Use of the Overdose Detection Mapping Application Program (ODMAP) to Study Opioid Overdoses in Oklahoma and the Pawnee Service Unit (PSU)

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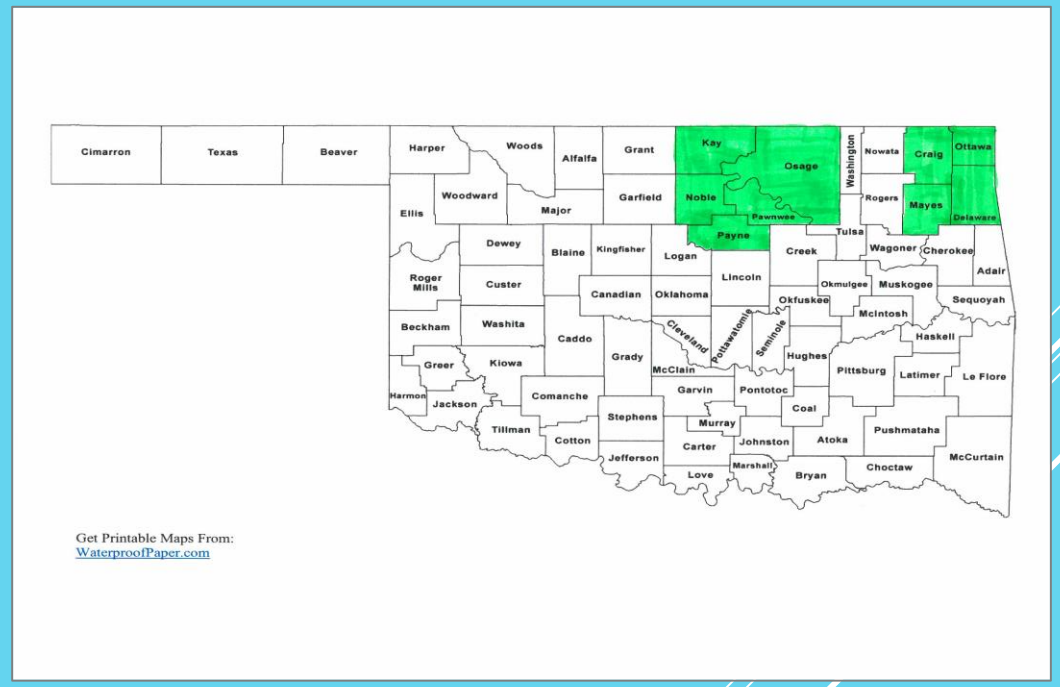
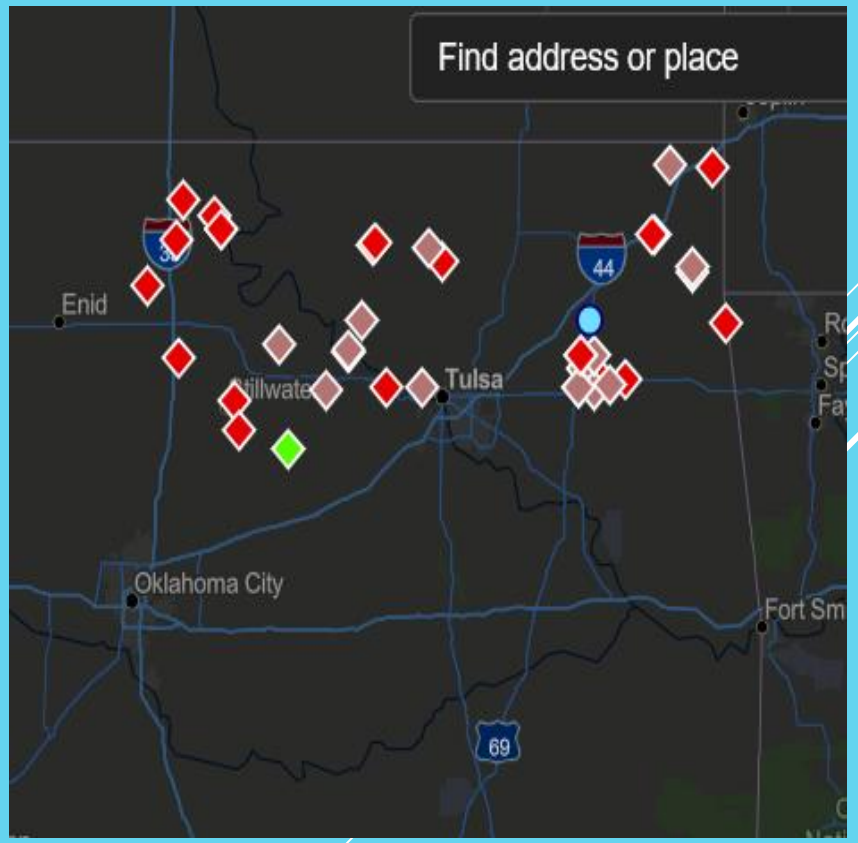
BACKGROUND

