

WHAT'S NEWS @ HFSC

HOUSTON FORENSIC SCIENCE CENTER • MAY 2018

INSIDE THIS EDITION



4 HFSC's ongoing implementation of a new LIMS is complex



5 Firearms database provides investigators with early leads

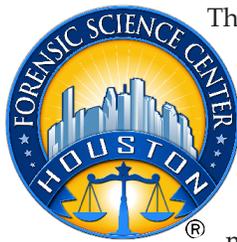


6 HFSC embarks on ambitious plan to eliminate DNA backlog



8 HFSC begins blind monitoring of testimony transcripts

Accreditation: What it means for evidence handling at HFSC, Houston



The Houston Forensic Science Center will have two of its sections that handle evidence accredited by year's end, a move that will impact stakeholders across the spectrum and change how HFSC does business.

Accreditation will require HFSC to be more stringent about evidence collection at crime scenes and how it receives evidence for analysis from stakeholders. In the short-term, it will likely lead to more rejections for analysis as we get accustomed to the new rules. It will also impact how HFSC's Crime Scene Unit (CSU) operates.

"Accreditation is important and a strategic goal for HFSC because it holds us accountable to a minimum standard," said Dr. Peter Stout, HFSC's CEO and president.

"However, I emphasize minimum. HFSC strives to surpass accreditation requirements to guarantee superior quality to the community," he added.

The Client Services/Case Management Division (CS/CM) is the unit that receives evidence from the Houston Police Department and other stakeholders, distributes it to the labs for analysis and then ensures it returns safely to the requester.

CS/CM is expected to be accredited by the International Association of Property and Evidence in the next

couple of months. An initial assessment has been conducted, and the team is addressing a few items by the end of May.

CSU will have its accreditation assessment in July when the rest of the laboratory undergoes its reaccreditation. CSU will be accredited by ANAB under the ISO/IEC 17025 standard.

In preparation for the assessment an internal audit will be conducted in May, and HFSC will begin tightening its procedures as it prepares.

How does this look on the ground?

CS/CM will ultimately reject more evidence for analysis due to improper packaging, labeling or handling. The evidence manual is posted to the HFSC website, and will be updated with any changes that occur due to accreditation.

CSU will continue to process scenes objectively and systematically, however, incidents that previously may have been overlooked could, under accreditation, rise to the level of a disclosure to the Texas Forensic Science Commission (TFSC.)

For example, a vehicle from a non-fatal scene is sent to CSU for processing. Evidence _ such as a bloody shirt _ is found in the car. That item will be treated as evidence, even if the investigating officer did not intend for it to be handled in that manner. Due to improper handling of evidence, that could then become a TFSC disclosure.



A Few Words From Our PRESIDENT

HOUSTON FORENSIC SCIENCE CENTER

Peter Stout, PH.D.
CEO/President

Accreditation. A lofty word that holds a great deal of weight, but _ in forensics at least _ not always as much substance. What do I mean by this?

Accreditation programs in forensics and evidence handling are confusing. There are extremely stringent, non-ISO programs _ such as the one that oversees laboratories that do federally regulated workplace drug testing _ and ISO programs, such as 9001, that are so generic they are almost meaningless.

To me, as the person ultimately responsible for providing Houstonians with a crime lab they can trust to bring credible results to the courtroom, all accreditation is only a minimum standard. We cannot rely on accreditation programs to ensure good performance and quality. A simple Google search of "forensic lab problems" will bring up scores of examples of accredited labs that have significant issues.

Accreditations are essential but insufficient.

For HFSC to do reliably high-quality work we must _ and will, and do _ demand much higher internal standards.

Here at HFSC, federal and state law requires accreditation in some disciplines, such as DNA and firearms. Our board of directors, meanwhile, set a higher standard, saying all disciplines will be accredited.

Sometimes these standards mean it takes longer to complete the work. Other times it translates into a back-and-forth over whether evidence has been handled so improperly it can no longer be analyzed. And then, there can be conversations around how all stakeholders can still have their needs met despite the quality rules that have been put in place either by the minimum accreditation requirements or our own, more rigorous, protocols.

