Community Policing and Forensics:

Using a Local DNA Database to Reduce Crime

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Police chiefs are expected to lower crime, improve community relations, and manage their departments to protect civilians in their jurisdictions—all while facing budgetary constraints. The Bensalem Township, Pennsylvania, Police Department (PD) is faced with the same challenges as police departments across the United States. When faced with these challenges, Bensalem took an out-of-the-box approach that has led to a 42 percent drop in property crimes in just over four years. The U.S. average drop in property crimes has been just 4.2 percent during the same time period.

Budgetary Challenges and Solving Crime

Police chiefs are pressured annually to either maintain or reduce their budgets, even though costs continue to rise. Increases in officers’ salaries (usually 2–5 percent), underfunded pensions, health care, fuel, ammunition, and other expenses contribute to the many fiscal challenges faced by police agencies. There is little to no funding for new and innovative programs. Traditional policing strategies might recommend hiring additional officers, but that is almost unheard of due to budgetary constraints—it is difficult to find funding simply to fill spots vacated by officers who have left.

Yet, whether leading an agency in a small town or in a large city, a chief’s responsibilities are the same. Police departments have to provide service to the public—arrest criminals and prevent individuals in the community from becoming the next victims of crime. In Bensalem Township, located in Bucks County, Pennsylvania, it costs approximately $232,000 to put a senior patrol officer on the street. This amount represents the full cost, including the officer’s salary, and benefits; operating costs such as fuel, vehicles, insurance, training, computers, and radios; and the staffing of support units. Having officers on the street will always be a top priority in law enforcement, but how much work responding to service calls, making arrests, and preventing crimes is
DNA TESTING LEADS TO RESULTS IN BENSALEM, PENNSYLVANIA

Bensalem PD’s local DNA database has garnered real case results, including the following examples:

Case # 1: An unsolved residential burglary with no investigative leads
An individual gained access to a house by throwing a brick paver through the window. Detectives processed the scene and swabbed blood that was found inside the house. The DNA from the blood was a match to the DNA of a suspect already in the local database, which had been previously collected when the suspect was arrested on a warrant. Other than the DNA match, there was no other evidence to tie the burglary to the suspect. He was later interviewed and confessed to the burglary.

Case #2: Multiple blind hits leading to the clearance of 18 cases
The investigation involved multiple thefts from vehicles and vehicle thefts. The detective used a search warrant to obtain DNA from a person of interest in one of the cases. The suspect’s DNA was entered into the DNA database, resulting in multiple hits and the clearance of 18 cases where previously unknown DNA had been recovered from vehicles and discarded items at each crime scene.

Case #3: Arrests and seizure of 12 kilograms of cocaine
Bensalem officers conducted a traffic stop in a well-known drug trafficking area. During the stop, officers discovered a hidden compartment in the vehicle. The occupants denied knowledge of the compartment, but did provide their DNA. A search of the compartment revealed 12 kilograms of cocaine, and the packaging of the cocaine was swabbed and tested for DNA. The resulting DNA profile matched the DNA of the driver, proving that the driver had been in possession of the cocaine.

Case #4: Constructive possession
This was a constructive possession case in which a glassine baggie containing approximately 30 vials of crack cocaine was discovered in the rear of a prisoner transport van. The van and the suspects were searched prior to the individuals being placed in the back of the van. There were five suspects in transit to police headquarters, and it was unknown who discarded the baggie. After the suspects consented to submit DNA samples, both the suspects’ samples and a swab from the exterior or the baggie were submitted for analysis. The DNA of one suspect was matched to the DNA swab from the exterior of the baggie, and he was charged and convicted with possession.

Case #5: Thirteen commercial burglaries of pizza shops
Blood was collected from multiple crime scenes, as well as surveillance photographs of a female actor. During one of the burglaries, a female was arrested exiting one of the pizza shops. This particular suspect had been arrested the previous month and had provided her DNA, which had already been entered into Bensalem PD’s local DNA database. The suspect’s DNA matched the DNA collected from the scenes of the burglaries, leading to a full confession.

There are many more examples like these from cases handled in Bensalem Township. DNA has been instrumental in solving more than 250 incidents and investigations.

represented by that $232,000? Due to budgetary issues and the cost of officers, police departments must look for innovative ways to complete their mission.

In Bensalem, the largest problems are not homicides and rapes. More than 95 percent of Bensalem’s calls for service are related to property and drug crimes. To effectively police Bensalem, these are the crimes that need to be prevented.

The department found an answer to the challenge of fighting property and drug crimes with a tight budget in 2010. Bensalem PD partnered with Bode Technology to create a local DNA database. DNA was traditionally used in investigations of violent crimes and rarely, if ever, employed in solving property crimes, other misdemeanors, or lower-level felonies. While Bode Technology, through its BodeHITS program, maintains a local DNA database for the agency, the database is owned and controlled by the Bensalem PD. The police department determines the policies regarding cases entered into the database, what evidence is submitted, and what is not.

Why did Bensalem go to a private laboratory to create a local DNA database? The FBI’s Combined DNA Index system (CODIS) does not stop crime in its tracks. CODIS is a great tool to help arrest violent criminals, but that arrest could be long after the crime takes place. In many cases, numerous other crimes are committed between offenses by the same person. With the local DNA database, Bensalem PD stops criminals in their tracks. The BodeHITS database is independent of CODIS and contains only individuals and crimes in the local community.

