



# Drug use in the American workforce

**Presented by:**

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Exclusive first look at the 2019 Quest Diagnostics Drug Testing Index™

- About the Quest Diagnostics Drug Testing Index (DTI)
- About National Survey on Drug Use and Health data
- Key findings
  - Insights from DTI data
  - Analysis by drug category
  - Analysis by specimen validity testing (SVT) category
  - Analysis by testing reason
- Summary
- Q & A



# Quest Diagnostics Drug Testing Index™

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National analysis of workplace drug testing data from our forensic toxicology labs

## Routine urine specimens submitted for *workplace* drugs of abuse testing

- Workplace
- Rehabilitation and criminal justice excluded
- Point of collection confirmations excluded (excludes high positivity)

## Laboratory positive data (prior to MRO review)

- Does not indicate whether there is an “alternative medical explanation”
- Includes employer/Medical Review Officer (MRO) blinds

## Two major groups

- Federally mandated, safety-sensitive workforce
- General U.S. workforce



# National Survey on Drug Use and Health (NSDUH)

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## Data on alcohol and illicit drug use in the United States

- Annual survey of the civilian, non-institutionalized population of the U.S. aged 12 years old or older
- Presents national estimates of rates of use, numbers of users, and other measures related to illicit drugs, alcohol and tobacco products
- Self-reported use
- Approximately 67,500 persons are interviewed in NSDUH annually
- Sponsored by Substance Abuse and Mental Health Services Administration (SAMSHA)



# Common matrices in drugs of abuse testing

Detection windows vary by drug test specimen type

## Urine drug testing



**Detects recent use**  
(previous 24-72 hours)

## Oral fluid drug testing



**Detects recent use**  
(previous 24-48 hours)

## Hair drug testing



**Detects a pattern of repetitive use**  
(up to 90 days, based on testing  
proximal 1.5" head hair)

# Key findings

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## Analysis from the Quest Diagnostics Drug Testing Index™ 2019 report

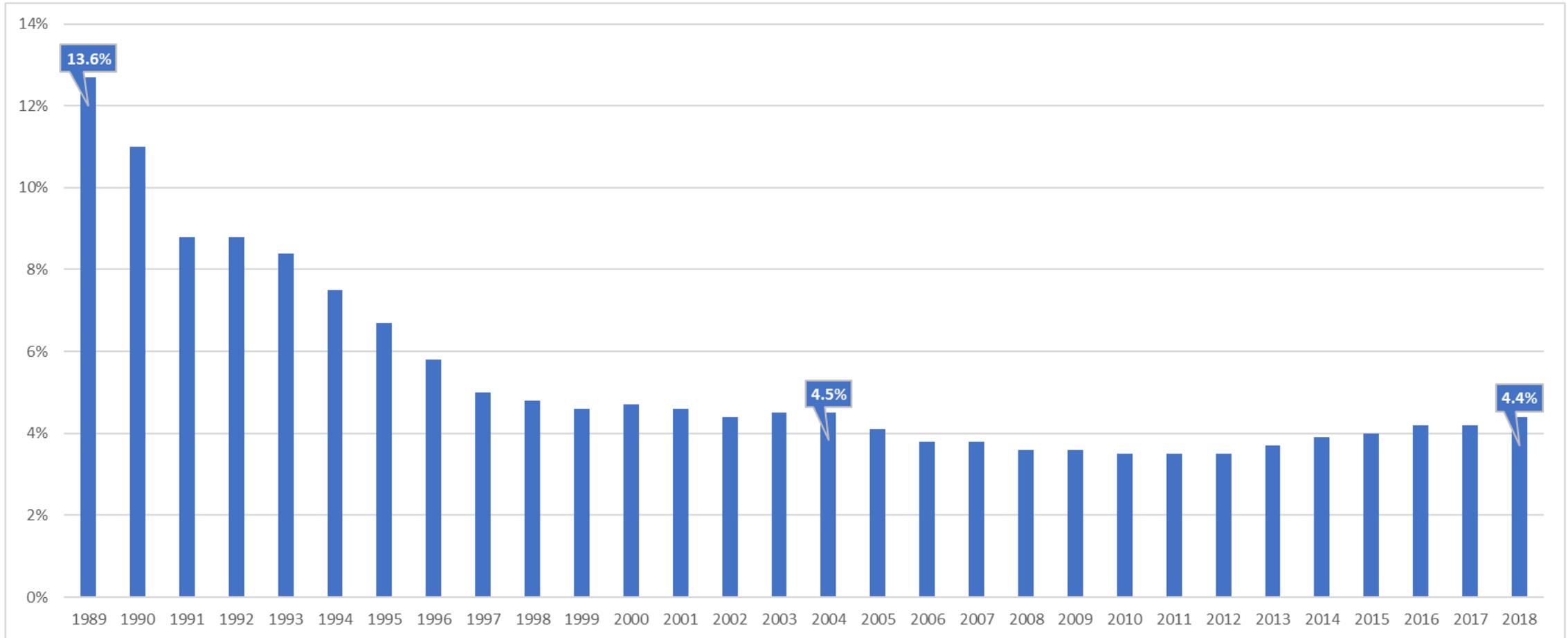
- Positivity climbs to its highest rate since 2004
- Increases in marijuana positivity across nearly all employee testing categories
- Positivity for cocaine and heroin declined between 2017 and 2018
- Positivity for opiates in urine drug testing declined across all opiate categories in general U.S. workforce
- Increases in post-accident positivity outpace those for all other testing reasons, including pre-employment screening
- Rises in specimens reported as invalid suggests more efforts to “cheat the test”



# Insights from DTI data

# Annual positivity rate increases

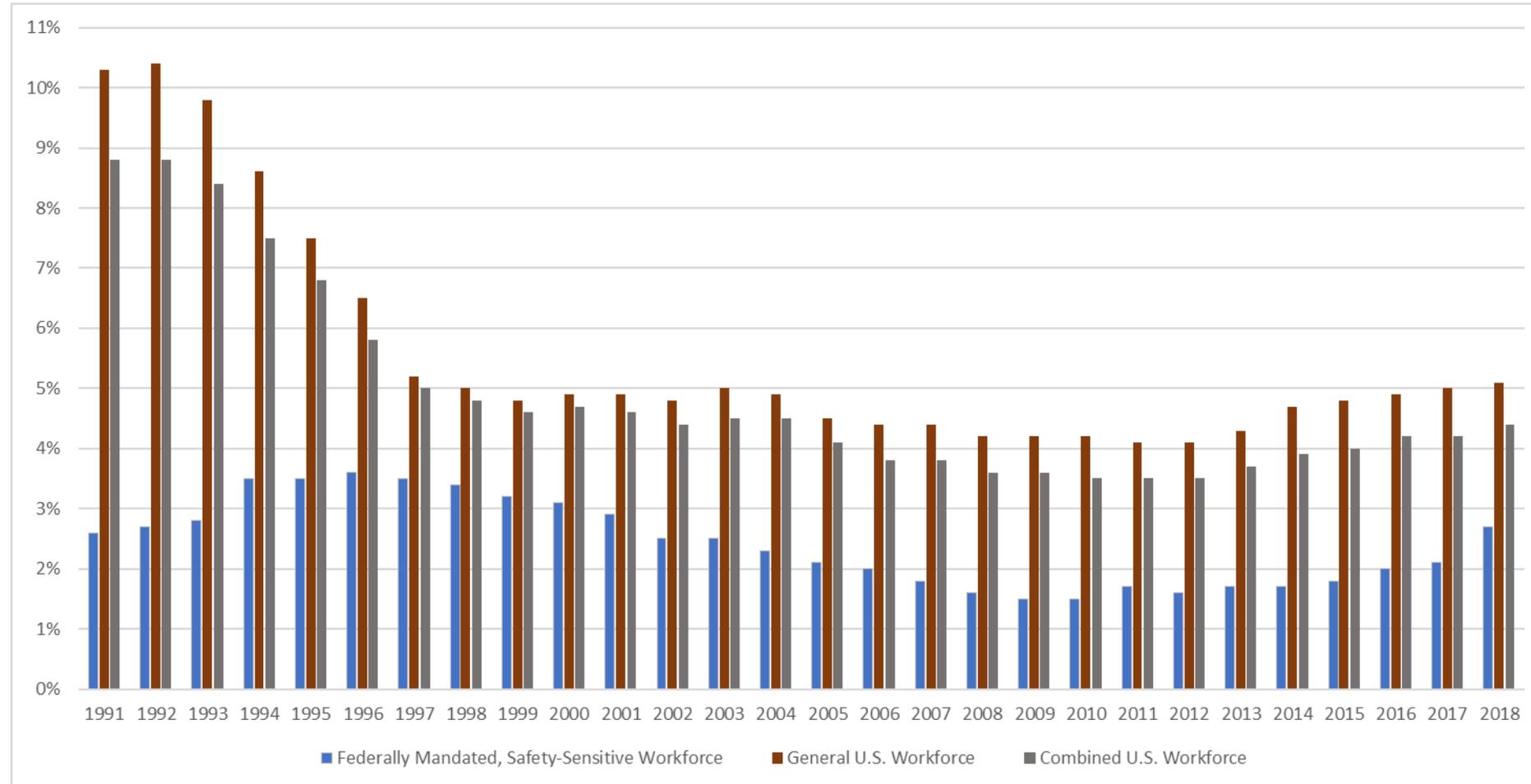
Insights from millions of combined U.S. workforce urine drug tests



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Workplace urine drug test positivity rates

