

WHAT'S NEWS @ HFSC

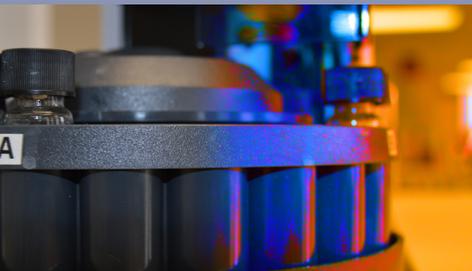
HOUSTON FORENSIC SCIENCE CENTER • FEBRUARY 2019

HFSC sees surge in DUI samples, shift toward drugged driving

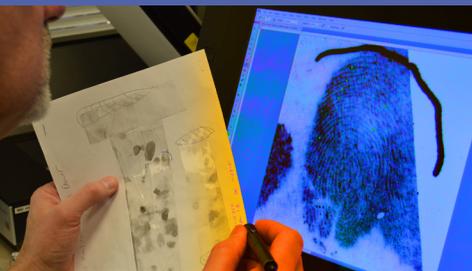
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HFSC's toxicology section has seen its workload surge and grow more complex in the past two years, taxing resources and forcing HFSC to try to urgently find money for new, high-tech instrumentation in a tight budget climate.

Requests for analysis have increased more than 80 percent since 2014 _ and nearly 40 percent in the past two years alone. More concerning, however, is the shift toward more drug testing.

Only samples associated with a fatality or those that test negative or below 0.1 g/100 mL for alcohol, go on for full drug analysis, which is more costly, timely and complex testing.

The number of samples going on to drug screening has increased from 12 percent in 2014 to 36 percent in 2018, and many of those tests are showing that people have ingested

multiple drugs. This means more people are driving while under the influence of drugs.

"This is a serious public safety concern," said Dr. Peter Stout, HFSC's CEO and president. "Without additional resources _ both to purchase new instruments and to hire additional people _ HFSC is unable to process these cases in a timely manner. This slows down the entire justice system."

HFSC's instruments are about a decade behind what most crime labs are using to detect drugs. In fact, the instrumentation HFSC currently uses in the toxicology section is not sensitive enough to detect low-quantities of fentanyl _ one of the deadliest opioids _ which is most common in casework.

"The increasing use of opioids in Houston _ and especially of fentanyl, an especially potent opioid _ is just another reason why it is so crucial for us to be able to identify these drugs," Dr. Stout said.

**HFSC's ADDRESS WILL CHANGE MARCH 4, 2019
TO 500 JEFFERSON, 13th FLOOR, HOUSTON, TX**

713-929-6760



A Few Words From Our PRESIDENT

HOUSTON FORENSIC SCIENCE CENTER

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.

The Houston Forensic Science Center has discovered a disturbing trend in its toxicology casework that has enormous impacts on public safety if it is not addressed on several levels.

The bulk of the toxicology section's work is to analyze blood samples collected from suspected impaired drivers, meaning people who have been stopped by police for possibly driving under the influence of drugs or alcohol. Quality, timely analysis of these samples is crucial.

And the changes in the number of requests HFSC's toxicology section is receiving and a shift in the results points to a significant issue in Houston.

First, since 2014, the number of requests for analysis has increased more than 80 percent. This is in part due to greater enforcement by the Houston Police Department combined with a rapidly growing population.

But at the same time, HFSC has discovered that more of the samples are coming back negative for alcohol and positive for drugs _ often with multiple drugs onboard _ indicating a shift away from drunk driving toward more drugged driving.

