

# WHAT'S NEWS @ HFSC

HOUSTON FORENSICS SCIENCE CENTER • MARCH 2021

## HFSC and COVID-19: How vaccines will help with return to “normalcy”

### INSIDE THIS EDITION



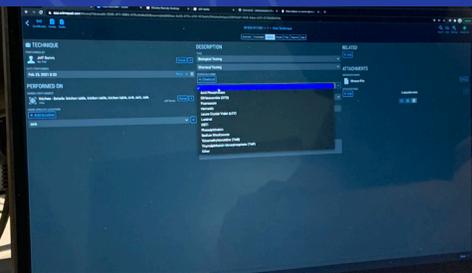
2 Dr. Peter Stout addresses pandemic impacts on the lab and ongoing plans



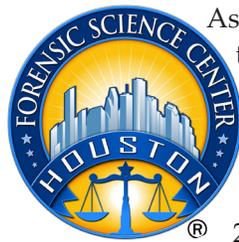
4 The forensic biology/DNA and toxicology sections eliminate backlogs



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As more people get the COVID-19 vaccine, the Houston Forensic Science Center will slowly start March 29 bringing staff back onsite full time,

beginning with the client services/case management section.

The seized drugs, firearms and multimedia sections will return April 5.

HFSC has been operating on rotating schedules \_ with staff dividing their time between remote and onsite work \_ since March 2019, when the rapid spread of COVID-19 made clear steps had to be taken to protect the health and safety of staff.

“While we did have some outbreaks of the virus among staff, our information indicates this didn’t occur in our facility or while people were at work, which signals to me our decision to minimize onsite numbers was the right one,” said Dr. Peter Stout, HFSC’s CEO and president.

“There is no question, however, that a year later we are seeing the impacts of that production decrease,” he added.

Until recently, however, when staff could get vaccinated, it was too risky to have more than 200 staff onsite at the same time.

Even with the vaccines, the goal will be to gradually return to full operations and slowly phase in

additional sections as more of the community gets vaccinated.

The seized drugs section has faced the most challenges during the past year, in part due to increased requests for new, more time-consuming and complex marijuana testing.

HFSC implemented the new analysis method for marijuana in September in response to legislation from 2019 that legalized hemp and changed the definition of marijuana, requiring crime laboratories to measure the amount of tetrahydrocannabinol \_ or THC \_ in an item to identify whether it is marijuana or hemp. Marijuana enforcement halted for more than a year due to crime laboratories’ inability to do the testing necessary under the new law, so once the analysis method went live requests increased significantly, in part due to pent up demand.

“Crime laboratories are generally so under-resourced that each small event \_ from a hurricane to a winter freeze to a pandemic to a change in legislation \_ can have impacts that last years,” Dr. Stout said.

“The past two years have presented challenge after challenge and while I believe we have weathered these storms quite well and I am proud of our staff for how they’ve handled things, there is no question it will take time to get back to full productivity,” he added.



## A Few Words From Our President

HOUSTON FORENSICS SCIENCE CENTER

**Peter Stout, PH.D.**  
CEO/President

It's been a year since life as we knew it changed, upending daily routines, disrupting our personal and professional lives and escorting in tensions and stresses most of us had never encountered before.

In that time, more than a half-million Americans have died from COVID-19, leaving millions of families grieving at a time when the hug and the embrace that could be most soothing was also most forbidden.

The Houston Forensic Science Center and its staff have faced all these struggles and more: the need to decrease onsite staff by 50 percent to create physical distance among our staff and protect their health and safety has created backlogs and increased turnaround times.

We will spend years recovering from this in some sections while we also contend with the scars the past year has left on us all.

Despite this, as we look to a more "normal" future with vaccinations, we can also use the past year as a learning opportunity, acknowledging some of the changes we made to promote remote work will serve us in the future and some may become more permanent.

Clearly, we are a lab-based, facility-reliant organization so permanent, remote work for all staff is not only impossible, it has already gone on too long.

However, in the process of making it work for the past year we have learned that some sections and some people are more productive working from home. It allows us to consider some hybrid situations for these folks, possibly freeing up some physical space as we try to expand other sections.

We have also been able to better secure and integrate our IT systems and the benefits will last for years. So will having laptops for nearly all staff.

And we've all learned that some remote meetings work better and could help reduce money and time spent on travel.