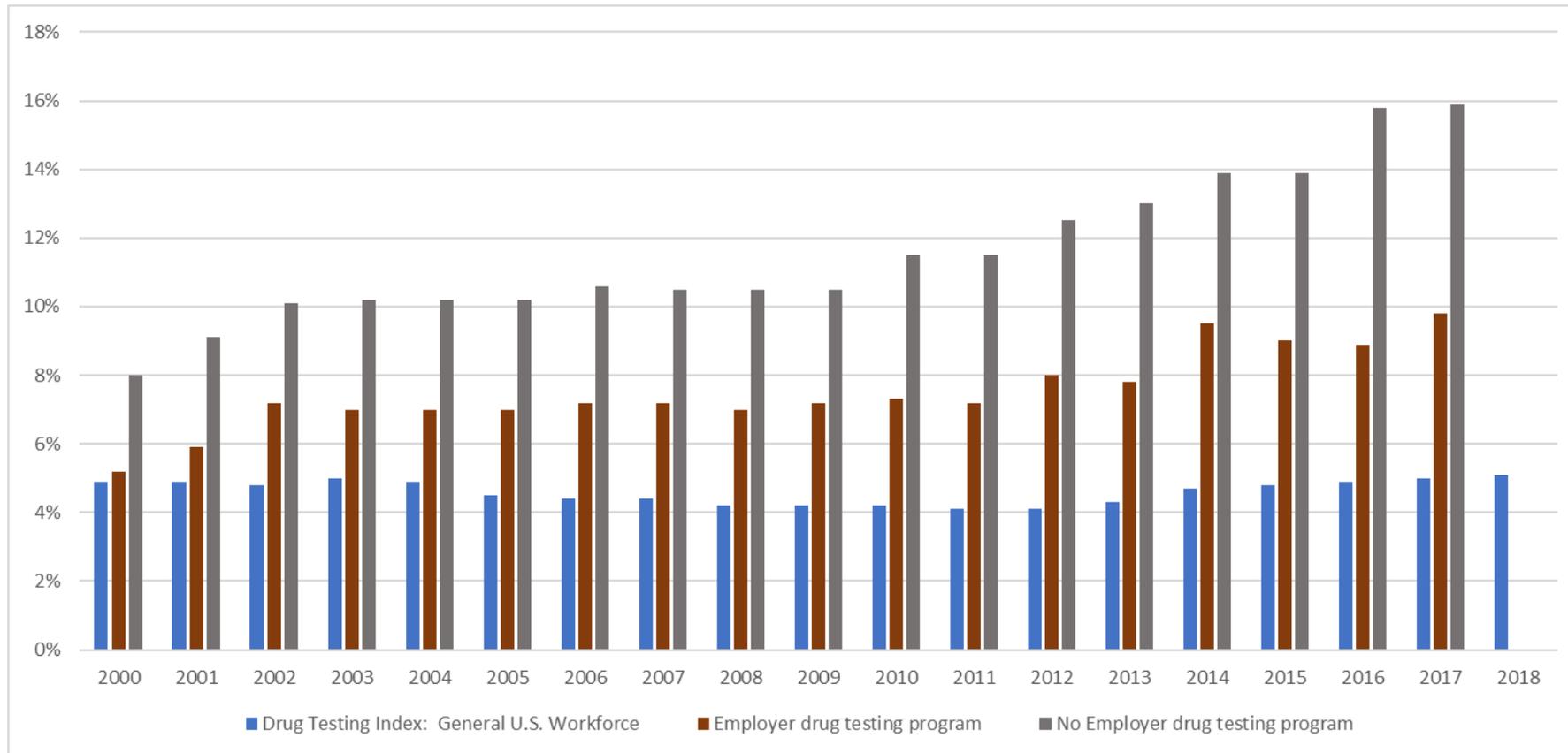
## Major testing groups



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Illicit drug use increases

DTI data and NSDUH self-reported use in the previous 30 days

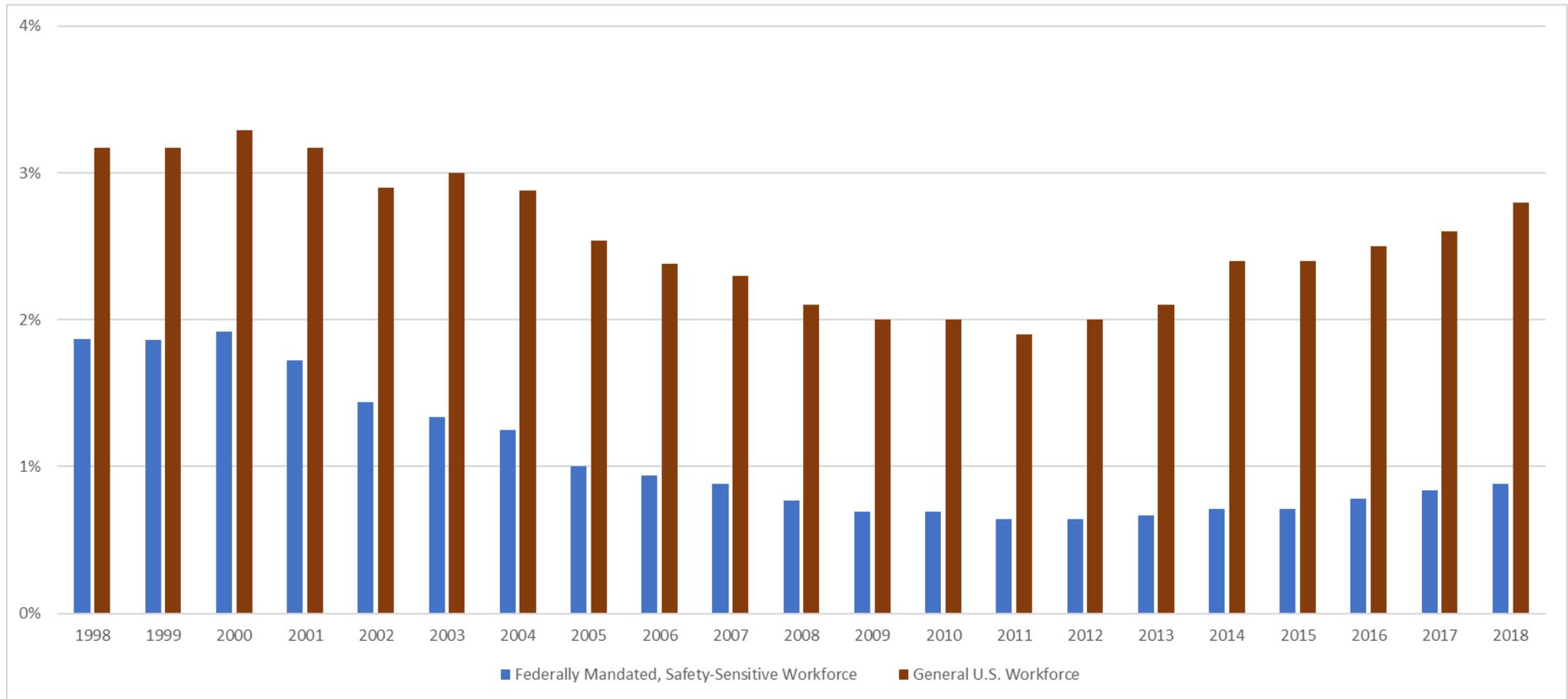


Source: Quest Diagnostics Drug Testing Index Full Year 2018 & The National Survey of Drug Use and Health

# Analysis by drug category

# Marijuana urine drug test positivity

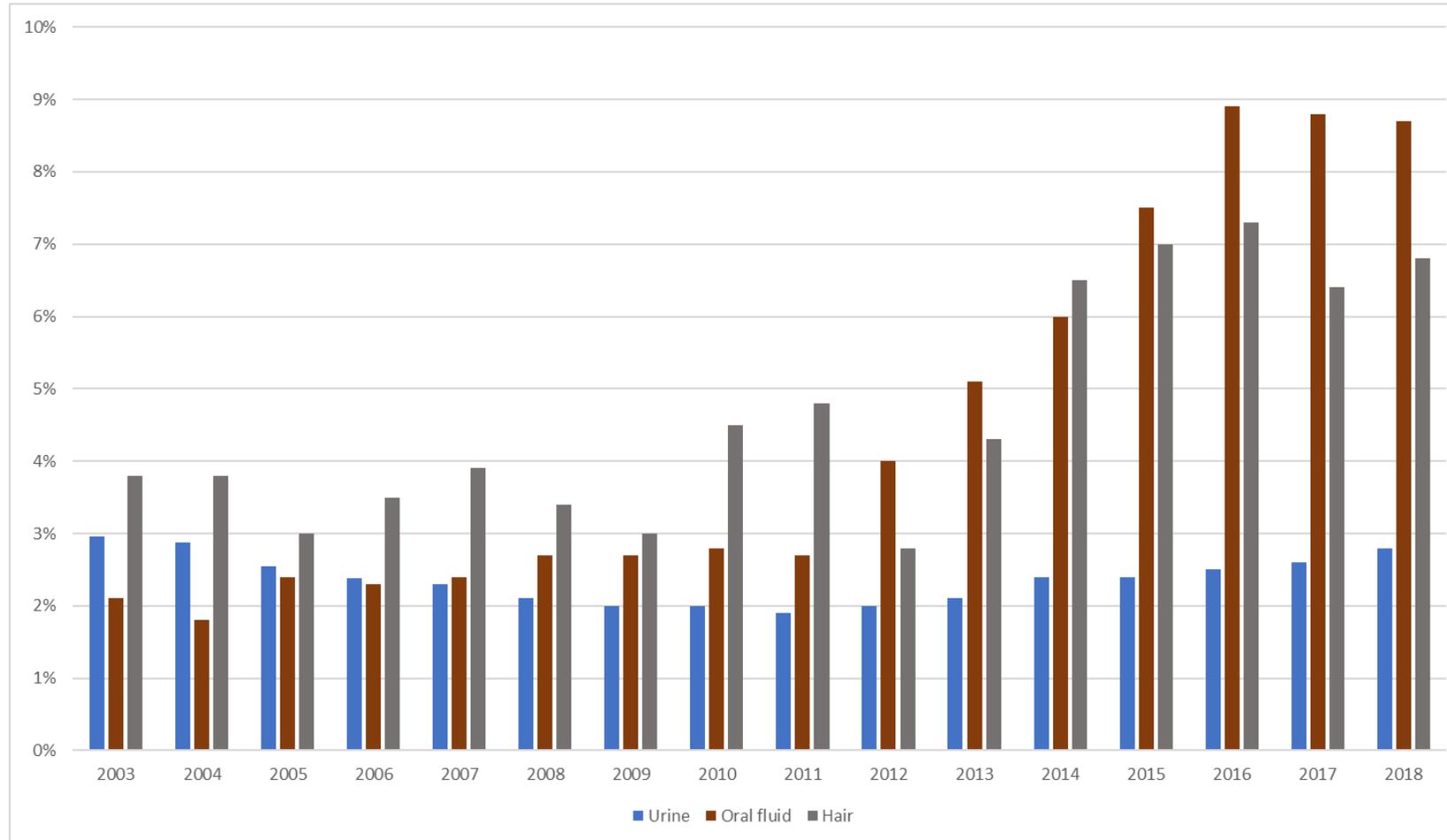
Dominates in the general U.S workforce



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Marijuana positivity in general U.S. workforce

Tops the list of the most commonly detected illicit substances



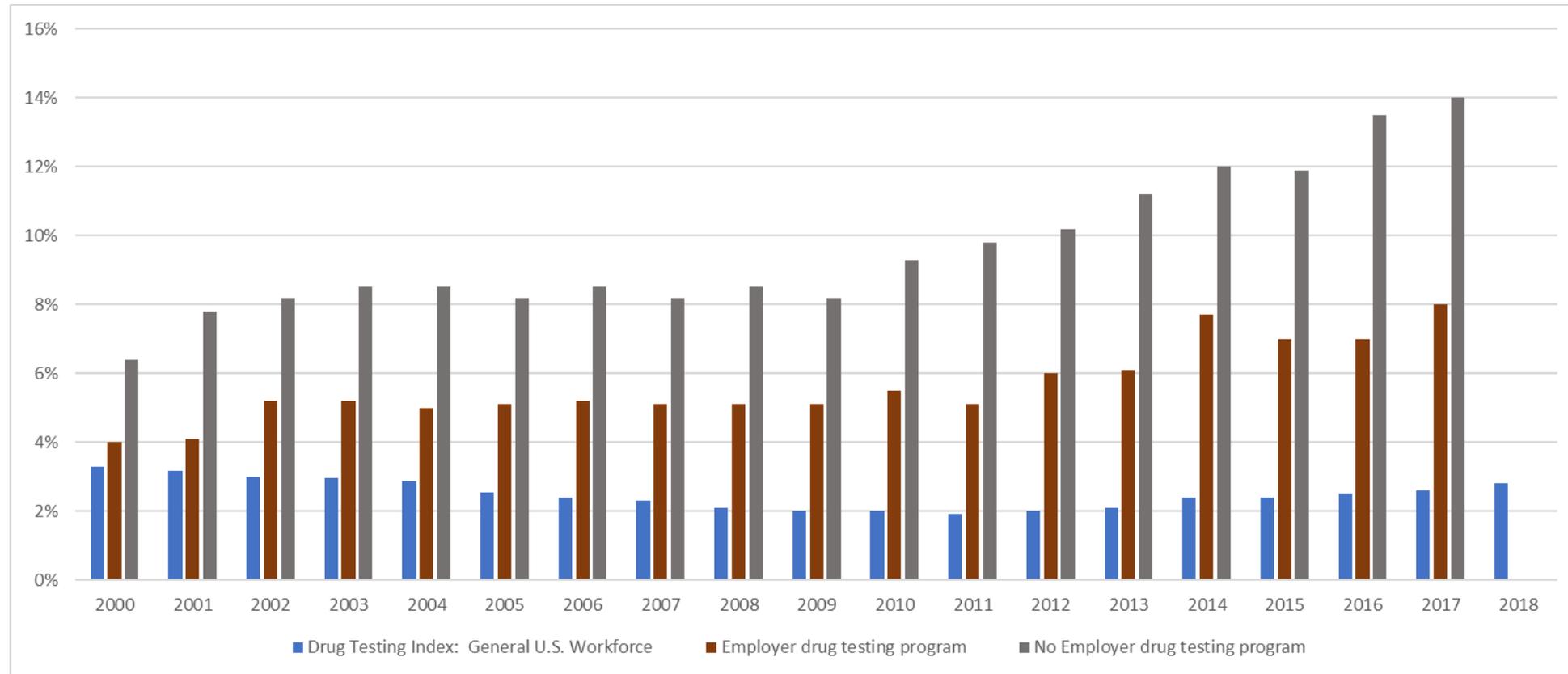
Source: Quest Diagnostics Drug Testing Index Full Year 2018



Increases in marijuana positivity across nearly **all** employee testing categories

# Marijuana drug use increases

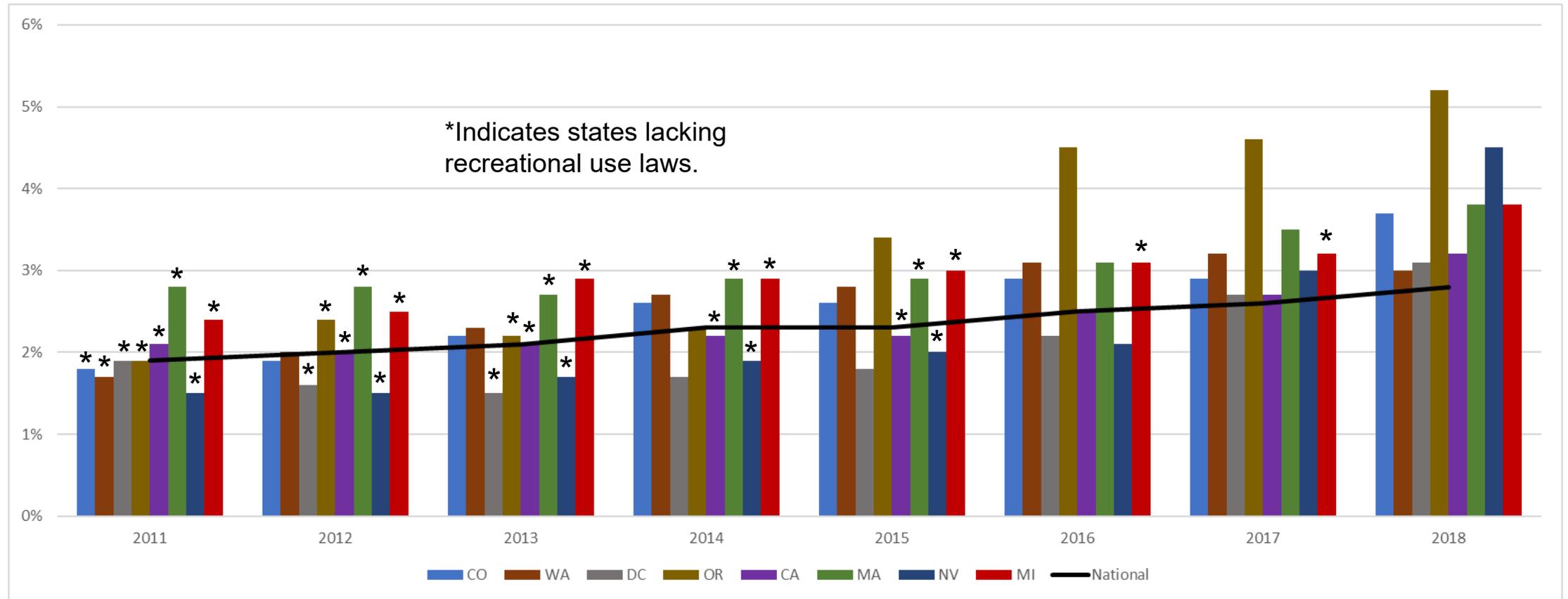
DTI data and NSDUH self-reported use in the previous 30 days



