Executive summary: King County Data Across Sectors for Housing and Health

Although housing is an essential component of the social determinants of health, the relationship between subsidized housing and health is only minimally understood. This limited understanding of how health and housing are linked has been fueled in part by data siloes that limit comprehensive insights into whole-person health. In an effort to overcome such limitations and to provide a stronger foundation for a growing regional (and national) focus on health and housing intersections, in 2016, the King County Housing Authority (KCHA), Seattle Housing Authority (SHA), and Public Health – Seattle and King County (PHSKC) joined to form the Data Across Sectors for Health and Housing (DASHH) partnership, focused on creating a unique and sustainable dataset containing linked health and housing administrative data.1 Key goals for DASHH were to use linked data to inform and measure future interventions, including policy, outreach, and programming to improve the health of King County residents, as well as to share this actionable data with key health and housing stakeholders.

Approach

Housing data provided by KCHA and SHA were matched with Medicaid enrollment and claims data to create a longitudinal dataset of housing and healthcare utilization data from 2012-2016.[2] This merged dataset allows exploration of population overlaps between the Medicaid and Public Housing Authority (PHA) service systems. To ensure that linked data was easily accessible and interpretable for cross-sector users, the DASHH dataset was built into a dynamic, web-based dashboard that allows exploration by condition, housing subpopulation, and time period. This platform is designed to be a sustainable (and updatable) resource, and new health and housing data will be incorporated into the dataset as it becomes available.

Key findings

Preliminary DASHH analyses highlight broad patterns in the health of PHA residents relative to Medicaid enrollees who are not living in subsidized housing. Data only indicates the number of times an individual interacted with the health service system. Additional examination is needed to understand the driving factors behind varying levels of service utilization, in part to identify if patterns are due to the prevalence of a given condition, differences in care-seeking behaviors, or for other reasons.

High levels of overlap between the PHA and Medicaid populations in King County

In 2012, 74% of PHA residents were enrolled in Medicaid; by 2016, this enrollment rate had increased to 83%, largely due to the expansion of Medicaid in 2014 under the Affordable Care Act. Enrollment rates vary by PHA population groups, with children (ages 0-17) having the highest enrollment (91%) and young adults (ages 18-24) having the lowest enrollment (77%). Overall, **PHA residents represent 11% of the Medicaid population within King County**. Given this magnitude and the unique and ongoing relationships PHAs have with residents, there is significant potential for cross-sector efforts to improve population health and lower health care costs by targeting education, resources, and supports to PHA residents.

PHA residents are more likely to receive care for chronic conditions than the non-PHA Medicaid population

Across all years, **PHA residents were more likely to engage with the healthcare system than the non-PHA Medicaid population for all chronic conditions** included in this analysis (e.g., hypertension, diabetes). For example, in 2016, the rate of service utilization for hypertension among people aged 45-61 years was 2.0 times higher in the KCHA population and

[1] This effort was supported by funding from the Robert Wood Johnson Foundation (RWJF) Data Across Sectors for Health (DASH) grant; for more information, see www.dashconnect.org.

[2] Both KCHA and SHA provided data for residents living in Housing and Urban Development (HUD) funded subsidized housing programs including Public Housing and the Housing Choice Voucher Program.

1.6 times higher in the SHA population as compared to the non-PHA Medicaid population. Further analyses will explore whether these patterns are due to higher chronic disease prevalence in the PHA population and if more frequent chronic care service utilization is due to prevention, condition management, or acute/emergency purposes.

PHA residents are more likely to seek acute care than the non-PHA Medicaid population

Rates of emergency department (ED) visits dropped dramatically among non-PHA population adults aged 25–64 following Medicaid expansion in 2014, likely due to changes in who was enrolled in Medicaid. However, a corresponding drop was not seen among the PHA population where rates remained similar before and after expansion. For all years, **PHA women had higher rates of both ED and avoidable ED visits compared to non-PHA women** suggesting opportunities for targeted innovation pertaining to health systems navigation among PHA residents.

Well-child visits are more frequent among PHA residents than non-PHA Medicaid enrollees

Well-child checks for children ages 3-6 are a crucial aspect of early child health. **A higher proportion of PHA resident children had well-child checks than non-PHA Medicaid enrollees** (61–64% among PHA children compared to 57% among non-PHA Medicaid children).

Demographic differences may explain some service utilization patterns

This project allows for the identification of trends and discrepancies in enrollment and service engagement within both PHA and non-PHA Medicaid populations. **Some patterns may be due to demographic differences across PHAs or in comparisons between PHA and non-PHA Medicaid enrollees**. The DASHH **interactive dashboard**[3] supports more detailed subpopulation comparisons in order to discern whether population characteristics or other factors may be underlying these differences.

Medicaid data alone cannot provide insights into the health of elderly residents

Though a majority (79%) of PHA residents aged 65 and older are enrolled in Medicaid, almost all (over 98%) are also enrolled in Medicare. Most health encounters in the 65+ age group are covered by Medicare and do not appear in the Medicaid claims data. **Integrating Medicare data is a high priority future project** in order to gain insights into health and housing patterns among older adults in King County.

Data regarding behavioral and mental health among the Medicaid population is limited

While depression and mental health conditions are included in the DASHH analysis and are critical health conditions to consider in health and housing intersections, Medicaid claims data alone provides an incomplete picture of behavioral health service utilization, and therefore limits the utility of these indicators. Results from just Medicaid claims indicate that **rates of service utilization for depression and other mental health conditions are higher for PHA than non-PHA populations**. However, additional data integration efforts are necessary to gain a better understanding of mental and behavioral health within both of these groups.

Next steps

Additional years of Medicaid and PHA data will be added to the current dataset as they become available, improving the ability to examine time trends. Given that service utilization does not necessarily equate to poorer health outcomes or higher condition prevalence (but rather may reflect regular engagement with the healthcare system for positive reasons), future analyses will also focus on gaining a better understanding of the causes and nature behind service utilization. As noted above, subsequent DASHH data integration will focus on adding Medicare and behavioral health data to provide a more comprehensive picture of health for all PHA residents.

This continued development and expansion of the DASHH dataset and dashboard will serve as a critical resource for strengthening cross-sector partnerships in pursuit of a better understanding of how housing plays a role in health, how policy and system changes impact health, and how linked and actionable data can be used to improve the health of vulnerable King County residents.

[3] www.kingcounty.gov/health-housing