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Denver Supportive Housing Social Impact Bond Initiative: Housing Stability Outcomes

Report to the Governance Committee

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In 2016, the City of Denver and eight private investors closed on the city's first social impact bond (SIB), an $8.6 million investment to fund a supportive housing program for individuals who are homeless and frequent users of the criminal justice system. Based on the SIB contract, the investors provided funding to support the program. If the program meets the goals of housing stability and decreased jail stays, the City makes outcome payments to the investors. If the program does not meet its outcome goals, the City does not repay the investors. Since the project's launch, the service providers, the Colorado Coalition for the Homeless and the Mental Health Center of Denver, have enrolled 285 participants in the program. In October 2017, the City made its first payment of $188,349.82 to investors for outcomes achieved from January 1, 2016, to June 30, 2017. This brief details the second assessment of housing stability payment outcomes for January 1, 2016, through June 30, 2018. The payment from the City to investors for this reporting period is $837,617.81.
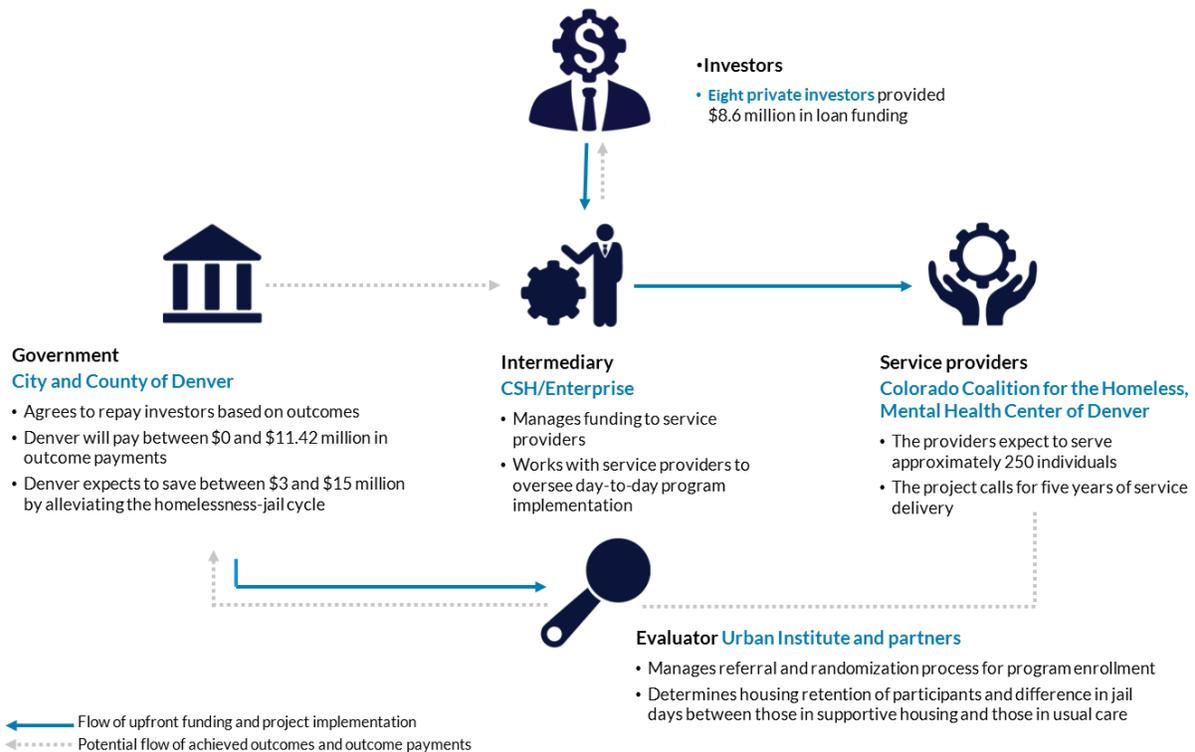
SIB Background

People who experience chronic homelessness often cycle in and out of jail, which affects their well-being and can come at a significant cost to taxpayers. Most of these individuals face other challenges, such as persistent mental illness and substance use. Denver's Crime Prevention and Control Commission calculated that about 250 people in this target population spent an average of 59 nights in jail each year and interacted with other systems, such as detox and emergency care, costing the city

$7.3 million a year.[1] Supportive housing aims to stabilize people caught in a homelessness-jail cycle through housing assistance and intensive services, leading to increased housing stability and decreased jail stays.