Source: Quest Diagnostics Drug Testing Index Full Year 2018 & The National Survey of Drug Use and Health

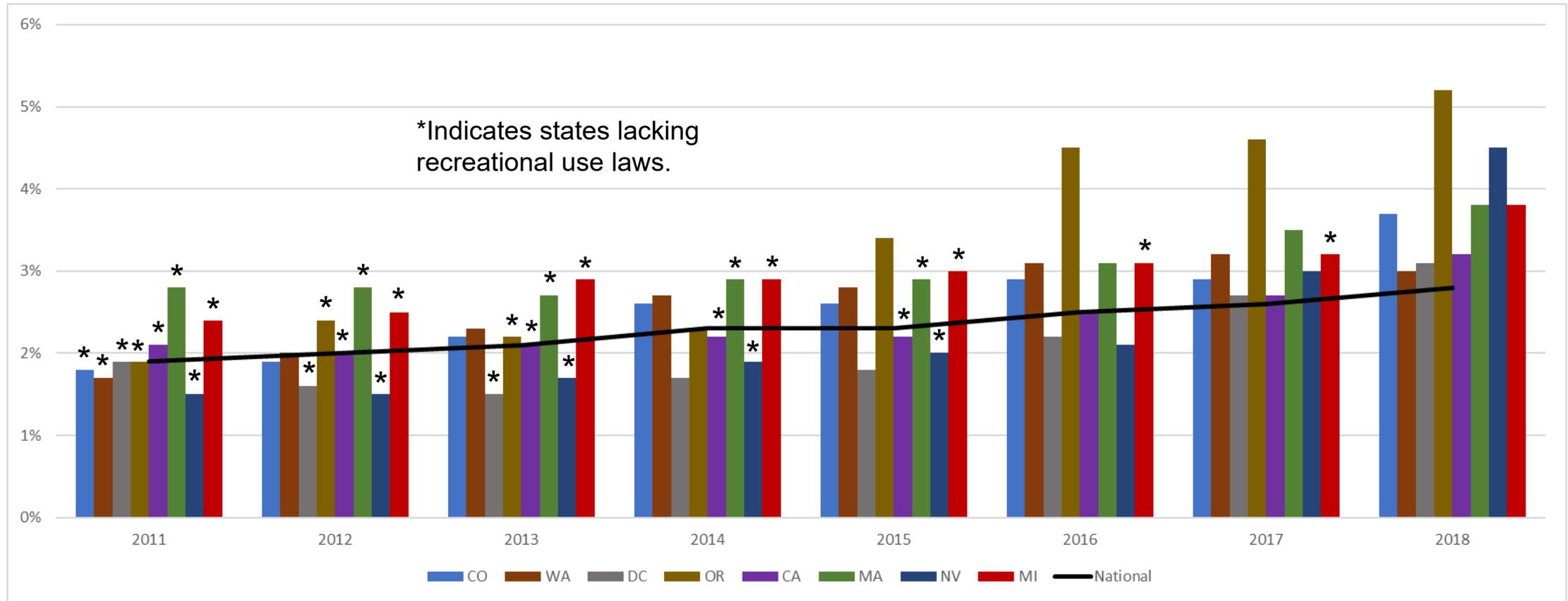
# Marijuana positivity in recreational use states

## General U.S. workforce



Source: Quest Diagnostics Drug Testing Index Full Year 2018

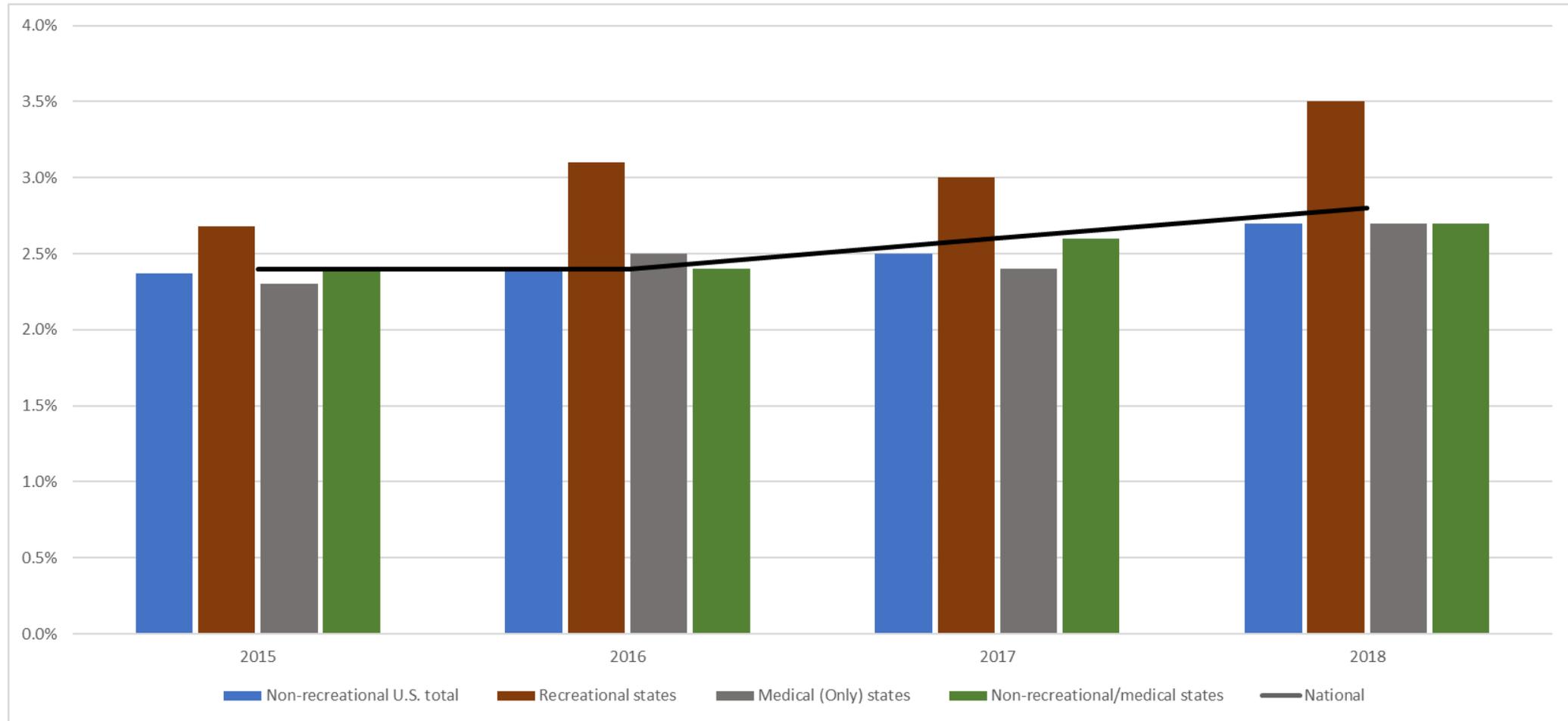
# Marijuana positivity in recreational use states



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Marijuana positivity in general U.S. workforce

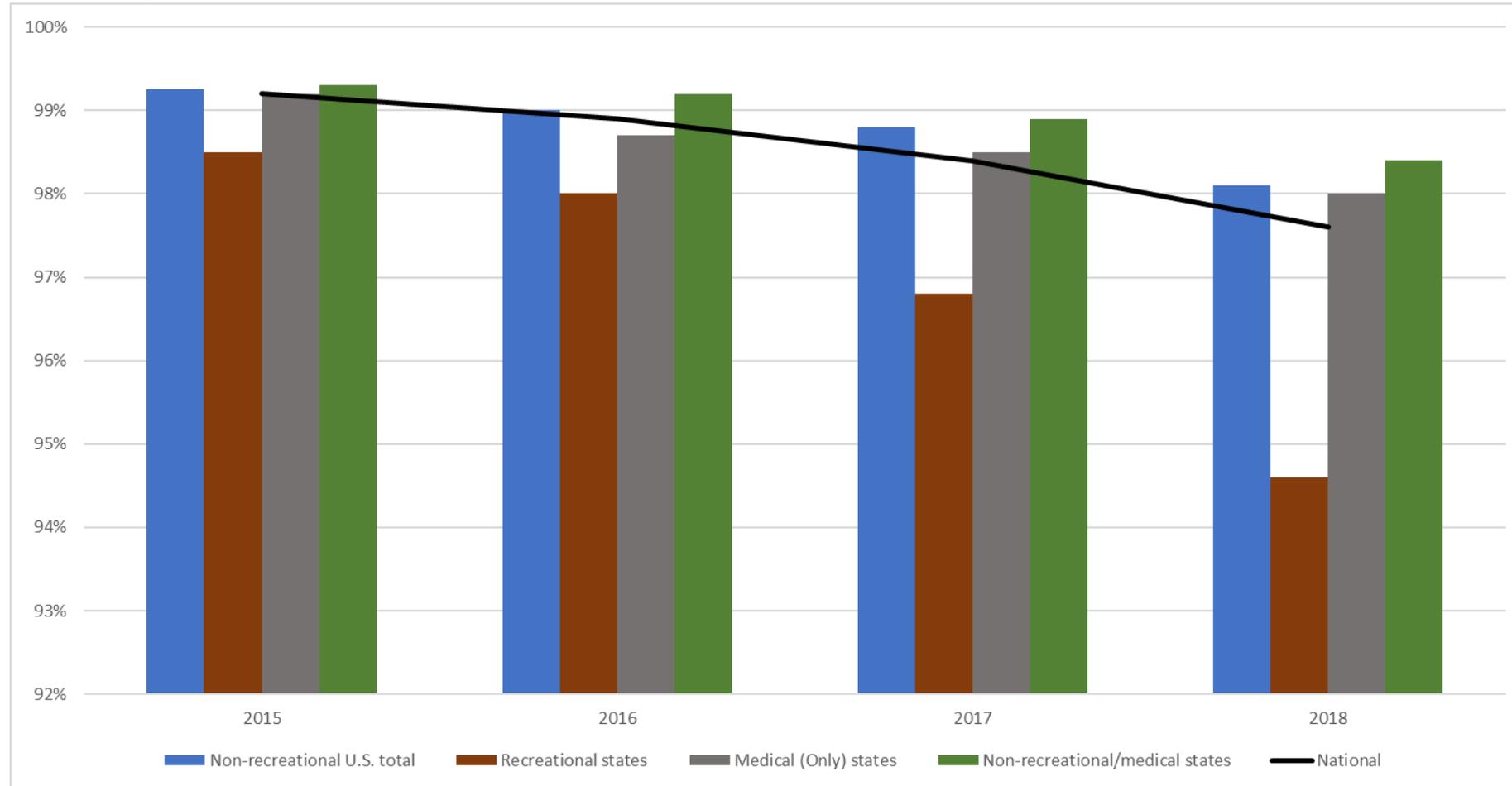
## By state marijuana law status



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Drug testing including marijuana in general U.S. workforce

