Evaluation of the Mary's Place Family Diversion Center

First Year Implementation and Outcomes

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Executive Summary

The Family Diversion Center (FDC) represents a new homelessness intervention model that combines Diversion and shelter with the aim of providing emergency shelter for families while assisting them in rapidly obtaining permanent housing.

Mary's Place contracted with Building Changes to evaluate the first year of implementation of the FDC model. The evaluation examines:
- Staff and family perspectives on FDC implementation.
- Utilization of the FDC and effects on overall shelter capacity.
- Permanent housing exits from the FDC compared to matched samples of families served in conventional shelter and Diversion.
- Differences in the cost of achieving an exit to permanent housing at the FDC versus comparison services.

Key Findings

- Staff perspectives on implementation identified the clear focus on the housing plan and close communication and working relationships with families as important features of the FDC model.
- In exit interviews, families tended to indicate they were very satisfied with FDC services.
- From its first enrollment in June 2019 through March 2020, the FDC enrolled a total of 109 families.
- With respect to its 50-person capacity, utilization of the FDC reached 100% in November 2019 and was less than 60% for most of the first three months of 2020. Other Mary's Place shelters operated below full capacity before the opening of the FDC, so it was difficult to determine if introduction of the FDC resulted in an increase in families served by Mary's Place shelters overall.
- Race and ethnicity of families enrolled at the FDC were similar to conventional shelter and Diversion; Black/African American, American Indian/Alaska Native, and Native Hawaiian/Pacific Islander families were over-represented in all three settings as compared to the general population of King County.
- At intake, FDC families were more likely to have a disabling condition and less likely to be experiencing homelessness for the first time compared to families in conventional shelter and Diversion. FDC families also tended to have more income than families in conventional shelter but less than families receiving Diversion.
- Matched samples of conventional shelter and Diversion families were selected that balanced pre-existing differences with FDC families.
- Results of outcome analyses of matched samples indicate that families in the FDC exited to permanent housing much more quickly than did families at conventional shelters, and at roughly the same rate as families receiving Diversion.
- The daily per-person cost of service at the FDC was higher than for conventional shelter or Diversion. After accounting for differences in the length of time needed for an exit to permanent housing, the cost of an exit to permanent housing at the FDC was lower than conventional shelter but higher than Diversion.

Introduction

This report describes results of an evaluation of the effectiveness of the newly formed Mary's Place Family Diversion Center. The Family Diversion Center (FDC) represents a new homelessness intervention model that combines Diversion and shelter with the aim of providing emergency shelter for families while assisting them in rapidly obtaining permanent housing. We begin by describing the FDC model in more detail, situating it within the wider array of Mary's Place services.

Mary's Place Shelters

Mary's Place is a nonprofit organization based in Seattle that provides shelter and services for families experiencing homelessness. Mary's Place operates seven emergency shelters, or "family centers," across King County, Washington (Seattle and the surrounding region). The facilities are open 24 hours a day, seven days a week, to provide shelter for moms, dads, and children at night, and resources for housing, employment, and wellness each day. Housing specialists work with families to address barriers and empower parents to build family stability, secure housing, and prepare for employment. Children are connected with schools and enrichment activities.

Additionally, Mary's Place operates a Women's Day Center in downtown Seattle that provides meals, showers, laundry, access to resources, safety, and relationships to more than a hundred women each day. Mary's Place is also home to Popsicle Place, a program that provides comfort and care in a more private setting for medically fragile children and their families, many of whom are recovering from chemotherapy, dialysis, or other treatments while living in their cars outside hospitals.

Outreach and Diversion

Mary's Place operates a team of mobile outreach specialists who work with unsheltered families where they are to address barriers and help move them quickly into stable housing, bypassing a shelter stay. Diversion is an important component of Mary's Place outreach services. With funding and partnership from the Schultz Family Foundation, Mary's Place successfully piloted a Diversion project in 2017. Diversion offers flexible financial assistance, family-led problem-solving conversations, and tailored solutions to move families from the streets and into stable housing as quickly as possible. Mary's Place has used the Diversion and mobile outreach model to help hundreds of families find stable housing at dramatically less cost than a shelter stay.[1]

Family Diversion Center

The Mary's Place Diversion pilot project informed the creation of the FDC, which opened in June 2019 on Aurora Avenue North in downtown Seattle. Before the FDC model was introduced, Diversion was offered as an alternative to shelter enrollment. This arrangement presented families with a choice: they could stay outside and access Diversion assistance, or they could enter shelter with some supports but not the full Diversion model.

The FDC offers families both Diversion assistance and a roof over their heads while they pursue immediate housing solutions, with a goal of 30-day placement into housing. At the FDC, a Diversion

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[1] Building Changes, the nonprofit organization located in Seattle that conducted the evaluation described in this report, has also piloted and evaluated Diversion with other service providers across Washington state. For a description of Building Changes Diversion pilot projects, see: https://buildingchanges.org/images/documents/library/2018_DiversionOverview_FINAL.pdf.

specialist works with families to assist them in making progress toward their housing goals. This model is distinct from other shelters in its focus on immediate housing solutions and the availability of flexible financial assistance.

The goals of the FDC demonstration project are to achieve positive housing outcomes while minimizing shelter costs, thus increasing the capacity of the Mary's Place shelter system overall by helping families exit quickly via Diversion.

Evaluation Overview

Mary's Place contracted with Building Changes to evaluate the first year of implementation of the FDC model. The evaluation aims to answer whether the FDC, in contrast to other Mary's Place shelters and Diversion, results in:

- Shorter shelter stays for families
- Better housing outcomes
- Lower costs per family
- Expanded shelter capacity

To assess the relative effectiveness of the FDC model and document lessons learned in implementation, this evaluation includes:

- Content analysis of <u>staff perspectives</u> on FDC implementation over time, reasons for program refinement from the provider's perspective, and factors critical for success or in need of continued improvement.
- Descriptive analysis of <u>family perspectives</u> from exit interviews and follow-up surveys regarding the client experience of the FDC and comparison services.
- A comparison of <u>utilization rates</u> at the FDC and other Mary's Place shelters over the past two years to examine the impact of the FDC on overall shelter capacity.
- A comparison of <u>family characteristics and outcomes</u> at the FDC, other Mary's Place shelters, and conventional Diversion to highlight differences in the types of families served in each setting.
- A <u>matched comparison group</u> statistical analysis to identify whether the FDC is more or less effective than conventional shelter and Diversion in achieving exits to permanent housing, controlling for pre-existing differences between families in each setting.
- Incorporation of <u>monetary costs</u> of service at the FDC versus comparison services to consider the cost-effectiveness of the FDC.

Data Sources

The evaluation incorporates information on client characteristics and outcomes from administrative data sources, for both FDC families and families receiving comparison services, along with rich qualitative information from staff and families on implementation of the new model.

Learning Circles. Building Changes held four hour-long Learning Circles with Mary's Place staff from August 2019 to February 2020, during which data summaries on FDC operations were reviewed and challenges and successes in implementing the FDC model were discussed. Participants included, from Mary's Place, FDC Diversion specialists, the Diversion outreach manager, data specialist, FDC site director, intake specialist, community impact director, and chief program officer; and from Building Changes, the director of research & evaluation, research associate, and grants manager, and an Master

of Social Work practicum student. Discussions were summarized in writing and offer a number of insights on implementation of the new model.

Guest exit interviews. In November 2019, Mary's Place began conducting exit interviews to monitor implementation at the FDC and collecting interviews from families who had exited other shelters and Diversion. Exit interviews were administered by Mary's Place staff, either in person at the conclusion of service or by phone shortly after exit. Interview questions addressed the types of services clients received and how satisfied they were. Interviews collected from November 4, 2019, through June 2, 2020, are included in this report and include households exiting the FDC (n=28), conventional shelter (n=28), and outreach/Diversion (n=2).

Administrative data. Client characteristics and outcomes were obtained from the Mary's Place agency database and the Homelessness Management Information System (HMIS). Administrative data were used to examine family characteristics, shelter utilization with respect to capacity, and outcomes including length of stay and exit destination. These data were obtained for the period January 2018 through March 2020 for both FDC and comparison families.

Financial records. Mary's Place provided the average daily cost per person served in the FDC, Diversion, and other shelters. These estimates were derived from total expenditure for the operation of each service for fiscal year 2020, divided by the annual number of person-days of service.

We begin with a description of the lessons learned during early implementation, from staff discussions in Learning Circles.

Learning Circles

Notes and comments from Learning Circle discussions were recorded in writing by a Mary's Place staff person. These discussion notes were later categorized into themes by the evaluation team. The themes are summarized below, and the actual discussion notes organized by thematic category are shown in the appendix.

Managing expectations of families. Staff reported that families often arrive with unrealistic expectations of what the FDC can do for them; for example, staff reported encountering expectations that the FDC will find housing for guests, pay their bills, or give large amounts of money to cover all costs of moving into housing. Staff recommended better communication with guests and partner agencies to address these misperceptions. However, staff noted that misperceptions can be persistent, so it is important to revisit the topic of realistic expectations throughout enrollment; and even then, some families will continue to have unrealistic expectations. Discussions then turned to the challenge of identifying families who are most likely to succeed in the model. Staff suggested that families who are highly motivated are more likely to succeed.

Selecting families for enrollment. One of the most discussed topics in Learning Circles was how to select families who would most likely succeed in finding housing within 30 days. Discussion often focused on the challenge of accurately assessing a family's situation at intake. Staff made clear that it is not the role of intake staff to investigate the validity of the initial information provided by families. There is a large amount of uncertainty in family circumstances at intake, so it is difficult for both families and staff to accurately assess the situation. It appears there is uncertainty about which characteristics define the

target population of the FDC as well as how to accurately assess those factors. The unpredictability of how these factors will change over the course of enrollment is a third difficulty.

Debt was frequently identified as a substantial barrier that is often not accurately assessed at intake. Staff also felt that intangible personal qualities such as motivation and determination are essential to success and difficult to assess at intake. There was discussion of altering the intake process to include more extensive discussion with families and to have more staff involved in assessing each family's situation, in order to get a better appraisal of family circumstances. However, there was also reluctance to slow down the intake process.

There were also discussions comparing outcomes at the FDC to other shelters, Diversion, and the goals of the city of Seattle. Discussions on how to improve the rate of exit to permanent housing tended to focus on identification of families who could succeed in the FDC model. Although there was a clear focus on enrolling those families most likely to benefit, there was also recognition that the FDC was being underutilized. There was clearly a push-pull dynamic between the focus on selecting families who are most likely to benefit, on the one hand, and concerns about underutilizing the shelter and denying enrollment of some families in the FDC on the other.

Working relationship between staff and families. The working relationship between staff and families at the FDC was often cited as an important active ingredient of the FDC model. Specific features noted included the regular contact between staff and families offered by the shelter setting (in contrast to conventional Diversion); the persistent focus on the housing plan (in contrast to conventional shelter); and the opportunity to celebrate successes in a community setting, which provides positive feedback for other families and staff.

Adapting the plan as the timeline unfolds. Securing housing within 30 days is an ambitious goal. Circumstances change over the course of enrollment—by day 20, staff and families typically have a clear view of the likelihood of achieving the goal within the timeline and can set an exit plan accordingly, whether it is an exit to housing or a transition to a conventional shelter. Discussions indicated that flexibility is available for families who are not able to meet the goal. Usually if families are not able to obtain housing, they return to the intake process in order to transition to conventional shelter. If unforeseen circumstances require an extension of the timeline to achieve housing, this can be arranged, and families can also stay longer if no bed at a conventional shelter is available. There appears to be some difficulty transitioning families to other shelters because families seeking intake while still enrolled at the FDC may be considered already sheltered. Staff also discussed success stories and analyzed the factors that may have led to success, which were quite varied. They also discussed the possibility that even though a family may not exit to housing, their experience at the FDC may eventually lead to success over a longer time period.

Behavioral health. Staff identified that behavioral health is a challenge for many FDC families. In one Learning Circle, a review of data identified five families who exited to literal homelessness, and unmet behavioral health needs were discussed as a possible cause. There was discussion of the need for assessment of behavioral health needs at intake so they could be addressed in services. There was an interest in promoting the use of the Mary's Place clinic for behavioral health needs. Behavioral health training for staff was also identified as a need.

