

Smart cities should be good cities: AI, equity, and homelessness

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Introduction

How can the City of Austin and Good Systems, a UT Grand Challenge, leverage AI to better serve, inform, and empower people experiencing homelessness?

This collaboration between UT's LBJ School of Public Affairs, School of Information, and the Good Systems Research Grand Challenge, and the City of Austin's Departments of Public Works, Neighborhood Housing and Community Development, Communications and Technology Management, & Innovation Office, Austin Public Health, Austin/Travis County Emergency Medical Services and Travis County Information Technology Services seeks to leverage AI and data science towards the City of Austin's mission to end homelessness.

Objective

Service providers must be empowered to address the full continuum of homelessness in a manner that is responsive to shifting needs and circumstances while still benefiting from population-level data and trend analysis.

Methods

At this stage, we have conducted initial research on the data and collaborative practices of service providers across the Travis County Continuum of Care and the experiences of service users. We have completed:

- 32 stakeholder interviews, selected following recommendations from key informants from the City of Austin, who were collaborators on this project, then further developed through snowball sampling, to leverage the unique social knowledge of participants (Noy, 2013).
- 87 user surveys, distributed through the Downtown Austin Community Court and the Austin Homelessness Advisory Council

In our interviews, we made use of critical incident technique (Flanagan, 1954) to draw deeply from the lived experience of individuals directly engaged with the knowledge infrastructure of the Continuum of Care.

We analyzed interviews and surveys through thematic analysis (Braun & Clarke, 2006).

Project Overview

We relate, here, the initial qualitative findings of a long-term, mixed-method engagement with the City of Austin. The City of Austin collaborates with a Continuum of Care (CoC), a regional organization that coordinates access to federal assistance funding. Led by a dedicated organization known as ECHO (Ending Community Homelessness Coalition) the CoC coordinates and shares resources with the heterogeneous providers of services, shelter, or other resources in the area. These service providers vary in mission, approach, and funding sources. Within the CoC, information resources are coordinated through an HMIS (Homelessness Management Information System) database managed by ECHO. This approach, along with the CoC organizational model, is recommended by the US Department of Housing and Urban Development (HUD) and is a common approach to managing urban homelessness across the US.

This project builds on the City of Austin's prior work in making better use of its data, and, in line with that goal, our collaboration seeks to develop knowledge-driven, AI-based, interventions and insights. In seeking to understand how practitioners used data in informing, enabling, and assessing their services, we found an intensely social, values-driven, mode of work across a complex ecology of organizational histories and individual relationships driving the collection, sharing, and use of data. Long term assessments of the overall population being served can become occluded by high levels of focus on the particulars of daily work. Without accounting for those particulars, however, data can become decontextualized or siloed and actionable analyses become increasingly distant to the practical concerns. Effective knowledge-driven policy, then, can be seen through these interviews as negotiating immediacy and personal experience with trends and dynamics that become visible only over time. Hence, interventions can easily become an inter-organizational, intensely political negotiation of the values and priorities of individuals engaged in service provision.

Key Findings

A brief typology of time: Temporal structuring and dissonance in service provision for people experiencing homelessness.

In International Conference on Information (iConference 2022) (pp. 211-224). Springer.

Socio-technical collaboration to end homelessness: A case study of perspectives on the value of interorganizational cooperation for data sharing.

In APA TMS Proceedings 2021.

Just infrastructure? Field research on a standardized assessment tool for a continuum of care for people experiencing homelessness.

Proceedings of the Association for Information Science and Technology (ASIS&T 2021), 58(1), 327-336.

Initial outputs from this project include an account of the collaborative practices of our interviewed participants, focusing on how values guided systemic approaches to ending homelessness within the Continuum of Care (Zimmerman et al., 2021). We have also explored the impact of time and temporality of the viability, utility, and efficacy of data collected to support service provision (Slota et al., 2022) and the exploration of a consequential instrument that served as both a point of contact for data collection and a means of prioritizing services based on prior research regarding risks to health and safety, which we had briefly discussed in terms of infrastructural justice – the VI-SPDAT (Slota et al., 2021).

Some key themes from our initial phases of analysis include:

- The **accuracy** of data representations of people experiencing homelessness (both within collected data and publicly) in guiding collaborations between service providers, government offices, and other organizations. This impacts **advocacy** through data, both on the part of people experiencing homelessness and those seeking support for ongoing service efforts.
- The **temporality** of collected and available data, with an emphasis on how data become more and less relevant over time for data-informed governance, and the need for **sustainability** of ongoing interoperability of data resources and inter-organizational collaborations.

In addressing an issue of significant social concern, knowledge-informed policy requires coordination and significant effort beyond the more commonly anticipated issues of data quality and access. Complicating factors include broader, sustainable inter-organizational coordination, management of how the environment and individuals within it were perceived and represented (both through data collected and knowledge held by individuals), and even how individuals within the system understood how their data might be used. These factors affect the implementation of policy changes and the perceived and actual quality of the data used to inform action.

Next Steps

As our work progresses, we will continue qualitative data collection among people experiencing homelessness, and we will more fully account for how service users understand data produced about them, and the impacts of data on their interactions with service providers. Additionally, in collaboration with local government offices and service providers, we are working towards knowledge-driven interventions in service provision and prioritization through data science methods and informed by our qualitative research through focus groups and workshops. In the coming months, we will continue to distribute surveys in order to reach a broad selection of users on the continuum of homelessness, ranging across situations like housing instability and aging out of the foster care system, to reintegration from incarceration, episodic homelessness, living exclusively on the street, or couch-surfing.

DACC Program Evaluation

Our team has also begun an evaluation of the Downtown Austin Community Court (DACC) case management program funded through the UT-COA inter-local agreement.

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