RESOURCES FOR
LABORATORY PERSONNEL

EDUCATIONAL COURSES,
PROGRAMS, AND MATERIALS

COLA CATALOG
WE GIVE YOU THE TOOLS TO SUCCEED

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COLA is pleased to present our latest catalog of educational resources for laboratory personnel. Since 1988, COLA’s philosophy has been one of educating and mentoring laboratory staff. Our interest is not just meeting accreditation standards, but helping labs to make their operations more efficient and effective, and to improve patient care.

We offer a wide range of educational resources, manuals, fact sheets, and newsletters, as well as educational courses and programs to help laboratory staff maintain high quality services for patient care.

We know what a day in the laboratory or doctor’s office is like; so we offer a wide range of ways to access these resources:

- Electronic and Paper Products - You can order manuals, newsletters, articles and guides on-line at www.cola.org. The products can be downloaded directly to your computer, or you may have them shipped to you.

- On-line Continuing Education Courses - LabUniversity® - You can earn the CME credits you need to be certified as a laboratory director, take competency tests required by CLIA, or take courses to earn CEU credits and maintain and increase your knowledge in a wide range of laboratory topics on-line at COLA’s LabUniversity®. Courses are designed so you can control when, where, and how long your sessions will take place. You can log into a course over the Internet at any time and start a new lesson, or continue where you left off at your last session.

- Custom Courses and Seminars - If you have special topics or needs, COLA can arrange for one of our experienced and knowledgeable technical staff to produce a customized course, program, or symposium for your laboratory or organization.

All our materials, programs, and courses are available at www.cola.org by clicking on COLA Store. Or call our COLA Call Center for further information at 800-981-9883.
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COLA ACCREDITATION MANUAL

The COLA Laboratory Accreditation Manual provides clear, concise guidelines on COLA's laboratory accreditation program. Includes all COLA program criteria with helpful explanations about implementing policies and procedures which meet COLA's standards.

Sections include:
1. COLA Accreditation: Introduction and Overview
2. COLA, CLIA, and CMS
3. The COLA Accreditation Process
4. COLA's Accreditation Criteria for Quality Laboratory Performance and Self-Assessment Questions
5. Appendix

All labs enrolled in COLA's accreditation program receive the CD version of this manual when they enroll. It also is available to non-COLA labs and technical consultants.

The complete set of COLA LabGuides are included with the Accreditation Manual.

COLA LABGUIDES

Brief, to-the-point, easy-to-use guides in three categories:
- Laboratory Administration
- Testing/Specialties
- Quality Control

LabGuides are available individually and in a booklet.

INDIVIDUAL LABGUIDES

LabGuide 1: Contents of a Procedure Manual
LabGuide 2: What You Should Know About Laboratory Paperwork
LabGuide 3: Responsibilities of the Laboratory Director
LabGuide 4: Personnel
LabGuide 5: Finding and Retaining a Laboratory Consultant
LabGuide 6: Laboratory Safety
LabGuide 7: Test Tracking
LabGuide 8: Proficiency Testing
LabGuide 9: Split Specimen Analysis
LabGuide 10: Communicable Disease Reporting Requirements: California
LabGuide 11: General Information on Waived Tests
LabGuide 12: Ensuring Compliance when Adding a Specialty or Subspecialty
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INDIVIDUAL LABFACTS/LABGUIDES

LabGuide 23: Coagulation
LabGuide 24: Microbiology
LabGuide 25: Kit Tests
LabGuide 26: Urinalysis
LabGuide 27: ABO and RH Blood Typing
LabGuide 28: Throat Cultures for Streptococcus
LabGuide 29: Urine Cultures
LabGuide 30: Presumptive Identification of Neisseria gonorrhoeae
LabGuide 31: Antimicrobial Susceptibility (Sensitivity Testing)
LabGuide 32: Plasma Prothrombin Time & The INR
LabGuide 50: Quality Control Primer
LabGuide 51: Laboratory Equipment Maintenance
LabGuide 52: Pipettes and Their Calibration
LabGuide 71: Incident Management—Developing a Plan

CLIA FACTS

Revised fact sheets answer your questions about the new 2003 Clinical Laboratory Improvement Amendments (CLIA). Topics that may interest you include:

- Updated Regulations
- Registering for CLIA
- Centers for Medicare & Medicaid Services (CMS)
- Waived and PPM Testing
- Quality Systems for Non-waived Testing
- Specialty-specific Control Procedures
- Personnel
- Proficiency Testing

CLIA Facts are available in several formats. Save money and purchase the entire CLIA Facts booklet, or a set of CLIA Facts on a particular topic.