Equity. Learning Circles often included review of data concerning the race and ethnicity of FDC families compared to other shelters. Notable differences varied from month to month, and staff would regularly

discuss possible causes, but no consistent evidence of inequity in FDC intake or outcomes was identified by staff over the course of the Learning Circles.

Use of flex funds. Discussions of how flex funds were used focused on the flexibility in what funding can be used for and the challenge of determining when to use flex funds and in what amount. The amount of flex funds was capped at $2,500, but this is characterized as a soft cap and has been exceeded in a number of cases.

Exit Interviews

Client feedback from exit interviews at the FDC indicated that families tended to be satisfied with their exit destination. Families also rated their overall satisfaction with services, and FDC families tended to be very satisfied with the services. The process of collecting exit interview data is itself in an early stage of implementation, and sample sizes for FDC and other Mary's Place surveys are not yet large enough to support comparisons between the FDC and other services. Full results for each question from the exit interview are shown in the appendix.

Utilization of the Family Diversion Center and Other Mary's Place Shelters

From the first enrollment in June 2019 through March 2020, the FDC enrolled 109 families, an average of 11 per month. Monthly counts of enrollments and exits at the FDC are shown in Table 1. The FDC has a capacity of 50 individuals.

Table 1. Family Diversion Center enrollments and exits per month.

	Enrollments	Exits
June 2019	7	5
July	12	5
August	11	11
September	15	16
October	18	12
November	4	15
December	12	7
January 2020	6	7
February	11	12
March	13	11
April	—	1
Total[2]	109	102

The figures below illustrate utilization rates, defined as daily enrollment (net of exits) as a percentage of capacity, for the FDC (Figure 1 below) and for all Mary's Place shelters (Figure 2 on page 7).

Figure 1. Family Diversion Center daily enrollment as a percentage of 50-person capacity.

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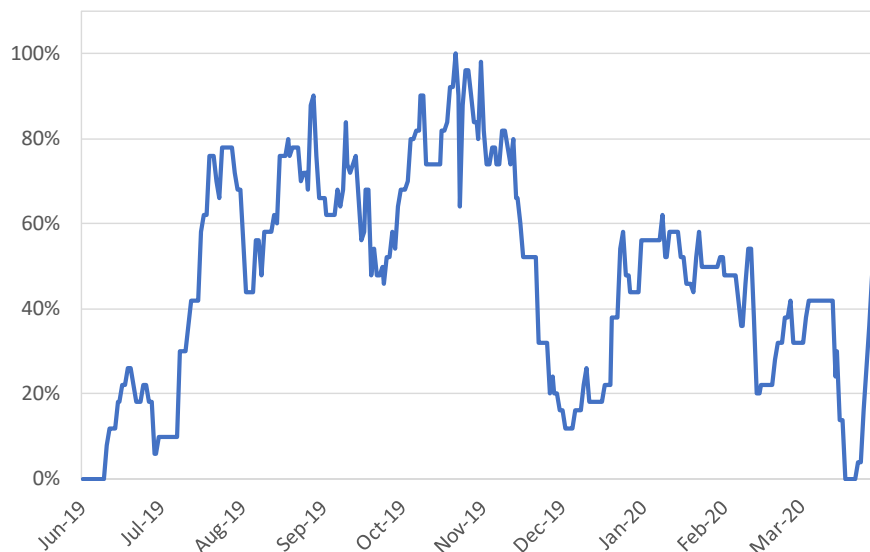
[2] The analysis sample includes 109 FDC episodes. There were 112 episodes in the data extract, but three had no identifiable head of household and were excluded from subsequent analyses. The 109 episodes consisted of 101 unduplicated households—indicating that several households had multiple FDC encounters—and 354 individuals. Further details on the administrative data extract and data preparation are available in the appendix.

Figure 2. Mary's Place daily shelter utilization (enrolled as percentage of capacity) June 2018 through April 2020.
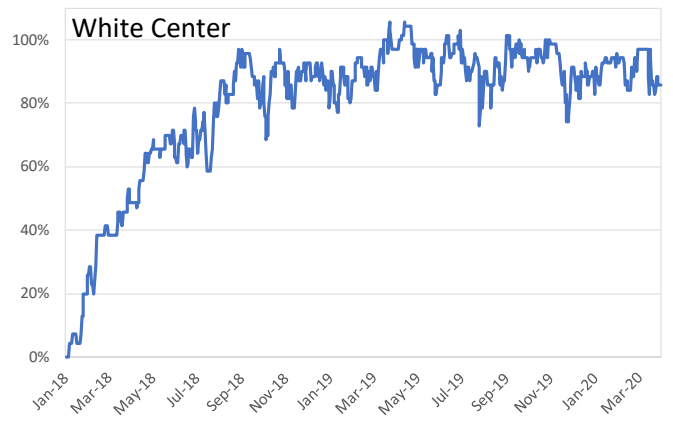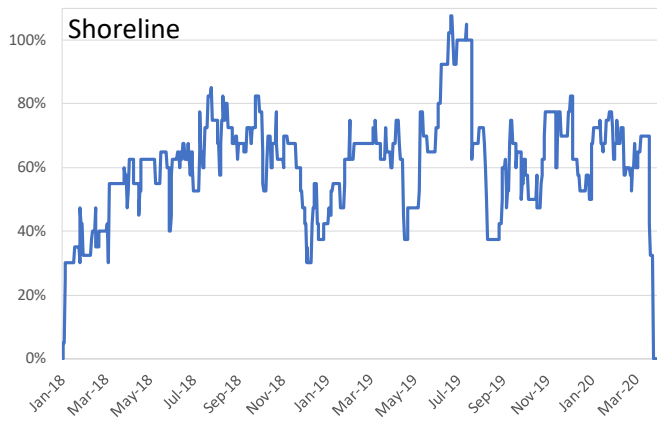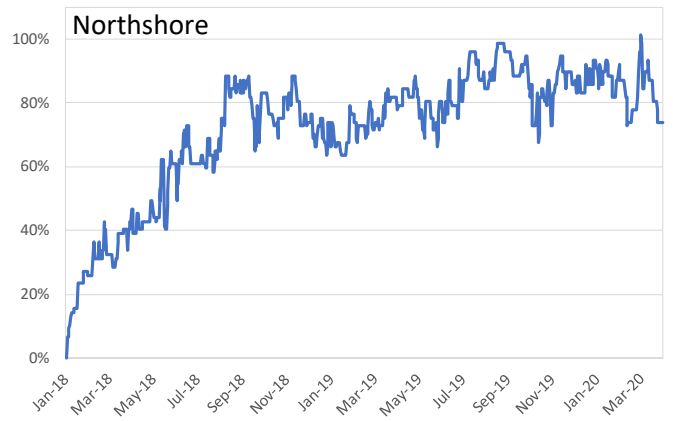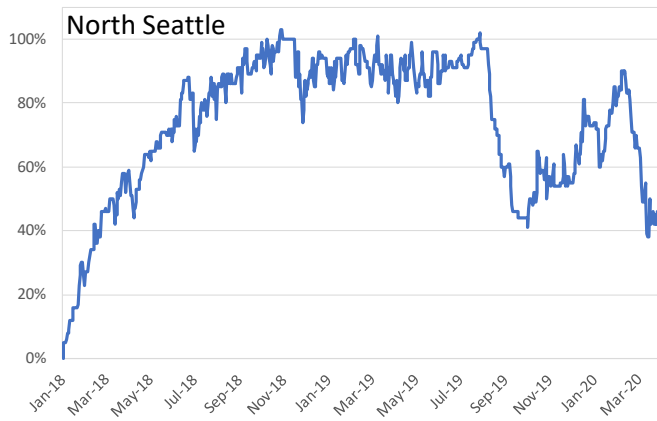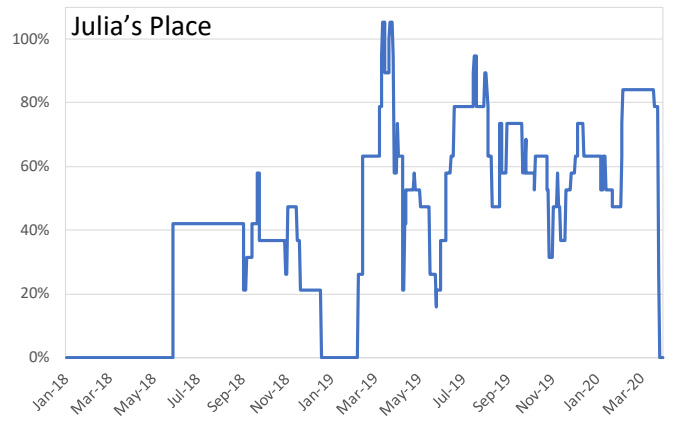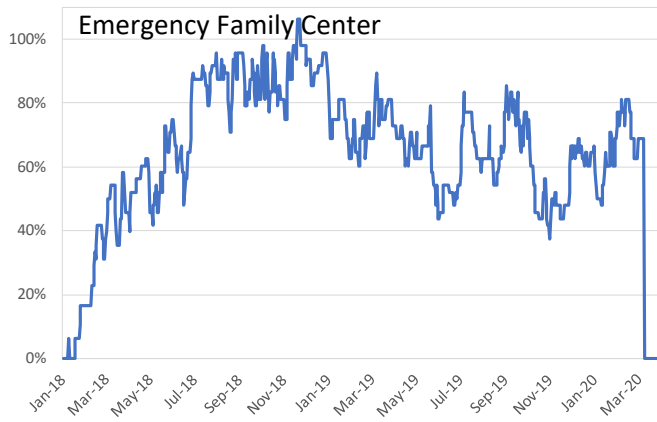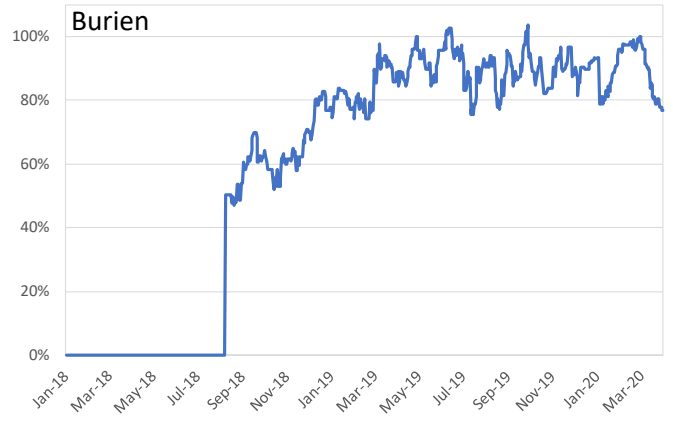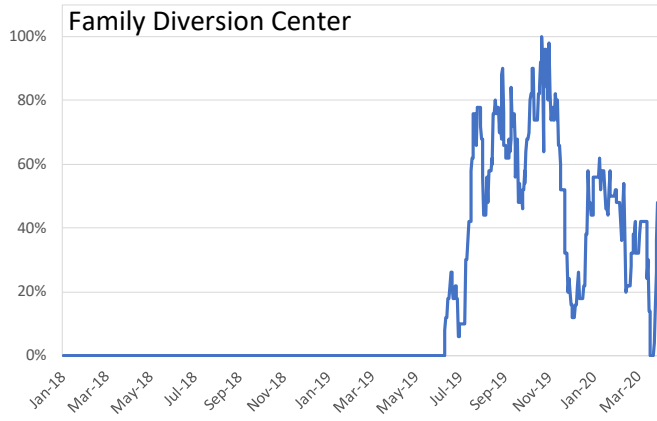
The opening of the FDC could naturally be expected to result in the delivery of services to more families, by the introduction of new shelter space, assuming that demand exceeded existing capacity. However, analysis of utilization of all Mary's Place shelters since 2018 did not indicate Mary's Place was operating at full capacity before the opening of the FDC. Only two shelters—Burien and White Center—operated consistently near 100% capacity over the course of 2019. This makes it less clear that the addition of the FDC beds would necessarily result in more families served. It is possible the FDC enrolled families who would have enrolled at a conventional shelter or in conventional Diversion, with no net increase in overall families served by Mary's Place. Furthermore, the FDC is not yet operating at full capacity. After an initial wave of admissions, FDC enrollment fell sharply around the turn of the calendar year and remained at less than 60% for the first three months of 2020. The FDC began with one intake staff person, adding a second in February, which doubled the center's capacity to enroll families, but this was not yet reflected in utilization rates as of the end of March 2020.