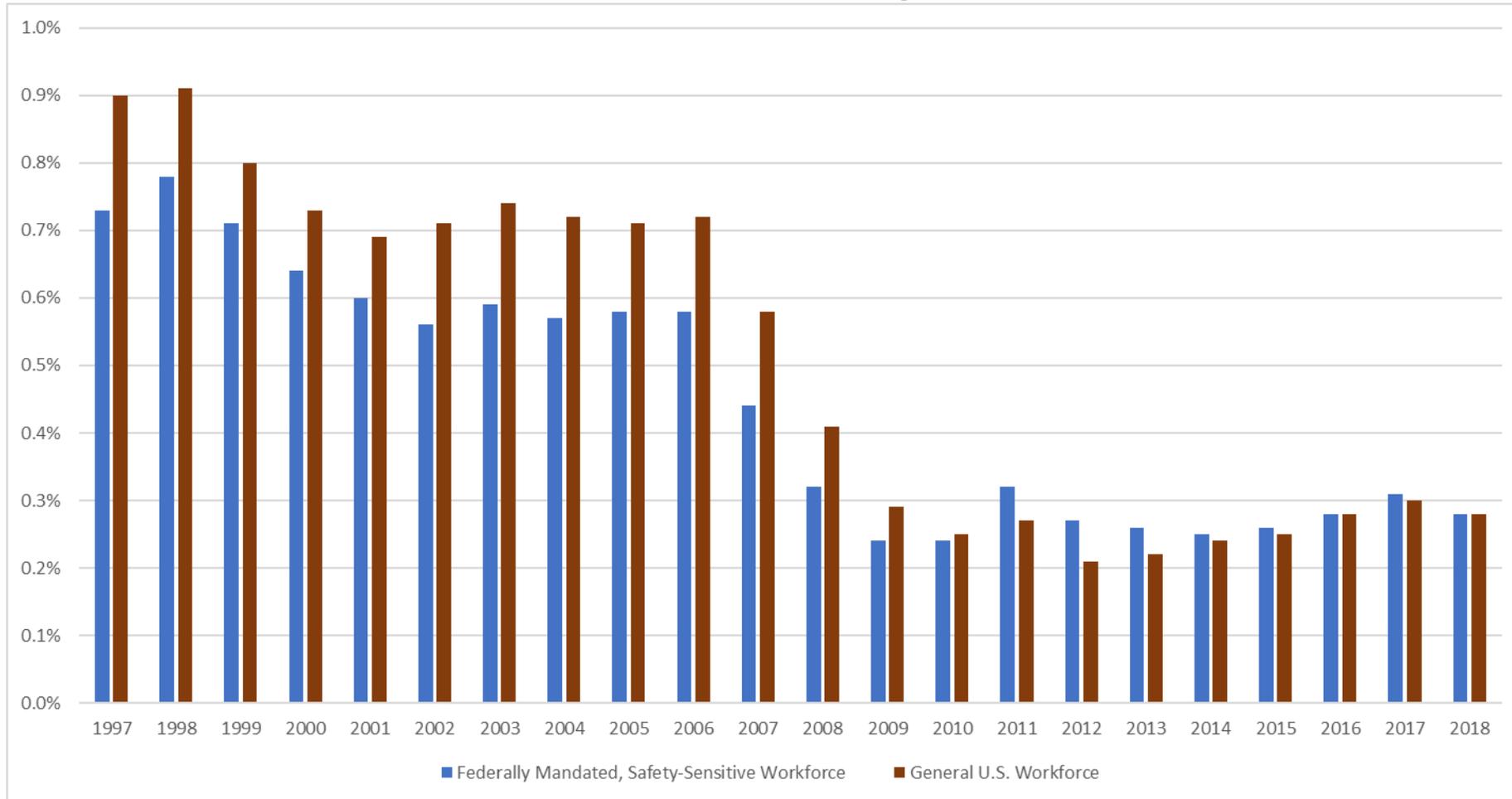
## By state marijuana law status



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Cocaine urine drug test positivity

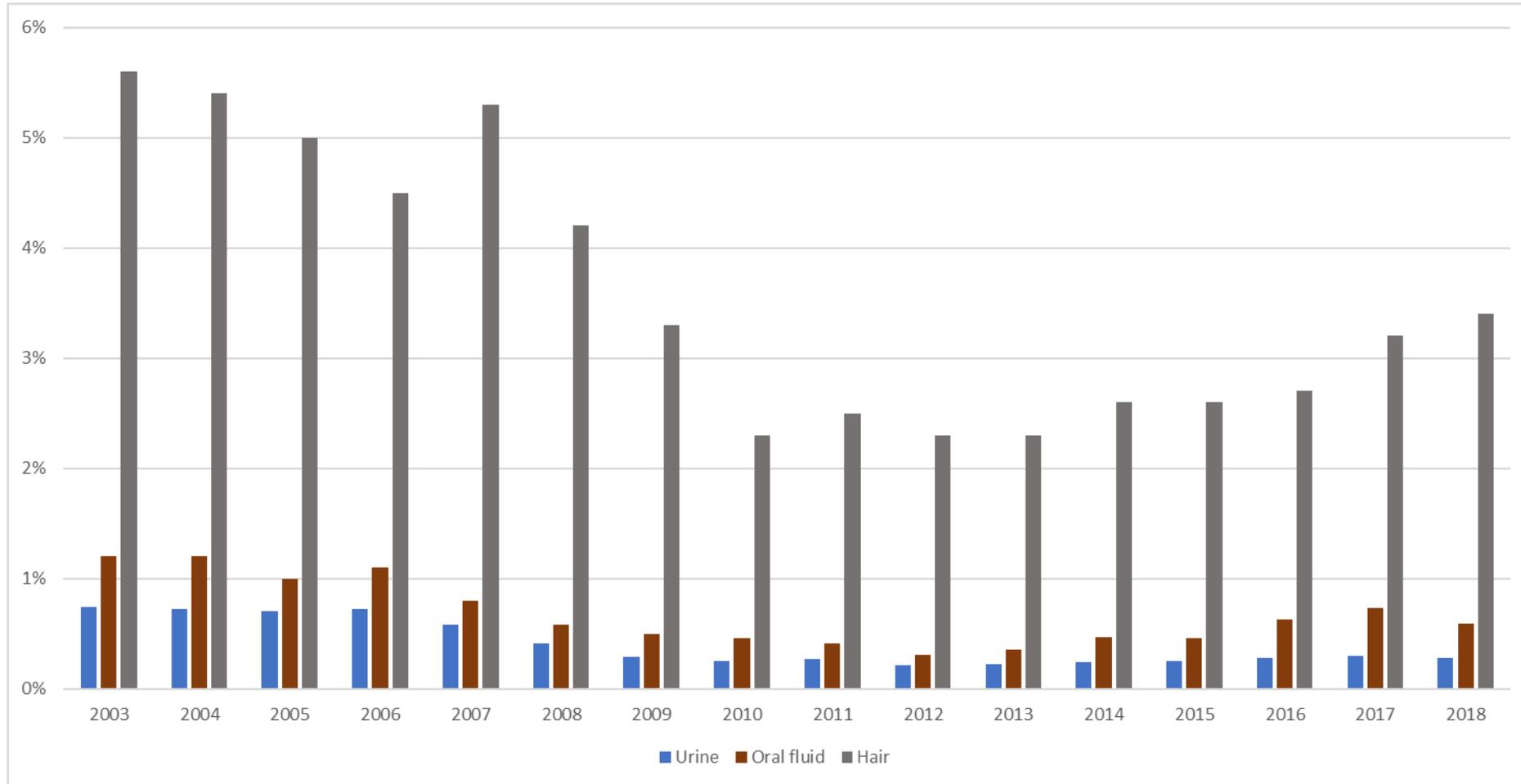
Positivity declined between 2017 and 2018 in urine testing for both workforces



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Cocaine positivity

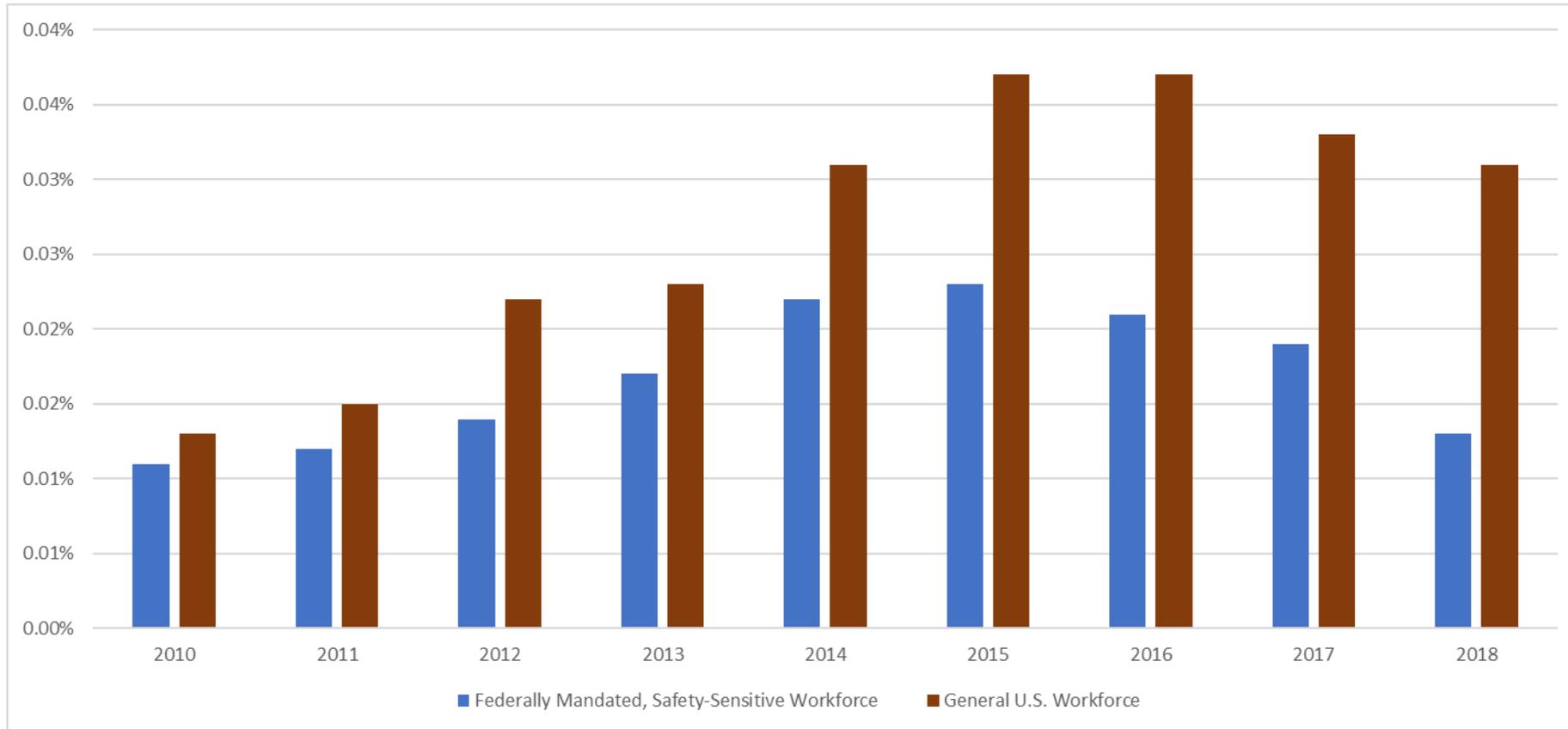
## Positivity across every specimen type



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Heroin (6-AM) urine drug test positivity

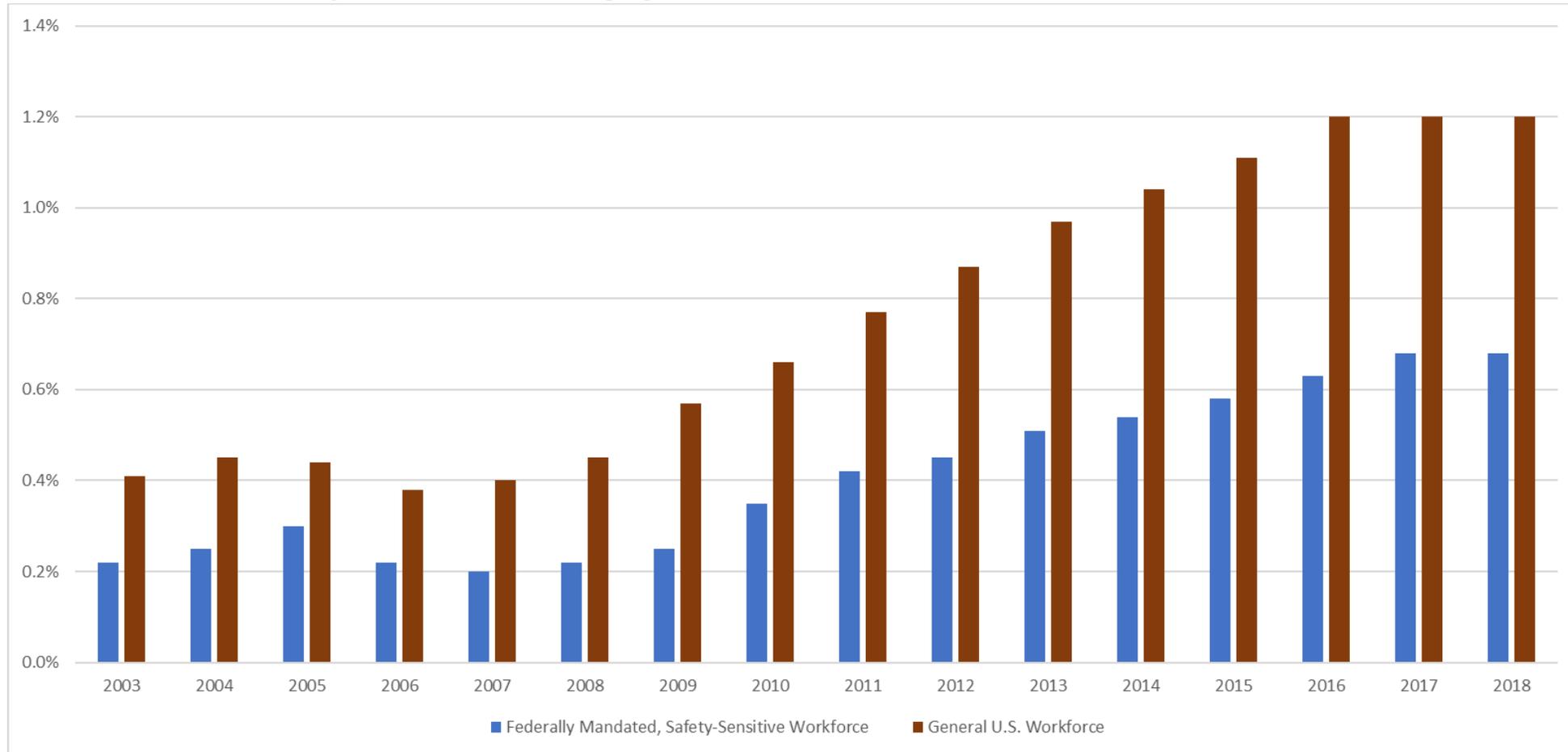
Declining in both employee testing groups since its peak