To launch the supportive housing program, the City and County developed an agreement with Denver PFS LLC, an entity established by the Corporation for Supportive Housing and Enterprise Community Partners, to execute the SIB. Eight lenders provided private investment for the SIB,[2] and the project leveraged additional funding through local and state housing resources and Medicaid reimbursement. In the first year, Colorado Coalition for the Homeless provided supportive housing services. Mental Health Center of Denver joined in providing supportive housing services in the second year. The Crime Prevention and Control Commission provided staff for the program referral process, and the Denver Police Department and Denver Sherriff's Department provided administrative data for the evaluation. The Urban Institute is conducting a five-year randomized controlled trial evaluation and implementation study in collaboration with partners from the Evaluation Center at the University of Colorado Denver and the Burnes Center on Poverty and Homelessness at the University of Denver. Figure 1 shows the basic structure of the SIB project.

FIGURE 1

Denver Supportive Housing Social Impact Bond Initiative Framework

•**Investors**
• **Eight private investors** provided $8.6 million in loan funding

Government
City and County of Denver
• Agrees to repay investors based on outcomes
• Denver will pay between $0 and $11.42 million in outcome payments
• Denver expects to save between $3 and $15 million by alleviating the homelessness-jail cycle

Intermediary
CSH/Enterprise
• Manages funding to service providers
• Works with service providers to oversee day-to-day program implementation

Service providers
Colorado Coalition for the Homeless, Mental Health Center of Denver
• The providers expect to serve approximately 250 individuals
• The project calls for five years of service delivery

Evaluator Urban Institute and partners
• Manages referral and randomization process for program enrollment
• Determines housing retention of participants and difference in jail days between those in supportive housing and those in usual care

⟵ Flow of upfront funding and project implementation
⟵······ Potential flow of achieved outcomes and outcome payments

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Source: Adapted from GAO-15-646 "Pay for Success" and the Urban Institute Pay for Success Initiative.

The first housing stability outcomes report was released in October 2017 (Gillespie et al. 2017). In this second housing stability report, we calculate the second payment to the Governance Committee for the SIB program.

Housing Outcomes

From January 1, 2016, through June 30, 2018, 285 individuals moved into SIB-funded supportive housing. Of those who leased up in housing, 46 percent signed their lease at least 365 days before the reporting period end date (table 1). Of those, 93 percent have been in housing for at least 365 days or more. Some participants exited housing; these exits are categorized as planned or unplanned. This categorization recognizes that some exits may be intentional and positive, such as a move to other permanent housing. Deaths are also categorized as planned exits so as not to penalize provider performance given the vulnerability of some participants. Unplanned exits included any interruption that caused the participant to be out of housing for more than 90 days, including jail stays of more than 90 days. Unplanned exits are tracked to measure project performance, but these participants can reengage with the program. During this period, 44 individuals exited housing. Of the 44 who exited housing, 14 were planned exits, each of whom passed away, and 30 were unplanned exits. The primary reason for an unplanned exit was a jail stay that lasted greater than 90 days; other reasons included hospitalizations and lease violations. A small share (3 percent) of those who leased up and exited the program unplanned, reengaged in the program and re-leased in housing.

TABLE 1

Lease-Ups and Exits for SIB Participants

	N	Share
Housing lease-ups		
Leased up in housing	285	
Time between end of reporting period and lease-up is less than 365 days	154	54%
Lease time at least 365 days	131	46%
Stay in housing is greater than or equal to 365 days	122	93%
Housing stability		
Individuals who remain in housing as of July 1, 2018	249	87%
Individuals who have never exited housing	241	85%
Individuals who reentered housing after an exit	8	3%
Housing exits after lease-up	**44**	**15%**
Planned exits (participant deaths)	14	5%
Unplanned exits	30	11%

Source: Days in housing and exit data come from the Colorado Coalition for the Homeless and Mental Health Center of Denver program data from January 1, 2016 through June 30, 2018.

