

WHAT'S NEWS @ HFSC

HOUSTON FORENSIC SCIENCE CENTER • NOVEMBER 2018

Quality: What it looks like, what it means and how it operates at HFSC

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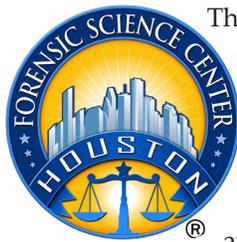
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The work done at the Houston Forensic Science Center impacts lives for good or bad daily, leaving little wiggle room for error and quality must be a

top priority.

But what does this mean and what does it look like? Can we expect to make no mistakes? Or simply to own the ones that occur, learn from them and take measures to prevent similar errors going forward?

Of course, so long as people are involved in the process, mistakes will occur so the best course of action is to have systems in place to catch errors early, thoroughly investigate the cause and put in place policies and procedures that help avoid repeat incidents.

At HFSC this is done through the quality division, a team of six women who ensure HFSC's standard operating procedures and quality manual _ the policy document that oversees all the work done in the laboratories _ are written and executed in a manner that ensures the analysis is accurate and thoroughly documented and reported.

When a mistake occurs, the division is responsible for finding the root cause of the error and then making fixes that will prevent a reoccurrence.

"The work HFSC does impacts so many lives we have little room for error though we know they will occur. But because the impact is so enormous, we have an equally large obligation to ensure we avoid making the same mistake twice and we take

that responsibility seriously," said Lori Wilson, director of HFSC's quality division.

In order to help the quality division act independently, Ms. Wilson reports directly to HFSC's CEO rather than the COO, who oversees daily operations.

The quality division determines the cause of the error, which can include: lack of clarity in the policy or procedure, lack of proper documentation or an individual's actions. Based on this information, the quality division, along with the appropriate staff, recommend ways to prevent future errors.

Like other forensic laboratories nationwide, HFSC has at times struggled with this reality and the difficulty of addressing such situations. In addition to our internal standards, HFSC must also consider external obligations.

HFSC is bound by "Brady," a Supreme Court decision which requires us to disclose to the district attorney any information that could challenge a witness's credibility and all evidence that is favorable to the defendant.

In Texas, the bar is even higher due to additional state laws. The Code of Criminal Procedure requires HFSC to provide attorneys with information relating to pending criminal cases and it requires HFSC to report incidents of professional negligence or misconduct to the Texas Forensic Science Commission, the state's oversight board.

The quality division and its investigations are key to ensuring HFSC's decisions on such issues are correct. They too have little room for error.



A Few Words From Our PRESIDENT

HOUSTON FORENSIC SCIENCE CENTER

Peter Stout, PH.D.
CEO/President

I spend a lot of time talking with staff and stakeholders about the right answer at the right time. But what do I really mean? What does it look like and why am I so laser-focused on this concept?

To begin with, the emphasis here is on the word "right." It is absolutely crucial the result we provide our stakeholder _ whether it is law enforcement, the DA or the defense _ be objective and accurate. But it is equally important the answer arrives at the "right" time, meaning when it is most useful to the investigation or the trial.

The "right" answer is always the same, regardless of case or discipline: it is an accurate result that has a strong scientific foundation.

The "right" time differs depending on the case, the circumstance, the discipline and a host of other factors.

Which is why talking to stakeholders, understanding their demands and ensuring they understand our needs and limitations, is so crucial. Sometimes, the "right time" can be hours. Other times it may be days or weeks.

