Building a Sustainable and Replicable Approach to Estimate Youth Homelessness Using the Linked Information Network of Colorado



Phase I Denver Pilot Research Brief

Lanae Davis, Center for Policy Research
Elysia Clemens, Colorado Evaluation and Action Lab
Whitney LeBoeuf, Colorado Evaluation and Action lab
Hilary Thibodeau, Center for Policy Research
Christian Belcher, Colorado Evaluation and Action Lab





Colorado Evaluation & Action Lab
UNIVERSITY OF DENVER

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Background

"We don't have the funding we need. And we don't have the funding because we can't prove it's a problem. And we can't prove why it's a problem."

— Colorado Department of Human Services, Division of Child Welfare

To address a lack of reliable data reporting the prevalence of youth homelessness, the Department of Housing and Urban Development (HUD) funded three research projects aimed at generating a better estimate of youth homelessness through the use of administrative data linkages. HUD awarded the Center for Policy Research (CPR), with their partner the Colorado Evaluation and Action Lab at the University of Denver, a 36-month project to develop a sustainable and replicable approach to estimating youth homelessness in Colorado.

No one public system, nonprofit, or data collection endeavor identifies all youth who experience homelessness. Some young people may be recognized as experiencing homelessness through their school's McKinney-Vento program, while others may have received a severe weather motel voucher through their county human services office or spent time in a runaway and homeless youth shelter. Some young people experiencing homelessness may not have accessed any services or support but were counted in the Point in Time (PIT)— an annual tally of individuals experiencing homelessness on a given night in January.

Connecting data across public systems and nonprofit service providers can help yield more complete estimates of youth homelessness than each individual system can produce on its own. While differing definitions of "homelessness" and data collection methods are challenges for estimating youth homelessnessⁱ, it can also be an opportunity to cast as wide of a net as possible to generate more comprehensive estimates.

This Research Brief shares the lessons learned from the first phase of a HUD-funded project, focused in the Denver area, where researchers piloted connecting local school district data to the regional Continuum of Care (CoC) homeless services data to state child welfare data as a model for how administrative data can be leveraged to better count youth homelessness and supplement existing information from various sources. Denver was selected for this pilot project because there is overlap in catchment areas and considerable capacity within data partners to work through the legal frameworks in order to develop a strong example of how to use a combination of local school district data, regional CoC data, and state child welfare data. This first phase of the project serves as a pilot for leveraging innovative administrative data linkages to build a sustainable and replicable approach to estimate homelessness of youth ages 14 to 24 statewide.

Overview of Metro Denver Youth Homelessness

According to the PIT count—a figure generated by tallying the number of people experiencing homelessness on a single night—in January 2020 in the Metro Denver area alone, 420 families with children and 279 unaccompanied youth were reportedly homelessⁱⁱ. The Metro Denver PIT from 2021 does not include complete data, due to COVID-19. Only unhoused people who were staying in an emergency shelter, transitional housing, or safe haven location were counted resulting in a total of 180 unaccompanied youth. Prior research suggests that youth who access homeless services are simultaneously likely to be involved in juvenile justice systems and/or to have a history in child welfare servicesⁱⁱⁱ. The National Alliance to End Homelessness reports that over 25% of youth previously involved in the child welfare and foster care system become homeless within just 2 to 4 years of aging out of the foster care system^{iv}. Social determinants such as race, gender identity, and sexual orientation are





additional predictors of risk of homelessness. Youth of color are considerably more likely to endure homelessness and housing instability. Youth who are pregnant or parenting, lesbian, gay, bisexual, transgender, or queer (LGBTQ+) identifying, or who have been exposed to labor or sex trafficking, are also at increased risk of homelessness.

Challenges with Other Estimates of Youth Homelessness

Much of what is currently understood about the prevalence of homelessness is derived from retrospective, self-reported surveys of adults^{vii}. A lack of credible data related to population size and characteristics of youth experiencing homelessness has hindered effective service delivery^{viii}. Historically, attempts to cross reference, integrate, and share data have not only met technical challenges, but have also encountered issues related to trust building and privacy practices between organizations^{ix}. Consequently, individual systems of service, such as the Homeless Management Information System (HMIS) or education systems, report data. Not knowing how many of the same youth are served by multiple systems stands in the way of accurate estimates of homelessness, despite what is represented within the individual administrative data sets^x.