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Amphetamines urine drug test positivity

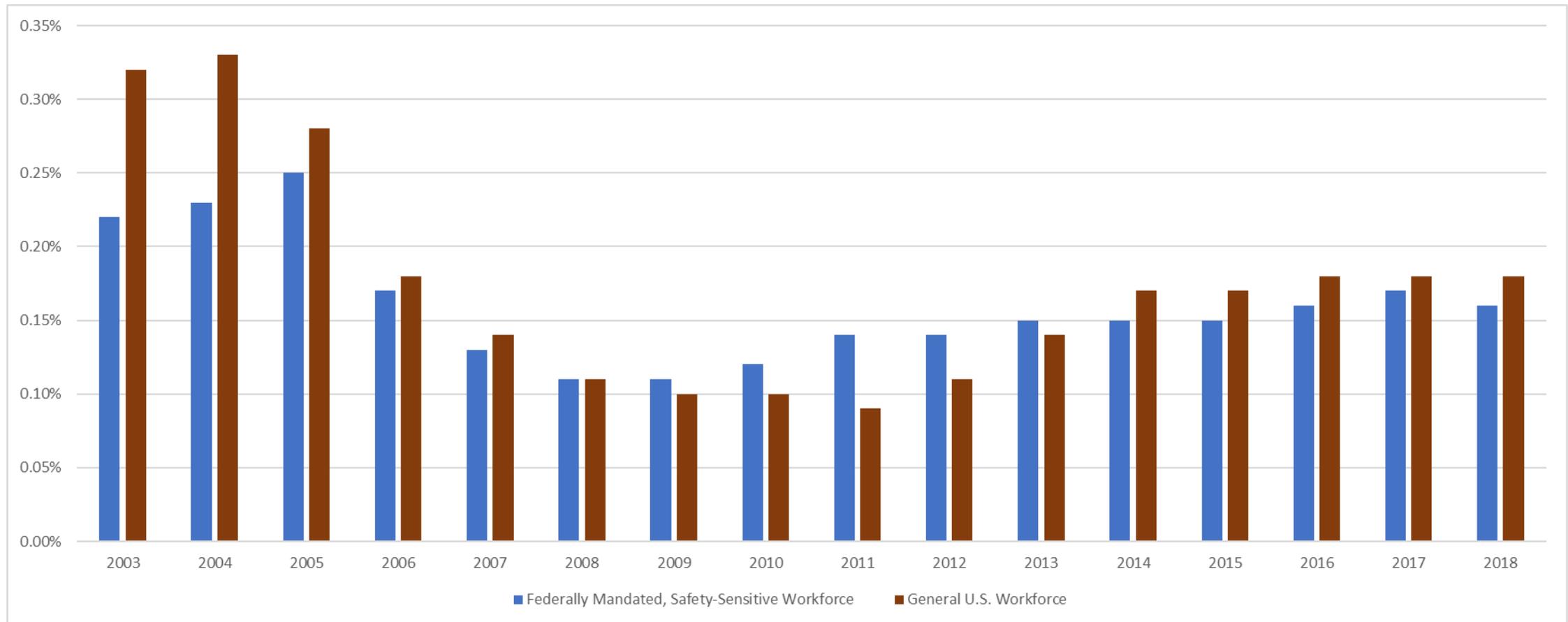
Second most commonly detected drug group



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Methamphetamine urine drug test positivity

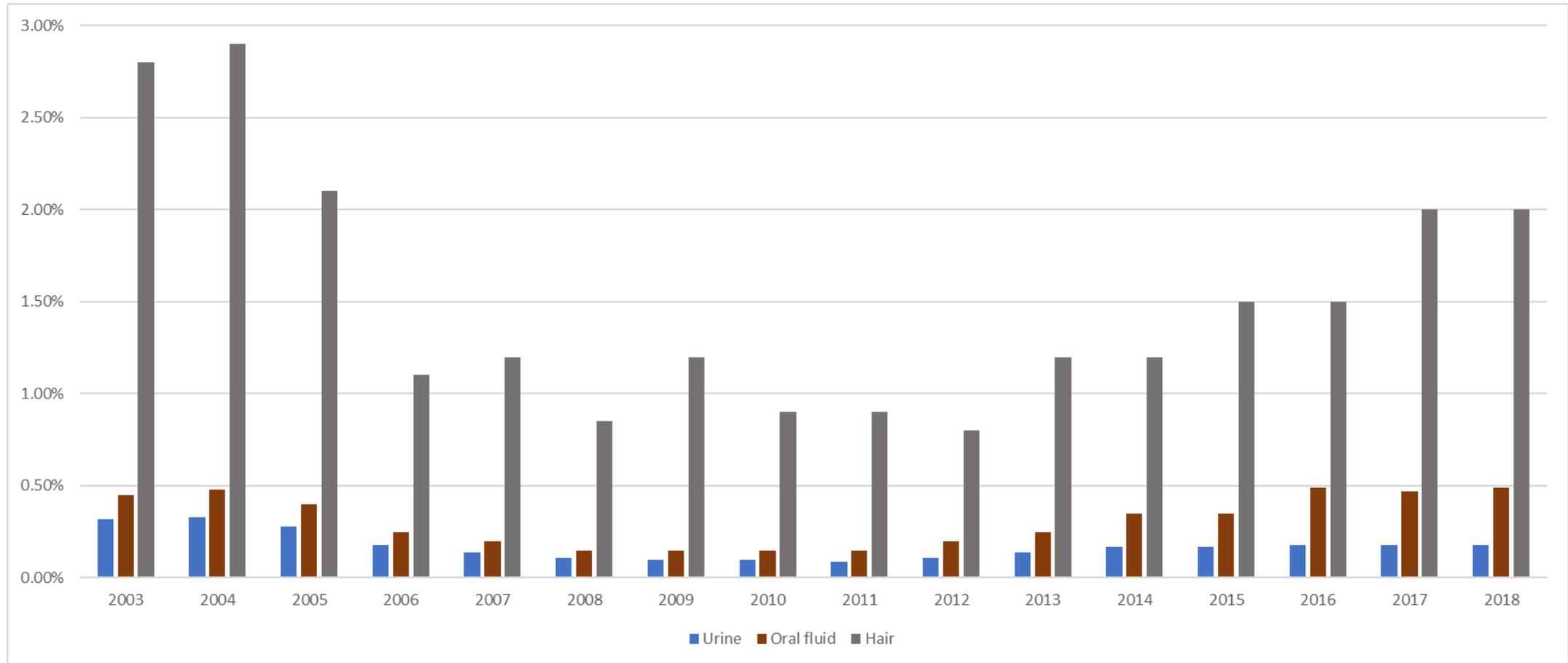
Positivity declined in the federally mandated workforce



