PROGRAM Standard Operating Procedure – Laboratory Services	
Title: MIC90300 – STH Microbiology Laboratory-External Quality Assurance	Policy Number:
Program Name: Laboratory Services	
Applicable Domain: Lab, DI and Pharmacy Services	
Additional Domain(s): NA	
Effective Date:	Next Review Date:
Issuing Authority: Director, Laboratory and Diagnostic Imaging Services	Date Approved:
Accreditation Canada Applicable Standard: NA	

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GUIDING PRINCIPLE:

The purpose of an external quality assurance (EQA) program is to promote laboratory quality improvement and assess the proficiency of laboratory testing through:

- Inter-laboratory/inter-facility comparisons of participant responses and reporting practices
- Identifying testing and measurement problems
- Assessment of risk for laboratory results that may have a negative impact on patient management
- Provision of educational comments and follow-up associated with findings of surveys to improve performance

The EQA program for the STH Microbiology Department consists of challenge surveys from Clinical Microbiology Proficiency Testing (CMPT), College of American Pathologists (CAP) and Quality Assessment and Standardization of Indicators (QASI) that evaluate the Microbiology Laboratory's performance on materials simulated to resemble patient specimens; and pattern-of-practice surveys to assess the Laboratory's practice on patient-derived specimens.

PURPOSE/RATIONALE:

This standard operating procedure describes how to process Microbiology EQA samples.

SCOPE/APPLICABILITY:

This procedure applies to Medical Laboratory Technologists (MLTs) processing EQA specimens.

SAMPLE INFORMATION:

Type	Testing material consists of lyophilized cultures, slides and "simulated" patient specimens
Source	EQA providers
Stability	As per specimen procedures
Storage Requirements	As per specimen procedures
Criteria for rejection	1. If specimens received are unacceptable, record observations and submit to Technical Supervisor 2. Keep unacceptable specimens in specimen fridge for further investigation

REAGENTS and/or MEDIA:

- Refer to specific specimen procedures for reagent information

SUPPLIES:

- Refer to specific specimen procedures for supply information

EQUIPMENT:

- Refer to specific specimen procedures for equipment information

SPECIAL SAFETY PRECAUTIONS:

Containment Level 2 facilities, equipment, and operational practices for work involving infectious or potentially infectious materials or cultures:

- Ensure that appropriate hand hygiene practices be used
- Lab gown must be worn when performing activities with potential pathogens
- Gloves must be worn when direct skin contact with infected materials is unavoidable
- Eye protection must be used when there is a known or potential risk of exposure of splashes
- All procedures that may produce aerosols, or involve high concentrations or large volumes should be conducted in a biological safety cabinet (BSC)
- The use of needles, syringes and other sharp objects should be strictly limited

All patient specimens are assumed to be potentially infectious. Routine Practices must be followed. Since viable micro-organisms are used, all cultures must be handled with appropriate precautions. All equipment in contact with cultures should be decontaminated by appropriate methods.

NOTE: EQA specimens may contain fully virulent organisms of Risk Group 2 or lower. Specimens must be handled with the same degree of care as equivalent clinical specimens and by the same appropriately qualified and supervised staff.

QUALITY CONTROL:

- Refer to Quality Control manual for reagent quality control procedures

PROCEDURE INSTRUCTIONS:

Step	Action
Processing Microbiology EQA Samples	
1	Refer to the directions accompanying each survey.
2	Requisition survey samples into the LIS following the relevant accessioning procedure for survey received. Follow instructions in procedure for the handling of paperwork associated with the survey.
3	Process specimens as per routine practices for similar patient's specimens.
4	After processing, place samples in a biohazard bag and place in the red bucket labelled EQA in the microbiology specimen fridge
5	Survey samples will be received by the microbiology specimen receiving technologist the day they are received in the laboratory. Survey samples will be worked up by the technologist on the corresponding bench as soon as possible after receipt.
6	For CMPT Clinical Bacteriology Surveys: • Work up isolates following the standard operating procedure for the specimen type • Use the ASTM for susceptibility test if indicated in survey • Result specimens in the LIS following the standard operating procedure • Store all organisms for future reference • Keep culture plates in specimen fridge until final results are received
7	For CMPT *C.difficile* and *T.vaginalis* Surveys: • Test samples following the standard operating procedure for the specimen type • Result specimens in the LIS following the standard operating procedure
8	For CMPT Clinical Bacteriology Gram and AFB Slides: • Stain slides following the standard operating procedure for the specimen type identified • Place slides on microscopy bench for reading • Each technologist will receive a results sheet to record their results • Complete results sheet and deliver to Technical Supervisor
9	For CMPT COVID-19 Surveys, CAP COVID-19; RPP; MTB Surveys: • Test samples following the standard operating procedure for the specimen type • Result specimens in the LIS following the standard operating procedure
10	For CAP Bacterial vaginosis Surveys: • Follow emailed instructions to view the virtual CAP images • Each technologist will receive a results sheet to record their results • Complete results sheet and deliver to Technical Supervisor
11	Finalize each sample in the LIS when complete and in TECH COM add any calls or copies to that would be made for a real patient.

INTERPRETATION OF RESULTS:

- Interpret results as per the standard operating procedures (SOP) for the specimen type, site and organisms identified

REPORTING INSTRUCTIONS:

- Microbiology EQA specimens should be handled as if they were routine tests unless there are special requirements in the design of the proficiency test which may require departure from this principle
- Submit results electronically by the due date, on the applicable website

CROSS-REFERENCES:

- MIC10400-Accessioning CMPT Surveys
- MIC10410-Accessioning Microbiology CAP Surveys
- MIC10420-Accessioning QASI Surveys

REFERENCES:

1. CLSI. *Using Proficiency Testing and Alternative Assessment to Improve Medical Laboratory Quality*. 3rd ed. CLSI guideline QMS24. Wayne, PA: Clinical and Laboratory Standards Institute; 2016.

APPROVAL:

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Date

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REVISION HISTORY:

REVISION	DATE	Description of Change	REQUESTED BY
1.0	27 Nov 23	Initial Release	L. Steven