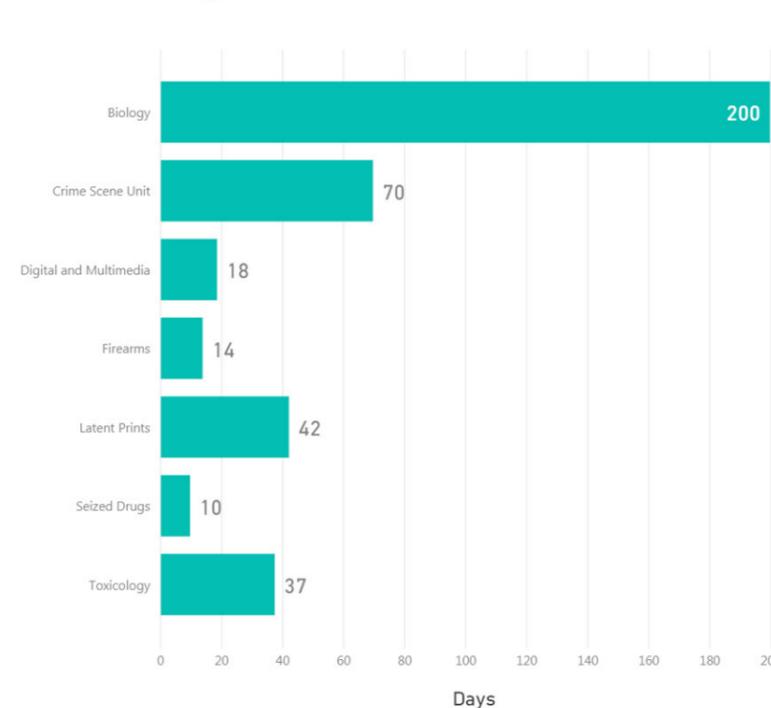
Recently, law enforcement was looking for a suspect that was sending mail bombs to high-profile people ahead of an important election. They needed latent print and DNA results within hours, and a forensic lab delivered. They arrested a suspect, and the mail bomb terror ended.

The right answer at the right time.

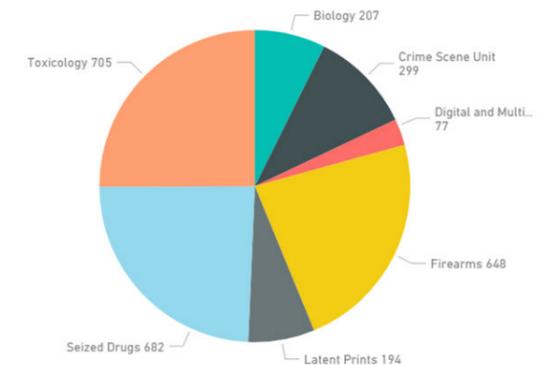
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HFSC At A Glance

Average Turnaround Time for October 2018



Requests Completed by Section



Turnaround Time - Days
40

Completed Requests
2812

Month Completed

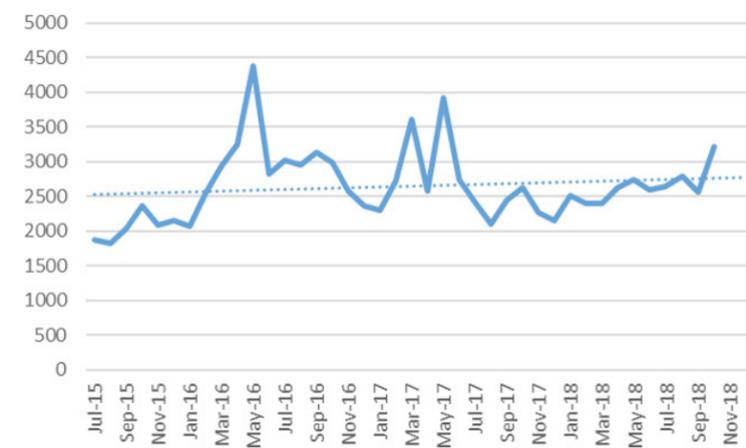
- 01-January
- 02-February
- 03-March
- 04-April
- 05-May
- 06-June
- 07-July
- 08-August
- 09-September
- 10-October
- 11-November

Year Completed

- 2014
- 2015
- 2016
- 2017
- 2018

This data is current as of 11/5/2018.

Total requests received



September was a busy month. HFSC received about 600 more requests for testing than on average, and while there has been a steady increase since 2015 _ as can be seen in the graph on the left _ September was unusual.