Denver Pilot Study

This research seeks to expand on existing literature by integrating a greater range of data in the metro Denver area and Colorado at large and exploring the opportunity to estimate the prevalence of youth homelessness more accurately, thus contributing to clearer guidance on resource allocation and prevention efforts. The long-term goals of this HUD-funded project are to (a) build a sustainable and replicable approach to estimate homelessness of youth ages 14 to 24 in states where data are siloed at different geographic levels and (b) describe the K-12 educational, child welfare-related, public-assistance program participation, and police involvement characteristics and histories of youth associated with homelessness as older youth (i.e., ages 18 to 24).

Phase I Denver Pilot Research Questions

- 1. What estimates of youth homelessness in the City & County of Denver can be produced when connecting information across the Child Welfare, Denver Public Schools, and Metro Denver Homeless Initiative (MDHI) data systems?
- 2. What percentage of homelessness estimates in the City & County of Denver were flagged uniquely in the Child Welfare, Denver Public Schools, and MDHI (i.e., unique contributions to estimates and duplication across systems)?
- 3. What is the overlap between youth who are flagged in these administrative systems as "runaway" and those that are identified in one or more of these administrative systems as experiencing homelessness in the same or different time periods?

To provide context for these research questions, youth and professional stakeholders were also engaged through interviews and focus groups.

Defining Youth Homelessness

A primary hurdle to counting youth who are homeless is the lack of shared understanding and definition of homelessness across systems that serve these youth, which poses a challenge to generating meaningful data^{xi}. A growing consensus within the field of homeless services is that a more sweeping definition could lend to appropriate allocation of resources and service delivery, especially for youth who experience the adverse impact of housing instability, but currently fall outside of certain qualifying guidelines^{xii}. For the purposes of this study, the broadest practical definition of homelessness was used to capture as many youths experiencing homelessness as possible. The table below presents the varying definitions of homelessness, including the definition used by the Linked Information Network of Colorado (LINC) team.

Table 1. Definitions of Homelessness						
Government Source	Definition					
Department of Housing and Urban Development	Literally Homeless: Individual or family who lacks a fixed, regular, and adequate nighttime residence, meaning: i. Has a primary nighttime residence that is a public or private place not meant for human habitation; ii. Is living in the publicly or privately operated shelter designed to provide temporary living arrangements (including congregate shelters, transitional housing, and hotels and motels paid for by charitable organizations or by federal, state and local government programs); or iii. Is exiting an institution where (s)he has resided for 90 days or less and who resided in an emergency shelter or place not meant for human habitation immediately before entering that institution.					
McKinney-Vento Education	Homeless: Individuals who lack a fixed, regular, and adequate nighttime residence (within the meaning of section 103(a)1)); and includes:					

Table 1. Definitions of Homelessness						
Government Source	Definition					
McKinney-Vento Education cont.	 i. Children and youths who are sharing the housing of other persons due to loss of housing, economic hardship, or similar reason; are living in motels, hotels, trailer parks, or camping grounds due to the lack of alternative adequate accommodations; are living in an emergency or transitional shelters; or are abandoned in hospitals; ii. Children and youths who have a primary nighttime residence that is a public or private place not designed for or ordinarily used as a regular sleeping accommodation for human beings (within the meaning of section 103(a)(2)(C)); iii. Children and youths who are living in cars, parks, public spaces, abandoned buildings, substandard housing, bus or train stations, or similar settings; and iv. Migratory children (as such term is defined in section 1309 of the Elementary and Secondary Education Act of 1965) who qualify as homeless for the purposes of this subtitle because the children are living in circumstances described in clauses (i) through (iii). 					
Runaway and Homeless Youth	The Runaway and Homeless Youth Act (RHYA) RHYA (42 U.S.C. §5732a) defines homeless youth as i. Individuals who are "less than 21 years of agefor whom it is not possible to live in a safe environment with a relative and who have no other safe alternative living arrangement." ii. This definition includes only those youth who are unaccompanied by families or caregivers. This definition is use in connection with the Basic Center Program and the Transitional Living Program.					
Study Definition	For the purposes of this study, youth were considered homeless if there was evidence of any of the above experiences that resulted in a referral, eligibility determination or provision of services by child welfare, the education system, and/or the local continuum of care (i.e., HMIS system).					



