

***SUMMARY OF SYNTHETIC
OPIOID TESTING
WITHIN THE DEPARTMENT OF DEFENSE***

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Drug Demand Reduction Program Mission and Scope

Mission:

Enable operational readiness, safety, and security of the Total Force by deterring illicit and prescription drug abuse through robust and dynamic drug testing; emerging drug threat surveillance; prevention, education, and outreach efforts; and development of new testing procedures.

Scope:

All DoD components and DoD civilians in testing designated positions (TDPs)

Policies:

DODI 1010.01 “Military Personnel Drug Abuse Testing Program (MPDATP)”

DODI 1010.09 “DoD Civilian Employee Drug-Free Workplace Program”

DODI 1010.16 “Technical Procedures for the Military Personnel Drug Abuse Testing Program (MPDATP)”



DDRP Driving Factors

- Drug abuse in the general U.S. 18-25 year old male group is estimated to be 17-20%— the population from which the Service recruits their enlisted personnel
- Before DoD instituted drug testing among Service personnel, drug use was a significant recurring problem
 - Vietnam (estimated over 5% of returning service members addicted to heroin)
 - 1981 CVN Nimitz aviation mishap – 14 killed, 48 injured, 7 aircraft destroyed, 11 aircraft damaged, \$150M in damages, six deceased with detectable levels of marijuana
- Notable increase in abuse/misuse of prescription pain medications
- Personnel abusing illicit drugs or prescription medications are a safety hazard resulting in the potential loss of equipment, resources, and lives



DDRP Major Functions

Testing

Collections

Prevention & Outreach

Joint Service



Illicit Drugs: Marijuana, Cocaine, Methamphetamine, MDMA (Ecstasy, Molly) Heroin, Amphetamines