How We Calculate Housing Stability Success Payments

As specified in the contract, housing stability is calculated for participants who meet the payment requirement (figure 2). This measure includes participants who remained in housing for at least 365 days without any episodes away from housing for greater than 90 days or individuals who had a planned exit from housing at any point. The contract designated the first six months of the project as a pilot period. This time is not included in the total adjusted days in housing for payment, but it does count for determining if the participant achieved at least one year in housing. Days participants spent in jail are also subtracted from the total days in housing. The remaining total adjusted days in housing are multiplied by $15.12/day to calculate the success payment from the City.

FIGURE 2

Summary of Housing Stability Payment Calculation

NUMBER OF PARTICIPANTS MEETING PAYMENT REQUIREMENTS

EQUATION

(X)-(X)-(X) = TOTAL ADJUSTED DAYS IN HOUSING * $15.12/DAY = TOTAL HOUSING STABILITY PAYMENT FOR PARTICIPANTS MEETING PAYMENT REQUIREMENTS

| NUMBER OF DAYS IN HOUSING | — | NUMBER OF DAYS IN PILOT PERIOD | — | NUMBER OF DAYS IN JAIL | = |

TOTAL ADJUSTED DAYS IN HOUSING * $15.12/DAY = TOTAL HOUSING STABILITY PAYMENT FOR PARTICIPANTS MEETING PAYMENT REQUIREMENTS

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Note: Calculation of the housing stability success payment is detailed in Article 4, Section 4.02 of the Denver SIB contract dated February 2016.

Investor Payment

In accordance with the Denver SIB contract, housing stability outcomes were observed for the first 10 quarters of the project, from January 1, 2016, through June 30, 2018, for participants in supportive housing who met the payment requirement. As table 2 shows, 136 participants met the payment requirement, 122 of whom maintained their voucher for a full year and 14 who had a planned exit. Together, the participants who were housed for 365 days or who had a planned exit spent 73,181 days in housing.

After deducting days within the pilot period (2,871 days) and days participants spent in jail (2,455 days), the project achieved 67,855 total adjusted days in housing (table 2). After subtracting for the housing days already paid for the first through sixth quarter, this outcome calls for a payment of just over $837,600 from the City of Denver. In the sections that follow, we provide context for this outcome by examining several factors that affected the project's housing stability success payment, including progress toward leasing targets, housing retention and exits, and jail stays and progress toward housing stability goals.

Payment Calculation for Housing Stability Outcomes

Quarters 1–10 (Outcomes 1/1/2016 to 6/30/18)

	Count
Number of participants meeting payment requirement	136
Number of participants maintaining voucher for 365 days	122
Number of participants with planned exit event	14
A. Total days in housing for participants meeting payment requirements	73,181
B. Minus total days in housing during the pilot period (1/1/2016–6/30/2016)	(2,871)
C. Minus total days in jail during the payment period (7/1/2016–6/30/2017)	(2,455)
D. Total adjusted days in housing for participants meeting payment requirement (D = A – B – C)	67,855
Total payment for participants meeting payment requirement ($15.12/day)	$1,025,967.63
Minus total payment investors received for Q1–6	($188,349.82)
Total payment for Q7–10	**$837,617.81**

Sources: Days in housing and exit data come from the Colorado Coalition for the Homeless and Mental Health Center of Denver program data from January 1, 2016, through June 30, 2018. Jail data come from the Denver Sherriff's Department and do not include days spent in prisons or any jails outside of Denver.

Notes: In quarters 1–6, participants reached 12,457 total adjusted days in housing, which amounted to an investor payment of $188,349.82.