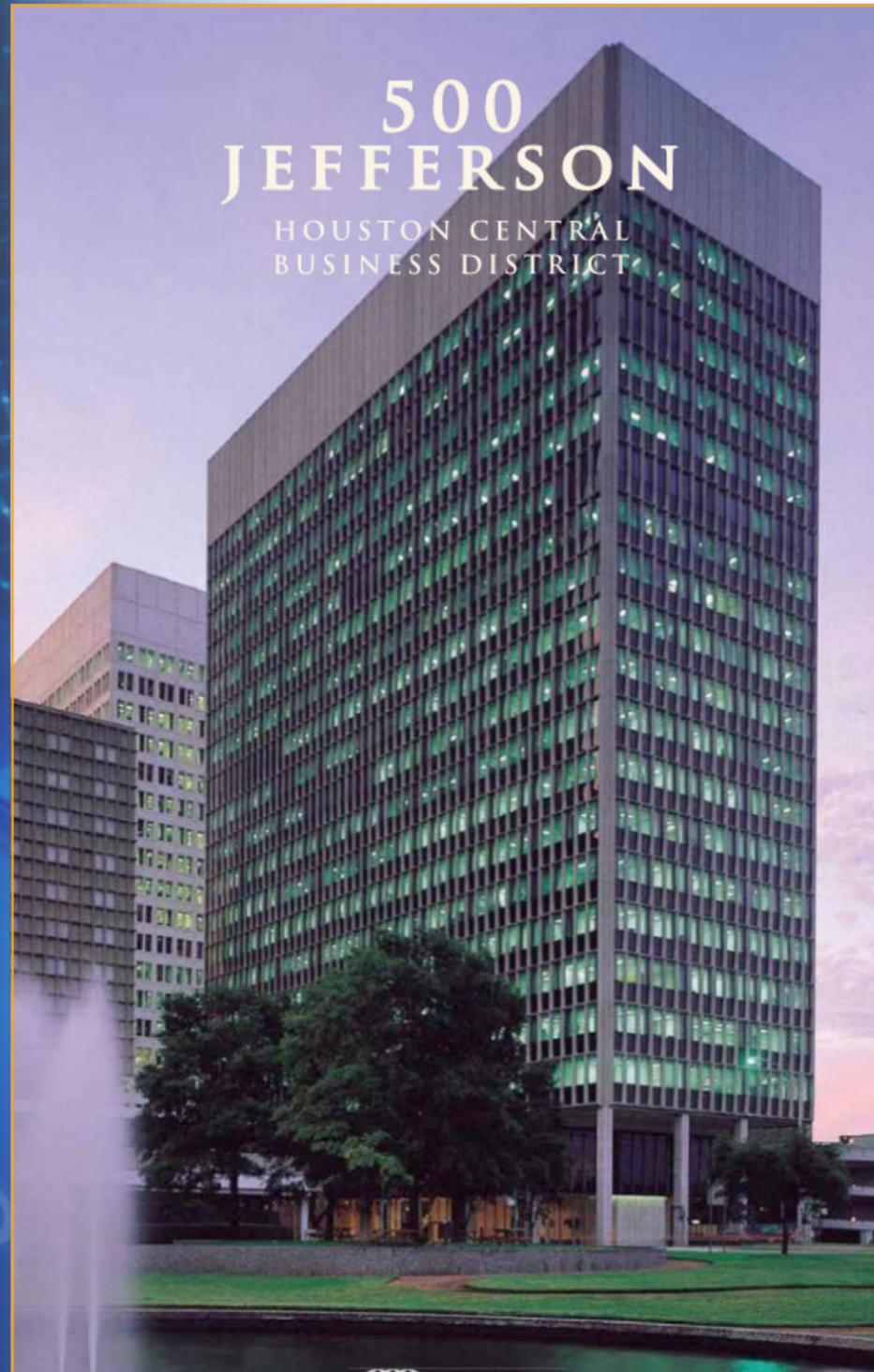
Sometimes there is no explanation and sometimes it is the beginning of a trend. It is too early to say in this case.

But despite the increase in requests, turnaround times remained at an average of 40 days across disciplines, not bad all things considered.