The FDC could also be expected to increase capacity by serving families more rapidly, reaching more families over a given period of time. The effect of adding shelter beds that have a limited length of stay implies a comparison to hypothetical alternatives, such as adding shelter beds with a longer time limit or perhaps no time limit at all. For example, what if the same number of conventional shelter beds had been added instead? Because there is no such timeline for conventional shelter, it is likely that more families would be served at the FDC over time. If the new FDC capacity had been additional Diversion capacity instead, it is possible that a still larger number of families could have been served. The potential effect on capacity of serving families more rapidly is best addressed by a comparison of lengths of stay between the three services. This is precisely the focus of our outcome analyses, and effects on system capacity may be inferred from any outcome effects we might find.

Comparison of the Family Diversion Center with Conventional Shelter and Diversion

The primary focus of the evaluation is a comparison of outcomes at the FDC to outcomes for families who received either conventional shelter or Diversion on their own. There are two main reasons that outcomes at the FDC might be different from outcomes for conventional shelter and Diversion: (1) differences in the effectiveness of the services themselves and (2) pre-existing differences between the people receiving each service. In this section, we consider pathways into the FDC as well as conventional shelter and Diversion. This information is essential to understanding how families in the FDC might differ from families receiving comparison services. We also describe services at the FDC and how they are different from comparison services.

The FDC combines Diversion and shelter, making it a more intensive service than either Diversion or shelter on its own. It is a particularly limited resource, and understanding which families receive it is one of the central questions of this evaluation. The goal of the intake process at the FDC is to identify families who can obtain housing within 30 days. In an intake interview, an FDC intake specialist discusses whether the household has a voucher, other form of rental assistance, or other resources to pay monthly rent. Based on factors like these, families who are deemed likely to identify a housing solution within 30 days are offered enrollment. Families who do not enter the FDC have the choice between Diversion and conventional shelter, as was the case before the FDC opened.

FDC services can be divided into three categories: basic needs, family support, and Diversion. Services to address basic needs include shelter, meals, access to bathroom and shower, storage for belongings, and

public transit passes. Families also have access to the nearby family center, where staff are available to provide a variety of family supports, directly or by referral, including housing, employment, school enrollment and advocacy, English language instruction, social and health services, and special needs. These services to address basic needs and family supports are common across Mary's Place shelters.

In addition, FDC families work closely with a Diversion specialist to develop and monitor their plans to obtain housing. Each family meets weekly with the Diversion specialist to monitor progress and address challenges. The model of Diversion practiced at the FDC is the same model that is practiced throughout the King County homelessness response system. Diversion conversations are designed to be strengths based, individualized to each family's unique situation, and entirely focused on helping families get past immediate barriers to obtaining safe housing. Diversion can also include one-time flexible financial assistance when needed to obtain housing. Common uses of financial assistance include obtaining personal identification, transportation, move-in costs, rental application fees, deposits, and payments of past-due rent.

The goal of Diversion at the FDC is for families to obtain safe housing within 30 days. The Diversion plan is oriented around this 30-day timeline, and the viability of the plan typically clarifies over the course of enrollment: usually after the third week, it is clear whether a family will be able to obtain housing within the timeline. Families who are not able to obtain housing in 30 days are typically transitioned to conventional shelter. Alternatively, enrollment can be extended to 45 days if additional time is needed for a viable housing plan.

How do these features of the FDC distinguish it from the two comparison services? Other Mary's Place shelters provide similar services to address basic needs and family supports. The provision of Diversion is the main feature that distinguishes the FDC from conventional shelter, along with the 30-day timeline—there is no such timeline at conventional shelter. The FDC can be distinguished from conventional Diversion by its services to meet basic needs (including shelter) and family supports. The model of Diversion practiced at the FDC is the same as elsewhere in King County. Conventional Diversion is oriented toward the same goal of housing within 30 days, but unlike at the FDC, this goal is not enacted as a limit on the duration of enrollment.

Characteristics of Family Diversion Center and Comparison Families

The above exploration of pathways into the FDC, conventional shelter, and Diversion suggests there may be substantial pre-existing differences between FDC and comparison families. Next, we use the administrative data to examine characteristics of families in each setting. Throughout the remainder of this report, we refer to the two comparison groups as "Shelter" and "Diversion."

Data were obtained for enrollments at the FDC from the commencement of operations (June 2019) through March 2020. Shelter and Diversion comparison data include a much larger number of episodes over a wider range of time, including enrollments from January 2018 through March 2020.[3] In the tables below, family characteristics are summarized for either household-episodes, heads of household, or individuals, as appropriate. The level of analysis is noted for each section. The sample sizes for each level of analysis are shown in Table 2 (next page) and are approximate sample sizes for each family

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[3] Although the extract was limited to enrollments through March 2020, the data for those enrollments were current through the date the data were extracted, April 22, 2020.

characteristic reported, with some discrepancies due to the amount of missing data for each variable. Additional details on the administrative data extract and data preparation are shown in the appendix.

Table 2. Data extract characteristics.

	FDC	Shelter	Diversion
First enrollment date	6/10/19	1/2/18	1/1/18
Last enrollment date	3/28/20	3/31/20	3/31/20
Household-episodes (unduplicated)	109	1,630	948
Households served (unduplicated)	101	1,169	885
Individuals served (unduplicated)	354	3,799	2,867

Differences between the families at the FDC and the two comparison services were tested for statistical significance using t-tests and z-tests for independent samples. Any statistically significant differences (p<.05) between FDC and comparison families are highlighted and denoted in the tables below. with superscripts—in the FDC column in the tables below, the superscript 'a' indicates a significant difference with Shelter and the superscript 'b' indicates a significant difference with Diversion.

Households in the FDC tended to be slightly larger than families in conventional shelter and slightly more likely to have young children than families in conventional shelter and Diversion (Table 3). None of these differences were statistically significant.

Table 3. Household composition (unduplicated household-episodes).

	FDC	Shelter	Diversion
Average size	3.23	2.97	3.24
Average number of dependents	2.28	1.98	2.24
Percentage with children under 5	55%	53%	48%
Average number of children under 5	0.72	0.73	0.63
Percentage with children under 18	90%	85%	92%
Average number of children under 18	1.84	1.64	1.89

More than 40% of heads of household in all services were Black/African American (Table 4 below), a substantially higher percentage than the percentage of Black/African Americans (5.5%) who comprise the general population of King County (Figure 3 below).[4] Families in the FDC and conventional shelter were slightly less likely to have a Black/African American head of household than in Diversion. American Indian/Alaska Native families and Native Hawaiian/Pacific Islander were also substantially over-represented in all services as compared to the King County population, and there were only slight differences between the services.

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[4] This finding is consistent with other research showing that Black/African American and American Indian/Alaska Native households experience homelessness at disproportionately high rates. For more information and discussion, see Olivet, J., Dones, M., Richard, M., Wilkey, C., Yampolskaya, S., Beit-Arie, M., & Joseph, L. (2018). *Supporting Partnerships for Anti-Racist Communities (SPARC): Phase one study findings*. Retrieved from https://c4innovates.com/training-technical-assistance/sparc/.

Table 4. Head of household race/ethnicity (unduplicated households).

Race/ethnicity[5]	FDC	Shelter	Diversion
Black/African American	41.5%	40.9%	47.5%
Asian American	—	3.0%	2.2%
American Indian/Alaska Native	3.8%	3.3%	1.8%
Native Hawaiian/Pacific Islander	3.8%	4.0%	4.6%
Hispanic/Latinx	10.4%	11.9%	13.1%
White	25.5%	20.5%	20.8%
Multi-racial (non-Hispanic)	10.4%	10.4%	8.1%
Other	4.7%[b]	5.8%	1.8%

Note: Superscripts denote a statistically significant (p<.05) difference of FDC with Shelter ([a]) and/or Diversion ([b]). Percentages may not add to 100% due to rounding.

Figure 3. Racial/ethnic composition at the Family Diversion Center versus the general population of King County.
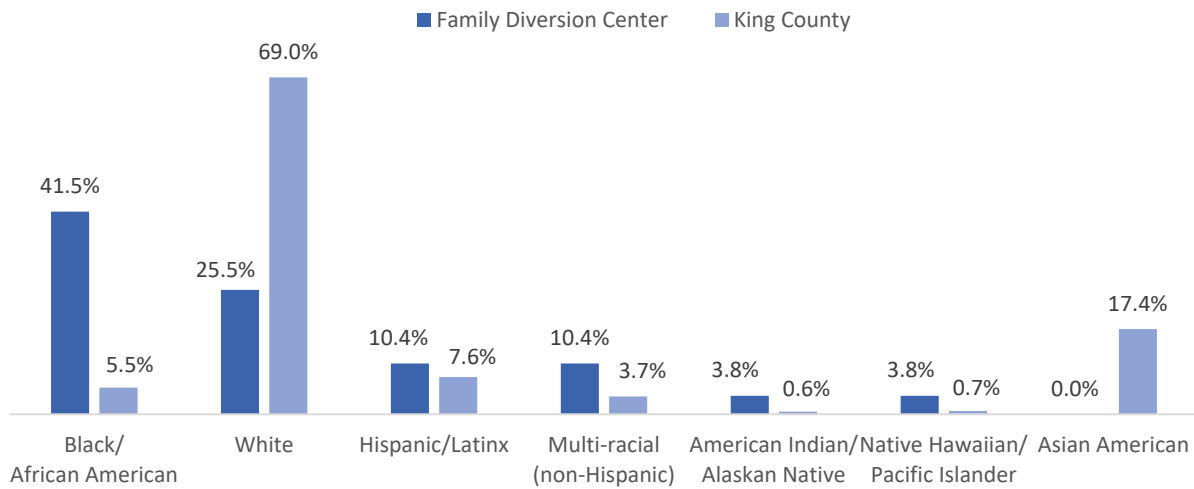
Source for King County data: US Census Bureau, American Community Survey, 2018 5-year estimates, all families.

As shown in Table 5 on the following page, heads of household in the FDC were somewhat older than in both comparison services, and significantly older than those of families in conventional shelter. They were also significantly less likely to be pregnant. FDC heads of household were also significantly more likely than in conventional shelter to speak English as their native language, be US natives, and be US citizens. As compared to Diversion, heads of household at the FDC were significantly less likely to have health insurance.

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[5] In the Mary's Place agency database, race and Hispanic/Latinx ethnicity are measured by a single variable. This effectively treats Hispanic/Latinx identity as a racial group and other race categories as non-Hispanic/Latinx. HMIS data were converted to this format for comparability, as conversion of the agency format to the HMIS format was not possible.

Table 5. Head of household demographics (unduplicated households).

	FDC	Shelter	Diversion
Female	87.7%	91.7%	87.8%
Age (years)	35.7 [a]	33.7	34.3
Veteran	1.9%	0.9%	0.7%
Pregnant	5.1% [a]	15.9%	—
Health insurance	75.8% [b]	71.6%	93.8%
English as native language	90.5% [a]	80.5%	—
US native	89.6% [a]	74.5%	—
US citizen	95.2% [a]	80.8%	—

Note: Superscripts denote a statistically significant difference (p<.05) between the FDC and Shelter ([a]) and/or Diversion ([b]).

The majority of heads of household in both the FDC and conventional shelter had completed high school or had some post-secondary education. None of the group differences were statistically significant (Table 6).

Table 6. Head of household education (unduplicated households).

Highest level of education	FDC	Shelter	Diversion
Less than high school	45.2%	41.9%	—
High school completion	28.8%	38.9%	—
Some post-secondary education	26.0%	19.0%	—

Note: Percentages may not add to 100% due to rounding.

Heads of household in the FDC were significantly more likely than those in both conventional shelter and Diversion to have a disabling condition. There were no differences between the FDC and Shelter groups in prior legal system involvement or the number of emergency screens (Table 7).

Table 7. Other head of household characteristics (unduplicated households).

	FDC	Shelter	Diversion
Prior legal system involvement	22.9%	21.5%	—
Disabling condition	39.6% [a,b]	23.5%	16.6%
Emergency screens (average number)	2.2	2.1	—

Note: Superscripts denote a statistically significant difference (p<.05) between the FDC and Shelter ([a]) and/or Diversion ([b]).

