



## Criminalistics Section - 2016

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### **B206 Using Results-Based Data to Make Informed Management Decisions**

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After attending this presentation, attendees will have a better understanding of how to make use of analytical result data to create and improve laboratory policies and management decisions. The data generated by a metropolitan police laboratory will be presented as a case study.

This presentation will impact the forensic science community by demonstrating how empirical-quality data can be used to focus and support management decisions. Using data that evaluates the quality of the evidence being submitted, managers can direct resources to evidence that will most likely yield usable results. Managers may also evaluate the effectiveness of their staff by using both quality and quantity metrics.

As the media continues to highlight the impact that forensic analyses can have on cases, the public and the courts are demanding more and more testing to be performed on evidence; however, as these requests increase, the resources needed to support them do not. Forensic laboratories are simply told to do more with less and to cut their backlogs at the same time that evidence submission is increasing. Intuitively, the logical choice would be to not process certain types of evidence routinely, but who makes those decisions and how can they be justified?

A laboratory must decide which types of evidence and which procedures yield the best results. This decision should not be based purely on analyst or management intuition, but rather on empirical, statistical data. By recording the results associated with particular evidence types, laboratories can decide how to prioritize evidence samples. Further, the same data can be used to evaluate the quality of work of an analyst. Are there trends in the data that shows that an employee consistently takes swabs that yield more useable DNA? Does one analyst have better results with differential extractions than another? Is there a crime scene technician that has a higher-than-average percentage of latent lifts with no value? By examining the data, laboratories can direct resources to training individuals to ensure that the evidence is collected and processed with the best available techniques. By focusing on the best evidence processed with the most effective methods, laboratories can ensure that they will get the most bang for their buck.

This presentation will provide the results of the St. Louis Metropolitan Police Department Crime Lab's DNA and latent sections as a case study for this data-driven management methodology. The laboratory began using their Laboratory Information Management System (LIMS) system two years ago to evaluate the quality of their analytical results. The results, as well as the related policy questions, will be presented.

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#### **LIMS, Management, Quality**