HFSC expects turnaround times to increase as it moves to a new facility and migrates operations to a new database.

For more information, please visit www.houstonforensicscience.org

Facility HFSC IS GETTING A NEW HOME



The Houston City Council has approved a 30-year lease for the Houston Forensic Science Center to move to four floors and part of the basement at 500 Jefferson.

The phased move will begin in late February 2019 and end by Dec. 31, 2019.

The vote in early October will help HFSC achieve a five-year-old goal of moving into its own facility, helping to increase lab efficiency and improve public perception of the agency's independence.

The Houston Police Department crime lab, Crime Scene Unit and parts of the identification division moved under HFSC's management in April 2014, but the city could not afford to move the laboratory into its own space at that time or build it a new, traditional government-run laboratory.

And so, HFSC has navigated improving quality and efficiency while housed on 11 floors in four different buildings. A lack of sufficient power, improper ventilation, challenging security issues and an inefficient layout that has sexual assault kits traveling seven miles in one building to undergo analysis have hampered some efforts to improve.

The new 83,000 square

The Houston City Council has approved a 30-year lease that will allow HFSC to build a new laboratory in a downtown building and move all staff to that same location. The new facility will be specifically designed for forensics.

By Jordan Benton

feet of laboratory and office space at 500 Jefferson puts all staff in one building and brings HFSC to the next level while keeping annual facility costs neutral. The laboratories will occupy one floor and will be specially designed with forensics in mind.

The first groups to move, beginning in late February, will be those currently housed at 1301 Fannin, a downtown building in which HFSC leased space shortly after taking over management of Houston's forensic services.

The moves, while time consuming for staff, are phased and designed to keep production going throughout and ease some of the pain for stakeholders. HFSC is focused on five key goals during the yearlong move: limiting operational interruptions, reducing duplicate rent, minimizing one-time costs, sharing stakeholder communications and meeting strategic timelines.

By moving the sections at 1301 Fannin first, HFSC will avoid costly, duplicate rent and bring a timely end to a lease that expires at the end of April. HFSC's corporate address will change to 500 Jefferson by early March.

The next moves will involve many of the lab-based sections and are designed to

ensure operations are not fully shutdown at any time.

Most sections that work with validated instruments will move both people and equipment in phases so operations can partially continue in the current facility while instruments are



HFSC is moving to a new downtown building, 500 Jefferson, and will occupy four floors and a part of the basement. The building is pictured on the far left. Some of the office space can be seen on the right.

being brought online in the new lab space.

HFSC is attempting to consider and prepare for all possibilities during the move, among those the unexpected surprises that accompany any complex endeavor of this size. Dates and plans may change as the move progresses and HFSC will continue to update stakeholders and the community with pertinent information.

CS/CM Evidence handling's importance

By Jordan Benton

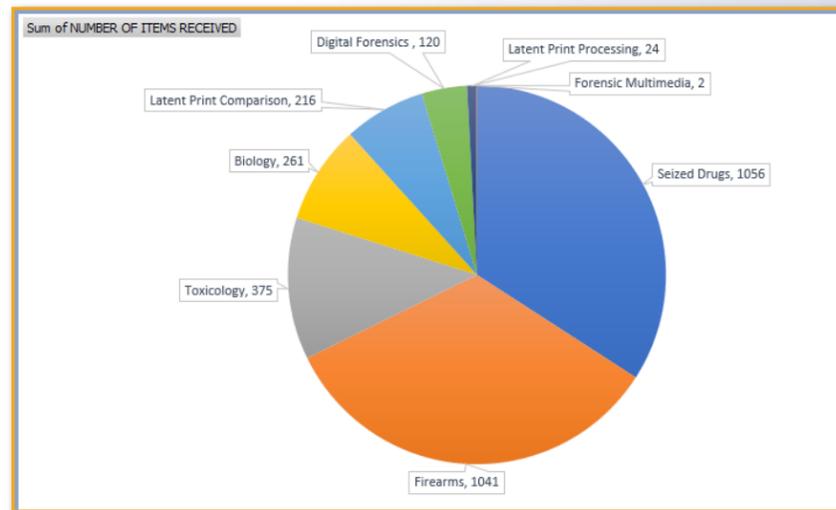
Integrity is defined as an unimpaired condition or an adherence to a code of values, according to Merriam-Webster.

