

Systematic Surveillance of Illicitly Manufactured Fentanyl Cases Initiated by Law Enforcement

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Illicitly manufactured fentanyl (IMF)

- Acetyl fentanyl, U-47700, carfentanil, etc. analogues
- 50 to 1000s of times more potent than morphine
- Standard tests do not distinguish from pharmaceutical fentanyl
- Legal status depends on the analogue
- Police avoidance of contact and local testing
- Counterfeit Rx drugs as well as powder

Timeline

- 1981 first fentanyl analogue Schedule 1
- Fentanyl-laced heroin / fentanyl powder:
 - 2012 British Columbia
 - April 2013 Maine
- Counterfeit Rx medications:
 - May 2013 Montreal
 - Sept 2013 Louisiana, Rhode Island
- 2013-???? Escalating overdose deaths
- June 2016 Carfentanil seized: China->Calgary
- July 2016 Carfentanil ODs in Ohio

Timeline (continued)

Public health actions:

2010 -	Expansion of US Rx opioid controls
June 2013	CCENDU warns Rx and IMF
Dec 2014	Alberta IMF warning
March 2015	US DEA IMF warning
May 2015	US DEA: acetyl fentanyl Sched 1
Oct 2015	China controls fentanyl analogues
Oct 2015	CDC warning / clinical guidelines
April 2016	US DEA counterfeit pill warning
	CDC opioid Rx guidelines
Sept 2016	US DEA carfentanil warning
March 2017	China controls carfentanil

Hypothesis

Systematic data collection from a national sample of law enforcement agencies on new cases of illicitly manufactured fentanyl will provide timely information about the scope and geographic concentration of the IMF problem.

Data Sources

Law enforcement and public health news reports were researched to compile the history of IMF distribution in Canada.

Data for the U.S. were compiled from the Drug Diversion Program of the RADARS[®] surveillance system from 1/1/2013 through 3/31/2017.

2012: New IMF Canadian Trafficking



Canada IMF Market

- High volume Chinese trade through Vancouver
- No searches of parcels under 30 grams in weight without cause
- Distant from Mexico heroin sources