We've also seen the benefits of in-person networking and communication, allowing us to better understand what can be done remotely and what must occur in person.

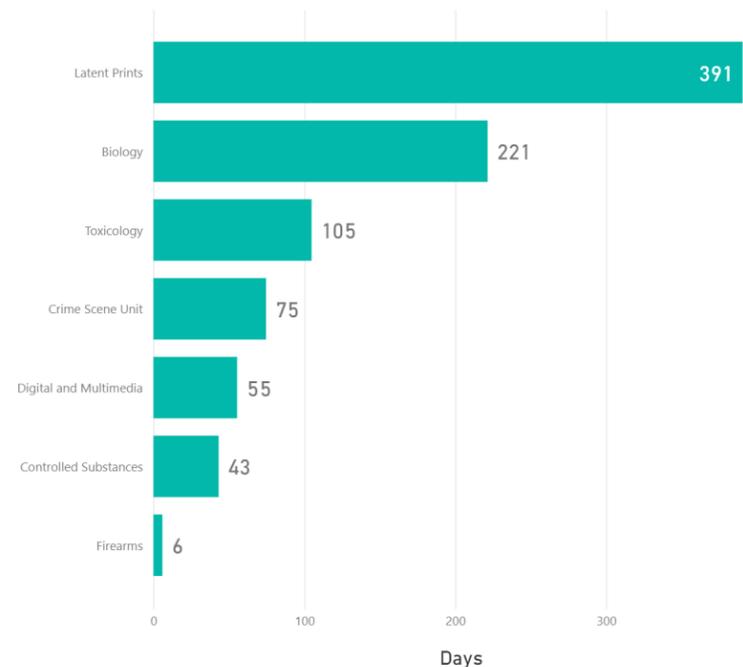
As HFSC starts to move toward "normal" we hope to integrate some of what has worked in the past year and make it our new normal.

After all, the least we can do is heed the lessons \_ good and bad \_ of the past year.

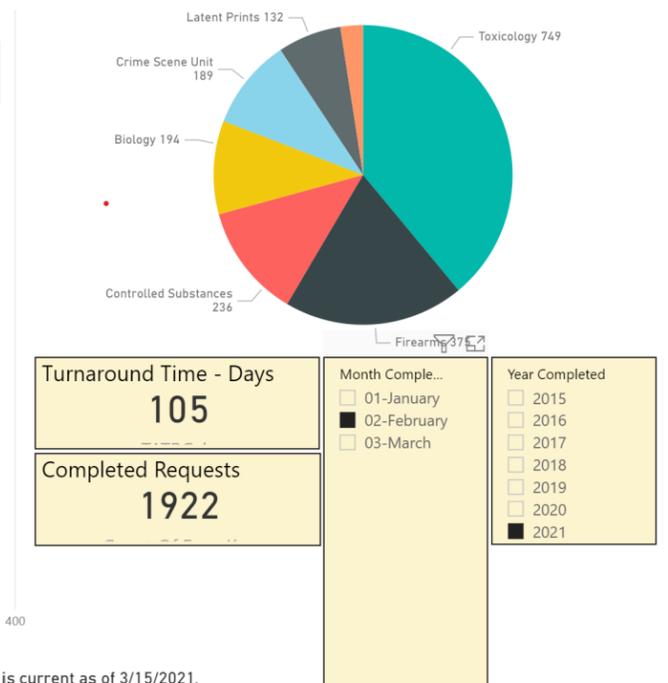
Peter Stout, PH.D.  
CEO/President

# HFSC At A Glance

Average Turnaround Time for February 2021



Requests Completed by Section



Turnaround Time - Days	105
Completed Requests	1922

Month Completed: 01-January, 02-February, 03-March

Year Completed: 2015, 2016, 2017, 2018, 2019, 2020, 2021

This data is current as of 3/15/2021.

As is apparent in the pie chart, the toxicology section is responsible for nearly half of all the completed requests in February. This is the result of the section's focus on backlog elimination and the ability to complete more cases since they have more people trained and authorized to complete blood alcohol analysis. The section will continue to struggle with drug testing for some time and more information on that is available on page 6 of this newsletter.

Turnaround times are higher than we like, however, this is in part the result of backlog elimination since the oldest requests are now being closed. As the oldest cases are completed, that turnaround time should start to decrease. However, as more disciplines resume normal onsite operations and work to eliminate backlogs that accumulated during the pandemic, that turnaround time will likely increase again.

