3 Principals of Effective Laboratory Training

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*Editor's Note: Training in the laboratory cannot be a one-time event. Adapted from*Alice Krumenaker*'s supplementary material at IVT's Lab Week, the following are three essentials of training that need to be developed and maintained to ensure effective laboratory operators.*

1. New Employee Training

Enough time needs to be allowed to let the new employee become familiar with the company and the culture. The temptation is always there to put a new employee to work quickly, but allowing enough time for the employee to learn the expectations of their new position will give a higher level of confidence and will minimize operator errors. Here are some key areas to include in new laboratory employee training:

Quality

Overview of the regulatory guidelines that apply to the lab (FDA GMP and/or GLP, European guidelines, DEA, EPA, USDA, or other regulation) needs to occur. Does the analyst need to be familiar with the USP, Ph. Eur., ISO standards, ICH guidelines? It helps to provide this framework initially. Applicable regulations vary depending on the types of products and countries the products are manufactured and sold in.

Internal Procedures and Policies

Before receiving work assignments, ensure employees understand internal procedures and policies and that complex procedures have instructor-based training (or that someone is identified to answer questions or provide guidance). Every company has different nuances in the way things are done. Don't leave it to chance – be sure new employees understand the expectations.

Orientation and Safety Procedures

New employees need to be shown where supplies are located, how labs are set up, where safety equipment (PPE, spill kits, etc.) is located. Be sure new employees know what to do in case of an emergency.

Methods and Techniques

Depending on the position and the nature of the work done in the lab, it may be necessary to conduct hands on training and/or have the new employee demonstrate the ability to perform specific techniques or analytical methods. If this type of training is necessary, allow enough time for the employee to receive training, perform the technique or method along with a subject matter expert, and perform the actions alone with an evaluation. This does not need to be an intimidating experience – additional training should be offered as required. If the employee is not able to perform the required activity after additional training, a re-evaluation of responsibilities may be necessary.

2. Procedures

New and/or revised procedures will require some type of training. If it is a minor revision, highlighting the changes may be sufficient. A new procedure may need to be read and understood by users or may need instructor-based training. This should be defined in procedures or policies in order to eliminate ambiguity. Less frequently used procedures or essential procedures should have periodic refresher training.

Quizzes are commonly used (especially with electronic training systems) to demonstrate that the employee understands the procedure. This is not a requirement and actually doesn't always confirm understanding (or a lack thereof). It is wise to be aware of deviations or investigations that relate to specific procedures because this could indicate a problem with the type of training that is currently being done. This could point out areas where training is not frequent enough or should be delivered by a different technique.

Procedures should be available for analysts to refer to so that they don't need to rely on memory.

3. Continuing Development

This is beneficial because it helps to keep employees engaged and performing at to the best of their ability. Employees should have the opportunity to learn new techniques or to keep up with changes in technology and be encouraged to read professional journals to learn about advances in their field.

If practical, allow employees to attend external conferences or training or schedule periodic internal training with external instructors. When external training isn't possible, schedule "lunch and learn" sessions sponsored by equipment or supply manufacturers. Many vendors have educational seminars on a variety of topics. It is possible in most cases to evaluate the presentations before scheduling the session to ensure that the material presented will be valuable to the attendees and will not merely be an "infomercial" for the vendor's products.

Webcasts are available on a variety of topics. In some cases these presentations are free, but even when a fee is charged, they allow many employees to attend a presentation at a reasonable rate without travel expenses. These webcasts may be used to introduce a new subject or expand a familiar one.

Also See:

GXP: Developing a Train-the-Trainer Program for Regulatory Compliance Part I

VIDEO: Optimize Training & Documentation for Complaint Handling

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