- 115 Americans die each day from overdose
- American Indians had the highest unintentional death rates among most age groups
- In Oklahoma prescription drugs were the number one cause of unintentional poisoning deaths from 2007 to 2017
- 3,500 unintentional poisoning deaths in Oklahoma
- The purpose of this study was to use the ODMAP to describe the extent of the opioid overdose problem in the Pawnee Service Unit



WHAT IS ODMAP?

- Free real-time app that allows first responders to report overdoses
- Developed by Washington/Baltimore HIDTA in 2017
- Public safety and public health officials use this information to:
  - Track overdoses across jurisdictions
  - Identify & respond to overdose spikes
  - Target & investigate drug dealers
  - Educate the public through public service announcements
  - Develop long-term strategies to reduce overdoses



ODMAP IN OKLAHOMA

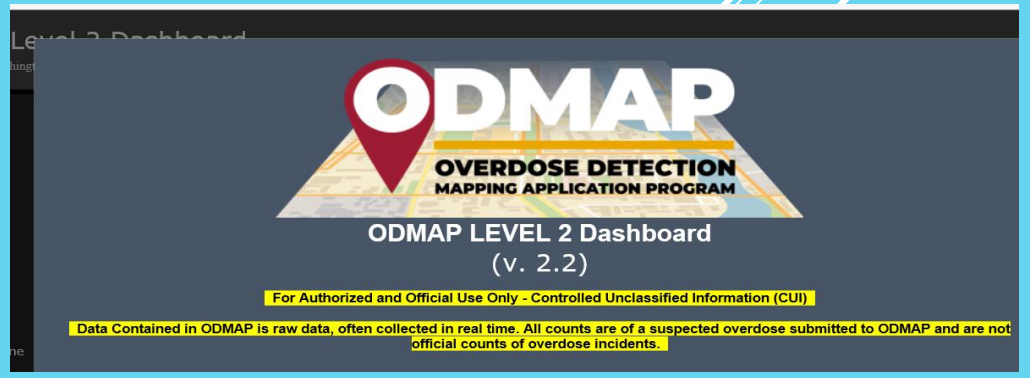
Currently in Oklahoma:

- 48 of 77 counties (63%) have at least one emergency service using ODMAP;
- 27 of 77 sheriffs (35%) are registered for ODMAP, yet
- None of the sheriffs or emergency services in the Pawnee Service Unit are currently using ODMAP

1,400 overdoses have been entered into ODMAP for Oklahoma into the system (1,308, or 93% fatal).

METHODS

- Registered as an ODMAP Level One user
  - Used most by first responders to enter information about overdoses
- Obtained access as an ODMAP Level Two user
  - Sent request to the agency-assigned administrator
  - Provided access to web-based dashboard application
  - Allowed for the display and filtering of data



DATA COLLECTION

Oklahoma

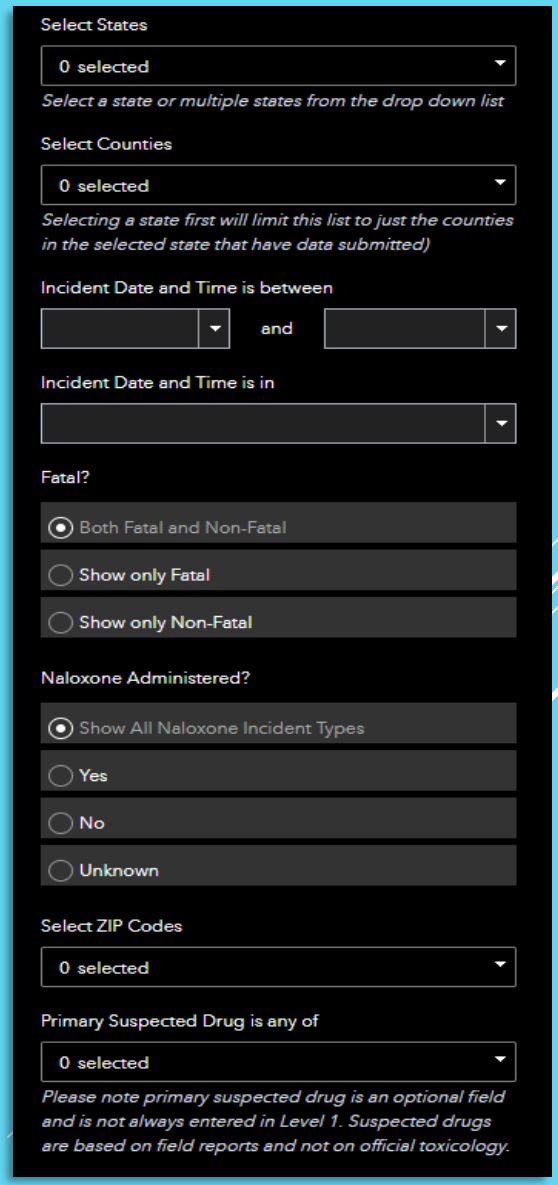
- Selected a state: Oklahoma) and selected counties: all 77 counties
- Selected an incident date range: January 1, 2018 - August. 31 2019