For more information, please visit [www.houstonforensicscience.org](http://www.houstonforensicscience.org)

# Backlogs DNA, toxicology work toward elimination



The Houston Forensic Science Center has progressed toward eliminating two significant backlogs in toxicology and the forensic biology/DNA sections, despite decreasing production during the global pandemic.

Currently, the DNA backlog of both sexual assault kits and other items stands at just over 1,300 requests, down from about 2,000 before the pandemic.

The toxicology section, which completes both alcohol and drug analysis of blood samples, has a combined backlog of nearly 1,400 requests, a decrease from more than 3,000 backlogged requests just over a year ago.

Both sections should eliminate their backlogs in 2022.

"If all goes according to plan and we don't have any unexpected surprises that force production halts, we should be able to get both of these sections operating at an average turnaround time of 30 days or less," said Dr. Peter Stout, HFSC's CEO and president.

"That said, our timelines are tight and, as we've seen in the past year, surprises can be expected. Hurricanes, freezes, pandemics \_ anything that disrupts production \_ can throw these plans off," he added.

HFSC moved to rotating schedules last March in an attempt to decrease onsite staff presence and minimize potential exposure and spread of the COVID-19 virus. This, in turn, decreased production,

*The Houston Forensic Science Center's forensic biology/ DNA and toxicology sections have been working to eliminate backlogs that in part accumulated due to the facility move last year. They are on track to eliminate the backlogs in 2022.*

creating backlogs in most sections.

The toxicology and forensic biology/DNA sections changed their processes to better accommodate remote work, though some staff always had to be onsite to complete laboratory-based tasks, which are substantial.

"The adjustment was significant but both sections were able to create electronic workflows and processes that allowed for production to not only continue, but in some cases, increase," Dr. Stout said.

For the toxicology section, federal grant dollars allowed drug analysis to be sent to a commercial laboratory as staff focused on validating methods on new instruments that will better serve Houston's needs. Those grant dollars have now been exhausted and the drug analysis backlog will grow until HFSC's accrediting body approves the new methods.

Meanwhile, the section will continue to work toward eliminating the backlogged blood alcohol samples.

All blood samples are first tested for alcohol content when they



arrive at HFSC. Samples that are either below the legal limit for

alcohol or are associated with a fatality are then tested for drugs. The latter testing is lengthier and more complex.

The DNA section is also using federal grant dollars to send some evidence to private laboratories. Most of the requests



sent to the commercial laboratories are incoming sexual assault kits, allowing staff to focus on the oldest backlogged kits. Of the 1,300 backlogged requests, about 600 are sexual assault kits.

"The reality here is that even the private laboratories are backlogged and their turnaround times are 120 days and sometimes more," Dr. Stout said. "This is in part because public labs are so strapped they are all sending samples to the commercial labs, who are now themselves under water. There are no easy answers here."

# In the weeds

## Struggles of marijuana testing

The Houston Forensic Science Center's seized drugs section is facing a backlog for the first time in nearly five years, in large part due to the new, time-consuming, complex testing required to determine whether a plant is marijuana.

About one-third of the section's more than 500 backlogged requests \_ those that are more than 30 days old \_ are for this new testing, which HFSC began offering in early September. The new testing method is required due to a

2019 Texas law that legalized hemp and defined marijuana as a Cannabis sativa item containing 0.3 percent or more of delta-9tetrahydrocannabinol (THC,) the psychoactive ingredient in the plant that causes a high.

The definition change required crime laboratories to measure whether the amount of THC in an item is above or below 0.3 percent to determine if it is hemp or marijuana. Until then, labs conducted simpler microscopic and chemical testing to determine if a plant sample contained cannabinoids and was therefore marijuana.

"The old way of testing is no longer sufficient with the new definition because it doesn't tell us how much THC is in an item," said James Miller, manager of HFSC's seized drugs section.

"The new testing method, which took us more than a year to

validate, is far more complex and time-consuming. In fact, it takes twice as long for us to do marijuana testing these days than analysis on any other suspected drug evidence. And it takes four times longer than it previously took to identify marijuana," he added.

And the new testing method is only validated for plant materials. This means, HFSC and other public crime labs in Texas are not able to determine whether items such as edibles or vapes contain marijuana.