At the Houston Forensic Science Center, integrity is the foundation of much of what we do but the word does not only apply to the behavior of our staff, but also to the evidence we analyze.

Integrity of evidence plays a significant role in the system. Victims, stakeholders, the public and all involved in the justice system rely on the integrity of the evidence from

the moment it is collected at a crime scene and through all the stops it makes between there and the courtroom.

Compromised evidence can destroy a case. It can cause an innocent person to be jailed and a bad guy to be left on the street to commit more crimes.



And so, at HFSC, the importance and care of evidence is always top of mind.

The Client Services/Case Management (CS/CM) division receives, transports, returns and inventories

evidence.

CS/CM staff touch nearly every item of evidence that passes through the laboratory. In order to ensure the staff follow set standards and procedures, the section is accredited by the International Association of Property and Evidence

(IAPE.) CS/CM polices each evidence item submitted to the lab, ensuring evidence seals and packaging meet accreditation standards and HFSC policies.

Often, when those standards are not met,

evidence is rejected for testing and sent back to the requester.

"As soon as evidence comes into the lab, HFSC is responsible for it and we take that responsibility seriously," Ashley Henry, manager of CS/CM, said.

Mishandling evidence can have serious consequences. For example, in the O.J.. Simpson murder trial the defense relied on poor handling and documentation of evidence to cast doubt on the prosecution's argument.

Consider not only the importance of the evidence

but the amount: each case often has more than one item and many have multiple items.

In September alone, CS/CM handled over 3,000 evidence items. HFSC as a whole has hundreds of thousands of evidence transactions annually, and each is fraught with the possibility of error.

HFSC strives to provide timely and accurate

- DO NOTS**

 - DO NOT use staples
 - DO NOT package items so tightly it cannot be opened and repackaged
 - DO NOT package wet items in plastic
 - DO NOT package sharp objects in plastic
 - DO NOT forget to package items being submitted for latent print processing or biology (DNA)

DO'S

 - DO use evidence tape
 - DO seal all openings of a package/container
 - DO place initials/signature on seal
 - Best practice is to place initials half on-half off the seal
 - Best practice is to place the date on the seal as well
 - DO place a biohazard label on the outer packaging if the item is suspected of containing bodily fluid
 - DO place a sharps label (or equivalent) on the outer packaging if the item is suspected of being sharp or safety hazard
 - DO make sure the case number is consistent across all items/packaging
 - DO make sure the correct barcode is placed on the correct item

scientific results and a large part of that depends on proper evidence handling.

Stakeholders requesting forensic analysis and submitting evidence for testing play a role in meeting those standards.

HFSC has taken measures to help stakeholders properly submit evidence for analysis. Videos are available on the website here and the Evidence Handbook, which outlines many of the rules and standards for handling and packaging, can be found [here](#).

The Client Services/Case Management division handles nearly every item of evidence that arrives at the Houston Forensic Science Center. CS/CM staff help determine if the evidence has been packaged and labeled properly or if HFSC will reject the items for analysis due to improper handling and submission. CS/CM's accreditation puts minimum standards in place and helps ensure consistency in policy, procedure and decision-making. Poor evidence handling can harm all subsequent forensic analysis and is the reason HFSC is focused on improving and perfecting this part of the process.



LIMS

NEW SYSTEM TO BE ONLINE BY 2019

The Houston Forensic Science Center plans to be fully operating in a new Laboratory Information Management System (LIMS) and request portal by year-end.

The completion of the move into the new systems ends a two-year process during which HFSC worked closely with vendors, stakeholders and staff to create systems that would be more responsive to internal and external needs.

Stakeholders, including law enforcement and prosecutors, will receive reports differently and should enjoy a more user-friendly experience when requesting forensic analysis.

