

WHAT'S NEWS @ HFSC

HOUSTON FORENSICS SCIENCE CENTER • JULY 2021

The rise of meth: what it means and why it's happening

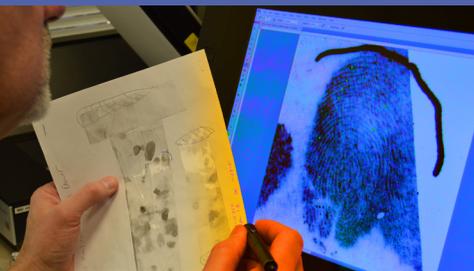
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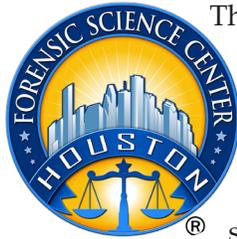
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The highly addictive and dangerous synthetic drug meth has taken over as the number one substance identified by Houston Forensic Science Center analysts and now makes up more than 40 percent of all drugs that land in the lab.

Methamphetamine, a psycho-stimulant also known as "meth," made up 23 percent of identifications in 2018 and has increased rapidly since, making up 31 percent in 2019 and 42 percent last year. So far in 2021, meth is again 42 percent of drug identifications.

"This is a scary trend and it is largely going unnoticed because as a nation we are focused on the opioid crisis ravaging the country," said Dr. Peter Stout, HFSC's CEO and president.

Drug overdose deaths increased overall in 2020, according to the Centers for Disease Control, the federal agency that aggregates the data. Preliminary data through November 2020 predicts more than 92,000 drug overdoses last year, a nearly 30 percent increase from 2019. Most of those deaths are from synthetic opioid use. However, hidden in that data are the nearly 24,000 meth overdoses in 2020, a 40 percent increase from 2019.

"Meth has evolved from a drug manufactured in someone's kitchen to being mass produced in industrial, Breaking Bad-like facilities in Mexico," said James Miller, HFSC's seized drugs section manager. "It's cheap and easy to make and so it is flooding the illicit drug market. We now see meth in everything from fake pharmaceuticals to fake XTC tablets. Many users don't even know they are in fact taking meth."

The meth being manufactured now in Mexico is far purer and more potent than its one-pot-cook predecessors, making it more likely for users to overdose or become addicted. The National Institutes of Health reports the drug has both short- and long-term impacts on physical and mental health. Further, the NIH's National Institute on Drug Abuse reported in January that meth overdose deaths had increased significantly between 2011-2018, quadrupling among non-Hispanic Native Americans and Alaska Natives. And while that was the sharpest increase, meth overdose deaths increased among all U.S. populations.

"The more meth is available on the streets, the more we see it slipped into all variety of drugs _ as we are now _ the more we can expect this upward trend to continue," Dr. Stout said.



A Few Words From Our President

HOUSTON FORENSICS SCIENCE CENTER

Backlogs. The bane of every crime lab's existence and what media love to talk about.

No question backlogs are problematic. They cause bottlenecks throughout the justice system as all stakeholders _ from the defendants to the victims to the attorneys to the investigators _ can be stuck waiting for that forensic result. It means sexual assault kits collect dust for months, years and even decades until they are tested, leaving survivors waiting for justice and, at times, rapists out on the streets still committing crimes. It causes undue stress and pressure on analysts, raising the risk of error.

But these discussions and more obvious impacts either miss or gloss over some of the more subtle, but no less significant, obstacles and challenges posed by backlogs, much of which can be traced to the No. 1 biggest problem for every crime lab: a lack of resources.

First, backlogs force crime labs to prioritize cases and decide which is more important. Imagine deciding whether a double homicide or a multiple assailant sexual assault is more important? How does one decide? What is the answer?

Second, backlogs mean that what could be the most objective piece of scientific evidence is delayed. But the justice system must move forward, and at times stakeholders, lacking that forensic result, base decisions on less reliable evidence, such as eyewitnesses or confessions.

These are just two of the biggest problems that often go unnoticed or ignored. They cause enormous issues for the entire justice system and can have significant consequences.

And yet, government on all levels _ local, state and federal _ has failed to properly fund crime laboratories for decades. Federally, there is some \$200 million in grant dollars annually to be shared by some 400 crime labs. Most of that money is for DNA, leaving all other disciplines scrambling for a few hundred thousand dollars even though the backlogs are often far bigger. The most recent data from 2014 shows that on average crime labs receive less than \$450/request to do everything from receiving the evidence to testimony. The real cost? More like \$1,800 to \$2,000 per request.

