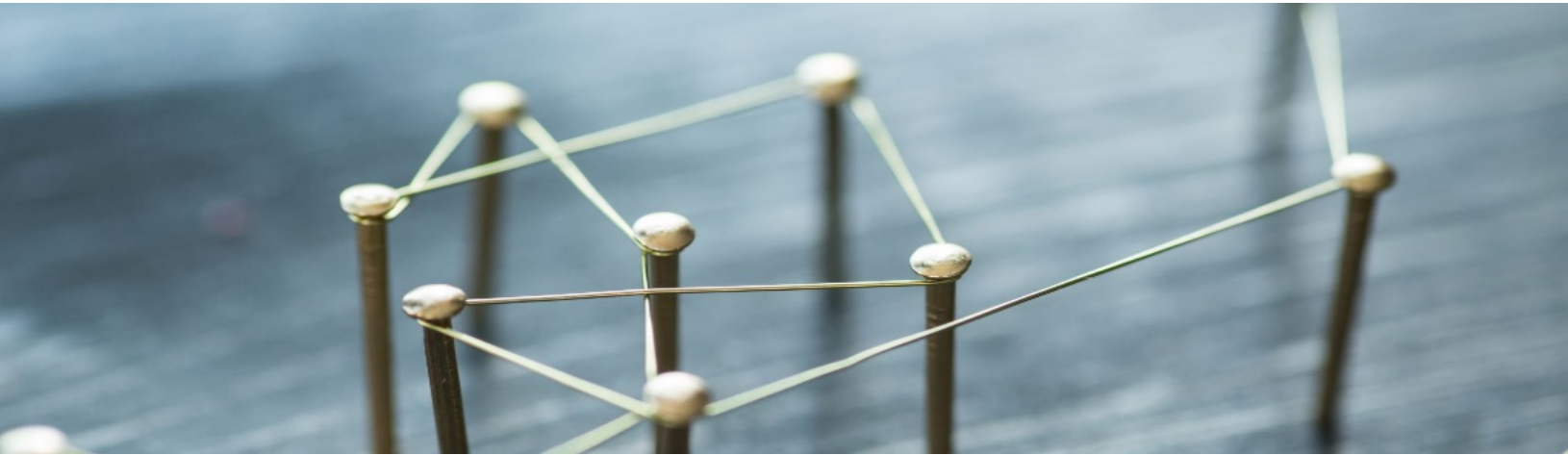


Michigan Data Warehouse Case Study: Integrating Housing and Health Data for Public Health Action



Background

Homelessness is an important factor that can impact an individual's health and well-being. People experiencing homelessness (PEH) are at increased risk of exposure to infectious diseases and violence and may experience higher rates of untreated chronic conditions. Data on housing status are imperative to understanding community needs, promoting overall health and well-being for PEH and other critical populations, and ensuring access to essential health and social services.

A state data warehouse is a centralized repository for storing, managing, and sharing data from various sources such as state agencies, community providers, and public health agencies. The Centers for Disease Control and Prevention (CDC) undertook this case study to better understand how state data warehouses that include housing data may be used to improve the provision of social services and healthcare for PEH while also enhancing population-level prevention and intervention efforts.

Objectives

- Document a state's experience with integrating Homeless Management Information Systems (HMIS) data into a data warehouse.
- Describe examples of how linked data in a state data warehouse can be used to improve the health and well-being PEH.
- Summarize lessons learned for other states considering establishing a data warehouse.

Case Study at a Glance

Overview

This case study draws on key informant interviews and review of available documentation (Appendix B: Methodology) to report on Michigan's experience integrating housing services data into an existing state data warehouse. Michigan has been refining its data warehouse since 1994, and HMIS data have been integrated into the warehouse since 2018. Over time, Michigan has implemented policies and procedures to address challenges such as data sharing, person-level matching, and data privacy. Two primary factors led to Michigan's success in incorporating HMIS data into the state data warehouse: 1) all Continuum of Care (CoC) organizations that collect HMIS data in the state were willing to participate in the process and provide housing data, and 2) all CoCs use the same HMIS reporting data system reducing logistical challenges when incorporating data into the warehouse.

Michigan is currently using warehouse data to identify people who qualify for available assistance, assess medical and housing vulnerability to coordinate provision of medical care with housing and social services, and more equitably focus public health intervention and prevention services. This allows Michigan to proactively address and improve the health and well-being of PEH and other disproportionately affected populations.

Discussion

Data warehouses provide an opportunity to efficiently integrate, manage, and share multiple sources of data from state agencies, community-based organizations and providers, and public health agencies. A data warehouse with HMIS data integration helps to identify and track service utilization across state and community programs to better understand populations served, including PEH. These insights allow states to improve inter-agency collaboration and better allocate resources. This can ensure provision of needed health and social services for PEH.

Integrating multiple data sources, including public health and housing data, in a data warehouse can provide a comprehensive view of how the social determinants of health impact disproportionately affected populations such as PEH and can assist federal and state efforts to more efficiently direct public health actions to address identified needs. Timely and complete data can enhance public health surveillance to inform public health interventions, direct research, and guide prevention efforts. Better data will enhance the ability of jurisdictions and the CDC to make evidence-based recommendations to support the overall health and well-being of PEH.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.