

# 2021 Virtual COSSAP National Forum

COSSAP 2021: New Partners, New Tools, Renewed Hope

November 16–18, 2021

# NIJ's Drugs and Crime Research and Forensic Technology Assistance

11/18/2021

Linda Truitt, Ph.D., Jonathan McGrath, Ph.D., and Eric Martin, M.A.,  
National Institute of Justice

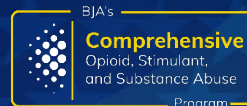
Jeri Roper-Miller, Ph.D., RTI International

Tammy Anderson, Ph.D., University of Delaware

Glenn Sterner, Ph.D., Pennsylvania State University



This event was supported by Grant No. 2017-AR-BX-K003 awarded by the Bureau of Justice Assistance. The Bureau of Justice Assistance is a component of the U.S. Department of Justice's Office of Justice Programs, which also includes the Bureau of Justice Statistics, the National Institute of Justice, the Office of Juvenile Justice and Delinquency Prevention, the Office for Victims of Crime, and the Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering, and Tracking (SMART). Points of view or opinions in this presentation are those of the author(s) and do not necessarily represent the official position or policies of the U.S. Department of Justice.



# NIJ Panel

- NIJ's Drugs and Crime Research Portfolio
- Criminal Justice and Public Health Response for Emerging Drug Threats – Jeri Roper-Miller, Ph.D., RTI International
- Delaware Opioid Metric Intelligence Project – Tammy Anderson, Ph.D., University of Delaware
- Identifying and Informing Strategies for Disrupting Drug Distribution Networks: An Application to Opiate Flows in Pennsylvania - Glenn Sterner, Ph.D.. Pennsylvania State University
- Discussion/Questions & Answers

# NIJ Drugs and Crime Research Portfolio

- NIJ Office of Research Evaluation and Technology
- NIJ Office of Investigative and Forensic Sciences
  - National Center on Forensics
  - Forensic Technology Center of Excellence
- Research Solicitations:
  - NIJ Research and Evaluation on Drugs and Crime
  - NIJ Research and Evaluation on the Administration of Justice
  - Research and Evaluation for the Testing and Interpretation of Physical Evidence in Publicly Funded Forensic Laboratories
  - Research and Development in Forensic Science for Criminal Justice Purposes
  - Graduate Research Fellowship Program

# Forensic Technology Center of Excellence (FTCoE)

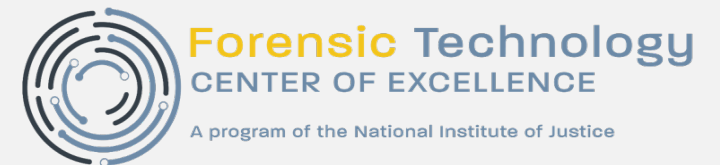
## *Criminal Justice and Public Health Response for Emerging Drug Threats* **Jeri Roper-Miller, Ph.D., RTI International**

- Implementation of new forensic technology and best practices
- Dedicated to elevating forensic science through advancing technology, sharing knowledge, and addressing challenges
- Emphasis placed on dual use methods and technologies supporting multiple practitioner communities
  - Drug surveillance strategies (e.g., PDMP, ODMAP, Statewide Dash boards)
  - Drug identification and toxicology

This project was supported by Grant Award No. 2016-MU-BX-K1110, awarded by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. The opinions, findings, and conclusions or recommendations expressed in this publication/program/exhibition are those of the author(s) and do not necessarily reflect those of the Department of Justice.

# FTCOE-COSSAP Efforts

- Support first responders with improved field technologies
- Build capacity in underserved regions
- Improve cross-system planning and resource allocation through improved surveillance
- Enhance partnerships among forensic science organizations and the broader public safety and public health community
- Implement evidence-based technologies and practices





# FTCOE Approach

- Engage and Immerse within the Community of Practice
- View the Needs and Challenges from different perspectives
  - Scientific
  - Behavioral
  - Multi-Sector view (e.g., Criminal justice, public health, governmental, society)
  - Social Impact



The screenshot shows the website header with the FTCoE logo and name. Below the header is a blue banner with the title "Resources to Address the Opioid Crisis". The main content area is divided into several sections:

- COSSAP-Related Activities**: Includes a link to [forensiccoe.org/cossap](http://forensiccoe.org/cossap).
- Working Group on Data Exchange in Medicolegal Death Investigation**: Includes a link to [forensiccoe.org/working-group-data-exchange-mdi](http://forensiccoe.org/working-group-data-exchange-mdi).
- Events**:
  - 2021 Medicolegal Death Investigation Webinar Series ([forensiccoe.org/mdi-webinar-series/](http://forensiccoe.org/mdi-webinar-series/))
  - The National Institute of Justice, in partnership with the FTCoE, hosted the National Opioid and Emerging Drug Threats Policy and Practice Forum, July 2019, in Washington, D.C. An archival version of the event can be found here: [forensiccoe.org/workshop/emerging-drug-opioid-forum-2019/](http://forensiccoe.org/workshop/emerging-drug-opioid-forum-2019/)
- Virtual Learning Opportunities**:
  - NPS Discovery Toolkit for Designing and Implementing Testing for New and Emerging Psychoactive Drugs ([learning.forensicac.org/course/view.php?id=33](http://learning.forensicac.org/course/view.php?id=33))
  - Webinar Series: Opioid Crisis: A Public Health Enemy ([forensiccoe.org/webinar/opioid-crisis-a-public-health-enemy-webinar-series/](http://forensiccoe.org/webinar/opioid-crisis-a-public-health-enemy-webinar-series/))
  - Webinar Series: Opioids & Emerging Drug Threats – Integrating Public Safety and Health Data for a Forensic Response ([forensiccoe.org/opioids-emerging-drug-threats-series](http://forensiccoe.org/opioids-emerging-drug-threats-series))
- Webinars**:
  - Webinar: Multiple Perspectives on Overdose Fatality Reviews ([forensiccoe.org/multiple-perspectives-overdose-mdi-ofr](http://forensiccoe.org/multiple-perspectives-overdose-mdi-ofr))
  - Webinar: Novel Psychoactive Substance Naming Conventions & Challenges ([forensiccoe.org/nps-naming-conventions](http://forensiccoe.org/nps-naming-conventions))
  - Webinar: Novel Synthetic Opioids in Oral Fluid: Analytical Methods and Prevalence ([forensiccoe.org/novel-synthetic-opioids-oral-fluid](http://forensiccoe.org/novel-synthetic-opioids-oral-fluid))
- Reports & Articles**:
  - Landscape Study of Field Portable Devices for Presumptive Drug Testing ([forensiccoe.org/landscape-study-of-field-portable-devices-for-presumptive-drug-testing](http://forensiccoe.org/landscape-study-of-field-portable-devices-for-presumptive-drug-testing))
  - Reports of Adverse Events Associated with Use of Novel Psychoactive Substances, 2013-2016: A Review ([forensiccoe.org/reports-of-adverse-events-associated-with-use-of-novel-psychoactive-substances-2013-2016-a-review/](http://forensiccoe.org/reports-of-adverse-events-associated-with-use-of-novel-psychoactive-substances-2013-2016-a-review/))
- Podcasts**:
  - Just Polysubstance Use and the Importance of Data Trends
  - Just the Intersection of Opioids and Illicit Stimulants
  - Just Throwing DARTs at the Opioid Crisis
  - Just Opioid Financial Burden on Crime Labs
  - Just the State of Pathology ([forensiccoe.org/just-science-podcast](http://forensiccoe.org/just-science-podcast))

At the bottom of the page, a blue banner contains the text: "For more information on FTCoE, visit [ForensicCOE.org](http://ForensicCOE.org)"

# FTCOE Webinars

## Over 30 webinars

- 60 minutes
- Certificate of Completion
- Live and OnDemand

## Topics:

- Multiple Perspectives on Overdose Fatality Reviews (July)
- Lessons Learned from Project ECHO: Overdose Fatality Investigation Techniques (Oct)
- The Importance of Data to the MDI Community and Stakeholders (Nov)
- Death Certification by the ME/Coroner in Drug-Related Deaths (Nov)
- Novel Psychoactive Substance Naming Conventions and Challenges (Feb)
- Preemptive Approach to Combatting and Characterizing the Emerging Synthetic Opioids (Feb)
- MDI Considerations for Prescription Drug Monitoring Programs (Nov)
- Death Certification by the ME/Coroner in Drug-Related Deaths (Nov)
- Data Systems Imperative in 21st Century Forensic Services (Nov)
- Harnessing Data to Implement Real-Time Data-Driven Overdose Response Strategies (Dec)
- Drug Fatalities in Tribal Lands- Special Considerations to Investigations (Jan 2022)



# FTCOE Reports

## Topics:

- Strengthening the Medical Examiner Coroner System through NIJ-funded Programs (Sept 2018)
- Anticipating Forensic Toxicology Staffing Needs: The Return on Investment from Early Identification of Emerging Drug Trends (Winter 2022)
- Determining the Costs and Benefits of Medical Examiner/Coroner Outsourcing (Winter 2022)
- Adverse Events for Novel Psychoactive Substances of 2017-2020 Cases (Winter 2022)
- COSSAP Success Story- Pittsburgh's Program Evaluation and Research Unit & Pennsylvania Opioid Overdose Reduction Technical Assistance Center (Winter 2022)



# FTCOE Podcasts

## *Illicit Substance Use Response (Jan-Mar 2021)*

- 30-45 minutes
- Seasons with Weekly Releases
- Experts discuss topics like stigma, recovery, policy solutions, public safety systems, & identifying drug trends
- Topics
  - JUST THE INTERSECTION OF OPIOIDS AND ILLICIT STIMULANTS: PART 1
  - JUST THE INTERSECTION OF OPIOIDS AND ILLICIT STIMULANTS: PART 2
  - JUST THE IMPORTANCE OF IDENTIFYING EMERGING DRUG THREATS
  - JUST THE STORY OF THE HEALTHY GRANDFAMILIES PROJECT
  - JUST PARTNERSHIPS TO ENHANCE OVERDOSE FATALITY REVIEW
  - JUST ALTERNATIVE CRISIS RESPONSE: ONE COMMUNITY'S EXPERIENCE
  - JUST BUILDING POLICY FROM THE GROUND UP
  - JUST THE DEA NATIONAL FORENSIC LABORATORY INFORMATION SYSTEM
  - JUST ADDRESSING THE STIGMA OF SUBSTANCE ABUSE DISORDER
  - JUST POLYSUBSTANCE USE AND THE IMPORTANCE OF DATA TREND

# FTCOE Tools and Other Resources

- Toolkits
- Interlaboratory Comparison Studies for Seized Drugs
- Technology Evaluations
- Program Evaluations
- Workforce Calculators
- Process Maps
- First Responder Roll Call Videos (Winter 2022)

A hand in a white lab coat is pointing towards a digital interface. The interface consists of a grid of blue hexagonal tiles, each containing a white icon representing different aspects of health and fitness: a bicycle, a heart rate monitor, a leaf, a person running, a person on a treadmill, a pair of feet, a heart with a pulse line, and a person sitting at a desk. The background is a light blue gradient.

