**CQI PLAN: Aligning Academic Laboratory SOPs with Clinical Practice to Strengthen Entry-Level Competency**

**Program:**

Medical Laboratory Technology Program – Hagerstown Community College

**Focus Area:**

Curriculum and instructional improvement through competency-based laboratory procedure design.

**CQI Objective**

To revise and standardize academic laboratory procedures (SOPs) to align with the structure and professional expectations of clinical laboratory procedures, while ensuring that the frequency, scope, and complexity of laboratory exercises provide sufficient opportunities for students to develop and demonstrate entry-level competencies required for professional success. The goal is to enhance student competency and documentation skills required for success as entry-level medical laboratory technicians.

**Rationale**

Student exit surveys and course evaluations indicate that students experienced a learning curve adapting to clinical documentation, workflow expectations, and professional SOP structure.

Aligning academic laboratory exercises and procedures with real-world clinical SOP formats and CLSI/CLIA standards will:

* Strengthen procedural competency and professional readiness.
* Familiarize students with quality assurance, safety, and regulatory terminology.
* Ensure consistent exposure to core entry-level tasks at sufficient frequency and repetition to promote mastery.

Bridging this gap strengthens students’ professional readiness and eases their transition from the academic to the clinical environment by reinforcing entry-level competencies. It also enhances faculty consistency and provides evidence of outcomes-based instruction for program accreditation.

**Goal**

To ensure that all academic laboratory procedures are:

* Written in a clinical SOP format, following CLSI guidelines;
* Explicitly linked to entry-level competencies; and
* Used as tools for competency assessment during academic training.

**Action Plan**

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| **Action Step** | **Responsible Person/Committee** | **Timeline** | **Evidence/Deliverable** | **Status/Notes** |
| Review student program evaluations and exit surveys for feedback related to lab procedure clarity, realism, and preparedness for clinical SOPs. | Program Coordinator | Fall 2025 | Student feedback summary; gap analysis | Complete |
| Collect representative clinical SOPs from affiliates to model academic templates. | Program Coordinator | Fall 2025 | SOP comparison summary | Complete |
| Develop a Standardized Academic SOP Template | Faculty/Program Coordinator | Fall 2025 | Master SOP template | Complete |
| Integrate competency assessment statements within each lab SOP | Faculty/Program Coordinator | Spring 2026 | Revised procedures with competency criteria and corresponding psychomotor objectives. |  |
| Pilot use of new SOP format in two key courses | Faculty | Spring 2026 | Student performance data, feedback |  |
| Evaluate effectiveness through student reflections, preceptor surveys, and performance in clinical rotations. | Program Coordinator | Spring 2027 | Evaluation summary report |  |
| Finalize SOP format and integrate into all MLT course laboratories. | Program Coordinator, Faculty | Spring 2027 | Approved final SOP manual |  |

**Performance Indicators**

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| **Indicator** | **Target / Benchmark** | **Assessment Method** |
| % of academic lab SOPs written using new standardized template | 100% by AY 2026–27 | SOP audit and master list |
| % of SOPs including explicit competency criteria | 100% | Procedure review checklist |
| Student survey agreement: “Lab procedures reflect clinical practice and support competency development.” | ≥85% agree | End-of-program exit survey |
| Clinical preceptor rating of student procedural competency | ≥80% average | Clinical evaluation form |
| Faculty trained in SOP writing and competency integration | 100% | Training attendance and materials |
| Documented CQI cycle completion (review, analysis, revision) | Annual | Watermark CQI record |

**Evidence and Data Sources**

* Competency-to-SOP mapping table
* Revised SOPs
* Student surveys and reflections
* Clinical preceptor feedback
* CQI meeting notes and Watermark reports

**Analysis and Findings**

Initial review of laboratory procedures revealed variations in structure, inconsistent inclusion of QC elements, and limited connection to competency language.  
The new format aligns every academic procedure with NAACLS competencies, CLSI SOP structure, and clinical practice standards, ensuring students can:

* Demonstrate professional documentation and QC habits;
* Understand regulatory compliance within laboratory operations;
* Translate academic performance directly into clinical proficiency.

Post-implementation review will compare pre- and post-data on student clinical readiness and preceptor evaluations to measure effectiveness.

**Projected Impact**

* Foster a smoother student transition to clinical practice.
* Ensure uniform expectations, evaluation criteria, and reproducible assessment across instructors and semesters.
* Provide adequate scaffolding, frequency and complexity for demonstrating entry-level skills.
* Practice accurate, professional-style recordkeeping (QC logs, reagent tracking, corrective actions).
* Internalize regulatory awareness and quality management principles through structured SOPs.
* Yield comparable performance data for Watermark integration and continuous improvement analysis.
* Increases in ASCP BOC pass rates, clinical site satisfaction, and graduate readiness.

**Continuous Improvement Loop**

**Plan:**

Identify gap between academic and clinical SOPs and missing competency integration.  
**Do:**

Develop and implement a standardized, competency-linked SOP template.  
**Check:**

Evaluate student and preceptor feedback, review clinical performance data.  
**Act:**

Adjust SOP template and instructional methods based on findings.

**Next Review Date:**

Fall 2026