Progress toward Lease-Up Targets

The SIB contract outlined a leasing plan that detailed how many individuals would be leased up in permanent supportive housing each month through December 2017. This leasing plan informed the financial model and the expected housing stability payments. Because of construction delays, the Colorado Coalition for the Homeless leasing plan was reforecasted in October 2016, and the Mental Health Center of Denver leasing plan was reforecasted in January 2017 and went through December 2017 (table 3). Per the reforecasted lease-up targets, the project had 99 percent of planned participants in housing by the end of December 2017.

TABLE 3

Progress toward Cumulative Leasing Targets

Month	Actual participant lease-ups (cumulative)	Reforecasted leasing plan (cumulative)	Progress toward reforecasted leasing targets
January 2016	2	0	
February 2016	4	4	100%
March 2016	11	11	100%
April 2016	26	25	104%
May 2016	34	33	103%
June 2016	37	36	103%
July 2016	42	41	102%
August 2016	52	51	102%
September 2016	55	54	102%
October 2016	61	61	100%
November 2016	67	66	102%
December 2016	71	72	99%
January 2017	79	78	101%
February 2017	88	84	105%
March 2017	98	97	101%
April 2017	111	110	101%
May 2017	126	123	102%
June 2017	140	136	103%
July 2017	153	149	103%
August 2017	172	157	110%
September 2017	188	184	102%
October 2017	202	211	96%
November 2017	225	234	96%
December 2017	254	257	99%

Sources: Actual participant lease-ups come from the Colorado Coalition for the Homeless and the Mental Health Center of Denver. The original leasing plan come from the Denver SIB contract, exhibit G, dated February 2016. The reforecasted leasing plan numbers come from an email to the Denver SIB Governance Committee dated October 26, 2016.
Note: The total "actual participant lease-ups" does not include 13 individuals who leased up after December 2017.

Housing Retention and Exits

Most participants who leased up successfully retained their housing. By June 30, 2018, the end of the observation period for the second housing stability payment outcomes, 113 participants had been stably housed for one year or more (with no planned or unplanned exits), spending an average about 19 and a half months. By June 30, 2018, 14 participants had a planned exit. These participants spent an average of about seven months, and a median of about five and a half months, in housing before their planned exit (table 4).

In addition to the planned exits, nine participants who met the payment requirement experienced an unplanned exit during the first year in housing. Participants with an unplanned exit spent an average of about 16 months, and a median of about 15 months, in housing before their unplanned exit.

TABLE 4

Days in Housing among Participants Meeting Payment Requirements

	Meet payment requirements	Stably housed for 365 days	Planned exits	Unplanned exits
Sample	136	113	14	9
Mean days in housing	534	582	216	482
Median days in housing	499	544	162	447

Source: Days in housing and exit data come from the Colorado Coalition for the Homeless program data from January 1, 2016 through June 30, 2018, including housing days during the pilot.
Notes: Days in housing is calculated as the number of days participants were in housing as of June 30, 2018. Jail stays have not been deducted from the days in housing calculation. "Stably housed for 365 days" includes the first nine pilot individuals and any treatment individuals who maintained their housing for one year without a more than 90-day exit; these individuals had no unplanned exits before or after a year in housing "Planned exits" includes any individual who was housed on or before June 30, 2018, and who had a planned exit. Planned exits meet housing stability payment requirements and include death, exit to other permanent housing, long-term residential treatment, or incarceration for actions solely occurring before referral.

Jail Stays

In accordance with the SIB contract, days spent in jail while participants were in housing were subtracted from housing stability days for the purposes of the payment outcome. Of the 136 participants who met the payment requirements, 60 percent had at least one jail stay during their time in housing (table 5). Most participants who had any jail stays during their time in housing had only one stay with an average of 32 days in jail and a median of 12 days in jail. These participants had been in housing for an average of about six months before their first jail stay.

One of the contract requirements is to report jail stays by race and ethnicity. Of the 136 participants who met the payment requirements, 61 are white, 44 are black, 15 are Hispanic, and 16 are another race. Fifty-two percent of white participants and 66 percent of black participants had a jail stay while in housing (table 6). About three-quarters of Hispanic participants and 56 percent of non-Hispanic participants of other races had a jail stay.