# FTCOE WORKING GROUP ON DATA EXCHANGE IN MEDICOLEGAL DEATH INVESTIGATION

## Goals:

- Document the types of data that are commonly exchanged with public health and public safety partners and determine collective usage points
- Provide suggestions on how to improve the naming process for emerging drugs
- Guide the drug mapping/classification process
- Recommend needed enhancements to the operation of exchanging forensic data with other organizations

# Contact Information

NIJ Forensic Technology Center of Excellence

<https://www.forensicCOE.org>

(see handout)

FTCOE Project Director: [jerimiller@rti.org](mailto:jerimiller@rti.org)

NIJ Program Manager: [Jonathan.McGrath@usdoj.gov](mailto:Jonathan.McGrath@usdoj.gov)

# Delaware Opioid Metric Intelligence Project (DOMIP)

## *Lessons Learned for Drugs & Crime Research from an Opioid Data Science Project*

**Tammy Anderson, Ph.D., Principal Investigator and Daniel O’Connell, Ph.D., co-PI,  
University of Delaware (tammya@udel.edu)**

### Purpose:

- Delineate the main benefits and challenges to adopting data science approaches for criminal justice research and policy on drugs and crime.
- Offer “lessons learned” from our opioid surveillance research in Delaware to advise future researchers in translating science into impactful best practices.
- Focus on crimino-epidemiologic approaches and partnerships.
- Describe our project, review some of our main scientific findings, and then pivot to the challenges we have faced in contributing to policy and practice.
- Close with recommendations for future research and public advocacy.

This project was supported by Grant Award No. 2017-IJ-CX-0016, awarded by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. The opinions, findings, and conclusions or recommendations expressed in this publication/program/exhibition are those of the author(s) and do not necessarily reflect those of the Department of Justice.



# DOMIP Project Description

*The Delaware Opioid Metric Intelligence Project (DOMIP) – seeks to improve timely drug intelligence and community surveillance capabilities in Delaware to help reduce its Rx opiate, heroin, opioid and related problems.*

- Goal #1. Build a six-year (2013- 2018) de-identified dataset with critical opiate, heroin, and opioid-based NPS\* public health and crime metrics measured at the census tract level for improved community surveillance.
- Goal #2. Perform overall and demographic-based trend analyses to investigate changes over time in metrics.
- Goal #3: Perform Pre & Post-test analysis of new Rx opiate, heroin and opioid-based NPS policies to assess the impact on public health and crime metrics.
- Goal #4: Conduct Hot spots mapping (identification of high risk and lower risk communities) for place-based interventions and development of best practices.
- Goal #5: Statistically model concentrated disadvantage and other theories of negative opioid and crime outcomes.

\*NPS are novel or new psychoactive substances.

## Delaware Opioid Metric Intelligence Project (DOMIP)

### Census Tract

• Printed Maps:

- [2019](#)
- [2018](#)
- [2017](#)
- [2016](#)
- [2015](#)
- [2014](#)
- [2013](#)