INDIVIDUAL CLIA FACTS

CLIA Facts 1: What’s New in the Final Regulations
CLIA Facts 2: Test Method Verification
CLIA Facts 3: Seeking Accreditation from a CMS-Approved Program
CLIA Facts 4: CLIA Certificate Types
CLIA Facts 5: What to Expect During Your CLIA Survey
INDIVIDUAL CLIA FACTS

CLIA Facts 6: How to Respond After Your On-Site CLIA Survey
CLIA Facts 7: CLIA Sanctions and Procedures for Appeal
CLIA Facts 8: What to Expect During Subsequent Surveys
CLIA Facts 9: CMS Validation Survey Process
CLIA Facts 10: How to Properly Register Your Shared Laboratory with CMS
CLIA Facts 11: Waived Testing
CLIA Facts 12: Requirements for Provider-Performed Microscopy Procedures
CLIA Facts 13: Facility Administration
CLIA Facts 14: Quality Systems - General Laboratory Practices
CLIA Facts 15: Quality Systems - Pre-Analytic Phase
CLIA Facts 16A-E: Quality Systems - Analytic Phase
- CLIA Facts 16A: Procedure Manual & Test Systems
- CLIA Facts 16B: Performance Specifications & Calibration
- CLIA Facts 16C: Maintenance, Function Checks & Test Records
- CLIA Facts 16D: Comparison of Test Results & Corrective Actions
- CLIA Facts 16E: Control Procedures
CLIA Facts 17: Quality Systems - Post-Analytic Phase
CLIA Facts 18: Control Procedures for Chemistry
CLIA Facts 19: Control Procedures for Hematology
CLIA Facts 20: Control Procedures for Microbiology
CLIA Facts 21: Control Procedures for Immunohematology
CLIA Facts 22: Meeting Personnel Standards for Moderate Complexity
CLIA Facts 23: Meeting the Personnel Standards for High Complexity
CLIA Facts 24: Responsibilities of the Laboratory Director
CLIA Facts 25: Additional Pathways to Qualify as General Supervisor/Testing Personnel For High Complexity Testing
CLIA Facts 26: Proficiency Testing Information
CLIA Facts 27: Enrolling in Proficiency Testing
CLIA Facts 28: Proficiency Testing Providers
CLIA Facts 29: Proficiency Testing Paperwork
CLIA Facts 30: Evaluating Your PT Results

SETS OF CLIA FACTS

Set 1: Updated Regulations
Set 2: Registering for CLIA
Set 3: Centers for Medicare & Medicaid Services (CMS)
Set 4: Waived & Provider-Performed Microscopy Testing
Set 5: Quality Systems for Non-waived Testing
Set 6: Specialty-specific Control Procedures
Set 7: Personnel
Set 8: Proficiency Testing
HIPAA SECURITY TOOL KIT FOR MEDICAL PRACTICES  
(CD only)

Are you ready for the HIPAA security implementation? The Tool Kit is unique, comprehensive, and designed for the medical practice to help meet the requirements of the HIPAA Security Rule and protect your business. It provides a step-by-step guide so that you can understand and implement a compliance program no matter what your level of computer security expertise.

This CD training resource, which is compatible with both PC and Mac, includes:

• User’s Guide: Outlines the elements in the total package and how to most effectively use the materials
• Security Handbook: Describes issues and decisions that must be made in establishing a security program for a medical practice
• Technical Guide: Provides easy-to-understand guidance for a medical practice IT staff or outside IT vendors
• Training Video: Provides training for your staff on standard policies and procedures, with a scenario-based, 10-minute video highlighting how they need to support the procedures
• Staff PowerPoint Presentation: Reinforces staff training points covered in the video
• Sample Security Policies: Modify this set of sample policies to meet the requirement for policies and procedures
• Glossary of Technical Terms: Helps you as you prepare to make important business decisions.

OSHA SELF-ASSESSMENT BOOKLET  
(paper only)

Created by COLA, this guide provides a complete overview of the bloodborne pathogen regulation and requirements. If the review included in the booklet is documented, it can be used to fulfill the annual OSHA training requirement.

MEDICAL PRACTICE EDUCATION

OFFICE GUIDES

Office guides on topics of interest to the medical practice in general.

• Office Guide 1: Medical Records—Organization and Standardization
• Office Guide 2: Guide to OSHA Requirements
• Office Guide 3: Employee Performance Appraisals
QUALITY ASSESSMENT/ QUALITY ASSURANCE

LABORATORY QUALITY ASSURANCE: A PLAN FOR IMPLEMENTATION

A turnkey publication on Quality Assurance (QA), which actually includes a working template of a QA Plan for any laboratory to implement immediately. Divided into four sections, the publication includes:

1. An explanation of the benefits of an effective QA process.
2. A brief synopsis of the QA process and the elements of a complete QA plan.
3. A turnkey QA plan to use or adapt for use.
4. QA forms to document all of your QA activities.

Available in hardcopy manual with or without the disk. CD includes MSWord 97 files and rich text format files of both the plan and charts/forms included with the plan. Rich text format files may be opened by any word processing program running on either PC or Macintosh computers.

QUALITY MANAGEMENT SYSTEMS COLLECTION FROM CLSI (Clinical and Laboratory Standards Institute)

QUALITY SPECIALTY COLLECTION

This collection provides medical laboratories with specific tactics for implementing quality guidelines. The Quality Specialty Collection includes the following documents via download:

- A Quality Management System Model for Health Care; Approved Guideline—Second Edition (HS1-A2)
- Application of a Quality Management System Model for Laboratory Services; Approved Guideline—Third Edition (GP26-A3)
- Clinical Laboratory Technical Procedure Manuals; Approved Guideline—Fourth Edition (GP2-A4)
- Continuous Quality Improvement: Integrating Five Key Quality System Components; Approved Guideline—Second Edition (GP22-A2)
- Training and Competence Assessment; Approved Guideline—Second Edition (GP21-A2)
Two of the most popular guidelines from the collection are also available for individual sale.