So, who suffers most when crime labs are underfunded?

Everyone.

And, sometimes, truth and justice.

As we focus nationally on criminal justice issues and on how, where and who to fund, we need to ensure crime labs are a part of the conversation. If we leave out a crucial element of the justice system _ we will find ourselves simply with the same problems, only with a larger backlog.

Peter Stout, Ph.D.
CEO/President



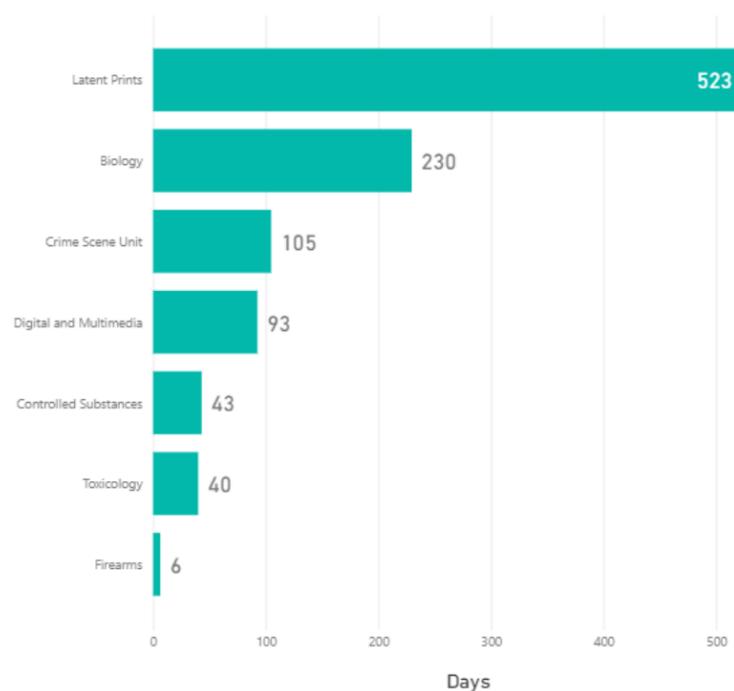
Peter Stout, Ph.D.

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.

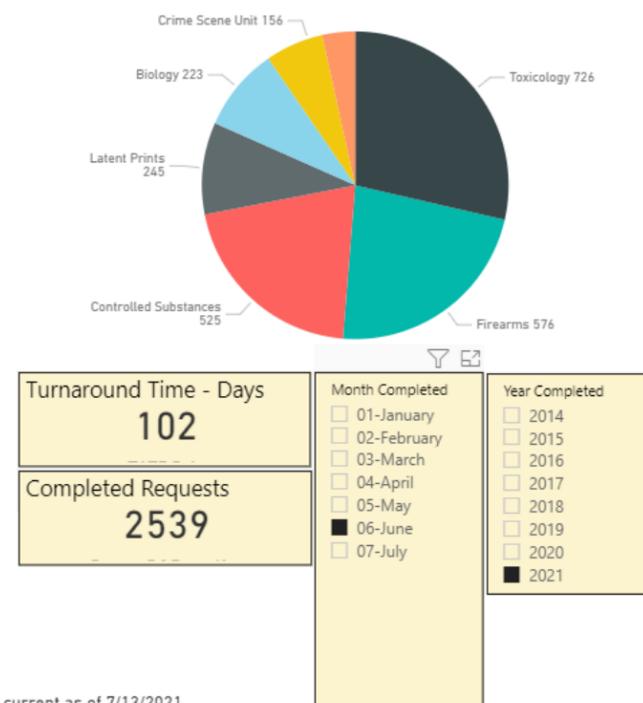
HFSC At A Glance

Average Turnaround Time for June 2021



This data is current as of 7/13/2021.

Requests Completed by Section



Turnaround Time - Days	102
Completed Requests	2539

Month Completed	Year Completed
<input type="checkbox"/> 01-January	<input type="checkbox"/> 2014
<input type="checkbox"/> 02-February	<input type="checkbox"/> 2015
<input type="checkbox"/> 03-March	<input type="checkbox"/> 2016
<input type="checkbox"/> 04-April	<input type="checkbox"/> 2017
<input type="checkbox"/> 05-May	<input type="checkbox"/> 2018
<input checked="" type="checkbox"/> 06-June	<input type="checkbox"/> 2019
<input type="checkbox"/> 07-July	<input type="checkbox"/> 2020
	<input checked="" type="checkbox"/> 2021

The most significant operational item to share from June is that the toxicology section has eliminated its blood alcohol testing backlog and is now largely running on an average 30-day turnaround time. Soon the section should also be able to resume in-house drug confirmation analysis and begin chipping away at that backlog.