Like other crime laboratories in the state, HFSC did not receive additional resources for personnel or instruments to meet the demands of the new law. As a result, HFSC is using the same number of people and instruments, creating a backlog. HFSC has two people and one instrument dedicated to this testing, not nearly enough based on the nearly 400 marijuana requests received since the new testing method was rolled out.

The pandemic further complicated matters as HFSC moved to rotating schedules to decrease onsite numbers and protect staff health and safety. Output decreased by nearly 50 percent, making it impossible for the section to keep up with demand.

The seized drugs section has for years been operating on an average turnaround of less than two weeks, helping courts close cases more quickly and decreasing jail numbers for low-level

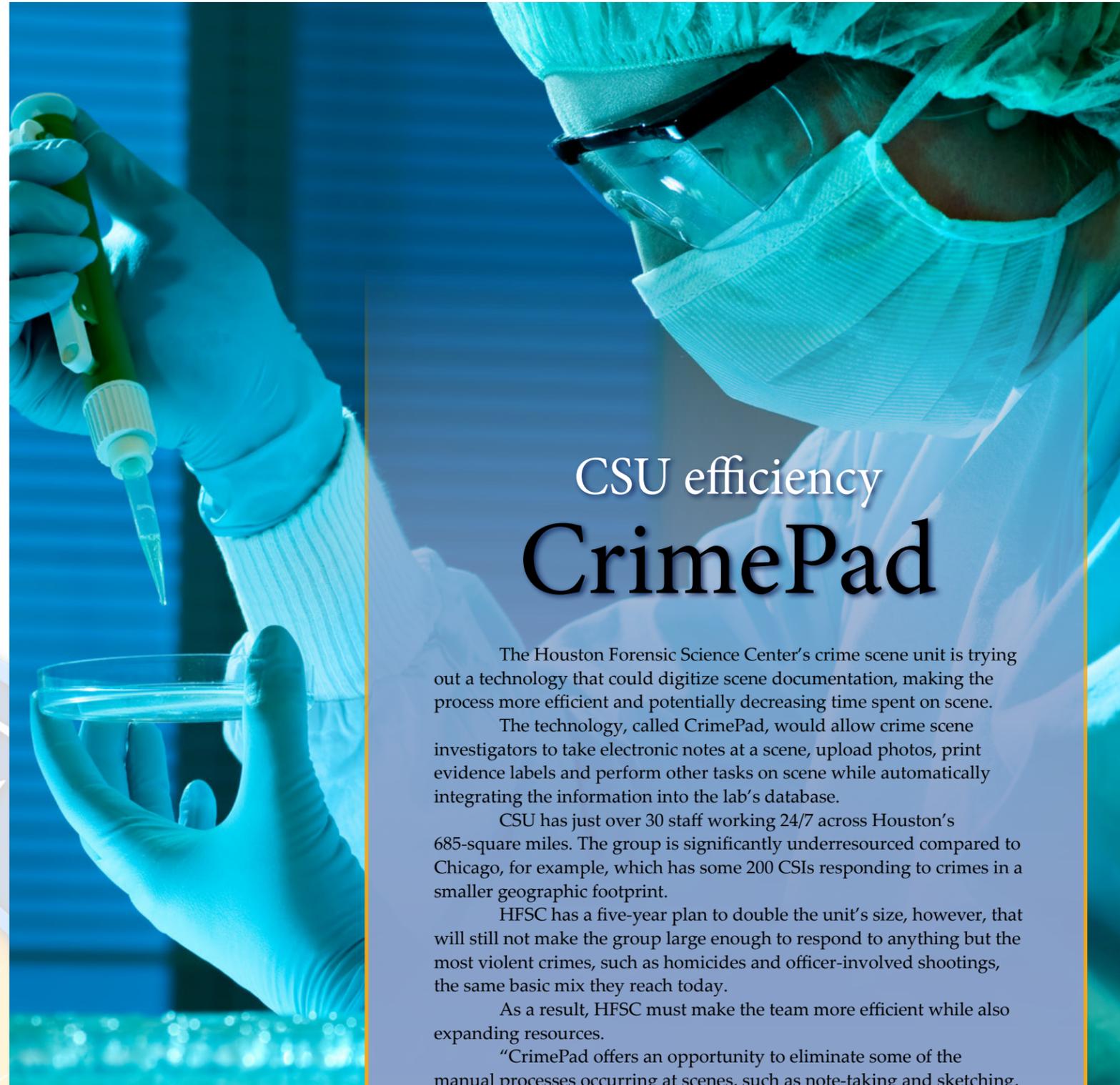
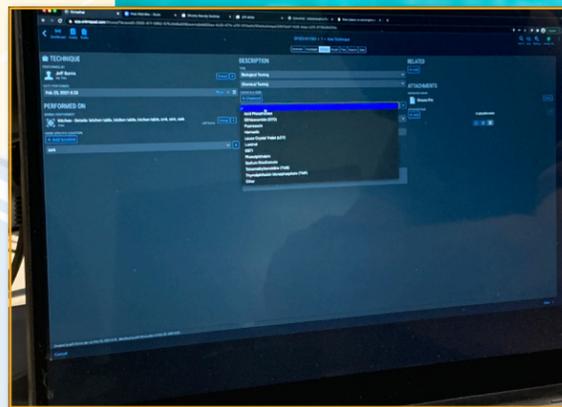
drug offenders.