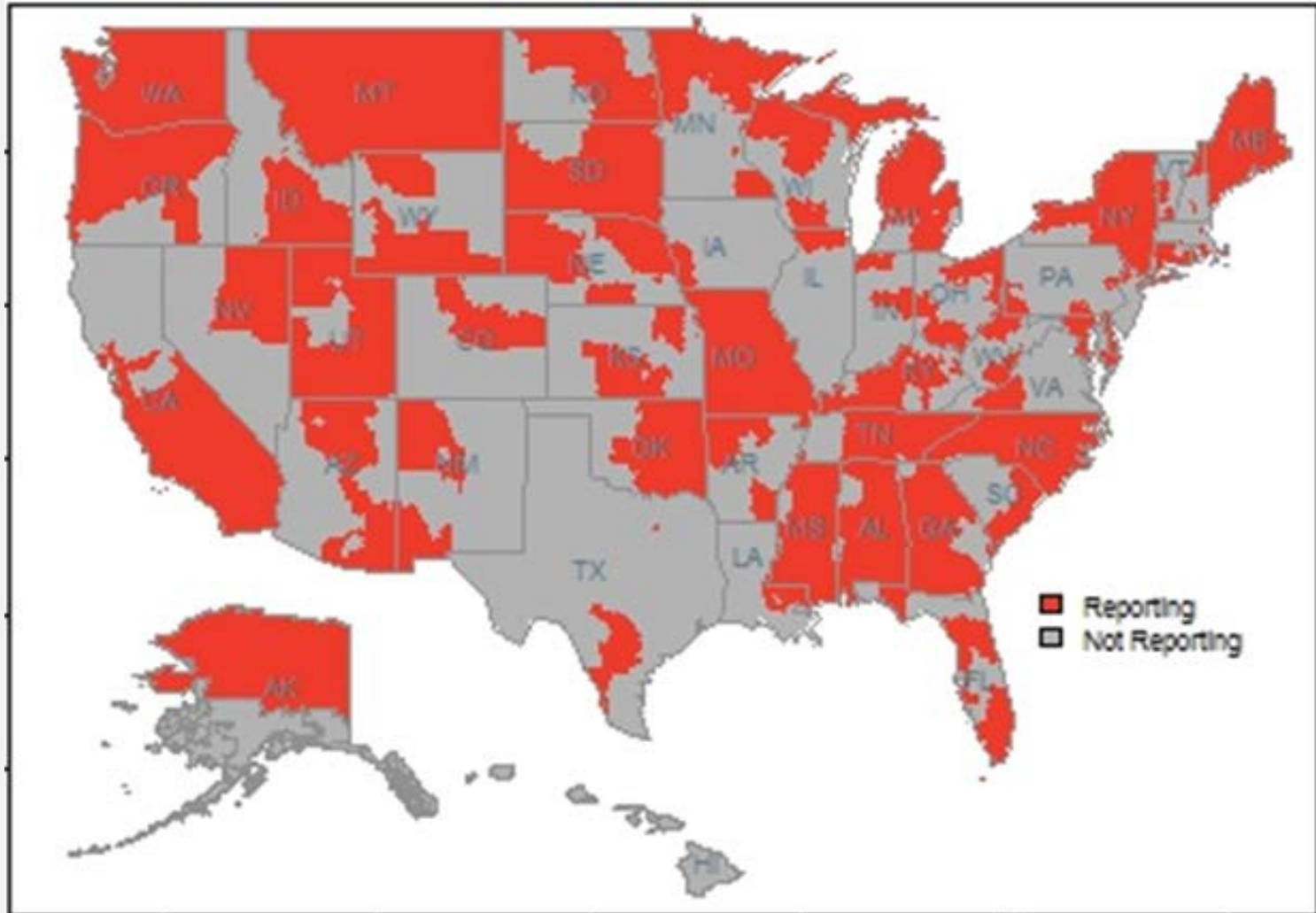
Drug Diversion Program

- Number of new cases of pharmaceutical diversion investigated by law enforcement units or reported to state regulatory boards
- 250 reporters from 49 states

IMF:

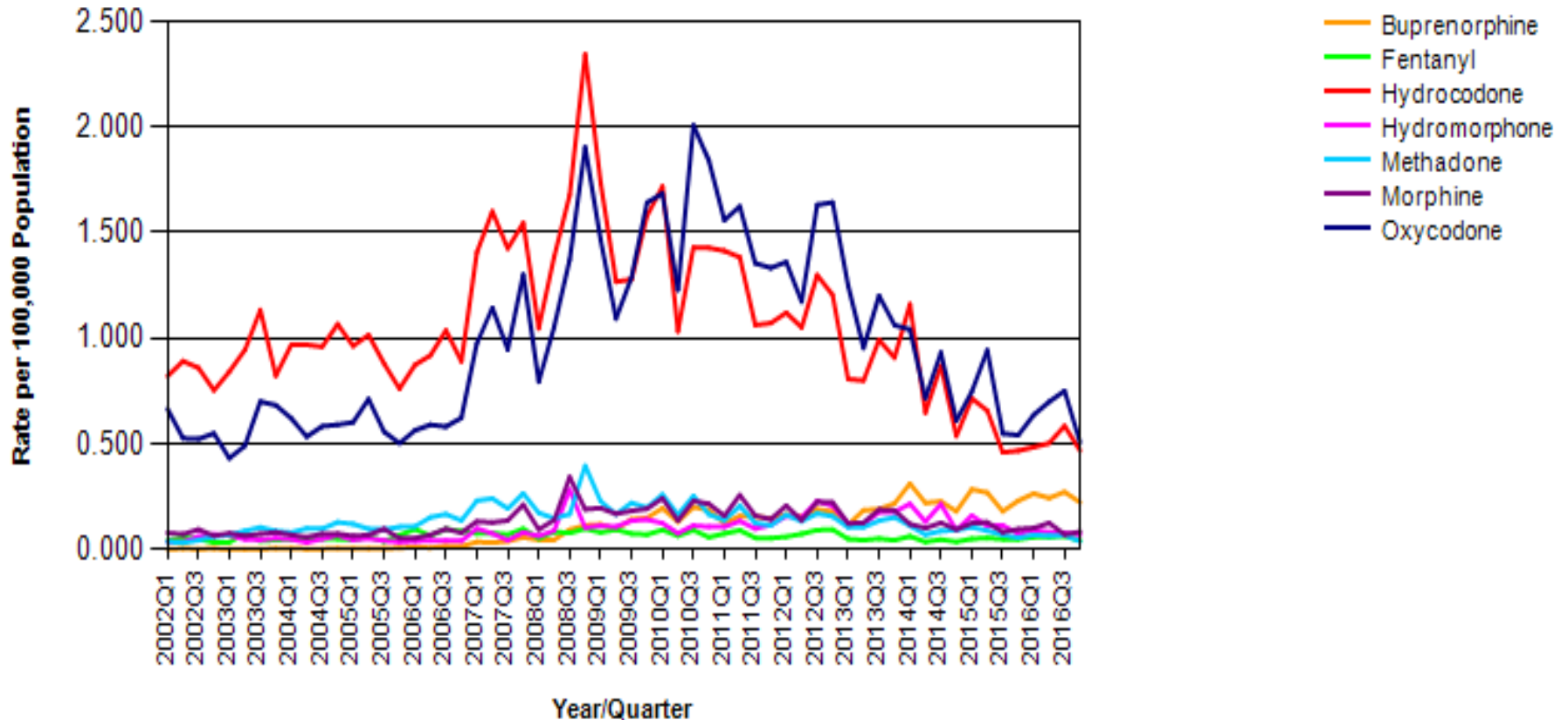
- Open-ended responses to a question about new drug trends
- 2Q2016 added to the survey as a target

3-Digit ZIP Codes Reporting to Drug Diversion for 2016



2002-2015 Diversion Rates (per 100,000 pop)