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Methamphetamine positivity

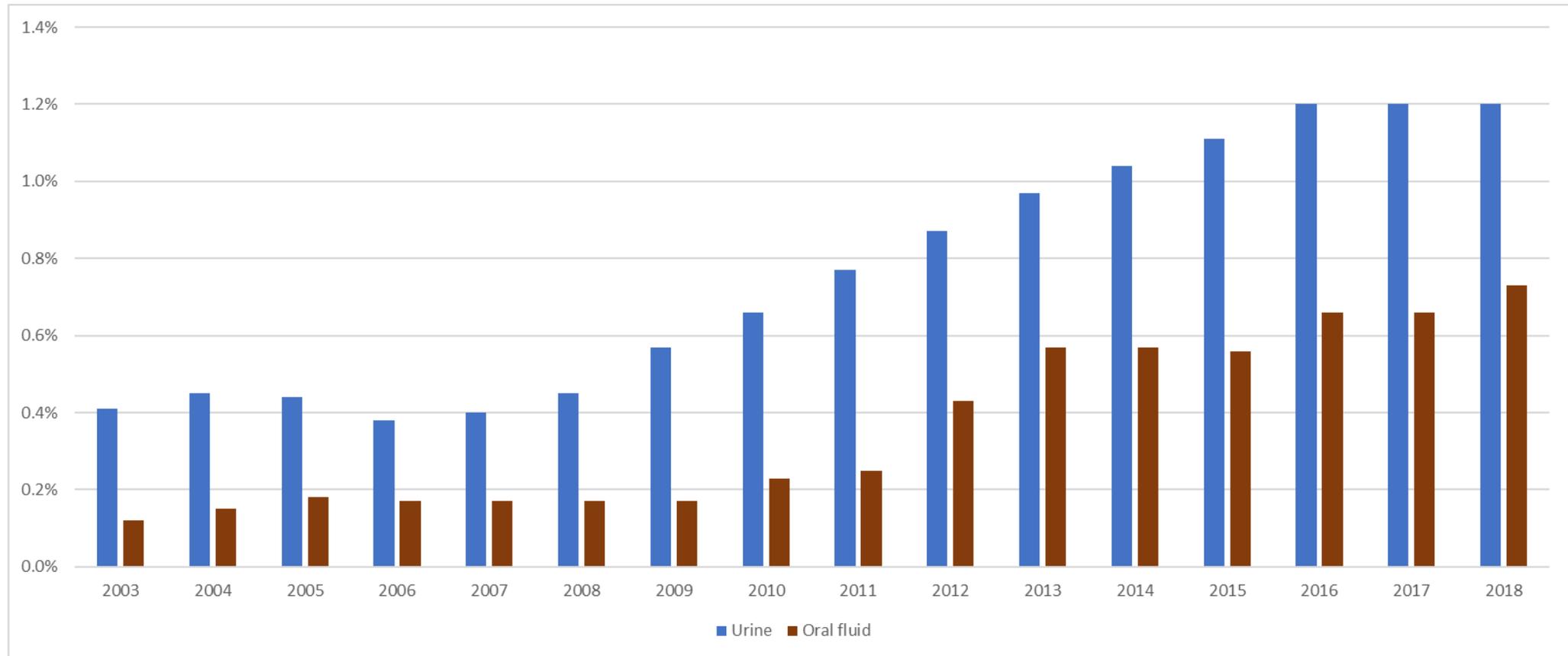
## General U.S. workforce



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Amphetamine positivity

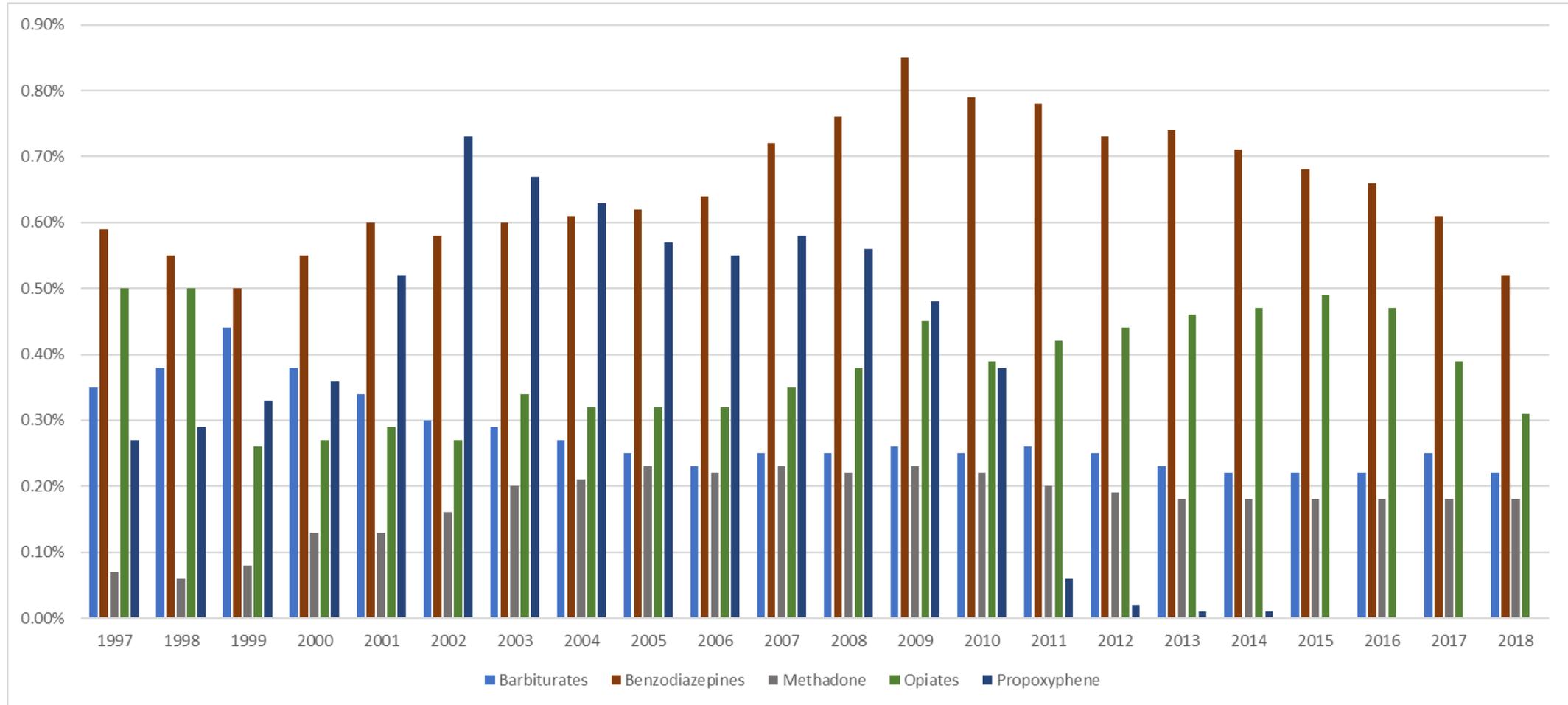
## General U.S. workforce



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Positivity by drug category

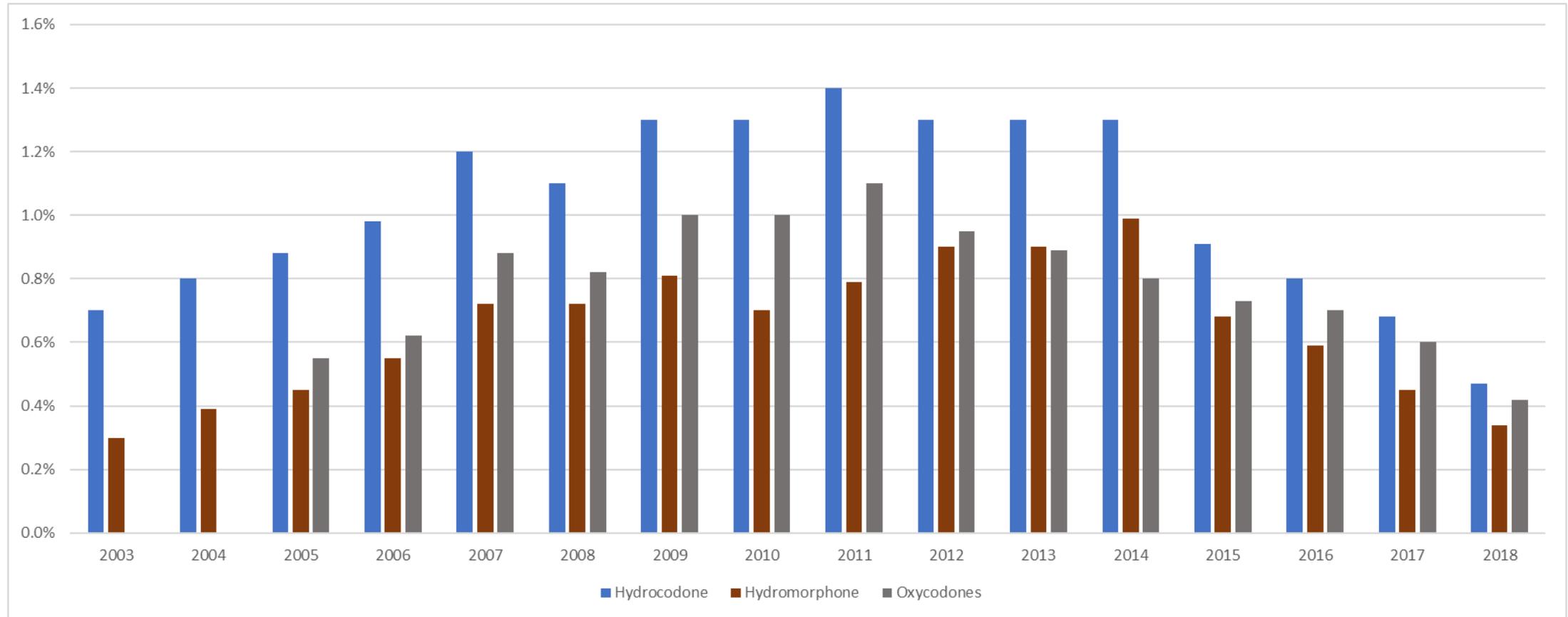
## Urine drug tests for the general U.S. workforce



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Prescription opiates in urine drug test positivity

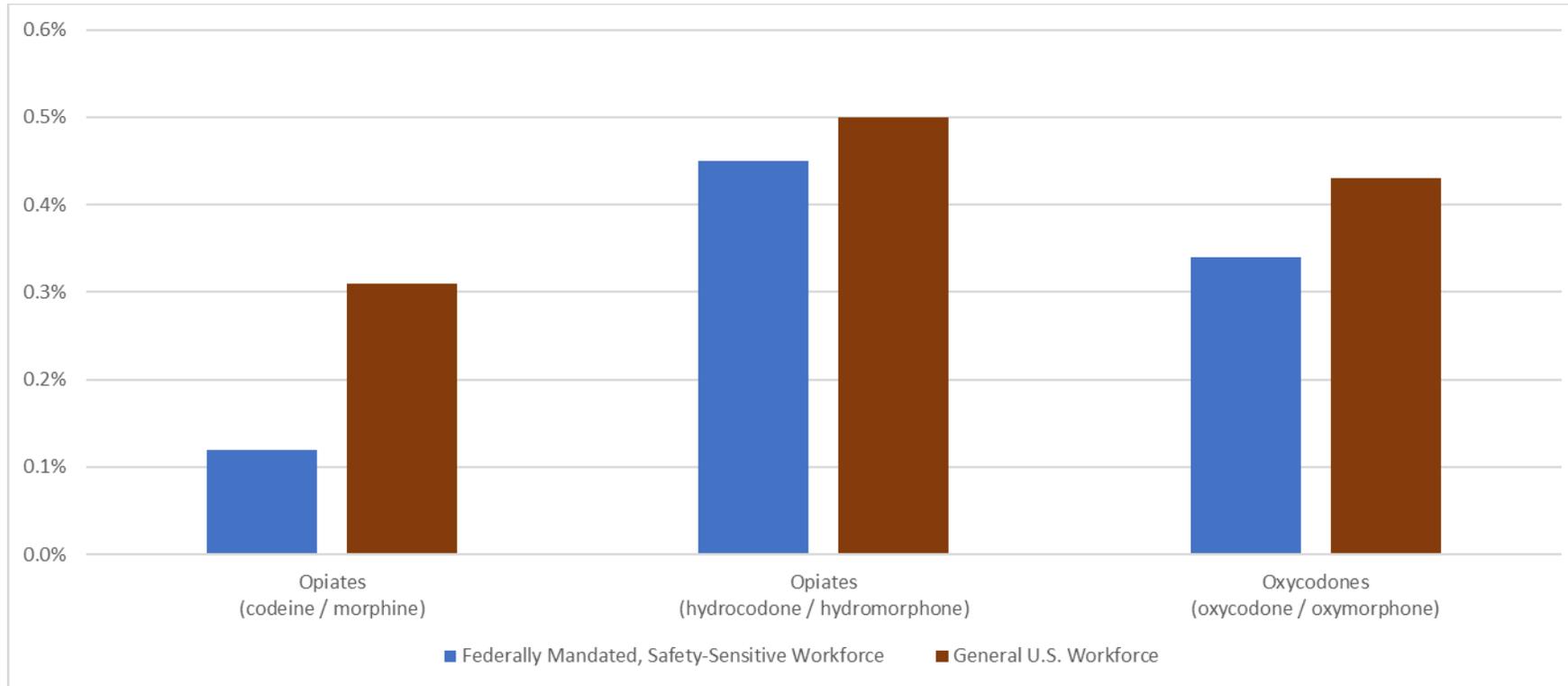
## General U.S. workforce



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Opiate urine drug test positivity

First full year of data for the federally mandated, safety-sensitive workforce

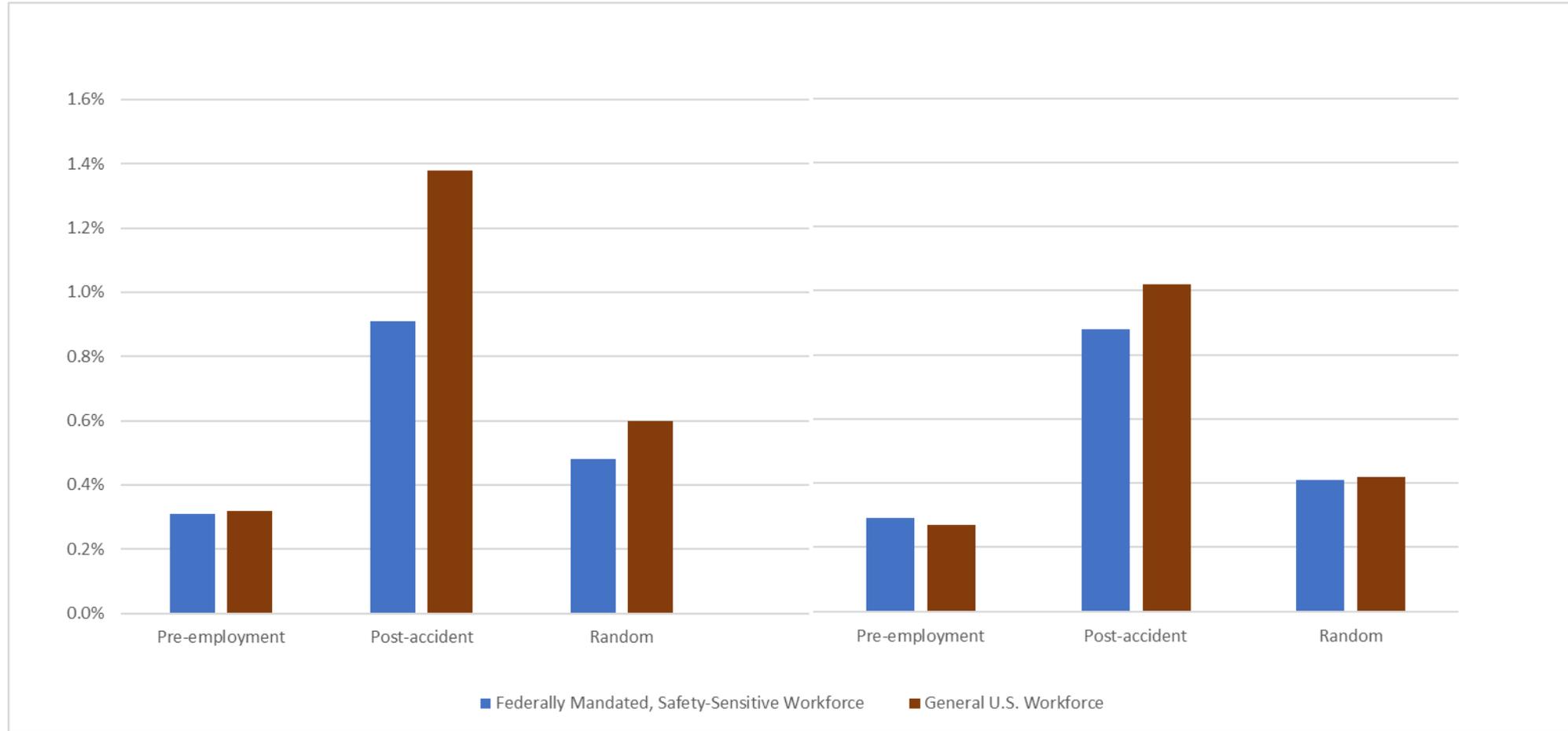


**New Federal rules** for opioid testing drive increase in safety-sensitive workforce positivity

Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Hydrocodone/ hydromorphone positivity