"The reality is crime laboratories are significantly under-resourced so an unfunded mandate, such as the marijuana law, creates an untenable situation that filters through the entire justice system, causing backlogs from top to bottom," said Dr. Peter Stout, HFSC's CEO and president.

It is especially crucial with marijuana testing because about 60 percent of these requests are tied to probable cause, meaning the courts and investigators need the marijuana result as burden of proof for a more significant charge, such as unlawful carry of a deadly weapon.

Now that most staff have been vaccinated for COVID-19, the seized drugs section will be able to resume normal operations April 5.

"This will ease some of the burden, but it will take months to eliminate the backlog, and unless we receive additional funding for resources, we may never truly address the issues created by the new marijuana testing," Dr. Stout said.



## CSU efficiency

# CrimePad

The Houston Forensic Science Center's crime scene unit is trying out a technology that could digitize scene documentation, making the process more efficient and potentially decreasing time spent on scene.

The technology, called CrimePad, would allow crime scene investigators to take electronic notes at a scene, upload photos, print evidence labels and perform other tasks on scene while automatically integrating the information into the lab's database.

CSU has just over 30 staff working 24/7 across Houston's 685-square miles. The group is significantly underresourced compared to Chicago, for example, which has some 200 CSIs responding to crimes in a smaller geographic footprint.

HFSC has a five-year plan to double the unit's size, however, that will still not make the group large enough to respond to anything but the most violent crimes, such as homicides and officer-involved shootings, the same basic mix they reach today.

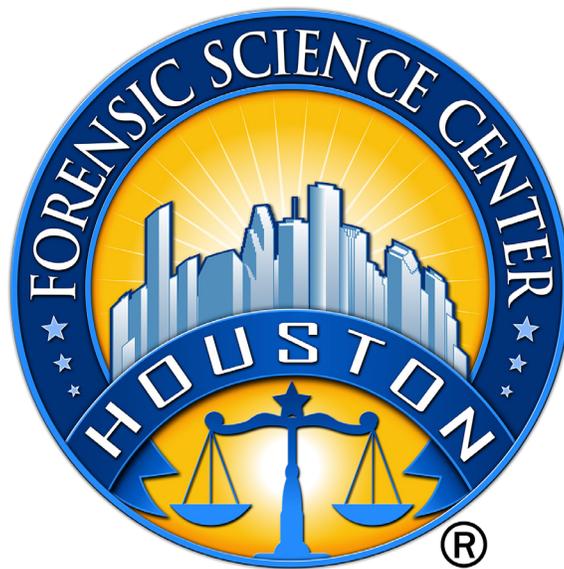
As a result, HFSC must make the team more efficient while also expanding resources.

"CrimePad offers an opportunity to eliminate some of the manual processes occurring at scenes, such as note-taking and sketching, which then needs to be transcribed and made electronic on the backend," said Dr. Peter Stout, HFSC's CEO and president.

"This not only has the potential to save time, it could also improve quality by eliminating the need to transcribe," he added.

Two CSIs are currently using the CrimePads at mock scenes alongside the unit's historical methods to get a sense of whether this technology could meet HFSC's needs.

"There is potential that this technology paired with drones and other mapping techniques will improve quality, efficiency and the final product to stakeholders," Dr. Stout said. "It will, however, take a few months to test, validate and write protocols to ensure these technologies are reliably and properly implemented."



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