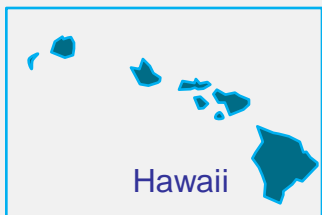
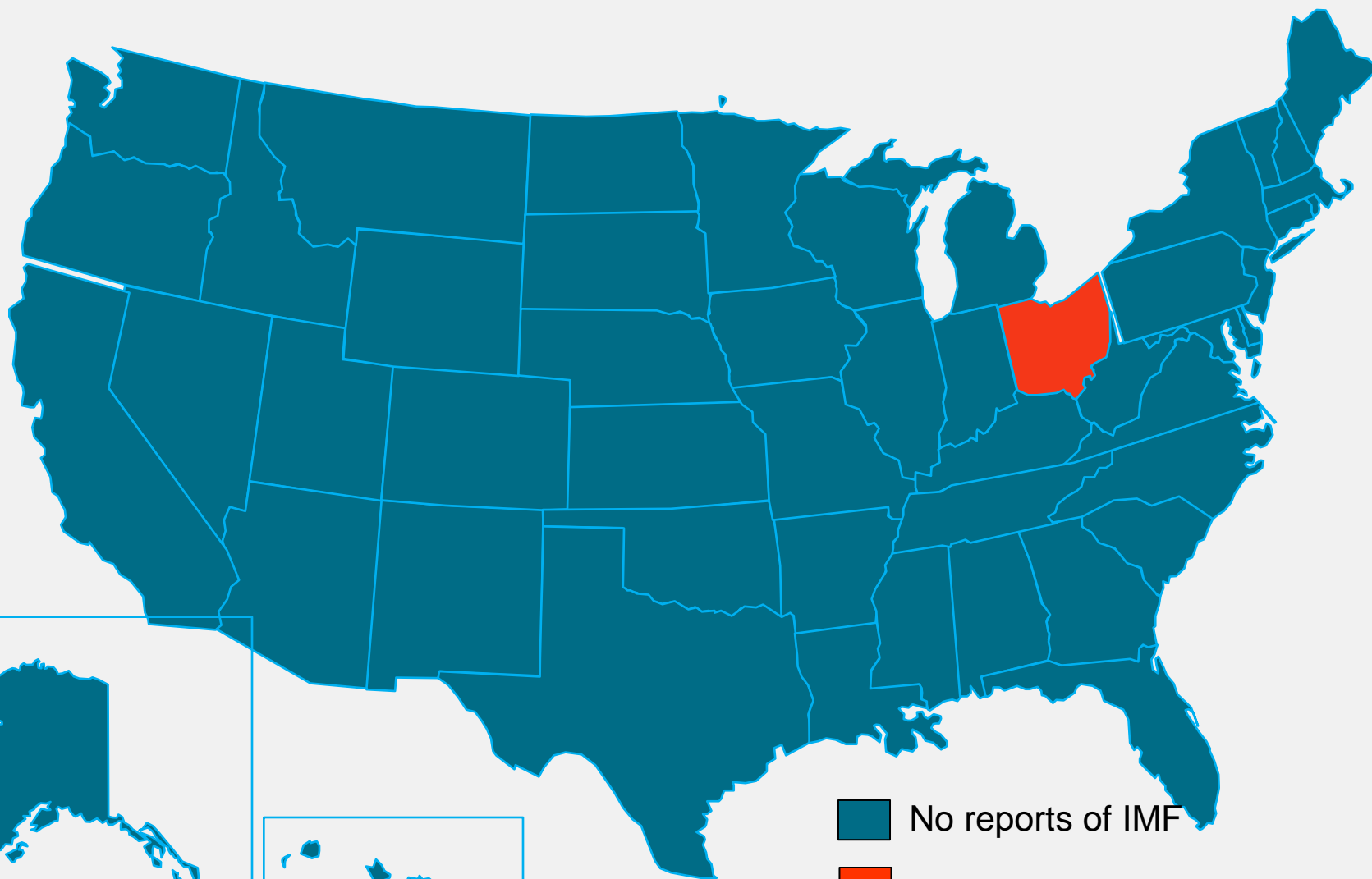
No change in Rx fentanyl diversion






