Latent print backlog grows as CSU improves

By Jordan Benton

The Houston Forensic Science Center’s latent print backlog is growing, a painful outcome that results from a positive improvement: the crime scene unit has become more proficient at processing and developing latent prints from evidence.

The average number of items per case has increased from about four between January and June 2018 to just over eight items in the same period in 2019, a 102 percent increase. This means it takes examiners longer to complete each request. Now the section is able to complete fewer than 200 cases per month, down from more than 400 per month in May 2018.

The upside is that the quality of the prints has also improved and investigators are being provided more viable information that advances investigations and ultimately improves public safety.

“Through the improvements that we’ve made, we’re seeing better results.” Tim Schmahl, manager of HFSC’s latent print section, said. “We need more people though.”

Finding experienced latent print examiners also presents an issue. It’s difficult to recruit experienced examiners due to the differences between laboratory operations. Training is rigorous and lengthy.

“It takes months to train an experienced examiner, and one to two years to train someone from the ground up,” Mr. Schmahl explained.

HFSC currently has four latent print apprentices being trained by an external agency in Mississippi. By sending the new hires offsite for training, HFSC cut down on the training time and avoided taking other examiners off of casework to train the new hires.

The trainees will graduate in March but will not be authorized to perform independent casework until at least December.

Mr. Schmahl estimates he will need another seven examiners in addition to the four currently in training to eliminate the standing backlog and offer enough cushion for staffing changes. However, HFSC plans to do a process improvement project later this year to thoroughly review the latent print workflow, look for additional efficiencies and take a deeper dive into the data before increasing staff size.

HFSC has already implemented efficiencies that received praise in the National Institute of Justice’s report to Congress. But that is no longer enough to keep up with the incoming workload.

“The situation has gotten so bad that we have cases running past the statute of limitations,” Mr. Schmahl said.

HFSC added six examiners to the latent print section in 2016 after the discovery of 2,400 latent fingerprint cases in the Houston Police Department property room. Within 10 days of the discovery, HPD had submitted all the cases to HFSC for examination. That was nearly a year’s worth of work.

The section currently has nearly 2,300 requests that are more than 30 days old, of those 199 are violent crimes. Of the violent crimes, 31 are murders or homicides and two are sexual assaults. The oldest violent crime request is from June 2019.

“These cases need to be completed so the justice system can do its job,” Mr. Schmahl said.
Peter Stout, PH.D.
CEO/President

Dr. Peter Stout, HFSC’s CEO and president, initially joined the agency in 2015 as its chief operating officer and vice president. He has more than 15 years of experience in forensic science and forensic toxicology. Prior to joining HFSC, Dr. Stout worked as a senior research forensic scientist and director of operations in the Center for Forensic Sciences at RTI International.

Dr. Stout also has served as president of the Society of Forensic Toxicologists (SOFT). He represented SOFT in the Consortium of Forensic Science Organizations and has participated in national policy debates on the future of forensic sciences in the United States.

Dr. Stout has a doctorate in toxicology from the University of Colorado Health Sciences Center in Denver. Dr. Stout also served as an officer in the U.S. Navy Medical Service Corps.

Houston is rather fortunate these days to have a crime laboratory that batted an average turnaround time of about 55 days in December and a total backlog of under 5,000 requests _ and that is AFTER a complex facility move when all laboratories didn’t operate for several weeks.

Compared to other cities, states and towns where backlogs can run in the tens of thousands and stakeholders wait months if not years for reports, Houston is doing pretty well.

And yet, even our backlog is unacceptable when one considers the impact this has on the justice system. Investigators may be waiting for crucial forensic results to make an arrest. The wrong person may be sitting in jail. Prosecutors and defense attorneys may not be able to go to trial. Crime victims and their families see justice delayed. Everything is backlogged downstream because of delayed crime laboratory results.

Forensic practitioners have for years been saying they lack the necessary resources to meet the justice system’s needs. But it was only recently, in late December, that a needs assessment completed by the Department of Defense’s National Institute of Justice put a price tag on the problem. The two-year long study found that as of 2017 crime laboratories nationwide faced a funding gap of $640 million and that nationally more than half a million requests are more than 30 days old _ backlogged.

Certainly the numbers have only grown since then considering the opioid epidemic wreaking havoc nationwide and the growing demand for DNA and other forensic services.

These resource problems must be addressed. The more they languish the bigger they get. Our communities and public safety suffer. We talk about the right answer at the right time. It can’t happen, though, without the right investment in crime lab infrastructure.

