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Executive Summary

Each year, around 1,000 youth age out of Los Angeles' foster care system. Many of these transition-aged youth ("TAY") will go on to experience homelessness, and in surveys, nearly one in four youth formerly in foster care report having been homeless at some point between ages 21 and 23. Yet little is known about which TAY in foster care are at highest risk of homelessness or how best to prevent that from happening.

This mixed-methods study focuses on TAY aged 18–21 with a foster care placement in Los Angeles and seeks to describe (1) how many go on to experience homelessness within three years; (2) whether we can predict which youth are at highest risk of homelessness; (3) the characteristics and service histories of TAY foster youth who experience homelessness; (4) the transition services and housing programs available to them; and (5) the experiences of former foster youth and case workers with these services. The project was developed in collaboration with the Los Angeles County Department of Children and Family Services (DCFS). The purpose of this study is to provide information to our partners in Los Angeles, particularly DCFS, the Department of Mental Health (DMH), and the Housing Justice Collective, 1 to help design programs or interventions for TAY in foster care at high risk of experiencing homelessness.

Below we preview our key findings. The conclusion includes key findings along with policy recommendations and areas for further research.

Key findings from data: Measuring and predicting homelessness among TAY in foster care

- Predictive models can help identify a subgroup of TAY in foster care who
 are at higher risk of homelessness. For the TAY aged 18–21 at the start of
 the study, we identified a model to predict their future receipt of Emergency
 Shelter or Street Outreach homelessness services over the next three years.
 The 10% of youth with the highest predicted risk subsequently enrolled in
 these homelessness services at nearly four times the rate of others.
- While predictive models can help identify a subgroup who are at high risk, all youth aging out of foster care appear to be at an elevated risk for homelessness, and a more generalized approach to homelessness prevention for this entire group may be appropriate. This is reflected not only in the number of youth enrolling in Street Outreach Services and Emergency Shelter services — which are unlikely to serve all youth who are experiencing

¹ Housing Justice Collective (HJC) is a collaborative of experienced organizers, facilitators, technical assistants and national housing policy consultants who work with communities to transform systems towards housing justice.

homelessness — but also in the number of youth who are flagged as homeless when enrolling in safety-net programs. For example, 7% of TAY in the study eventually enrolled in Emergency Shelter or Street Outreach services over three years, but 30% were flagged as experiencing homelessness when they enrolled in safety-net programs, including CalFresh (SNAP), CalWORKs (TANF), MediCal (Medicaid) or General Relief over the same time period. Although the higher prevalence is likely due in part to a broader definition of homelessness that includes households doubled up with others, it also indicates a high level of housing instability among all youth exiting the foster care system. In fact, the prevalence of future homelessness reflected in safety-net data for this group is roughly the same as adults prioritized for the LA County Homelessness Prevention Unit. Further, actual needs are likely higher since there may be TAY who are experiencing homelessness but not being served by any of these systems.

 TAY in foster care who experience homelessness are more likely to be Black, and even more likely to be Black and female. They are also more likely to have LA County service histories indicating diagnoses related to substance use disorder, serious mental illness, and conditions associated with mortality.

Key finding from policy analysis: Resources available to TAY in foster care

For TAY who have exited care and have a closed DCFS case, we identified
approximately 500 housing "slots," including 206 housing vouchers. With
1,000 TAY exiting each year and high prevalence of future homelessness, these
resources are unlikely to meet demand for housing after TAY exit care.

Key findings from exploratory interviews: Personal experiences with the system and transitional and housing resources

- The foster care system is designed to offer extensive structural support, services, and transition planning to TAY in foster care, but according to former foster youth and DCFS case workers, these services often fall short.
- High turnover among Child and Family team staff members causes foster youth to disengage with the foster care system.
- Foster youth report feeling isolated because of a lack of diversity and culturally relevant, trauma-informed care within the foster care system and foster families.
- Fragmented services within the foster care system make it difficult for youth and their Child and Family team to know what supports are available. The services that are available vary in quality.

- Youth with high needs report that support services are often stigmatized and weaponized, and as a result, youth are afraid to access support.
- When TAY age out of the foster care system, they feel unprepared for independence.
- TAY struggle to obtain and maintain employment sufficient to pay rent.
- When TAY age out of the foster care system, they experience a supportive services cliff.
- TAY have difficulty obtaining and maintaining housing in LA County.

Background

In 2023, the number of people experiencing homelessness in Los Angeles on a given night reached an all-time high of 75,518 individuals.² Of these people, 6,137 (9%) are children ages 0–17, and 3,718 (5%) are youth ages 18–24.³ Los Angeles is housing more people experiencing homelessness than ever before but residents continue to face increasing housing costs, income inequality, and severe rent burdens,⁴ and the number of people experiencing homelessness remains high.

Within this context, there is interest by policymakers in strategies to connect with people at high risk of homelessness in order to help them avoid becoming homeless. Research studies in Chicago,⁵ New York City,⁶ and Santa Clara County⁷ all found that prevention programs — typically short-term cash assistance paired with other direct services — reduce shelter stays and result in projected cost savings. However, because homelessness is statistically very rare, the existing research also highlights how difficult it is to ensure that limited prevention resources are targeted to people who would otherwise become homeless if they did not receive these resources.

In previous work, we explored strategies to proactively identify adults at risk of homelessness using predictive modeling⁸ and evaluated surveys used to screen adults and families who self-identify as being at risk of homelessness.⁹ In this study, we shift our focus to identifying the risk of homelessness among a population that is already on average at very high risk of experiencing homelessness: youth aging out of the foster care system.¹⁰ In 2022, 15% of unsheltered youth ages 18–24 (150 out of 1,010 youth) who were surveyed as part of the Greater Los Angeles Homeless Count self-reported involvement in foster care, and in 2020 it was 25%.¹¹ In a California statewide survey administered to a group of approximately 700 former foster youth, nearly one in four reported having been homeless — *i.e.*

^{2 2023} PIT count

^{3 2023} PIT count

⁴ Bonett, G., McKeon, K., Harshbarger, T., Martin Moya, B., McGraw, C., & Nelson, K. (2019). Priced Out, Pushed Out, Locked Out: How Permanent Tenant Protections Can Help Communities Prevent Homelessness and Resist Displacement in Los Angeles County. Public Counsel and the UCLA School of Law Community Economic Development Clinic.

⁵ Evans, W. N., Sullivan, J. X., and Wallskog, M. (2016). "The impact of homelessness prevention programs on homelessness." Science, 353.6300, pp. 694–699.

⁶ Rolston, H., Geyer, J., Locke, G., Metraux, S., & Treglia, D. (2013). Evaluation of the homebase community prevention program. *Report, Abt Associates, Inc., Bethesda, MD.*

⁷ Phillips, D. C., and Sullivan, J. X. (2023). "Do homelessness prevention programs prevent homelessness? Evidence from a randomized controlled trial." Review of Economics and Statistics, forthcoming.

⁸ von Wachter, T., Bertrand, M., Ollack, H., Rountree, J., and Blackwell, B. (2019). "Predicting and preventing homelessness in Los Angeles." Policy Report. Los Angeles, CA: California Policy Lab and University of Chicago Poverty Lab.

⁹ von Wachter, T., Santillano, R., Rountree, J., Buenaventura, M., Gibson, L., Nunn, A., Migineishvili, N., and Arbolante, A. (2021). "Preventing Homelessness: Evidence-Based Methods to Screen Adults and Families at Risk of Homelessness in Los Angeles." Policy Report. Los Angeles, CA: California Policy Lab.

¹⁰ Rosenberg, R., and Kim, Y. (2018). "Aging out of foster care: Homelessness, post-secondary education, and employment." Journal of Public Child Welfare. 12(1), pp. 99–115.

¹¹ LAHSA 2022

slept in a homeless shelter or in a place where people were not meant to sleep, because they had no place to stay for at least one night since their last interview — at some point between ages 21 and 23.¹²

This study focuses on the risk and experience of homelessness among transition-aged-youth (TAY), *i.e.* youth ages 18–21, in foster care to identify opportunities for homelessness prevention. During the past 10 years, around 1,000 youth exited the foster care system in Los Angeles each year because they age out.¹³ Youth in Los Angeles County age out of the foster care system at age 18 unless they opt into Extend Foster Care, which allows them to remain in care until 21. 18-year-olds are eligible for Extended Foster Care if they are in school, working, or meet criteria for an exemption.¹⁴ Although the transition from foster care to independence is accompanied by exit planning and the offer of some resources, it also reflects a general loss of support and legal protection. The goal of this study is to better understand these youths' experiences in order to inform strategies to prevent homelessness when they transition to independence.

This project was developed in collaboration with the Los Angeles County Department of Children and Family Services (DCFS) and the Los Angeles County Chief Executive Office's Homelessness Initiative (CEO-HI). On May 21, 2019, the Los Angeles County Board of Supervisors directed the CEO-HI to report on how County departments could prevent homelessness and how research on predictive modeling by the California Policy Lab (CPL) could inform the design and targeting of prevention services. The Motion resulted in the CEO-HI convening an ongoing County Prevention Working Group that included County departments, CPL, and other stakeholders. On December 16, 2019, this group submitted a report (the "Working Group Report") with recommendations, including strategies focused on youth in the foster care system. DCFS was specifically interested in understanding the prevalence of homelessness among youth aging out of the foster care system and developing predictive models to prevent homelessness by supporting young adults before their exit.

¹² Chapin Hall 2021

¹³ CCWIP, Exits from Foster Care table for LA County, at https://ccwip.berkeley.edu/childwelfare/reports/Exits/MTSG/r/ab636/s

¹⁴ In order to receive Extended Foster Care benefits and services, youth must meet one of the following criteria: (1) completing high school or equivalent program or enrolled in college, community college or vocational program, (2) employment for at least 80 hours/month or participating in a program to gain access to employment, (3) or inability to do one of the above requirements do to a medical condition. For more information please see All County Letter No.11-61 2011.

Research Questions

To help DCFS develop homelessness prevention strategies for TAY in foster care, we answer the following research questions:

- 1. How many 18–21-year-old TAY who were in foster care in Los Angeles, as of July 2019, experienced homelessness in the following three years?
- 2. Can predictive modeling help identify TAY in foster care who are at the highest risk of experiencing future homelessness?
- 3. What are the characteristics, placement histories, and LA County agency interactions of TAY in foster care who go on to experience homelessness?
- 4. What transition services and housing programs are available to TAY aging out of foster care?
- 5. What can we learn from the perspectives of previous TAY in foster care, DCFS staff, and housing providers to improve housing outcomes for those aging out of foster care?

We use a mixed-methods approach to answer these research questions. To organize the presentation of findings, we divide the analysis into two parts. The first part is quantitative in nature and answers questions 1 through 3. The second part is qualitative and answers questions 4 and 5. In this section we supplement and enrich the quantitative analysis with the voices and perspectives of TAY with lived experience of foster care and homelessness as well as DCFS case managers. We begin each section with a discussion of our strategy to answer the questions before providing the results.

Part 1: Measuring and predicting homelessness among transition-aged foster youth (quantitative analysis)

The quantitative analysis consists of descriptive analyses and predictive analytics modeling. The descriptive analysis is used to measure TAY foster youth's experiences of homelessness and to summarize their characteristics and their engagement with various LA County agencies. The predictive analytics modeling is used as a proof-of-concept exercise to demonstrate the possibility of identifying youth at higher risk of homelessness. Because predictive modeling is a relatively new strategy for allocating homelessness prevention sources, we give a detailed explanation of our data sources, methods, and equity analysis before presenting the results of the model. Both types of analyses rely on the same source of data. In this section, we describe the data and study population, discuss the research strategies, and present results for the relevant research questions.

Data and study population

The primary data source for this study is de-identified administrative data from LA County's Chief Information Office (CEO-CIO). This novel dataset is referred to as the "Information Hub," and it was started by the CEO-CIO in 2006 as a way to link health services and safety-net benefits receipt data for adults in LA County. In subsequent years, the CEO-CIO and 11 County agencies entered into legal agreements and built data-engineering pipelines to link data across contributing agencies into a regularly refreshed data resource. The resulting dataset is a critical piece of infrastructure for both analytical and operational use cases in LA County, and includes records from health, mental health, safety-net programs, sheriff, probation, homeless services, and the foster care system for millions of individuals from 2010 onwards. Critical for this study is the inclusion of services captured in the Homeless Management Information System (HMIS), which captures enrollments in homelessness services.