3Q2014 – 1Q2016

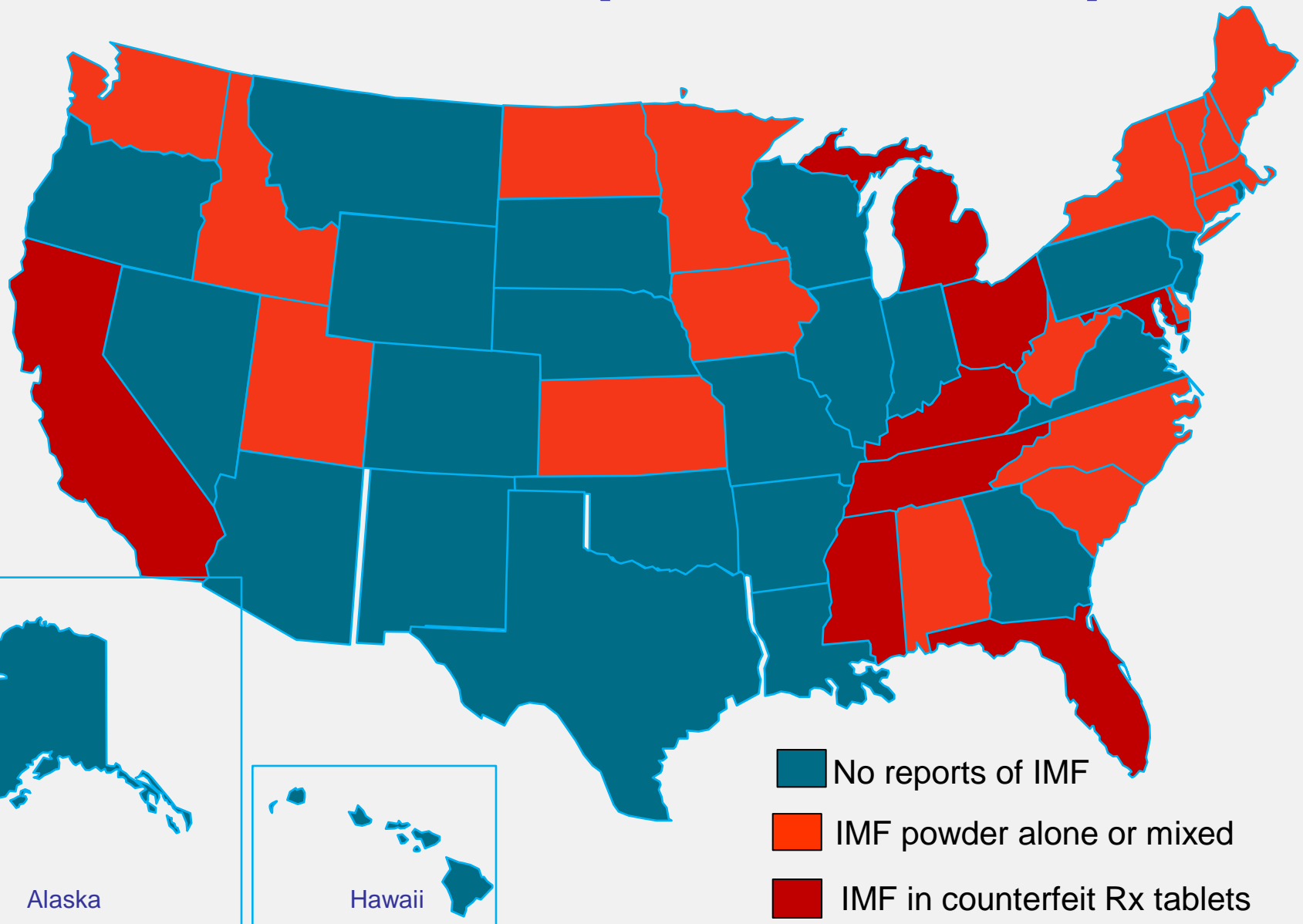
**Reports of IMF in the write-in
section of the DD survey**

3Q 2014



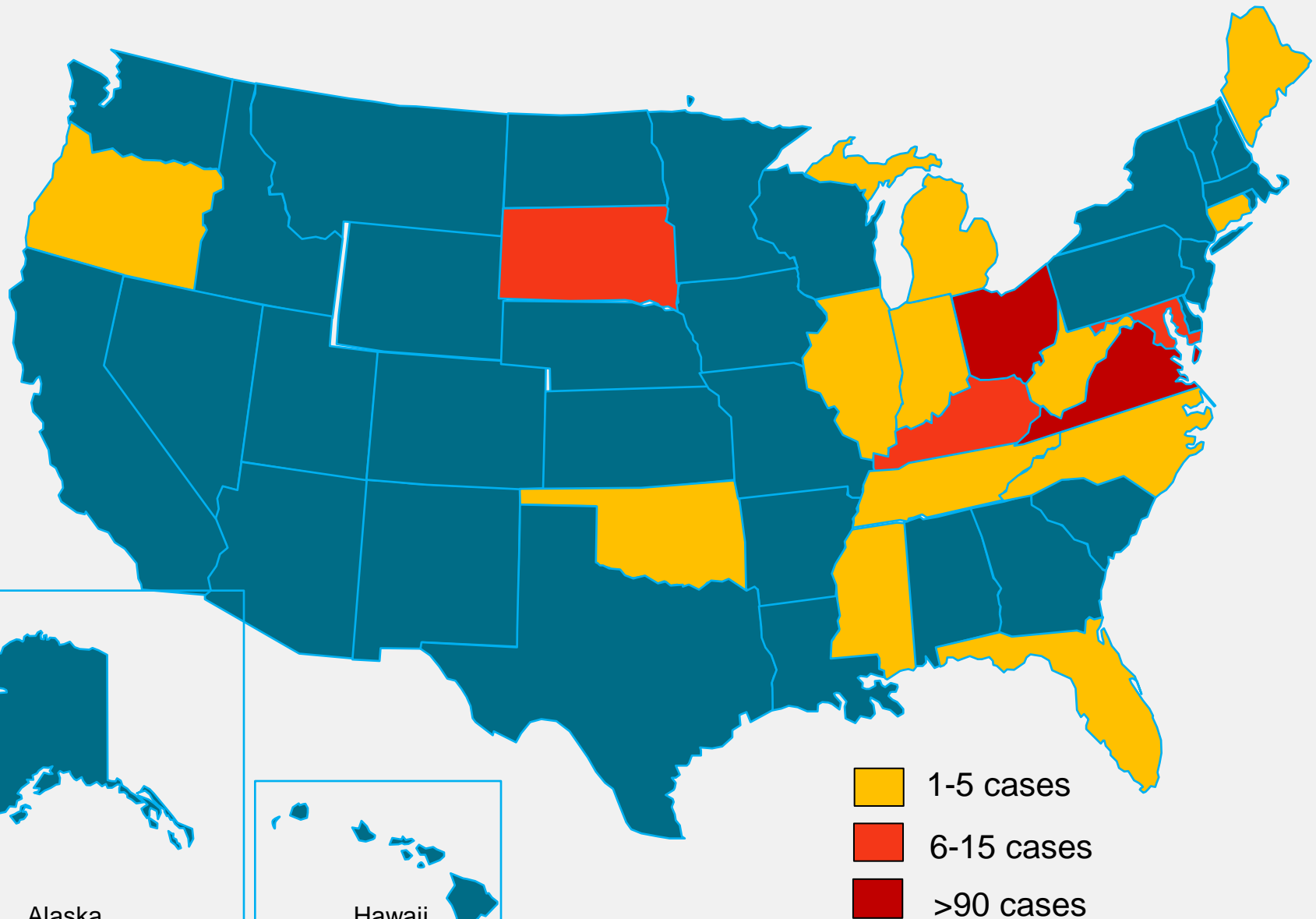
-  No reports of IMF
-  IMF powder alone or mixed
-  IMF in counterfeit Rx tablets

