

# Introduction to Laboratory Informatics: Life of a Result

## Life of a Specimen Flow Overview

Let's take a moment to review the life of a specimen flow. The first step is collecting the specimen and all associated information, and ensuring proper labeling of all components. Next, there needs to be communication with the testing laboratory regarding the test requisition form.

The second part of the process is specimen transportation. The packaging and transportation method used depends on the specific requirements of the recipient laboratory given the type of specimen collected and the test that was ordered.

The third part of the process is receiving and evaluating the quality of the specimen. This involves the laboratory receiving, storing, and accessioning the specimen into the laboratory.

Among other considerations the laboratory will evaluate the specimen to ensure it is of the appropriate type for the test requested, has the needed volume or quantity, and that the associated information is complete, among other considerations.

The fourth part of the process is testing and recording the test results. This step includes the performance of any test preparations for the specimen and laboratory instruments.

The fifth part of the process is reviewing and communicating results. Within this process, the laboratory sends the test results back to the healthcare provider or submitter. If the results qualify as notifiable results, the laboratory also reports the results to the local or state health department, which later reports de-identified data to the CDC.

The last part of the process is specimen storage and disposal. The specimen will either need to be stored for future testing and/or research, or it must be properly disposed of.

It is important to note that there are multiple points throughout the lifecycle where a quality check of the specimen and data will occur to ensure accurate and reliable data that follows appropriate data standards.

As we go through the specimen flow in more detail, it is important to know that this flow is typically characterized into three phases:

pre-analytic,  
analytic and  
post-analytic.

Next, as we focus on the life of a result, we will provide a more detailed look at how specimen and testing information is generated and moves from inside the laboratory to outside the laboratory.

This process occurs in the "Testing and Recording Results" section within the analytic phase and in the "Communicating Results" section within the post-analytic phase.