



DELAWARE OPIOID METRIC INTELLIGENCE PROJECT

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DOMIP Overview

- Goals: improve drug intelligence and community responses in hope of reducing opioid-related problems
- Integrating data to identify opioid-related issues
- Understand causes of and develop solutions to these issues

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- Integrating data to identify opioid-related issues
 - Develop key opioid metrics from different data sources
 - Identify trends over time and in detail
 - Conduct hot-spot mapping

Developing Opioid Metrics: Integrating Diverse Datasets



Toxicology Data



Arrest & Criminal Justice Data



Incident Data



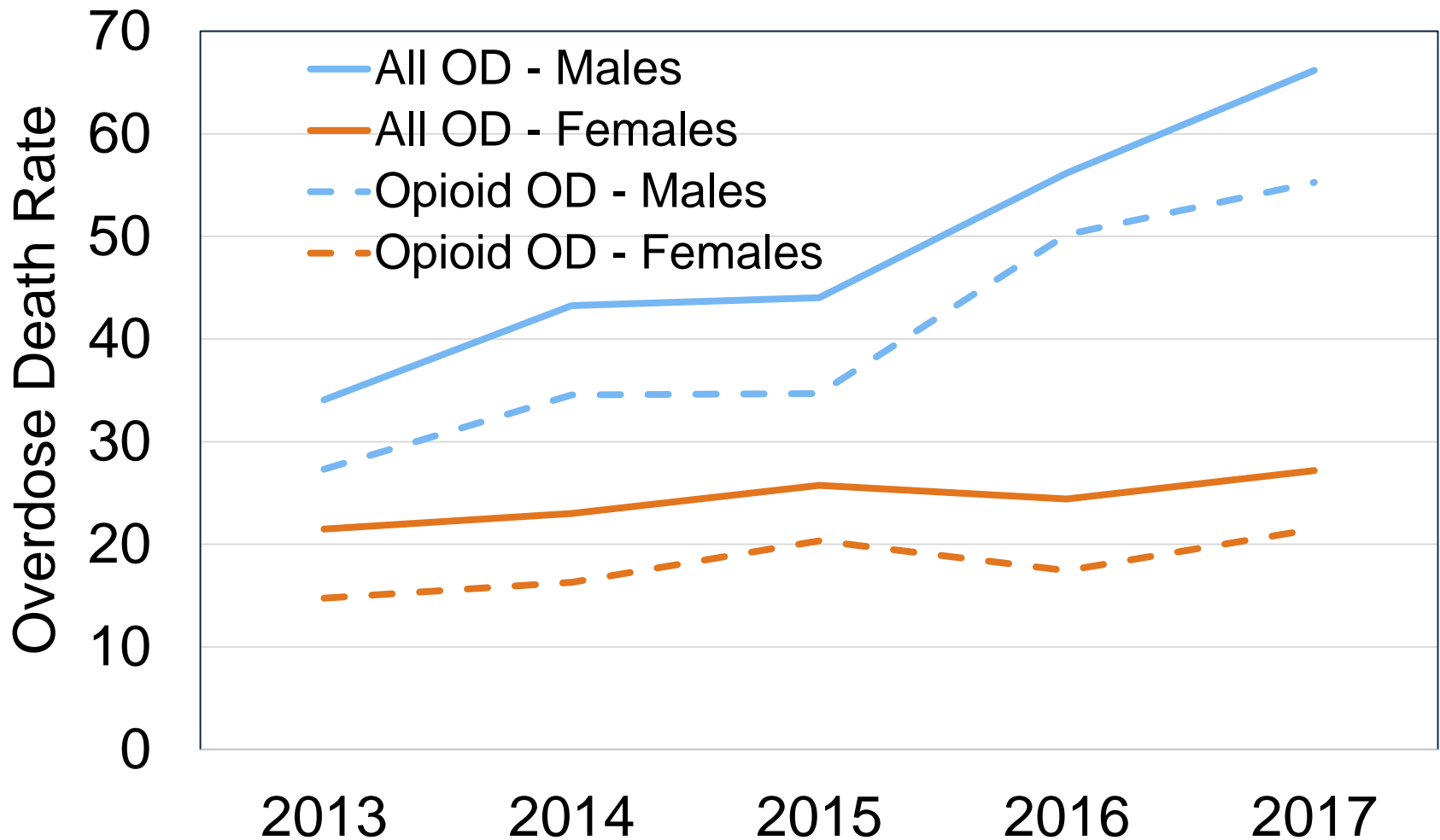
Prescription Data



Demographic Data

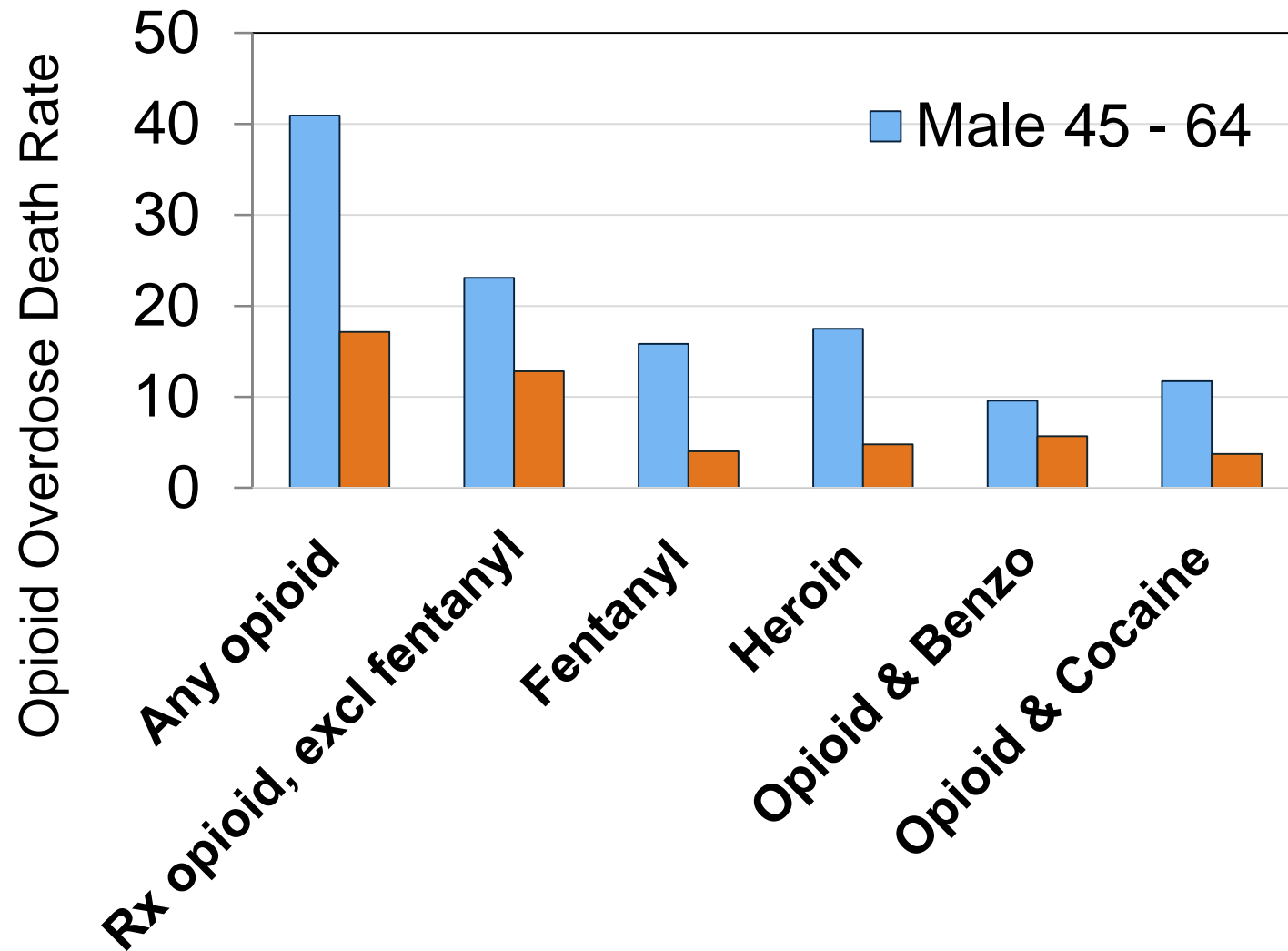
Identify Trends:

Opioid Metrics Over Time

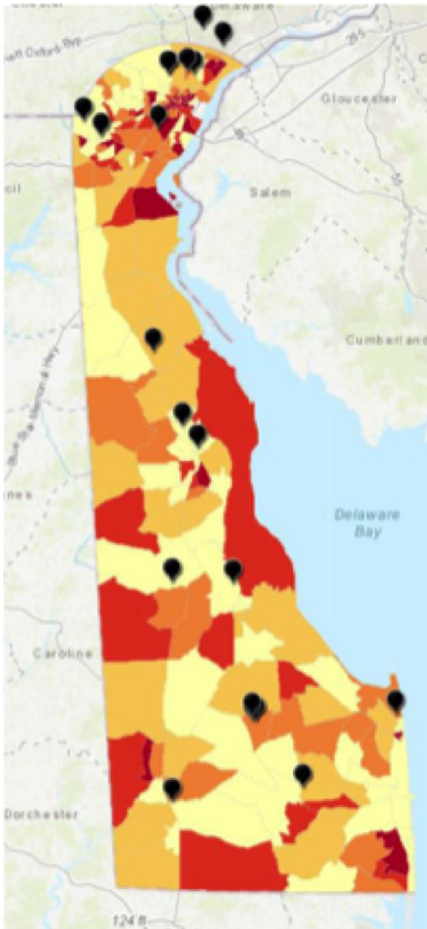


Identify Trends:

Details of Overdoses



Conduct Hot Spot Mapping: DOMIP Mapping App



Asset Mapping

2017 Metrics for Christiana/Varlano (Newark)

Overdose Death Rate (per 100,000)	12.25
2017 Mean Overdose Death Rate (per 100,000)	35
# of Methadone Clinics	0
# of Residential Treatment Facilities	0
# of Other Treatment Facilities	1
Median Home Value \$	247,300.00
Unemployment Rate (16 years or older)	9.50%

Local Metrics

Conduct Hot Spot Mapping: DOMIP Mapping App

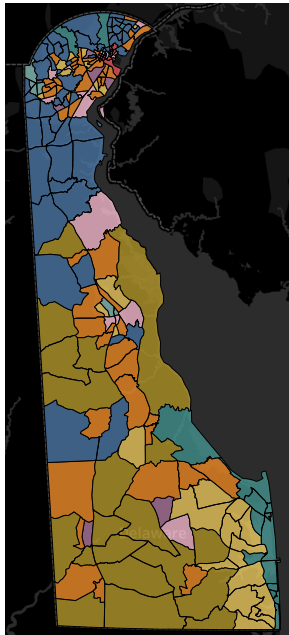
<https://www.cdhs.udel.edu/projects/domip>

DOMIP Overview

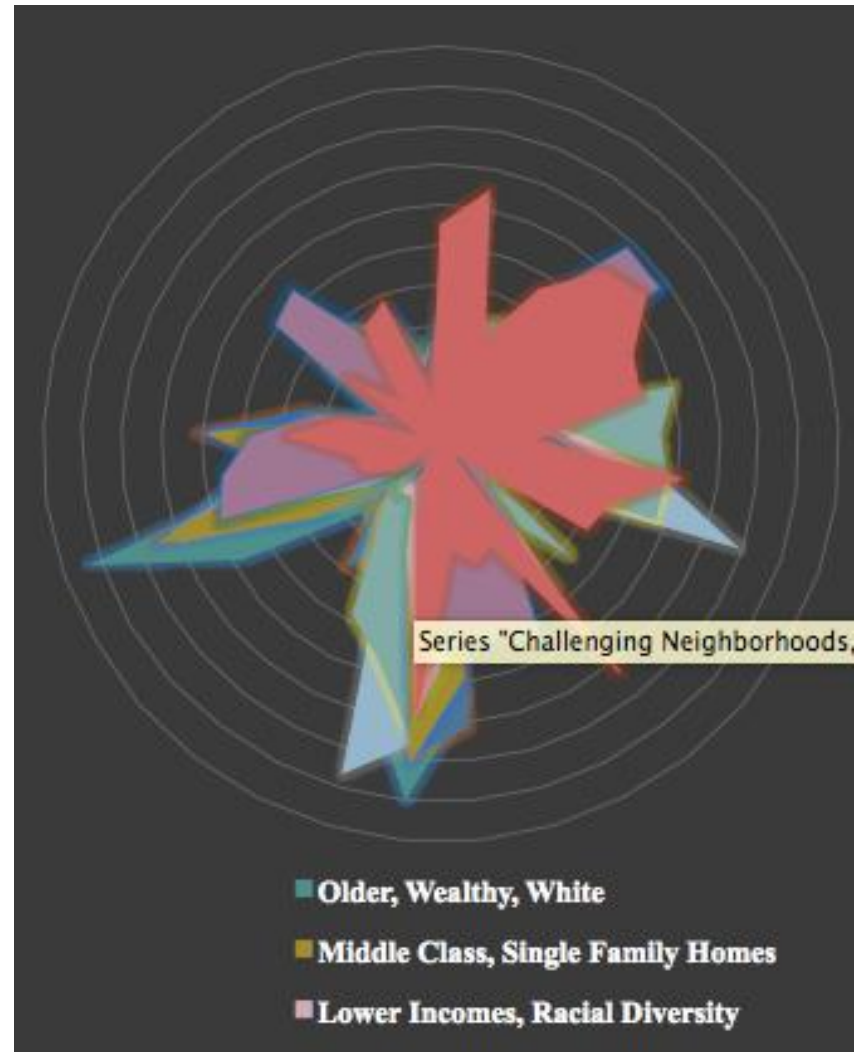
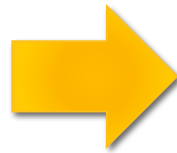
- Goals: improve drug intelligence and community responses in hope of reducing opioid-related problems
- Integrating data to identify opioid-related issues
- Understand causes of and develop solutions to these issues
 - Spatial modeling of opioid problems to find sources
 - Analyze policy responses to opioid problems