As shown in Table 8 below, families in the FDC were less likely than families in conventional shelter or Diversion to be experiencing homelessness for the first time, and this difference was significant for Diversion. Families in the FDC also had higher income than families in conventional shelter, and significantly lower income than families in Diversion.

Table 8. Prior experiences of homelessness and income (household-episodes).

	FDC	Shelter	Diversion
Living arrangement prior to entry			
Unsubsidized housing	2.8%	2.3%	4.5%
Subsidized housing	0.9%	0.7%	0.8%
Doubled-up (permanent)	1.8% [b]	1.2%	—
Doubled-up (temporary)	6.4% [a]	13.6%	10.0%
Transitional housing	0.9%	0.3%	0.9%
Other shelter	14.7%	18.0%	12.1%
Hotel/motel	5.5% [b]	3.3%	1.8%
Institution	0.9%	3.2%	4.1
Unsheltered	66.1%	57.5%	65.7%
Times homeless			
One	48.5% [b]	54.9%	63.1%
Two	25.8% [a]	16.9%	21.1%
Three	10.3% [b]	10.9%	3.4%
Four or more	15.5%	17.2%	12.4%
Income on entry			
Average	$862.63 [b]	$613.84	$1,624.36
Median	$583.50	$307.50	$1,180.00
No household income	37.5%	45.1%	30.6%

Note: Superscripts denote a statistically significant difference (p<.05) between the FDC and Shelter ([a]) and/or Diversion ([b]). Percentages may not add to 100% due to rounding.

Simple Comparison of Outcomes: Exit Type and Length of Stay

Turning to outcomes, simple comparison of exit types and length of stay provides a first look at differences in outcomes between the service types. Please note that the summary statistics presented in Table 9 (next page) are for the total samples before applying our statistical matching approach. Families in the FDC were slightly more likely than families in conventional shelter to exit to permanent housing, but families in Diversion were considerably more likely than both groups to exit to permanent housing. Exits to unsubsidized housing were markedly more common among families in Diversion.

The median length of stay across all exits was shortest in the FDC, significantly shorter than conventional shelter and Diversion. Stays ending in exits to permanent housing were longer than stays ending in other exit types. One exception to this pattern was that in Diversion, unknown exits had the longest length of stay.

Table 9. Exit types and length of stay (household-episodes).

	FDC	Shelter	Diversion
Number of exits	102	1,394	883
Exit to (% of exits):			
Permanent housing	45.1% [b]	40.3%	77.4%
Unsubsidized housing	12.8% [b]	9.9%	56.2%
Subsidized housing	27.5% [b]	23.5%	17.1%
Doubled-up (permanent)	4.9%	6.9%	4.1%
Unstable housing	35.3% [b]	37.7%	13.3%
Doubled-up (temporary)	6.9%	9.9%	4.1%
Transitional housing	0.9% [a]	5.5%	2.2%
Other shelter	17.7% [b]	14.4%	5.3%
Hotel/motel	2.9% [b]	1.6%	0.5%
Institution	—	1.8%	0.2%
Unsheltered	6.9% [b]	4.5%	1.0%
Unknown	19.6% [b]	22.0%	9.4%
Length of stay (median days) by exit type			
All exits	16 [a,b]	41	28
Exits to permanent housing	21 [a]	65	27
Exits to unstable housing	15	30	28
Unknown exits	6 [a,b]	16	47

Note: Superscripts denote a statistically significant difference ($p<.05$) between the FDC and Shelter ([a]) and/or Diversion ([b]). Percentages may not add to 100% due to rounding.

The important pre-existing differences between these groups could explain the differences in outcomes, but we will address that issue later. For now, we are focused on the information provided by the summary statistics for exit type and length of stay. These statistics provide limited information on the effectiveness of each service for several reasons. The proportion of exits ending in permanent housing and the median length of stay both omit information from cases that have not yet ended. The data for Shelter and Diversion also include a larger range of time, because the FDC began operations more recently.

Below, we calculate proportions of exit types among the total of enrollments, as opposed to known exits, which provides some accounting for episodes that have not yet ended. We also limit the data to enrollments starting after FDC operations began on June 10, 2019, to equate possible length of stay across groups. For cases that had not yet ended, we inserted the ongoing length of stay current to the end of March.

After these refinements, the pattern was similar, although some of the group differences were reduced. Diversion provided the highest rate of exit to permanent housing, followed by the FDC and Shelter. The FDC had the shortest length of stay, followed by Diversion and Shelter (Tables 10 and 11 below).

Table 10. Exit status among enrollments since Family Diversion Center operations began on June 10, 2019.

	FDC		Shelter		Diversion	
	Count	%	Count	%	Count	%
Permanent housing	46	42.1	151	28.8	231	64.1
Unstable housing	36	33.0	182	34.7	32	8.9
Unknown exits	20	18.5	100	19.1	32	8.9
Not exited	7	6.4	91	17.4	65	18.1
Total	109	100	524	100	360	100

Table 11. Length of stay (median days) among enrollments since Family Diversion Center operations began on June 10, 2019.

	FDC	Shelter	Diversion
Overall	15	33	27
Permanent housing	21	54	22
Unstable housing	15	28	16
Unknown exits	6	13	37
Not exited	5	55	71

These statistics provide a limited perspective in that information on exits that had not yet ended is only partially accounted for, and the two metrics—proportion exiting to permanent housing and length of stay—remain separate. Both of these metrics are important, and ideally, we would examine a single outcome reflecting both a higher proportion of exits to permanent housing with a shorter length of stay. Next, we introduce the analysis method used in this evaluation, called "survival analysis," which allows us to address both the likelihood of exits to permanent housing and the timeliness of such exits, as well as to more accurately account for stays that had not yet ended at the time of this evaluation.

Survival analysis is a statistical method that focuses on the rate of occurrence of a key event—in this case, exits to permanent housing. In the analysis, time elapses from the beginning of enrollment, and at each point in time following enrollment the number of exits to permanent housing is divided by the number of enrollments that have not yet ended. Unlike in the summary statistics examined previously, information for families who had not yet exited is accounted for without omitting them from the analysis or assuming their length of stay is the current length of an ongoing episode. Figure 4 on the next page illustrates the rate of occurrence of permanent housing exits on a cumulative basis (i.e., cumulative incidence) for each of the three service settings, with data limited to enrollments occurring after June 9, 2019, to align with the start of FDC operations on June 10. Additional details on survival analysis methods are shown in the appendix.

Figure 4. Cumulative incidence of permanent housing exits. [6]
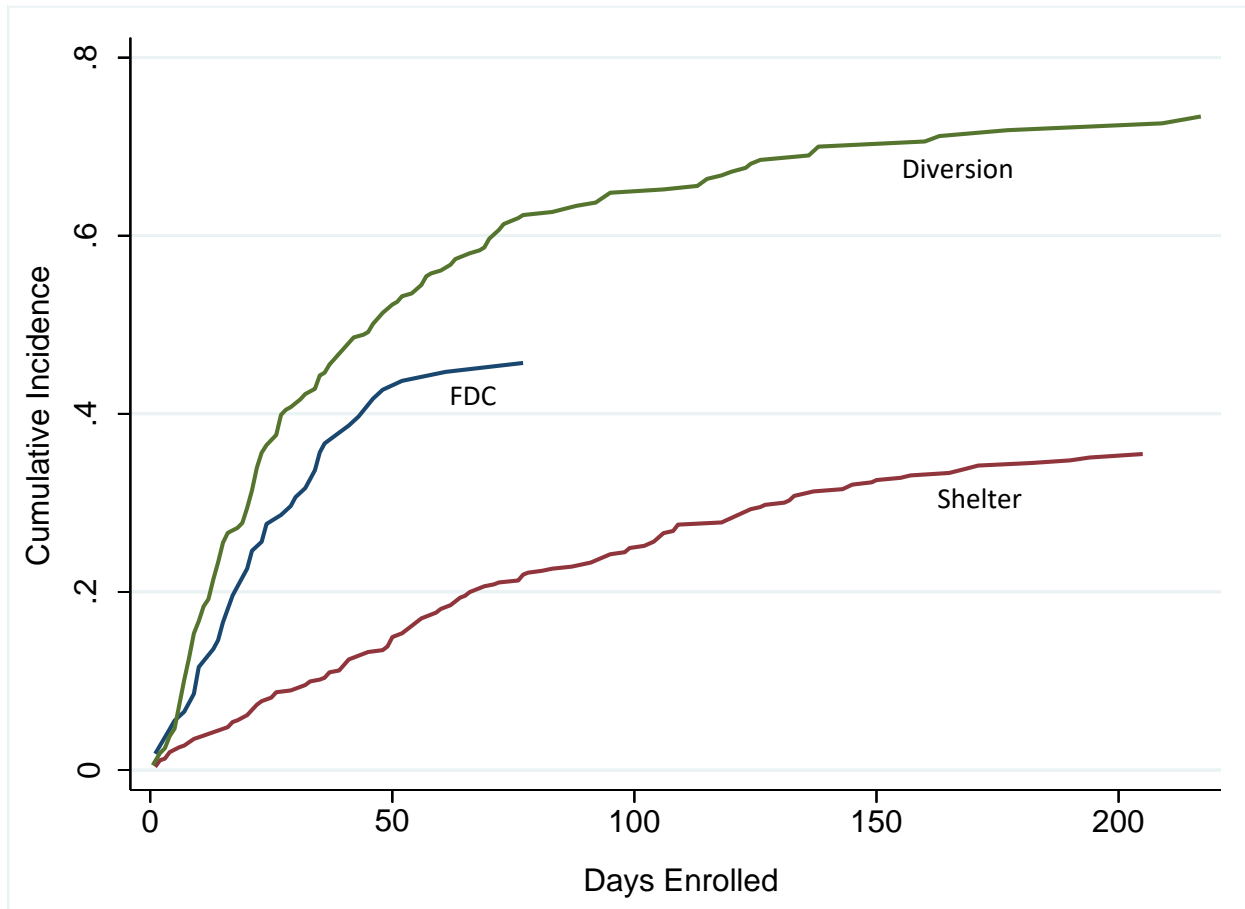
Cumulative incidence represents the probability of an exit to permanent housing before any given point in time during the course of enrollment. For example, where the blue FDC line crosses 0.4 cumulative incidence in the figure above shows that 40% of FDC enrollments ended with an exit to permanent housing within approximately 45 days of enrollment. Diversion episodes had the highest probability of exit to permanent housing from the first few days of enrollment over the full range of episode length. The probability of permanent housing exits in the early stages of enrollment was nearly as large for the FDC and flattened out beyond 50 days, as very few FDC enrollments lasted that long. In the Shelter group, the probability of permanent exit was lower than for both of the other groups throughout the range of enrollment durations. These outcomes are based on all families in conventional shelter and Diversion with no adjustment for pre-existing differences between families in those services.

Selection of Valid Comparison Groups

Up to this point, we have compared outcomes for families in the FDC to all other families receiving comparison services. Earlier, we considered the processes that determine which service a family receives, identifying the important roles of the FDC intake process and family choice. These processes

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[6] Kaplan-Meier–based estimates of cause-specific cumulative incidence = K-M survival X cause-specific hazard. Computed using the Stata 16 stcompet package. Cumulative incidence is a cumulative probability, summing the instantaneous probabilities of key event occurrence across all of the time points that precede any given time point.

make it likely that families in the FDC and comparison services are different on average before services have begun, and our examination of family characteristics revealed differences that are consistent with this expectation. For example, families in the FDC had higher income than families in conventional shelter and significantly lower income than families in Diversion. Families in the FDC were significantly more likely to report a disabling condition than families in conventional shelter and Diversion. We then saw substantial differences in outcomes between the groups, which may be due to pre-existing differences in family characteristics and/or the effects of the services received.

Ideally, our analysis of outcomes would eliminate all pre-existing differences between the people receiving each service. The preferred approach for accomplishing that would be to randomly assign families to one of the three services: FDC, Diversion, or Shelter. Random assignment would ensure there were no systematic differences between families in each group. Given that random assignment was not feasible for this study, we applied a research method called "propensity score matching" to minimize pre-existing differences between families in each group, setting the stage for a more valid comparison of outcomes.