Methods

Linked Information Network of Colorado¹

All administrative data for this project have been connected through LINC, a state and local collaborative that supports timely and cost-efficient research, evaluation, and analytics using integrated data across public and nonprofit systems. LINC is designed to share data securely and temporarily to a centralized linking hub in state government to produce anonymized datasets for approved end users. No personally identifiable information is LINC has a dedicated data scientist who specializes in identity resolution, with oversight from the acting LINC director. Probabilistic matching procedures are used, and match reports are provided to all project partners and are publicly available upon request.

Administrative Data

Three distinct administrative databases were leveraged for this analysis: MDHI contributed services data from the HMIS system, Denver Public Schools contributed McKinney-Vento data, and the state Division of Child Welfare contributed data surrounding involvements, removals, and placements from their TRAILS database. The primary inclusion parameters for each of the data sets are as follows:

- MDHI (HMIS) Youth received a service between July 1, 2016 and June 30, 2021, and were between 14 and 24 years of age at the encounter. This includes all accompanied youth aged 14 to 17 and all youth aged 18 to 24. Unaccompanied youth (aged 14 to 17) were not included in this export.
- **Denver Public Schools (McKinney-Vento)** Students who were flagged for McKinney-Vento services between July 1, 2016 and June 30, 2021 and aged 14 to 24 at the time.
- Child Welfare (TRAILS) Youth with homelessness indicated as a referral reason, allegation, or risk on a safety assessment, or identified as a runaway in any capacity between July 1, 2016, and June 30, 2021. Youth were aged 14 to 24 at the time of involvement.

Overlap Analysis

System-level tables created by the LINC data scientist were used to generate counts of youth appearing in each system within the City & County of Denver from State Fiscal Year (SFY) 2017 to SFY 2021 (July 1, 2016 to June 30, 2021). As a result of the matching process, each individual in the sample received a unique ID, which was used to identify overlap across systems, and produce a single, master dataset at the individual level, with binary flags for experiencing homelessness in each system by state fiscal year. Because the catchment areas of each system differ, a youth was only counted as experiencing homelessness within a system in a given fiscal year if that youth appeared as flagged in Denver within that system in that year. Similarly, a single overlap in any fiscal year means that an individual was flagged as experiencing homelessness in Denver in two separate systems within that year, even if the episodes in each system do not overlap temporally. We report counts below by state fiscal year and for the full five-year period. The Division of Child Welfare's TRAILS database, a repository for client-level referral and case information, was the only system in which youth were identified as runaways. These individuals are included in the full sample for Research Questions 1 and 2 and reported separately for Research Question 3.

¹ This work would not be possible without anonymized data provided by the Linked Information Network of Colorado (LINC). The findings do not necessarily reflect the opinions of the Colorado Governor's Office of Information Technology or the organizations contributing data.





Youth Focus Groups and Stakeholder Interviews

To better understand the landscape of youth homelessness in Denver, gain insight into those with lived experiences, and to generate feedback on the data sharing process, the research team (1) conducted focus groups with youth who have multi-system involvement and have experienced homelessness or housing instability, and (2) conducted interviews with key stakeholders in Denver who went through the data onboarding and sharing process with LINC.

Youth Focus Groups

The focus groups sought to gain insight into how youth are and are not responsive to systems and surveys that count and track them, and ask them about the services they receive, and identify risk and protective factors associated with homelessness. For Phase I, the youth were recruited from the Rocky Mountain Children's Law Center Youth Advisory Board and the Denver area homeless shelter, Urban Peak. The focus groups at Urban Peak specifically sought out youth who are school age and are attending or want to attend school. These participants represented a cross-section of system-involved youth with lived experience of homelessness, foster care, youth corrections, and behavioral health systems. A protocol was developed and approved by the University of Denver's Institutional Review Board. Youth were provided a \$50 gift card incentive for participating following the conclusion of the focus groups.