A Quality Management System Model for Health Care; Approved Guideline — Second Edition (HS1-A2)

This document provides a model for providers of healthcare services that will assist with implementation and maintenance of effective quality management systems.

Application of a Quality Management System Model for Laboratory Services: Approved Guideline — Third Edition (GP26-A3)

This guideline describes the clinical laboratory’s path of workflow and provides information for laboratory operations that will assist the laboratory in improving its processes and meeting government and accreditation requirements.

WAIVED/PPM TESTING PROCEDURES

There are 22 individual Waived/PPM test procedures available via download or hardcopy.

1. Direct Wet Prep
2. Examination of Expressed Prostatic Secretions
3. Fecal Leukocyte Examination
4. Fern Test (Amniotic Fluid Crystallization Test)
5. Finger Puncture Technique
6. General Laboratory Policies
7. Heel Puncture Technique
8. Hemoglobin by Copper Sulfate Screening Method
9. KOH Prep
10. Nasal Smear for Leukocytes
11. Pinworm Examination
12. Postcoital (Sims-Huhner) Test
13. Qualitative Semen Analysis
14. Specimen Collection and Handling for Skin Scraping
15. Spun Microhematocrit
16. Throat Swab Collection
17. Urine Sediment Examination
18. Urine Specimen Collection
19. Venipuncture Using a Syringe
20. Venipuncture Using an Evacuated Tube System
21. Westergren Erythrocyte Sedimentation Rate
22. Wintrobe Erythrocyte Sedimentation Rate
LabUniversity® is COLA’s on-line learning center developed to respond to the needs of physicians and laboratory staff. Courses and programs are designed to meet certification and licensing requirements. With on-line programs you can take the courses anytime or anywhere you have Internet access. Lessons are designed to take between 20 and 30 minutes. Each course includes examples drawn from current laboratory practices - so you are gaining practical knowledge that can be immediately applied in your own laboratory.

LabUniversity® is flexible to meet your needs. Enroll in a single specific course or courses specially packaged together such as the Laboratory Director Program, the Quality Management Systems Program, or the Courses of Study packages.

ACCREDITATION FOR CONTINUING EDUCATION

LabUniversity® courses have been designated by University of Wisconsin School of Medicine and Public Health for Category 1 credits toward the AMA Physician’s Recognition Award. The University of Wisconsin School of Medicine and Public Health is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

COLA is approved as a provider of continuing education programs in the clinical laboratory sciences by the:

- American Society for Clinical Laboratory Science (ASCLS) P.A.C.E.® program (Professional Acknowledgment for Continuing Education)
- California Division of Laboratory Science, Dept. of Laboratory Field Services
- Board of Clinical Laboratory Personnel, Division of Medical Quality Assurance at the Florida Agency for Health Care Administration
ON-LINE COURSE CATALOG
Course descriptions following, beginning on page 11.

LABORATORY SCIENCE
• CLIA ‘88 Requirements for the Medical Laboratory
• Laboratory Director Responsibilities
• Laboratory Personnel Requirements for the Physician Office Laboratory (POL)
• OSHA Safety Requirements for the Medical Laboratory
• Proficiency Testing
• Quality Assessment Basics
• Quality Control in the Clinical Laboratory, Part 1: Bringing a Test System On-line
• Quality Control in the Clinical Laboratory, Part 2: The Basics of Quality Control

LABORATORY DIRECTOR PROGRAM
The Laboratory Director Program includes the first eight of the Laboratory Science courses listed above.

QUALITY MANAGEMENT SYSTEMS
Available individually or together as the Quality Management Systems Program
• QMS: Introduction to Quality Management in the Medical Lab
• QMS: Bringing CLIA and QMS Together
• QSE: Organization
• QSE: Personnel
• QSE: Equipment
• QSE: Process Control
• QSE: Assessments
• QSE: Purchasing and Inventory
• QSE: Documents and Records
• QSE: Occurrence Management
• QSE: Facilities and Safety
• QSE: Information Management
• QSE: Customer Service
• QSE: Process Improvement
• QMS: Process Flowcharting
• QMS: Quality Manual
LABUNIVERSITY® ON-LINE COURSES

LABORATORY TESTING

- Accu-Chek® On-line Training
- Best Practices for Performing Waived Tests
- Calibration Verification
- Triage® BNP Test On-line Course
- Triage® Cardiac Panel Test On-line Course
- Triage® Cardio ProfilER Test On-line Course
- Triage® ProfilER Shortness of Breath Panel On-line Course
- Triage® TOX Drug Screen On-line Course

CEEXPRESS

- CE express 1: Getting it Right - Specimen Collection and Instrument Performance
- CE express 2: CLIA has Changed, Have You?
- CE express 3: Quality Systems
- CE express 4: Laboratory Information Systems
- MLE CE express 1: Blood Cell Identification
- MLE CE express 2: Teaching Patients to Check Blood Sugar
- MLE CE express 3: Urine Sediment Refresher
- MLE CE express 4: Waived Testing - Doing It Right!