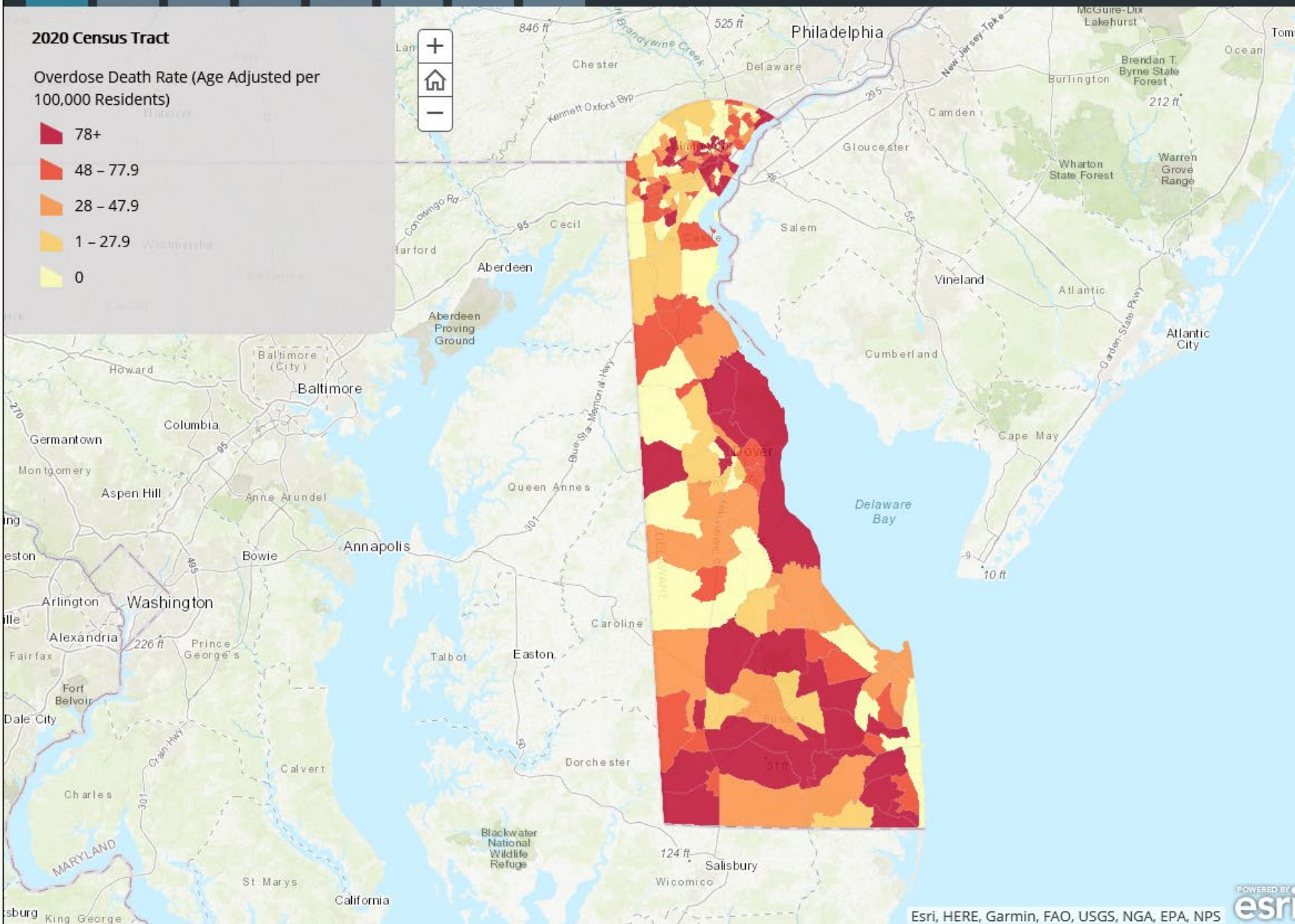
### Zip Code

• Printed Maps:

- [2019](#)
- [2018](#)
- [2017](#)
- [2016](#)
- [2015](#)
- [2014](#)
- [2013](#)



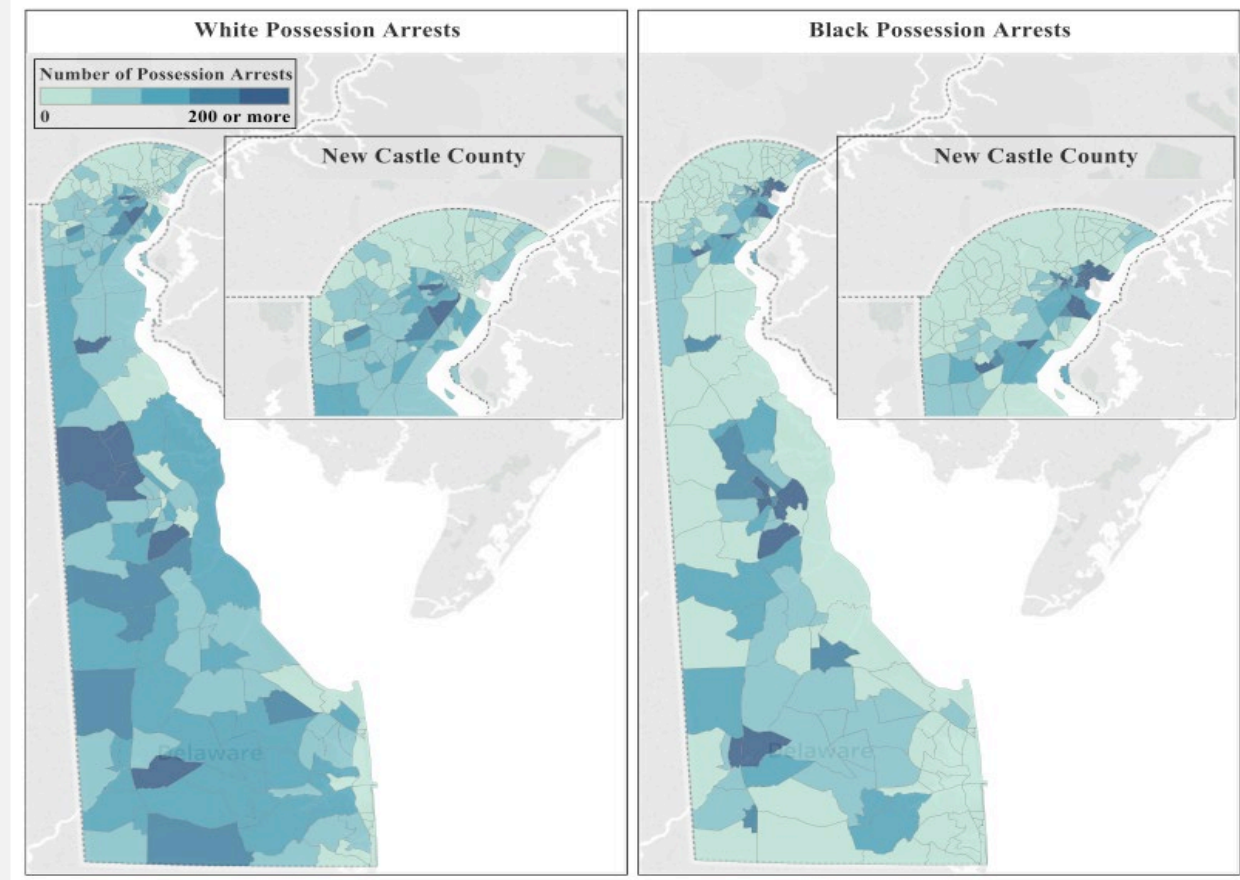
- 2020
- 2019
- 2018
- 2017
- 2016
- 2015
- 2014
- 2013



