The Houston Forensic Science Center’s crime scene unit responded to 15 percent more homicides in the first two months of 2020 compared to the same time last year.

In January alone, CSU saw a 60 percent increase in homicide calls in 2020 compared to January 2019. HFSC also responded to 33 aggravated assaults in January-February 2020 compared to just 16 in January-February 2019, a 103 percent increase.

Two months of data does not indicate a trend of rising violent crime, however, it does point to a larger problem regarding the number of crime scene investigators the City of Houston has at its disposal and what it means if crime does increase.

HFSC, which provides forensic services, including crime scene investigation, to the Houston Police Department has only 27 CSIs responding 24/7 to a 685-square mile area. Chicago, in comparison, has some 200 CSIs responding to an area that is about one-third the size of Houston.

As a result, HFSC only responds to homicides, officer-involved shootings, scenes with dead children and some high-profile aggravated assaults.

“If you are raped, stabbed or beaten in this city and you survive, our CSIs are probably not going to be documenting or collecting evidence at that scene,” said Dr. Peter Stout, HFSC’s CEO and president.

For example, last year the Houston Police Department reported more than 12,000 aggravated assaults _ which include domestic violence and stabings _ but HFSC’s CSU responded to fewer than 150 of those scenes, about 1.2 percent of the total.

“Scientific, forensic analysis begins at the scene with proper documentation and evidence collection,” said Jerry Pena, director of HFSC’s crime scene unit and multimedia division.

“Unfortunately, while our 27 CSIs are providing investigators with more and better quality evidence than ever before, there is no way we can significantly increase our caseload and continue to do quality work.”
A Few Words From Our President
HOUSTON FORENSIC SCIENCE CENTER

Public and private budgets are nearly always a compromise and almost never include ALL the money those spending it would like to have.

As a result, budgets are, as former Houston Mayor Annise Parker once said, moral documents. Budgets are the document that best express the priorities of a given government, corporation, agency or entity. At the end of the day, we spend money on what we believe to be most important in that moment.

This year, the City of Houston has supported HFSC’s view that the top priority for the crime lab must be toxicology. The Houston Police Department has prioritized enforcement of impaired driving in the past 18 months and will likely continue this trend. This has lead to an increase in requests for analysis from right around 2,000 in 2014 to more than 6,000 last year, an increase of about 200 percent.

HFSC has asked the city to provide an additional $1.6 million in the fiscal year 2021 budget, which will be considered and approved by City Council this summer. Those additional dollars will allow HFSC to hire five more toxicology analysts, lease additional instruments used for analysis and cover the ongoing costs of essential employees.

That money, however, does not address other hurdles HFSC _ and by extension, the community _ faces in a resource-challenged environment.

The crime scene unit, the group that documents scenes and collects evidence, has only 27 staff members for a 24/7 operation that covers 685-square miles. The group is big enough to respond only to homicides, officer-involved shootings, baby deaths and high-profile aggravated assaults, leaving thousands of violent crimes without forensic evidence collection and documentation. This team, however, has become so proficient and effective they are collecting far more evidence, especially latent prints, than ever before, providing HPD with better investigative material but struggling with a growing backlog of thousands of cases.

The city cannot address all issues in one year. But as a community we must make public safety improvements that could have long-term benefits. The crime lab must be a part of that planning.

For more information, please visit www.houstonforensicscience.org
The “right answer” is all about quality and HFSC always strives to exceed minimum standards. What does this mean, what does it look like and how does this happen?  

The foundation is a culture of quality HFSC is continuously building and growing throughout the agency. But there are also several key areas that highlight HFSC’s goal to exceed accreditation standards: its quality division, a robust blind proficiency program, a testimony monitoring method that exceeds requirements and its voluntary adoption of consensus industry standards. 

“Like other industries, forensic science has standards and requirements designed to minimize risk of error. But to us at HFSC quality is more than requirements and accreditation,” said Dr. Peter Stout, HFSC’s CEO and president. “It is a culture and a mindset. By working to exceed expectations, we build this culture, benefiting the entire judicial system and the community,” he added. 

