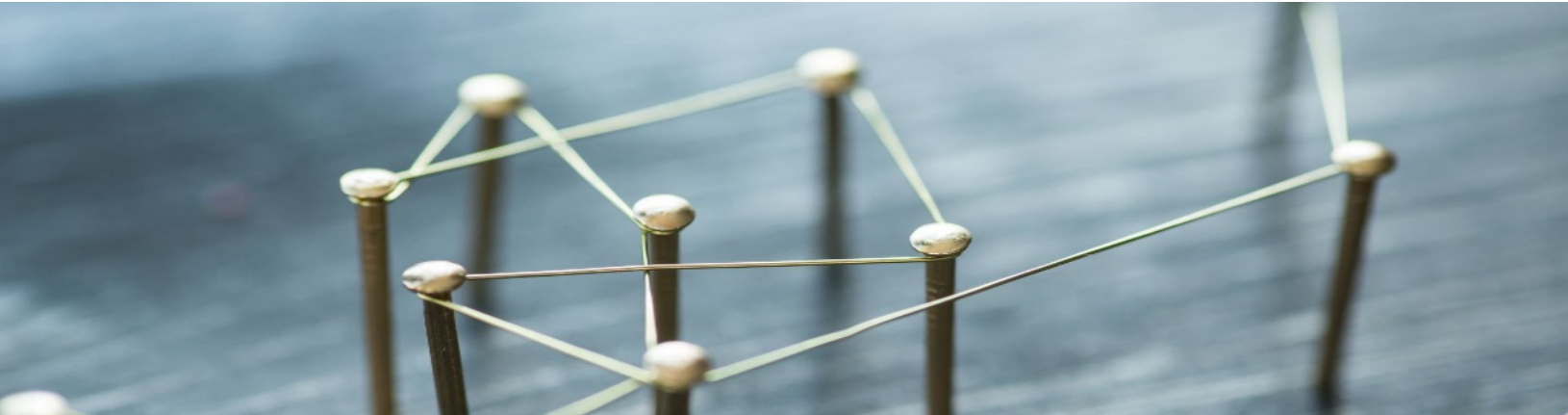# Ohio Data Warehouse Case Study: Integrating Housing and Health Data for Public Health Action

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 System (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.

Overview

This case study draws on key informant interviews and review of available documentation (Appendix B: Methodology) to report on Ohio's experience integrating housing services data into a data warehouse. Ohio began planning for its data warehouse in 2011, and HMIS data have been integrated into the warehouse since 2017. Ohio's success in incorporating HMIS data is due to all Continuum of Care (CoC) organizations' willingness to provide housing data and participate in the process as well as warehouse staff persevering in problem solving to incorporate data from diverse HMIS reporting systems.

Ohio's challenges include staffing to support the OHSDW; the perception that data request processes are cumbersome; and the need to recruit additional Steering Committee and data partners to enrich the data warehouse. Restrictions on data sharing between agencies limit use of data to coordinate medical care and service provision, and coordinate public health intervention and prevention services for PEH.

Ohio uses warehouse data to gain a holistic view of people accessing homelessness services through cross-system data sources; to assess and address gaps through collaboration; to furnish reliable, comprehensive data for state and local planning; and to inform funding and policy-making decisions.

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.