# DOMIP Scientific Contributions (Goals 3 & 4)

## Predicting Opioid Arrest Rates by Race:

- Most opioid arrests among Whites
- Overdose calls predict White arrest rates
- Disadvantage & racial diversity predict Black arrest rates



*Donnelly et al. (2019) Race and Justice*



# DOMIP Scientific Contributions (Goals 3, 4 & 5)

## General Trends:

Over 90% of Delaware neighborhoods saw increasing death rates between 2013-2017

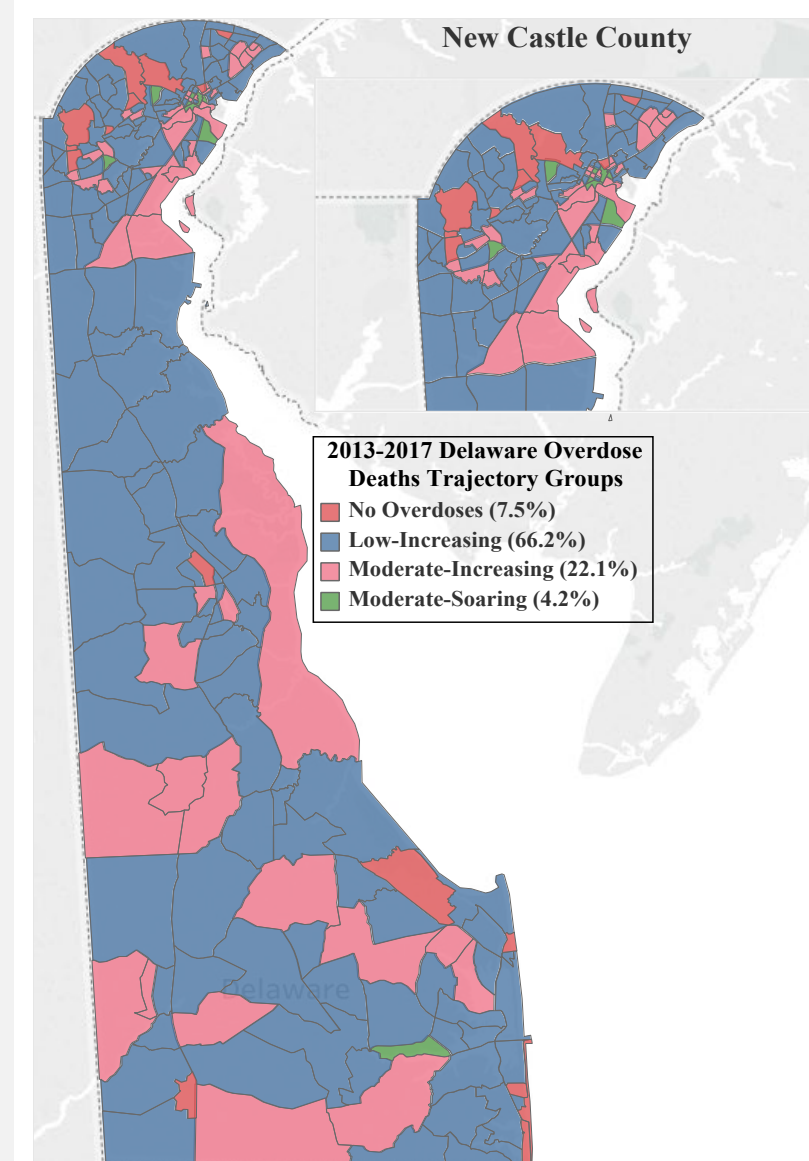
Differences in severity – 2016/2017 spike was uneven with 25% of neighborhoods carrying main load

A small cluster of neighborhoods (4.2%) with highest spikes across drug types

## Drug Types & Communities Matter:

- Rx opioid involvement declining across neighborhoods
- Heroin involvement increasing in some but not all neighborhoods
- Fentanyl and Cocaine involvement increasing across communities
- Neighborhood level factors are significantly associated with trends
- Social class gradient
- Concentrated disadvantage
- Drug markets

*Wagner et al. (2021) Sociological Forum*



# DOMIP Data Science Challenges

1. Reconciling “academic” interests with “real world realities”
  - Data Use Agreements, MOUs, IRBs
  - Data Quality and Integration
2. Communication w/State Agencies- (Email, Phone, etc. slow!)
3. Data Clearance/Security
  - Security policies
  - Onboarding staff
4. Data Costs
5. Granularity of Data
6. Competing Dashboards and State Agency Support

# Policy Recommendations

- Complex public health and public safety crises require a diverse, multidisciplinary set of solutions.
- Funding, in particular grants from the federal government, can make academic/practitioner partnerships possible.
- Data science projects seeking to bring together data from different sources will require multiple data use agreements and/or memoranda of understandings.
- Relationships with practitioners from various agencies must be actively cultivated and sustained.
- Once agencies share their data with research teams, ensuring the proper integration and security of data are not easy tasks.
- Academics should offer analytical assistance to enhance the value of the relationships with practitioners as well as advance scientific and policy knowledge. Division of labor and specialization is key.
- The future of academic/practitioners' data science projects can be contested as agencies see what academics can achieve.



