow Field.

HSA,   QM Field.

KRISS,   ALL Fields

NIM,   M, EM,AUV,PR fields.

NMIJ   Some Fields

NIMT,   ALL Fields.

CMS/ITRI,   Some Fields.

SCL,   Some Fields.

MSL,   Humidity Field.

Postponement

NMC, A*STAR , AUV Field.

How about the effect of the Online/Remote
Peer Review in the past 1 year ?

APMP TCQS started a survey in August 2021, and
collected the feedbacks till the end of August.

APMP Survey on Remote Peer Review during COVID-19 Pandemic

A total of **28** individuals

feedback the survey,

including TCQS members,

TC chairs, NMI/DI contacts

and possibly experts

involved in remote reviews.

APMP Survey on Remote Peer Review during COVID-19 Pandemic

This survey is intended to be distributed to TCQS members, TC chairs, NMI/DI contacts and possibly experts involved in remote reviews. Survey results will be used to evaluate and improve the remote peer review in the future.

Your Details	
First Name :	
Last Name :	
Title :	
Name of NMI/DI :	
Email Address :	
Relevant TC :	
QMS Pathway :	
Answering as:	☐ TCQS Member ☐ TC Chair ☐ NMI/DI Contact ☐ Expert Involved in Remote Peer Review ☐ Other (Please specify:_____) For example, technical staff received/planning a peer review, etc.

Part I:

1. How much do you understand the major points of 'APMP Guidelines for On-site Peer Reviews/Assessments under Unexpected Circumstance due to COVID-19′ before?
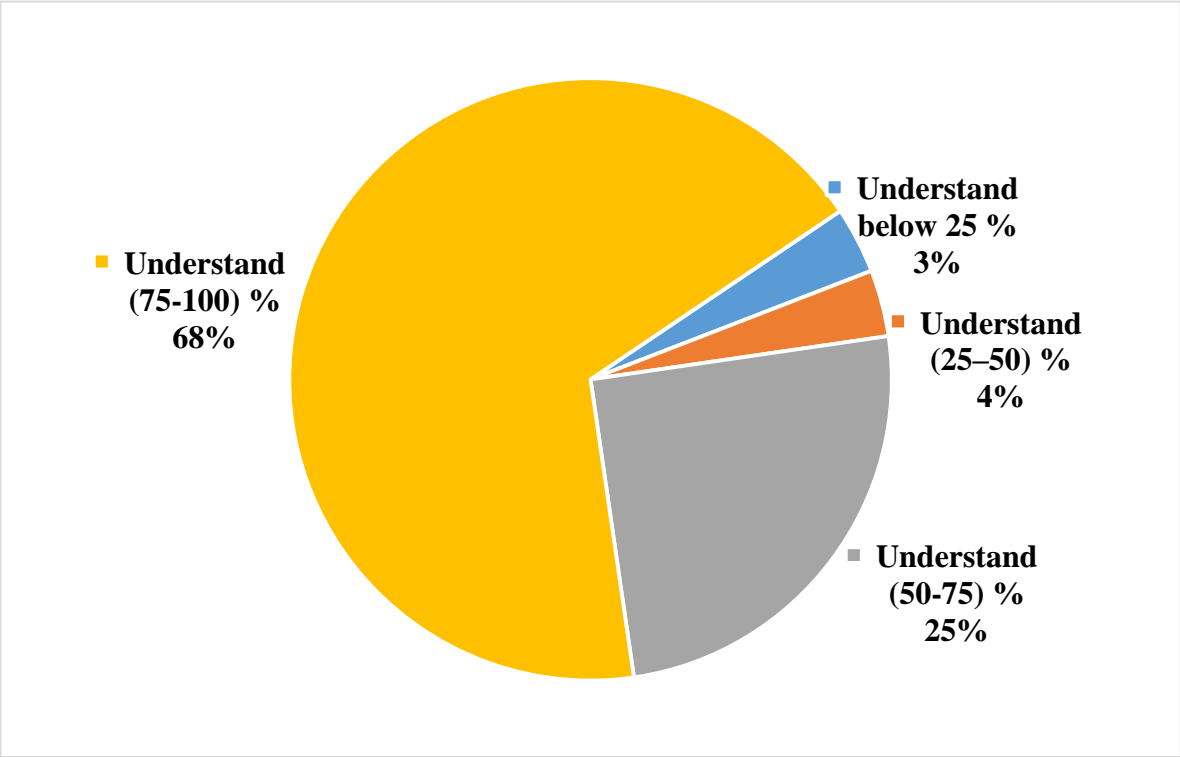
2. How did you know the APMP Guidelines mentioned above?
(Multiple Choice)
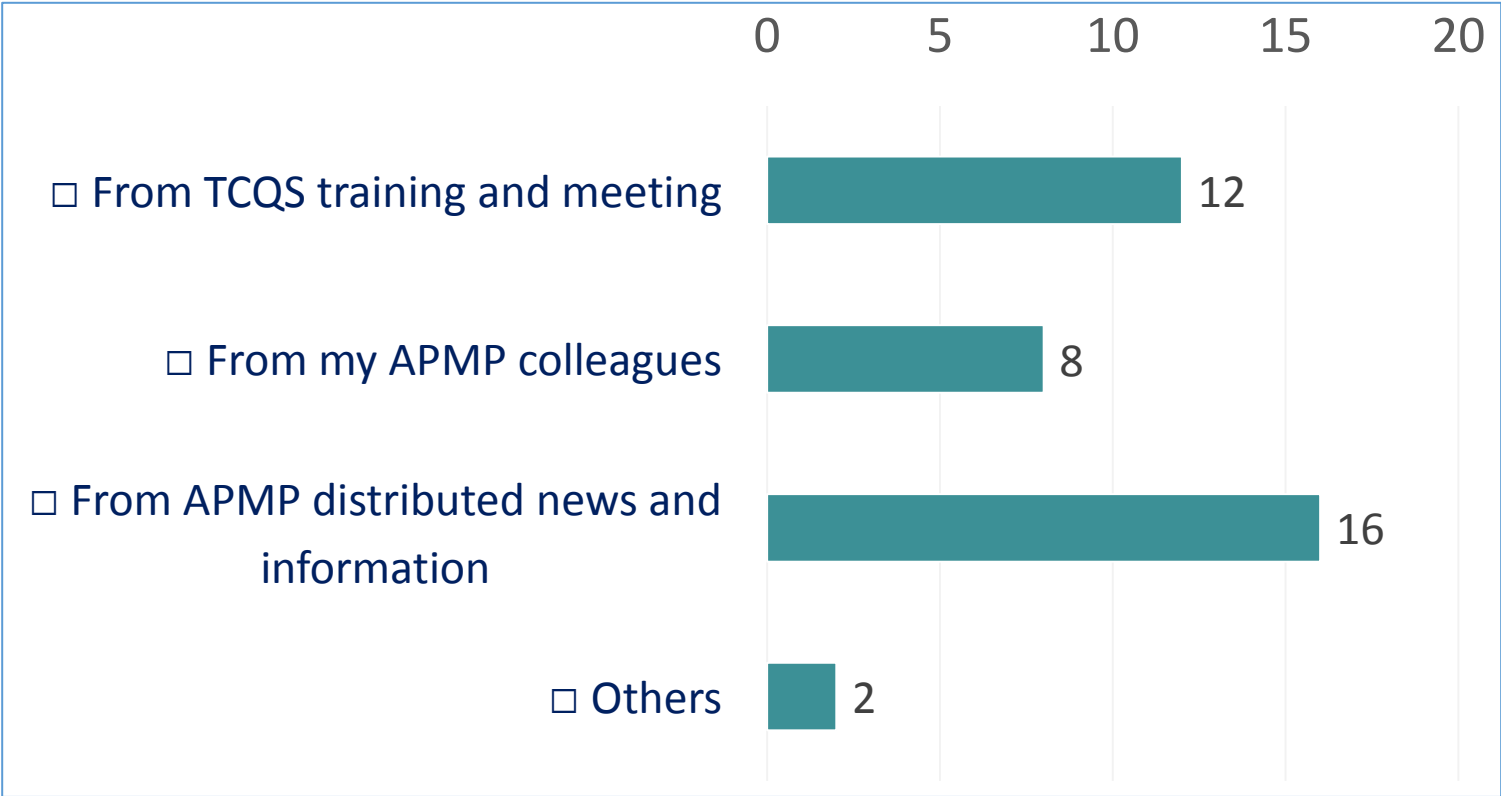
3. Which choice do you most likely select according to the Guidelines if your CMCs or QMS will exceed five years limit based on the CIPM MRA G-12.