Spatial Modeling of Opioid Problems: Geodemographic Prediction of Overdoses

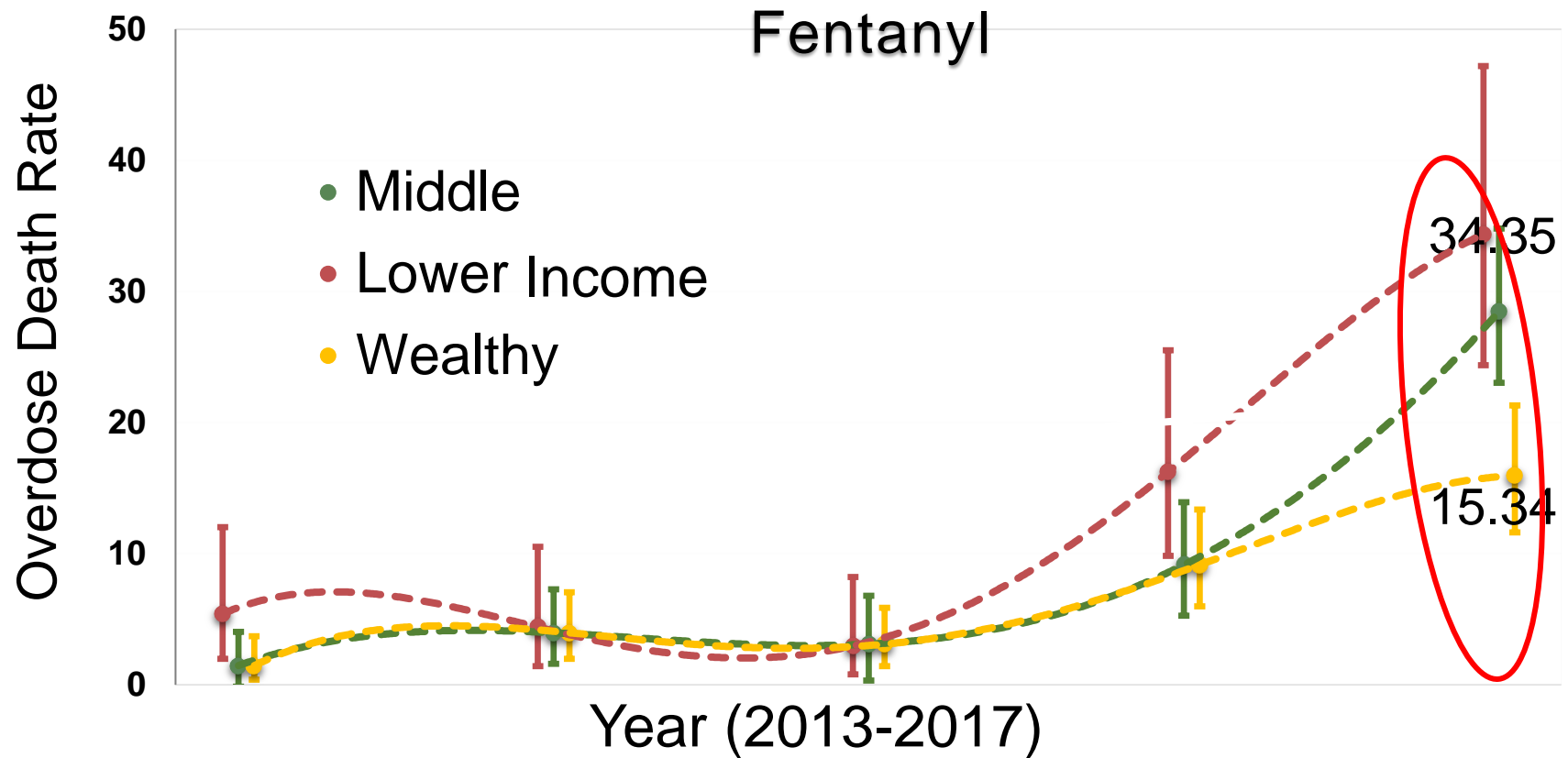
- Question: do overdose death rates vary by neighborhood type?