As part of this project, HFSC has moved its LIMS into a cloud environment that provides greater security and more data storage at a lower cost. Stakeholders that are also operating in the cloud environment will enjoy the benefits of the new request portal.

The new LIMS will also help HFSC more easily access crucial data that increases transparency and assists in making changes and decisions to improve efficiency.

As HFSC comes online in the new system there could be periodic shutdowns and delays to accommodate the move. Any impacts to services will be shared with stakeholders.



HFSC plans to be online with a new LIMS and request portal by 2019



Content in phones and laptops can be crucial to an investigation



Digital requests are increasing as people store more content on devices

DIGITAL: THE RIGHT ANSWER

Shortly after Hurricane Harvey pounded Houston a heated dispute erupted late on a September evening in the Acres Home neighborhood.

The result: the shooting death of Leticia Greer, a 38-year-old mother.

Days later police arrested Marion Charles Goodall, a 34-year-old Houston man who had been in and out of jail for years.

Goodall had fled in a gray Dodge truck after the shooting, leaving police to try to hunt him down and then build a case against him.

A gold Samsung phone and the content it held turned out to be crucial evidence presented at trial.

Allison Sudik, a forensic analyst in the digital and multimedia evidence section, received the phone on October 18, about a month after the shooting.

The phone had a crack on the bottom of the screen but appeared to be in fair condition.

It is the content, though, that is key to these

investigations. The text messages. The social media posts. The photos.

The very machinations of daily life in the 21st century can become crucial tidbits that help investigators piece together a crime.

And it is the HFSC analysts who specialize in extracting information from phones, laptops and computers that can deliver that information when it is most crucial to an investigation.

"As more and more people rely on phones for their communication _ whether via text message or social media _ the work our digital analysts do is becoming more crucial," said Jerry Pena, director of HFSC's Crime Scene Unit and multimedia evidence section.

"Nearly everyone today has at least one phone _ if not multiple digital devices _ packed with information that can become critical to solving crime. As a result, we have seen requests for analysis to our digital section increase by

more than 35 percent in the past four years, and we expect that number to continue to rise."

In Goodall's case it was that content, as well as conversations on Facebook Messenger, that would hold some secrets.

Messenger is a Facebook app that allows users to communicate similar to how they would via text message.

The communication appears to be private _ between the invited parties _ but under the right conditions, with



"NEARLY EVERYONE TODAY HAS AT LEAST ONE PHONE ... PACKED WITH INFORMATION."

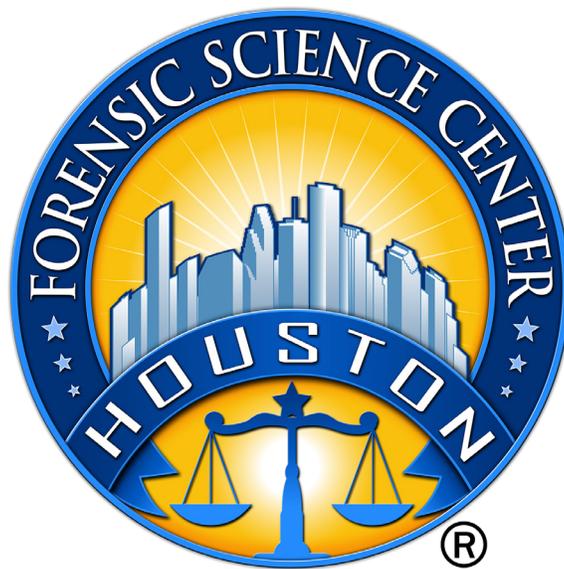
specific forensic software, it can also be accessed by those seeking answers.

In this case, it was Ms. Sudik that would get that information, even though the forensic software did not extract it from the Samsung device as it did other content.

The information in the Messenger app appeared relevant as Ms. Sudik dissected the phone. So she took screenshots of the information and reported it to the investigator.

Months later, when Sudik testified to her work, the content of the phone, including the search history, the text messages, the photos and the social media conversations were presented in court.

"The right answer at the right time means investigators get good, accurate scientific information on the front end that can also be presented in court as credible evidence and ensure justice is served," Mr. Pena said.



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