# Strategies for Disrupting Drug Distribution Networks

## *Identifying and Informing Strategies for Disrupting Drug Distribution Networks: An Application to Opiate Flows in Pennsylvania*

**Presented by: Glenn Sterner, Ph.D.,** PI; Assistant Professor of Criminal Justice, Criminal Justice Research Center, The Pennsylvania State University ([ges5098@psu.edu](mailto:ges5098@psu.edu))

**Project Team:** Ashton Verder, Co-PI, Penn State; Shannon Monnat, Co-PI, Syracuse University; Scott Yabiku, Penn State; Gary Zajac, Penn State; Peter Forster, Penn State

This project was supported by Grant Award No. 2017-IJ-CX-0017 awarded by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. The opinions, findings, and conclusions or recommendations expressed in this publication/program/exhibition are those of the author(s) and do not necessarily reflect those of the Department of Justice.



# Project Approach and Methodology

Figure 2: Map of Target Counties

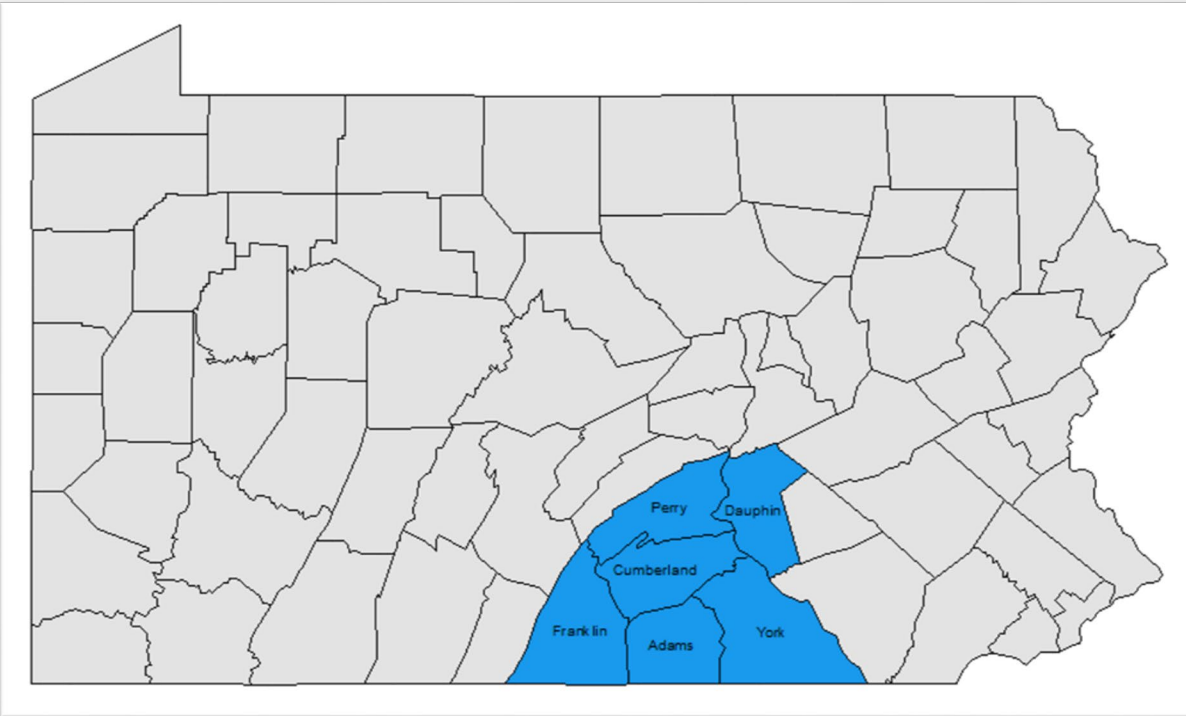
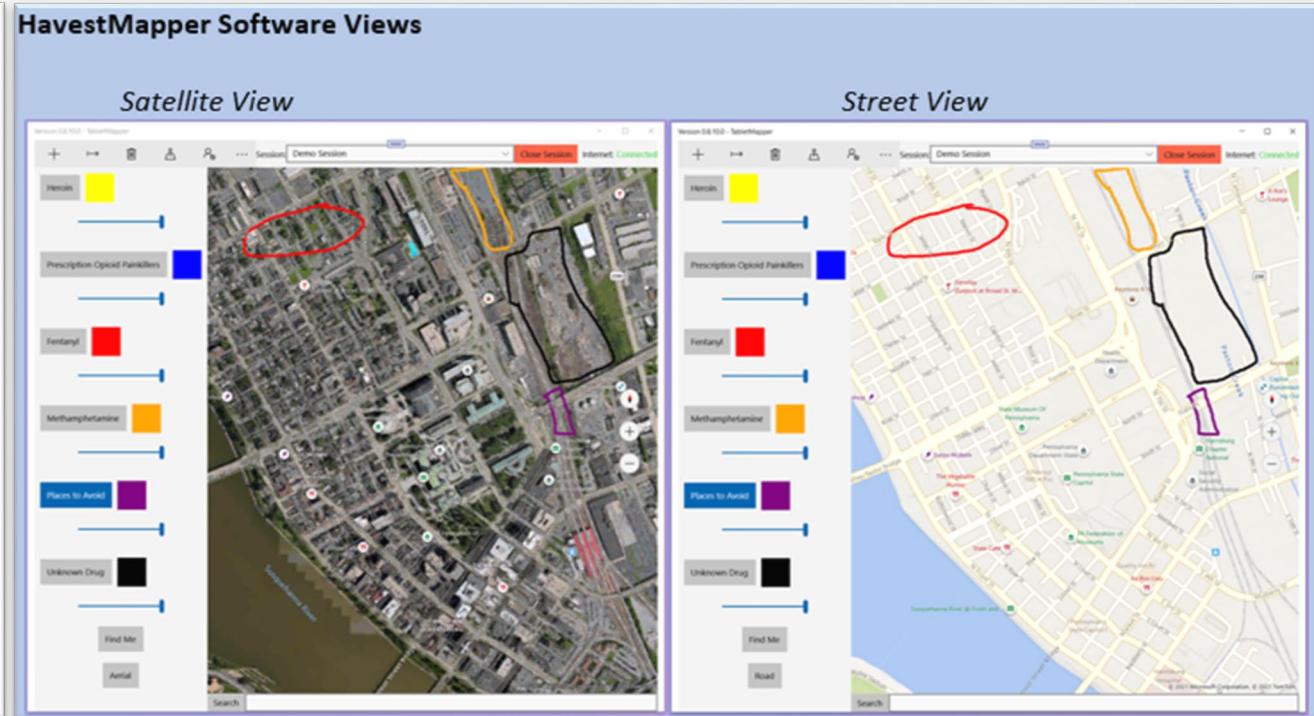