3.1 For technical peer review, we most likely select:

3.2 For QMS following pathway C, we most likely select:

Chart 3.1: Postponement 18%; Remote Review by technical Expert 71%; Review by local technical Expert 11%

Chart 3.2: Remote Review by QS Expert 50%; Review by Local QS Expert 50%
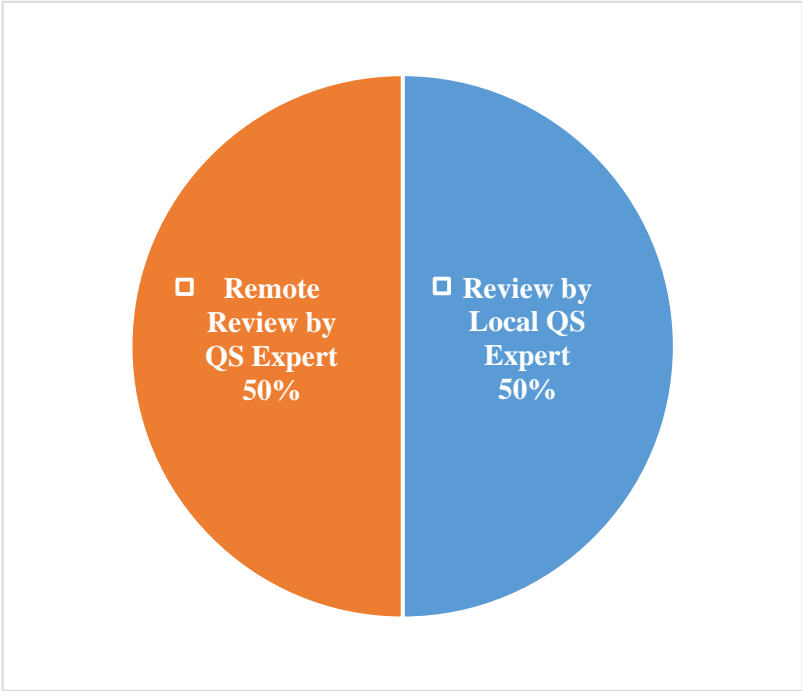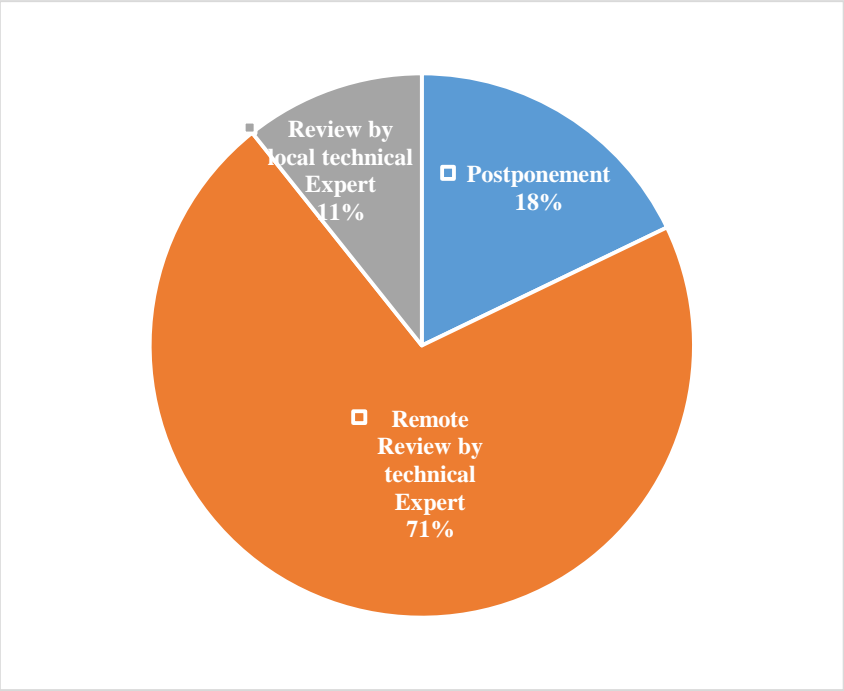