For more information, please visit www.houstonforensicscience.org

The Houston Forensic Science Center ended the year with four backlogs: forensic biology/DNA, latent prints, blood alcohol analysis and toxicology testing for drugs. The backlogs are in part due to the year-long facility move, but mostly result from increasing demand, lack of resources and intensive training programs _ issues highlighted as national problems in a report released at the end of December by the Department of Justice’s National Institute of Justice.

Despite these backlogs, HFSC had an average overall turnaround time of about 57 days in 2019, higher than the 30-day goal mandated by the board of directors, but smaller than the six-month-long turnaround times many cities and states face.

HFSC also completed more than 27,100 requests in 2019, which is not significantly different than the past five years. HFSC typically completes between 25,000 and 30,000 requests annually.
Forensic labs suffer from lack of resources

NIJ REVIEW FINDS $640 M SHORTFALL

The Department of Justice’s National Institute of Justice has found that in 2017 forensic labs nationwide had a $640 million budget shortfall and that the funding gaps were greatest in the areas hardest hit by the opioid epidemic.

The first-of-its-kind review is based on two years of research and listening sessions with forensic practitioners from across the country. The resulting 200-page document, titled “Needs Assessment of Forensic Laboratories and Medical Examiner/Courier Officers,” has been submitted as a report to Congress, which mandated the review as part of the 2016 Justice for All Reauthorization Act.

“This is the first time we have put a price tag on what forensic labs mean when they say they lack resources,” said Dr. Peter Stout, HFSC’s CEO and president.

“And that number _ $640 million _ is now two years old. The gap has certainly grown since then along with the opioid crisis and an increasing demand for DNA and other services.”

Federal grant dollars for forensic laboratories are scarce, the report stated, and nearly all are narrowly focused on DNA analysis, leaving other disciplines struggling to find much-needed funds to simply keep up with existing work.

The review also revealed a national forensic backlog of more than 570,000 requests, most of them in the seized drugs _ or controlled substances _ discipline.

The backlogs mean investigators, the courts, defendants and victims wait months, and sometimes even years, for what can be crucial forensic results. At times, police cannot make arrests until they have those results. Other times, an innocent person can languish in jail waiting for forensic analysis to be completed.

“FORENSIC BACKLOGS LEAD TO BOTTLENECKS IN THE ENTIRE SYSTEM.”

“Forensic backlogs lead to bottlenecks in the entire system, delaying justice and ultimately harming public safety,” Dr. Stout said.

The Houston Forensic Science Center has backlogs that are smaller than in many other agencies nationwide, and is still struggling with about 4,600 requests that are more than 30 days old. HFSC’s goal is to have an average overall turnaround time of 30 days.

The NIJ review revealed that backlogs result from a variety of factors, including insufficient resources and capacity, increasing workloads, demand and complexity and lengthy, resource-intensive in-house training.

Nationally, DNA requests increased by 21.9 percent between 2011 and 2016. In the same time period, cases completed also increased by 21.6 percent, showing laboratories increased capacity. And yet, DNA backlogs still grew in that time period.

HFSC has seen the greatest increase in demand in its toxicology section, where requests for service grew by more than 160 percent in five years from 2,300 requests in 2014 to more than 6,000 in 2019. Resources, however, have not grown to keep up with that added demand, leading to backlogs.

Although there appears to be a reluctance nationally to properly invest in crime laboratories, research revealed in the NIJ report shows there is a clear advantage to such an investment. For example, there is an 8,000 percent return on investment from testing a sexual assault kit based on the average cost of analyzing each kit. There is a societal benefit of $130,000 for each kit that is tested and a social welfare saving of $20,000 for each DNA profile uploaded into the national database.

“Despite these clear advantages to investing in crime laboratories, most of the public safety dollars go elsewhere,” Dr. Stout said.

“To truly improve public safety, investments need to be more equitable across the justice system, and nationwide we need to understand the importance of investing in all forensic disciplines, not only DNA.”

HFSC details its blind quality program

By Callan Hundl and Maddisen Neuman

The Houston Forensic Science Center’s quality and research and development divisions collaborated to write a paper detailing how HFSC implemented a wide-reaching blind quality control program.

The paper, entitled “Implementation of a Blind Quality Control Program in a Forensic Laboratory,” has been published in the Journal of Forensic Sciences.

HFSC developed and implemented a blind quality control in the toxicology, seized drugs, firearms, latent prints (both in processing and comparison,) forensic biology/DNA and multimedia sections.

The program is based on recommendations made in the 2009 National Academy of Sciences report. It is an addition to the open proficiency tests required by accreditation.

The blind quality control program allows HFSC to test its entire quality management system and provides a real-time assessment of the laboratory’s proficiency.