Stakeholder Interviews

Phase I key stakeholder feedback consisted of interviews with primary and secondary points of contact at the Phase I agencies where LINC agreements were executed, and data were acquired. These partners include MDHI, the Colorado Department of Human Services' (CDHS) Division of Child Welfare Adolescent Services Director, and the Colorado Department of Local Affairs, Division of Homeless Youth Services. The key informants were interviewed following the completion of the data onboarding process with LINC.

Results

Research Question 1: Estimates of Youth Homelessness in the City & County of Denver

Total Counts of Youth Experiencing Homelessness in the City & County of Denver

The deduplication of individuals appearing within the City & County of Denver in any of the three systems identified 9,638 unique youth flagged as experiencing homelessness within this 5-year period. Of these youth, 6,249 (64.8%) appeared in MDHI data, 2,486 (25.8%) appeared in Denver Public Schools data, and 1,851 (19.2%) were flagged in the Division of Child Welfare's TRAILS database. Even within these systems, this is an undercount because for the pilot study, only accompanied youth served by MDHI were included in the study.

Table 2. Total Counts of Youth Experiencing Homelessness

Full Sample	Denver Public Schools (DPS)		Metro Denver Homeless Initiative (MDHI)			of Child (TRAILS)	Total	
Overall: SFY 2017-SFY 2021								
	Count	%	Count	%	Count	%		
Deduplicated	_	_	_	_	_	_	9,638	





Across System								
Deduplicated within Systems	2,486	25.8%	6,249	64.8%	1,851	19.2%	-	
	State Fiscal Year							
	Count	%	Count	%	Count	%		
SFY 2017	549	19.1%	1,866	64.9%	643	22.4%	2,876	
SFY 2018	492	20.1%	1,523	62.4%	568	23.3%	2,442	
SFY 2019	535	19.9%	1,726	64.1%	572	21.3%	2,691	
SFY 2020	718	20.4%	2,483	70.7%	537	15.3%	3,513	
SFY 2021	593	16.3%	2,708	74.2%	527	14.4%	3,649	

Research Question 2: Estimates of Youth Homelessness Flagged Uniquely in Each System

As illustrated in Table 3, there was little overlap in identification across systems, meaning that each system contributes to generating meaningful estimates of youth homelessness. Throughout the observation period, 8,786 youth (91.2%) appeared in one system only . Just over 1 in 5 of these youth (20.1%) were flagged within the Denver Public Schools system, more than 1 in 8 (13.6%) were flagged by the Division of Child Welfare, and the remainder (57.5%) were identified by MDHI. The proportion of youth flagged uniquely within any one system is higher within a given state fiscal year, ranging from 93.9% in 2020 to 95.3% in 2021. Roughly two-thirds of the uniquely identified youth in any state fiscal year can be attributed to the MDHI database. We expect in future studies that if it is possible to integrate data on unaccompanied youth, the overlap across systems will increase.

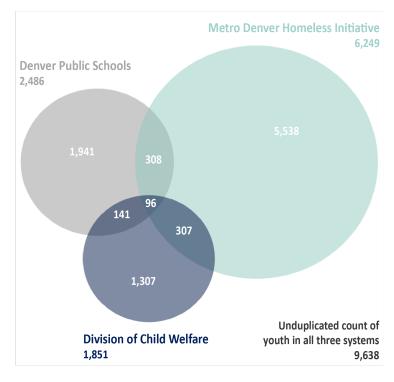
Key Insights:

- There was very little overlap in identification across systems, which may be due
 in part to the study limitation that unaccompanied youth served by MDHI are not
 included.
- Each system contributes to generating meaningful estimates of youth homelessness.
- 8,786 youth (91.2%) appeared in one system only throughout the 5-year observation period.
- Roughly two-thirds of the uniquely identified youth in any state fiscal year can be attributed to the MDHI database.