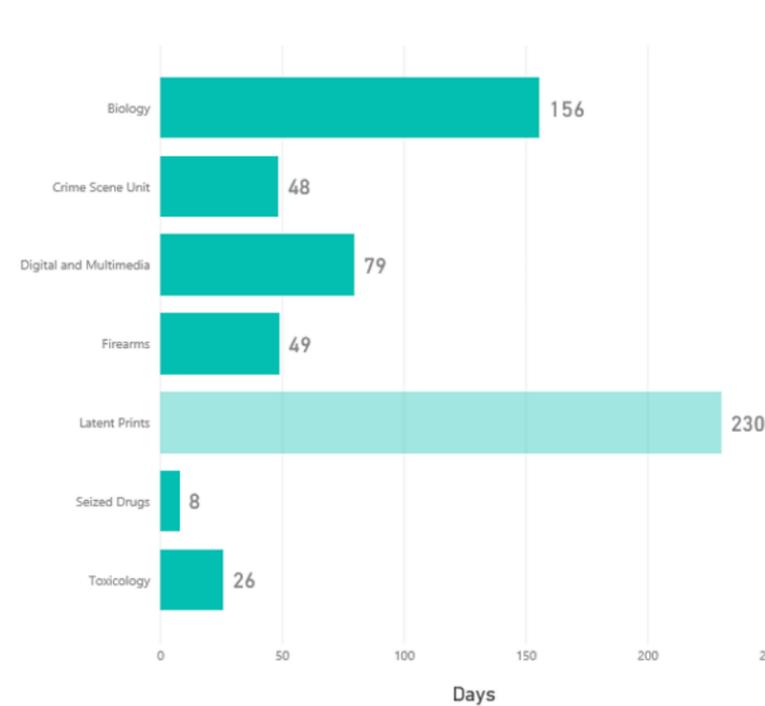
These conversations are valid, and we must have them to ensure we meet the goal of providing the right answer at the time.

But none of it will come at the expense of ensuring Houstonians can trust that when forensic work is presented in a courtroom it is of the highest quality.

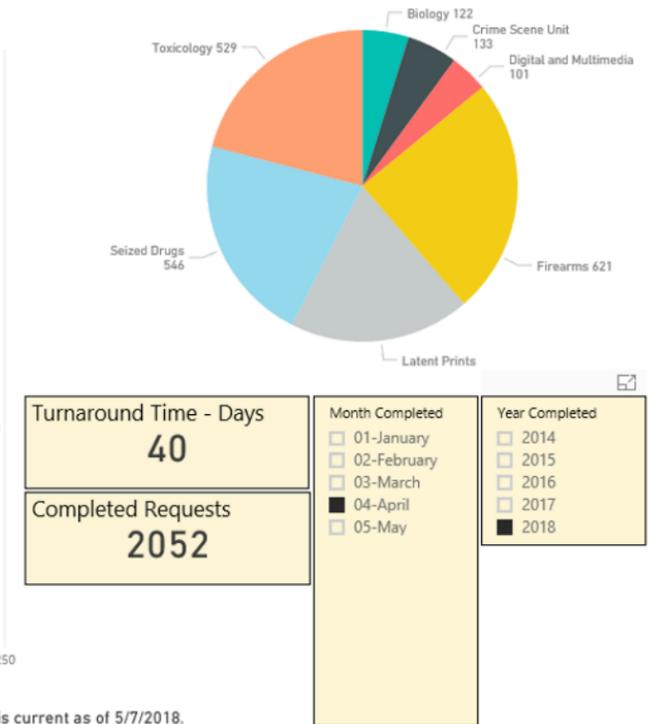
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HFSC At A Glance