Cluster Analysis



Spatial Modeling of Opioid Problems: Geodemographic Prediction of Overdoses



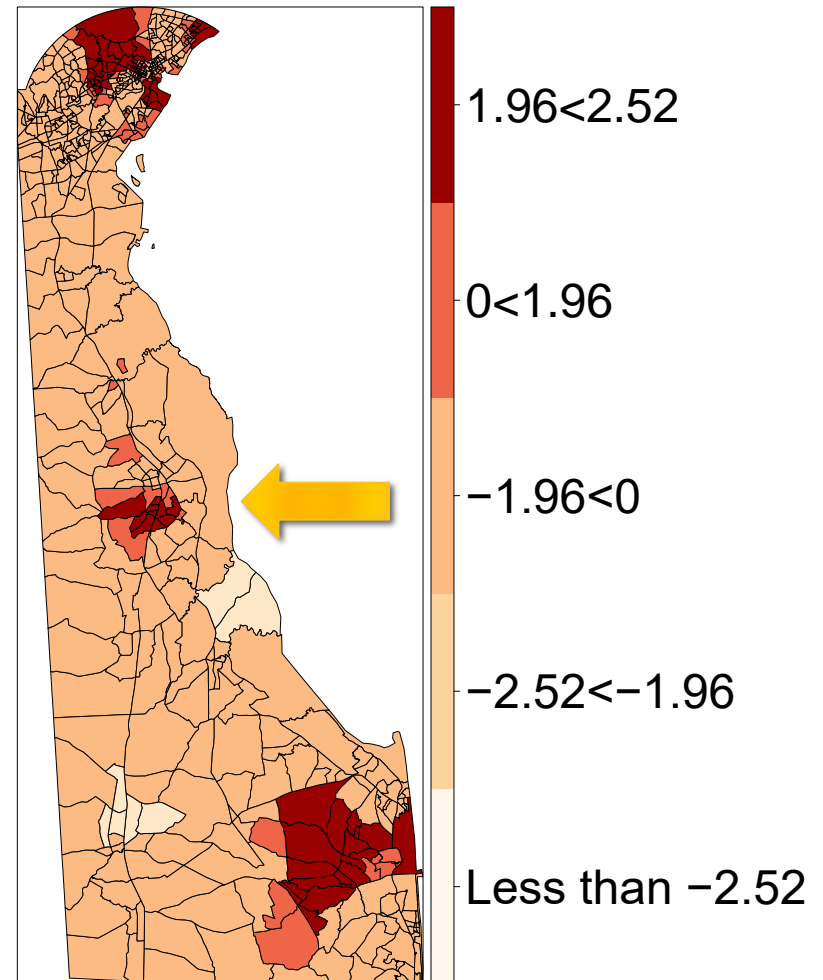
Source: "Understanding Geographic and Neighborhood Variations in Overdose Death Rates" (2018). *Journal of Community Health*.

Impact of Responses to Opioid Problems: Prediction of Opioid-Related Arrests

- Is there are relationship between calls for overdose incident services and arrests?

Dover's 'ANGEL' initiative steers opioid users into treatment instead of jail

T-Statistic for Overdose Incident Rate on Arrests



Geographically Weighted Regression

Takeaways

- Addressing the opioid crisis requires data integration
- Opioid metrics should illuminate shifts in problems over time
- Maps and spatial models incorporate community context
- Prediction and evaluation may help with risk reduction and issue prevention

Thank you!

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ANDERSON, TAMMY L. (PRINCIPAL INVESTIGATOR) AND
DANIEL O'CONNELL, (CO-INVESTIGATOR). "DELAWARE
OPIOID METRIC INTELLIGENCE PROJECT," (2017-IJ-CX-0016),
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