Table 3. Counts of Youth Experiencing Homelessness, Flagged within One System Only

No Overlap	Denver Public Schools (DPS)		Metro Denver Homeless Initiative (MDHI)		Division of Child Welfare (TRAILS)		Total
Overall: SFY 2017-SFY 2021							
	Count	%	Count	%	Count	%	
Total	1,941	20.1%	5,538	57.5%	1,307	13.6%	8,786
State Fiscal Year							
	Count	%	Count	%	Count	%	
SFY 2017	441	15.3%	1,732	60.2%	534	18.6%	2,707
SFY 2018	405	16.6%	1,415	57.9%	486	19.9%	2,306
SFY 2019	457	17.0%	1,612	59.9%	490	18.2%	2,559
SFY 2020	588	16.7%	2,299	65.4%	411	11.7%	3,298
SFY 2021	498	13.6%	2,544	69.7%	435	11.9%	3,477

Figure 1. Youth Flagged as Experiencing Homelessness by System, SFY 2017-2021



Note: Overlap in this figure signifies that an individual appeared in each system within the 5-year period but does not necessarily indicate temporal overlap.

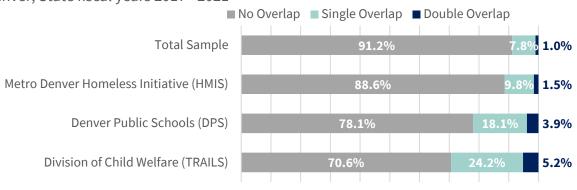


Overlap of Youth Across Systems

Of the 9,638 youth comprising the full study sample, 8,786 (91.2%) appeared in one system only, without exhibiting any overlap within the 5-year period. Seven hundred and fifty-six youth (7.8%) appeared in two systems (single overlap), and the remaining 96 youth (1.0%) were identified in all three systems (double overlap) within this period.

Figure 2. Overlap of Youth Flagged as Experiencing Homelessness

Overlap of youth flagged as experiencing homelessness by system, City & County of Denver, State fiscal years 2017 - 2021



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

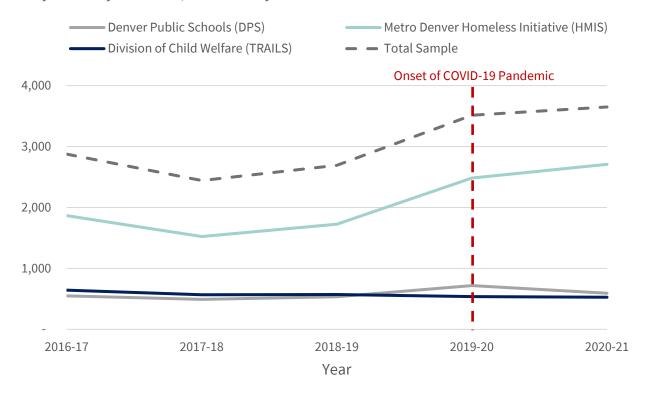
Trends in Identification of Youth Experiencing Homelessness by System

The number of youth identified as experiencing homelessness in any system averaged 3,034 individuals per year and ranged from a low of 2,442 in SFY 2018, to a high of 3,649 in SFY 2021. With the onset of the COVID-19 pandemic towards the end of SFY 2020, the number of youth flagged as experiencing homelessness by either Denver Public Schools or the Division of Child Welfare decreased. MDHI increased their identification of youth experiencing homelessness during this same time period, though at a lower rate than the previous year.

Annualized counts of youth flagged as experiencing homelessness by system,

Figure 3. Trends in Identification of Youth Experiencing Homelessness

Annualized counts of youth flagged as experiencing homelessness by system. City & County of Denver, State fiscal years 2017 - 2021



Research Question 3: Runaway Youth Flagged as Experiencing Homelessness

Runaway Youth

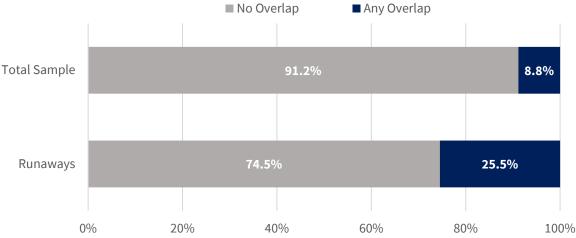
The Department of Child Welfare's TRAILS database was the only system in the sample that included identifiers for runaway youth. Within our sample, 428 youth (4.4% of the full sample) were flagged as runaways at some point during the 5-year period. Most of these youth, 319 (74.5% of runaways), were found only in the TRAILS system, while the remaining 109 (25.5% of runaways) were identified in the Denver Public Schools data, MDHI data, or both.