COMPETENCY ASSESSMENTS

- Chemistry Competency Assessment
- Gram Stain Competency Assessment
- Hematology Competency Assessment
- I-STAT Operations Competency Assessment
- Microbiology Competency Assessment
- Patient Safety Competency Assessment
- Phlebotomy Competency Assessment
- Specimen Processing Competency Assessment
- Specimen Transport Competency Assessment
- Urinalysis Competency Assessment

COURSES OF STUDY

PROFESSIONAL DEVELOPMENT COURSES OF STUDY

- Course of Study for New Employees Performing Waived Tests
- OSHA and Laboratory Safety Course of Study
- Provider-Performed Microscopy Procedures Course of Study
- Documents and Record Keeping Course of Study
- Hematology and Coagulation Course of Study
- Phlebotomy Continuing Ed (targeted to California recertification)
STATE CONTINUING EDUCATION COURSES OF STUDY

- California Continuing Education Course of Study
- Florida Continuing Education Course of Study
- Louisiana Continuing Education Course of Study
- Montana Continuing Education Course of Study
- Nevada Continuing Education Course of Study
- North Dakota Continuing Education Course of Study
- Rhode Island Continuing Education Course of Study
- West Virginia Continuing Education Course of Study

ON-LINE COURSE DESCRIPTIONS

LABORATORY SCIENCE COURSES

CLIA ‘88 REQUIREMENTS FOR THE MEDICAL LABORATORY
This course examines the CLIA requirements that apply to most laboratories and discusses ways to document compliance. This course explains the following CLIA’88-related topics: certification, test complexity, proficiency testing, personnel, quality systems, quality assessment, and compliance.

LABORATORY DIRECTOR RESPONSIBILITIES
This course is designed to introduce you to the lab director’s responsibilities as spelled out in the CLIA regulations. The types of responsibilities are broken down into five categories. For each responsibility we also present ways that you can meet this responsibility. A printable summary of this information is available in the Resources section of this course.

LABORATORY PERSONNEL REQUIREMENTS FOR THE PHYSICIAN OFFICE LABORATORY (POL)
This course addresses the personnel requirements for the physician office laboratory as stipulated by CLIA ’88 regulations. Included in the discussion are the requirements for waived laboratories, provider performed microscopy (PPM) laboratories, moderate complexity laboratories, and high complexity laboratories. Each role in the lab is defined by educational and experiential requirements, and is further enhanced by an examination of the responsibilities of that role.

OSHA SAFETY REQUIREMENTS FOR THE MEDICAL LABORATORY
This course is designed to describe safety standards and to explain the importance of safety in the medical laboratory. The course content contains relevant OSHA Standards that pertain to the safe operation of a medical laboratory. At the end of this course, the learner will be able to develop, implement, and document safety procedures.
PROFICIENCY TESTING
This course explains proficiency testing (PT) in the laboratory and how it plays a key role in assuring the highest quality of patient care while meeting the requirements of CLIA ’88. Proficiency testing is examined from a practical point of view—how to select a vendor, how often it must be performed and for which tests, rules for performing PT, and how to analyze your scores. Documentation and record-keeping requirements are reviewed, along with tips and techniques for achieving long-term success in proficiency testing.

QUALITY ASSESSMENT BASICS
This course was revised to include the updated CLIA regulations. The course defines the Quality Assessment (Assurance) process according to CLIA ‘88. The course covers CLIA standards for all areas of laboratory operations under the pre-analytic, analytic, and post-analytic phases of testing. The difference between quality control and quality assessment is addressed, as well as the goals and benefits of having a written Quality Assessment Plan for the laboratory. Sample documentation and logs are provided to illustrate record-keeping techniques that satisfy QA requirements.

QUALITY CONTROL IN THE CLINICAL LABORATORY, PART 1: BRINGING A TEST SYSTEM ON-LINE
This course is designed to explain the quality control (QC) process in the laboratory and its importance in assuring the accuracy of patient test results. At the end of this course, the learner will be able to define and understand the importance of quality control (QC) in the laboratory.

QUALITY CONTROL IN THE CLINICAL LABORATORY, PART 2: THE BASICS OF QUALITY CONTROL
This course is designed to prepare the learner for the development, implementation, and documentation of an appropriate QC program for the laboratory, and provide an understanding of the analysis of QC results. Course content includes the selection of QC material, determination of frequency to run QC, establishment of QC limits and explanation of proper documentation.
LAB DIRECTOR PROGRAM

Physicians who complete our Lab Director program will earn 20 Continuing Medical Education (CME) credits that meet CLIA requirements and Quality Systems standards in the areas of laboratory practice and director responsibilities.

The complete course series covers all of the topics required by Centers for Medicare and Medicaid Services (CMS), combining interactive exercises with self-paced learning activities in a flexible on-line format. Please note that anyone may participate in this program, but only licensed MDs, DOs or DPMs may obtain CME credits and use them as a means to qualify as a laboratory director for a moderate complexity laboratory. These courses have been approved for CME and P.A.C.E.® credit. Participants have up to one year to complete the Laboratory Director Program.