1Q 2016 (cumulative)

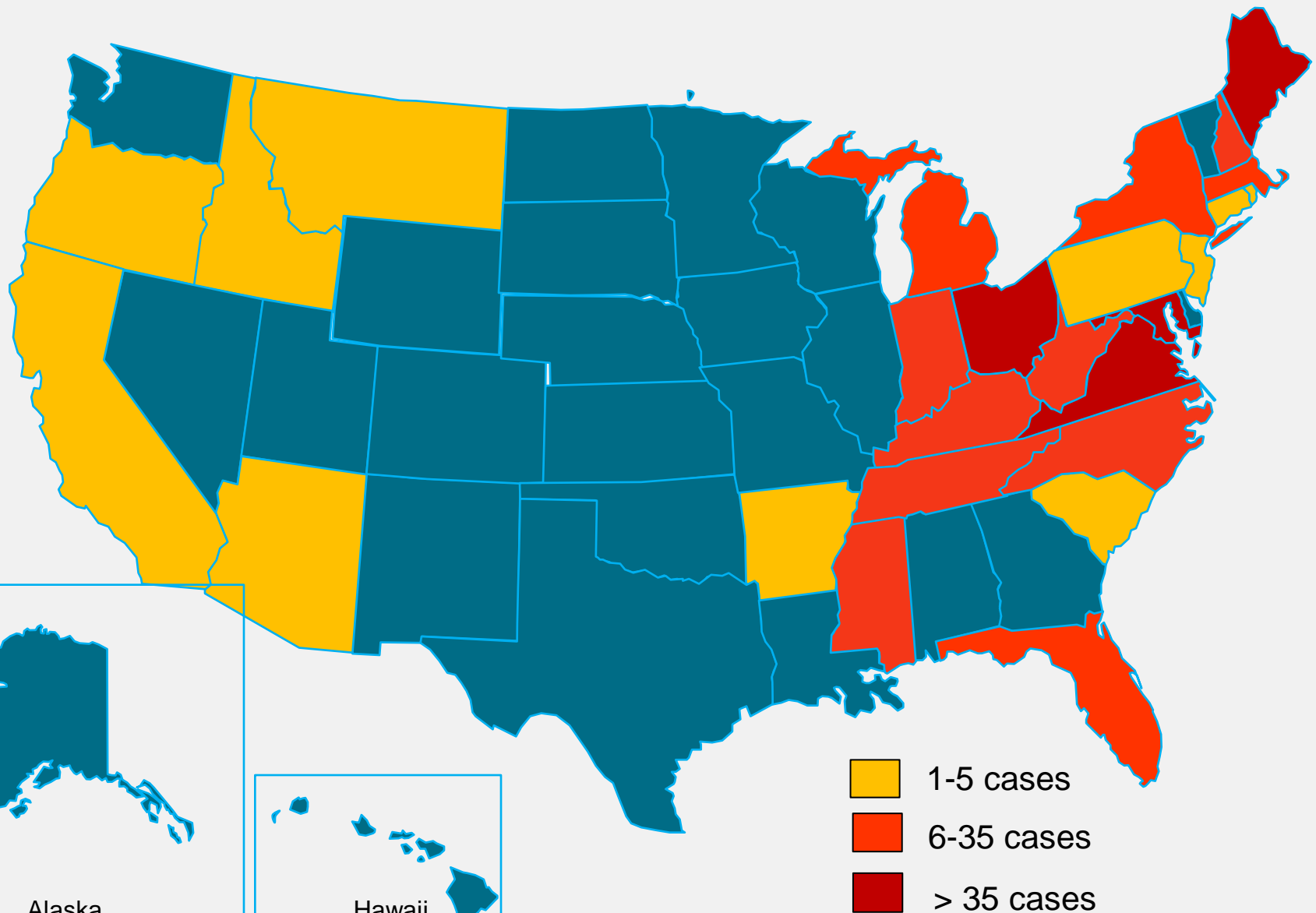


2Q1016 – 1Q2017
IMF Target Drug Survey
Responses