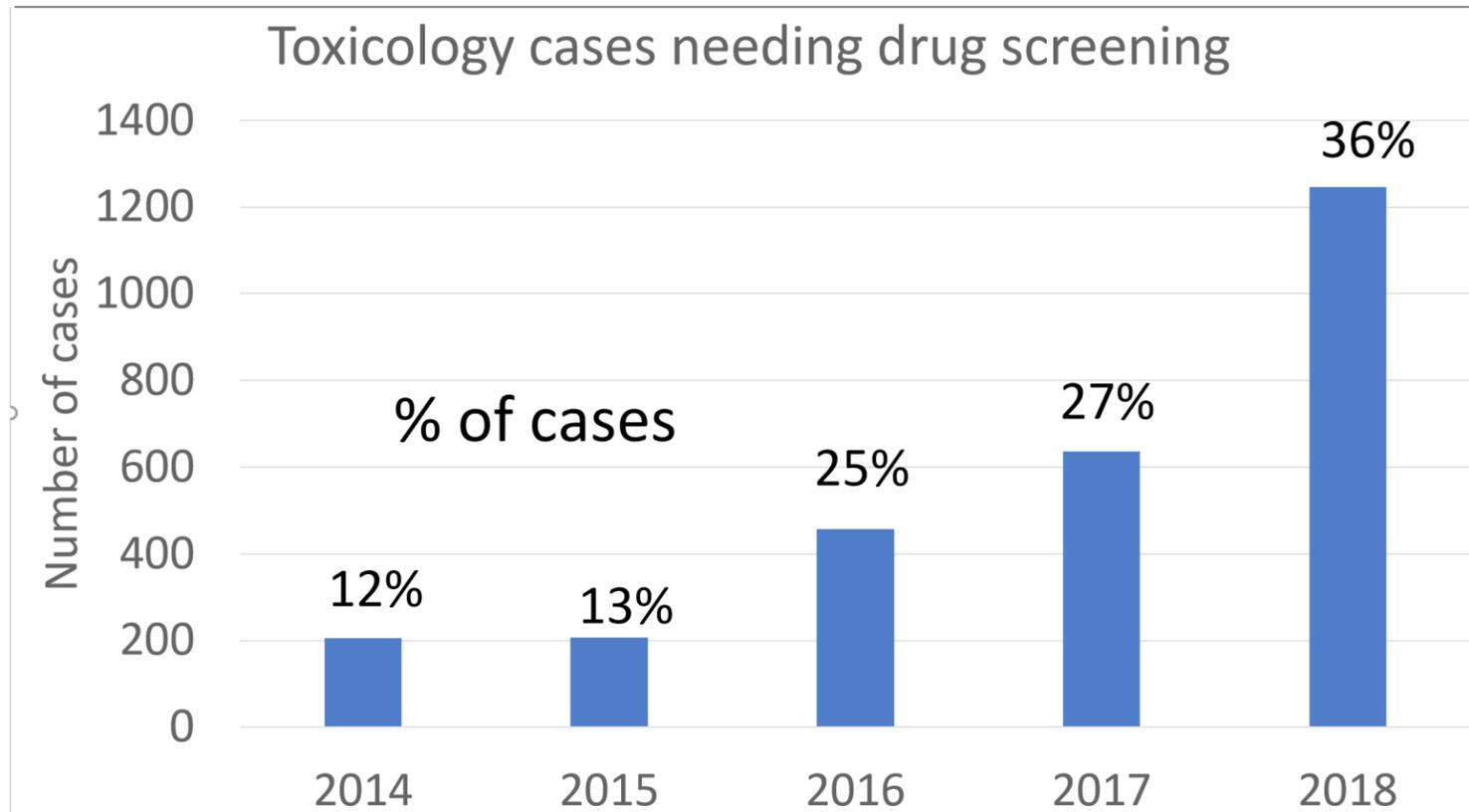
This presents multiple problems. While alcohol analysis is relatively simple and quick, testing for drugs is the opposite. The analysis is more complex as is the interpretation. The testing itself takes longer and it requires more staffing resources and higher-tech equipment _ none of which HFSC has at the moment.

As president and CEO I have an obligation _ and will do my best to fulfill it _ to use every means at my disposal to get HFSC the resources it needs to respond to this disturbing trend.

I am raising the flag with all who will listen to make sure HFSC is properly resourced to respond to all shifting and changing trends, including this one.

Peter Stout, PH.D.
CEO/President

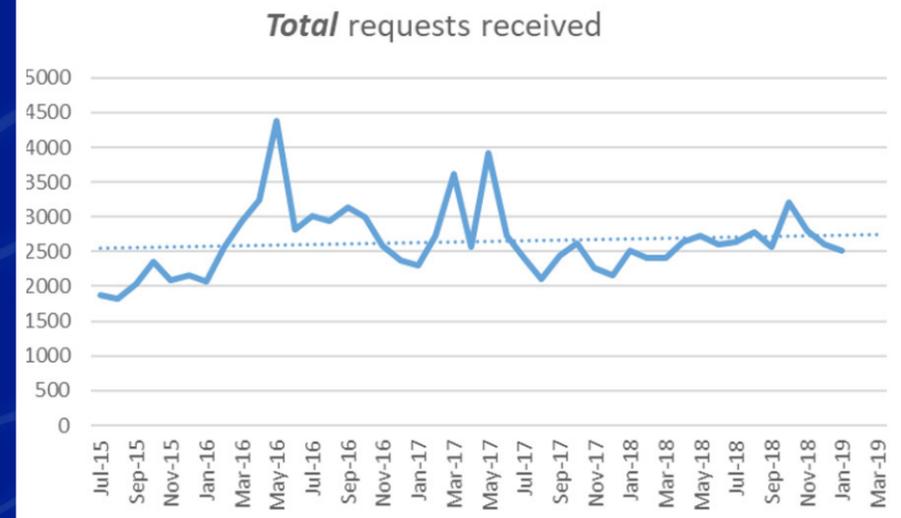
HFSC At A Glance



The graph above depicts the significant increase in cases showing up negative for alcohol and moving on for drug analysis instead.