One of the key areas this manifests itself is in HFSC’s quality division. For starters, the mere existence and size of HFSC’s quality division sets it apart from many other laboratories. The eight-member quality division is a separate division of HFSC that operates independently to oversee the laboratory’s accreditation programs. While many of these individuals have former technical expertise in one of HFSC’s seven technical disciplines, they are independent of those sections and manage the various programs that ensure the quality of HFSC’s work goes well beyond what is required for accreditation. 

One of the more unique programs the quality division maintains is HFSC’s blind proficiency program. Open proficiency testing _ when an analyst is aware the work they are performing is in fact a test _ is an accreditation requirement. Most laboratories only participate in open proficiency testing. HFSC, however, also has a robust blind proficiency program in which the quality division inserts more than 40 mock cases each month into the workflow. The mock cases are designed to look like routine casework so the analyst is unaware if they are being tested. 

The quality division creates or purchases the blind tests, repackages them as normal casework, submits the items into the normal casework workflow and is responsible for determining if each blind case has been satisfactorily completed. 

There are other laboratories that have blind programs, but none are of the same scope and breadth as the HFSC program which encompasses all disciplines except the crime scene unit. As such, the program has received national and international attention, and quality division staff members have authored two articles about the program. 

Forensic accreditation standards require analysts to have a technical expert monitor their court testimony. To fulfill this requirement, a technical expert will accompany the testifying analyst to court and document the performance noting everything from body language and appearance to their ability to explain the work they conducted and their conclusions. 

It is well-documented, however, that words can be missed or misheard in live situations, so HFSC’s quality division expanded the scope of this monitoring to include a transcript review program. The quality division requests transcripts and redacts all personally-identifying information from the documents to render them blind. The transcripts are then reviewed by a three-member committee comprised of a technical expert, a quality division member and a layperson. The testifying analyst also reviews the transcript. The committee’s feedback is shared with the analyst with the goal of strengthening testimony throughout the agency, soliciting help with future testimony training and identifying opportunities for improvement. 

Testifying can be stressful and HFSC has learned there is tremendous benefit in reviewing transcripts as they provide a completely different and vital perspective than in-person monitoring. As a result, the transcript review programs is a good complement to the in-person monitoring. 

Finally, HFSC’s board of directors voted in December 2018 to voluntarily implement consensus forensic industry standards listed in the registry overseen by the Organization of Scientific Area Committees for Forensic Science (OSAC.) 

The registry contains consensus standards that are written and vetted by technical experts in each scientific discipline. Adoption of the OSAC registry standards is voluntary. HFSC’s board has committed to implementing the standards as they publish on the registry. There are currently seven standards on the OSAC registry that apply to HFSC. HFSC is in compliance with four of the standards and will soon comply with the remaining three.
The Houston City Council on February 19 confirmed Dr. Lois J. Moore and Dr. Vicki Huff to the Houston Forensic Science Center’s board of directors.

Dr. Moore and Dr. Huff have been appointed to a three-year term to join the other seven directors on HFSC’s board. HFSC’s board of directors has oversight authority, including fiduciary oversight.

The board includes a forensic nurse, currently serving as the chairwoman, a retired Houston Police Department assistant chief, several attorneys and an exoneree among others.

“HFSC is fortunate to welcome both Dr. Moore and Dr. Huff to our board. Their dedication and service is proven in each of their respective fields,” said Dr. Stout, HFSC’s president and CEO. “We look forward to their guidance and support over the next few years.”

Dr. Moore previously served as the chief administrator at the University of Texas Harris County Psychiatric Center where she was responsible for planning and developing hospital functions and activities. Dr. Moore spent her career in the health field, beginning as an emergency center charge nurse, working her way up to president and CEO of the Harris County Hospital District, a position she filled for more than 10 years. She has an honorary doctorate.

Dr. Huff is a professor of genetics and director of advanced technology genomics core at the University of Texas MD Anderson Cancer Center. She has been with MD Anderson for over 25 years and oversees a research program that focuses on molecular genetics of childhood kidney cancer.