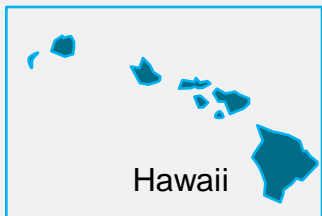
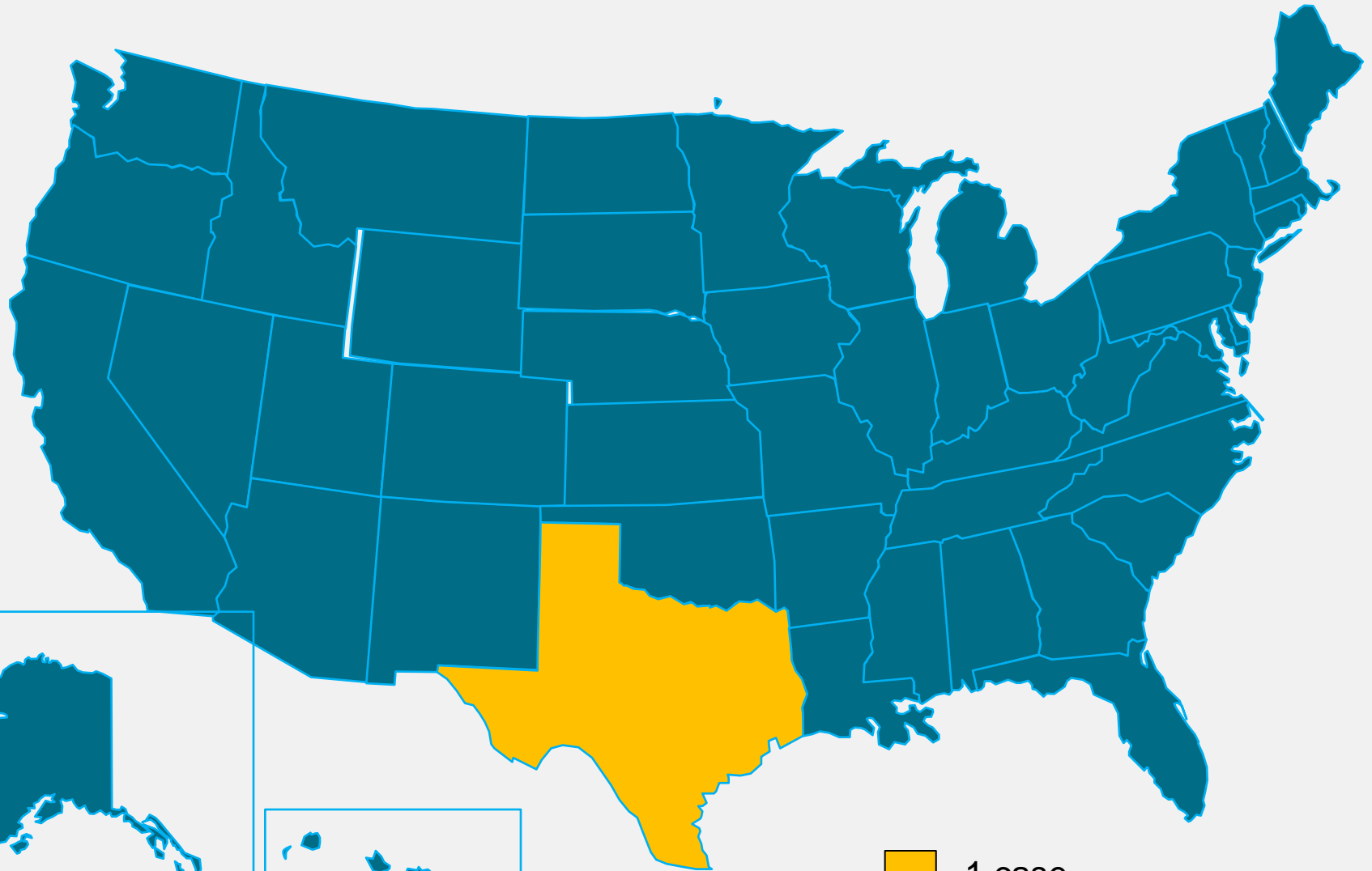
IMF in counterfeit Rx tablets



