SPANISH WEBINARS

Members of AACC’s Global Lab Quality Initiative Latin American Working Group present these practical webinars designed to train students and laboratorians in practical techniques for quality control and enhanced laboratory medicine. These webinars are geared towards clinical chemistry technologists, supervisors, scientists and students.

WEBINARS

**Quality Control Best Practices**

Speaker: M. Laura Parnas, PhD

During this session we will introduce and review clinical laboratory quality control basic concepts, including definition of terms, basic statistical concepts and types of quality control. In addition, we will define and provide examples of the types of errors possible during the analytical phase: systematic and random errors. We will also describe in detail quality control best practices, including areas related to control materials, how to establish control limits, the usage of Levey-Jennings graphs, as well as the usage of Westgard rules, investigation and resolution of errors, and how to document and record the information related to laboratory quality control.

**How to Implement an Internal Quality Control**

Speaker: Jose C. Jara Aguirre, MD

During this session we will describe the most important practical aspects to consider for the implementation of an internal quality control in the clinical laboratory as a tool focused on bringing added value to patient care and obtaining safe, reliable and clinically useful results; based on and emphasizing the triad of elements of analytical quality in the Clinical Laboratory: 1) Analytical Quality Specifications, 2) Analytical Quality Creation and 3) Analytical Quality Control. We will also describe the basic concepts of the minimum statistical parameters required for the preparation of Levey-Jennings Control Charts and Graphs and how to determine control limits; in addition, we will explain the systematic Westgard statistical rules or “Westgard Rules” designed to monitor the stability of the analytical system, identify the presence of an analytical error and as a guide to identify whether we are facing a systematic or random error through examples in analytical runs and the application of quality control best practices in the daily routine. We will also present an introduction to the strategy for planning an internal statistical quality control based on the sigma metric described in the CLSI C-24-A3 guidelines.

**Practical Advice to Maintain a Healthy Quality Control Program**

**Speaker:** Veronica Luzzi, PhD

The general focus of this presentation is to show the audience the elements required to conduct a quality control program in the clinical laboratory involving monitoring strategies in order to minimize deviations in patient results. During this presentation we
will introduce useful statistical concepts to implement in the identification and resolution of quality control issues. We will also explain the usage of Levey-Jennings graphs to monitor test performance, detect random and systematic errors and how to document research. Finally, the presentation focuses on the usage of previously analyzed patient samples to verify test deviations and the acceptance criteria for analytical performance to be used based on total permissible error. We will provide practical examples of situations regularly faced by the laboratorian and how to solve them.

**Selection of the Proper Internal Statistical Quality Control**

**Speaker:** Gabriel A. Migliarino

If we think about internal statistical quality control, we must consider that not all measuring procedures perform similarly and, in addition, the quality requirements selected for the measuring procedures from valid sources are different for different measuring procedures. Therefore, it is important to design schemes of internal statistical quality control specific for each measuring procedure, taking into account its initial performance and the selected quality requirement in relation to its anticipated usage. The objective of these planned schemes is detecting clinically significant errors and avoiding costs derived from false rejects. In order to work on this plan, we will use the sigma metric, which allows us to integrate the measuring procedure performance with its quality requirements to obtain a measure of the quality achieved by the method. The selection of the proper internal statistical quality control scheme will be based on this sigma performance.