Overlap of runaway youth flagged as experiencing homelessness, City & County of Denver, State fiscal years 2017 - 2021

No Overlap

Any Overlap

Figure 4. Overlap of Runaway Youth Flagged as Experiencing Homelessness



Stakeholder Insights

All of the stakeholders interviewed shared the general sentiment that services to youth at risk of or experiencing homelessness would be improved if data were more easily shared between agencies.

State Department of Housing

"Youth fall through the cracks all the time for lack of data sharing across service providers.

Broadening the definition of homelessness would allow for more flexible use of both federal and state funds." – DOH Representative

The State Department of Housing (DOH) has historically been dependent on the Youth Supplemental Survey (YSS) to provide insight into how many youth are experiencing homelessness at any given time; however, it is assumed that the YSS grossly undercounts the population. Even within the DOH, different definitions of "homelessness" are used depending on the funding and programming, further complicating estimates. The state struggles to appropriately serve historically marginalized groups such as Black, Indigenous, and People of Color (BIPOC) youth and LGBTQIA+ youth—those who have historically been at greater risk of homelessness. More accurate data will lead to greater ability to serve youth in a culturally responsive way.

Colorado Department of Human Services, Division of Child Welfare

Federal oversight and buy-in to data sharing would be very helpful, as currently there is minimal coordination and states are left to try to solve how to share data on their own without federal support. Agencies that serve individuals who have been disproportionately harmed by the child welfare system are understandably hesitant to share data, and CDHS must work to build trust and overcome the history of systemic oppression specifically to marginalized groups. CDHS uses a broad definition of homelessness, intending for it to be encompassing enough that people qualify for services without

unnecessarily labeling people in a way that might harm them and expose them to systemic involvement. This approach differs from other systems.

Metro Denver Homeless Initiative, Denver Area Continuum of Care

PIT data gets reported and is widely cited as an estimate of youth homelessness on a single day. While a useful snapshot for some homeless advocates, the PIT has many drawbacks, including that it is conducted in the winter in Colorado, most recently on February 25,

"The PIT YSS is not particularly useful in estimating the number of homeless youths in Colorado." – Metro Denver Homeless Initiative Representative

2021. The YSS is an addendum to the PIT that is specific to youth. The PIT/YSS

"Child welfare agencies may think they have set a young person up for success but due to lack of data quality and data sharing, [have] no ability to know if they have become homeless." – Division of Child Welfare Representative

is done voluntarily by organizations that choose to count homeless youth and rely on volunteers to complete the survey with the youth. MDHI uses different definitions of homelessness depending on the purpose.

Focus Groups with Lived-Expert Youth

Twenty-eight youth participated across three focus groups. These youth were between the ages of 14 and 24 and had all experienced homelessness; many were unhoused at the time of the focus group. Nearly all youth had multi-system involvement and had at one point attended school locally; however, they were generally unaware of the various data systems that may have counted them as homeless. Key takeaways from the youth include:

- Youth are oftentimes unaware of how they are identified as homeless in any given system or by service providers.
- All youth participants had multiple known risk factors for homelessness including running away
 from home, fleeing violence, substance abuse issues, inability to attend school due to being
 expelled, and a lack of documents needed to enroll.

Are we seeing these youth?

"Kai" is 17 years old and unhoused. They dropped out of school at age 14, and they were involved in the child welfare system on and off. They currently receive services through the Runaway and Homeless Youth providing agency in Denver.

"I completed 9th grade, but the schools I went to couldn't handle my mental health, so I didn't want to go to school anymore."