The turnaround for DNA testing in the program is less than 30 days, and every arrestee and suspect consent to providing a DNA sample. One might ask what suspects in their right mind consent to DNA testing? Along the same vein, why does an individual with seven kilos of cocaine or heroin in the trunk give consent to an officer to search the car? The answer is unknown, but as long as they keep doing it, the police will keep searching. Bensalem PD applies the same principles to its DNA collection process—as long as suspects will give consent, the department will continue to collect their DNA. Among Bensalem arrestees and suspects, there is a 95–98 percent compliance rate for individuals consenting to provide their DNA. These are the types of individuals who are committing burglaries, petty thefts, and drug crimes every day—the crimes that affect all communities and the crimes that the local DNA database stops before the criminal re-offends.

CODIS is a combined index of DNA profiles from the U.S. local, state, and national level. The database allows profiles from convicted offenders, arrestees, and qualifying unknown forensic profiles to be entered into the database. Some crime labs will allow additional qualifying profiles into the local level, but many limit what can be submitted from law enforcement. The majority of criminals who affect “Anytown USA” are not convicted offenders. They are low-level criminals. BodeHITS provides the tools for a local database with the DNA profile of criminals that actually impact the local community. This database
contains samples of individuals arrested for felonies and misdemeanors. In the words of Sesame Street, "these are the people in your neighborhood."

Bill Bratton, New York City Police Commissioner, once said, "Knowing your assailant will be caught is a lot less comforting to a citizen than the confidence that you won't be attacked in the first place." That quote became well known during the mid-1990s when "community-oriented policing" became a buzz phrase. What is the relationship between community policing and forensic science? There is a direct relationship—the use of a local DNA database is a community policing initiative. It is thinking outside the box, utilizing every tool in the tool box to combat the problem of crime, while preventing further crimes and making sure that there is one less victim in the world tomorrow.

How does an agency implement such a program department-wide? How does a chief get buy-in from the officers? The key is making sure the officers know the program is a top priority, are involved in the program daily, and see the actual results. If patrol does not buy into this program, it will not work. Every officer in the Bensalem PD is trained in the collection of DNA from crime scenes and suspects. Officers attempt to obtain DNA from every single arrestee and suspect brought in for questioning. Suspects are notified that it is by their consent only and are required to sign a form indicating that they understand they are giving permission and that the purpose of the DNA is for criminal investigations.

The next step is to actually have the individuals take their own DNA. They use a buccal swab to swab the inside of their mouth, and give it back to the officer who then places it into evidence. Individuals acknowledge on the evidence envelope that the swab has been voluntarily given, and they sign the envelope directly. The collection process is that simple.

Bensalem patrol officers also take DNA swabs from the scene of a theft from a vehicle or burglary, which can then be entered in the database to find a match or connect multiple crimes.

Testing the DNA

In traditional DNA investigations, testing is very costly and the turnaround time is anywhere from 12–18 months, making it less effective as an investigative tool. Bensalem PD's new local DNA database system has cut the turnaround time to fewer than 30 days.

All DNA is submitted into evidence and triaged by a DNA triage supervisor (a detective sergeant who goes through each DNA submission). The data from the DNA are then entered into a computer and submitted via FedEx to Bode Technology in Lorton, Virginia, for analysis. Within 30 days, Bensalem PD is notified via email that the resulting DNA profiles have been added to its database. This notification also includes whether or not there are any matches (hits), which can be used in the investigation.

The success of the program has created buy-in throughout the organization, starting at patrol, through the investigations department, and all the way up to the district attorney's office. When a program directly impacts the arrest rates of criminals and prevents community members from becoming tomorrow's victims, it is a program that the entire law enforcement organization can get behind.

Cost Benefit

Although there is a cost associated with testimony by lab analysts, Bensalem has incurred this cost only once in four years. DNA confirmation has led to a much higher confession rate, simplifying the process, and most of the suspects in these cases involved in this program turn their pleas into guilty pleas.

After four years of this initiative, Bensalem PD has more than 7,500 reference and evidence samples in its DNA database. Addi-

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tionally, the department has a backlog of approximately 3,000 submissions that it is currently in the process of adding to the system. Within the next six months, Bensalem’s local DNA database will contain more than 11,000 profiles and will continue to play a major role in the police’s investigations and crime-fighting abilities.

As mentioned at the beginning of this article, hiring a new senior police officer costs an agency like Bensalem PD $232,000 for one year. The BodeHITS program costs the department approximately $125,000 each year, and over the last four years, it has made an impact in 250 investigations. The success of the program extends beyond the property crimes to narcotics and gun crime investigations. These are cases where fingerprints have not been historically successful, so the local DNA database has offered new investigation avenues. When compared with the cost of a single new hire, the results and impact of the program are more than could be achieved by putting one officer on the street for the same time period.

Ultimately, the key to the success of the program is buy-in from the department. For departments who wish to successfully institute a similar program, all sworn personnel should be trained to process crime scenes for DNA with the emphasis on narcotics and property crimes. This allowed Bensalem PD to adopt a new department-wide philosophy of using DNA as an investigative tool with patrol playing the biggest role in the DNA collections. In the Bensalem model, success also stems from working with a local private laboratory that understands law enforcement and the use of DNA in everyday crime fighting.

As the program and database grow, Bensalem PD becomes more successful in fighting crime in its community. The inverse correlation between crime and victims increases and becomes more apparent—as the arrest rates of criminals increase, victimization decreases.

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