4. Have you organized, conducted or been involved in remote peer review during the COVID-19 pandemic within APMP?
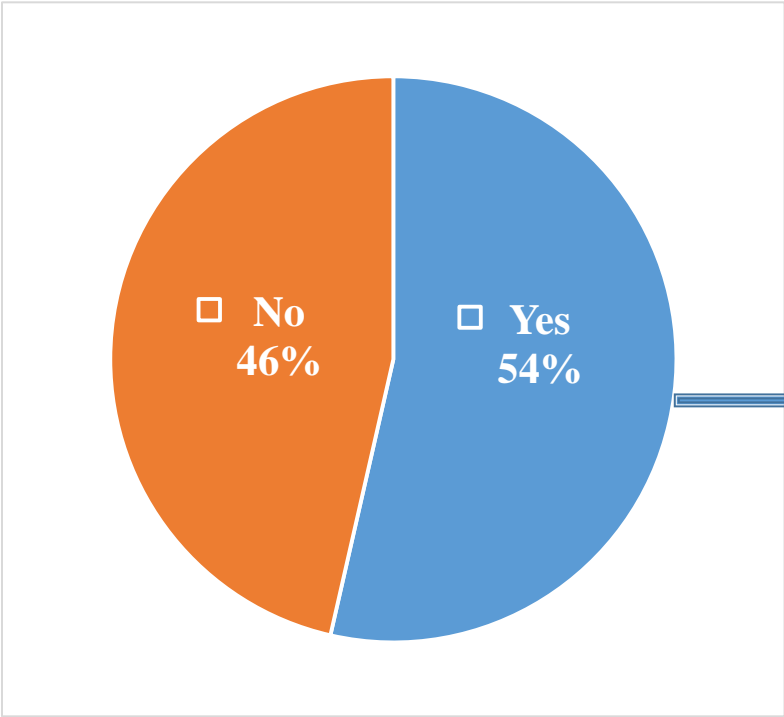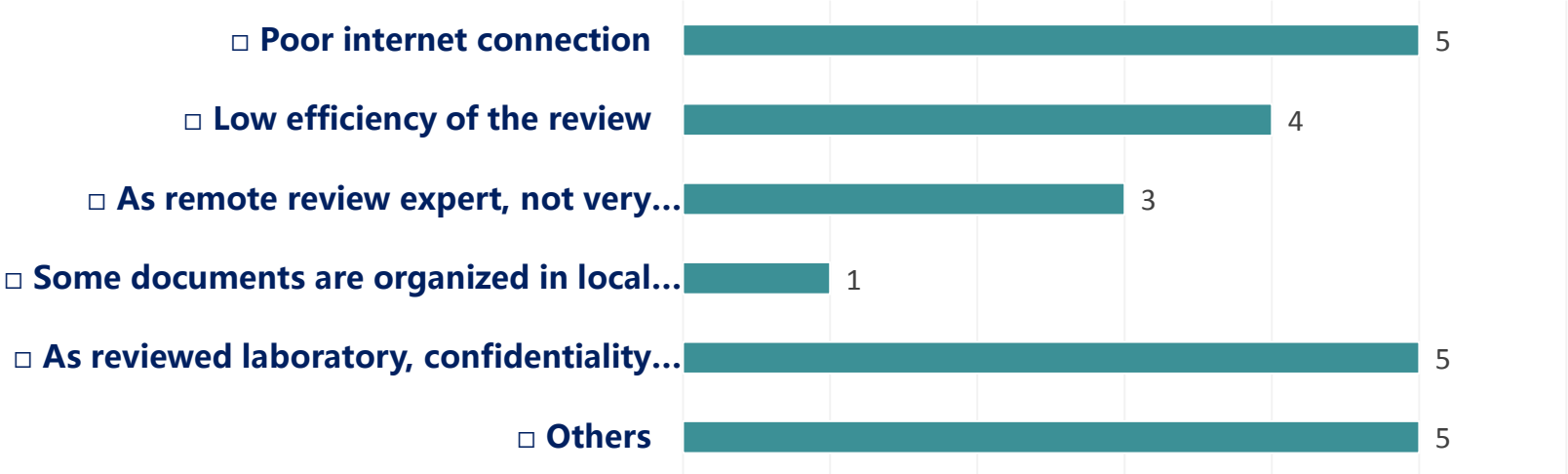
4.1 Are you satisfied/confident with the remote review?
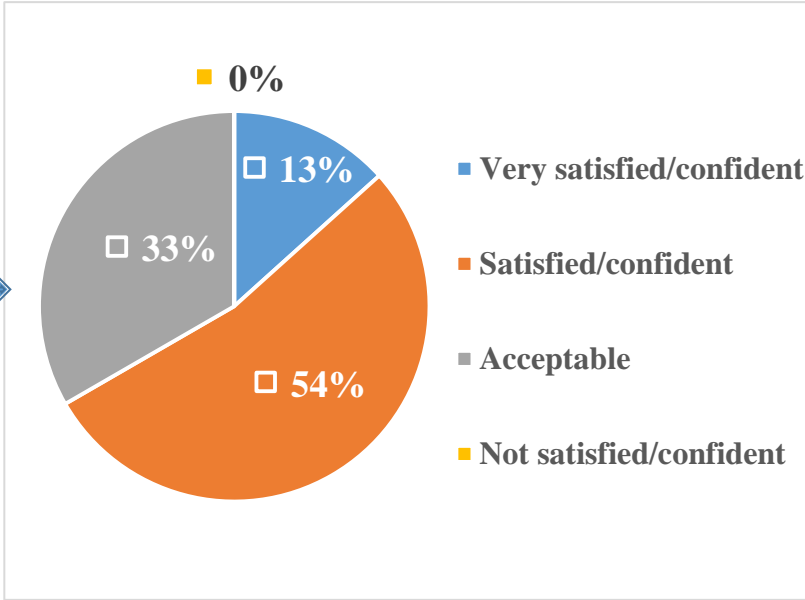
4. 2 What do you think are the major advantages of the remote peer review?

