Maine’s Harold Rogers PDMP Innovation Grant:

Constructing a Substance Use Disorder Focused Master Data Repository

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Challenges

• We need to know more about people who use drugs
• We need to know more about the circumstances around fatal and non-fatal drug overdoses
• We need to know if State overdose prevention and response efforts are effective
Data silos

- Office of Chief Medical Examiner
  - Quarterly and Annual Drug Death Reports

- Emergency Departments
  - CDC Syndromic Surveillance Dashboard

- Maine EMS
  - Annual Data Report

- Office of the Maine Attorney General
  - Internal Program Evaluation Report

- Maine Naloxone Distribution Initiative
  - Internal Program Evaluation Report
Maine’s Opioid Response Strategic Action Plan

• Shared Value #3: Improving data collection, analysis, and timely communication

• Strategy 5: Maximize the collection of actionable data and evaluate the impact of interventions

• Strategy 5e: Create an online data hub to increase public transparency

• Strategy 5f: Share key data to inform policy and program design
SUD/OD focused Master Data Repository

- Person-level linkage of 10 data sources
  1. All-Payer Claims Database
  2. Prescription Drug Monitoring Program
  3. Office of Behavioral Health
  4. Syndromic Surveillance
  5. Maine EMS Trip Record Data System (ImageTrend)
  6. Department of Corrections
  7. Office of the Chief Medical Examiner
  8. Registry of Vital Records and Statistics
  9. SUDORS
  10. MaineCare
What do we hope to learn?

• Link disparate data sets at the person level to create a comprehensive, holistic understanding of individuals’ trajectories with substance use

• Identify patterns of interaction with State services and agencies, health care, and other organizations that could serve as opportunities for proactive intervention, outreach, and/or support for people who use drugs and affected others

• Evaluate State policies and programs to assess quality and effectiveness, particularly for those individuals most at risk for poor outcomes

• Uncover new promising strategies for preventing OD

• Create a more complete understanding of the need/demand for services and supports among people who use drugs and their loved ones
Questions?

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Objectives of the MDR Project

• A “360-degree view” of Maine DHHS clients, providers, and partners across programs to support service delivery, monitoring, and evaluation

• Improved management of data as an asset to inform evidence-based program and policy decision making

• Improved efficiency and reduced workload of siloed data analysis

• New opportunities for data analysis, research, and evaluation

• Educate and increase the overall understanding of MDM and its potential benefits
What is Master Data Management?

• Master Data Management (MDM)
  • A systematized method to consolidate and manage data
  • Incorporates data governance, policies, standards, and tools
  • Determines the most accurate and current data elements across multiple overlapping data sets

• Objective of MDM
  • Provide processes for collecting, aggregating, matching, consolidating, quality-assuring, and distributing data throughout an organization to ensure consistency and control in the ongoing maintenance and application of the information

• MDM example
  • Use of a unique person identifier or “golden record” to isolate and analyze elements across data sets

• Adopting MDM can improve data quality and strengthen the utility of data analysis
Definitions

• Master Data Management (MDM)
  • MDM comprises the processes, governance, policies, standards, and tools that consistently define and manage the critical data of an organization
  • This structure enables an organization to link all of its critical data to one file, sometimes called a “master file” or “golden record”, that provides a common point of reference across data sources and systems
  • The purpose of MDM is to allow efficient, streamlined data sharing and data linkage across departments/data systems

• Identity Resolution Management (IRM)
  • IRM is a data management process that occurs as a key component of MDM
  • An identity is searched and analyzed between disparate data sets and databases to find a match and/or resolve identities
  • IRM enables an organization to analyze a specific individual’s or entity’s identity based on its available data records and attributes
Definitions

• Unique person identifier (UPI)

• Master Data Repository (MDR)
Master Data Management
Deliver Timely, Trusted, Relevant Master Data

Access
1. Discover
2. Model
3. Cleanse
4. Recognize
5. Deliver
6. Resolve
7. Relate
8. Govern

Operational

Analytical

Applications
- Integrated Eligibility
- Mental Health
- Medicare/Medicaid

Legacy
- CIF
- Legacy Systems

Data Sources
- OBH
- Public Records
- Vital Records
- EHR
- Dept of Correction
- County Jails
Project timeline