The study population for the quantitative analysis includes 1,369 youth aged 18–21 who had an active foster care placement on July 1st, 2019.¹⁵ This study population reflects two decisions we made to understand aging out of care. First, we define the relevant population based on youth who had an active foster care placement on a specific day, *i.e.* July 1, 2019. This allows us to use available data to study their outcomes up to three years later. Second, we focus on 18–20-year-olds because many would in theory be eligible for homelessness prevention services before they age out at 21, and everyone in this study population will age out at some point during the outcome period.

¹⁵ The Information Hub only contains the year of birth, so ages are approximate. For this reason, some "18-year-olds" may be 17 on the date the sample was defined, and some "21-year-olds" may have just turned 21, but they had an active placement so we include it as the top age.

Predictive analytics modeling

This section provides an overview of the predictive analytics approach we use for this study, with a focus on how our approach responds to the policy motivation and goals of our partners. Given the County's interest in predictive modeling, we provide a description of these methods for a broader audience. For a more technical description of these same steps, please refer to the Quantitative Methods section in the Appendix.

Predictive analytics refers to the use of computer-automated statistical methods to discover patterns and relationships in data that can be used to predict future outcomes. In our case, the model is designed to predict future risk of homelessness among transition-aged youth with an active placement in foster care. It does this by looking at historical relationships across hundreds of variables in de-identified data drawn from the individuals' prior encounters with health, behavioral health, safety-net programs, and homelessness services. These relationships are used to predict an outcome during a defined time period in the past, when the outcome is known and can therefore be used to assess the accuracy of the prediction. In this case, for a target outcome, the model produces an estimate of risk from 0 to 1 for every individual. Each individual's risk represents the estimated probability that they will experience a future outcome — like homelessness. If the model is sufficiently accurate, it could be used to predict the same outcome in the future.

Predictive analytics is useful in situations where an estimate of the future likelihood of an outcome can improve decision making. For example, when prevention resources are scarce, predictive analytics can help identify the group of individuals who are most in need of prevention based on the likelihood that they will experience homelessness. In the case of TAY exiting the foster care system, knowing which youth are at highest risk of experiencing homelessness would be useful if it were a goal to allocate prevention resources according to that risk. It is important to note that predictive analytics does not necessarily lead to the most *effective* allocation of resources, because prevention resources may not actually prevent the outcome for those who receive it. But it may lead to the more *efficient* allocation of resources, since they will be given to those who are predicted to be at highest risk.¹⁶

Predictive models are not designed to identify generalizable risk factors for the predicted outcome. Many potential risk factors for homelessness — including income or job loss, contacts with the juvenile justice system, and/or births of

¹⁶ Experts note that homelessness prevention programs should be both effective and efficient, for example see: Shinn, M. & Cohen, R. (Jan. 2019). **Effective** programs stop people at risk of homelessness from becoming homeless. **Efficient** programs target individuals and families who are at high risk of homelessness, i.e. those who would become homeless in the absence of assistance, rather than those who would find a way to maintain stable housing even without assistance.

children — are not observed in the data we use. The goal of the predictive model is to make an accurate prediction, not explain why certain individuals are at higher risk. For example, one model could identify specific variables that are efficient at predicting the outcome, and a different model could select completely different variables and perform just as well. In such a case, both models are good at prediction but neither offer generalizable information about risk factors for homelessness. In all cases, it is important to remember that the variables selected by a predictive model may not reflect causal relationships. This is because the available variables may be proxies for the true underlying cause of the outcome. Because of this, the variables would themselves represent intermediate outcomes and not represent true risk factors, which may influence both the outcome and the measured variable. For these reasons, we do not look to predictive models as a way to identify risk factors for an outcome.

We start the process by defining our study population and the target outcome to predict. Our study population includes the 1,369 18–21-year-old TAY with an active foster care placement on July 1st, 2019. The target outcome we predict is whether these youth ever receive Emergency Shelter or Street Outreach services over a three year period — that is, through June 30, 2022. We select this outcome because these two services represent entry points into the homeless-service Coordinated Entry System (CES), and so they are clear indicators of experiencing homelessness. We do not include enrollments in CES permanent housing programs because, at the time of the study period, TAY exiting the foster care system were sometimes enrolled in these programs proactively as part of their transition plans — not because they were already experiencing homelessness. This decision to exclude permanent housing programs from our outcome definition was informed by our exploratory conversations with service providers and advocates of foster youth.

We next select the "features" used to make the prediction. Features are measures of an individual's characteristics or their situation at a given point in time that are used to create relationships with a future event. Ideally, we would want to include features that we believe are important in determining future outcomes. However, we are often limited to the administrative data that is available. For this study, we can rely on a rich set of data elements from the Information Hub. This includes an individual's characteristics as well as engagement with 7 county agencies, including health, behavioral health, and safety-net programs, among others. The From DCFS, this mostly includes active placement histories and the facility types of those placements.

We next select a specific strategy for estimating the predictive-analytics model. There are various strategies that can be used to model the relationship between

¹⁷ For a complete list of features and the County agency of their source, see Appendix Table A.

features and the target outcome. We assess the performance of each strategy by calculating a measure of its accuracy and then select the final model based on the strategy with the highest accuracy. When doing this, it is important not to test the accuracy of the model using the same population that was used to build (or "train") the model, otherwise, the accuracy of the models may be overly optimistic. For this reason, we create two study populations when identifying the final model: (1) a population of individuals that is used to create the models; and (2) a non-overlapping population of individuals whose outcomes are predicted by the model in order to then measure the accuracy of the model and select the final approach.

The measure of accuracy we rely upon in this study is called the Average Precision Score. This measure gives a general sense of how much better a model is at predicting an outcome for a group of people as compared to randomly selecting individuals (not using a model) who might experience that outcome. For example, if 5% of all individuals eventually experience homelessness in the future, but the Average Precision Score for a specific model is 15%, then this tells us that using the model to identify those at risk of homelessness is generally 3 times better than not using the model. We use the Average Precision Score because it is useful for a general use case, and we are not yet studying a specific intervention. We may use a different measure of accuracy for an actual use case with program capacity constraints.

The final step in assessing a predictive analytics model is to assess its equity. Models can make different mistakes for different groups of people — particularly people in different gender, racial or ethnic groups. ¹⁹ Because of this, transparency around these mistakes is critical for decision makers and the public to know whether a selected predictive analytics model would create or contribute to inequities across groups. If there is evidence that it would introduce inequities, then the decision maker could ask for the model to be adjusted or not use it at all. If the model is adjusted, it may become less accurate, but the trade-off may be worthwhile to the decision maker.

The specific equity metric we use to test the selected model is the Generalized False Negative Rate (GFNR). The intuition for focusing on a "false negative" in this context is based on the idea that the model will be used to allocate a beneficial resource. A false-negative identification means that someone who actually experienced an outcome was not identified by the model as high risk for that outcome. We focus on this type of error in this context (as compared to other types) because it could result in resources being withheld from those who need them to avoid a harmful outcome.²⁰

¹⁸ See the Technical Appendix for more detailed information.

¹⁹ Race and ethnicity were not used as features when building the model to predict homelessness.

²⁰ Generalized False Negative Rate is defined as $E[1 - p \mid Y = 1]$, where p is the risk score and Y is the outcome.

We implemented the above steps to identify a predictive model to be used in this study. We discuss the selected model and resulting accuracy and equity metrics in the results section below. Before presenting those results, we highlight differences between this proof-of-concept exercise and a realistic model-deployment scenario.

The decisions used in this study — including our metrics on model accuracy and equity — were driven by the fact that we do not know the actual deployment scenario or the availability of prevention resources for this population. We would likely suggest different decisions once an actual intervention scenario is identified. For example, the relevant population might change based on theories of how best to enroll TAY in a new program or resource, or the funding source for a new program could introduce specific eligibility requirements that change the sample. Also, because predictive modeling predicts the future based on the past, ongoing monitoring for changes and adjustments to the model are important. Finally, there are also other considerations when incorporating a real model within a government agency. Model deployment requires linked data to be regularly refreshed and available to the agency using the models, and it often requires an internal investment in available technology and procedures, which may be costly.

Quantitative findings

Using the data, population, and methods described above, we present the answers to the three quantitative research questions.

Research Question 1: How many 18–21-year-old TAY who were in foster care in Los Angeles, as of July 2019, experienced homelessness in the following 3 years?

To understand the scale of the homelessness problem for TAY, we estimate the prevalence of homelessness among the 1,369 youth aged 18–21 who had an active foster care placement on July 1st, 2019. Our primary measure of experiencing homelessness is enrollment in Emergency Shelter and Street Outreach because TAY who enroll in these services are clearly experiencing homelessness. It is likely an undercount, however, because not everyone experiencing homelessness accesses services.

To get a more comprehensive sense of TAY experiencing homelessness, we also include two alternative measures. The second measure is engagement with any homelessness service recorded in HMIS data. This includes everything from a triage-tool assessment with no additional services provided to enrollments into permanent housing programs. This may reflect more youth experiencing homelessness, but in some instances it may be overly inclusive if TAY are enrolling in housing services as part of their transition planning and not because they are experiencing homelessness.

The third measure is the number of youth enrolled in a safety-net program administered by the Department of Public and Social Services (DPSS), who are flagged as experiencing homelessness by those programs. These programs include CalFresh (SNAP), CalWORKs (TANF), MediCal (Medicaid) or General Relief.²¹ As part of the application and recertification process for these programs, DPSS records an indicator of homelessness using various business rules. We include this indicator because it is more inclusive than the Housing and Urban Development (HUD) definition used for services recorded in HMIS data. For example, the DPSS homelessness indicator includes people who are in temporary "doubled-up" situations with family or friends. This measure may show more youth experiencing homelessness, but it may overcount due to limited verification of homelessness status. It may also undercount as it is limited to those who are receiving these safety-net benefits.

Older TAY experience high rates of homelessness. The prevalence rates for experiencing homelessness for the three measures are shown in Table 1, by age groupings (18–19 and 20–21). For both groups, 7% experience the primary outcome, which is enrollment in Emergency Shelter or Street Outreach. This may seem low, but in comparison, fewer than 1% of all TAY aged 18-24 (including youth not enrolled in foster care) in Los Angeles enrolled in these programs in 2019.²² As expected, the prevalence of TAY experiencing homelessness increases when using the two alternative — and more inclusive — measures. The higher prevalence from these measures suggests the challenges of housing instability for this population are even more widespread. At the higher end, more than one in three 20–21-year-olds with foster care placement histories are identified as experiencing homelessness by DPSS safety-net programs over a three-year period (through ages 23–24). These youth are three times more likely to be flagged as homeless by DPSS (when applying for a safety-net program) than the general LA County population of the same age.²³

²¹ We restrict the outcome to safety-net benefits receipt as a "primary applicant," to rule out scenarios where the youth may be flagged as homeless by virtue of being listed as a dependent in the family from which they have been removed.

²² This is according to the 2019 PIT count and ACS estimates of the population aged 18–24.

²³ Fewer than 10% of the LA County population aged 20–24 is identified by DPSS as experiencing homelessness over the same time period. American Community Survey counted 678,574 youth aged 20–24 in LA County, and DPSS administrative data included 65,591 primary safety-net applicants aged 20–24 as of July 2019 who were flagged as homeless in the three-year period between July 2019 and June 2022.

TABLE 1. Prevalence of homelessness as measured by 3 proxies over a 3-year period

,	Υ		EMERGENCY STREET	_	HELTER OR OUTREACH	ANY	CES SERVICE	DPSS HO	MELESSNESS
1	d	# of Youth	N		Base Rate	N	Base Rate	N	Base Rate
)	22	735	49		7%	78	11%	199	27%
)	24	634	44		7%	88	14%	213	34%
)	24	1,369	93		7%	166	12%	412	30%

Notes: Age is approximate and based on birth year. The population is based on youth aged 18–21 with active foster care placements as of July 1st, 2019, which is indicated as the "start" of the study period.

Research Question 2: Can predictive modeling help identify TAY in foster care who are at the highest risk of experiencing future homelessness?

We assess whether predictive analytics modeling can identify a population of TAY in foster care who are at higher risk of experiencing future homelessness, as defined by enrollment in Street Outreach or Emergency Shelter over a three-year period.²⁴ We use a Random Forest model to predict the risk of future Emergency Shelter or Street Outreach services in the next three years. This model is particularly useful at separating relationship patterns between features and the target outcome when those patterns differ meaningfully across subgroups. This is valuable in this application because we are including TAY of different ages in the modeling process, and those TAY are eligible for foster care for different lengths of time.