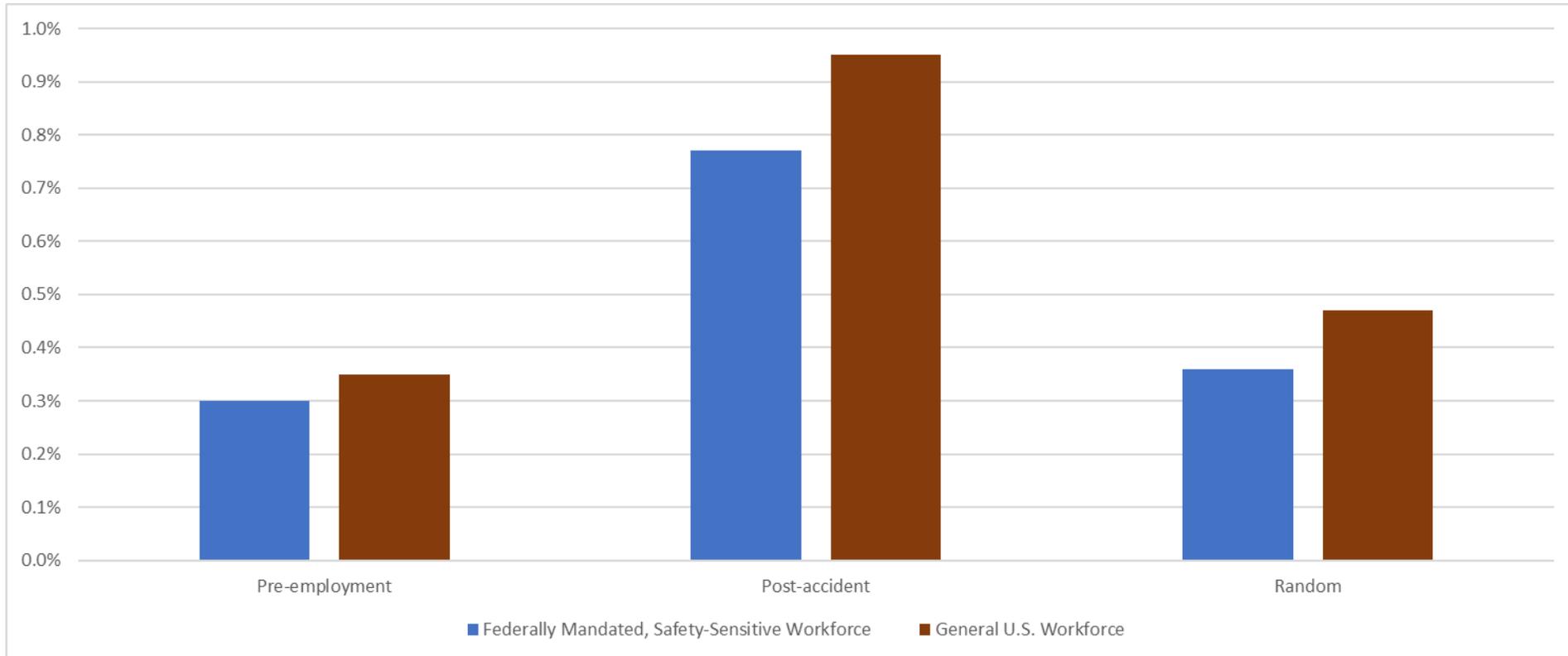
By testing reason



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Oxycodones positivity

## By testing reason

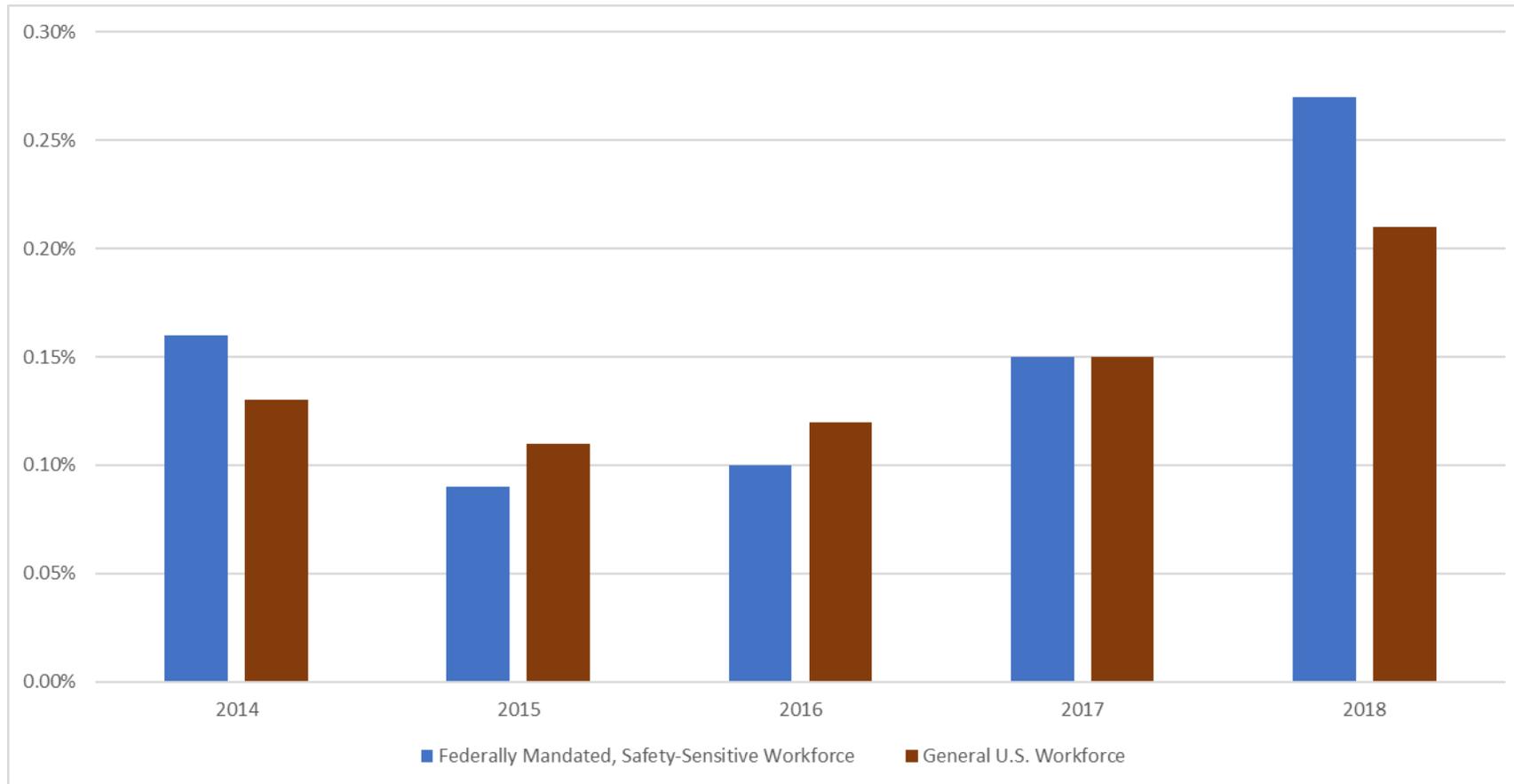


Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Positivity by SVT category

# Non-negative rates by specimen validity test category

Rise in urine drug test specimens reported as invalid

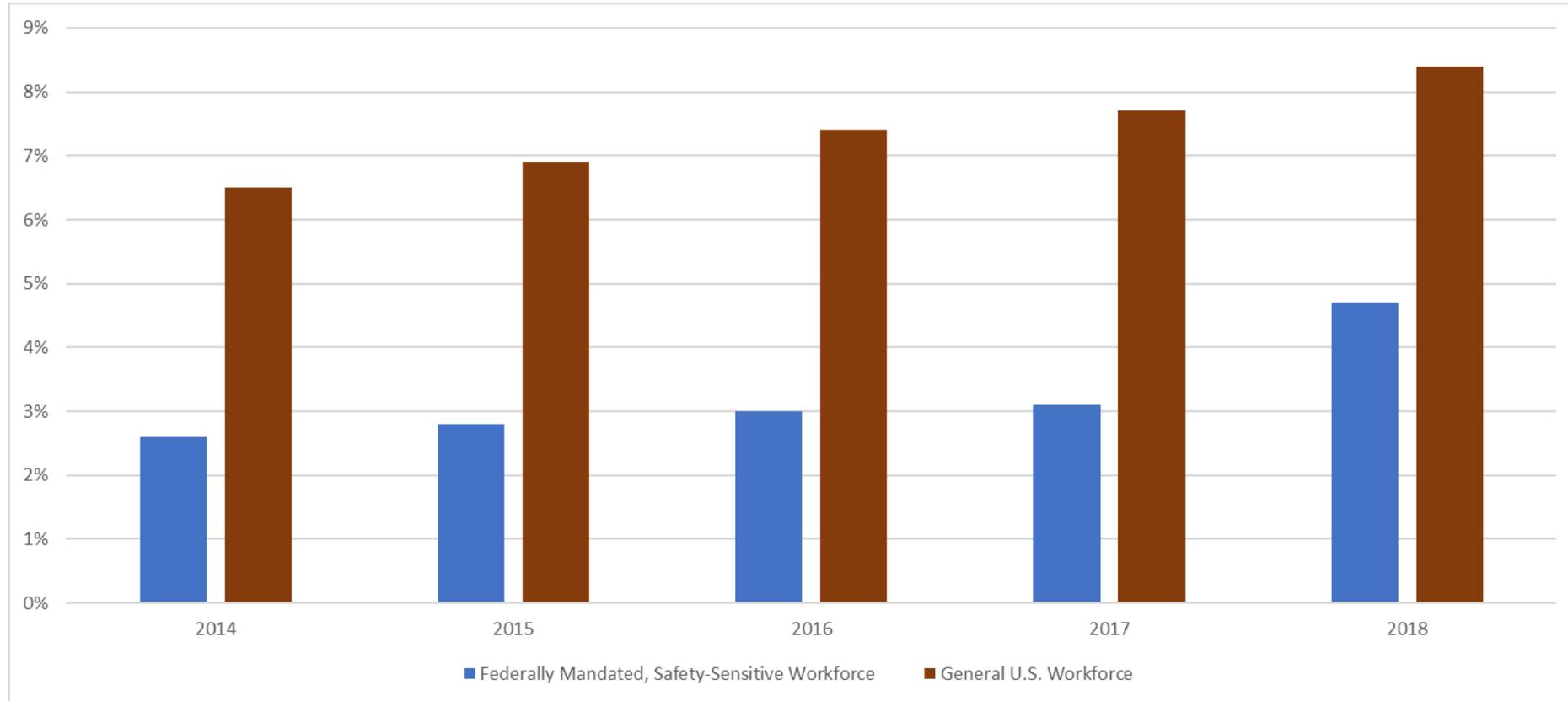


Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Positivity by testing reason

# Post-accident urine drug test positivity

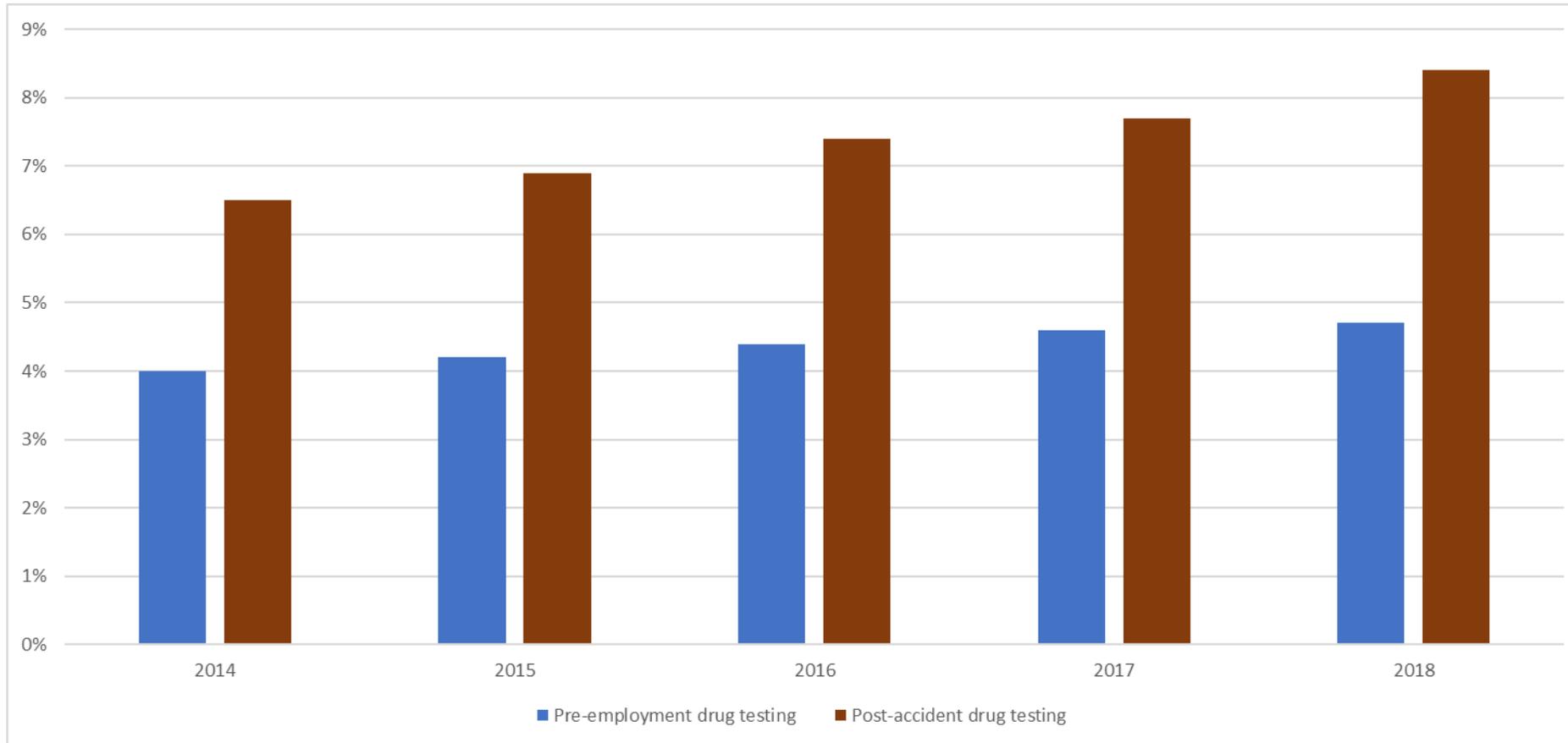
Jumps in both employee testing categories