PSU

- Selected a state: Oklahoma) and elected counties:
  - Kay, Noble, Payne, Pawnee, Osage, Craig, Ottawa, and Mayes, Delaware
- Selected an incident date range: January 1, 2018 - August. 31 2019

Search variables:

- Naloxone administration
- Drug type
- Fatal vs non fatal



ANALYSIS

- Frequency distribution
- Calculating proportions

To describe the proportion of naloxone administration stratified by fatal and non-fatal injuries

RESULTS: All Drug Overdoses by Naloxone and Outcome—Oklahoma

Table 1-All Drug Overdoses by Naloxone Use and Outcome, and Proportion of Fatalities in the State of Oklahoma (n=714), Jan 2018 to Aug 2019.

Naloxone Use	Outcome		Proportion of Fatalities
	Fatal (n=591) 83%	Non-Fatal (n=123) 17%	
	n (%)	n (%)	
Use Unknown (n=175)	171 (28.9%)	4 (3%)	98%
No Naloxone (n=505)	412 (69.7%)	93 (76%)	82%
Multiple Doses (n=8)	2 (0.3%)	6 (5%)	25%
Single dose (n=26)	6 (1.0)%	20 (16%)	23%
Total Naloxone Use (n=34)	8 (23.5%)	26 (75.5%)	6%

RESULTS: All Drug Overdoses by Naloxone and Outcome—Pawnee Service Unit

Table 2-All Drug Overdoses by Naloxone Use and Outcome, and Proportion of Fatalities in the Pawnee Service Unit (n=39), Jan 2018 to Aug 2019.			
Naloxone Use	Outcome		Proportion of Fatalities
	Fatal (n=38) 97%	Non-Fatal (n=1) 2.6%	
	n (%)	n (%)	
Use Unknown (n=16)	16 (42.0%)	0 (--)	100%
No Naloxone (n=21)	20 (52.6%)	1 (100%)	95%
Multiple Doses (n=1)	1 (2.6%)	0 (--)	100%
Single dose (n=1)	1 (2.6)%	0 (--)	100%
Total Naloxone Use (n=2)	2 (100%)	0 (--)	9%