The intake process at the FDC, which aims to select families who are most likely to obtain housing within 30 days, is an obvious source of pre-existing differences between FDC families and the other two services. Because this selection process did not occur prior to the introduction of the FDC, we opted to select Diversion and Shelter comparison cases from the year prior to the FDC opening. The downside of this approach is that outcomes between the FDC, Diversion, and Shelter groups may depend on historical differences, such as changes in the economy or the homelessness service system. A contemporaneous comparison group would better account for such historical factors but would suffer too much from the unknown factors involved in selecting families for the FDC at intake.

We used propensity score matching to select a sample of episodes from both comparison pools that are most similar to FDC cases. In propensity score matching, statistical models are estimated that analyze the relationship between the various family characteristics available in the administrative data and the service a family receives (FDC, Shelter, or Diversion). Families receiving Shelter or Diversion who have similar characteristics to families in the FDC will have similar propensity scores to FDC families. By focusing on only those comparison families with similar propensity scores to FDC families, we are able to identify comparison families who are very similar to families in the FDC on all characteristics summarized by the propensity score.

Propensity scores can be applied in different ways for the selection of the comparison group. In this study, we used 1:1 matching, pairing each FDC episode with a single episode from Shelter (and Diversion), creating two matched comparison groups. Propensity score matching resulted in substantial reductions in pre-existing differences between the FDC and comparison groups on income, prior homelessness, and having a disabling condition. These were factors we most expected to be related to the likelihood of exiting to permanent housing, and thus were most important to equate between the FDC and comparison services for a valid comparison of outcomes. We also considered employment status, debt, and eviction history to be important factors to balance, but we did not have access to data with that information. This is one of the primary limitations of the outcome analysis: any differences in outcomes we may find could potentially be explained by pre-existing differences between the groups on factors that were not accounted for in the analysis. Additional details on propensity score matching are shown in the appendix, including group differences before and after matching.

Results of Outcome Analyses

Upon conclusion of propensity score matching, we were set to compare FDC episodes to two separate comparison groups (Shelter and Diversion), and outcome analyses were conducted separately for each of these comparisons. We used Cox regression for survival analysis, which provides an estimate of the relationship between service type and the likelihood of exit to permanent housing across the range of enrollment time, controlling for any other factors included in the model. Having already created matched comparison samples, we also included the individual variables used to generate propensity scores directly in Cox regression models, as a sort of double protection against the possibility of pre-existing group differences explaining any differences in outcomes we might find. We included all variables from propensity score modeling and iteratively eliminated variables that did not approach statistical significance ($p < .10$). Estimates from the final model for FDC versus Shelter are shown below.

Cox Regression Results for the Family Diversion Center versus Shelter

The first row of the table below contains the estimate for the effect of the FDC on the likelihood of permanent exit over enrollment, as compared to Shelter. The positive estimate (2.63) indicates that likelihood of exit to permanent housing is significantly higher ($p < .05$) among FDC episodes than Shelter episodes across the range of enrollment time. Episodes with heads of household with a disabling condition were less likely to end in exit to permanent housing across both the FDC and Shelter groups.

Table 12. Cox regression results for the Family Diversion Center (n=87) versus Shelter (n=87).

	Coefficient (b)	Std. err.	z	p	95% confidence interval Lower	95% confidence interval Upper
FDC (1) versus Shelter (0)	2.63	0.41	6.48	0.00	1.84	3.43
American Indian or Alaska Native	1.93	1.09	1.77	0.08	-0.21	4.06
Disabling condition	-1.16	0.36	-3.19	0.00	-1.87	-0.44
Previous shelter starts	-0.49	0.25	-1.95	0.05	-0.99	0.00
Previous Diversion starts	-0.69	0.38	-1.83	0.07	-1.44	0.05
Disability X income	0.00	0.00	2.73	0.01	0.00	0.00

The Cox regression estimate of the intervention effect is borne out in the observed incidence of permanent housing exits for the FDC and Shelter groups, as shown in Figure 5 (next page). Families in the FDC exited to permanent housing more frequently at shorter lengths of stay. Comparison episodes at other Mary's Place shelters eventually reached a similar overall rate of permanent housing exit (just less than 60%), but over a much longer length of time.

Figure 5. Family Diversion Center versus Shelter:
Cumulative incidence of exits to permanent housing, matched samples.[7]
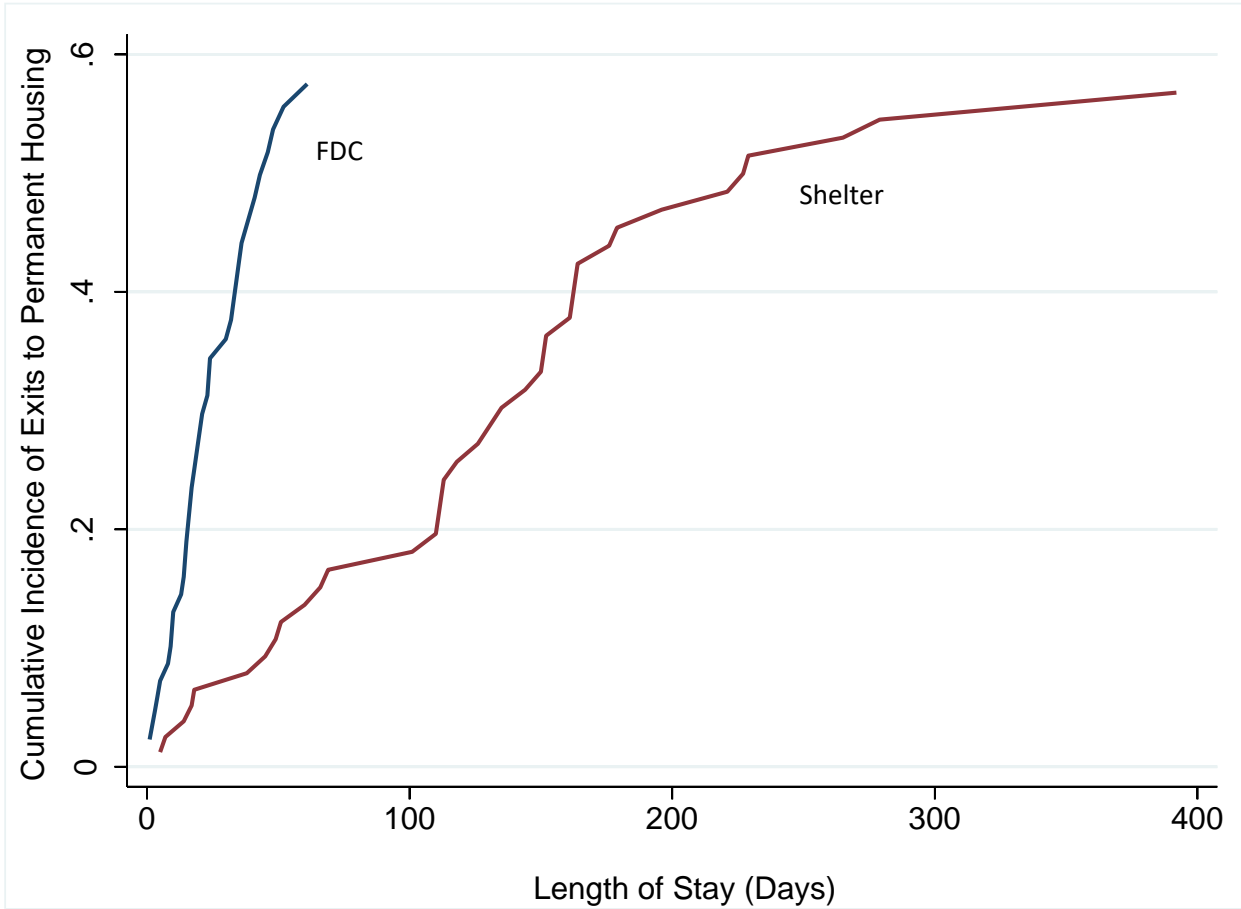
Cox Regression Results for the Family Diversion Center versus Diversion

Outcome analyses were repeated for the comparison of the FDC to the matched Diversion sample. We used the same approach as before of including all control variables from the propensity score model and eliminating those that did not approach statistical significance (p<.10). In this analysis, this resulted in the elimination of all covariates. Results from the final model are shown in Table 13. After matching, results indicate there was no statistically significant difference between the FDC and Diversion in the likelihood of exit to permanent housing over the range of enrollment time (p<.05).

Table 13. Cox regression results for the Family Diversion Center (n=89) versus Diversion (n=89).

	Coefficient (b)	Std. err.	z	p	95% confidence interval	
					Lower	Upper
FDC (1) versus Diversion (0)	0.36	0.22	1.66	0.09	-0.07	0.79

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[7] We display the observed cumulative incidence as opposed to the model estimated cumulative hazard for ease of interpretation and because the intervention estimate was not substantially different in the model omitting all covariates.

Figure 6 illustrates the observed cumulative incidence for the FDC and the matched sample of Diversion episodes. Diversion produced permanent housing exits at a similar rate to the FDC at all FDC enrollment durations. Both groups had a similar likelihood of exit to permanent housing throughout the range of time represented in FDC lengths of stay. Diversion retained a substantial number of cases for much longer enrollment durations and achieved a higher overall rate of permanent housing exits over that longer period of time.

Figure 6. Family Diversion Center versus Diversion:
Cumulative incidence of exits to permanent housing, matched samples.
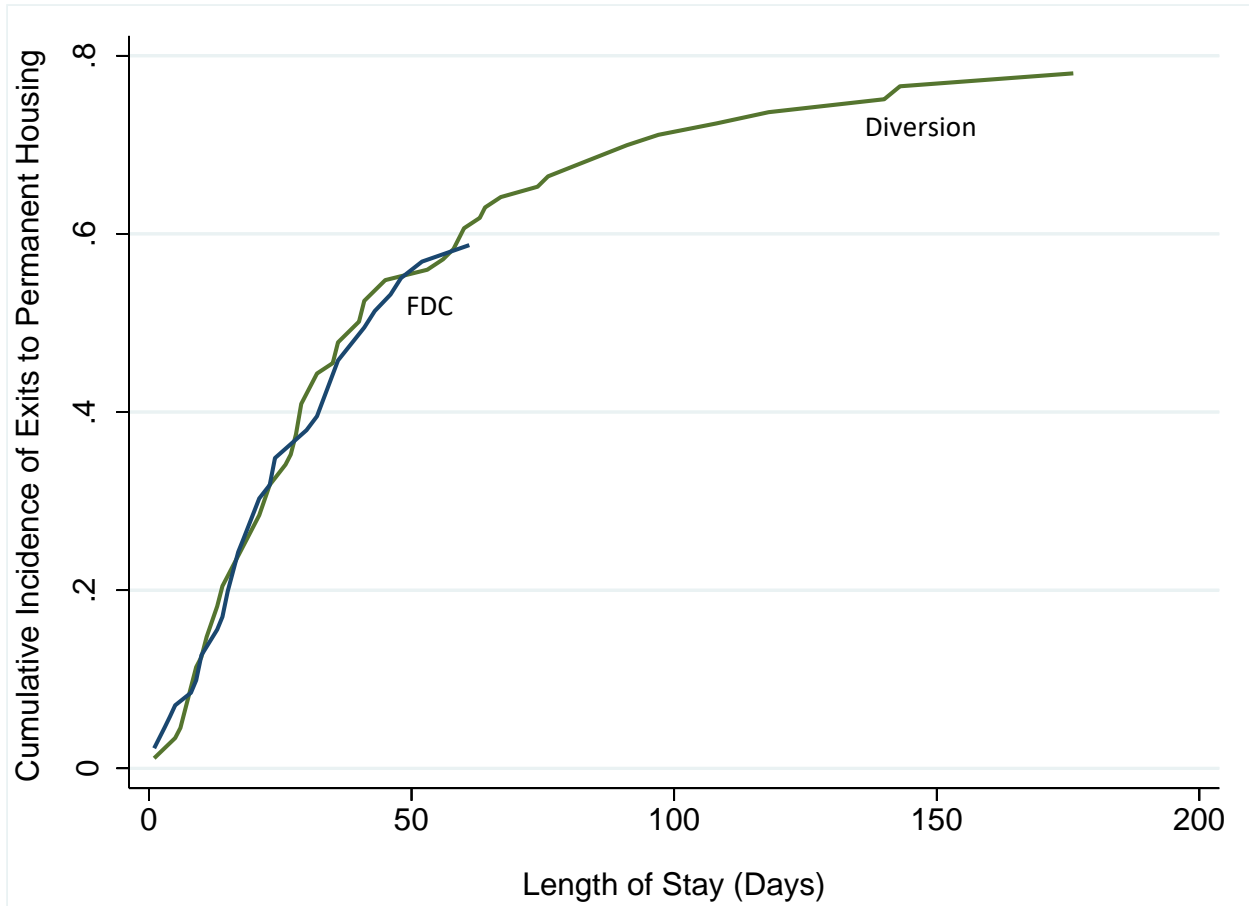
Cost of Services

Mary's Place provided estimates of the cost of service in each service setting, on a per person, per day basis. Estimates were based on fiscal year 2020 data. Cost estimates include all fixed and variable costs at each setting, including overhead, personnel, food, and supplies. Cost estimates also include flexible funding assistance amounts paid to families in the FDC and Diversion; they omit in-kind costs.[8] Costs were totaled for the fiscal year and divided by the number of person-days of service (Table 14).