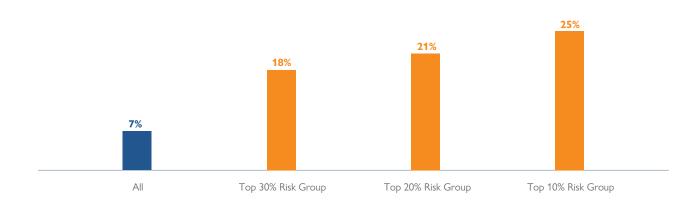
The predictive model can identify TAY aged 18–21 at higher risk of homelessness. Because we observe the outcomes, we are able to test how accurate the model is in predicting them. The measure of accuracy for the selected model is an Average Precision Score of 22% whereas the overall prevalence of Emergency Shelter or Street Outreach is 7%. In other words, on average, using the model to identify a high-risk group is over three times more accurate at identifying individuals who go on to experience homelessness compared to not using the model. For more results on accuracy across tested models, see Table A2 of the Technical Appendix.

We assume the predictive model will be used to allocate an intervention for a higher-risk subgroup of foster youth. However, we don't know the size of the group that would receive the intervention, so we analyze how the precision changes for high-risk groups of different sizes. Figure 1 compares the prevalence of the outcome for the overall sample versus three subgroups representing

²⁴ We generally only select a single target outcome when estimating predictive analytic models. Selection of the outcome definition is a policy decision that should be directly tied to its intended use in the real world. In the predictive analytics application here, we rely on Emergency Shelter/Street Outreach as the target outcome, but there are other outcomes DCFS (or another agency) may want to prevent. This decision is meaningful because it will change who is prioritized for an eventual intervention.

youth who are predicted to be in the top 10%, 20%, and 30% highest risk of that outcome. Foster youth in the top 10% highest-risk group (137 TAY) are almost four times as likely to enroll in Emergency Shelter or Street Outreach (25%) than the overall sample of foster youth (7%). If the size of the risk list is expanded to accommodate larger program capacity (274 or 411 TAY), then we see that the model becomes less precise. However, the youth identified as higher-risk by the model still have higher than average risk of experiencing homelessness.

FIGURE 1. Prevalence of Emergency Shelter or Street Outreach use by three higher-risk subgroups of transition aged youth in Los Angeles



Note: Estimates are based on groupings of individuals with the highest risk scores from the predictive analytic results using the "test" population. Details are included in the Technical Appendix.

In an equity analysis, we found the model did not introduce inequities in the selection of TAY at high risk of homelessness.

Assuming the model would be used to allocate prevention services, we performed a preliminary analysis of the Generalized False Negative Rates (GFNRs) across race/ethnicity and gender. This analysis allows us to determine whether the model systematically underpredicts a person's risk of homelessness due to their race/ethnicity or gender, and thereby their need for prevention services. If a biased model was used to allocate prevention services, then it could cause some people to miss a new opportunity to access prevention services due to their race/ethnicity or gender. Our analysis showed that the GFNRs by race/ethnicity and gender are indistinguishable, and we found no evidence that the model would introduce inequities in the selection of TAY as high risk. However, if the model were to be used to allocate an intervention, a fuller equity analysis should be performed to take into account specific details of the real-world context and policy goals. For example, the specific point of service contact where the predictions are made, the specific choice of outcome measure, and program capacity could change the model and require additional equity analyses.

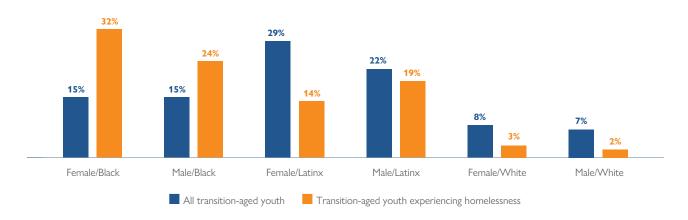
²⁵ See the Technical Appendix for a more detailed explanation.

Research Question 3: What are the characteristics, placement histories, and agency interactions of TAY in foster care who go on to experience homelessness?

To inform the design of a homelessness prevention intervention, we describe the characteristics of TAY aged 18–21 in foster care who go on to experience homelessness and the types of county services they use. We continue to rely on Emergency Shelter or Street Outreach services over three years to identify homelessness experiences. The analysis covers demographic characteristics, foster placement types, and health services. We present all characteristics alongside those for all TAY aged 18–21 in foster care as a benchmark. This analysis highlights the potential needs of those who go on to experience homelessness, which could provide ideas for what to include in a prevention intervention.

We begin with race/ethnicity and gender.²⁶ Figure 2 shows the percentage of TAY with certain race/ethnicity and gender characteristics by experiences of future homelessness. Those who eventually experience homelessness are more likely to be Black, and the gap is largest for Black TAY who identify as female: 32% of those experiencing homelessness were Black and female vs. 15% of all TAY in foster care. These descriptive statistics suggest a need to better understand what is driving these disparities — particularly for Black and female participants.

FIGURE 2. Race/ethnicity and gender of TAY in foster care in Los Angeles, by experience of future homelessness, July 2019



Notes: The population includes 18–21-year-old TAY with an active foster care placement on July 1, 2019. Experiencing homelessness is measured as going on to receive Emergency Shelter or Street Outreach services within 3 years.

²⁶ Demographic information (race/ethnicity and gender) comes from the Information Hub's "golden record" which combines demographic data sourced from multiple County agencies. We present data for Black, Latinx, White, Male, and Female only since there were small cell sizes for other demographic groups.

We next look at placement histories for TAY and the various facility types they lived in while in the foster care system. We show whether TAY were in placements classified as: (1) the Supervised Independent Living Program, which provides a stipend for independent housing for TAY; (2) a Resource Family Home, which is a private residence with supervised care identified by DCFS; (3) a Foster Family Agency Home, which is a resource family that was identified by privately operated organizations; (4) a Short-term Residential Therapeutic Program, which is a residential facility for youth who need short-term intensive care and supportive services; or (5) whether an individual had 2 or more placements. The results are presented in Figure 3. The most common type of placement for TAY in foster care who go on to experience homelessness is in a Foster Family Agency, at 42%. However, our main take-away from the figure is that TAY in all placement types are at risk for future homelessness.

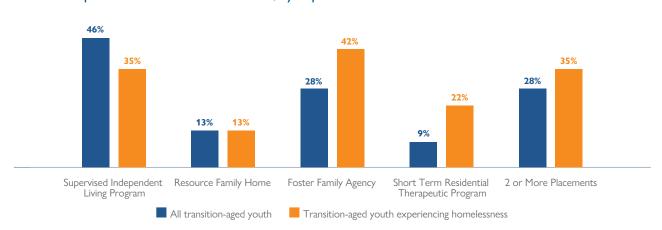


FIGURE 3. Prior placements of TAY in foster care, by experience of future homelessness

Notes: The population includes 18–21-year-old TAY with an active foster care placement on July 1, 2019. Experiencing homelessness is measured as going on to receive Emergency Shelter or Street Outreach services within 3 years.

Finally, we look at health services for TAY experiencing homelessness. We measure whether TAY had a service history within the last five years indicating a diagnosis related to mortality,²⁷ a serious mental illness,²⁸ or a substance use disorder.²⁹ Because these rates measure enrollment in services offered by a county agency, they exclude those whose conditions were untreated

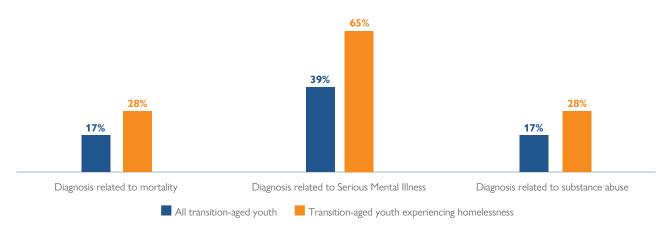
²⁷ Mortality-related diagnoses are based on either the Elixhauser or Charlson indices, which include chronic conditions such as heart disease, diabetes, liver disease and others associated with one-year risk of mortality. To estimate prevalence, we mapped diagnosis codes from county records to those associated with these two indices.

²⁸ These are based on a classification of ICD10 diagnosis codes provided by the UCLA medical school, which were verified with the LA County Department of Mental Health (DMH).

²⁹ Substance use disorder is measured by diagnoses in health and mental health service data. This is likely to represent an undercount for two reasons: (i) substance use diagnoses, when they occur in the course of treatment for other health or mental health conditions, are often "secondary" and non-billable for Medicare purposes, and thus may be under-reported; and (ii) the data does not include substance abuse treatment programs administered by the LA County Department of Public Health (DPH).

(or treated outside of a county agency) and are therefore a lower-bound estimate. The results are presented in Figure 4. For all three types, TAY who go on to experience homelessness were more likely to have each type of service history while they were in foster care. A little less than a third of these youth had a service history related to a substance use disorder or an illness or physical condition correlated with risk of mortality. Also, a majority of TAY who go on to experience homelessness previously had a service history related to Serious Mental Illness (65%) while they were in foster care. That number should be interpreted with caution, however. Youth in foster care are automatically referred to LA County DMH for public mental health care, which may increase their DMH service history and related diagnoses of Serious Mental Illness, compared to other TAY in LA County who may not be connected to services. In addition, as discussed in the second part of this study, there are social factors that could influence service history with DMH. Specifically, some youth formerly in foster care reported that seeking mental health treatment is stigmatized in their communities, while also reporting that referrals to mental health services were sometimes weaponized responses to behavioral issues. For all of these reasons, these numbers should be interpreted with caution, however, they suggest health and mental health resources should be part of a prevention intervention.

FIGURE 4. Diagnoses for mortality, serious mental illness, or substance use disorder, among all TAY youth and those experiencing homelessness in Los Angeles



Notes: The population includes 18–21-year-old TAY with an active foster care placement on July 1, 2019. Experiencing homelessness is measured as going on to receive Emergency Shelter or Street Outreach services within 3 years.

Part 2: Experiences of transition-aged foster youth and case workers with services (qualitative analysis)

The qualitative analysis consists of policy reviews and in-person focus groups or interviews. The policy reviews document policies and existing resources that are available to TAY in the foster care system. We also included conversations with DCFS staff to clarify facts about these policies and their implementation. The in-person focus groups and interviews were conducted to draw lessons from individuals' lived experience and practice. We first present the methods used to collect the qualitative data and then present results for the relevant questions.

Methods

In addition to document and policy reviews, we also conducted focus groups with 11 individuals who had previously aged out of foster care,³⁰ a focus group with 3 DCFS staff, and exploratory interviews with 6 geographically dispersed housing providers to document their perceptions of those programs and services. These conversations were centered on youth's experiences with services and housing programs as they exited the foster care system, as well as service needs for youth perceived to be at high risk of experiencing homelessness. For a more detailed description of these methods, please see Section A1 of the Technical Appendix.

Qualitative findings

Research Question 4: What transition services and housing programs are available to TAY aging out of foster care?

DCFS and the Los Angeles Continuum of Care provide transition, housing, and supportive services to youth aging out of foster care. To answer this question, we summarize the results in two categories: (1) transition services, and (2) housing resources. For a more complete description, see Section A3 of the Technical Appendix.

Transition services

It is important to contextualize transition services within the structure in which they are delivered. This structure starts with a Children's Social Worker (CSW) who organizes and facilitates aspects of a child's case. This includes navigating access to resources both within DCFS and across the County for the child and their biological family as well as their placement families. The CSW is also

³⁰ These youth were identified with the help of the Housing Justice Collective (HJC).

a part of a youth's Child and Family Team (CFT), which consists of a larger multidisciplinary team that collaboratively identifies and addresses each youth's needs. The CFTs can include the youth's family, their current caregiver, a Court Appointed Special Advocate, other individuals identified by the youth, a foster family agency, and medical/professional staff. The CFT meets at least once every 90 days to co-create plans and wraparound services to improve the safety, permanency, and well-being of the youth.³¹ The CFTs facilitate wraparound services with the intent of building on individual and family strengths to improve family well-being. The CFTs develop, implement, monitor and revise uniquely tailored Child and Family Plans of Care that include the strengths, needs and related strategies, services and supports based on the results of the CANS (Child and Adolescent Needs and Strengths Assessment) Tool to provide whatever it takes to address the needs of the child and family in order to maintain safety and permanency in a community-based setting.

Youth in foster care are automatically enrolled in Medi-Cal, which covers routine, emergency, and specialized medical care; vision exams and prescription treatments; substance use treatment; mental health treatment; and dental care. Some foster youth also have access to specialized services. For example, the Intensive Field Capable Clinical Services (IFCCS) program, funded by the LA County Department of Public Health, provides trauma-informed therapy and referrals for TAY in foster care up to 21 years old who have difficulties (i.e., significant mental health needs) maintaining a stable housing placement. TAY in foster care with substance use disorders can be offered enrollment in an Adolescent Intervention, Treatment and Recovery Program (AITRP). Finally, foster youth with developmental disabilities have access to one of 7 Regional Centers where they can receive behavioral therapy.