The Lab Director Program includes the following courses:

- CLIA ‘88 Requirements for the Medical Laboratory
- Laboratory Director Responsibilities
- Laboratory Personnel Requirements for the Physician Office Laboratory (POL)
- OSHA Safety Requirements for the Medical Laboratory
- Practical Proficiency Testing
- QC in the Clinical Laboratory, Part 1: Bringing a Test System On-line
- QC in the Clinical Laboratory, Part 2: The Basics of Quality Control
- Quality Assessment Basics

QUALITY MANAGEMENT SYSTEMS

This series of courses is designed to help you implement Quality Management Systems in your laboratory. QMS: Introduction to Quality Management in the Medical Laboratory and QMS: Bringing CLIA and QMS Together introduce the concept of quality management systems (QMS) and the quality system essentials (QSEs).

The series continues with courses focusing on each of the 12 QSEs to gain in-depth knowledge of these important building blocks of quality. Also included in the series are two “how to” courses that will guide you in process flowcharting and developing a quality manual for your laboratory’s quality management system. These courses have been approved for CME and P.A.C.E.® credit. There are no prerequisites for these courses. Courses are available together as a package or individually.

QMS: INTRODUCTION TO QUALITY MANAGEMENT IN THE MEDICAL LABORATORY

This Quality Management System course introduces the laboratory to the concept of Quality Management Systems and the ever-increasing focus on quality in healthcare. It describes a plan for managing the quality of your laboratory’s test results and services. At the end of this course you should be able to define quality in the medical laboratory environment, define a quality system essential (QSE), describe the quality system model, and identify 12 quality system essentials (QSEs).
QMS: BRINGING CLIA AND QMS TOGETHER

This Quality Management System course explains the process for transitioning from a CLIA-based to a quality management system-based accreditation program. It describes what your laboratory needs to know about meeting the requirements established for QMS accreditation. At the end of this course you should be able to recognize the quality management system model used by COLA to structure its laboratory accreditation program, state the approach taken by COLA to transition from a CLIA-based accreditation program to a quality management system-based program, and correlate your laboratory's current quality control (QC) and quality assessment (QA) activities to the quality management system model. This course helps you to organize your laboratory's current quality management activities around the Quality System Essentials (QSEs), and to develop a strategy for transitioning your laboratory from QC/QA thinking to quality management.

QSE: ORGANIZATION

This Quality System Essential course is about the organizational structure of your laboratory, including the relationships between the laboratory director, executive management, the management, and employees. QSE: Organization is also about how your lab organizes itself to design, implement, maintain, and improve your quality management system and it discusses the role of planning and reviews in determining the effectiveness of your laboratory's quality management system.

QSE: PERSONNEL

This Quality System Essential course is about the human resources aspect of quality management. It includes discussions about taking the time to select qualified people, training them to do the work processes in your laboratory, and verifying that they remain competent in their job tasks.

QSE: EQUIPMENT

This Quality System Essential course is about having appropriate equipment that is accurate and reliable, so that your laboratory can provide test results that contribute meaningfully to patient care. It discusses taking the time to properly select the right equipment; install the equipment and validate its function; maintain and calibrate the equipment according to established requirements; solve and document equipment-related problems; and maintain all required records.

QSE: PROCESS CONTROL

This Quality System Essential course describes how your laboratory's technical work processes need to be designed to function in such a way as to meet requirements and your customer's expectations. Process Control is about identifying, documenting, managing, and controlling your laboratory's pre-analytic, analytic, and post-analytic technical work operations.

QSE: ASSESSMENTS

This Quality System Essential course is about using external and internal assessments to verify that your laboratory's processes meet requirements and to determine how well those processes are functioning. The term assessments is used in quality management when referring to onsite inspections or surveys, proficiency testing, quality assurance reviews, and other evaluations done inside the laboratory.
QSE: PURCHASING AND INVENTORY
This Quality System Essential course is about the agreements that your laboratory has with entities you provide services to, and entities you obtain products and services from. At the end of this course you should be able to determine when your laboratory is a supplier and when it is a customer, discuss the essential elements of an agreement (contract), and describe the key processes for laboratory inventory management.

QSE: DOCUMENTS AND RECORDS
This Quality System Essential course is about your laboratory's policy, process, and procedure documents and the records you generate by performing activities in your quality management system. At the end of this course, you should be able to state the difference between documents and records, describe various types of documents, and define a record and document control management system.

QSE: OCCURRENCE MANAGEMENT
This Quality System Essential course is about detecting, reporting, investigating, tracking, and trending events that do not conform to your laboratory’s established policies, processes, and procedures. It describes ways to learn about how well your laboratory is functioning by taking the time to analyze where problems are occurring and why.

QSE: FACILITIES AND SAFETY
This Quality System Essential course is about your laboratory's physical space and the maintenance and safety programs needed to support it. At the end of this course you should be able to explain issues important to space allocation and laboratory design, describe the features of a facilities management program, and develop a safety management program.

QSE: INFORMATION MANAGEMENT
This Quality System Essential course is about protecting and managing the confidentiality, privacy, security, and accessibility of information stored in your laboratory’s paper-based and electronic record keeping systems. At the end of this course, you should be able to state the relationship between QSE: Equipment and QSE: Information Management, with respect to the computer system. Additionally, the course focuses on privacy and confidentiality, data integrity, and data storage and retrieval.