IMF powder alone or mixed

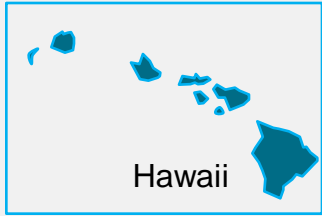
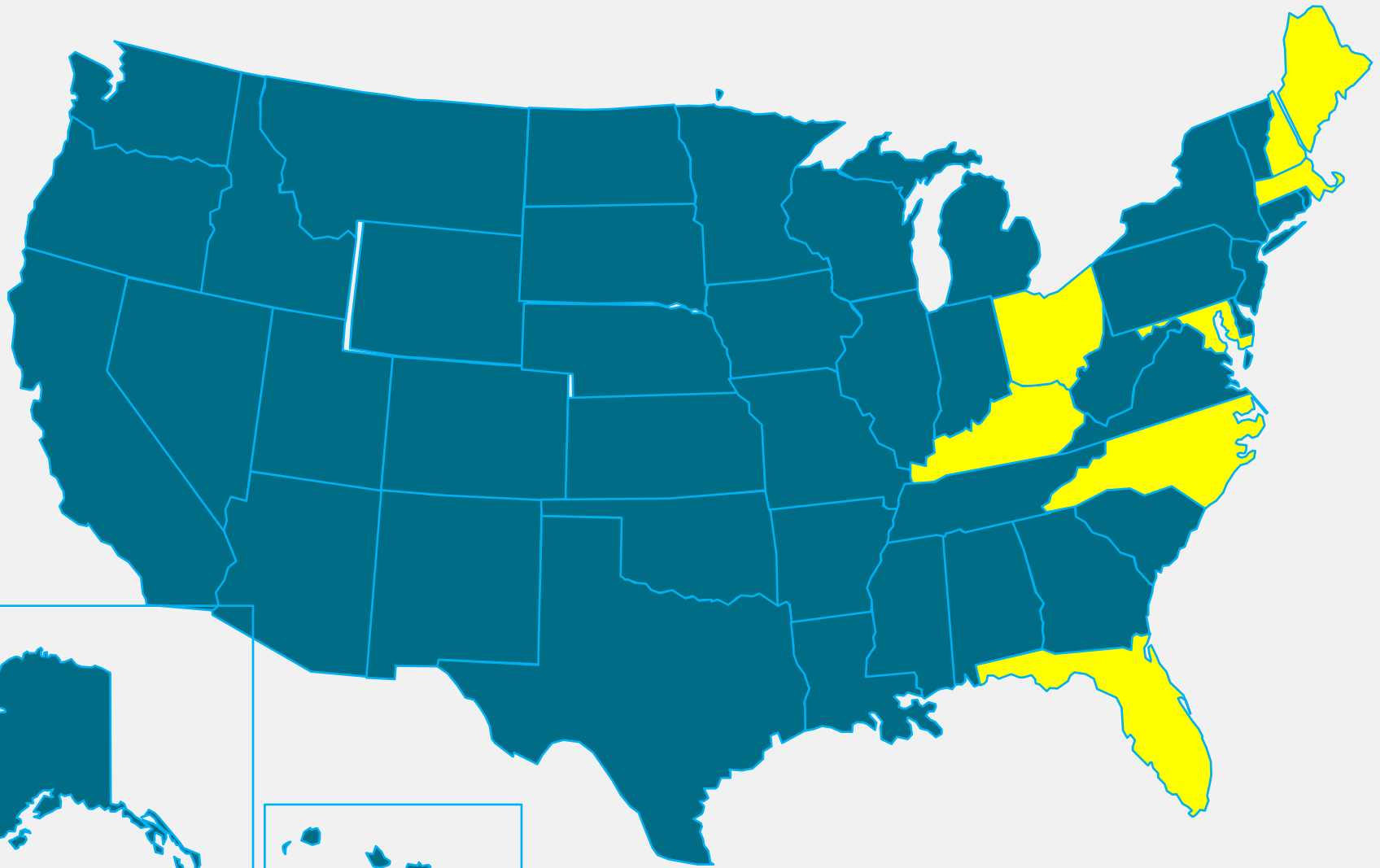