Transition planning occurs within this support system. Transition planning has processes written in law to help youth in foster care prepare for their transition to independence. These processes are either mandated for all foster youth after a certain age or are optional for youth who meet certain criteria. These services are:

• Transitional Independent Living Plan (TILP; ages 14+, mandatory): TILPs are for all foster youth, including non-minor dependents (NMDs),³² who are 14 or older. The TILP is a CWS/CMS case plan document that describes the youth/NMD's transition goal(s) for when they exit age out of the foster care system at age 18 or at age 21 for NMDs. The TILP describes activities that will assist the youth/NMD in achieving those goals, including programs and services provided by the Independent Living Program (ILP). The TILP also

³¹ The CFT uses the Child and Adolescent Needs and Strengths (CANS) tool to help with planning.

³² Non-minor dependents refers to youth who are 18–21 years of age and still in the foster care system.

identifies the individuals assisting the youth/NMD to meet those goals, indicates the planned completion date, and evaluates progress towards reaching those goals. Transition planning is typically done with a transition coordinator and focuses on the educational, medical, and psychosocial foundations necessary to enable self-sufficiency. The TILP must be updated every 6 months.

- 90-day Transition Plan (TP; at least 90-days before aging out, mandatory): These plans are for foster youth who are expected to age out at 18 or at 21 for NMDs. The plan is meant to identify housing, education, health insurance, mentors/continuing support services, and workforce support/ employment services.
- Independent Living Program (ILP; 16+, optional):33 This is a federally funded and state administered program, which assists eligible youth to live independently. The resources are available for foster youth 16 and older, are identified through a youth's CSW, and youth must be working or attending school full time to be eligible. Once enrolled, ILP Transition Coordinators work with CSWs to determine ILP eligibility and assist CSWs in identifying education, career development, mentorship, daily living skills, connections to safety-net programs, financial resources, and housing services. The ILP coordinator will also support the development of the initial TILP. With each TILP update, the ILP coordinator will continue to evaluate ILP eligibility. For those 18 and older, financial assistance can be requested to cover a range of costs, including education, apartment start-up; food; transportation; auto insurance; and clothing. Youth who participate in ILP are supported by a core team (CSW, foster/kinship parent or agency, group home, ILP Transition Coordinator) and a support team (DCFS Staff, ILP service provider, school representative, county counsel).
- Individualized Transitional Skills Program (ITSP; 16+, optional):

 This program is specifically for those with an ILP. CSWs refer youth to ITSPs, which are run by contracted organizations to provide a one-on-one life coach to help youth navigate access to safety-net benefits and services, enhance daily life skills, and gain self-sufficiency and permanent connections/ relationships.³⁴ ITSP goals are consistent with the requirements to fulfill the Foster Care Independence Act (Chafee Act) and the eight Chafee Outcome Measures which are receiving high school diploma, educational attainment, employment, avoidance of dependency, avoiding homelessness, avoiding nonmarital childbirth, avoiding incarceration, and avoiding high-risk behaviors. The program is voluntary and available for up to 2 years from referral.

³³ Optional programs give youth the choice to participate in the services. According to DCFS, if a youth initially declines these services, they have the ability to opt in at a later date.

³⁴ The goals of ITSP are aligned to the Foster Care Independence Act (Chafee Act).

• **Teen Club (14+, optional):** An optional monthly meeting where youth learn about services and resources and are able to create connections with peers.

Combined, transition services cover a range of planning and opportunities for foster youth to prepare for independence as they age out of care. At the same time, the support system is complex, not universally available, and relies on a network of professionals to help youth navigate through what is available. In the qualitative section, former foster youth, DCFS staff, and housing providers reflect on their experiences with these supports.

Housing resources

Similar to transition planning, there are a range of housing resources available to TAY in foster care while they have an open case and after they transition from care.35 These are summarized in Table 2. Transitional housing beds and Supervised Independent Living Placement (SILP) stipends are available to TAY ages 18–21 with active cases in extended foster care. DCFS also recently added bridge housing, which is more temporary, congregate style housing for TAY with open cases. At any given time, there are approximately 500 housing placements, including 206 Section 8 vouchers, available for TAY ages 18-24 who have exited care and have closed DCFS cases. Housing programs for TAY with open and closed cases have a wide variety of eligibility requirements, most of which require the TAY to demonstrate some level of independence. Consequently, there is a lack of housing resources for TAY who need more support, and all housing resources end by the age of 25. In addition, housing resources for TAY experiencing homelessness are delivered through a collaboration with several public agencies, which can introduce coordination challenges. Combined, navigating these resources may be challenging — not only for youth — but also for those who support them.

³⁵ If a youth is eligible for multiple housing programs, the CSW will work with the youth to determine the best option. For example, a youth attending a college or university, who is eligible for SILP and THP-NMD, most likely will be enrolled in SILP because of its flexibility.

TABLE 2. Housing programs for transition aged current and former foster youth^a

	CONTRACTED COUNTY AGENCY	DCFS CASE	AGES	OTHER BASIC ELIGIBILITY (ADDITIONAL ELIGIBILITY <u>HERE</u>)	HOUSING	SERVICES	PROGRAM LENGTH	PART OF CES?	CAPACITY/ WAITLIST/ ROSTER IF AVAILABLE	
Housing programs for TAY with Open DCFS Cases										
Transitional Housing Placement Program for Non-minor Dependents (THPP-NMD), formerly known as THP+FC	DCFS	Open ⁸	18–21st birthday (NMD)	 In school or employed Responsible enough to share an apartment or house with another NMD Eligible for ILP (Individualized Living Plan) 	Agency supervised apartments or houses	Ongoing case management, etc.	Up to 3 years; can't remain once 21 years old	No ^c	Licensed capacity (total allowable)=661 beds ³⁶ Actual capacity offered=408 beds ³⁷	
Supervised Independent Living Placement (SILP)	DCFS	Open ^B	18–21st birthday (NMD)	 Should be able to: pay all their own bills and manage their own money; find a safe, secure place to live; and be ready to live independently SILP Readiness Assessment 	Placement that youth finds themselves	Youth receive a monthly \$1,200 stipend; No caregiver, but youth still receive supervision from a social worker/ probation officer	Presumably as long as non-minor dependent (NMD)	No	Bed capacity is unknown; SILP stipends are available as youth are determined to be eligible and are granted until funding is exhausted	
Housing progi	rams for TAY wi	th Closed	I DCFS Ca	ses						
Transitional Housing Program-Plus (THP-Plus)	DCFS	Closed	18–24th birthday or 25th with education extension	 Exited foster care at or after age 18 Work and/or attend school full time Homeless or at risk of homelessness 	Shared apartment	Case management, education assistance, employment training, etc.	36 cumulative months or age 24	No ^c	180 beds ³⁸	
ILP Transitional Housing Program ^D	DCFS	Closed	18–21st birthday	 ILP Eligible Former Foster Youth Youth who can work or attend school/training Homeless or at risk of homelessness 	Shared (?) apartment	Case management, 24-hour residential supervision, etc.	Up to 36 months, if they enter at 18 years of age	No	Capacity = 95 ³⁹	

³⁶ ILP Online Housing Services Vacancy Report, available here.

³⁷ ILP Online Housing Services Vacancy Report, available here. A list of providers is available here.

 $^{38\,}$ Interview with DCFS Director of Housing Services, Supportive Housing Division, May 2024

³⁹ Interview with DCFS Director of Housing Services, Supportive Housing Division, May 2024. A list of providers is available here.

	CONTRACTED COUNTY AGENCY	DCFS CASE	AGES	OTHER BASIC ELIGIBILITY (ADDITIONAL ELIGIBILITY <u>HERE</u>)	HOUSING	SERVICES	PROGRAM LENGTH	PART OF CES?	CAPACITY/ WAITLIST/ ROSTER IF AVAILABLE
Family Unification Program (FUP)	HACLA, ⁴⁰ LACDA ^E and DHS	Closed	18–25th birthday	 Left foster care at age 16 or older or will leave foster care within 90 days Homeless or at risk of homelessness Some counties use vouchers for special populations 	Section 8 voucher	Case management, housing navigation, life skills, job training, etc.	36 months of subsidized housing and at least 18 months of supportive services	No	As of 2024, 206 total vouchers under Family Unification Program/ Foster Youth Independence (FUP/FYI) in LA County ⁴¹ As of 06/1/2024, 20 individuals
				like parenting youth (not sure if this is the case in LA County)					on waitlist in LA County
Foster Youth to Independence (FYI) Initiative vouchers	HACLA, LACDA and DHS	Closed	18–24th birthday	 Left foster care or will leave foster care within 90 days 	Section 8 voucher	Case management, housing navigation, life skills, job training, etc.	36 months of subsidized housing and supportive services provided by DHS	No	As of 2024, a total of 206 FUP/FYI
				 Homeless or at risk of 					vouchers in LA County
				homelessness at age 16 or older					As of 61/2024, 20 individuals on waitlist in LA County
				 Includes out- of-home care probation youth 					
Transitional Housing For TAY	LAHSA	Closed	18–25th birthday	 Homeless or at risk of 	Housing administered by Youth providers via site-based facilities or scattered-site apartments	Life skills development, as well as connections to employment, education, healthcare and mental healthcare	36 months	<u>Yes</u>	587 LAHSA funded beds ⁴²
				homelessness • LA County resident					Programs are expected to maintain 95% occupancy

Table Notes

- A Full primer is available here.
- **B** Youth with open cases also have options generally available to children and youth in DCFS care as noted in the <u>full primer</u>.
- C THP-NMD and THP-Plus provider stated that the THPP NMD and Plus programs do not come through CES. While there have been conversations about combining foster care housing resources and homeless housing resources, some feel it is better to keep them separate, in part because youth who are typically connected to DCFS have more access to resources because of their connection to their social worker. For that reason, they would be considered less vulnerable than a young person who is homeless without access to housing and other services through DCFS.
- **D** DCFS took over LAHSA's contract for the Mental Health ILP Transitional Housing Program and collapsed the beds into their ILP bed count. As a result, there are no longer beds dedicated to youth with an Axis 1 diagnosis.
- **E** Eligible program participants are identified by DCFS and referred to the Los Angeles County Development Authority (LACDA) for rental assistance and DHS provides the supportive services. For more information please see <u>Los Angeles County Development Authority (LACDA) Administrative Plan July 1, 2022.</u>

⁴⁰ Housing Authority for the City of Los Angeles (HACLA)

 $^{41\ 34\} vouchers\ held\ by\ HACLA,\ and\ 139\ held\ by\ LAHSA.$

⁴² Information provided by LAHSA's Interim Housing Manager, June 2024

Research Question 5: What can we learn from the perspectives of previous TAY in foster care, DCFS staff, and housing providers to improve housing outcomes for those aging out of foster care?

To help answer this question, we conducted exploratory interviews with six housing providers and focus groups with 11 former foster youth and three DCFS staff (names listed in the quotes have been changed to protect interviewees and focus group participants' identities). Our goal was to document the perspectives of youth and service providers on transitions from foster care, and we summarize their perspectives within four categories: (1) general services while in foster care; (2) supportive services while in care; (3) planning for the transition to independence while in foster care; and (4) housing and support services after aging out of foster care.

General themes related to services while in foster care

"Case workers are supposed to be the experts but when you are still slamming case workers with 35 people on a caseload, it's difficult. We really need smaller caseloads if we really want to have that impact. We need to be able to spend more time with our young people." — David, ILP Coordinator

- Caseworkers are overburdened: Former foster youth, providers and DCFS staff stated that caseworkers have extremely large caseloads of 35 youth to 1 case worker, and this makes it difficult for TAY to get individual attention needed to find housing and other supportive services. Former foster youth felt that it would have been helpful to have peer mentors/navigators with lived experience of foster care supplementing caseworkers.
- There is a high turnover rate for TAY Child and Family team members: In addition to large caseloads, former foster youth and DCFS staff mentioned that Child and Family team members such as caseworkers, public health providers, and school personnel sometimes do not have the training and/or resources to support youth with more intense service needs. Therefore, they often "burnout," which leads to high turnover among team members and youth disengagement with the system.

"We talk about abandonment with our kids... our kids face abandonment all the time. When they come into the system, they are abandoned by parents/family and then any time they move from placement to placement, they are abandoned. For young people in [STRTPs], their staff changes all the time. That is all abandonment."