Frequent Randomized Collection



Anti-Drug Training and Awareness



Centralized Instrument Procurement



Expanded Prescription Opiates & Benzodiazepines



Forensic Chain of Custody necessary for Litigation or Punitive Actions



Military Family Outreach Programs



Military Entrance Processing (MEPS) Drug Testing



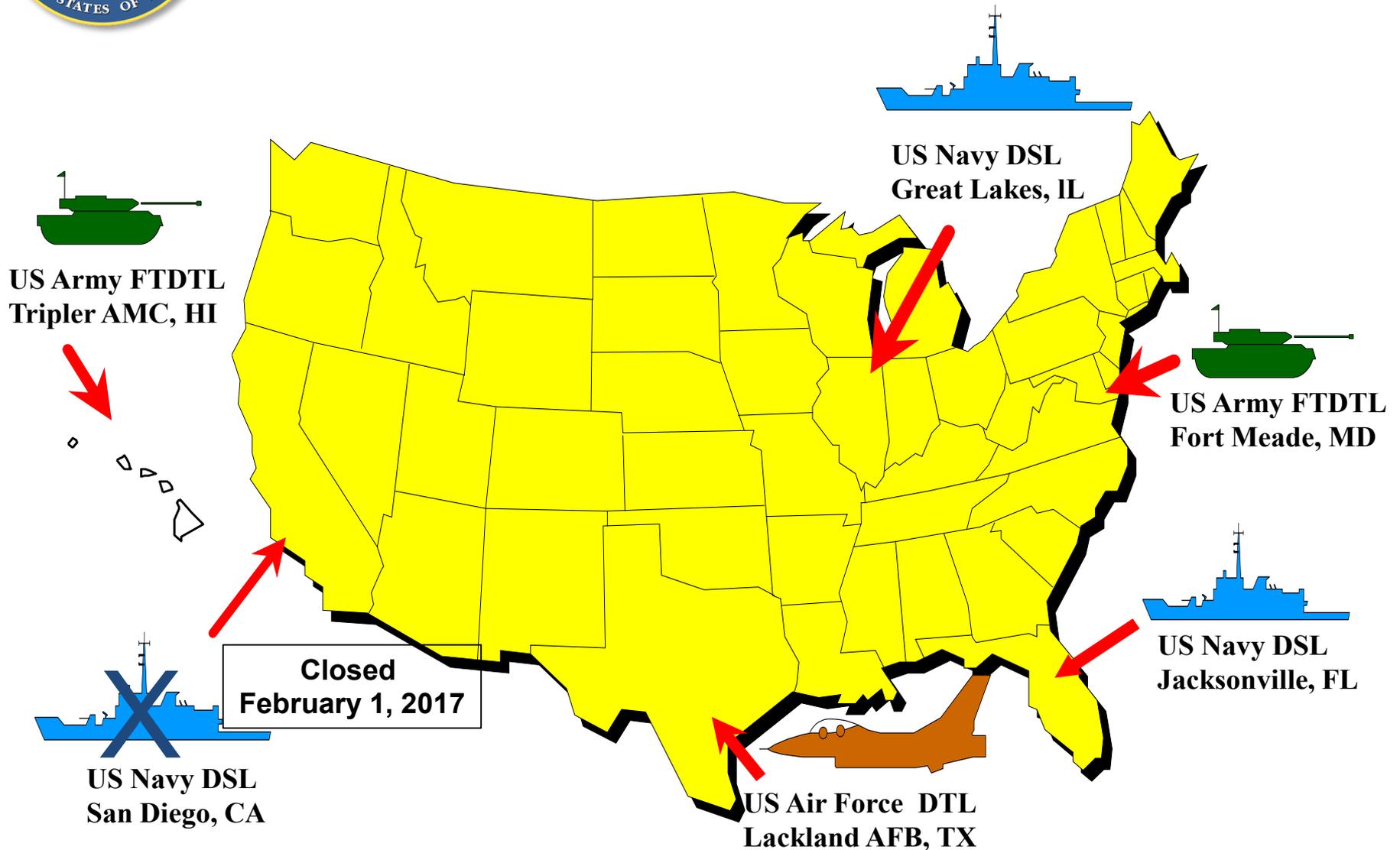
Synthetic Cannabinoids



AFMES Forensic Toxicology Drug Surveillance and Testing Methodology Development



DoD Laboratories





DoD Opiate/Opioid Cutoff Concentrations

SUMMARY

Initial Screen Immunoassay	
Analyte	ng/mL
PRELIMINARY (Codeine, Morphine, Hydrocodone, Hydromorphone)	300
Opiates (Morphine/Codeine)	2,000
Opioid (6-monoacetylmorphine)	10
Opioid (Oxycodone / Oxymorphone)	100
Opioid (Hydrocodone / Hydromorphone)	300

Confirmation Analysis		
Analyte	ng/mL	Drug
Morphine	4,000	Morphine
Codeine	2,000	Codeine
6-monacetylmorphine	10	Heroin
Oxycodone/	100	Oxycodone
Oxymorphone	100	Oxymorphone
Hydrocodone/	100	Hydrocodone
Hydromorphone	100	Hydromorphone



DDRP History

- Jun 11, 1971 – President Nixon directed military drug urinalysis program to identify service members with drug addiction returning from Vietnam
- May 26, 1981 – CVN Nimitz aviation mishap – 14 killed, 48 injured, 7 aircraft destroyed, 11 air craft damaged, \$150M in damages. Six deceased service members with detectable levels of marijuana upon medical autopsy and toxicology analysis
- Dec 28, 1981 – Deputy Secretary authorized use of drug positive urinalysis for punitive measures including courts martial and military separation
- 1984 – Department of Defense issued DoD Directive 1010.1 that formally defined forensic drug testing requirements and responsibilities for testing
- September 15, 1986 – President Reagan issued Executive Order 12564 mandating drug testing for all federal civilians