In 2014, there were about 200 such cases compared to nearly 1,200 in 2018.

While the graph to the left shows that overall requests have steadily increased since 2014, the toxicology trend is particularly concerning due to the cost, time and complexity associated with the analysis as well as the potential threat to public safety.



For more information visit www.houstonforensicscience.org

HFSC LAUNCHES KEY SYSTEM IMPROVEMENTS

By Darrell Stein

The Houston Forensic Science Center enhanced its laboratory operations in January by transitioning all but one of its technical sections to a new management system and by launching a new request portal better tailored to meet stakeholder needs.

By January 22 the crime scene unit, firearms, audio video, client services/case management (toxicology accessioning) and toxicology disciplines had all transitioned from the legacy laboratory information management system (LIMS) to a new JusticeTrax LIMS product.

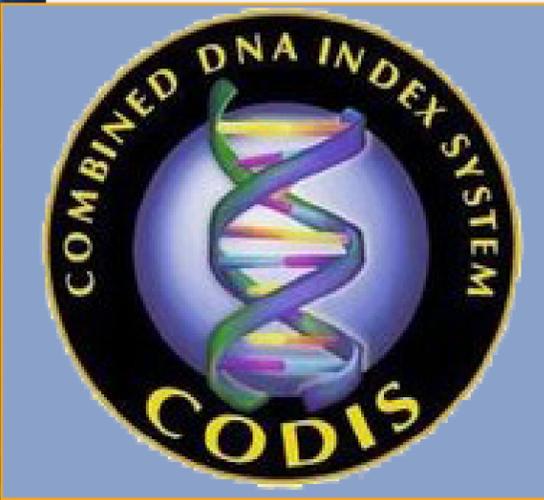
The only discipline remaining in the legacy LIMS is forensic biology/DNA. An HFSC LIMS project team will soon begin work with this discipline to prepare them for their move to the new LIMS, which is expected to occur this summer.

Second, HFSC launched on January 18 a new, web-based portal for stakeholders to request testing. Where's My Result is the first request portal to interface with a law enforcement agency's evidence management system as well as the JusticeTrax LIMS-plus software.

The new user-friendly portal is designed to provide the lab with the information it needs up front to make the process more streamlined and efficient by minimizing the need for follow up after a request for testing has been submitted. HFSC's former request portal (web pre-log) is now ONLY available to download reports from the legacy LIMS.

There will be small glitches and setbacks along the way as laboratory staff and stakeholders learn to use these systems, which in the long term will lead to significant improvements. HFSC will provide prompt resolutions as problems are encountered to ensure a great experience for all users.

DNA, CODIS: GET IT RIGHT



The Houston Forensic Science Center recently got a DNA hit from the FBI-run database that excluded the Houston Police Department's suspect in a serial sexual assault case _ only to get a separate hit connecting him to two other rapes.

And this is the power of the national DNA database _ the Combined DNA Index System or CODIS - when its operating at its best.

"These hits helped HPD make identifications in two cases. They had the wrong person connected to the crime _ and while in this instance it turned out this person was connected to other sexual assaults and HPD got two for the price of one _ there are times when a suspect could be completely innocent," said Dr. Peter Stout, HFSC's CEO and president.

"The key here is getting the right information to stakeholders at the right time. When we delay, it could create a situation where people are sitting in jail for crimes they didn't commit, and a criminal could still be out on the street," he added.

This is why HFSC invested time and resources in improving its process and workflow for CODIS notifications. It now operates on a turnaround time well below 30 days in most cases.

But HFSC learned this the hard way when it found a much-needed notification had not been made.

Like many others, HFSC discovered it significantly lacked resources in its CODIS unit and needed to improve its process.

CODIS is the last step of the DNA analysis process. For the system to truly work, all laboratories need to have enough personnel and instruments to complete the lab work and data interpretation in a timely manner. Only when that, in combination with CODIS, is all properly resourced can it have the strongest impact on the justice system.

CODIS is divided into three layers _ the local database which feeds up to the state that finally hits up to the national level. As hits occur, labs are responsible for confirming and notifying each other of the information. Efficiency

and turnaround time throughout the process is intricately linked to each lab's available resources.

And resources have often been hard to come by at every level.

