

K4 The Return on Investment From Reducing Turnaround Time for Processing Driving Under the Influence (DUI) Drug Cases

Paul Speaker, PhD*, West Virginia University, Morgantown, WV 26505

Learning Overview: After attending this presentation, attendees will be able to effectively plan for personnel needs as external forces alter the demands for toxicological analysis in forensic crime laboratories. That planning includes anticipating staffing increases and training to support increased demands for services. This presentation offers measures on the societal benefits from the identification and anticipation of emerging trends.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing laboratory management with an independent assessment of the personnel support required to meet emerging demands for analysis. Laboratory directors will have quantifiable measures of societal gains to support appeals to funding bodies for increased resources to meet demands for services.

From the opioid crisis to legalization of marijuana to the continuing evolution in the abuse of drugs, the societal costs from substance abuse are extensive. This includes societal costs from treatment, health care, lost productivity, death, and costs to the justice system. The justice system costs range from policing to the crime laboratories to jails, courts, and prisons.

This presentation examines the costs associated with the evolution of drug use as reflected in the growth of Driving Under the Influence of Drugs (DUID) cases. The societal return on investment is presented from the allocation of additional resources toward the problem of drugged driving, and the bottleneck in the justice system from too few resources devoted to emerging drug use in society, both legal and illegal.

As a seemingly invisible participant in the justice system's efforts to deal with the constant change, the forensic crime laboratory has been inundated with casework related to evolving drug use from drug chemistry, toxicology antemortem and postmortem. Unfortunately, the resources to deal with this growing social problem have failed to materialize. Could the resource demands be foreseen? Consider, for example, Washington state. The legalization of marijuana was expected to generate over \$300 million annually in tax revenues, and that has come to fruition. Yet, additional permanent funding was not planned for the forensic crime laboratory, and the backlog in toxicology has exceeded 6,000 cases. While some emergency funding has been allocated, the permanent investment in staffing is lacking.

As other states consider the passage of medical or recreational use of marijuana, planning for the demands upon the forensic laboratory should be included as an associated cost with resources dedicated for testing. Illumination of the societal costs will assist in that planning.

The costs from DUID go well beyond marijuana use. A recent analysis of the rise in Phencyclidine (PCP) use in Houston demonstrates the need to react quickly and provide the needed funding to the laboratory.¹

As highlighted by a 2017 White House report, the opioid crisis has resulted in an annual societal cost that exceeds two percent of gross domestic product. Reaction to deal with the crisis has been slow and the costs mount. And, when efforts are directed toward a specific form of abuse, such as prescription pain killers, the drug of choice changes to black tar heroin to fentanyl to other synthetic opioids. This presentation centers on the return on investment to anticipating and reacting quickly to change and avoiding severe down-the-road costs.

This analysis will assist policymakers for proactive planning and reactive support to the justice system. There is a considerable amount of literature and data available. Data from the National Highway Traffic Safety Administration, insurance industry, and project FORESIGHT will be used to estimate the costs of delay in processing DUID cases. This demonstrates the statistical technique to estimate the costs of delayed processing and compares the associated opportunity cost with the cost of additional staffing targeted toward alternative turnaround times in the laboratory.² Together, these estimates provide the return of investment metric for effective demonstration to policymakers for the need for additional funding.

Reference(s):

1. Lee, D., and Stout, P. (2020). Toxicological and demographic profiles of phencyclidine-impaired driving cases in Houston. *Journal of Analytical Toxicology*, 244, 499-503.
2. Aldy, J.E. and Viscusi, W.K. (2008). Adjusting the Value of a Statistical Life for Age and Cohort Effects. *The Review of Economics and Statistics*, 90(3), 573-581.

Toxicology, Staffing, Management