Synthetic Opioid History

- FY 2006 – Oxycodone and Oxymorphone added to testing panel
 - Pulse tested only
 - ~25% of specimens tested
- FY 2010 – Chairman, Joint Chiefs of Staff directive expanded prescription drug testing for synthetic opioids and benzodiazepines
- FY 2012 – Hydrocodone and hydromorphone added to the testing panel
 - Pulse tested at ~40%
- FY 2013 – Achieved 100% testing for all opioids (Codeine, Morphine, Hydrocodone, Hydromorphone, Oxycodone, Oxymorphone)



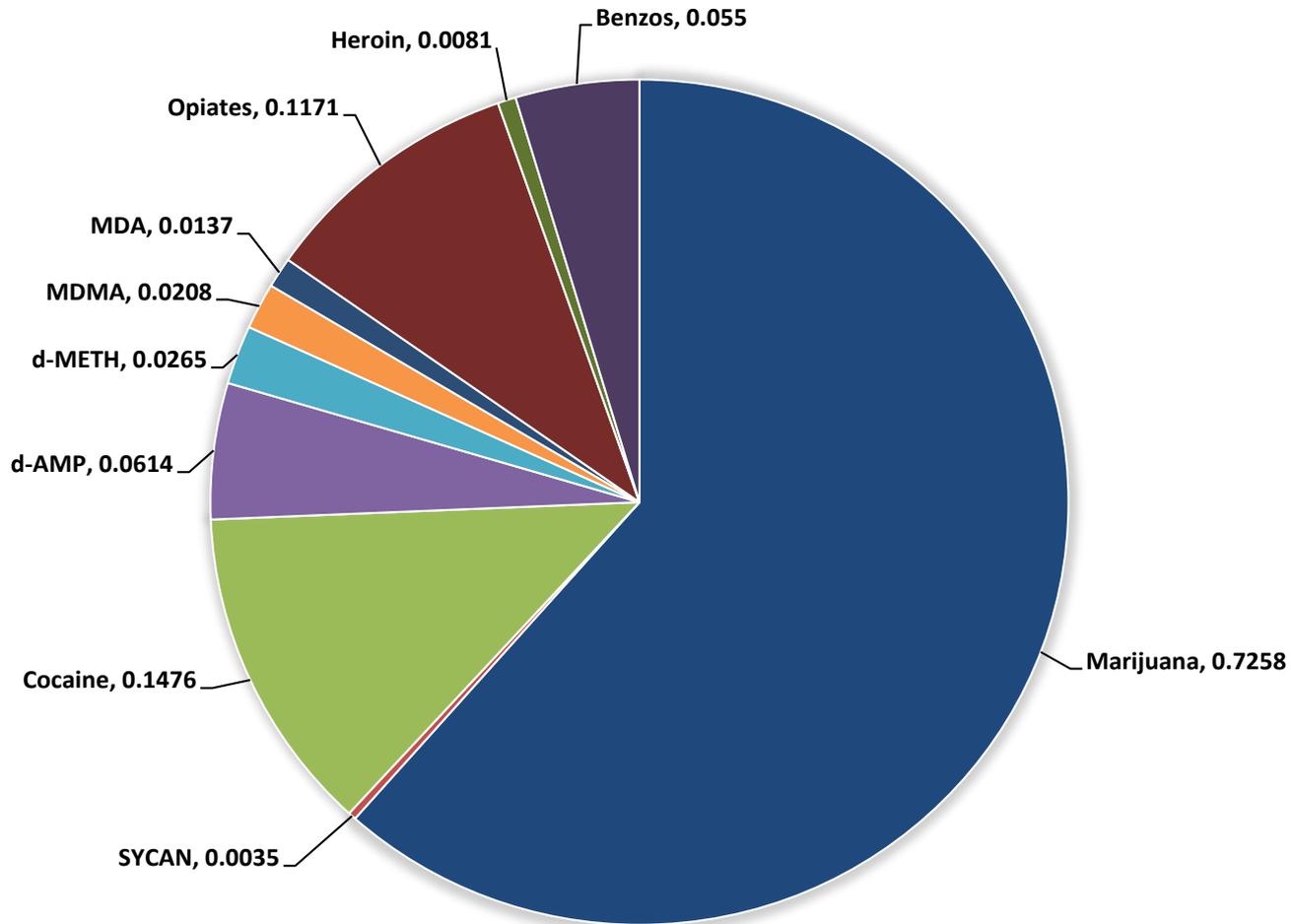
Observations on Synthetic Opioid Testing