Advantage	Count
☐ Reduced costs for reviewed laboratories.	14
☐ Reduced infected risks.	11
☐ Efficient use of time	4
☐ Possibility to conduct the review despite...	14
☐ Others:	0
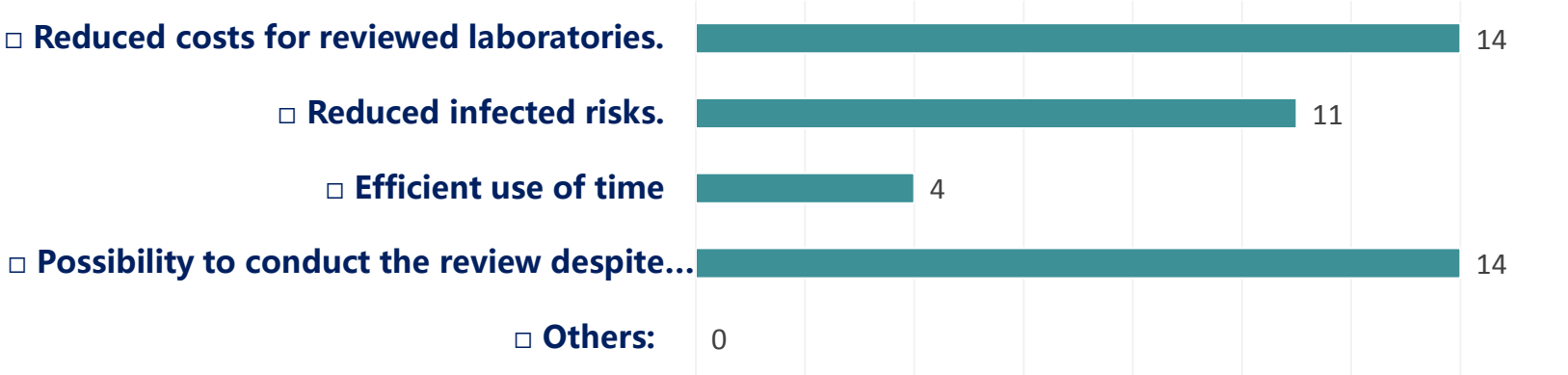
4. 3 What do you think are the major disadvantages of the remote peer review?