Average Turnaround Time for April 2018



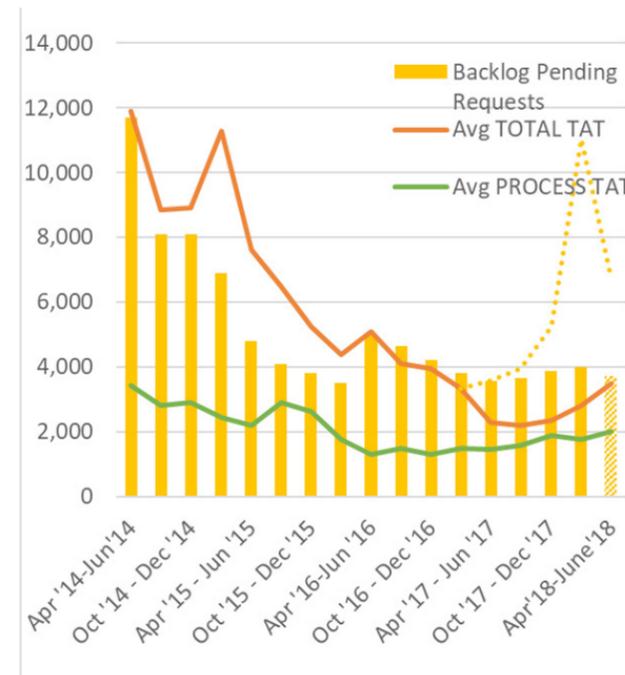
Requests Completed by Section



Turnaround Time - Days	40
Completed Requests	2052

Month Completed	Year Completed
01-January	2014
02-February	2015
03-March	2016
04-April	2017
05-May	2018

This data is current as of 5/7/2018.



The Houston Forensic Science Center has had a few challenging months between unexpected weather events that forced shutdowns and planned disruptions to implement a new Laboratory Information Management System (LIMS.)

All this while working diligently to eliminate two longstanding backlogs: DNA and latent prints.

The numbers this month, shown above with latent prints removed, shows the progress HFSC has made with this backlog. As the group moves through the oldest cases, average turnaround times company-wide become inflated. With latent prints, the average is 76 days, showing the progress the section has made as that number has been in the hundreds for several months. Once latent prints is removed, the average drops to 40 days, higher than the 30-day goal and a direct result of shutting down operations.

The latent print backlog is on track to be eliminated by year's end.

For more information please visit www.houstonforensicscience.org

What's Up? WITH LIMS

HFSC has chosen to be innovative, a leader and different in many areas, and its implementation of a new Laboratory Information Management System (LIMS) is no different.

And "the first" one also overcomes obstacles, pitfalls and challenges alone.

HFSC's LIMS and its rollout have been unique in many ways. It is leading the way by putting LIMS in a cloud-based environment and by building a custom request portal to more closely suit internal and external needs.

In addition, because of HFSC's unique governance, it was simultaneously required to move off the Houston Police Department network, and build and transition to an independent computer network.

So, imagine all the things that can go wrong and the surprises along the way. There has been no shortage of either.

As such, it is difficult to predict when the project will be complete; all disciplines operating in the new JusticeTrax LIMS, and stakeholders requesting analysis through a custom-built, user-friendly request portal.

For now, some are operating in JusticeTrax, while others are in the old system. All are in HFSC's network and will fully transition to the cloud.

But HFSC staff are manually entering data as the portal is completed.

Here's how it looks: HFSC received 11,400 requests for service in 2017 for the three disciplines operating in the new LIMS. This is of nearly 30,000 overall.

That's a lot of data entry.

Since it is unclear when the new portal will be ready, HFSC is seeking an interim solution that will eliminate the manual data entry.

Timelines are fuzzy, but one thing is clear: once the project is complete HFSC will be better able to serve internal and external stakeholders.

FIREARMS: RIGHT ANSWER



Analysts use HFSC's Laboratory Information Management System



The national ballistic database, NIBIN, helps link between crimes



NIBIN "hits" link fired evidence found at different scenes to the same gun

A robbery in June 2016 in Fort Bend County. A little over a year later, in October 2017, a murder. February, March and April 2018: two aggravated assaults, a homicide and a discharge from a gun.

What do all of these crimes have in common? The gun.

And that link is what lead investigators to the suspects.

"In the absence of other evidence _ or evidence that can take longer to analyze, such as DNA _ it is often the fired casings or the gun itself that provides investigators with that first crucial lead," said Donna Eudaley, manager of HFSC's firearms section.

"This is why HFSC aims to provide stakeholders with information regarding fired evidence within 48 hours and is looking for

ways to make the process for test-firing and imaging guns more efficient," she added.