— Sara, DCFS staff

There is a lack of diversity and an absence of culturally relevant and trauma-informed training for Child and Family team members and foster families:

"In the courtroom, I only saw White judges, White attorneys, White case workers so I never felt comfortable and felt like they shouldn't be the only ones making decisions for me, a Black youth." — Jill, former foster youth

Former foster youth stated that while they were in the foster care system, they experienced a lack of diversity within system staff, e.g. judges, attorneys, and caseworkers. Because there were no staff like them, they felt unable to relate to the staff or vice versa. This made it difficult for the TAY to express their needs or seek services.

For example, some former foster youth stated that they were placed in households that did not match their ethnic/racial backgrounds (despite requesting this). This led to the youth feeling isolated because the foster parents were unable to understand cultural nuances. Conversely, other youth reported being placed with foster families who shared their racial/ ethnic background, but who were unqualified and unable to provide a safe environment for the youth. In these cases, the case worker may have assumed it would be a "better fit."

In addition, some former foster youth felt that some caseworkers purposely did not share services or resources with them due to racial bias.

These statements were further supported by DCFS staff, who mentioned that Black youth often experience discrimination in many ways — from being more likely to be removed from homes, to not getting basic needs met, to being less likely to achieve permanent placements.⁴³

Themes related to supportive or specialized services while in foster care

"One of the challenges that we have faced in our program... particularly recently in the last couple of years, we have seen a rise in mental health concerns where young people have severe mental health concerns to a point where it may not be safe for them to live independently and there just does not exist housing and support for youth who need a higher level of care...Those situations really create a high risk for homelessness." — Grace, THP-Plus service provider

⁴³ A study done by Foster Together Network and UCLA Pritzker Center looked at the experiences of Black youth in the foster care system and highlighted the discrimination Black youth often experience while in care. This study recommended the following: 1) require skin and hair care education; 2) enhance Cultural Competency and Racial Literacy; 3) increase funding; 4) provide additional resources; 5) make reunification a priority; 6) improve accountability and expertise; 7) prioritize mental health and well-being; and 8) strengthen advocacy for biological parents.

 There is a lack of housing placements with supportive services for youth with more intense service needs: Research studies have observed a direct relationship between adverse childhood experiences and health outcomes later in life due to the buildup of toxic stress.⁴⁴ Providers

"We need more mental health services that are more effective. We have a lot of youth who suffer from mental health needs who should have priority over housing and they do not."

—Tony, transitional housing service provider

and DCFS staff stated that youth in the foster care system often experience high levels of trauma before, during, and after care, and as a result, often develop toxic stress which leads to increased challenges. These challenges often manifest as behavioral issues in housing placements as there are limited numbers of housing programs for TAY with more intensive needs, and the programs that are available often cannot meet their needs. Former foster youth and providers felt that youth with more intensive service needs often move frequently between placement types and are shuffled around until they age out of the system.

Providers and DCFS staff also mentioned that AB403,⁴⁵ which led to the restructuring of housing placements to move the system away from congregate care and to favor family-based placements (resources families)⁴⁶ and short-term residential treatment programs (STRTP) for youth who display a "clinical need,"⁴⁷ has led to some positive outcomes but has also led to the exclusion of youth who do not meet the "clinical need" requirement for STRTPs. These youth most likely are placed with resource families, who can access supportive services for their foster youth. However, DCFS staff stated that 1) there are not enough family-based home placements to support the number of foster youth in Los Angeles County; and 2) case workers often experience challenges with placing a youth who needs more support in family-based placements despite these available services. In addition, former foster youth stated that policy didn't always align with practice. Youth stated that their foster family did not follow up on these outside services and/or used them as a threat for behavioral issues. Youth also mentioned that they

⁴⁴ Mersky, J. P., Topitzes, J., & Reynolds, A. J. (2013). Impacts of adverse childhood experiences on health, mental health, and substance use in early adulthood: A cohort study of an urban, minority sample in the US. *Child abuse & neglect*, 37(11), 917–925.

⁴⁵ AB 403 is a comprehensive reform effort to make sure that youth in foster care have their day-to-day physical, mental, and emotional needs met. AB 403 updates the assessment process so that the first out-of-home placement is the right one. AB403 establishes core services and supports for foster youth, their families, and resource families, strengthens training and qualifications for resource families providing care to foster youth and congregate care facility staff, transitions children from congregate care into home-based family care with resource families, to the extent that the children are provided needed services and support and transforms group homes into a new category of congregate care facility defined as Short-Term Residential Treatment Centers (STRTCs). AB 403 revises the foster care rate structure, requires STRTCs and treatment foster family agencies to be certified by counties through their mental health plans and evaluates provider performance.

⁴⁶ A resource family is an individual, couple, or family who has completed the official Resource Family Approval (RFA) process to provide foster care or adoption to a child in the care of DCFS. Commonly referred to as foster parents, resource families include relatives, extended family members, and non-relatives.

⁴⁷ A licensed residential facility that provides an integrated program of specialized and intensive care and supervision, services and supports, treatment, and short-term, 24-hour care and supervision to children. Health & Safety Code § 1502(a)(18).

were told to call the Family Urgent Response System (FURS)⁴⁸ for immediate services but would often not receive the immediate response that the youth felt was necessary for their given situations.

Mental health services are stigmatized and weaponized: When
asked about mental health services and if they utilized these services while
in foster care, former foster youth stated that they were wary of using
mental health services because they were often stigmatized and weaponized.
Former foster youth of color stated that accessing mental health services
was stigmatized in their communities, and they experienced shame and/or

"A lot of the services are out there but it is confusing and there are so many hoops to jump through [to get the services] that it becomes a challenge...young people can get frustrated easily because [when they were in foster care] they didn't see all the red tape that one has to go through in order to secure [services]."

- Lauren, DCFS staff

embarrassment when needing to access services. Former foster youth also mentioned that mental health services were used as a threat for bad behavior, and they have witnessed or experienced inappropriate responses to behavioral issues by members of their Child and Family team and by the staff at their housing placements. For instance, they and/or their peers were sent or threatened to be sent to places for severe mental health issues that felt very "institutional" and that appeared to over-use medication as a solution. Former foster youth who went to these places felt they were overmedicated and would have preferred alternatives to medication. In addition, former foster youth and/or their peers were threatened to have Psychiatric Emergency Teams (PET) called for them by Child and Family team members for non-emergency situations. Those who experienced psychiatric holds felt that they had their life negatively interrupted. Former foster youth felt they needed better support to learn how to effectively cope with feelings that were a result of past trauma.

Programming for TAY is fragmented and hard to navigate: Service
providers mentioned that although supportive services are available, youth
are sometimes unaware or don't utilize these services. As mentioned above,
caseworkers and other Child and Family Team members are overburdened
and often don't have the capacity to learn about and share all existing services
with youth. Former foster youth also mentioned that the services they did
receive varied in quality and often left them feeling unprepared for life after
foster care.

⁴⁸ FURS is a 24/7/365 hotline that supports youth and families by connecting youth to a trained counselor or peer. FURS is a judgment-free and safe space to talk about youth's concerns and vent to trained professionals. FURS sends a team to where the youth is located to help work on the problem and to create a plan to help stabilize the situation and keep the youth safe. The team follows up by helping connect the youth and their caregiver to local services, peer support and other resources.

Planning for the transition to independence while in foster care

"I, personally, did not feel ready to transition. I had the mandatory classes through ILP but it would have been helpful to have them start at like age 13 because I felt like that was when I was basically an adult... it would have also been helpful to know all the things that you can get through the ILP program like help with getting a driver's license and other things that could help after foster care." — Allison, former foster youth

"Youth placed with their families are 'being raised' while youth in resource family homes or group homes/short-term residential therapeutic treatment centers are 'being housed.' As a result, these youth placed with their families learn important life skills like paying bills, finding a job and budgeting that are necessary to live independently and those in other placements don't."

— Mark, ILP coordinator

 TAY aging out of the foster care system do not feel prepared for independence: Federal law requires transition planning to begin no later than age

"The biggest challenge for finding housing [for TAY] is the level of income."

— Louis, THP NMD service provider

14 and there are several procedures written into state law that ensure transition planning is occurring.⁴⁹ However, all former foster youth stated that they did not receive transition preparation or planning until they were 16 years old. The transition planning that they did receive varied in quality. Some youth mentioned receiving in-depth programming geared to improving life skills like budgeting and financial planning whereas others were given self-guided worksheets that they believed did not adequately prepare them for their transition out of care.

Former foster youth and providers also mentioned that outside of the transition planning curriculum, there are very few opportunities for the development of life skills. In many cases, they did not learn skills from their housing placements, and/or caseworkers completed all of the youth's daily needs like obtaining transportation tokens, food resources and filling out important documents. Former foster youth mentioned that being unprepared introduced challenges with accessing resources, such as housing.

"A big challenge is the cost. TAY can't afford it. I have a good job and can barely afford housing. The amount they want the youth to earn is like two or three times the amount of the rent and the rent for a one bedroom apartment in LA County is \$1,500 minimum...They don't have the resources to be able to afford it. They need transitional housing and other housing programs."

— Sheila, TAY transitional housing service provider

⁴⁹ Welf. & Inst. Code 16501.1(g)(16)(A)(i)

- Many TAY have difficulty securing employment and credit to obtain and maintain housing in Los Angeles County: Service providers, former foster youth, and DCFS staff all mentioned that TAY often struggle to find the employment necessary to provide the income needed to afford the high housing costs in Los Angeles County. In addition, TAY also have poor or no credit histories, which poses challenges when looking for market rate housing. Former foster youth mentioned the need for technical job training to help them get jobs where they could earn a good wage.
- TAY often have challenges developing strong support networks before
 and after care: Service providers, former foster youth, and DCFS staff stated that
 it is often difficult for TAY to develop the supportive relationships and social networks
 needed for successful exits out of the foster care system. Providers mentioned that
 youth in STRTPs and other youth who experience placement instability often do not
 develop long-term relationships with positive adults, case workers and other Child
 and Family team members.

Housing and supportive services after aging out of foster care

- There is a supportive service cliff when youth exit care: Former foster youth stated that they felt like a "rug was swept from under them" when they transitioned out of the foster care system and they no longer received wraparound services. Former foster youth felt they needed services to continue to their early thirties.
- To avoid experiencing homelessness, many TAY try to remain in a DCFS housing resource for as long as possible: To address the issues of high housing costs and lack of income, TAY in the THP-NMD program try to transition to SILP or THP-Plus programs to maintain housing. However, there are challenges with receiving SILP dollars and there are not enough THP-Plus housing units to support the number of TAY who want them. Former foster youth noted it is challenging to gain approval

"It was like I had services and support and then suddenly I didn't."

 Joe, former foster youth, reflecting on his experience exiting foster care. for SILP dollars because TAY have to prove the ability to live independently through the SILP readiness assessment⁵⁰ and TAY must find a living situation that meets the standards for SILP.⁵¹ Former foster youth who were enrolled in a SILP mentioned that they had their SILP payments taken away because they were unable to find housing within their budget that met all of the SILP housing requirements. In addition, former foster youth and service providers stated that if a TAY does get SILP, the money (around \$1,200 a month) is not enough to rent a unit in Los Angeles County. Former foster youth who tried to secure FUP and FYI vouchers also mentioned the process was

cumbersome, and that TAY have difficulty finding landlords who will accept their vouchers. One housing service provider noted that if a youth exiting the THP-NMD program (on their 21st birthday) is not prepared to live independently, they will try

⁵⁰ https://www.cdss.ca.gov/Portals/9/FMUForms/Q-T/SOC157C.pdf?ver=2017-10-06-165718-610

⁵¹ https://www.cdss.ca.gov/cdssweb/entres/forms/English/SOC157B.pdf

to exit the youth into a PSH program. However, providers' ability to do this varied by whether their organization ran a PSH program and whether the program had capacity.

 TAY experiencing housing insecurity after transitioning out of foster care often have challenges entering the CES: Several former foster youth mentioned that they experienced homelessness when they exited the foster care system and had difficulty accessing homeless services because they did not fit the

"We try to keep our youth in programming as long as possible. In a perfect world, we would have a THP-Plus program to transition them into [from transitional housing] to ensure that they did not experience homelessness. Since we don't, we try to fight for beds. But there are not enough THP-Plus beds in LA County."

— Janelle, transitional housing service provider

HUD definition of homelessness due to short spurts of homelessness and/or couch surfing. Others mentioned challenges accessing services due to the lack of vital documents like identification or birth certificates that are often lost with constant movement during foster care. In addition, in order to access services through the Coordinated Entry System (CES), participants must complete a CES survey. Higher scores on this survey are meant to reflect greater vulnerability and need of services, however, some youth felt they scored low on CES survey tools because they had previously received DCFS resources. Even if they are able to access CES services, former foster youth mentioned they are often placed in adult shelters where they do not feel safe and some of the shelter rules like curfew are difficult to navigate when trying to build their income.