For example, HFSC sometimes waits for the Texas Department of Public Safety _ the state entity responsible for all DNA samples from convicted offenders _ to confirm a "hit." This occurs when the name associated with the "hit" may not be known and DPS has to confirm the information before it is passed along to the investigating agency. It can sometimes take



"THIS IS HOW THE SYSTEM SHOULD ALWAYS WORK, BUT RESOURCES ARE A PROBLEM" DR. PETER STOUT

up to 60 days to receive these confirmations depending on DPS' workload, delaying the output of crucial investigative information.

Like most other crime labs, DPS is strapped for resources _ including personnel.

Sometimes, though, it all works perfectly, as it did in a second case in December when DPS and HFSC collaborated to urgently get information on a Houston homicide. On December 19, DPS agreed to perform an unscheduled CODIS upload on the homicide. The hit came back the same day, and DPS confirmed the name the following day on December 20.

Everything was done within 24 hours.

"This is how the system should always work but resources are a problem across the board," Dr. Stout said.

"The need for more crime lab resources in Texas is gaining attention and tackling the problem strategically on a statewide level will benefit the entire justice system."

Tracking RAPE KITS IN TEXAS, WHERE WE ARE



Crime laboratories, law enforcement, prosecutors, defense and victim advocates are collaborating to implement in Texas a rape kit tracking software that will provide all stakeholders, including sexual assault survivors, a view of the analytical process.

The software is being implemented in response to a bill passed in 2017 by the Texas state legislature and is designed to ensure all stakeholders know when a sexual assault kit has been collected and then follow its progress through analysis.

Successful implementation of the project requires collaboration and cooperation on many levels and has provided Houston stakeholders the opportunity to reestablish a multidisciplinary group that had worked together during the crime laboratory's project to eliminate a longstanding backlog of more than 6,660 rape kits.

"We are excited that the rape kit tracking project has provided the impetus to reestablish a forum for all stakeholders to not only address issues as they arise, but also to communicate to better catch problems on the front end and find solutions that help all involved," said Dr. Amy Castillo, HFSC's COO and vice president.

"Our previous project taught us that collaboration and communication are key to successfully improving the

Texas 85th legislature passed in 2017 a bill requiring rape kits in the state to be tracked from collection and through analysis. The complex implementation of the program and software is now in full swing, creating opportunities for additional collaboration to improve handling of sexual assaults.

system. We are determined to continue those efforts using a multidisciplinary approach."

The first group was established using money awarded by the National Institute of Justice to research the reasons behind rape kit backlogs and to make recommendations on steps that could be taken to improve the system as a whole and prevent similar issues going forward. In the end, the group also learned the importance of communicating directly as they discovered how their actions and processes impact each other, allowing them to fix problems they may not have even been aware of otherwise.

That project ended in 2015 when Houston's backlog was eliminated, but the need for communication continues.

Implementation of the rape kit tracking software brought those stakeholders back into the room together and provided the impetus to reestablish the group.

The first meeting will take place in March and will include participants from Houston's two crime labs, the district attorney's office, defense, law enforcement and victim advocates.

"The goal is to have a broad view of the issue so we can make constructive improvements that ultimately serve the community and help improve the justice system as a whole," Dr. Castillo said.

The rape kit tracking

software, which should be operational by September, will be one piece of the puzzle. It will help give all parties a view of where a kit is at any given time _ possibly helping to prevent bottlenecks _ and improve transparency.

The Texas Department of



Public Safety's crime laboratory is responsible for implementation and oversight of the tracking software, and has been holding meetings and trainings across the state to ensure it provides all involved with the information they need in a platform that is usable, while also protecting the privacy of the involved parties.

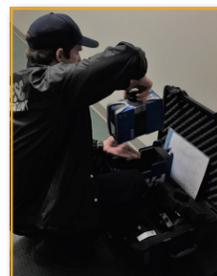
"Texas has been on the forefront of improving forensics and reforming criminal justice. This is just another way to continue on that road and we are proud to be a part of this," Dr. Castillo said.

CRIME SCENE

HFSC TO USE 3D SCANNER

BY LURENA HUFFMAN

The Houston Forensic Science Center's Crime Scene Unit will begin using in the spring a 360-degree laser scanning system to better and more efficiently document crime scenes.



Some trained crime scene investigators had previously used the FARO laser scanning system before the unit

became accredited to ISO/IEC 17025 standards. However, in order to meet accreditation requirements, the unit implemented a lengthy and thorough training program for the use of FARO and upgraded the system to meet current FARO standards.