QSE: CUSTOMER SERVICE
This Quality System Essential course is about why your laboratory needs to identify its external and internal customers, their needs, and their perception of your services. At the end of this course, you should be able to identify your laboratory’s external and internal customers, describe methods that can be used to determine external and internal customer satisfaction, and identify ways to use customer service feedback to improve quality.

QSE: PROCESS IMPROVEMENT
This Quality System Essential course is about identifying opportunities for improvement and using an established problem resolution plan to solve process problems. At the end of this course, you will be able to list sources of opportunities for improvement, prioritize problems for process improvement, and develop a process improvement team. The course also focuses on the problem resolution process and several methods of root cause analysis.
QMS: PROCESS FLOWCHARTING

This Quality Management Systems course explains the concept of your laboratory's work as a series of processes that need to be understood, documented, used as the basis for training, and monitored for performance. At the end of this course, you should be able to explain the differences between process and procedure, describe the symbols used in process flowcharting, construct a flowchart for a laboratory work process, and explain the uses for flowcharts. The course also introduces the process activities that need written procedures.

QMS: QUALITY MANUAL

This Quality Management Systems course is about an important collection of laboratory documents called a quality manual. A quality manual is required in organizations that have a quality management system. At the end of this course, you should be able to differentiate between a quality manual and a technical procedures manual, state the purpose of a quality manual, and use the process to develop a quality manual, including document control requirements. The course offers a planned approach to develop quality system essential (QSE) policies, how the functions of the supporting QSE process and procedure documents work together, and how to organize the contents of a quality manual.

LABORATORY TESTING COURSES

The purpose of these courses is to provide the knowledge and skills necessary for laboratory personnel to successfully perform specific tests and operate any associated instruments. Courses utilize an interactive format and are designed not only to provide step-by-step instructions, but to also give additional insight not found in the package insert. Along with the technical information presented in the courses, helpful hints and suggestions are offered throughout to assist laboratory personnel while actually performing tests. Courses present material in a convenient and easy to understand format that is suitable for those who are new to laboratory testing, as well as experienced clinical laboratory professionals. They are appropriate for anyone performing testing in various clinical laboratory settings, whether in the physician office laboratory or a hospital-based facility.

ACCU-CHEK® ON-LINE TRAINING

This course is designed to prepare the learner to use the Roche Accu-Chek® meters. The Accu-Chek® meters are designed for testing glucose in whole blood (blood sugar) by persons with diabetes or by healthcare professionals in the home or in healthcare facilities. After completing this course and reviewing the material provided with the test kit, the student will be able to successfully perform glucose testing with the Accu-Chek® meter.

BEST PRACTICES FOR PERFORMING WAIVED TESTS

This course is designed to provide a basic understanding of waived tests and a good background to properly perform waived tests in your laboratory. The course focuses on following good laboratory practices to achieve the goal of accurate and reliable test results. After completing this course, the student will be able to successfully perform waived tests.
CALIBRATION VERIFICATION

This course explains the process of calibration verification as detailed in the updated CLIA requirements of 2003. It is presented by AUDIT® MicroControls™ and introduces products manufactured by AUDIT that can be used as calibration verification materials. At the end of this course you will be able to define calibration and calibration verification and recognize the difference between them.

TRIAGE® BNP TEST ON-LINE COURSE

This course is designed to prepare the learner to perform the Biosite® Triage® BNP Test, a rapid, objective point-of-care test to aid in the diagnosis of congestive heart failure (CHF). After completing this course and reviewing the material provided with the test kit, the student will be able to successfully perform the Triage® BNP Test.

TRIAGE® CARDIAC PANEL TEST ON-LINE COURSE

This course is designed to prepare the learner to perform the Biosite® Triage® Cardiac Panel, a point-of-care diagnostic test that measures creatine kinase MB (CK-MB), myoglobin, and troponin I (Tn I) levels in the blood. These cardiac markers are used as an aid in diagnosis of acute myocardial infarction (AMI). After completing this course and reviewing the material provided with the test kit, the student will be able to successfully perform the Triage® Cardiac Panel Test.

TRIAGE® CARDIO PROFILER TEST ON-LINE COURSE

This course is designed to prepare the learner to perform the Biosite® Triage® Cardio ProfilER, a point-of-care diagnostic test that measures creatine kinase MB (CK-MB), myoglobin, troponin I (Tn I), and B-type natriuretic peptide (BNP) levels in the blood. These cardiac markers are used as an aid in diagnosis of acute myocardial infarction (AMI), the diagnosis and assessment of severity of congestive heart failure (CHF), and the risk stratification of patients with acute coronary syndromes (ACS).

After completing this course and reviewing the material provided with the test kit, the student will be able to successfully perform the Triage® Cardio ProfilER Test.

TRIAGE® PROFILER SHORTNESS OF BREATH PANEL ON-LINE COURSE

This course is designed to prepare the learner to perform the Biosite® Triage® ProfilER Shortness of Breath Panel. This point-of-care diagnostic test is used with the Triage® MeterPlus to measure creatine kinase MB, myoglobin, troponin I, B-type natriuretic peptide (BNP), and D-dimer levels in the blood. These markers provide rapid risk assessment and differential diagnosis of patients with shortness of breath. After completing this course and reviewing the material provided with the test kit, the student will be able to successfully perform the Triage® ProfilER Shortness of Breath Panel test.