"They referred me to a

counselor for mental health

a roof over my head, you

therapy. But you can't counsel

know?" - Unhoused youth, on

services provided in school

Experiences in Education

- Most youth want to attend school, but traditional school systems are not equipped to help youth experiencing homelessness. All youth who were currently attending school were in alternative or non-traditional school settings.
- When asked about their experience of being identified in school as homeless, most youth said their teachers were aware they were homeless. When asked if they had supports in school, youth reported a teacher or school counselor had tried to help them but had limited ability or resources to do much for them.
- No youth had heard of a homeless youth liaison or a McKinney-Vento liaison.
- For those youth who were not attending school, most had dropped out and had not completed high school. Many wanted to get their GED or go back to get their high school diploma but lacked the resources or help to find a school to enroll and attend.

Experiences in Housing Services

- Youth reported that they learned of various housing opportunities through friends or asking around on the streets.
- Most youth are on a list to get a housing voucher and report that they receive little help navigating

"We just need a roof, and more youth shelters." – unhoused youth the systems. While they wait, they stay at the shelter, couch surf, or sleep on the streets. One youth remarked that it is safer to sleep outside on the street near a camera than it is to sleep at an adult shelter because of the drug use, violence, and mental health issues that are common in adult shelter settings.

setting

Navigating systems and accessing services is very difficult and most youth do not have an advocate
or someone they can go to for help. Youth at the Denver shelter report having a case manager
that helps them when they need it.

Experiences in Child Welfare and Foster Care

- Youth had been connected to the Runaway and Homeless Youth shelter (Urban Peak) by their county caseworker, but otherwise had not received support in preventing homelessness.
- One youth reported multiple foster care placements, which resulted in changing schools repeatedly. This was in part why they decided to drop out of school after 9th grade.
- Most youth reported they had an older sibling or parent they could reach out to if they needed help; however, when pressed about the status of the relationship, most youth reported it was with a relative that had previously failed them in some way and they could not rely on them for long, if at all.

"Going into the [child welfare] system is confusing." – Youth who had experienced homelessness



Discussion: Building a Sustainable and Replicable Approach

Ensuring the ability to share data across systems is critical to being able to accurately estimate youth homelessness. There are very few youth counted as homeless in more than one system in the City & County of Denver despite youth qualifying for services from multiple sources. Only 71 youth, or 0.8% of the sample were found in all three administrative systems, indicating that each individual system alone is undercounting youth experiencing homelessness. Information gathered from youth with lived experience is supportive of this notion, in that most youth did not know when, if at all, they had been counted as homeless, nor did they know which systems might have counted them. The 2020 PIT count indicates that only 278 youth were homeless on a given night in January.

This pilot study with linked administrative data demonstrates that in fact 3,513 youth were documented as experiencing homelessness in 2020 in the metro Denver area and we know this is still an undercount. As we move toward more accurate estimates, resources can be appropriately allocated to not only support youth experiencing homelessness, but to more effectively intervene at earlier stages of housing instability.

This Phase I pilot has clearly demonstrated the value of multiple data sources contributing to estimates and also elucidated opportunities for improvement.

Implications for Phase II

Value of Statewide Approach Because of High Mobility

Focusing on one geographic area does not fully capture multi-system involved youth. Homeless youth are highly mobile. From the focus groups with youth, nearly all youth reported being involved in more than one system; however, they were involved in a very broad geographic region, oftentimes attending school in another district while living at the Denver area shelter or having moved from one state where they were involved in the child welfare system to receiving services at a shelter in Denver where they would appear in CoC data.

Value of State and Regional Data Sources for Replicability and Sustainability

Colorado is a local control state, and it is simply not sustainable, nor would it be replicable, if we used federal grant funds to develop a model that relies on local data sources. There are 178 school districts, 64 counties, and two tribal nations. As such, prioritizing building relationships at the state and regional levels is necessary to develop a sustainable and replicable approach. We expect to continue to work with the state child welfare agency and MDHI. We are in the process of onboarding the other regional COCs to LINC so that this methodology is replicable. As part of the work with all the COCs, we are working to address barriers to including unaccompanied youth. Because the Colorado Department of Education staff need this information for their McKinney-Vento program outcomes, they can participate in this project and share state-level education data on youth homelessness.