RESULTS: Opioid Overdoses by Naloxone and Outcome — Oklahoma

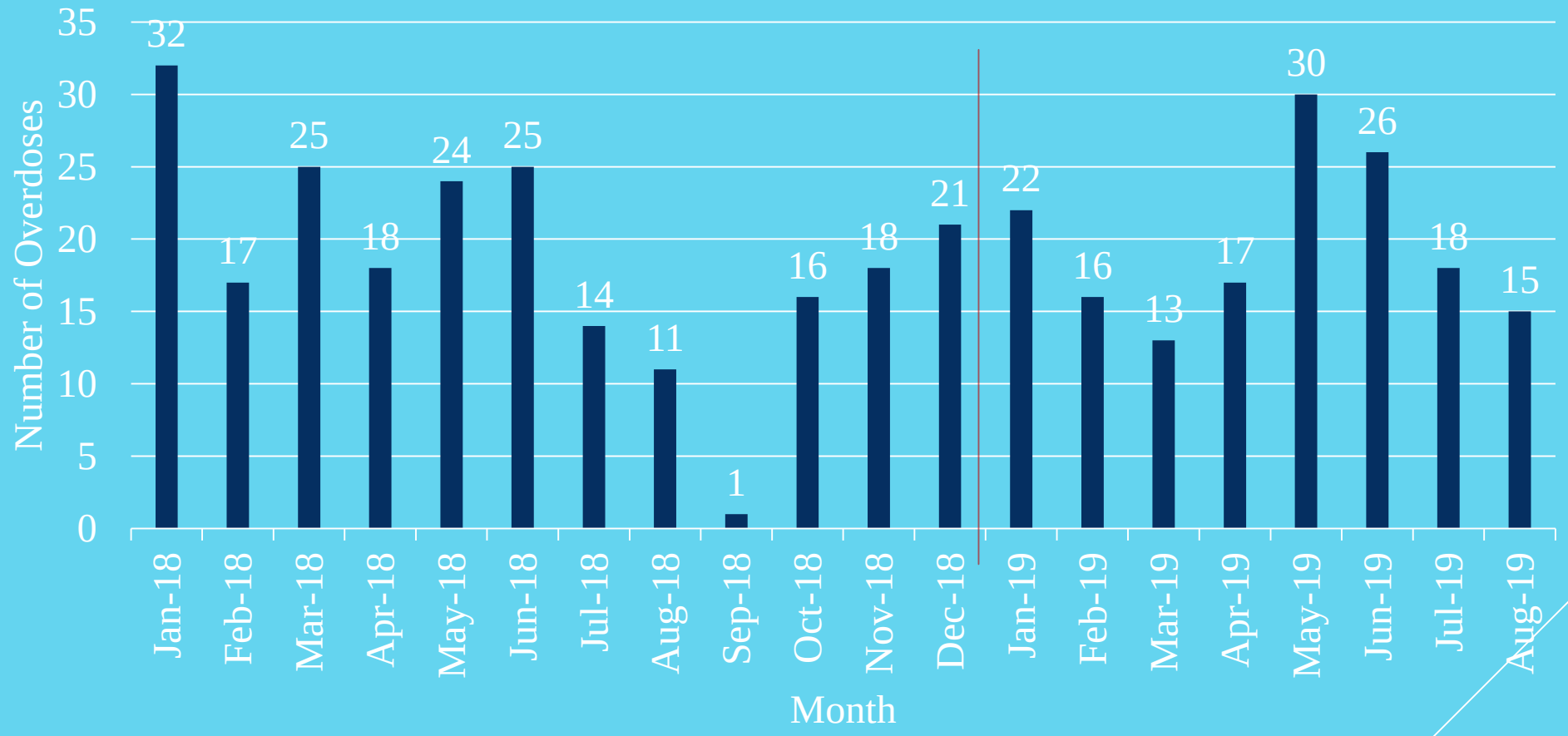
Table 3-Opioid Overdoses OK (n=379), Jan 2018 to Aug 2019.			
Naloxone Use	***Outcome***		***Proportion of Fatalities***
	Fatal (n=313) 82.6	***Non-Fatal (n=66) 17%***	
	n (%)	*n (%)*	
Use Unknown (n=104)	102 (32.6%)	2 (3.0%)	98%
No Naloxone (n=253)	208 (66.5%)	45(68.2%)	82%
Multiple Doses (n=5)	1 (0.32.%)	4 (6.1%)	20%
Single dose (n=17)	2 (0.6)%	15 (22.7%)	12%
Total Naloxone Use (n=22)	3 (14%)	19 (86%)	8%

RESULTS: Opioid Overdoses by Naloxone and Outcome—Pawnee Service Unit

Table 4-Opioid Overdoses PSU (n=24), Jan 2018 to Aug 2019.			
Naloxone Use	Outcome		Proportion of Fatalities
	Fatal (n=23) 96%	Non-Fatal (n=1) 4%	
	n (%)	n (%)	
Use Unknown (n=14)	14 (60.9%)	0 (--)	100%
No Naloxone (n=9)	8 (34.8%)	1 (100%)	89%
Multiple Doses (n=1)	1 (4.4.%))	0 (--)	100%
Single dose (n=0)	0 (--)	0 (--)	0%
Total Naloxone Use (n=1)	1 (100%)	0(--)	10%