1. Potentially huge increase in confirmation workload mitigated through use of electronic review (automated MRO) process

- In situ comparison of positive initial test result to the individual's military prescription record. "Washed" if valid script and dispensing event on record.
- Implemented on May 1, 2012
- Decreased need for confirmation and subsequent manual MRO process (MRO "Wash")
- Example of impact: FY 2014 Summary
 - Oxycodone = 78% (12,586 positives "washed")
 - Benzodiazepines = 67% (11,838 positives "washed")
 - Opiates = 46% (11,443 positives "washed")
- Large number of Service members positive during initial implementation
- Significant reduction in positive rates over past three Fiscal Years
 - Nearly 70% decrease from FY 2013 to FY 2016
 - Trend continuing in FY 2017* (*final data pending)



FY 2016 Positive Service Member Drug Distribution





Observations on Synthetic Opioid Testing

2. Significant reduction in positive drug rates

Total DoD Drug Positive Rates per 100,000 Unique Service Members Tested (Post MRO Review)	2012	2013	2014	2015	2016
Codeine (Corrected for 39% testing in FY 2012)	24.3	15.7	12.0	10.4	7.3
Morphine (Corrected for 39% testing in FY 2012)	34.2	17.9	13.7	13.0	7.5
Oxycodone (Corrected for 35% testing in FY 2012)	100.0	59.9	40.3	25.2	17.6
Oxymorphone (Corrected for 35% testing in FY 2012)	175.1	106.4	70.9	46.7	31.9
Hydrocodone (Corrected for 39% testing in FY 2012)	39.6	50.0	34.3	20.6	17.4
Hydromorphone (Corrected for 39% testing in FY 2012)	46.2	54.8	37.3	24.7	17.5
Heroin	9.9	10.7	10.1	9.8	6.9
<i>Source: Defense Manpower Data Center</i>					