There is geographic variation in available support:

"I am from South LA and was placed in South LA. But there was nothing there. It is a resource desert...no quality housing programs, no programs to help families build generational wealth. The parks are small and not safe and there are no programs for kids. At the same time, it's hard to leave your community when you exit because you don't know anyone or how to access anything in other cities or Counties." — Jason, former foster youth

Former foster youth who were placed in communities such as South Los Angeles mentioned they experienced challenges navigating services in what felt like a resource desert. For instance, there were few housing programs when they transitioned out of care, limited programs to help increase their income, and limited programs for foster youth with families. The former foster youth also felt limited in their ability to seek services outside of their placement community.

Conclusion and Recommendations

Here we summarize key findings, areas for further research, and recommendations.

Key findings from data: measuring and predicting homelessness among TAY in foster care

- Predictive models can help identify a subgroup of TAY in foster care who
 are at higher risk of homelessness. For the TAY aged 18–21 at the start of
 the study, we identified a model to predict their future receipt of Emergency
 Shelter or Street Outreach homelessness services over the next three years.
 The 10% of youth with the highest predicted risk subsequently enrolled in
 these homelessness services at nearly four times the rate of others.
- While predictive models can help identify a subgroup who are at high risk, all youth aging out of foster care appear to be at an elevated risk for homelessness, and a more generalized approach to homelessness prevention for this entire group may be appropriate. This is reflected not only in the number of youth enrolling in Street Outreach Services and Emergency Shelter services — which are unlikely to serve all youth who are experiencing homelessness — but also in the number of youth who are flagged as homeless when enrolling in safety-net programs. For example, 7% of TAY in the study eventually enrolled in Emergency Shelter or Street Outreach services over three years, but 30% were flagged as experiencing homelessness when they enrolled in safety-net programs, including CalFresh (SNAP), CalWORKs (TANF), MediCal (Medicaid) or General Relief over the same time period. Although the higher prevalence is likely due in part to a broader definition of homelessness that includes households doubled up with others, it also indicates a high level of housing instability among all youth exiting the foster care system. In fact, the prevalence of future homelessness reflected in safetynet data for this group is roughly the same as adults prioritized for the LA County Homelessness Prevention Unit. Further, actual needs are likely higher since there may be TAY who are experiencing homelessness but not being served by any of these systems.
- TAY in foster care who experience homelessness are more likely to be Black, and even more likely to be Black and female. They are also more likely to have LA County service histories indicating diagnoses related to substance use disorder, serious mental illness, and conditions associated with mortality.

Key findings from policy analysis: resources available to TAY in foster care

- For TAY who have exited care and have a closed DCFS case, we identified approximately 500 housing "slots," including 206 housing vouchers. With 1,000 TAY exiting each year and high prevalence of future homelessness, these resources are unlikely to meet demand for housing after TAY exit care. In addition, these housing programs require youth to demonstrate independence, and youth with higher needs are likely underserved.
- For TAY who are still in foster care, LA County's housing capacity is mixed. Since 2023, DCFS has taken over several housing and service contracts to increase their capacity to house and support TAY who are still in foster care. However, challenges persist. DCFS implemented temporary bridge housing to increase capacity, but there are vacancies because some TAY do not feel comfortable accepting the housing due to the congregate living style and/or their perceived safety at the facilities. As with housing programs serving TAY who exit care, most housing requires youth to demonstrate independence, and youth with higher needs are underserved.

Key findings from exploratory interviews: personal experiences with the system and transitional and housing resources

- The foster care system is designed to offer extensive structural support, services, and transition planning to TAY in foster care, but according to former foster youth and DCFS case workers, these services often fall short.
- High turnover among Child and Family team staff members causes foster youth to disengage with the foster care system.
- Foster youth report feeling isolated because of a lack of diversity and culturally relevant, trauma-informed care within the foster care system and foster families.
- Fragmented services within the foster care system make it difficult for youth and their Child and Family team to know what supports are available. The services that are available vary in quality.
- Youth with high needs report that support services are often stigmatized and weaponized, and as a result, youth are afraid to access support.
- When TAY age out of the foster care system, they feel unprepared for independence.
- TAY struggle to obtain and maintain employment sufficient to pay rent.
- When TAY age out of the foster care system, they experience a supportive services cliff.
- TAY have difficulty obtaining and maintaining housing in LA County.

Areas for further research

- The data available for this project do not include family composition, such as whether foster TAY are parenting minor, dependent children. Other research suggests that the birth of a child is correlated to risk of homelessness, likely due to financial impacts and impact on housing.⁵² The County and its partners should measure how many TAY in foster care are parenting and identify what additional supports these TAY(and their children) need.
- Similarly, while the predictive model uses adult criminal justice data, the
 data does not include contacts with the juvenile justice system, which may
 contribute to risk of future homelessness. The County and its partners should
 explore whether existing programs for youth in foster care involved in the
 justice system reduce homelessness, and if not, if there are strategies to do
 that.

Recommendations for policymakers

- Because all TAY in foster care are, on average, at higher risk of homelessness, and because predictive models can be costly and time-consuming to deploy, the County should weigh the benefits and costs of deploying a predictive model compared to offering homelessness prevention services to all TAY in foster care.
- The concerns and experiences shared by DCFS staff and former foster youth should inform a discussion of how to improve the services and supports provided to TAY in foster care. For example, high turnover among staff was cited frequently and appears to have large impacts on the experiences of youth
- Homelessness prevention programs for TAY in foster care need to be more accessible for those with complex needs and include culturally competent, trauma-informed supportive services.

⁵² Gubits, D., Shinn, M., Bell, S., Wood, M., Dastrup, S. R., Solari, C., ... & Spellman, B. (2015). Family options study: Short-term impacts of housing and services interventions for homeless families. US Department of Housing and Urban Development, Office of Policy Development and Research.

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Technical Appendix

A1. Qualitative Methods

To better understand youth's experiences with services and housing programs as they exited the foster care system and the service needs for youth at high risk of homelessness before they exit care, we conducted exploratory interviews with six housing providers and focus groups with 11 former foster youth and three DCFS staff.

Recruitment: We recruited six housing providers by reviewing public lists of foster youth housing providers in Los Angeles County and contacting those providers to ask for their participation. The recruitment was purposefully conducted to represent service providers across Service Provider Areas (SPAs), housing resources and supportive programs for TAY. Providers were from agencies that supported TAY who are currently in the foster care system under AB-12 and those who have transitioned out of the foster care system. These agencies provide THP-NMD, THP-Plus, LAHSA DMH ILP, SILP, FYI vouchers, TAY drop-in centers, LAHSA DCFS Probation Program and Permanent Supportive Housing services to TAY.

We recruited former foster youth through a collaboration with the Housing Justice Collective (HJC) Youth Intermediary. HJC is a collaborative of experienced organizers, facilitators, technical assistants and national housing policy consultants who work with communities to transform systems towards housing justice. HJC's Youth Intermediary is a group of eight young people from across Los Angeles County that are connected to different youth commissions and youth action boards, using their talents, knowledge and experience to help shape HJC's work. The Youth Intermediary used their networks to recruit former foster youth for our focus groups. We recruited three DCFS staff by requesting names of potential participants from a manager at DCFS and then emailing these potential participants.

Interview focus group procedures and analysis: We conducted individual, one-hour interviews with housing providers between January 2022 and September 2022 and a two-hour focus group with DCFS staff virtually via Zoom in March 2023. We conducted two, two-hour, in-person focus groups with former foster youth in March 2023. Eight former foster youth attended the first focus group and three former foster youth attended the second focus group. Interviews and focus groups were conducted by two members of the research team, one with a Master of Social Work and the other with a PhD in public policy. Interviews and focus groups began with study staff providing a brief introduction to the study and explaining how the interviews and focus groups would be

conducted. Next, study staff addressed logistics, such as the duration of the interviews and focus groups, their rights as a participant, and confidentiality. Study staff then received oral consent to record the interview.

Interviews with housing providers covered the following topics: (1) the experiences of TAY aging out of foster care; (2) eligibility for housing and services targeting foster youth; (3) referral and process flow; (4) outcomes for each type of housing and service; and (5) risk factors and protective factors for foster youth homelessness.

Focus groups with former foster youth helped interpret initial findings on the demographics and helped identify any gaps within the data. Topics covered included: (1) County service utilization and housing placements of transition age youth at the highest risk of experiencing homelessness and (2) the experiences of TAY aging out of foster care.

Focus groups with DCFS staff helped interpret initial findings on the demographics and helped identify any gaps within the data. The main topic covered during the focus group was County service utilization and housing placements of transition aged youth at the highest risk of experiencing homelessness.

One research team member conducted the interviews and focus groups and the other took notes. The two research team members who conducted the interviews and focus groups independently reviewed the notes and identified distinct incidents, quotes, anecdotes and stated opinions. Independently, the research team members grouped these items based on the interview question topics referenced above. For example, all items referencing the experience of TAY aging out of the foster care system were grouped together and then the research team members generated subgroups of like items such as the quality of transition planning or experiences of TAY of color. Each research team member refined their subgroup items and individually identified the emerging themes. Next, the two research team members discussed, compared, contrasted and synthesized the themes they identified. In order to translate themes into policy recommendations, the entire research team internally discussed themes and also solicited feedback from the HJC Youth Intermediary.

A2. Quantitative methods

Data sources and policy problem

Determining the specific application of a real-world prediction problem — for example, using predictions to target a homelessness prevention intervention — requires an in-depth process of requirements gathering and policy analysis in conversation with a government partner and community stakeholders.

Because the predictive modeling in this report is "proof-of-concept" in order to demonstrate basic feasibility, we have not yet had those detailed stakeholder conversations, which would cover topics such as the points of service contact where prediction and intervention is technically feasible, the availability and timeliness of different data sources for prediction purposes, and housing resources which would be used for the intervention. Consequently, our understanding of the prediction problem is at a high level, and makes assumptions that may not hold in a deployment scenario. Nonetheless, we have attempted to structure the prediction problem in a way that allows the modeling results to provide general indications of potential real-world performance.

Our structuring of the source data from the Information Hub is subject to the following constraints. First, we assume that predictions of future homelessness would only be useful for foster youth who are currently in care — otherwise they could not be offered an intervention by DCFS staff. In the DCFS data in the Information Hub, we do not have reliable data on case start and end dates in addition to data on placements — so we cannot tell whether youth who are not in a current active placement still have an active case in the foster care system. Therefore, we take a conservative route and condition the sample on foster youth aged 18–21 who are currently in active placements.⁵³ Because we only observe year of birth in the Information Hub data, age is by year (i.e. 18 years old) and is not precise (i.e. 18 ½ years old). We are constrained by date range limitations in the Information Hub data, where usable data for features and outcomes ranges from 2017 through 2022, so our choice of "index dates" for the predictions is also limited. Based on these date range constraints, we construct a dataset consisting of 2,608 observations at the person-date level for foster youth aged 18–21 who are in current active placements at two index dates: July 1st, 2018 (N=1,239) and July 1st, 2019 (N=1,369). These index dates give us at least six months of prior data for feature generation, and at least three years for outcomes following the index date.

⁵³ This restriction could potentially be relaxed if reliable data on case start/end dates could be obtained from DCFS.

Because predictive models are used to generate predictions for time periods after the model was trained, an optimal out-of-sample validation strategy should take this into account by ensuring that out-of-sample predictions are generated "out-of-time," for time periods which are later than those used to train the model. Our choice of two index dates separated by a year gives us the opportunity to adopt a partial "out-of-time" out-of-sample validation strategy.⁵⁴ We use the July 1st 2018 data to train the model, and the July 1st 2019 data as a "test" set in order to validate the model's predictions. After randomly partitioning the 628 persons who occurred in both datasets into either the training or test datasets in order to ensure the datasets are disjoint, the training dataset consisted of N=925 person-level observations for the July 1st 2018 index date, and the test dataset consisted of N=1,055 person-level observations for the July 1st 2019 index date.

Outcome definitions

One of the major challenges of quantitative research on homelessness is that we never directly observe homelessness in administrative data, only imperfect proxy measures. Different measures of homelessness in the administrative data capture different definitions of homelessness, and are also associated with different service receipt dynamics. We consider three different outcome measures in this report.

The first, "Emergency Shelter or Street Outreach," is the most restrictive and potentially the most credible measure of unsheltered homelessness, since it is verified by a caseworker at intake into shelter or in a Street Outreach program according to the Housing and Urban Development (HUD) definition of homelessness. The limitation is that it is likely to be an undercount of the underlying problem due to limited availability of shelter beds and Street Outreach capacity.