The seized drugs section is also making progress against its backlog, though efforts are complicated by new, more complex and time-consuming marijuana testing.

The latent print section, which has the largest backlog, has implemented process changes designed in part to decrease turnaround times and to improve communication and responsiveness to stakeholder needs.

Requests have also increased nearly 20 percent across sections, making fiscal year 22 even tighter than had been expected. Most of the increase is driven by DNA, firearms and the crime scene unit, though others are also seeing more modest rises in requests.

For more information, please visit www.houstonforensicscience.org

Guns, guns and more guns: 2021 sees 38% increase in requests



The Houston Forensic Science Center has been processing an average of more than 450 guns a month this year, an increase of nearly 40 percent compared to the same time in 2020, a reflection of a broader trend of increasing gun violence in Houston and nationally.

These firearms are seized by the Houston Police Department. HFSC test fires the guns and uploads images of the cartridge cases into the ATF's National Integrated Ballistic Information Network (NIBIN,) a database used to link guns used between crimes.

The information can provide law enforcement with crucial investigative information if it is received quickly and so HFSC _ in line with ATF policy _ generally provides results in five days or less.

"This increase has been going on for two years and is having enormous impact on the section, forcing technicians at times to work 14 hour or more days," said Dr. Peter Stout, HFSC's CEO and president.

"It is also a scary indication of what is happening in our city at the moment since homicides have also increased nearly 40 percent in the first six months of 2021. And this after violent crime increased significantly in 2020," he added.

NIBIN technicians processed 3,137 guns from January 1 to June 30 of this year, compared

Requests have increased nearly 40 percent in 2021 for HFSC to image and upload guns into the ATF's National Integrated Ballistic Information Network _ a database of largely guns and cartridge casings used to link firearms between crimes. HFSC now routinely processes about 450 guns a month compared to an average of 310 in 2019.

to 2,270 during the same time in 2020. And by July 15, they had completed 291 guns, on track to blow past July 2020 when 356 had been processed during the entire month.

HFSC is hiring an additional technician, bringing the total number of personnel in the NIBIN unit to five. However, it takes six to nine months to train a new staff member and one person in the unit is still in training and another focuses on identifying leads, leaving only two people currently authorized to do firearms testing.

"This is not a sustainable situation and I am worried about the well-being of my staff," said Donna Eudaley, HFSC's firearms section manager. "I am watching these numbers closely so we can make sound decisions going forward on how to grow the unit to continue meeting demand and ensuring a quality product."

NIBIN is not the only unit seeing an increase in requests. Several other sections are seeing a significant rise in demand, including DNA and toxicology, and overall HFSC has seen a nearly 20 percent increase in requests in 2021.

"Increasing caseload is a concern across the board and, in the long term, can lead to backlogs and longer turnaround times," Dr. Stout said.



Process improvements

Latent prints looks to better turnaround times

The latent print lean six sigma project team implemented several process improvements earlier this month, including requiring investigators to use the Where's My Request portal to have latent print work completed and creating a method to prioritize evidence items based on potential value.

The changes, which are still in a pilot phase, are in direct response to stakeholder needs and feedback.

The first improvements rolled out July 1 and this will continue in August with internal process changes.

The project team collaborated with the Houston Police Department to design process improvements that would improve communication, turnaround time and the request process.

For example, by using the Where's My Request portal, requesters can select prioritization needs, provide additional information as it becomes available and it allows the investigator to receive the examination results directly. This will ultimately improve



communication and turnaround time by improving the process itself.

In addition, by prioritizing testing based on stakeholders' requests HFSC will be able to more quickly provide investigative information. The latent print section can also optimize its processes, conserve resources and reduce its backlog if there are standards for the number of evidence items associated with a request.

“The project team has done a great deal of work to design and prepare for these improvements.”

For violent crimes, requesters will be limited to 10 evidence items. If that examination does not yield results, subsequent requests will focus on additional items. In non-violent cases, such as burglary of a motor vehicle, examination will be prioritized based on the description of the evidence. For example, prints from the interior of a car will be prioritized over those from the exterior.

These policies are based on a draft of best practices for

latent print examination from the Organization of Scientific Area Committees for Forensic Science (OSAC.) The draft guidelines recommend examiners prioritize the most probative items in a request and stop analysis when a stakeholder's investigative needs have been met.