Table 14. Daily cost per person.

FDC	Conventional shelter	Diversion
$68.97	$44.95	$16.97

Survival analysis results indicated that families in the FDC exited to permanent housing more quickly than families in conventional shelter and at approximately the same rate as families in Diversion. One way to estimate the differences in the cost of achieving permanent housing exits for each of the three settings is to compare median time to exit to permanent housing. This represents the length of enrollment at which 50% of households exited to permanent housing. These values were computed using the matched Shelter and Diversion samples. We then computed the average size of households exiting to permanent housing (also using matched samples), in order to associate the per-person cost estimates with per-household time to exit. We then multiplied these three components—median days to permanent housing exit, average household size per permanent housing exit, and average cost per person per day—for an estimate of the cost of a permanent housing exit in each setting (Table 15).

Table 15. Estimated cost per exit to permanent housing from the
Family Diversion Center, conventional shelter, and Diversion.

		FDC	Shelter	Diversion
A	Median time to exit to permanent housing (days per household)	34	152	36
B	Average household size per exit to permanent housing	3.62	3.26	3.22
C	Average daily cost per person	$68.87	$44.95	$16.97
	Cost per exit to permanent housing (A × B × C)	$8,477.13	$22,275.06	$1,967.74

Compared to conventional shelter, days of service at the FDC cost more, but the shorter time to permanent housing exits more than offset that higher daily cost, resulting in much lower cost per permanent housing exit at the FDC. Diversion is much less costly than the FDC on a daily basis and it achieves permanent housing exits at approximately the same rate, so the overall cost per permanent housing exit for Diversion is much lower.

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[8] The estimate for conventional shelter is an average for all Mary's Place shelters, excluding the FDC, Popsicle Place, Regrade, and Yesler.

Conclusions

This evaluation examined the effectiveness of the new Mary's Place Family Diversion Center in achieving exits to permanent housing as compared to conventional shelter and conventional Diversion. Results indicate that families in the FDC exit to permanent housing much more quickly than do families in conventional shelters and at roughly the same rate as families receiving Diversion.

The FDC was introduced to deliver Diversion to families while providing emergency shelter. Prior to the FDC, families had to choose between remaining unsheltered in order to receive Diversion or entering shelter. The FDC averts what could be a difficult decision for families, but it is a select group of families who are served within the 50-person capacity of the new center. In its intake process, the FDC aims to enroll families who most likely will be able to obtain permanent housing within 30 days. Comparing the select group of FDC families to families in either conventional shelter or Diversion alone was the primary challenge for the evaluation.

We used propensity score matching to select comparison families who were most similar to FDC families. We selected comparison families from the period of time before the FDC began operations to provide further protection against the possibility of pre-existing differences created by the FDC intake process. Using propensity score matching, we were able to identify a matched set of families in conventional shelter and Diversion who were very similar to the FDC families. With these matched comparison samples, we found that families exited to permanent housing significantly more quickly from the FDC than from conventional shelter. We found no significant differences between the FDC and Diversion, indicating that Diversion produced exits to permanent housing as quickly as the FDC.

Black/African American, American Indian/Alaska Native, and Native Hawaiian/Pacific Islander families were substantially over-represented in all services as compared to the King County general population. There were only slight differences in racial/ethnic composition of families in the FDC, conventional shelter, and Diversion. Race/ethnicity was accounted for in the development of the matched comparison groups and was also accounted for directly in outcome models and was generally not related to likelihood of exits to permanent housing.

The use of matched comparison groups reduces but does not eliminate the potential for bias due to pre-existing differences between families served at the FDC and comparison families. Our choice to select comparison cases from the period prior to the FDC opening increases the chance that historical differences between FDC and comparison groups might be a source of differences in outcomes between the groups. For example, if there was a large shift in the availability of permanent housing or employment around the time of the FDC's opening, it could explain differences in outcomes at the FDC. We are aware of no such historical changes around that time, and the pattern of findings for the Shelter and Diversion groups, both selected from the earlier time period, does not suggest a substantive historical shift.

Other important factors were clearly accounted for by the propensity score method—it is safe to say that differences in income, disability, and prior housing do not explain any of the observed differences in outcomes. But there are other factors that we were not able to account for because they were not available in the administrative data, including employment status, debt, and eviction history, which may affect differences in outcomes between the FDC and comparison groups. This is the primary limitation of the outcome findings.

The FDC has a very clear timeline that limits the duration of enrollment, whereas comparison services do not. Naturally, people will exit more quickly in general as a result of this timeline, but the question of how quickly exits to permanent housing in particular occur remains equally relevant to all three services. Given that the FDC is a combination of the two comparison services, one might expect the FDC to outperform both comparisons; however, it outperforms conventional shelter but it does not outperform Diversion in terms of exits to permanent housing.

We also considered differences in the cost of services at the FDC, conventional shelter, and Diversion. As a combination of the two comparison services, the FDC is naturally the most costly service model, and Diversion is the least expensive by a large margin because it does not provide shelter. It is worth noting that average cost per person would tend to decrease as utilization rates increase, as fixed expenses would be divided across a larger number of recipients. Utilization of the FDC was relatively low in some months, which would have the effect of inflating the FDC per-person cost estimate. FDC unit costs would be expected to decrease as utilization approaches full capacity. That caveat aside, daily cost information was combined with differences in how quickly families exited to permanent housing. Families exited to permanent housing more quickly from the FDC than conventional shelter, which more than offset the additional daily cost. Families in Diversion exited to permanent housing as quickly as families in the FDC, at a much lower cost per day, so Diversion produced permanent housing exits at the lowest cost by a large margin.

This raises the question: what benefit does the provision of shelter in addition to Diversion provide? Based on these results, there is no reason to think FDC families would not be as well served by Diversion, in terms of achieving a permanent housing exit. However, providing shelter along with Diversion may produce benefits that are not accounted for by our focus on exit to permanent housing. For example, the shelter stay may reduce distress and increase safety for children and families as compared to remaining unsheltered to receive Diversion. There may be some people experiencing homelessness for whom Diversion is sufficient, while others may benefit from the services offered by the FDC in ways that might not be addressed by Diversion. Prior to the FDC, this determination may have been made by families on their own: families who were unwilling to remain unsheltered would have foregone Diversion and entered conventional shelter, where they would have been less likely to exit to permanent housing. It appears that the FDC may be a favorable alternative for that type of family.

Our evaluation also considered effects of FDC introduction on the capacity of Mary's Place shelters as a whole. Utilization data indicate that the FDC is not yet at full capacity; capacity remained at less than 60% for the majority of the most recent three months of operation. Many other Mary's Place shelters also tend to operate well below full capacity. If the system were operating at full capacity, it would be more straightforward to conclude that the addition of new shelter beds at the FDC increased the number of families served, but this cannot be unequivocally concluded from the partial capacity context within which the FDC was introduced.

Findings from Learning Circles indicate a strong focus on identifying families who are most likely to obtain housing within 30 days, the goal being to utilize the FDC where it can produce the greatest benefit. This emphasis may contribute to underutilization of the FDC. The process of selecting families appears to be rapidly developing. Learning Circle discussions indicate lack of consensus on the specific factors that characterize the target population for the FDC and uncertainty about how to accurately assess those factors at intake. Improving the clarity of intake criteria and how they are measured would

support monitoring of the intake decision-making process moving forward. Effects of more or less restrictive intake criteria on shelter utilization and outcomes could then be examined.

We also considered the possibility that the shorter timeline of services at the FDC would allow more families to be served over a period of time. Based on the results of outcome analyses, had the FDC been a conventional shelter instead, it is reasonable to infer that fewer families would have been served over a given period of time. The effect on capacity of the FDC versus Diversion is less clear. Although Diversion does not have the explicit timeline that the FDC does, it achieves permanent housing exits at approximately the same rate as the FDC when family characteristics are equal. Thus, it is possible that Diversion would reach as many families as the FDC over a given period. Once cost is accounted for, Diversion could be provided to many more families. However, this study did not account for all possible benefits, aside from exits to permanent housing, that may accrue to families from the FDC model as opposed to receiving Diversion but remaining unsheltered.

Appendix

Learning Circles

Notes and comments from Learning Circle discussions were recorded in writing by a Mary's Place staff person. These notes were later categorized into themes by the evaluation team. The actual notes are shown below, arranged by thematic category.

Managing expectations of families
- Biggest thing that we are running into is expectations of what housing is and what we do at Mary's Place with Diversion. Info comes through grapevine and people come in with expectations. Each case is so different and families have unique understandings of what we can and can't do.
- A lot of guests want more so call back once they move in with additional asks (washer/dryer as example). Other guests think that we are going to go out and find a house for them. People wanting more and more.
- This seems to be a more global issue across all of Mary's Place. Is a really high level of expectation. Bit of misconception that will get a house, will get bills paid, will get huge amount of money to move in, will get all needed items to move in. Learning we have to remain very consistent in accurately orienting guests. Has to be a broken record. Even when repeated, will still have families who never get it and still believe that if they stay long enough, we will come up with a housing solution for them. Once we get past this, we will get to the core group that we really can help. If families come in highly motivated, more success.
- Miscommunication county wide of what services are offered. Have to remind other providers is that not only is there housing scarcity but there is also resource scarcity. The public perception is different which is a myth that we have to dispel. Part of this work is being really honest with families about the shelter environment and what we can offer so that families can make the best choices for themselves. This is the reality and have to be as honest as possible and revisit the conversation repeatedly.

Selecting families for enrollment
- When family calls or walks in, there is a screening form that is completed. Ask do they think that they will be able to move in 30 days or 90 days? Ask this if they have a voucher or say they can pay monthly rent. Then explain how model works and how other model works. Add families to daily placement list. Depends on the conversation with the family. Right now, no waiting list for this site, but daily waiting lists for other sites. Will also communicate with the diversion specialist about whether or not this is best program.
- Challenge is to better define candidate families that should be here. For every bed that is filled by family member that will not be successful in 30 days, they are taking up beds from a family that might be able to be successful in 30 days.
- Which groups are most capable of entering FDC? What makes them different than other shelter guests? Do they already have service connections, etc.? Diversion is an approach that we want in every one of our shelter sites so we need to figure out how we make that happen effectively.
- For screening in, families self-disclose if they have a housing solution within 30 days.
- Will be some families who identify that they can do this within 30 days but will learn that the 30 days wasn't realistic.
- If looking for a place to say, may say yes to everything to ensure my family can get into shelter. Some families may also not know what all their barriers are.