In the recent string of incidents, which ended in April when investigators asked HFSC to rush analysis of a gun found in the possession of a felon, it was those earlier entries into the firearms database, the National Integrated Ballistic Information Network (NIBIN), that helped break the case.

After each crime, beginning with the robbery in Fort Bend County and ending with the March 2018 firearm discharged in the city, police collected fired cartridge casings from the scenes and submitted them to HFSC for examination.

The first step HFSC takes in all cases is to upload image-eligible evidence into the NIBIN database.

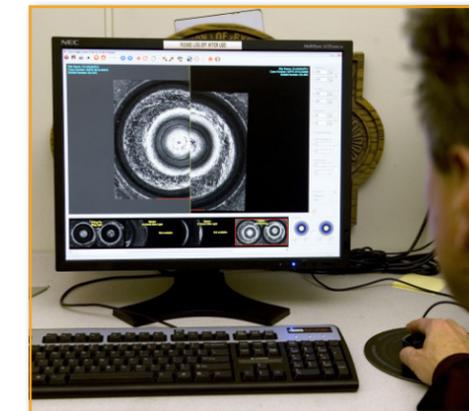
The hope is always that

if the same gun is used in the commission of another crime, having the images in the database will help investigators link the crimes.

The jackpot, though, is always the firearm itself.

So in April 2018, when police arrested a felon who had a firearm in his possession they asked HFSC to rush the case. It might not yield any information.

But in the off chance the felon had used the



"HFSC AIMS TO PROVIDE INFORMATION ON FIRED EVIDENCE WITHIN 48 HOURS."

firearm to commit a previous crime, the hope would be the fired evidence had been found, collected and uploaded into NIBIN.

And here it was. Bingo.

HFSC provided the investigator with the findings within a day of the request.

The gun had been linked to the six previous events.

Ten minutes later the investigator called.

This information and the quick turnaround by HFSC could help police identify suspects in all the crimes.

At the very least, police knew where to look.

And this is how local, state and national databases _ used effectively and efficiently _ help provide investigators the right answer at the right time.

DNA TRAINING, BACK-LOG, PROCESS IMPROVEMENT



The Houston Forensic Science Center will seek to outsource as much incoming DNA work as possible over the next 10 months as it eliminates a growing backlog and cross-trains staff to prevent similar situations in the future.

More than 930 forensic biology/DNA requests are currently more than 30 days old, or backlogged according to HFSC standards.

That number has grown in recent months as the section's staff has shrunk, unforeseen weather events shutdown production and HFSC transitioned its database and computer network, losing more work days.

In addition, 11 biology staff members have left HFSC in the past year, creating a gap between the resources and the workload. It takes on average about nine months to fill a DNA position.

Finally, HFSC's goal has long been to cross-train biology personnel to do all parts of the multi-pronged, complex DNA analysis to avoid bottlenecks in the process.

However, even though a bottleneck in the final data analysis part of the process

The Houston Forensic Science Center will be outsourcing all incoming DNA requests for the next 10 months as it focuses resources on eliminating a growing backlog and putting analysts through a year-long training program that will provide the section with long-term benefits.

is the major cause of the backlog, HFSC has struggled to train staff while also having them complete casework.

By outsourcing incoming cases, HFSC will be able to have about 15 staff members complete a year-long training program that will teach them to do all parts of the DNA testing process.

In the past, like many other labs, HFSC had a bifurcated DNA testing process in which individuals focused on only one task or part of the program.

Process improvement research and data analysis has shown that HFSC will benefit in the long-term from a more efficient process by cross-training staff and allowing them to more flexibly shift the workload. The section has struggled to find a way to complete the training.

The growing backlog and the shrinking resources made it more pressing for the training to occur.

The project will cost \$2.4 million over the coming

year, about half of which will be paid for with federal grant dollars designated for DNA backlog reduction.

"DNA backlogs are the plague of the forensic community, and in this regard,



DNA analysis is a multi-step, complex process that requires highly skilled staff. Like many labs nationwide, HFSC has struggled with backlogs and long turnaround times.

HFSC is no different," said Dr. Peter Stout, HFSC's CEO and president.

