

Medical Laboratory Scientists

Quality Care from Quality Professionals

Profession Definition

Medical Laboratory Scientists are health care professionals with special expertise in laboratory medicine. Their role is to provide accurate laboratory results in a timely manner. The results are used to confirm a diagnosis or to monitor treatment. The technologist must recognize abnormalities and know how to correct them. They monitor, screen, and troubleshoot analytical devices including calibration, quality control, statistical control of observed data, and recording normal operations.

History of the Profession

The beginning of the 20th century saw discoveries of drugs and new diagnostic techniques to identify and help cure disease. These discoveries helped establish medical laboratories as a permanent service to physicians within U.S. hospitals. Far different than the medical laboratory today, these labs included functions now separated into their own services as radiology, nuclear medicine, respiratory lab, and gastrointestinal lab.

“In the early part of the century, many hospitals began reorganizing their laboratories so that they were headed by biochemists. Professional organizations emerged as self-regulating groups that helped ensure the skills and knowledge of laboratory professionals would pass the scrutiny of the hospitals that employed them.”

“Developments in microbiology attested to the link between the diagnosis and treatment of disease.” Clinical chemists developed quantitative analytical methods for several blood analytes that continue to be at the heart of diagnosis today. In 1909 blood types were classified “into the well-known A, B, AB and O groups and catastrophes of earlier blood transfusions were eliminated by transfusing blood only between individuals of the same blood group.” Later, the Rh factor was discovered. Technological advances in cell counting techniques allow hematologists to identify anemia and leukemia within minutes rather than hours.

“By the end of the first half of the 20th century, laboratory medicine had earned professional legitimacy through contributions to diagnosing disease and discovering drugs to treat formerly life-threatening illnesses. Professional societies emerged to develop professional identity and to provide educational support.”

(Berger, 2007)

Core Competencies

- ❖ Developing and establishing procedures for collecting, processing, and analyzing biological specimens and other substances;
- ❖ Performing analytical tests of body fluids, cells, and other substances;
- ❖ Integrating and relating data generated by the various medical laboratory departments while making decisions regarding possible discrepancies;
- ❖ Confirming abnormal results, verifying quality control procedures, executing quality control procedures, and developing solutions to problems concerning the generation of laboratory data;
- ❖ Making decisions concerning the results of quality control and quality assurance measures, and instituting proper procedures to maintain accuracy and precision;
- ❖ Establishing and performing preventive and corrective maintenance of equipment and instruments as well as identifying appropriate sources for repairs;
- ❖ Developing, evaluating, and selecting new techniques, instruments and methods in terms of their usefulness and practicality within the context of a given laboratory’s personnel, equipment, space, and budgetary resources;
- ❖ Demonstrating professional conduct and interpersonal skills with patients, laboratory personnel, other health care professionals, and the public;
- ❖ Establishing and maintaining continuing education as a function of growth and maintenance of professional competence;
- ❖ Providing leadership in educating other health personnel and the community;
- ❖ Exercising principles of management, safety, and supervision.

(NAACLS, 2006)

Code of Ethics

I. Duty to the Patient

Medical laboratory professionals are accountable for the quality and integrity of the laboratory services they provide. This obligation includes maintaining individual competence in judgment and performance and striving to safeguard the patient from incompetent or illegal practice by others.

Medical laboratory professionals maintain high standards of practice. They exercise sound judgment in establishing, performing and evaluating laboratory testing.

Medical laboratory professionals maintain strict confidentiality of patient information and test results. They safeguard the dignity and privacy of patients and provide accurate information to other health care professionals about the services they provide.

II. Duty to Colleagues and the Profession

Medical laboratory professionals uphold and maintain the dignity and respect of our profession and strive to maintain a reputation of honesty, integrity and reliability. They contribute to the advancement of the profession by improving the body of knowledge, adopting scientific advances that benefit the patient, maintaining high standards of practice and education, and seeking fair socioeconomic working conditions for members of the profession.

Medical laboratory professionals actively strive to establish cooperative and respectful working relationships with other health care professionals with the primary objective of ensuring a high standard of care for the patients they serve.

III. Duty to Society

As practitioners of an autonomous profession, medical laboratory professionals have the responsibility to contribute from their sphere of professional competence to the general well being of the community.

Medical laboratory professionals comply with relevant laws and regulations pertaining to the practice of medical laboratory science and actively seek, within the dictates of their consciences, to change those which do not meet the high standards of care and practice to which the profession is committed.

(ASCLS, 2007)

Certifications

Medical Laboratory Professionals can obtain certifications from several different accrediting bodies.

American Society for Clinical Pathology (ASCP)

- Medical Laboratory Technician
- Medical Laboratory Scientist
- Categorical Certifications
- Specialty Certifications

General requirements to take the Medical Laboratory Scientist (MLS) Exam include:

- A Bachelor’s Degree from an accredited institution and
- Completion of a NAACLS approved program
- OR
- an MLT degree and completion of the necessary requirements

Once certified, a Medical Laboratory Professional may decide to take a specialty exam. The specialty exams include the Chemistry, Hematology, Microbiology and Immunohematology (Blood Bank). In addition to technical certifications, laboratory professionals may obtain certification for management roles.

(ASCP, 2009)

References

- ASCLS (2007) ASCLS website: www.ASCLS.org
- ASCP (2007) ASCP website: www.ASCP.org
- NCA (2007) NCA website: www.nca-info.org
- Berger D. (2007) A brief history of medical diagnosis and the birth of the clinical laboratory. Retrieved from www.mlo-online.com/history/LabHistory2.pdf