In addition to these external improvements the project team designed new internal processes and created a new support position for the section.

The new support specialist will focus on triaging incoming and backlog cases, accepting portal requests, discussing case status and request prioritization needs with stakeholders, assigning cases to the section and performing other administrative tasks.

“The project team has done a great deal of work to design and prepare for these improvements. Any increment of change is not easy, and these large improvements will cause major disruption to internal and external processes,” said Dr. Peter Stout, HFSC's CEO and president.

“The team will monitor the pilot's progress to determine if it is in fact more efficient and streamlined and will modify the pilot where needed,” he added.

HOUSTON FORENSIC SCIENCE CENTER

Quality first: Findings of HFSC's assessment



The Houston Forensic Science Center's accrediting body, ANAB, has completed its annual assessment of the laboratory's operations and procedures, finding only one non-conformance relating to documentation of training.

HFSC also asked ANAB to consider expanding the agency's scope of services in toxicology to allow the section to resume in-house drug confirmation testing but with new methods.

Once HFSC has corrected the non-conformance, ANAB will re-certify the lab's accreditation and approve the scope expansion in toxicology.

“To have only one non-conformance _ and for it to be a genuine opportunity to improve _ is truly a great outcome for an annual assessment and is further evidence of the great work done every day by HFSC's staff and quality division,” said Dr. Peter Stout, HFSC's CEO and president.

“Here at HFSC we view accreditation as the minimum standard and so, even with this non-conformance, we will review and respond to it broadly to ensure the entire organization is compliant,” he added.

ANAB found that while the toxicology section's training program outlined that all analysts have to satisfactorily pass a written or oral exam in order to be authorized to complete casework it does not define “satisfactory.”

HFSC has 60 days to address and fix the issue and during that time it will review the training programs for all disciplines to ensure there is a clear definition for this requirement across the board.

“ We will ensure the criteria for ‘acceptable performance’ are defined in all training program documents,” said Erika Ziemak, HFSC's quality

division director. “We are always eager to improve our processes and documentation and this is yet another opportunity to do just that.”

However, HFSC will work to address the issue in fewer than 60 days because the toxicology scope expansion, crucial for the resumption of drug confirmation testing, hangs in the balance.

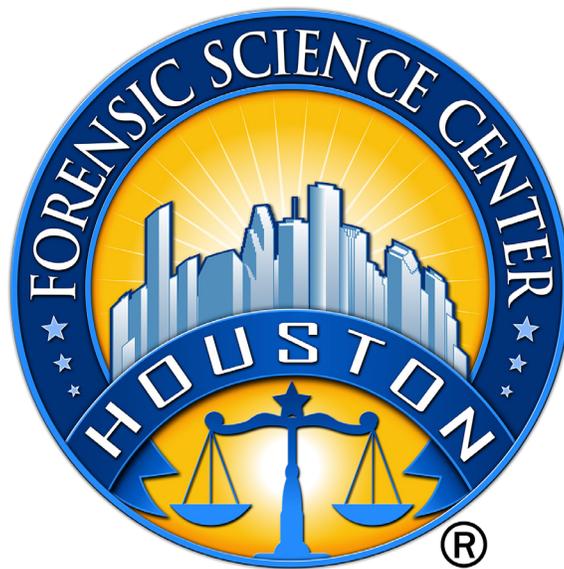
The toxicology section has spent more than a year validating methods on new, high-tech instruments so HFSC could provide better drug confirmation results to the community. That work cannot begin until the scope expansion is approved and a backlog of more than 1,500 requests is growing as that work remains on hold.

HFSC did outsource this work to a private vendor during some of this time but exhausted the federal grant dollars that had been available. As a result, only urgent cases are being sent to the vendor and the remaining work is awaiting approval of the new methods.

“We will do our best to speed along the process of correcting this non-conformance, however, we need to ensure this is done properly and so, while the goal will be to complete it in fewer than 60 days, we think we can sufficiently resolve the issue in less than two months,” Dr. Stout said.

Toxicology drug testing is typically done when a suspected DWI sample comes back negative for alcohol or when there is a fatality associated with the incident. All samples from drug-facilitated crimes, such as sexual assaults, are also tested for drugs. Overall, about 30 percent of requests to the section move on to drug analysis.

“This is an important function so while there must be a short turnaround time we also must ensure we get the right result. Our quality system is what makes this happen,” Dr. Stout added.



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