IMF spray



1 case

CDC High Burden States AUG 2016



Reporter comments

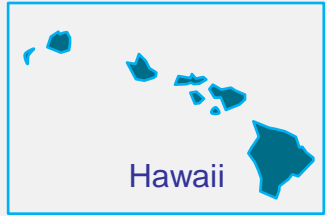
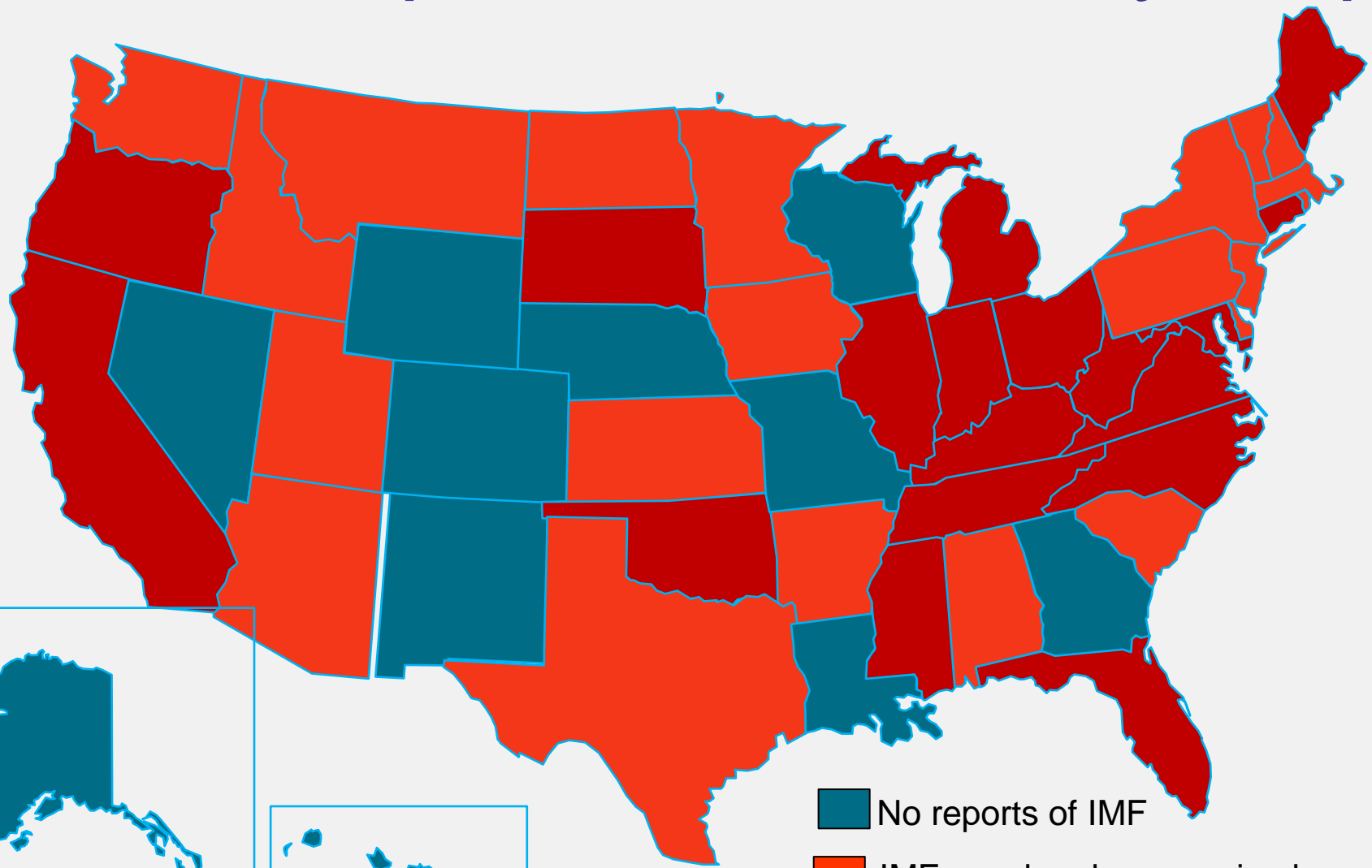
“In the last quarter of 2015, we seized over 1 pound of fentanyl destined for South Florida. It is present in our area and is becoming a greater problem all the time.” – *Reporter in TN*




“The most recent trend in heroin sales that it is being laced with fentanyl and the street nickname for it is “China White. I have also heard of a **fentanyl inhalant/spray** that people have been abusing. But have not arrested anyone for it yet.”
- *Reporter in MD*

Reporter comments

“We have also seen an influx of people producing and manufacturing their own pills with presses at their homes and businesses. **Most of the heroin and fentanyl are being formed and sold as oxycodone but lab results are indicating otherwise.** There are some older molds for oxycodone 30mg pills out there and maybe this is why the dealers are disguising heroin as oxycodone? More to come.” - *Reporter in FL*

1Q2017 Updated DD History Map



-  No reports of IMF
-  IMF powder alone or mixed
-  IMF in counterfeit Rx tablets

Discussion

- Canada and US have different but complementary drug trafficking routes
- Illicit drug trade adapts to Rx opioid misuse trends and control measures

Most worrisome:

- high potency illicit fentanyl analogues are easily camouflaged and transported
- mass produced counterfeit Rx products

Discussion

- The Drug Diversion Program detected the first signal of IMF in Ohio in the 3Q 2014.
- By 1Q 2017, IMF reports had been received from 30 states, primarily along the east and west coasts and the Canadian border
- The systematic collection of these surveillance data in the U.S. signaled the entry of IMF into the US approximately six months before public health notices.

IMF trafficking policy issues

- Ongoing systematic surveillance is needed, including counterfeit Rx products
- Drug Diversion Program adds value:
 - Systematic quarterly data collection
 - Large sample of drug diversion investigators
 - Identification of product form
 - Timely reporting, early warning system
 - Includes qualitative data to describe the problem
- International cooperation needed for control
- Improvements in laboratory testing accuracy and timeliness are needed