For context, according to Denver Sherriff's Department data from 2017, 24 percent of the inmates in custody were black and 30 percent were Hispanic in the City of Denver.[3] The share of inmates in Denver who are Hispanic mirrors the city's total population (30 percent of Denver residents are Hispanic). Black residents, however, represent only 10 percent of the city's population but a quarter of the inmate population. The overrepresentation of black people in the Denver criminal justice system mirrors national trends, with black people being 3.6 times more likely to spend time in local jails nationwide than white people (Vera Institute 2018).

TABLE 5A

Jail Stays among Participants Meeting Payment Requirements

	Meet Payment Requirements		Maintained Voucher for 365 Days		Planned Exits		Unplanned Exits	
	N	Percent	N	Percent	N	Percent	N	Percent
No jail stays	55	40%	44	39%	10	71%	1	11%
Any jail stays	81	60%	69	61%	4	29%	8	89%
1 stay	37	46%	34	49%	2	50%	1	13%
2 stays	17	21%	14	20%	2	50%	1	13%
3 stays	13	16%	11	16%	0	0%	2	25%
4+ stays	14	17%	10	14%	0	0%	4	50%
Total	136		113		14		9	

TABLE 5B

	Meet payment requirements	Maintained voucher for 365 days	Planned exits	Unplanned exits
Mean days in jail	32	27	34	81
Median days in jail	12	10	26	61
Mean days in housing before first jail stay	177	187	85	135

Source: Jail data come from the Denver Sherriff's Department and do not include days spent in prisons or any jails outside of Denver.
Notes: Jail stays are calculated as the number of times participants were booked into jail while in housing before July 1, 2018. Days in jail is calculated as the total number of days an individual spent in jail while in housing before July 1, 2018. Jail data cover January 1, 2016, through June 30, 2018, which includes jail stays and days in jail that occurred during the pilot period but after participant lease-up.

TABLE 6A

Jail Stays among Participants Meeting Payment Requirements by Race

	Non-Hispanic Black		Non-Hispanic White		Hispanic		Non-Hispanic Other	
	N	Share	N	Share	N	Share	N	Share
No jail stays	15	34%	29	48%	4	27%	7	44%
Any jail stays	29	66%	32	52%	11	73%	9	56%
1 stay	13	45%	16	50%	4	36%	4	44%
2 stays	8	28%	5	16%	2	18%	2	22%
3 stays	5	17%	6	19%	1	9%	1	11%
4+ stays	3	10%	5	16%	4	36%	2	22%
Total	44		61		15		16	

	Non-Hispanic black	Non-Hispanic white	Hispanic	Non-Hispanic other
Mean days in jail	32	30	21	52
Median days in jail	9	15	11	54
Mean days in housing before first stay	174	179	181	171

Source: Jail data come from the Denver Sherriff's Department and do not include days spent in prisons or any jails outside of Denver.

Notes: Jail stays are calculated as the number of times participants were booked into jail while in housing before July 1, 2018. Days in jail are calculated as the total number of days an individual spent in jail while in housing before July 1, 2018. Jail data cover January 1, 2016, through June 30, 2018, which includes jail stays and days in jail that occurred during the pilot period but after participant lease-up.

Progress toward Housing Stability Goals

One way to understand progress toward the project's housing stability goals is to look at how actual adjusted days in housing compare with possible days in housing based on the leasing plan, assuming the project met all leasing targets and participants remained housed and spent no days in jail. These are not housing stability rates but a benchmark against the possible days in housing (table 7). After deductions for the pilot period and days in jail, the project achieved 67,855 total adjusted days in housing. This represents 89 percent of the number of days possible based on the reforecasted leasing plan.

TABLE 7

Possible Days in Housing Achieved

Quarters 1–10

	Possible adjusted days in housing	Actual adjusted days in housing	Share of possible days in housing achieved
Reforecasted leasing plan	76,207	67,855	89%
Financial model projections	63,057	67,855	108%

Sources: Days in housing and exit data come from the Colorado Coalition for the Homeless and Mental Health Center of Denver program data from January 1, 2016, through June 30, 2018. Jail data come from the Denver Sherriff's Department and do not include days spent in prisons or any jails outside of Denver.