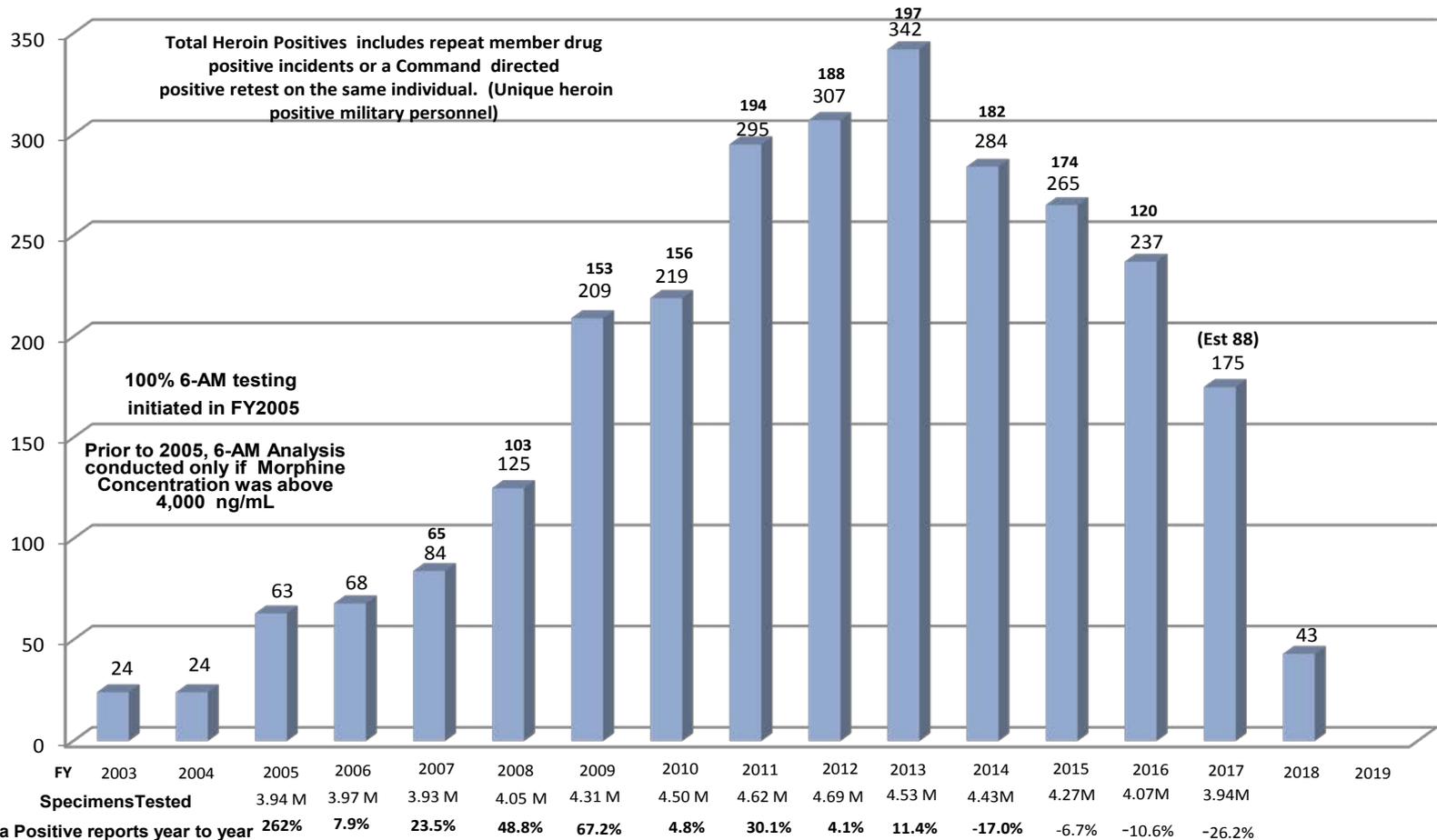
~70% decrease in opiate/opioid positives since 2013, but prescription medication abuse cause for concern!



DoD Success with Heroin Addiction

DOD

Total DoD Military Personnel Heroin Positives Reported Through 31 December 2017. Based upon two months data metrics, estimate 172 heroin positive results will be reported in FY 2018. The bolded number is the number of unique heroin positive Service memb



82 Heroin Positive Results Reported during 5 year period between FYs 1998 - FY 2002



Observations on Synthetic Opioid Testing

3. MRO review is more complicated

- MROs need to be aware of metabolism pathways and ratios
 - Many instances of MROs concluding that Hydrocodone was from Oxycodone ingestion and vice versa (“all are opioids”)
- Increasing need to release negative or “washed” results to interpret whole picture
- Many claims of innocent / accidental ingestion
- Significant empathy for sharing of prescription drugs!



Observations on Synthetic Opioid Testing

4. What is the definition of illicit/unauthorized use?

- Use for another medical condition than originally intended?
- Use of different dose than prescribed?
- Use someone else's prescription?
- Use after the expiration date? Which one?
- No Federal Law on prescription expiration dates
 - One prescription during lifetime = authorized use?
 - Attempts to implement expiration dates for DoD unsuccessful
- DoD trying to change policy to 180 days since dispensed.
- **With no expiration date policy, DoD is essentially only enforcing one finding: use of another person's prescription**



Conclusions

- Random urinalysis testing appears to be an effective deterrent to opioid drug abuse in concert with medical and education and outreach programs.
- Prevalence of opioids can result in large increases in workload, most of which is legitimate use.
- MRO review is more complicated and requires additional training, oversight, and quality assurance.
- Legal limits on possession and use of prescription drugs needed.