"HFSC _ and the HPD crime lab before it _ has struggled to eliminate its DNA backlog. We believe after we are fully staffed, and at the end of this outsourcing and cross-training program we will be able to sustainably hold to an average turnaround time of 30 days," he added.



TESTIMONY BLIND TRANSCRIPT REVIEW

HFSC launches program to monitor testimony without witnesses' knowledge



The Houston Forensic Science Center has launched a new blind quality control initiative: testimony transcript review.

Under this new program, HFSC adds a new, unique layer of testimony evaluation by reviewing court transcripts after an analyst or other staff member has testified in court. The review is conducted by a panel of people, including non-technical individuals who could be considered similar to a jury in terms of their knowledge of forensics.

The person who testified is notified after their transcript has been received and selected for review.

The blind program complements HFSC's robust live testimony monitoring program, under which each person that testifies is required to be monitored and evaluated in court at least once a year.

"We sit in the courtroom and listen to testimony, make notes and think we are hearing things correctly," said Lori Wilson, who, as director of HFSC's quality division, oversees the blind quality control program.

"But in a written transcript you see things you missed in court when you were also looking at demeanor, body language and eye contact," Ms. Wilson said. "It's really meant to bolster the quality of our testimony."

HFSC has reviewed one transcript and has already discovered at least one challenge: HFSC prefers transcripts already made available by the court and so has to wait for the appeal

phase. And even then it could take months for the transcript to be available.

HFSC's goal is each quarter to evaluate all transcripts that are available.

Another challenge is deciding how to provide feedback to the witness that has been evaluated. The most important person on the review panel could be the lay person, that individual who most closely represents what a juror could look like.

"Did they say it in a way the jury could understand," Ms. Wilson asked, noting this is the question that will be most crucial to evaluate.

The feedback, however, must be constructive and the witness cannot figure out who was on the panel so in all likelihood responses will be paraphrased by quality division personnel. Once the details of how to run the program are nailed down, HFSC will invite members of the Technical Advisory Group and non-staff to participate in the program as reviewers.

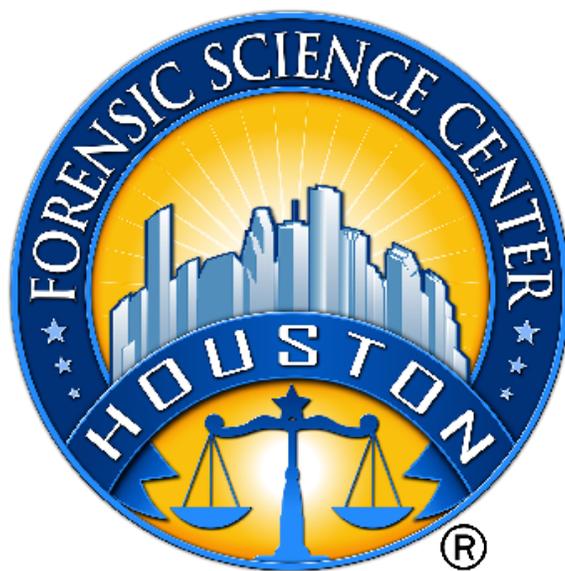
"The quality of forensic testimony and whether it remains true to the letter of the science and its limitations has become a national conversation," said Dr. Peter Stout, HFSC's CEO and president.

"Several high-profile instances in which forensic scientists overstated the capability of their discipline _ at times leading to a wrongful conviction _ has highlighted the importance of this part of our jobs. And so, like everything else, we aim to provide the highest quality testimony. This is one tool."



An expert witness explains a chart while testifying in court. Forensic scientists testify as expert witnesses in criminal cases

HFSC has launched a blind testimony monitoring program in which a panel, including a lay person, evaluates court transcripts to determine whether an analyst or other staff member has responded to questions in court in a manner that could be understood by a jury and not be misinterpreted or misleading. Court testimony has become a hot topic in the forensic community as it becomes clear that false, misleading or statements that exaggerate the limitations of the science have led to wrongful convictions around the United States. The transcript reviews are designed to bolster an already robust testimony monitoring program that requires each staff member that testifies to be evaluated at least once a year.



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