Notes: Possible adjusted days in housing are calculated the same way as actual days in housing. It does not include days in the pilot period. It assumes original or reforecasted leasing targets were met, participants leased up on the last day of the month for which they were targeted and spent zero days in jail.

Appendix A. Methods

The housing stability calculations use Denver Sheriff's Department data on jail stays and Colorado Coalition for the Homeless data on lease-ups and housing exits. The Colorado Coalition for the Homeless data include information on the dates of lease-up and dates of housing exits from January 1, 2015, through June 30, 2018. The Mental Health Center of Denver data include information on the dates of lease-up and dates of housing exits from January 2, 2017, through June 30, 2018. The Denver Sheriff's Department data include the booking start and end dates for all jail stays from January 1, 2009, through June 30, 2018, on all individuals randomized into treatment by July 1, 2017, as well as the nine bonus names. In this year's data extract, the Urban team found some internal inconsistencies in the Denver Sherriff Department's data file. Together with the Denver Sherriff's Department, Urban identified the issue leading to the quality error. The Denver Sherriff's Department fixed this error and pulled a new, complete dataset. To ensure that the dataset matched the original raw records in the jail management system, the data-point person at the Denver Sherriff's Department performed a quality check on a list of randomly selected jail stays for SIB participants. All the information in the quality check was consistent with the files Urban received, leaving no remaining quality concerns.

Individuals are determined to have met the payment requirement if they have either been housed for 365 or more days without an absence from housing for more than 90 days or if they have leased-up and had a planned exit. For those meeting the payment requirement, days in housing are calculated as the last day in housing or June 30, 2018 (whichever comes first) minus the date of lease-up or January 1, 2016 (whichever comes last). The days in housing during the pilot period are calculated as the last day of housing or June 30, 2016 (whichever comes first) minus the date of lease-up or January 1, 2016 (whichever comes last). Days in jail during the payment period are calculated as the booking end date, their housing exit date, or June 30, 2018 (whichever comes first) minus the booking start date, their lease-up date, or June 30, 2016 (whichever comes last). Jail days were only included if they took place during the time the participant was housed after the pilot period from July 1, 2016, through June 30, 2018. One day was added to each of these measures, days in housing, days in housing during the pilot period and days in jail, so that both the first day and last day were counted. Each of these measures, days in housing, days in housing during the pilot period, and days in jail, were calculated at the individual level and then summed for all participants meeting the payment requirement. Total adjusted days in housing were then calculated by taking the total days in housing and subtracting the total days in housing during the pilot period and the total time in jail.

Notes

1. For the Denver SIB fact sheet, see "Mayor Hancock Announces Social Impact Bonds to Serve First 25 Participants at North Colorado Station," City and County of Denver, news release, February 16, 2016, https://www.denvergov.org/content/denvergov/en/mayors-office/newsroom/2016/mayor-hancock-announces-social-impact-bonds-to-serve-first-25-pa.html.

2. The Denver SIB lenders include the Denver Foundation, the Piton Foundation, the Ben and Lucy Ana Walton Fund of the Walton Family Foundation, the Laura and John Arnold Foundation, Living Cities Blended Catalyst Fund LLC, Nonprofit Finance Fund, the Colorado Health Foundation, and the Northern Trust Company.

3. "2017 Inmates in Custody Demographics and Totals," Denver Sherriff Department, accessed January 19, 2018, https://www.denvergov.org/content/dam/denvergov/Portals/776/documents/Data/DSDInmateDemographicsTotals2017.pdf.

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Mary Cunningham is a senior fellow and the vice president of the Metropolitan Housing and Communities Policy Center at the Urban Institute. Her research focuses on homelessness, housing instability, and concentrated poverty. Cunningham is coprincipal investigator of the Denver Supportive Housing Social Impact Bond Initiative and leads studies examining the impact of supportive housing on high-need families in the child welfare system and outcomes from a homeless prevention program for at-risk veterans.

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Acknowledgments

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