CEEXPRESS

CEEXPRESS is a fast and effective method for obtaining required continuing education units. In these courses, you will read the course articles, and then answer a quiz about the information covered.
CEEXPRESS 1: GETTING IT RIGHT - SPECIMEN COLLECTION AND INSTRUMENT PERFORMANCE contains two articles about Quality Assurance. At the end of this course, you will be able to identify the important factors that go into maintaining specimen integrity, analyze the effectiveness of a maintenance schedule, and identify the benefits of performing instrument maintenance and calibration.

CEEXPRESS 2: CLIA HAS CHANGED, HAVE YOU? contains two articles about the new CLIA regulations. At the end of this course, you will be able to identify key changes to the CLIA final regulations and recognize specific CLIA requirements as defined in the final regulations.

CEEXPRESS 3: QUALITY SYSTEMS contains three articles about quality systems and quality communication. This course introduces the laboratory to the quality management systems (QMS) concept and how it can improve the management of laboratory operations. These articles cover several QMS topics including: benefits of QMS, effectiveness of QMS, using QMS to reduce errors, and quality communication.

CEEXPRESS 4: LABORATORY INFORMATION SYSTEMS contains two articles about the positive impact a Laboratory Information System (LIS) can have on a POL. At the end of this course you will be able to identify the benefits of a Laboratory Information System (LIS) and recognize the issues involved with selecting an LIS.

MLE CEEXPRESS 1: BLOOD CELL IDENTIFICATION contains two articles about the identifying characteristics of white blood cells. At the end of this course you will be able to identify the sources and developmental stages of white blood cells, recognize identifying characteristics of white blood cells, and identify white blood cells found in peripheral blood.

MLE CEEXPRESS 2: TEACHING PATIENTS TO CHECK BLOOD SUGAR contains one article about preparing laboratorians to teach diabetic patients how to check their blood sugar with a hand-held meter. Included are links to helpful web sites with more information on the topic. At the end of this course you will be able to educate diabetic patients on how to perform blood glucose testing with a hand-held device, including explaining the theory and procedure in practical terms that non-medically trained patients can understand.

MLE CEEXPRESS 3: URINE SEDIMENT REFRESHER is two articles intended as a refresher on the performance of the urine microscopic examination, including the identification of commonly seen elements. At the end of this course you will be able to determine when a urine sediment microscopic exam is indicated, describe how to process urine specimens for microscopic examination, explain how to perform the microscopic exam, identify microscopic elements found in urine sediment, and recognize the origin and significance of elements found in urine sediment.

MLE CEEXPRESS 4: WAIVED TESTING - DOING IT RIGHT! is three articles about waived testing and the importance of performing it correctly for accurate results. Waived testing is defined and the importance of following the manufacturer's instructions and using good laboratory practices is stressed. The three articles cover the three phases of testing, providing important pointers for each testing phase that can lead to more accurate results and better patient care.
COMPETENCY ASSESSMENTS AND TRAINING COURSES

Competency Assessments offer objective assessments of personnel competency in specific areas, including analytic procedures, specimen collection and processing, waived testing, point of care testing, and instrument operation for staff involved in all aspects of clinical laboratory testing. Assessments include:

- Chemistry Competency
- Hematology Competency
- Microbiology Competency
- Phlebotomy Competency
- Specimen Transport Competency
- Gram Stain Competency
- I-STAT Operations Competency
- Patient Safety Competency
- Specimen Processing Competency
- Urinalysis Competency

Training Courses may be used for initial training or remedial training after a failed competency assessment.

MICROSCOPY

Intended for all laboratory staff and students. Covers the principles and practice of microscopy including: equipment and maintenance, Kohler illumination, and how images are formed.

BIOSAFETY

Intended for all laboratory staff. Covers standard precautions, personal protective equipment, and spill cleanup.

INTRODUCTION TO THE CLINICAL LABORATORY

Intended for staff and students who are new to laboratory services, including pre-analytic and analytic testing. Course gives an overview of the clinical laboratory testing process.

BASIC PHLEBOTOMY

Intended for laboratory and nursing staff who perform phlebotomy, and for phlebotomy students. Course covers anatomy, blood collection equipment, and basic venipuncture technique, including procedural complications.

PERIPHERAL BLOOD

Intended for MTs, MLTs, MDs, and others reading peripheral blood smears. Course explores peripheral blood smear preparation and interpretation.

URINALYSIS

Intended for students and laboratory staff performing microscopic urinalysis. Course covers the complete urine microscopic examination including the identification of structures found in urine sediment, and clinical presentations.
SPECIMEN PROCESSING
Intended for specimen processing personnel. Course covers procedures for the processing of laboratory specimens including: receiving, data entry, dispatch, further processing, routing, and reporting.

GRAM STAIN
Intended for physicians, microbiology staff, and students. Course covers direct gram stain preparation and interpretation.

COAGULATION
Intended for coagulation testing staff, physicians, and students. Course explores physiology of hemostasis, common bleeding disorders, and their laboratory evaluation.