Disadvantage	Count
☐ Poor internet connection	5
☐ Low efficiency of the review	4
☐ As remote review expert, not very...	3
☐ Some documents are organized in local...	1
☐ As reviewed laboratory, confidentiality...	5
☐ Others	5

5. To what extent do you think NMI/DI can effectively benefit, in the future (i.e., the pandemic crisis is over), from a remote peer review?
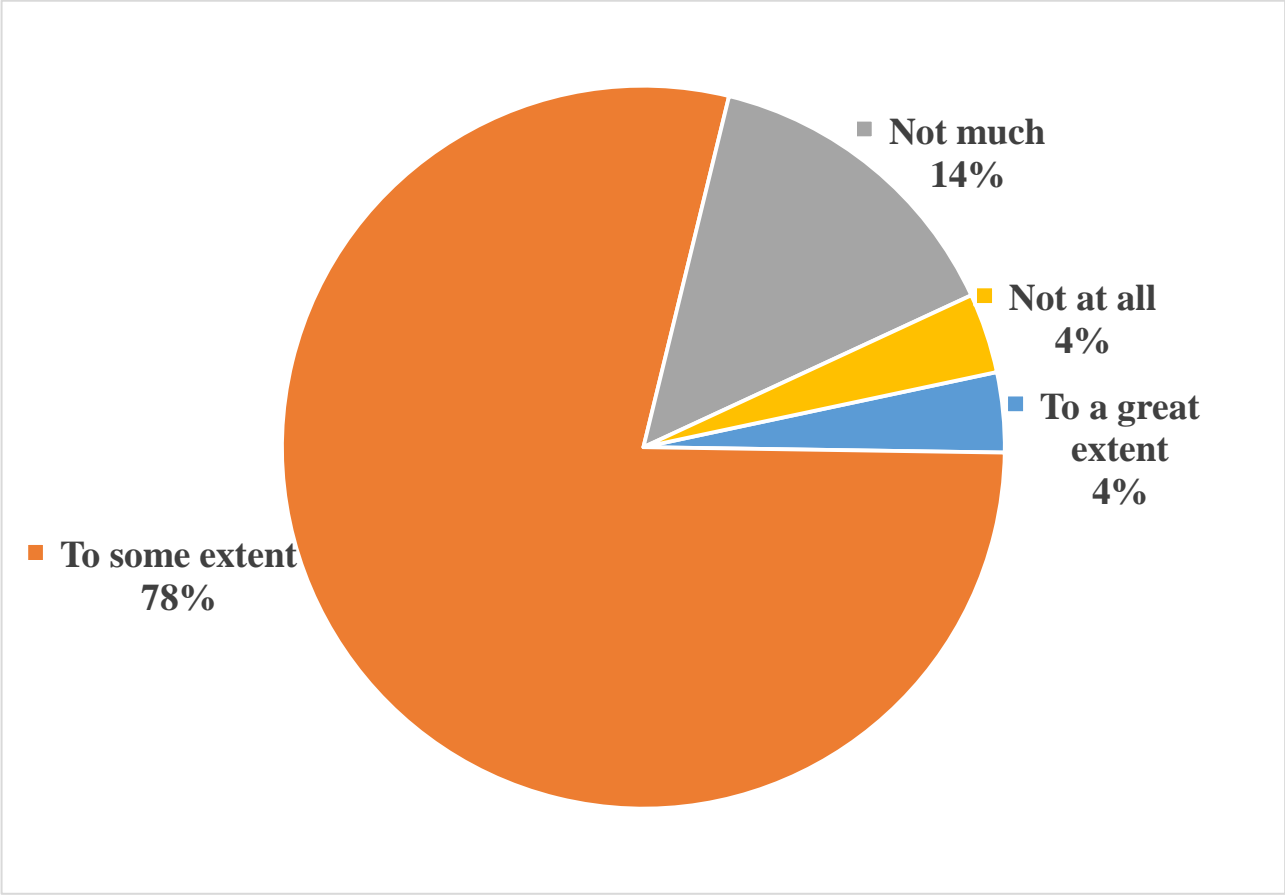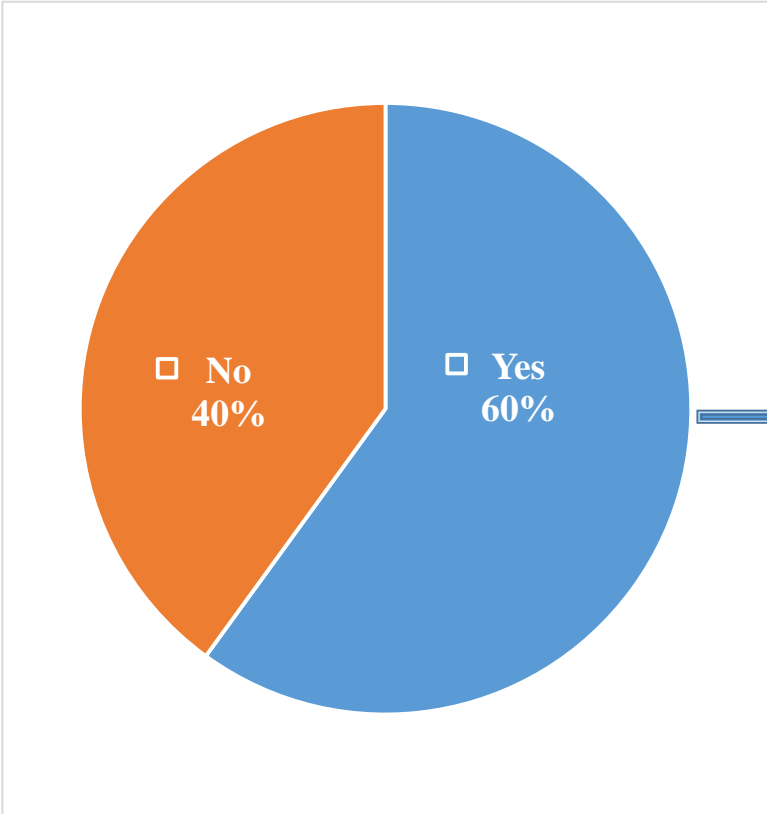
6. For the current version 1.1 of 'APMP Guidelines for On-site Peer Reviews/Assessments under Unexpected Circumstance due to COVID-19, do you think it should be modified or not?
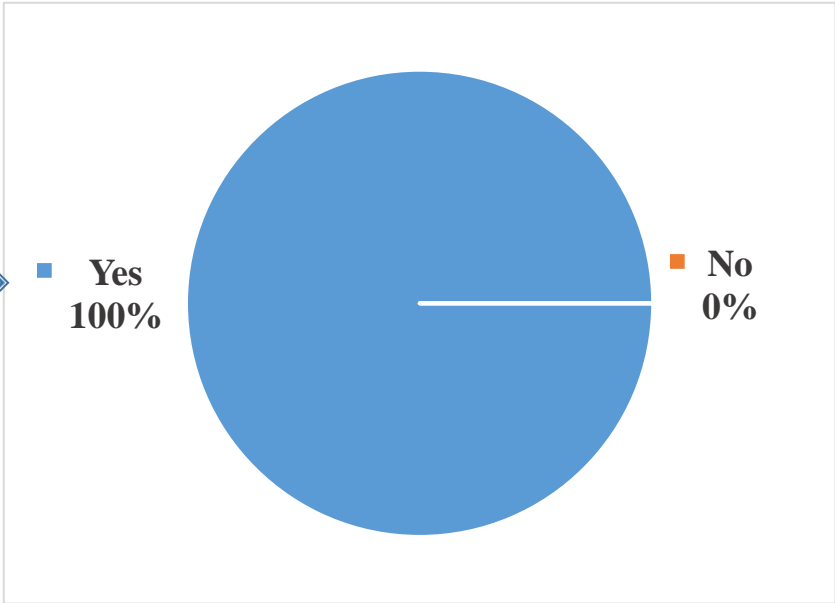