Figure 3: Community Intelligence Gathering Software





# Results

Figure 4: Simulated Distribution Networks

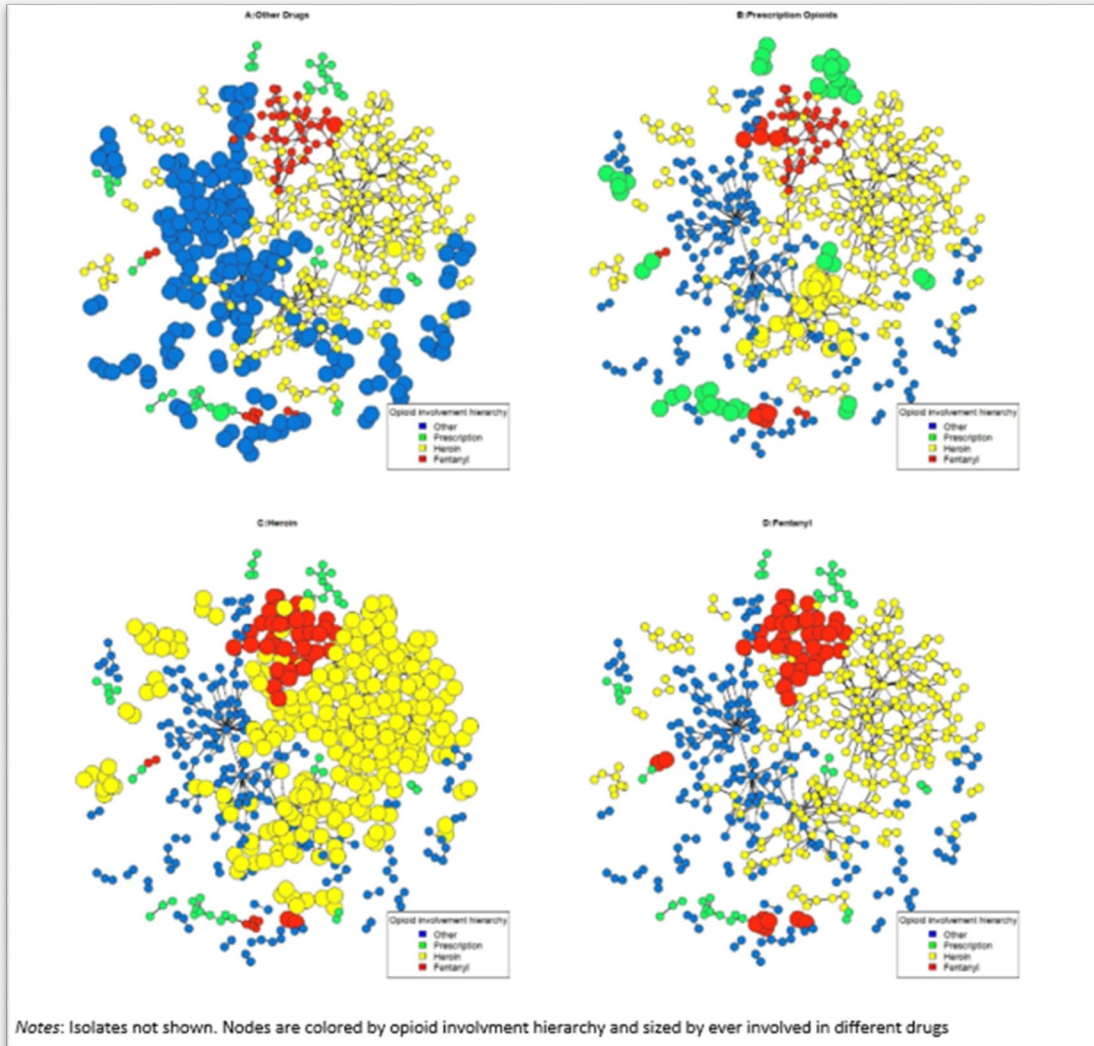
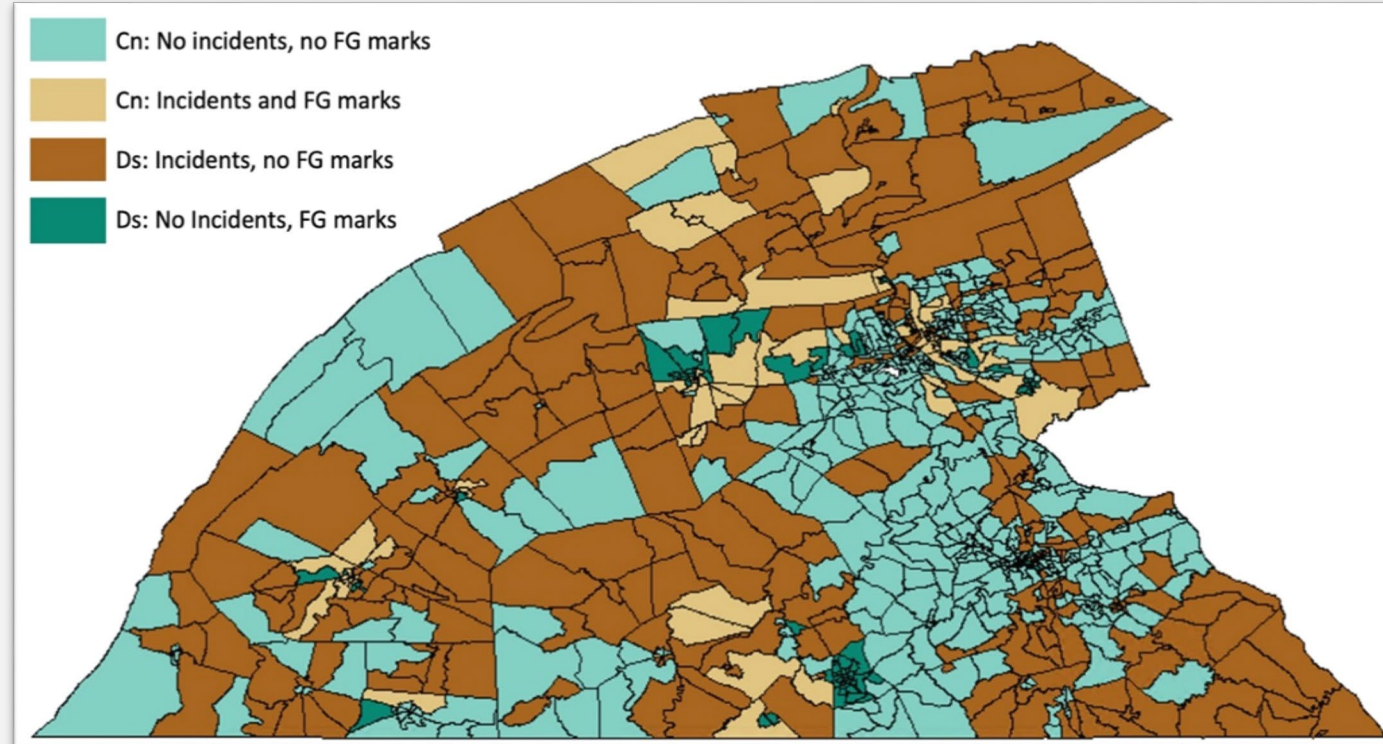


