B152 A Forensic Scientist Staffing and Infrastructure Model: A Model for Adequate Forensic Scientist Staffing and Funding of the Nation's Forensic Science Crime Laboratories

Garry J. Bombard, PhD, Forensic Institute for Research, Science, and Training (FIRST), 3400 West 111th Place, Suite 116, Chicago, IL 60655-3203*

The goals of this presentation are to introduce a versatile, robust, and flexible forensic science staffing and infrastructure model for the nation's forensic science laboratories; and to discuss the development and incorporation of foundational data to support the forensic sciences in the public policy arena.

The presentation will impact the forensic science community by addressing the critical shortages and needs in the nation's forensic science laboratories, while developing the lacking foundational data to further support the forensic sciences in the public policy arena. The incorporation of this foundational data in public policy analysis will justify the expansion of the forensic science role in providing public safety and protecting citizens.

The presentation addresses the critical shortages and needs in the nation's forensic science laboratories (crime laboratories), along with developing the lacking foundational data to further support the forensic sciences in the public policy arena. The presenter creates a dynamic and robust model to address both issues. The model is versatile and flexible, creating data for use by any level of government (federal, state, and local). The model provides *minimum* staffing levels and a variety of costs based on 2005 crime data. Additionally, the model provides the *ideal* staffing levels and costs based on forecasted 2010 crime data.

A major role of government is to provide public safety and protect citizens. Unfortunately, this is not the case for the nation's forensic science laboratories. The nation's forensic science laboratories are understaffed and under budgeted. Forensic science laboratories are under increasing pressures to provide a wide range of services with the

limited resources available. Media stories depict the state of affairs, including high backlogs, cases not being worked timely, and wrongful convictions, while the public has come to expect CSI-like services and results based upon a variety of forensic-based television shows.

How does the forensic community address and defend its needs to the political leadership at national and local levels? The forensic science community must start developing and incorporating the appropriate, supporting data in their funding and staffing requests, using public policy methods.

From a public policy viewpoint, the forensic science community lacks the data necessary for the appropriate support. Several authors have identified the lack of and need for various types of quantitative data. They discussed the need for quantitative data to demonstrate the value of forensic science applied to the criminal justice system, and recommended the development of sophisticated estimates, using agreed upon standards. The developed estimates can provide estimates of values and costs.

The model develops a standard to provide adequate staffing resources for the nation's forensic crime laboratories. The model develops the necessary infrastructure costs to compliment the projected staffing.

An early process in public policy analysis is the identification and development of various costs. More sophisticated policy analyses rely on these costs. The presenter provides the foundational costs in the staffing and infrastructure model, which can be incorporated into further policy analyses. The model calculates annual operational costs. Cost per analyst and cost per case for each operational section are calculated in the model. These various costs can then be used in a variety of public policy calculations.

The model provides the starting point in determining the value of forensic science to the criminal justice community and society as a whole. The model provides some of this quantitative data. The model provides the costs of providing services. These costs provide foundational data for determining the *value* of forensic sciences to the criminal justice system.

From a policy development and evaluation perspective, the costs provide foundational data for further economic and financial evaluations, one of the four main evaluation criterion used by public policy analysts. An example of an economic and financial evaluation is economic efficiency studies. A type of economic efficiency study is a sophisticated cost/benefit analysis, which accomplishes the value objective. The model becomes an integral part of the cost/benefit analysis.

Further economic and financial evaluations are accomplished after the primary data is created. The further evaluations include determining studies on economic effectiveness, benchmarking studies, and marginal analysis.

Staffing and Infrastructure Model, Public Policy Analysis, Values and Costs of Forensic Science

 ** Presenting Author*