□ Yes, something should be modified. 21%

□ No, it is OK. 79%

Part 2: For TC chairs only (10 participants)

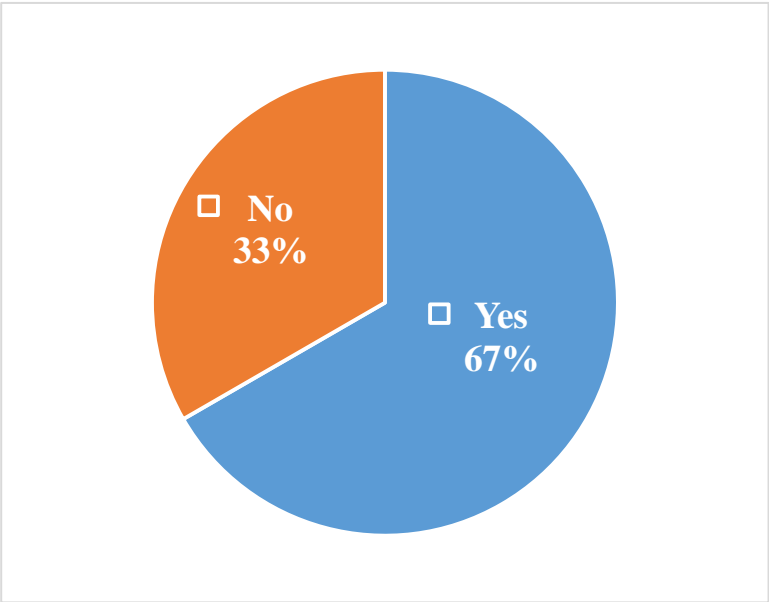**7. As a TC Chair, have you approved remote technical peer review before?**

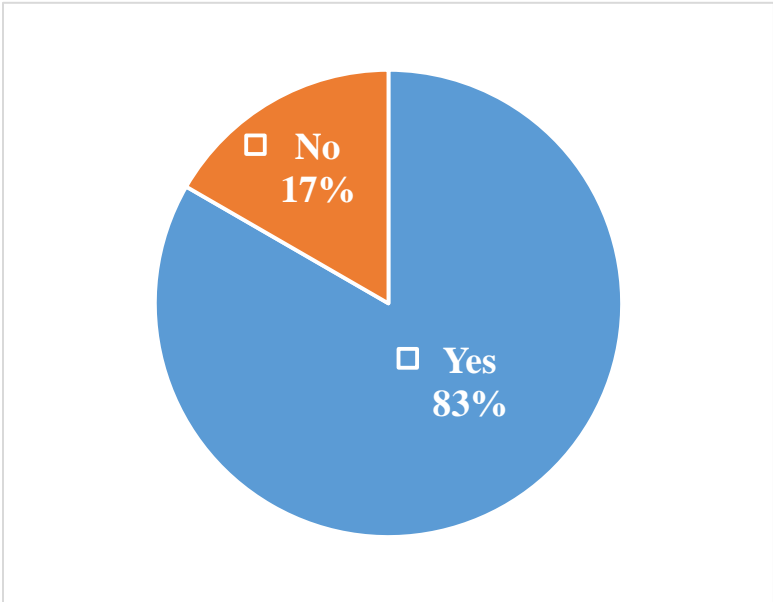7. 1 Are the experts from other NMI/DI?

APMP Survey on Remote Peer Review during COVID-19 Pandemic

Part 2: For TC chairs only (10 participants)

7. 2 Are there new CMCs submission in your approved review cases?

7. 3 Are you confident with the remote peer review?

Summary

In APMP:

1. More than 70% feedback prefer to remote/online peer view than postponement.

2. Many NMIs/DIs have been involved in the remote peer review,

   For all Participants: near 70% are satisfied and confident.

   For TC Chairs who approved remote peer review: 83% are confident.

My Personal Opinions:

1. Till now the majority are confident, mainly based on frequent onsite peer review before.

2. Onsite peer review, both review expert and reviewed laboratory can benefit more, because of the adequate onsite communication.

Thanks for Your Attention.

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