The second outcome, "Any CES Service," represents a broader array of services offered by the CES, including transitional housing and time limited subsidies. It has the advantage of capturing a wider proportion of the underlying problem, but the disadvantage is that not everyone enrolled in those programs may necessarily be experiencing literal homelessness at program enrollment.

The third outcome, "Self-Reported Homelessness in Safety-Net Benefits Data," is recorded at application and recertification time for participants in safety-net programs, including CalFresh (SNAP), CalWORKs (TANF), General Relief, and MediCal (Medicaid). The intended definition of homelessness for this measure is more inclusive than the Housing and Urban Development (HUD) definition used for CES services recorded in HMIS data. It includes people who are staying in a place not meant for human habitation or are staying in shelter facilities for people

⁵⁴ The strategy is not fully "out-of-time" because there is some overlap in the outcome windows between training and test data. Nonetheless, we believe this strategy is preferable to one where training and test data fully overlap temporally. We also ensure that the individuals in the training and test data are disjoint.

experiencing homelessness, and also includes temporary "doubled-up" status (staying with family or friends for less than 90 days). As well as capturing a broader underlying overall phenomenon, the safety-net benefits measure may represent an overcount due to limited caseworker verification of homeless status. It may also undercount since it only captures individuals enrolled in these safety-net programs.

The final choice of outcome for a real-world predictive model should be made in close collaboration with the government partner and other stakeholders, and is closely tied to the structure of the prevention intervention and the available resources. In particular, we would need to take into account whether the intervention interferes with the measurement of the outcome in potentially misleading ways. For example, if the prevention intervention is intended to connect participants to safety-net programs, then it may potentially increase the opportunity for homelessness to be measured in the safety-net benefits data, therefore inadvertently appearing to "increase" the negative outcome it is trying to reduce (homelessness). Similarly, if a prevention intervention connected foster youth with transitional housing, then it could inadvertently appear to "increase" homelessness as measured by the "Any CES Service" outcome.

As researchers we cannot make the final decision about the choice of primary outcome. However, for the purposes of proof-of-concept modeling, we choose the most conservative measure of homelessness, "Emergency Shelter or Street Outreach." Although this measure is likely to undercount the true extent of homelessness, it is also least likely to be subject to measurement interference from a prevention intervention. We use this outcome to train the predictive model and to evaluate equity.

Feature engineering approach

Because the drivers of homelessness are not theoretically or empirically well-understood, particularly among youth, we take an inclusive approach to generating features for the predictive model. Following the general approach recommended by Harrell (2015),⁵⁵ we designed our feature engineering algorithms to make maximum use of the information content of the Information Hub data while staying within reasonable computational and storage constraints. If the model were to be deployed in the real world, we would request that the government partner and community stakeholders provide input on any features that they would specifically want included or excluded from the model.

The Information Hub data elements used as inputs to the feature engineering algorithm are given in Table A1.

⁵⁵ Harrel, Frank (2015). Regression Modeling Strategies. Springer.

TABLE A1. Information Hub data elements used as inputs to the feature engineering algorithm

AGENCY	HIGH-LEVEL DESCRIPTION OF FEATURES INCLUDED			
Demographics and Geography	Age, Gender, Service Provision Area (SPA), Area Deprivation Index (ADI) of last known ZIP code			
Department of Child and Family Services (DCFS)	Placement dates for active and prior foster care placements; Placement facility types (e.g. Resource Family Home, Foster Family Agency, SILP); Service Provision Area (SPA) of placement facility			
Department of Health Services (DHS)	Admission and discharge dates; Emergency/Inpatient/Outpatient; Diagnosis and Procedure Codes; Facility information			
Department of Mental Health (DMH)	Admission and discharge dates; Outpatient/Inpatient/Psychiatric Hold; Diagnosis and Procedure Codes; Facility information			
Department of Public and Social Services (DPSS)	History of benefit receipt (CalFresh, MediCal, CalWORKs, General Relief, and other programs); History of housing and homelessness; Other self-reported characteristics (disabilities, domestic violence status, substance abuse, education)			
Sheriff	For adults only: arrest, booking, and discharge dates; arrest and release codes; arresting agency			
Probation	Dates of probation spells; facility information			
LA Homeless Services Authority (LAHSA)	Dates of enrollment and exit in homeless services; service details (interim housing, street outreach, permanent housing)			
Dimensions	Time (last 6 months vs. earlier); number and duration of services; foster youth and connected persons as observed in DPSS data			

The feature engineering algorithm can be described at a high level as follows:

- Data elements representing service encounters with LA County agencies (for example, a placement in foster care or a visit to a County hospital) are transformed into features representing:
 - Numerical variables representing number and duration of contact episodes;
 - Categorical variables for contact type (such as emergency or outpatient visits for County hospitals, or felony vs. misdemeanor charge code for Sheriff bookings);
 - Categorical variables for agency-specific codes (such as ICD10 procedure codes or California arrest codes); and
 - Categorical variables representing facility information (such as DHS hospitals or County jails).
- Categorical variables were encoded using binary encoding of most frequent levels, along with numerical proxies (historical rates of homelessness) for high-cardinality categorical variables such as ZIP codes or procedure codes.
- All features are interacted with a time indicator for "recent" service contacts within the last six months vs. "earlier" service contacts from six months to five years ago.
- Demographic and service utilization features are also generated for persons who are connected to foster youth in the DPSS safety net benefits receipt data

(for example, by being connected through a CalFresh or CalWORKs case).56

When applied to the Information Hub source data, the production feature engineering algorithm generates 274 numerical features. Since the algorithm, which we will call the "complex" feature engineering algorithm, maximizes the use of the data's information content and results in the creation of many highly collinear features, the research team was interested in whether a simpler and more interpretable approach to feature engineering could yield comparable model accuracy results. The "simple" feature engineering algorithm attempts to minimize multicollinearity by creating a more limited set of binary indicators for major agency service contact types, such as emergency/inpatient/outpatient visits in County hospitals; misdemeanor/felony arrests; and crisis/non-crisis mental health treatment. Those binary indicators are interacted with a recent/earlier time indicator. When including only features for the foster youth and excluding features related to persons connected to those youth through safety-net benefits data (for example, people who may be registered on the same CalFresh case), the algorithm generates 74 features. When features for connected persons are included, the algorithm generates 123 features.

Model validation results

We generate predictions using three algorithms: Logistic Regression, Random Forest, and Gradient Boosted Trees (XGBoost), and apply those algorithms to the feature engineering approaches described above. In order to simplify the out-of-sample validation process, we used hyperparameters for those algorithms which were selected by a grid-search process on a separate historical dataset prior to the index dates in the analysis sample.

Because we don't know the real-world use case and requirements for the predictive model, we make some general assumptions in order to choose the most relevant metric for comparing models. We assume that the predictive model will be used to allocate homelessness prevention resources as opposed to being used purely informationally, with a risk score threshold being chosen based on capacity constraints in the program. This suggests that metrics that focus on precision at the top of the risk distribution are most relevant.⁵⁷ However, since program capacity is unknown, we focus on the Average Precision Score metric, a weighted average of precision across all risk score thresholds. The metric can be interpreted as an indication of how the model, on average, improves upon random guessing. We also visualize precision at capacity thresholds from 10% to 30% of the overall sample. These visualizations, presented in the main body of the report, give a sense of the risk level that would be identified if an intervention were to be offered to the top 10%, 20%, and 30% most high-risk youth. We also calculate

⁵⁶ Note that the safety net benefits receipt data only records whether persons are on the same safety net benefits case, and family structure is not observed.

⁵⁷ Precision is also called positive predictive value, and is defined as E[Y = 1 | D = 1], where D is a binary prediction decision and Y is the outcome.

Area Under the Receiver Operating Curve (AUROC) for informational purposes since it tends to be the most widely-reported metric for predictive models.

AUROC and Average Precision Score are displayed in Table A2. The model with the highest Average Precision Score is highlighted. In general, we found that the simpler feature engineering approach, combined with the Random Forest algorithm, achieved highest overall performance, and that the addition of features for persons connected to foster youth through safety-net benefits data has no effect.

TABLE A2. Predictive model validation results

ALGORITHM	FEATURE ENGINEERING APPROACH	INCLUDE FEATURES FOR CONNECTED PERSONS	AUROC	AVERAGE PRECISION SCORE
Logistic Regression	Simple	Yes	0.585	0.145
Logistic Regression	Simple	No	0.662	0.174
Logistic Regression	Complex	Yes	0.517	0.109
Random Forest	Simple	Yes	0.753	0.199
Random Forest	Simple	No	0.785	0.228
Random Forest	Complex	Yes	0.697	0.149
XGBoost	Simple	Yes	0.696	0.198
XGBoost	Simple	No	0.706	0.215
XGBoost	Complex	Yes	0.644	0.139

Notes: The "test" sample includes 1,055 TAY aged 18–21 in active foster care placement on 7/1/2019. The target outcome was Emergency Shelter or Street Outreach enrollment over a 3-year outcome window. The base rate for this outcome was 7% for this population. The selected model with the highest Average Precision score is bolded.

The value of the predictive model in distinguishing between higher and lower risk groups is illustrated in Figure A1, which plots precision (prevalence for those above the risk score threshold), and false omission rate (prevalence for those below the risk score thresholds), at risk score thresholds from 0 to 100%.

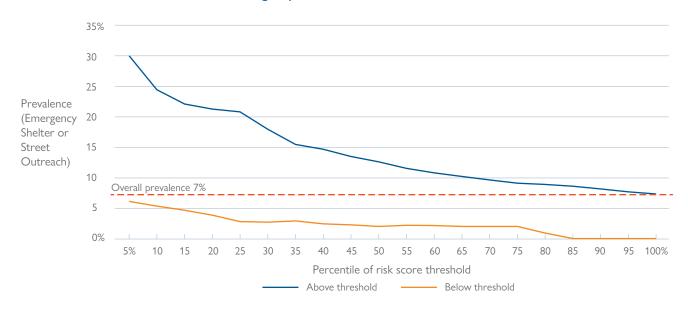


FIGURE A1. Prevalence of homelessness for groups above and below the risk score threshold

Equity

Predictive modeling has become an increasingly sought after and scrutinized tool in public policy settings, and has been used to make decisions across child welfare, education, criminal legal, immigration enforcement, public health, and social services settings (Mitchell et al 2021). At the same time, this growing interest has been accompanied by concerns over equity — often referred to as "algorithmic fairness" — and the need to assess bias across protected groups during the modeling process. This need is particularly relevant in the domain of homelessness, where racial and other disparities have been well-documented.

Assessing equity for a real-world predictive model should be seen as an ongoing, holistic process in which many sources of evidence need to be considered and evaluated because there are many different formal definitions of equity which are mathematically impossible to satisfy simultaneously, so certain equity dimensions would likely need to be prioritized over others.

A full equity analysis would require a detailed understanding of the real-world use case and policy context for the predictive model. Because this is a proof-of-concept analysis, this information is unavailable. Therefore, we make some basic assumptions. We assume that the predictive model will be used to allocate a homelessness prevention allocation to high-risk youth, rather than being used purely informationally. We choose to assess algorithmic fairness by focusing on errors made by the predictive model, on the assumption that they constitute a harm to the individual in question. The two kinds of errors are *false positives*, where a decision to intervene was made even though the individual would *not*

have experienced the outcome, and *false negatives*, where there was a decision to not intervene, but the individual *did* experience the outcome.

In the context of a mandated intervention such as jail to prevent recidivism, false positives — the decision to incarcerate someone who would not have been rearrested — are the more important metric, since they involve the individual being harmed through loss of their freedom. In the context of a scarce, beneficial resource like homelessness prevention, false negatives are more important, since the result is the individual is harmed because they experienced homelessness, but were not offered the intervention. Equity is then defined in terms of equality of false positive or false negative rates across groups: even though all models make errors, those errors should not systematically discriminate against groups. In other words, there shouldn't be large differences in the error rates across groups.

Ideally, false negative rates would be evaluated using the real-world risk score threshold that is used to allocate the prevention intervention. Because our analysis is proof-of-concept and a real-world program does not exist, we don't know what risk score threshold would be used. We therefore evaluate equity using Generalized False Negative Rates (GFNRs), which indicate average false negative rates across all thresholds.⁵⁸

Figure A2 shows GFNRs by race/ethnicity and gender. Using 1,000 bootstrap iterations, we compared Black, Latinx, Other Race/Ethnicity, and Female GFNRs by comparison with White non-Latinx, and Male baselines, and found no statistically significant differences at p<0.05. This provides some evidence that the model is equitable. However, a fuller equity analysis should be performed prior to a real-world deployment scenario when more information about the intervention and policy goals are available.

