

# Kentucky State Police Forensic Laboratories Toxicology Update

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# Toxicology Caseloads: Alcohol vs. Drugs

2017

Received 14,324 Assignments

Completed 15,386 Assignments

2018 (as of 08/31/2018)

Received 8,906 Assignments

Completed 9,184 Assignments

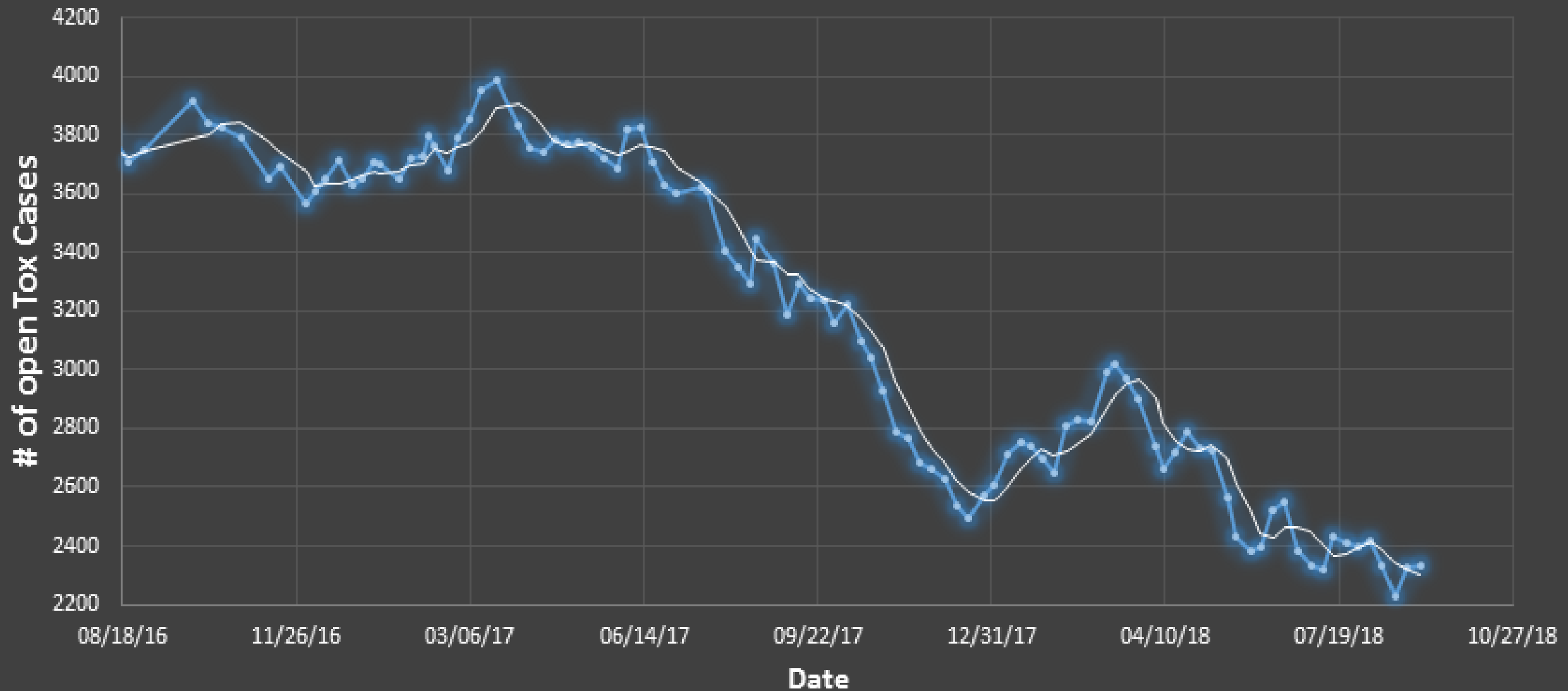
72% of cases get drug tested

Current Average Turnaround Time is 36 days for alcohol and 76 days for drugs

~ 1,900 cases statewide awaiting analysis (down from 4,800 in 2015)

# Tox Active Cases

—●— weekly Active Tox Cases      — 4week moving average



# Expanding Drug Panel

Acetyl Fentanyl  
Buprenorphine  
Cocaine  
Cyclobenzaprine  
EDDP  
Norbuprenorphine  
6-  
Monoacetylmorphine  
7-Aminoclonazepam  
α-Hydroxyalprazolam  
Alpha-PVP  
Alprazolam  
Amitriptyline  
Amphetamine  
Benzoylcegonine  
Butalbital  
Carbamazepine  
Carisoprodol  
Cathinone  
Clonazepam

Codeine  
Dextromethorphan  
Diazepam  
Dihydrocodeine  
Diphenhydramine  
Doxepin  
Estazolam  
Etizolam  
Fentanyl  
Flunitrazepam  
Hydrocodone  
Hydromorphone  
Ketamine  
Lorazepam  
MDA  
MDMA  
MDPV  
Meperidine  
Mephedrone  
Meprobamate

Methadone  
Methamphetamine  
Methcathinone  
Midazolam  
Morphine  
Nitrazepam  
Nordiazepam  
Nortriptyline  
Oxazepam  
Oxycodone  
Oxymorphone  
Phencyclidine  
Phenobarbital  
Phentermine  
Phenytoin  
Promethazine  
Propoxyphene  
Quetiapine  
Temazepam  
Tramadol

Trazodone  
Zaleplon  
Zolpidem  
Zopiclone

RED = NEW

Plus we will now be  
able to see THC as  
low as 1ng/mL

# Timeframe for Faster Turnaround Time

- **New screening and confirmation techniques will reduce the number of tests from 7 to 4**
- Implementation is a slow process (validation, training, SOP updates)
- 1st new screening technique going 'live' by the end of the year
- **Personnel retention is vital**
- Retaining experienced analysts is critical to improve turnaround times
- Currently 5 fully trained drug analysts on new methods will double to 10-13

# Timeframe for Faster Turnaround Time (Cont)

- **Avoid Instrumentation Breakdown**
- Instruments are VERY expensive, repairing them is no different
  - LC/MS/MS – approximately \$375,000 apiece
  - Purchasing 2 extraction robots after 01/01/2019 – approximately \$60,000 each
- Due to expense building redundancy is difficult
- Instrument breakdown is the #1 cause of backlog increases

# Difficulties with Synthetics

- A review of cases we outsourced where synthetics were “indicated” by the arresting officer, 18% of the cases were positive
- Bringing synthetics into the drug screen is difficult due to the amount of time it takes to identify the metabolites and have validations completed. (Cannot create test subjects for Schedule I DEA drugs)
- If all cases are screened for synthetics, percentage will be significantly lower?
- What will we need to add synthetics?
- How will adding this extra screen impact case Turnaround Time?
- Need to balance with cost of testimony from vendor labs if we continue to outsource

Questions or Comments?

DUI-D Toxicology

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