- Many families state they can find housing in 30 days upon entry into the shelter, but don't actually have a realistic solution in 30 days.
- Have a few families that come through that don't quite qualify. Have noticed that we have had a lot of families coming in with major barriers. Some families dishonest about barriers, income, won't follow shelter rules. Got in because they weren't able to have diversion conversation prior to program entry. Particular family ended up being a mess, was traumatic for the kids and didn't work out. Want good processes to make sure that doesn't happen and avoid as much as possible.
- Some families come in with barriers that won't be addressed within 30 days; aren't a good fit for this program.
- One of the challenges that most people walk in with is debt. Some families will say they have a solution in 30 days, but then when they come in disclose that they have large amounts of housing debt. Families are in such a crisis that they over-estimate their ability to have a successful housing solution within 30 days.
- Have had a lot of large families or families with debt that have been successful. Had a family of 8 that was only here for 2 weeks. Had a Section 8 voucher and were in and out.
- Large amount of families with excessive housing debt, major barriers or are not interested in participating in the program.
- High debt is a barrier and many families present with high debt; Mary's Place staff now ask families about how much debt they have at intake.
- Common challenges for those who are unable to find housing: debt, family violence, illness among children, CPS involvement because it erodes trust in staff.
- One family that didn't have job was optimistic, so had a realistic conversation with the family to check again and see if 30 days is realistic.
- How families may appear on intake paper may misrepresent likelihood of success.
- On paper some families look like they are a good fit for program, but then don't succeed, and vice versa.
  - Example: Family where mom and daughter came in with no job, got union jobs, and exited program in 22 days.
  - Example: "I'm supposed to start that job next week" to "I can't start that job anymore"; once job goes away no longer eligible for some services.
- Families who have a clear plan and have been working on it are easiest to house.
- How to gauge this on intake?
- Beyond the intake questions, how do we identify if a family has a clear plan and motivation?
- Intake role is not to vet housing. She does ask questions to try to find best fit, but she can only take what families are telling her. Families may not know their barriers until they come in. Need a stop gap prior to them coming in to see the appropriateness of the fit. For instance, maybe Amanda should have a conversation with families first prior to coming into shelter.
- New process that will be trying is Sherry calling Amanda or Ryan to have a more thorough conversation with the family.
- Outreach team can also provide coaching around calling in. Lots of collaboration between outreach team and intake specialist.
- Might be good to take some guest situations where we have been successful and others where we had to move to shelter to tear apart and better understand success and what went wrong so that we can learn from those situations. Always have to prompt selves that we can always do better.
- Reluctance comes from slowing down intake process. To have them do a second tier intake process pushes against the effort of rapidly getting people into shelter. Competing priorities.

- 50 open beds here and right now about 30 guests in 6-7 families. Every family has own unique set of barriers. Have had complicated set of barriers and others not so complicated. Amount of time and energy varies.
- Regardless of barriers, is really up to the family. Don't want to deny the opportunity.
- Also, learning that we have people who get stuck.
- Noting low enrollment numbers (outside of the holiday period which is typically low), not sure why.
- Potential opportunity to "loosen the screw" on who is let into FDC.

Working relationship between staff and families
- Collaboration between shelter staff and diversion staff is effective. Joint effort of giving prompts and support. Normal shelters so overwhelmed with daily shelter life, so you don't see this piece. To be able to have ongoing communication between staff about where each family is on their plan is working and not sure this is happening at other shelters. Stepped up energy level of putting mindfulness of guest to work hard and remain focused on housing. Collaboration working really well.
- Staff do check-ins and this may look different from other shelter sites. Here our check-ins are how was your day and what did you do today to work on your housing plan.
- Meet every week, set calendar for every week here upon move in. But talk to every guest every day.
- If progress meetings are higher than 0, the likelihood they will move to a permanent housing situation is 4.5 times.
- Success is that we have a lot of direct contact with families so there is always a lot of dialogue to see how they are doing and what their challenges are. Tend to be able to get information that they may not be talking about. Having a relationship with them opens up other things, and info can be passed over to Amanda.
- A lot of success is participation. Connect with specialist, talk to staff, make goal sheets. When family participates, can still be successful with high barriers. Some families have fewer barriers but won't meet with Amanda and are less successful.
- When families aren't meeting, can rely on staff to help encourage connection. Staff was trained in Diversion prior to program starting which means that they can be really supportive with housing. Imperative that shelter staff works closely with housing staff. Families are aware that staff work together.
- Staff attribute the focus of housing at the shelter as a strong point of the program.
- The goal is housing—this focus helps.
- 30-day timeline is helpful for urgency—this is unique from other shelters.
- Community is important for them. Share successes and whole group comes together as a family. Rarely do we have those who don't want to support others. We say that we are all in this together.
- Learning that celebration is a big part of the diversion cycle here. Weekly mandatory community meetings where we celebrate achievements. Families who are struggling get to witness. We celebrate even little achievements. Building family celebrations and develop a certain level of intimacy within community which also contributes to families wanting to also achieve goals, which builds enthusiasm amongst other guests.
- Strengths-based and always seeing strengths.
- Community meetings are really effective and make a difference in helping families move through more quickly and efficiently.
  - Creates community.
  - Open conversation where guests support each other.
  - Sitting down as a group to do applications together.

- Adds to showing shelter staff that they are valued and appreciated → Positive feedback loop on family experience.
- Strong example of the impact of sense of belonging and community!!!

Adapting the plan as the timeline unfolds
- Family thought 30 days would be enough, but surprise barriers popped up. On day 29 if no housing solutions, will call intake line to give heads up. Will call on day 30 with shelter need. Would allow to stay until spots opened up if shelter not available on day 30.
- 10 day exit plan with everyone who reaches day 20. Here is your solution now, what happens if that falls through. Make sure we have steps in place for what happens when day 30 rolls around. If you don't want to go back into shelter, what are your next steps?
- Really a 20 day model with a 10 day exit plan. That is really not a lot of time, especially when dealing with barriers that our families face. It is an extreme mind warp for people to face reality.
- On day 25 if there is a housing solution that passes day 30, then we fill out an extension form. Developed a goal sheet. What accomplished last week and what were the barriers for the week. Then set goals of what going to do this week. All staff can pull the most recent goal sheet to see what the family talked about during that meeting. Supporting the guest not only from diversion side, but staff as well.
- Challenge when families are not successful in 30 days, and how to transition them to another program. Not clear what to do, not sure when to grant extension. Biggest problem we are having right now is no space. Families will be calling in but there are no beds available. Families think they are being kicked out even though we are clear with them that they are not being kicked out. Some other sites have not been considering these families eligible because they are technically sheltered. Mobility requests are not utilized as they should be. This will probably be a topic of conversation at the FESA meeting this month.
- Goal that no one leaves shelter but to a home.
- Housing solution may not be perfect, but can help them meet their goals down the road.
- Goal to lower number of families sent to emergency shelter.
  - Understanding how foundation from FDC, then moving to emergency shelter, has a positive impact on later outcomes.
- Success stories:
  - One family with many barriers found housing after their second round at the shelter; the first time through the family "timed out"; staff attribute success to the family being "housing ready" after second attempt; change of pace and structure.
  - One family experienced chronic homelessness and was successfully housed through Diversion. Staff attribute success to diversion specialist, daily conversations with supportive staff at the shelter, general resilience/grit.

Behavioral health
- Chronic mental health issues, particularly with some of the children. Suicidal ideation. Things we aren't equipped for. These situations are tough on everyone because always have to keep a special eye on that individual. Have to balance care of that individual and the community around them. Medication was changed, but shelter staff did not get that information so had no context for the change in behavior and could easily misinterpret. Would like to see more training on working with youth who have mental health issues.

- Same challenges seen with adults who have mental health issues. Staff should receive mental health first aid training prior to join the team so know how to adequate support individuals in their path to housing.
- Mental illness is being examined more closely at intake—not to screen out but just for early recognition.
- Mary's Place has a clinic—looking at supporting families through this resource.
- Data review identified five families that exited to literal homelessness; reasons discussed included behavioral health (i.e., possible PTSD); asked to leave by staff; FDC model wasn't working for them.

Equity
- Racial demographics are very similar at the family diversion shelter as other Mary's Place programs; indicates families are not screened in or out by race.
- No guests from non US origin African Descent.
  - May have different needs, not fit model.
  - Could be a documentation and language barrier for African Descendent families (not US origin).
- US Origin African Descent higher for FDC than other shelters.
  - Past negative interactions with traditional systems of care, but FDC is shelter so that seems counterintuitive.
- Glad to see that we are serving Native families.
  - Partially through design with CSC partnership and dedicated beds but are currently serving more than just those beds.
  - Have specialist on Outreach team that is dedicated to outreach specifically with Native and Pacific Islander.

Use of flex funds
- Other agencies blowing through funds and we have firm boundaries with our funds.
- Not a hard cap, but want to be mindful of equity. Start with cap at 2500 and then go on case by case basis there. Want to make sure there is additional assessment before we go over the cap.
- For flex funds, how do these funds help you get closer to housing or to a safe housing solution? Could be program connected and each program covers a portion of the cost, could be covering move-in costs. What is needed is really up to the family. Soft cap of $2500 to help us be equitable. If we are exceeding this amount, there is a more thorough explanation of why. Are a number of families who have needed to exceed the cap, especially for larger families. Not the feeling that have been exceeding that more than usual up to know, but anticipate to be doing so in the coming weeks because lots of large families in shelter right now.

Exit Interviews

Mary's Place staff began conducting exit interviews with guests leaving shelter and outreach services in November 2019. Between November 4, 2019, and June 2, 2020, exit interviews were completed with 58 households:

- 28 from the FDC.
- 28 from other Mary's Place shelters.
- 2 from outreach/Diversion.

The following data summary focuses on exit interviews at the FDC. Responses from other shelters and outreach/Diversion are provided as a contrast. Note that respondents were not randomly sampled and may not be representative of client experiences as a whole.

What Mary's Place services did you/your family access?
The vast majority of FDC respondents accessed food services and housing support. Many also accessed financial and transportation services.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Food services	84%	86%	83%
Housing support	79%	79%	80%
Financial support	57%	61%	53%
Bus tickets	55%	46%	63%
Youth services (Kids Club)	33%	39%	27%
Employment support	17%	18%	17%
Assistance with school enrollment/transportation	16%	21%	10%
Health services	9%	4%	13%

Did you have health insurance when you exited Mary's Place services?
More than three-quarters of FDC respondents had health insurance upon exit.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Yes	72%	79%	67%
No	19%	14%	23%
Blank	9%	7%	10%

If yes, what type of health insurance?
Listed insurance providers included Amerigroup, Apple Health/Molina, Community Health, Kaiser, Medicare, and United Healthcare.

Did Mary's Place assist you with obtaining health insurance?
In most cases, FDC respondents did not receive assistance from Mary's Place staff in obtaining health insurance.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Yes	16%	7%	23%
No	71%	79%	63%
Blank	14%	14%	13%

If yes, what about that assistance was most helpful?
No valid responses.

Did you have a primary care provider when you exited Mary's Place services?
Nearly two-thirds of FDC respondents had a primary care provider upon exit, in contrast to just more than one-third of respondents from other shelters/outreach.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Yes	48%	61%	37%
No	33%	29%	37%
Blank	19%	11%	27%

Did Mary's Place assist you with establishing a primary care provider?
In most cases, the FDC did not assist respondents with establishing a primary care provider.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Yes	16%	11%	20%
No	57%	64%	50%
Blank	28%	25%	30%

If yes, what about that assistance was most helpful?
No valid responses.

Were all school-aged children in your family enrolled in school when you exited Mary's Place services?
Nearly two-thirds of FDC respondents' school-aged children were enrolled in school upon exit, in contrast with one-third of respondents from other shelters.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Yes	48%	64%	33%
No	34%	25%	43%
Blank	17%	11%	23%

Did Mary's Place assist you with enrolling your school-aged child/children in school?
More than half of FDC respondents said FDC staff did not assist them with enrolling their children in school.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Yes	22%	25%	20%
No	55%	54%	57%
Blank	22%	21%	23%

If yes, what about that assistance was most helpful?
Two FDC respondents commented that it was helpful that Mary's Place staff assisted with arranging transportation to school.

Which sources of income did you have when you exited Mary's Place services? (Select all that apply.)
More than half of FDC respondents received food stamps and the percentage receiving other types of public assistance varied. Approximately one in five worked full- or part-time.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Food stamps	53%	54%	53%
TANF	26%	18%	33%
SSI	14%	18%	10%
Part-time employment	12%	7%	17%
Full-time employment	10%	11%	10%
Child support	7%	7%	7%
WIC	7%	4%	10%
SSDI	5%	7%	3%
Veteran benefits	5%	4%	7%
No income	5%	4%	7%
Unemployment	3%	7%	0%
Per diem	2%	0%	3%
Unknown	2%	4%	0%

Did Mary's Place assist you with increasing your income?
In most cases, FDC respondents did not receive assistance with increasing their income.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Yes	14%	7%	20%
No	59%	64%	53%
Blank	28%	29%	27%

If yes, what about that assistance was most helpful?
There were two responses with specifics, which identified assistance with signing up for food stamps and veteran benefits.