ORIENTATION TO PATIENT SAFETY
Intended for all laboratory staff. Course offers an introduction to patient safety culture, patient injury investigation, and laboratory error.

BASIC CELL THERAPY
This course introduces the student to stem cells and cell therapy, describing stem cell collection, processing, storage, and transplantation. Critical aspects of cell therapy and the different types of stem cell transplant are explored. This course has been approved for CME and P.A.C.E.® credit. There are no prerequisites for this course.

TRANSFUSION-RELATED ACUTE LUNG INJURY CASE STUDIES
Transfusion-related acute lung injury (TRALI) is an infrequent, but serious potential complication of transfusion. This course is designed for three separate, but related audiences with a common goal of successful patient outcomes:

- The Clinical track is intended for physicians and other clinicians directly involved in patient care
- The Transfusion Center track is intended for Blood Bank personnel in healthcare facilities
- The Blood Center track is intended for personnel in centers that manage donors to collect and provide blood components to healthcare facilities

Each track offers a different perspective on the same three case studies. You may take the track that most closely applies to you, or you may take more than one track. Each track offers 1 hour of CME or P.A.C.E.® credit for successful completion. There are no prerequisites for this course.
COURSES OF STUDY

These Courses of Study are a combination of existing on-line courses and existing relevant COLA print products in a downloadable format targeted at a specific audience. The web site gives descriptions and lists the contents of each “bundle.” They are a huge savings over purchasing the courses and products separately.

The Courses of Study programs are designed for specific laboratory needs and for laboratory professionals in those states requiring continuing education credits to maintain licensure.

COURSE OF STUDY FOR NEW EMPLOYEES PERFORMING WAIVED TESTS

This course of study is a combination of existing COLA products packaged to meet the specific needs of laboratories that perform waived tests. New and existing employees in facilities that perform waived laboratory tests will benefit from this course of study. You will learn the importance of safety in the laboratory, importance of following manufacturer’s instructions for waived tests, and proper procedures and good laboratory practices for performing waived tests.

DOCUMENTS AND RECORD KEEPING COURSE OF STUDY

This course of study is a combination of existing COLA products packaged to meet the specific needs of laboratories performing nonwaived tests. All levels of personnel in facilities that perform nonwaived laboratory testing will benefit from this course of study. You will learn what documents and records your laboratory needs, and the importance of proper documentation of laboratory activities.

HEMATOLOGY AND COAGULATION COURSE OF STUDY

This course of study is a combination of existing COLA products packaged to meet specific needs of laboratories performing hematology and coagulation testing. We recommend that you also purchase the AAFP POL Microscopy Atlas as a useful companion to this Course of Study. Personnel in laboratories that perform nonwaived hematology and/or coagulation tests will benefit from this course of study. You will learn the CLIA requirements for hematology and coagulation and how to comply, proper procedures for collecting specimens for hematology and coagulation tests, and proper procedures for performing hematology and coagulation tests.

OSHA AND LABORATORY SAFETY COURSE OF STUDY

This course of study is a combination of existing COLA products packaged to meet the specific needs of facilities that collect and/or test patient specimens. Laboratory and patient care staff in medical laboratories will benefit from this course of study. You will learn the importance of safety in the medical laboratory, OSHA Standards that are relevant to the safe operation of a medical laboratory, how to comply with the OSHA Bloodborne Pathogens Standard, and how to protect laboratory staff and patients from hazards in the laboratory.

STATE CONTINUING EDUCATION COURSES OF STUDY

These Courses of Study are a combination of existing COLA products packaged to meet the specific needs of laboratorians in states that have requirements for continuing education as part of personnel license renewal. Topics include safety in the medical laboratory, proper procedures and good laboratory practices for performing waived tests and information on the registration process, requirements, and ways to document compliance for a typical laboratory. Also, courses cover quality assessment, basics of quality systems, and calibration verification as detailed in the updated CLIA requirements of 2003.
We look forward to welcoming you to a Symposium for Clinical Laboratories. These symposiums are specifically designed to meet the education and networking needs of physicians and healthcare professionals involved with the medical laboratory. COLA hosts several learning events each year with a focus on topics, such as laboratory director responsibilities, quality systems, and management skills that are important to all sizes of laboratories. We offer sessions on technical topics, as well as information on state and federal laboratory regulations, personnel requirements, and continuous improvement tools.

We are pleased to provide physicians with a conference offering an approved continuing education track that leads to certification as a laboratory director of a moderate complexity laboratory. Each Symposium provides the laboratory director with basic, as well as more advanced tools for success. In addition, our conference is approved to provide continuing education to meet laboratory professional’s state license requirements.

At each Symposium, we offer more than thirty breakout sessions in small group settings, so you can customize your learning to meet professional and personal goals. In addition to workshops and breakouts, the general sessions showcase laboratory medicine experts who share their knowledge on topics of universal laboratory interest, such as the role of the laboratory in quality and patient safety.

And there is more... We gather manufacturer representatives to exhibit laboratory equipment specific to the medical laboratory, offering you the opportunity to get up close and personal with the newest and best equipment in the laboratory industry.

We hope you will review the Symposium brochure and join us at one of our spirited learning events in the coming year.

For more information on the next Symposium for Clinical Laboratories, call 800.981.9883 or visit www.cola.org