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Urine drug test positivity by testing reason

U.S. general workforce

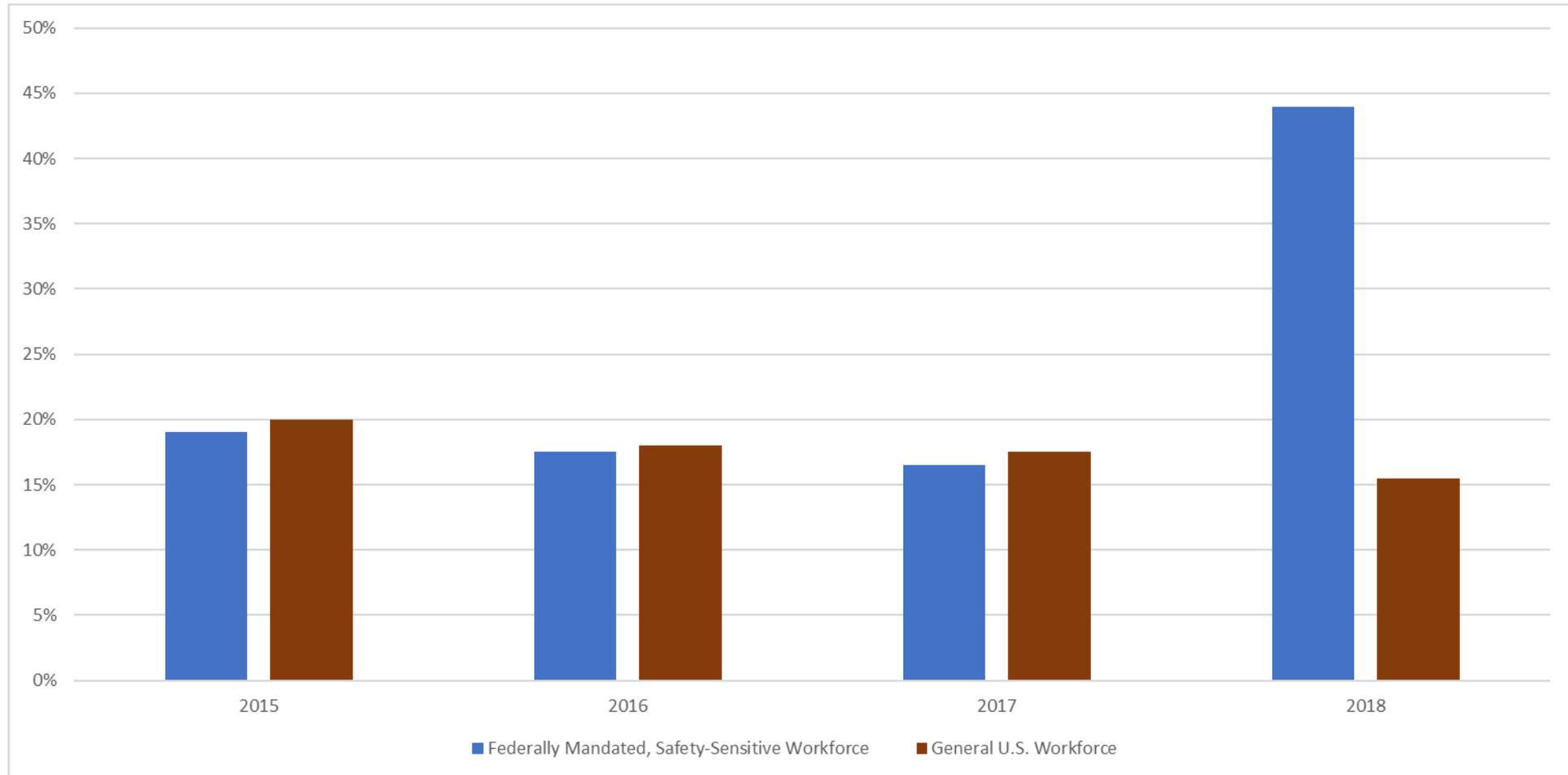


**Post-accident testing outpaces all other testing reasons, including pre-employment**

Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Post-accident urine drug test positivity - opiates

Opiates make up a large portion of all positive post-accident drug tests



Source: Quest Diagnostics Drug Testing Index Full Year 2018

# Impact of Rx opiates on federal post-accident positivity rates

Reason for Test	(A) 2017 Positivity	(B) 2018 Positivity	(C) 2018 Positivity w/o semi-syn opiates	(B vs. C) % Difference	(A vs. C) 2017 vs 2018 w/o semi-syn opiates
<b>All Reasons</b>	<b>2.07%</b>	<b>2.66%</b>	<b>1.98%</b>	<b>34%</b>	▼
Pre-employment	2.13%	2.65%	2.08%	27%	≈
Random	1.78%	2.36%	1.59%	48%	▼
Post-Accident	3.08%	4.68%	3.14%	49%	≈
Reasonable Susp/Cause	13.08%	13.00%	11.20%	16%	▼
Return to Duty	3.42%	5.52%	3.77%	46%	▲
Follow-up	3.90%	5.35%	3.91%	37%	≈
Periodic/Medical	1.11%	2.02%	1.40%	45%	▲

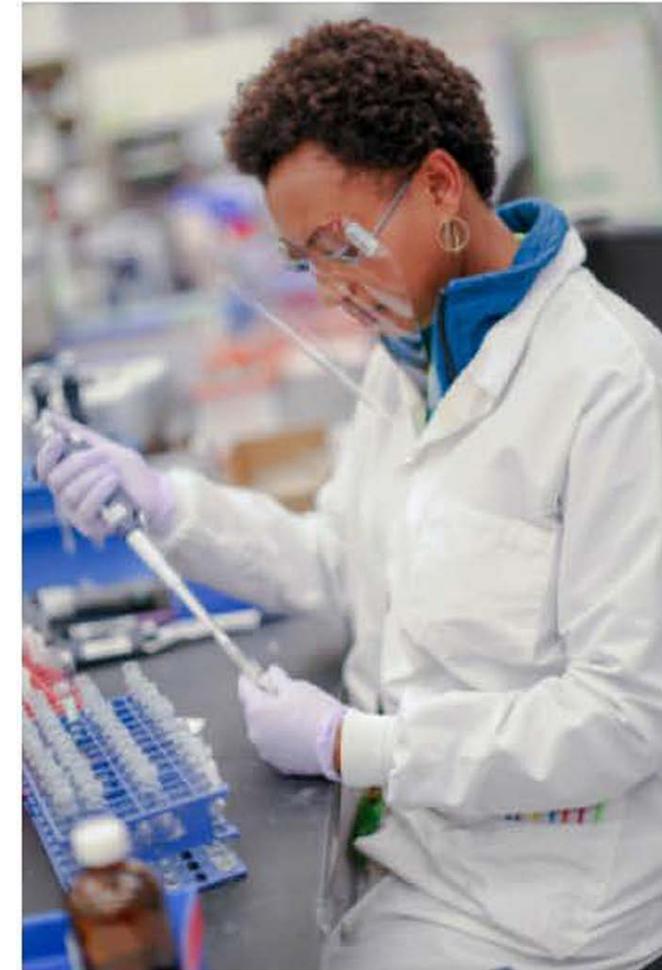
# Summary

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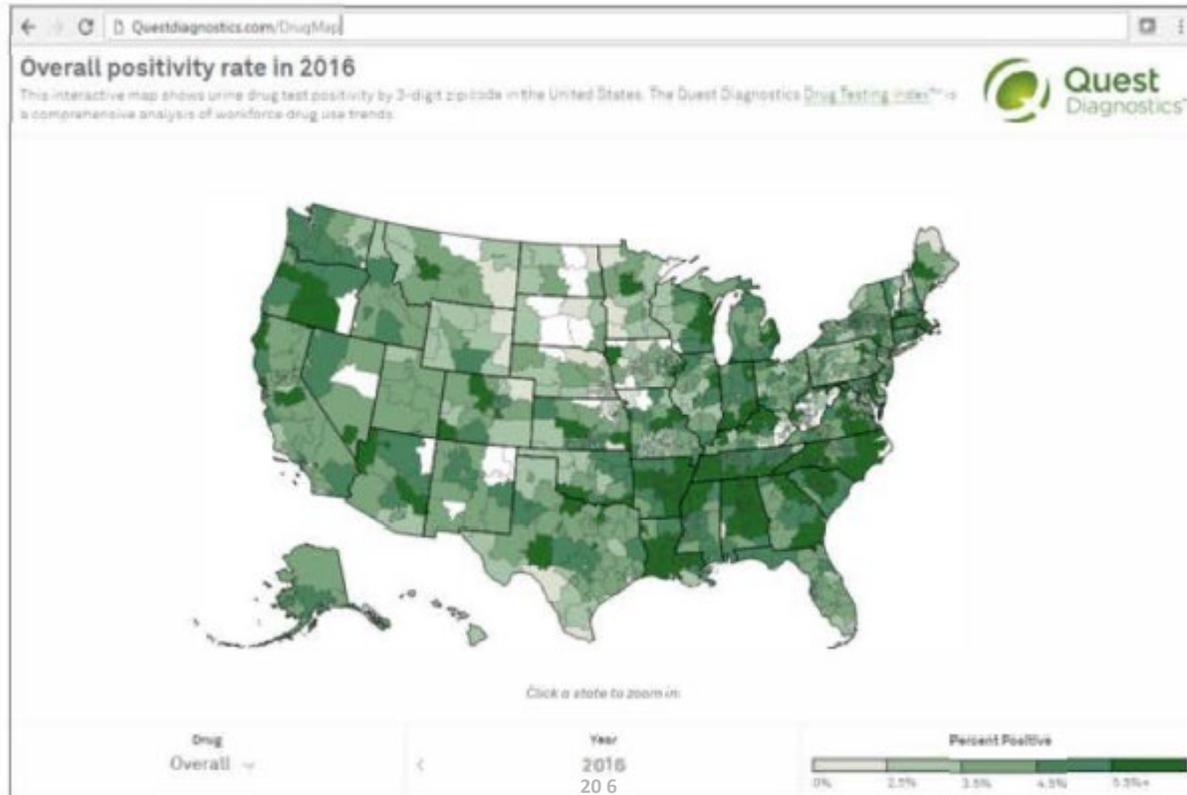
## Drug use in the American workforce

- Rate of workforce drug positivity hit a fourteen-year high in 2018
- In-depth analysis shows that marijuana is not only present in our workforce, but use continues to increase
- Marijuana tops the list of the most commonly detected illicit substances across all workforce categories
  - Increased nearly 5% in urine drug tests (4.2% in 2017 versus 4.4% in 2018)
  - More than 25% higher than the thirty-year low of 3.5%
- Cocaine positivity declined nearly 10% compared with 2017, when the positivity rate was the highest in more than 5 years
- Increases in post-accident positivity occur in both workforces
  - Opiates accounted for 44% of FMSS post-accident positives in 2018
- Positivity rate for opiates in urine drug testing declined across all opiate categories in the general U.S. workforce
- Percentage of invalid results jumped 80% in the federally mandated workforce and 40% in the general U.S. workforce between 2017 and 2018



# Quest Diagnostics.com/DrugMap

Interactive map shows positivity by 3-digit zip code in the United States



Source Quest Diagnostics Drug Testing Index

Search by drug and year

- 6-AM (heroin metabolite)
- Amphetamines
- Cocaine
- Marijuana
- Opiates
- Phencyclidine (PCP)

Compare your state to the national average

# Drug use in the American workforce

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Q & A



[QuestDiagnostics.com/DTI](https://www.questdiagnostics.com/DTI)