Where are you going when you leave Mary's Place services (please include type of residence as well as the city)?

The bulk of responses indicated city only and tended to reflect destinations in western Washington.

Are you happy/satisfied with your family's exit destination?

The vast majority of FDC respondents indicated they were happy with their housing solution.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Yes	78%	86%	70%
No	9%	7%	10%
Blank	14%	7%	20%

Why or why not?

One non-FDC respondent answered "no," and eight other non-FDC respondents indicated they were happy with the location of their new home. Sixteen FDC respondents indicated they were happy with the spaciousness and location of their new home.

Why are you leaving/did you leave Mary's Place services?

Most respondents who commented indicated they were leaving because they found housing.

	All Mary's Place respondents (N=40 comments	FDC respondents (N=22 comments)	Non-FDC respondents (N=18 comments)
Found housing	28	15	13
End of 30-day program	2	1	1
Transfer to another shelter	2	1	1
Transportation issues	2	2	0
Program not a good fit	2	2	0

If you are exiting to housing/exited to housing, did Mary's Place assist with this?

Nearly two-thirds of FDC respondents indicated that Mary's Place helped them obtain their housing solution.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Yes	53%	61%	47%
No	29%	21%	37%
Blank	17%	18%	17%

If yes, what about that assistance was most helpful?

FDC clients commented that:

- They were very happy to exit to their own home (7 responses).
- Having room/space for children to play in the shelter was helpful (4 responses).
- Finding a place near school/family was appreciated (3 responses).
- They appreciated the speed and ease of Diversion services (1 response).

There were fewer responses from other shelters, with similar sentiments.

On a scale of 1-5 (5 being the highest), how satisfied are you with Mary's Place services?
FDC respondents were more likely to be very satisfied with Mary's Place services than respondents in other shelters/outreach.

	All Mary's Place respondents (N=58)	FDC respondents (N=28)	Non-FDC respondents (N=30)
Mean	4.1	4.3	3.9
Median	5	5	4
Mode	5	5	5
1	12%	11%	13%
2	3%	4%	3%
3	5%	0%	10%
4	16%	11%	20%
5	57%	71%	43%
Blank	7%	4%	10%

Do you have any suggestions about how we can improve our guest experience?
Many FDC respondents indicated they had a positive experience. Some expressed a desire for more access to space and services during the day. Non-FDC respondents expressed a desire for better communication/relations with case managers.

	All Mary's Place respondents (N=42 comments)	FDC respondents (N=15 comments)	Non-FDC respondents (N=27 comments)
None; a positive experience	14	5	9
More access during day	4	4	0
Better communication/relations between guests and case managers	16	3	13
Clearer access to financial resources	2	2	0
Improve food	3	1	2
Improve safety/heat	3	1	2
Location	1	1	0
Overall negative	1	0	1

Administrative Data Preparation

Enrollment data, client characteristics, and outcomes were obtained from the Mary's Place agency database and the Homelessness Management Information System (HMIS). These administrative data were obtained for all enrollments occurring from January 2018 through March 2020 at the FDC, which began operations in June 2019; conventional shelter; and Diversion. Data for these enrollments were current through the date the data were extracted, April 22, 2020.

For both data sources, raw, de-identified data were available at the individual level, with information for each member of each household enrolled in a given service episode. Unless otherwise noted, analyses were conducted at the episode level. For analyses at the episode level, the record for the head of household was chosen from among the available records for multiple household members. For episodes with no recorded head of household, or more than one, we applied specific criteria to select a record:

- If only one individual 18 or older, assigned that person as head.
- If no member over 18, no head assigned.
- If multiple individuals 18 or older, selected record with least missing data on analysis variables.

Individuals or households that received more than one type of service were classified into the FDC group if they were ever served at the FDC, and other records for the individual or household from other service settings were omitted.

Propensity Score Methods

Propensity scores were estimated using the psmatch2 package in Stata 16.

Developing propensity scores is an iterative process of specifying the model that develops the propensity scores and then checking the balance achieved on each variable included in the propensity score model (i.e., family characteristics from administrative data). Because the propensity score summarizes information from many different variables, matching on the propensity score will not usually improve balance on every variable summarized by the propensity score. The goal of propensity score model development is to achieve the greatest overall improvement in balance between the groups, but we were most interested in achieving balance between the intervention types on variables we expected to have the strongest relationship with likelihood of obtaining permanent housing. The variables we most expected to be related to the likelihood of exiting to permanent housing were income upon entry, prior homelessness, and having a disabling condition. We also considered employment status, debt, and eviction history to be important factors to balance, but we did not have access to data with that information.

We began by including all variables that were consistently measured for both groups and that did not have a large amount of missing data. We specified a number of different models, observing the balance achieved for all variables each time but paying particular attention to the balance achieved on variables expected to be related to the outcome. Propensity score model development included evaluation of models with two-way interactions and exponentiated expressions of variables.

For matching, we applied a common support criterion that would drop comparison cases with propensity scores outside the range of propensity scores in the FDC group. For the selection of the matched Shelter comparison group, we were able to identify a matched comparison case for every FDC case. For the Diversion comparison group, one FDC case was dropped due to lack of a comparison case within the region of common support.

In the tables below, we summarize characteristics of episodes for the FDC and comparison groups before and after propensity score matching, first for the comparison of the FDC to Shelter, then for the comparison to Diversion. In each table, the average level of each covariate included in the propensity score model is presented for the FDC and the comparison group, before 1:1 matching on the propensity score and then after. The ASMD columns represent the absolute value of the standardized mean difference between the groups, expressed as a percentage, before and after matching. Values of ASMD greater than 20% reflect substantial imbalance, and the standard of 10% to 20% is typically applied in evaluating balance after matching. For the Shelter comparison group, we were able to obtain sufficient balance on all covariates, with no value of ASMD higher than 14% (Black/African American). Most importantly, large differences before matching on income and disability were substantially reduced after matching. Indicators of prior homelessness were also more balanced after matching (i.e., prior Diversion and shelter starts) or were sufficiently balanced before and after matching (i.e., times homeless).

Covariate means for the Family Diversion Center and Shelter groups
before and after propensity score matching.

Variable	FDC	Before matching		After matching	
		Shelter	ASMD (%)	Shelter	ASMD (%)
Sample size	87	454	—	87	—
Age	34.70	33.88	9.5	34.41	2.9
Age squared*	1,269.4	1,231.1	5.9	1,249.7	2.6
Female	0.86	0.92	-16.8	0.86	3.7
Black/African American	0.43	0.38	11.2	0.49	-14.0
American Indian or Alaska Native	0.01	0.03	-11.1	0.01	0.0
Native Hawaiian or Other Pacific Islander	0.02	0.03	-2.4	0.01	7.4
Hispanic/Latinx	0.11	0.11	1.8	0.09	7.3
White	0.26	0.24	4.4	0.28	-2.6
Disabling condition	0.40	0.19	45.1	0.40	0.0
Domestic violence	0.35	0.41	-11.8	0.41	-11.8
Prior legal system involvement	0.19	0.22	-6.7	0.19	0.0
Children under 5 (#)	0.76	0.76	0.4	0.71	5.5
Children under 18 (#)	1.91	1.69	14.9	1.70	13.8
Income on entry ($)	862.22	662.92	19.6	825.70	1.6
Income squared*	1.9e6	1.4e6	13.4	1.7e6	3.8
Income X disability*	346.40	151.50	30.2	350.30	-4.7
Times homeless	1.86	1.95	-7.5	1.95	-8.3
Shelter starts since January 2018 (#)	1.42	1.37	7.4	1.38	4.8
Diversion starts since January 2018 (#)	0.17	0.11	14.4	0.19	-5.5

*Propensity score model testing resulted in the inclusion of squared age and income and the interaction of disability and income.

As shown below, balance achieved for the Diversion comparison group was not quite as good, but we were still able to obtain ASMD values less than 20%, with the highest ASMD value at 18% (Black/African American) after matching. Most importantly, matching resulted in substantial improvement on all key covariates: income, disability, and times homeless.

Covariate means for the Family Diversion Center and Diversion before and after propensity score matching.

Variable	FDC	Before matching		After matching	
		Diversion	ASMD (%)	Diversion	ASMD (%)
Sample size	89	395	—	89	—
Age	34.89	34.88	0.1	36.13	-14.7
Female	0.85	0.86	-2.7	0.81	12.9
Black/African American	0.44	0.48	-8.1	0.53	-18.0
American Indian or Alaska Native	0.01	0.02	-3.5	0.02	-9.8
Native Hawaiian or Other Pacific Islander	0.02	0.05	-15.0	0	12.0
Hispanic/Latinx	0.11	0.13	-4.4	0.09	6.9
Disabling condition	0.40	0.14	62.9	0.39	2.6
Domestic violence	0.35	0.43	-17.3	0.37	-4.6
Veteran	0.02	0.01	9.7	0.02	0.0
Dependents (#)	2.38	2.31	4.8	2.34	2.9
Children under 5 (#)	0.76	0.65	13.8	0.75	1.4
Children under 18 (#)	1.89	1.96	-4.0	1.83	4.6
Unstable housing before enrollment	0.93	0.96	-14.5	0.96	-10.2
Times homeless					
One	0.49	0.62	-24.4	0.46	6.8
Two	0.26	0.20	13.3	0.30	-10.7
Three	0.11	0.04	28.4	0.10	6.8
Income on entry ($)	852.53	1,828.40	-29.4	913.06	-1.8

*FDC and Diversion samples were extremely dissimilar on the number of prior shelter and Diversion starts. Most Diversion households had no prior shelter enrollments, and most FDC households had no prior Diversion enrollments. As a result, it was not possible to achieve balance between groups on these variables, so they were omitted from the propensity score model. Other differences in variables between the propensity score models for Shelter and Diversion are due to the availability of variables from respective data sources or variables being dropped from their respective models due to non-significant contributions to propensity scores.

Survival Analysis

We use the term "rate of occurrence" for what is typically referred to as the hazard rate in survival analysis terminology.

In this study, exits to permanent housing were the event of interest, but there is also the possibility of other types of exit—unstable housing and unknown exits. These alternative exit types are referred to as competing risks in survival analysis terminology, and there are a variety of approaches for dealing with competing risks. In this study, we typically treated competing risks as censored, but we also estimated cause-specific cumulative incidences, which address competing risks more explicitly. Cause-specific incidences are adjusted for the possibility that the likelihood of an exit to permanent housing over time may be affected by the likelihood of other types of exit, independent of effects of predictors such as intervention type. Cause-specific cumulative incidence rates were computed using the stcompet package in Stata 16. Our Cox regression outcome models treated competing risks as censored. We elected not to use a cause-specific approach to outcome model estimation (i.e., sub-distribution hazard) because those models have been shown to be more biased for the estimation of intervention effects.[9]

Cox regression provides an estimate of the effect of intervention type on the hazard of exits to permanent housing. Hazard is defined as the instantaneous rate of occurrence of the key event (i.e., exit to permanent housing). As opposed to cumulative incidence, which accumulates event occurrence rates over time, hazard is instantaneous. One of the primary assumptions of the Cox regression model is that the relationship of a predictor to the hazard rate is consistent over time, referred to as the proportional hazards assumption. We tested the proportional hazards assumption for the intervention variable by the inclusion of its interaction with time, examining both linear and logarithmic functional forms of time. If there is concern that this assumption is violated, the interaction with time can be retained in the model, effectively relaxing the assumption by allowing the effect of the predictor to vary over time. For both outcome models (FDC versus Shelter and FDC versus Diversion), the proportional hazard assumption was supported.

Cox regression estimates reported are unstandardized estimates of the relationship between predictors and log hazard.

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[9] Allison, P. (2018). For causal analysis of competing risks, don't use Fine & Gray's subdistribution model. Statistical Horizons. Retrieved from https://statisticalhorizons.com/for-causal-analysis-of-competing-risks.