Phlebotomy Introduction

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There is an organization and structure of healthcare and the laboratory. Within the healthcare system, there are four different levels of care. Primary care is where basic healthcare is performed, normal health is monitored, and disease prevention is practiced. Secondary care is where specialized healthcare takes place. This is the category where specialized physicians such as neurologists, obstetrics, nephrologists, orthopedics, and pediatricians practice. Tertiary care is the category hospitals fall into and are considered acute care facilities. The fourth level of care is long-term care and refers to stays longer than 30 days.

There are many different departments in the hospitals that help them run smoothly. There are professional, nursing, support, and fiscal services which make up the four divisions within hospitals. In each of those divisions there are individual departments such as radiology, pharmacy, laboratory, ICU, ER, housekeeping, maintenance, accounting, and medical records, just to name a few.

When we discuss the laboratory specifically, there are several different departments and levels of staff. Within the laboratory there are two main components: the clinical pathology side and the anatomic pathology side. The clinical pathology side consists of six main departments, and the anatomic pathology department consists of two divisions.

The Clinical Laboratory Departments:

Clinical chemistry is where testing is performed to determine the chemical composition of the blood, including analysis of drug levels, hormones, and organ system profiles, such as cardiac panels and liver panels.

Hematology and coagulation are really two separate divisions of testing that are usually paired together. Hematology is the study of formed cellular elements of the blood. This is where the diagnosis of certain cancers begins. This department performs complete blood counts and manual differentials. Coagulation assesses the body’s ability to stop bleeding, also known as hemostasis, and monitors Coumadin and Heparin therapy by performing PT and APTT tests.

Microbiology is where cultures are performed and bacterial pathogens are identified. Antibiotic susceptibility is performed, as well as parasite and fungal cultures. In this department, we are able to figure out what bacteria is causing an infection and what antibiotics will kill that bacteria to help the patient feel better.

Immunohematology, or blood bank, is the department where transfusion medicine is performed. Blood types and compatibility testing for transfusions are performed, as well as prenatal and cord blood testing. This department performs testing on patient samples and finds compatible units of blood, platelets, and plasma for patients.

Immunology and Serology is where antigen and antibody reactions are determined as part of the immune system. Tests such as mono, HIV, hepatitis, and rubella are performed in this department to assess or diagnose diseases.
Urinalysis and other body fluids is the last department discussed in this section. This is where the technologist will evaluate urine and other body fluids for their chemical and physical properties to help diagnose different diseases. Urine dipsticks, cell counts on body fluids, and microscopic urinalysis are a few of the tests performed in this department.

**The Anatomical Pathology Department:**
The anatomical pathology department has two major divisions. Those divisions are histology and cytology. Histology is the study of tissues from surgery to determine diagnosis, and cytology is the study of cells in various body fluids to evaluate cancers.

Almost all specimen collections begin with the phlebotomist. The most important duty of the phlebotomist is to identify the patient correctly. After proper patient identification, the phlebotomist must collect the correct specimens, label them, and transport them appropriately. The phlebotomist is also the face of the lab in most cases, and must interact with patients professionally and appropriately. They must have computer skills and maintain confidentiality of patient information. HIPPA is a big deal, and can result in termination, jail time, and fines if a patient’s health information is not kept confidential.

There are more than just phlebotomists that work in the laboratory. There are clerical staff that put patient orders in, MLTs with associate degrees, MLSs with bachelor’s degrees, specialists with bachelor’s degrees and 5 years of experience in that department, master’s degree managers or directors, and pathologists. All healthcare workers should be dependable, compassionate, honest, and flexible, have integrity and have a professional appearance. Working in a laboratory can be a high stress job, and most laboratories run on minimum staff numbers, so it is important to remember that each employee is part of the team and needs to be dependable. The laboratory technicians in the back of the lab need to be able to trust the phlebotomists that are drawing the specimens for testing. This is why it is important to have good integrity and dependability.

Any laboratory must be accredited and regulated to ensure the accuracy of results being reported out. The federal government regulates all clinical laboratories through the Clinical Laboratory Improvement Amendment of 1988, or CLIA ’88. CLIA groups laboratory tests into three categories, and all must be monitored. These categories are waived, moderate, and high complexity. Each of these levels of testing are monitored on a yearly basis by blind samples that must be tested and reported back to the certifying agency. This ensures that laboratories continue to operate at a compliant standard.

This learning unit also covers several medical terms that must be memorized. These are vocabulary words that will be heard often throughout a healthcare worker’s career. Knowing the definition of patient ages, different categories of diseases and conditions, understanding food and liquid intake statuses, anatomic locations, and different laboratory tests and departmental terms will aid in the phlebotomist’s ability to continue to provide excellent care to their patients, and interact with medical staff in an educated way.

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