The FARO is a 360-degree laser scanning system that quickly and accurately collects millions of measurable data points while simultaneously using an internal high-definition camera to capture images. The end result is a two- and/

or three-dimensional model of a crime scene that includes valuable investigative details, including details regarding the chain of events and images of evidence.

"This is another tool that will help the crime scene unit provide an even better quality product to our stakeholders," said Jerry Pena, director of HFSC's crime scene unit. "We are always looking for new technologies and methods to ensure the work we do is of the greatest quality and provides our stakeholders with the information they need to properly and thoroughly close out their cases. The FARO is another example of such a tool."

The FARO not only provides a permanent two- and/or three-dimensional record of a crime scene, it also allows an investigator to retrieve stored data and

measurements for future reconstruction.

Other features include using the stored data captured on-scene to reconstruct the in-flight path of evidence such as bloodstains and bullet trajectory.

The technology can also generate scene animations and create "fly throughs" to show viewpoints from a victim or witness perspectives.

When used on larger scenes, such as officer-involved shooting and other multi-shooter events, the FARO will help expedite documentation, allow for a more efficient investigation and for a better use of crime scene personnel.

HFSC crime scene investigators train on the use of a 3D scanner



HFSC's moving! Office space at 500 Jefferson, 13th

HFSC's Moving NEW HOME

BY JORDAN BENTON

The Houston Forensic Science Center is just weeks away from moving its first group of people and operations into a new downtown location, a crucial step toward implementing a plan to have the entire company in the new facility by year's end.

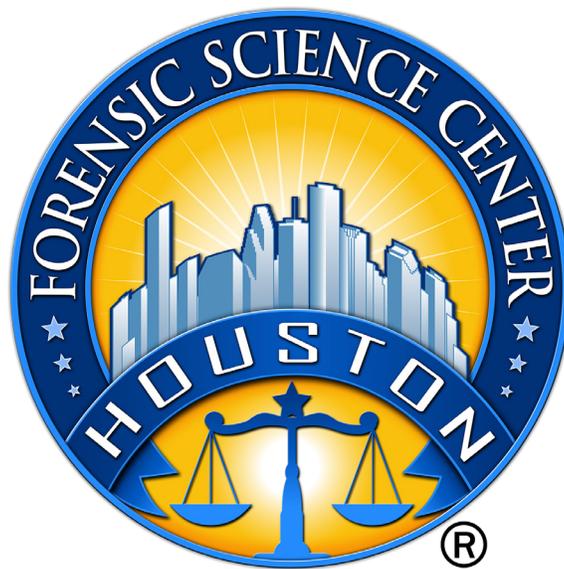
HFSC's board of directors approved at its February meeting a 30-year sublease with the City of Houston, allowing the crime lab and its staff to live in the space at 500 Jefferson for the next few decades. The board has also approved changes to an interlocal agreement with the city to better reflect the lease's 30-year timeline. City Council will be asked to approve both documents later this month.

Now that HFSC's IT network and personal security system are installed and working at 500 Jefferson, the latent print and digital multimedia sections _ both groups have spent the past few years in a downtown high-rise on Fannin Street _ can move by the end of March.

Other administrative functions will join them, making up 20 percent of HFSC's staff. HFSC will handover the leased space on Fannin Street by the end of April.

HFSC's front door and address will change on March 4 to coincide with the first moves. The new address will be: 500 Jefferson St., 13th Floor, Houston, Texas 77002. HFSC's main number will be 713-929-6760. Call out phone numbers will change June 1. To reach the crime scene unit call 281-810-3774. For an audio/video callout, please dial 281-810-3815.

"We're getting close," Dr. Peter Stout, HFSC's president and CEO, said. "The first few moves will teach us the things we do right and how we can improve the process. As we continue on this journey, we will share information with all stakeholders to minimize the moving pain."



CONTACT US

1301 Fannin St, Suite 170 Houston, TX 77002

info@houstonforensicscience.org

(713) 929-6760

LAW ENFORCEMENT AGENCIES, ATTORNEYS AND COURTS

(713) 929-6760 for local calls

(844) 4RENSIC or (844) 473-6742 for toll-free long-distance calls

Fax: (832) 598-7178

info@houstonforensicscience.org

legal@houstonforensicscience.org

JOB SEEKERS

Fax: (888) 396-7190

hr@houstonforensicscience.org

Houston Forensic Science Center, Attention: HR Recruiter, 1301 Fannin, Suite 170, Houston, TX 77002

MEDIA RELATIONS

Media resources are available 24 hours a day, seven days a week.

media@houstonforensicscience.org (Media requests)

pia@houstonforensicscience.org (Public Information Act requests)

(713) 929-6768 (Office)

(713) 703-4898 (Mobile)