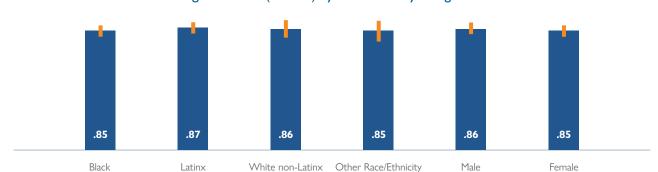


FIGURE A2. Generalized False Negative Rates (GFNRs) by race/ethnicity and gender

Note: No GFNRs were found to be statistically significantly different from White and Male baselines (alpha = 0.05). Significance tests were performed through 1,000 bootstrap iterations. Confidence intervals are displayed as yellow bars.

⁵⁸ Generalized False Negative Rate is defined formally as E[1 - risk score | Y = 1], where Y is the outcome variable. In the literature, it is sometimes referred to as "balance for the positive class".

A3. TRANSITION SERVICES AND HOUSING RESOURCES

CPL conducted a scan of services and supports available to foster youth during foster care and during their transition out of care. We then reviewed this list with former foster youth during our focus groups. This section of the Technical Appendix provides more detailed descriptions of these resources than the main body of the report.

Support System

Below is a description of the support system components provided to TAY foster youth.

Children's Social Worker (CSW) (all ages, mandatory)

Each foster child is assigned a CSW through DCFS after a referral is considered substantiated⁵⁹ and a case is opened after an initial court hearing. The CSW works with the foster child and their birth family or out-of-home caregiver (if the child was not able to remain safely at home) to assess and connect children and families with services they need to meet immediate and long-term basic needs (e.g., physical/mental health, substance use treatment, housing, food, employment, child care, transportation, and education) and facilitate reunification and/or ensure permanence.⁶⁰ Along with providing foster youth with DCFS services (e.g., Independent Living Program services described below), CSWs connect youth with services available through other county departments and/or other community resources (e.g., Department of Mental Health immediate and ongoing assessments and referrals, drug testing and rehabilitation programs). CSWs also arrange for service delivery (e.g., scheduling appointments for the client, directing the client for drug testing, transporting a child in a vehicle to a counseling session).

In addition, CSWs resolve day-to-day issues and challenges such as scheduling and monitoring visitation, crisis management, and handling and mediating conflict among parties.

⁵⁹ A referral is considered substantiated when there is evidence of some form of abuse.

⁶⁰ Permanency refers to the planning done by Child and Family Teams to provide services to children and their families to help keep children with their parents if at all possible. If children cannot live with their parents, permanency planning provides for placing children with relatives. If a relative placement is not possible, permanency planning provides for temporary, short-term, foster care placement with a plan to return to the parents. Finally, if return to the parents is not possible, permanency planning provides for alternative permanence via adoption, guardianship or independent living,

Child and Family Team (CFT) (all ages, mandatory)

TAY in foster care are served by a multidisciplinary team, the Child and Family Team, all tasked with collaboratively identifying and addressing each youth's needs.

The CFT includes:

- child/youth/non-minor dependent and their family
- CSW, or agency representative
- current caregiver
- Court Appointed Special Advocates (CASA), if applicable (unless the youth objects)
- other individuals identified as important by the child/youth/non-minor dependent (NMD) and their family
- foster family agency (FFA) social worker, or short-term residential therapeutic program (STRTP) representative, when applicable
- behavioral health staff (e.g., mental health service provider), when applicable
- a representative of the child/youth/NMD's tribe or Indian custodian, when applicable

These team members attend recurring CFT meetings, which must take place at least every 90 days but may occur more frequently (e.g., once a month). The purpose of a CFT meeting is to assemble the people involved in the foster child's life to determine how best to address the child's needs and achieve positive outcomes of safety, permanency, and well-being.

CFT members develop a plan that builds on strengths, meets needs, and considers long-term outcomes. CFT members use a tool called the Child and Adolescent Needs and Strengths (CANS) to assess child safety and well-being, support care coordination and collaborative decision-making, and to monitor outcomes and services. As reflected on the CANS, CFT meetings cover a **child's behavioral and emotional needs, life functioning, risk behaviors, cultural needs, and strengths.**

Support services

Below is a more detailed description of supportive services available to TAY foster youth.

Wraparound services

Wraparound is a strength-based planning process that occurs in a team setting to engage with foster youth and their families. The intent is to build on individual and family strengths to improve family well-being. Wraparound services are facilitated by the Child and Family Teams (CFT). The CFTs develop, implement, monitor and revise uniquely tailored Child and Family Plans of Care that include the strengths, needs and related strategies, services and supports (based off of the results of the CANS tool) to provide whatever it takes to address the needs of the child and family in order to maintain safety and permanency in a community-based setting.

Health, mental health, and substance use treatment services (all ages, as appropriate)

Children and youth in foster care are automatically enrolled in Medi-Cal, which covers routine, emergency, and specialized medical care; vision exams and prescription treatments; substance use treatment; mental health treatment; and dental care.

The Intensive Field Capable Clinical Services (IFCCS) program serves children and TAY up to 21 years old with an open DCFS case who have had difficulties maintaining a stable placement for an extended period of time. Services include individual and family therapy, vocational and education referrals, case management, and trauma-informed services and linkage to community resources. The program is funded by the Los Angeles County Department of Mental Health.

If DCFS identifies a need for a youth to be tested for alcohol or other drugs, the youth's CSW will notify the court. If the youth agrees, the court will then order DCFS to refer the youth to an Adolescent Intervention, Treatment and Recovery Program (AITRP) agency.

Regional services

Children and youth in foster care who have developmental disabilities have access to regional center services through 7 Regional Centers located in Los Angeles County. Regional center services are critical for older disabled youth, who, for example, may rely on behavioral therapy in order to remain stable in a new placement. The adults who have the legal authority to make education-related and

developmental decisions and Developmental services decision makers⁶¹ work with regional center staff to develop Individualized Family Service Plans (IFSP). IFSPs are contracts between client and the regional center for children 0–3 and must list all of the services and supports the child receives as well as the child's current levels of performance and future goals. IFSPs are reviewed every 6 months.

Transition Planning/Programs

Transition planning refers to the process of ensuring that youth in foster care are prepared for the transition from foster care to a successful adulthood. According to state law, there are several procedures to ensure that transition planning is taking place, including Transitional Independent Living Plans (TILPs), 90-day transition plans prior to a youth's exit from foster care, Independent Living Program (ILP), and Individualized Transitional Skills Program (ITSP). Older youth can also participate in Teen Clubs in preparation for transition.

Transitional Independent Living Planning (TILP) (ages 14+, mandatory)

DCFS must initiate transitional independent living planning for all nonminor dependents (NMDs) and all youth who are 14 or older who reside in "out-of-home care." (Out-of-home care means that the youth is no longer residing with a parent and is in foster care. Out-of-home care encompasses everything from guardianship or placement with a relative to residential group care.) Transition planning is typically done with a transition coordinator.

TILP is a CWS/CMS case plan document that:

- describes the youth/NMD's transition goal(s),
- describes activities that will assist the youth/NMD in achieving those goals, including, programs and services provided by the Independent Living Program (ILP) and other services for transition age youth,
- Identifies the individuals assisting the youth/NMD to meet those goals,
- Indicates the planned completion date, and
- evaluates progress towards reaching those goals.

The purpose of TILP is to help dependent youth/NMDs transitioning to independence to attain the educational, medical, and psychosocial foundations necessary to enable self-sufficiency. The TILP **must be updated every 6 months.**

⁶¹ These individuals could be biological or adoptive parents or guardian, foster parent, or court appointed special advocate and they have the ability to request records, consent to assess for eligibility, consent to receive services.

90-day transition plan

In addition to the TILP, dependent foster youth and NMDs are required to have a 90-day transition plan that covers the following areas:

- housing,
- education,
- health insurance,
- mentors/continuing support services, and
- workforce support/employment services.

The 90-day transition plan is completed 90 days prior to exiting foster care or for NMDs within the 90 days prior to exiting Extended Foster Care. Once the 90-Day transition plan is completed, no additional TILP updates are required unless the court continues dependency beyond the 90-day period and a TILP update is due.

Independent Living Program (ILP) (ages 16 until day before 21st birthday, optional)

The Independent Living Program (ILP) is a federally funded and state administered program, which assists eligible youth to live independently. ILP services are available to all 16–21-year-old foster and former foster youth (subject to additional eligibility criteria). ⁶² ILP Transition Coordinators assist CSWs in locating and providing ILP services.

Core ILP services include:

 education: skill development, assistance and referral to obtain literacy skills, high school diploma/GED, post-secondary education experiential learning, and computer skills;

⁶² Youth/NMDs are eligible for ILP services up to their 21st birthday if at least one of the following criteria is met:

^{1.} The youth is/was in foster care at any time between their 16th to their 18th birthday. This includes NMDs in the EFC program. This does not include youth/NMDs placed in detention facilities, locked facilities, forestry camps, training schools, facilities that are primarily for the detention of youth who are adjudicated delinquent, medical and psychiatric facilities, voluntary.placements, wraparound programs, placements pursuant to an IEP, and guardianship placements in which the youth is not a dependent or ward of the court. Although youth/NMDs in psychiatric hospitals are not eligible for ILP, ILP-equivalent services are provided or initiated while the youth/NMD is hospitalized.

^{2.} The youth is/was 16–18 years old and in receipt of Kin-GAP assistance, regardless of what age he/she exited foster care.

^{3.} The youth was adopted after their 16th birthday.

^{4.} The youth is a former foster youth placed with a non-relative legal guardian (NRLG), whose guardianship was ordered on or after the youth's 8th birthday.

- career development: assistance and referral to obtain career exploration, work readiness and responsibility skills, employment development, employment experience, vocational training, apprenticeship opportunities, job placement and retention;
- **mentorship:** referrals to available mentors and mentoring programs;
- daily living skills: information on, and experiences and training in, financial
 management and budgeting, personal responsibility skills, self-advocacy,
 household management, consumer and resource use, survival skills, and
 obtaining vital records;
- **financial resources:** information and referrals regarding financial assistance, if applicable, on such topics as incentives, stipends, savings and trust fund accounts, educational/vocational grants, CAL-Grants, Workforce Investment Act funding and programs, other employment programs and other forms of public assistance including, but not limited to, CalWORKs, CalFresh, and Medi-Cal; and
- housing information: information and referrals about transitional housing programs, federal, state, and local housing programs, and landlord/tenant issues.

ILP offers additional programs and services, including transitional housing options (see table below). Note that as we heard in our interviews, bed availability is limited and youth must work or attend school full time and demonstrate that they are responsible and independent to secure transitional housing.

From age 18 to their 21st birthday, TAY can request assistance for education funds (tuition, books, supplies, school related fees); apartment start-up costs to purchase sheets, towels, silverware; assistance with food costs; transportation (e.g., MTA Tap Cards, gas money); auto insurance; and clothing assistance (e.g., interview or work uniforms primarily for TAY with a closed case).

Youth typically learn about ILP through their CSWs. Youth who participate in ILP are supported by a core team (CSW, foster/kinship parent or agency, group home, ILP Transition Coordinator) and a support team (DCFS Staff, ILP service provider, school representative, county counsel).

Individualized Transitional Skills Program (ITSP, offered as part of ILP (ages 16 until day before 21st birthday, optional)

CSWs refer youth to ITSP, which provides a one-on-one life coach to help youth navigate access to safety net benefits and services, enhance daily life skills, and gain self-sufficiency and permanent connections/relationships. ITSP goals are consistent with the requirements to fulfill the Foster Care Independence Act (Chafee Act) and the eight Chafee Outcome Measures which are:

- Receiving high school diploma
- Educational attainment
- Employment
- Avoidance of dependency
- Avoiding homelessness
- Avoiding nonmarital childbirth
- Avoiding incarceration
- Avoiding high-risk behaviors

ITSP is voluntary for participating TAY who can receive ITSP services for up to 2 years. TAY must be referred prior to their 19th birthday. Two contractors administer ITSP: The Community College Foundation (TCCF) for Service Planning Areas 1 through 4 and Children's Institute Incorporation (CII) for SPAs 5 through 8.

Teen Club

Youth between the ages of 14–21 and have or had an open case with DCFS or Probation are able to participate in Teen Club. Youth learn about services and resources and are able to create connections with peers. Teen Clubs are held monthly throughout Los Angeles.