

Educational Preanalytical Cases Support End-to-end EQA in Urine Culture



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INTRODUCTION

Labquality has introduced educational pre- and postanalytical cases to an increasing number of the traditional external quality assessment (EQA) schemes; a service named integrated EQA (EQA3), starting in 2017. This helps clinical laboratories and point-of-care testing (POCT) sites to meet the end-to-end requirements of the ISO 15189 standard, which states that all steps of the laboratory process should be monitored. In Labquality's scheme for urine culture, the EQA3 service has been provided since 2018. According to the results of a questionnaire in 2023, the participants find the EQA3 service suitable for their needs.

AIM

The aim of EQA3 is to enhance the end-to-end EQA service provided by Labquality. The aim of this study was to gain feedback on the usefulness of the EQA3 service and cases used in order to serve the clients according to their needs.

CONCLUSIONS

- Responders (n=81) are satisfied with the integrated pre-analytical service.
- The EQA3 cases are relevant for the routine work.
- The educational aspect enhances the knowledge of the pre-analytical processes and best practices.
- Units that do not provide guidance to patients benefit from the evaluation of the preanalytical cases since the case descriptions add the knowledge on factors influencing the results of urine culture analysis.
- The preanalytical case pool is beneficial for the scheme experts as it allows them to develop diverse and relevant pre-analytical case descriptions based on real-life situations.
- **The addition of EQA3 to traditional schemes provides an excellent learning tool and this appreciated feature contributes to the overall usefulness of external quality assessment.**

RESULTS

Have the combined EQA3 rounds suited your unit well?

YES
83%

Have the preanalytical cases been relevant for you?

YES
80%

Are questions such that you take a stand with patient samples?

YES
79%

Does your lab provide patient sampling guidance?

YES
80%

METHODS 1

Integrated preanalytical cases are added to Labquality's urine culture scheme every year. In addition to the physical EQA samples distributed, the external scheme expert presents a pre-analytical case describing the clinical background of a patient and the urine sampling process. The participants are given the opportunity to answer questions regarding the described case and indicate preanalytical errors observed. In the final report, the response distribution is presented along with expert comments about the case.

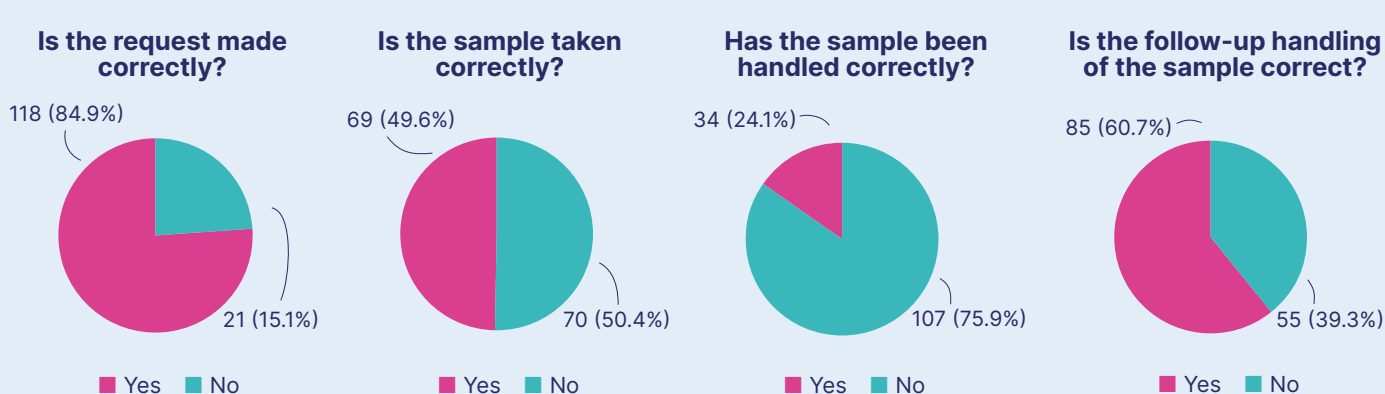
METHODS 2

Labquality established a one-year project working group for urine preanalytics in 2019 with four external laboratory professionals having different educational backgrounds and working in different organizations. The members, all with a vast experience in pre-analytics of urine analysis, created a pool of preanalytical cases to be used by scheme experts in EQA3 rounds of urine analytics. For this study, Labquality included a feedback questionnaire to all participants of the Urine culture round 2, 2023 in order to evaluate the satisfaction of participants on the preanalytical cases over the past 5 years.

Example of a case description included in EQA3 scheme

A first morning urine sample of a woman living in a nursing home is sent to the laboratory after doctor's consultation. The scarce sample is in a tube with preservative, having appropriate details on the label. Small local laboratory doesn't perform cultures and the sample is transported to a hospital laboratory in the next shipment. The sample is placed in the refrigerator to await the shipment. It is noticed when packing that the tube has touched the back wall of the refrigerator and it is covered with frost. The tube is found to be cold enough and therefore cold packs are not included in the package. Shipment to the hospital laboratory takes 3 hours and the sample is processed quickly upon arrival.

QUESTIONS AND RESULT DISTRIBUTION



REPORT

A client-specific preanalytical report is provided for the participants. The scheme expert comments on the best practices of the case and the result distribution in the final report.

What preanalytical errors did you detect?
Summary of major errors found (>10)