RESULTS: Opioid Overdoses By Month—Oklahoma

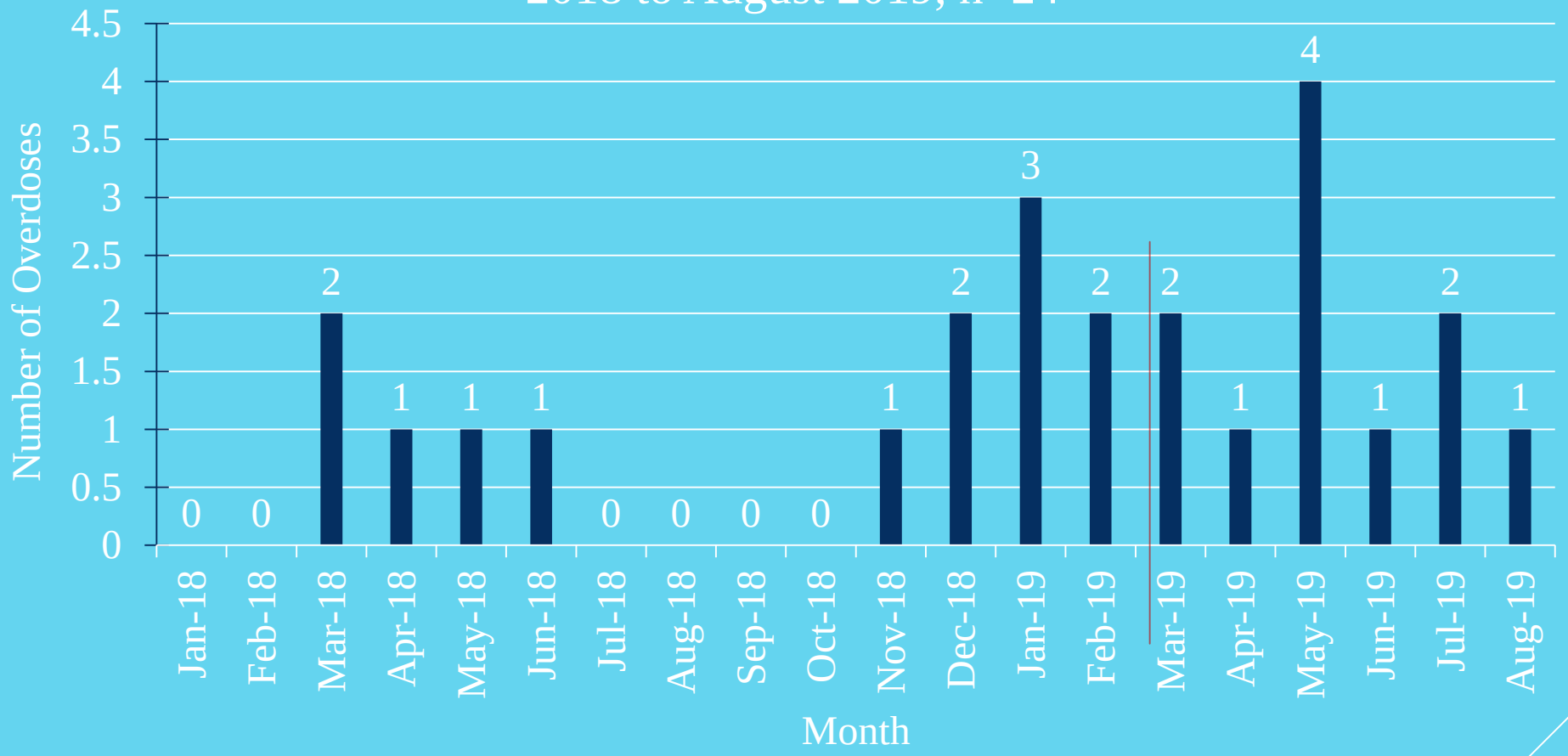
Figure 1. Overdoses (Opioid Specific) by Month, State of Oklahoma, January 2018 to August 2019, n=379.



Source: ODMAP

RESULTS: Opioid Overdoses by Month—Pawnee Service Unit

Figure 2 - Overdose (Opioid Specific) by Month, PSU, January 2018 to August 2019, n=24



Source: ODMAP

DISCUSSION

- The majority of overdose fatalities occurred when Naloxone was not given
- Naloxone use is low for both the state of Oklahoma and Pawnee Service Unit
- Naloxone use is unknown for
  - 33% of fatal overdoses in Oklahoma
  - 42% of fatal overdoses in the PSU.
- PSU's proportion of overdoses (5.5%) was lower than its population proportion of the state of Oklahoma (8.4%)
- Next Steps
  - Increase use of ODMAP system among first responders
  - Work with stakeholders to:
    - Increase access to and education about the use of Naloxone
    - Evaluate program effectiveness

LIMITATIONS

- Demographics are not available within the ODMAP data
  - Age
  - Race
  - Gender
- Non-fatal data are limited
- PSU have no first responder users
- Residence of victim is not captured

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QUESTIONS

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