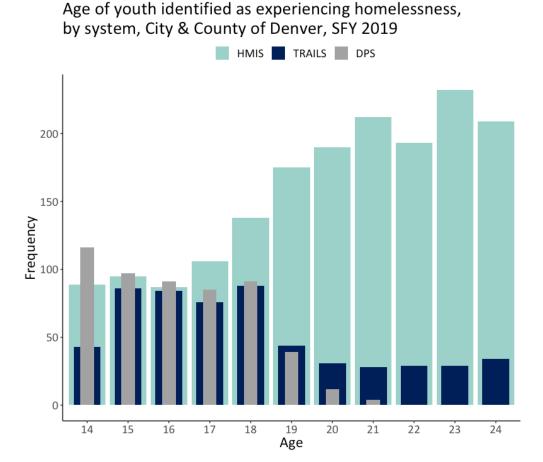
Challenges Associated with Establishing a Prevalence Rate

Setting a denominator for a prevalence rate for youth homelessness is a challenge because the youth are highly mobile and the systems that are contributing to the linked estimate do not serve the full age range of interest. Moving to a statewide approach will address much of the mobility challenges. As illustrated in Figure 5 , McKinney-Vento and child welfare data tends to capture younger youth, while



the youth most often captured in the HMIS data are at the older end of the range. Thus, it may only be practical to establish a prevalence rate for ages 14 to 18 when using these systems, as this range allows for the greatest overlap across databases.

Figure 5. Age of Youth Identified as Experiencing Homelessness in SFY 2019



Challenge of Undercount

Even if we can incorporate unaccompanied youth served by the COCs into the next phase of this project, our known population of homeless youth will still be an undercount. Identification of these young people experiencing homelessness is an imperfect process. We are considering partnering with Dr. Josh Barocas at the University of Colorado School of Medicine to employ a methodology he has used to estimate opioid prevalence in Massachusetts and Kentucky. The strategy is a capture-recapture methodology to estimate the unknown population of youth homelessness and is feasible when there are multiple years of three or more linked administrative datasets.

References

- Narendorf, S. C., Brydon, D. M., Santa Maria, D., Bender, K., Ferguson, K. M., Hsu, H., Barman-Adhikari, A., Shelton, J., & Petering, R. (2020). System involvement among young adults experiencing homelessness: Characteristics of four system involved subgroups and relationship to risk outcomes. *Child and Youth Services Review*. 108:1-9.
- Family Court Journal. National Council of Juvenile and Family Court Judges. 69; no. 1. 19-34.
- ^v Evangelist, M., & Shaefer, L. H. (2020). No place called home: Student homelessness and structural correlates. *Social Service Review*. 4-36.
- vi Robinson, B.A. (2018). Child welfare systems and LGBTQ youth homelessness: Gender segregation, instability, and intersectionality. Child Welfare. 96:2, 29-45.
- vii Evangelist, M., & Shaefer, L. H. (2020). No place called home: Student homelessness and structural correlates. *Social Service Review*. 4-36.
- Morton, M. H., Dworsky, A., Matjasko, J. L., Curry, S. R., Schlueter, D., Chávez, R., & Farrell,
 A. F. (2018). Prevalence and correlates of youth homelessness in the United States. *Journal of Adolescent Health*. 62:14-21.
- ix Wiegand, E. R. & Goerge, R. M. (2019). Recommendations for ensuring the quality of linked human services data sources. *Washington, DC: Family Self-Sufficiency and Stability Research Consortium. Chapin Hall University of Chicago.* 1-5.
- * Wiegand, E. R. & Goerge, R. M. (2019). Recommendations for ensuring the quality of linked human services data sources. Washington, DC: Family Self-Sufficiency and Stability Research Consortium. Chapin Hall University of Chicago. 1-5.
- xi Cutuli, J. J., Treglia, D., Herbers, J. E. (2019). Adolescent homelessness and associated features: Prevalence and risk across eight states. *Child Psychiatry & Human Development*. 51:48-58.
- yii Johnson. L. A. (2020). A consistent definition of homelessness in ACF programs. *Administration for Children and Families*. Retrieved from www.acf.hhs.gov.

Government Accountability Office, 2010; National Conference of State Legislators, 2019.

ii Metro Denver Homeless Initiative. (2020). State of homelessness 2020 report. Retrieved from www.mdhi.org.