Figure 5: Mapping of Discordance/Concordance between PSP and Focus Group Marking (cut off <5/5+)



# Policy Recommendations

- Use participatory mapping with residents to gain a more complete picture of drug-related activity in communities.
- Law enforcement should use network modeling and simulation techniques to augment investigations and observed intelligence for greater network understanding and disruption efforts.
- Criminal justice administrative entities should take efforts to connect locally-derived data to extra-local sources.
- Supply reduction should be included as one tool in comprehensive substance responses and policies.

# Questions and Answers

**Facilitator – Jonathan McGrath, Ph.D., NIJ**

## **Discussion:**

- NIJ's Drugs and Crime Research Portfolio
- FTCOE/Criminal Justice and Public Health Response for Emerging Drug Threats – Jeri Roper-Miller, Ph.D., RTI International
- Delaware Opioid Metric Intelligence Project – Tammy Anderson, Ph.D., University of Delaware
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# Contact Information

NIJ Research Funding Opportunities

<https://nij.ojp.gov/funding>

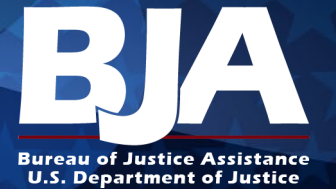
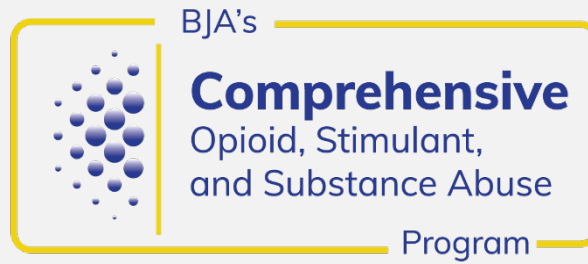
NIJ Drugs and Crime Research Portfolio

<https://nij.ojp.gov/topics/drugs>

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<https://www.cossapresources.org>