Dr. Huff earned a Ph.D. in human genetics from the University of Michigan, Ann Arbor. She has been a Houston resident for more than 30 years.
DNA database

SOLVING CRIME

Houston criminal justice stakeholders from prosecutors to crime lab officials and law enforcement representatives met in February to brainstorm ideas for making better use of the national DNA database that provides crucial information that can be used to solve crimes.

The problem is that Houston, like most other cities, states and municipalities, does not make the best use of the Combined DNA Index System (CODIS) and there is little transparency between parties on what is done with information coming out of the database.

“The goal in getting these parties together is to find ways we can effect change, whether legislatively or through collaborative policies, to ensure we use this powerful tool to improve public safety in Houston and across the state,” said Dr. Peter Stout, CEO and president of the Houston Forensic Science Center.

The database, CODIS, is divided into three sections: local, state and national. Crime laboratories upload eligible DNA profiles into their local database after analysis and some, if not all or most, will then push up to the state level. The state lab which oversees Texas’ CODIS then pushes eligible samples up the national level.

At each point, the profile can “hit” against another profile in the system, potentially providing investigators and prosecutors with names or possible suspects in a case. That “hit” is then verified by crime lab personnel to ensure it is a true match that can be used in the resolution of a crime.

However, Texas, like most other states, has no good way of tracking what happens when a “hit” is confirmed and on the follow up. Information is missed by prosecutors, law enforcement and others. The group discussed the need to increase visibility and to better gather data.

“This is a powerful tool,” Dr. Stout said. “This is only the start of a conversation about how we can better use the database.”

VAPING
A TEEN EPIDEMIC

By Jordan Benton

Dr. Peter Stout, the Houston Forensic Science Center’s CEO and president, is on a mission: to tell anyone who will listen that vaping is dangerous and could even kill them.

Armed with a jug of anti-freeze and car deodorizers, Dr. Stout is traveling throughout Texas, from Fort Worth to El Paso, to share his anti-vaping message with adults and students.

“A user has no way to know what may or may not be in the product they are inhaling. We see and hear reports all the time about everything from heavy metals to illicit drugs like marijuana, to bacterial contaminants to unexpected concentrations of active ingredients,” Dr. Stout said.

“There is little to no oversight and standards for any of these products. This may change, but right now there is no way to know what’s in the product without extensive laboratory testing,” he added.

Dr. Stout joined Texas Rep. Nicole Collier at anti-vaping events in Fort Worth where he told parents and high school students that vaping can be deadly. He has also visited schools across Houston and southeast Texas and spoke at an international drug summit in El Paso.

The biggest fear is around teenage users.

Recent data released by the Centers for Disease Control’s National Youth Tobacco Survey show that nearly 30 years of progress getting youth to avoid using tobacco products has been erased in the span of two years.

And this is largely the result of vaping and e-cigarette products. The 2019 youth survey showed that nearly one-third of teens admitted to using an e-cigarette product during that year. That is the same percentage that admitted to smoking cigarettes in the mid-1990s, a number that had dropped to 4.5 percent by 2018, only to be erased by the advent of vapes the following year.

Now, a whole new generation is addicted to nicotine.

Furthermore, the lack of regulation over vape products is unsettling, and the consequences of their use are impacting families across Houston and the nation. The long-term impacts of vaping are unknown, as are the consequences of secondhand inhalation.

“We’ve seen from past experience that people who have been exposed to inhaled mists, particles and vapors have experienced serious lung injuries that leave them with lasting problems,” Dr. Stout said.

HFSC is also one of many crime laboratories that regularly receives vape and e-cigarette products for analysis. The contents found in them range from nicotine to methamphetamine to synthetic cannabinoids.

“I have an obligation as the head of one of the largest crime laboratories in the state to try and ensure the public understands this information. I have three college-aged boys and the thought of what some families face with addicted teens haunts me,” Dr. Stout said.

And the message is clear. “Every time you vape, you are giving your money to a tobacco executive who thinks you are too dumb to understand the risk,” Dr. Stout said.

And for parents, “We’ve seen that this is a great way to push back against the idea that some of these products are safe, that they can be used by your kids,” Dr. Stout said. “In the long run, this is a way for parents to push back against the tobacco industry’s marketing. It is a way to prevent kids from starting to vape.”
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