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Laboratory standard operating procedures are clearly defined methods and processes that must be adhered to by all laboratory personnel when carrying out laboratory procedures. The number of standard operating procedures developed used by a laboratory varies, depending on the size of the laboratory as well as the volume and type of procedures performed; it is not uncommon for very large laboratories to have hundreds of standard operating procedures.



BENEFITS OF LABORATORY STANDARD OPERATING PROCEDURES

There are several benefits to having operating standards for executing laboratory processes. These include, but are not limited to:

- **Improved worker productivity:** Laboratory operating standards are typically best practices for performing tasks associated with the procedure. By adhering to the recommended best practice, laboratory technicians are able to get their tasks done effectively and efficiently, thereby making them more productive.



- **Cost savings:** In addition, best practices tend to generate efficiencies that over time reduces expenses. Therefore, laboratories are able to save money by following a standard workflow.
- **Quality control and calibration:** The accuracy of test results is highly dependent on completely following the steps required to perform the test; deviation from this process can result in inaccurate test results which may impact the quality of care offered to a patient. Adhering to the standard operating procedures in performing laboratory tests ensures that the results are accurate.
- **Improved regulatory compliance:** There are several local, state, and federal regulations that laboratories have to comply with; failure to do so may result in financial or other types of penalties. Following a standard operating procedure greatly minimizes the risk of non-compliance to these regulations.

STANDARD OPERATING PROCEDURE EXAMPLES

As stated earlier, there are many types of laboratory workflow standards that can be developed depending on the type of test and size of the laboratory. However, there are some standardized workflow processes that all laboratories should have, irrespective of their size or tests performed. Discussed below are some of these standards.

1) SPECIMEN PROCESSING

All laboratories should have a standard procedure dictating how various tests should be performed. This standard should state:

- How the test specimen should be collected
- What type of specimen container should be used
- How the specimen should be transported
- What the transport temperature should be
- Specimen storage requirements
- What instruments should be used to perform the test
- How to interpret the test results.

The specimen processing standards vary depending on the test; each individual test should have a standard starting from how it is collected to how the results are generated. Failure to adhere to the specimen processing standards can yield incorrect or invalid results.

2) ORDER ENTRY

Several pieces of information are typically required before any test can be performed. Some of the required information includes



- Patient demographics
- The name of the test required
- Type of specimen type to be collected
- Suspected diagnosis
- Ordering physician

Not having all the necessary information prior to placing the test order may lead to a delay in performing the test and generating the result. To prevent this, a standardized order entry template should be developed. The order entry template should have all the required fields filled out for a test to be performed; the order will not be submitted otherwise. An order entry template ensures that the lab personnel has all the information needed to perform the requested tests in a timely manner.

3) PROVIDER REPORTS

Once a test has been performed and test results generated, the ordering provider then has to create a report for the patient and other relevant third-parties such as insurance companies. If done manually, there is an increased risk of errors when creating patient reports; the providers may also create their reports in different ways which can lead to confusion in interpretation. It is, therefore, necessary to have a standard report template to be used by all providers when reporting patient results. With a standard report template, there is a decreased risk of reporting errors. In addition, a standard report template is easy to share and can be readily understood by all relevant parties.

In addition, other developed standard operating procedures include instrument quality control, rules logic for reflex testing, and supplemental document management. At Psychē, we appreciate the relevance of standard operating procedures to the smooth functioning of the laboratory. With nucleoLIS Efinity, our Molecular Information Management System (MIMS), we are able to support and manage the unique operating procedures and complex reporting requirements of molecular and genetic tests. [Contact us](#) today for more information.