Quality division staff assessed and researched each discipline’s evidence submission processes before introducing blind cases into the workflow to ensure the mock cases mimicked real casework and evidence. The quality division creates the samples and knows the expected answer.

Of the 973 blind samples submitted between 2015 to 2018, 901 have been completed and deemed satisfactory.

The program has revealed process improvement opportunities in several disciplines. HFSC hopes this paper will encourage other laboratories to create their own programs best suited to their needs.
The Houston Forensic Science Center’s toxicology section, responsible for analysis of samples associated with impaired driving and drug-facilitated crimes, has seen requests for its services increase by more than 160 percent in the past five years, leading to significant backlogs and presenting a resource challenge.

Alcohol requests have increased from about 2,300 in 2014 to more than 6,000 requests in 2019 as the Houston Police Department has beefed up drunk driving enforcement on Houston roads, a much needed endeavor since research shows Harris County has the highest fatality rate from drunk driving in the nation.

Further complicating matters is that about 20 percent of samples in Houston are below the legal limit for alcohol. As a result, those samples require far more complex and time-consuming drug analysis. And more designer, synthetic drugs can only be detected with more sensitive instrumentation.

HFSC will need to hire more staff to keep up with the new demand.

“HPD is doing all the right things for the community by cracking down on impaired drivers that put all of us at risk,” said Dr. Peter Stout, HFSC’s CEO and president.

“Justice, however, will be delayed if not completely circumvented, if HFSC does not have the staff, resources and equipment to do its part of the job.” In addition, the section is now working to eliminate a backlog of more than 1,800 requests that built up while the laboratory was shutdown during the recent facility move.

So while Houston will benefit from the new laboratory, with current staffing it will take until 2021 to eliminate the backlog, assuming requests don’t increase further.

The new laboratory space has allowed HFSC to procure much-needed, higher-tech instruments for the toxicology section. These instruments, which have been in use in many other laboratories for years, could not be installed in the previous facility due to space and power constraints.

HFSC has two new liquid chromatography tandem mass spectrometry (LC-QQQ) instruments. It will take until summer for staff to learn to use the instruments and to validate methods for casework. Once the new instruments are in operation HFSC will be able to more efficiently and effectively conduct drug analysis. "We have a few stressful months ahead of us ... but in the long-term all Houstonians will benefit from these changes," Dr. Stout said.

HFSC’s toxicology section has seen requests for alcohol analysis grow from about 2,300 in 2014 to more than 6,000 in 2019, a 161 percent increase. This is the result of greater enforcement by the Houston Police Department, which will ultimately improve public safety. HFSC, however, does not currently have the staff or the resources to keep up with the new demand. HFSC’s toxicology section is also working to eliminate a backlog that grew during a recent facility move. Two new instruments that are being validated in the new laboratory will allow HFSC to more efficiently and effectively conduct drug analysis. “We have a few stressful months ahead of us ... but in the long-term all Houstonians will benefit from these changes,” said Dr. Peter Stout, HFSC’s CEO and president.
It was a typical weekday morning when Jeff Frye launched into a detailed explanation about how to properly package a futon to ensure potential sexual assault evidence was not compromised during handling, transport and storage.

The supervisor of the Houston Forensic Science Center’s client services and case management (CS/CM) division helped the officer locate a box big enough to hold the futon and carefully guided the officer on the phone how to best package the bed to minimize the risk to the forensic testing.

This situation is not unusual for HFSC’s CS/CM, a support group created in 2015 that receives, transports, returns and inventories evidence, in addition to overseeing other administrative functions that allow the lab sections to focus on their primary duties. CS/CM is accredited by the International Association for Property and Evidence.

“The whole point of our job is to get the right answer at the right time. To catch mistakes and prevent mistakes from taking place. This can mean answering questions from an officer on how to package an item of evidence or rejecting an item of evidence that wasn’t properly preserved,” Mr. Frye said.

CS/CM is the go-to for all evidence handling questions both internally and externally, during business hours and even when the lab is closed.

Mr. Frye recalled an instance when HFSC’s forensic biology/DNA section received a rush request on a Saturday regarding testing needed on evidence from a high-profile crime in Houston.

The DNA analyst was on the way to the lab, but the evidence was waiting at the HPD property room. Mr. Frye ensured all involved understood how to transfer evidence and followed proper chain of custody in order to preserve the integrity of the evidence before, during and after analysis.

“It will be an honor and privilege to serve in the capacity of vice chair, and I look forward to the excitement and challenges ahead as we advance the mission of the Houston Forensic Science Center,” Chief Lentschke said.
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