



E67 Utah Quick Kit (UQuiK): A Collaborative Program on the Sexual Assault Kit Analysis Process

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The goals of this presentation are: (1) to describe the UQuiK program to streamline the DNA analysis process in sexual assault kits; and, (2) to identify the research findings on the effectiveness and reliability of the UQuiK program. After attending this presentation, attendees will better understand the importance of collaboration and communication between forensic medical providers/Sexual Assault Nurse Examiners (SANEs) and forensic scientists on sexual assault evidence collection. In addition, attendees will learn about a novel, collaborative approach in selecting most probative DNA evidence swabs to streamline the DNA analysis process in sexual assault cases.

This presentation will impact the forensic science community by providing data on a collaborative approach uniting forensic medical providers/SANEs and forensic scientists at the state crime laboratory. This presentation will add to research as findings from a study analyzing the effectiveness of this new approach will be shared.

Crime laboratories across the United States are receiving higher amounts of sexual assault kits for analysis. The rise in numbers is likely due to more sexual assault victims reporting the crime and an increase in law enforcement submission rates of sexual assault kits. Many crime laboratories have moved to a direct-to-DNA analysis approach consistent with improved Short Tandem Repeat (STR) and Y-chromosomal Short Tandem Repeat (Y-STR) analysis methods and to streamline the analysis process, bypassing serology testing prior to DNA analysis. In an effort to additionally improve the throughput of the crime laboratory analysis process, the Utah state crime laboratory collaborated with a forensic nursing team to pilot a program entitled UQuiK.

The UQuiK program involves educating forensic nurses in identifying the most likely probative swabs collected during a forensic sexual assault examination. The forensic nurses select up to three probative swabs and a reference sample, buccal swab from the victim, and package these swabs in a separate container from the full sexual assault kit. Law enforcement in this jurisdiction also received information and education regarding the UQuiK process. Law enforcement agencies were encouraged to submit the UQuiK evidence envelope to the state crime laboratory. The full sexual assault kit was also submitted, although the evidence contained in the UQuiK envelope was analyzed first. Swabs contained in the full sexual assault kit could be analyzed following evidentiary swabs in the UQuiK envelope, if deemed necessary.

The UQuiK program shortened DNA analysis time for the forensic scientists as they did not need to open a full sexual assault kit, sort and catalog the evidentiary swabs, read the history of the assault, perform body fluid testing, and select the most likely probative swabs for DNA analysis. Prior to launching the program, a pilot study found the time was decreased from 120 days to 25 days for DNA analysis.¹ As the forensic medical providers/SANEs collect the history of the sexual assault directly from the patient/victim, they are prepared with the information to select the most likely probative swabs for DNA analysis. A training program was developed to educate the SANEs participating in the study on how to select the most probative swabs. The training program consisted of three training sessions with the SANEs where studies were shared on DNA analysis findings. The SANEs were then given scenarios and asked to determine which swabs would most likely result in a probative DNA profile.

Research on the DNA analysis results from a sampling of cases under the UQuiK program and cases prior to the UQuiK program will be shared to provide data on the effectiveness and reliability of the UQuiK approach. A key component of this program is the collaborative relationship between forensic scientists and forensic medical providers/SANEs. One study found that only 53% of crime laboratories in the United States have a communication feedback mechanism in place between forensic scientists and forensic medical providers/SANEs.² This program underscores the need for improved communication between the professions to improve practice and outcomes.

In conclusion, this project and research study provide information on a program based upon communication and collaboration between forensic scientists and forensic medical providers/SANEs to improve the process of DNA analysis of sexual assault kits.

Reference(s):

1. Kay R., and Mills H. (2014). Unpublished study, Utah Bureau of Forensic Services, Salt Lake City, Utah.
2. Corum V., and Carroll J. (2014). Forensic analysts' perspectives: Sexual assault kit under the microscope. *Journal of Forensic Nursing*. 10(1), 50-57.

Sexual Assault, Forensic Scientists, SANEs