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EVALUATION OF FORT LYON
SUPPORTIVE RESIDENTIAL COMMUNITY:
FINAL REPORT

AUGUST 2018

Prepared by Illuminate Evaluation Services, LLC



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TRANSMITTAL LETTER

August 1, 2018

Members of the Legislative Audit Committee:

This report contains the final results of the evaluation of the Fort Lyon Supportive Residential Community Program (Fort Lyon Program). This evaluation was conducted pursuant to Section 24-32-725, C.R.S., which requires the State Auditor to retain a contractor to conduct a longitudinal evaluation of the Fort Lyon Program. This final report presents a description of the Fort Lyon Program, a description of the evaluation methodology and results, issues for further consideration, and a literature review.

The work presented herein is based on data furnished by the Colorado Departments of Local Affairs, Health Care Policy and Financing, Human Services, and Corrections; the Colorado Judicial Branch; the Colorado Coalition for the Homeless; and several county sheriff's offices (Denver, El Paso, Mesa, Otero, Prowers, Pueblo, Weld). We gratefully acknowledge the cooperation of all parties providing data, the Office of the State Auditor (OSA), the Department of Local Affairs, Fort Lyon Program staff, and the Fort Lyon Evaluation Advisory Committee. Without this cooperation, the evaluation could not have been completed.

Respectfully submitted,
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REPORT

HIGHLIGHTS

FORT LYON SUPPORTIVE RESIDENTIAL COMMUNITY FINAL EVALUATION REPORT, AUGUST 2018

Illuminate Evaluation Services, LLC

KEY RESULTS

- The average annual per participant cost of the Fort Lyon Supportive Residential Community Program (Fort Lyon Program) from Fiscal Years 2014 through 2017 was about \$18,800 based on a 250-person capacity.
- Of the 777 participants exiting the Fort Lyon Program as of June 30, 2017, 47 percent exited to permanent housing (333 of 715 with complete data).
- The average total costs per Fort Lyon Program participant decreased by 33 percent from pre-enrollment in the Fort Lyon Program to post-enrollment for participants who had 1-year of post-enrollment data and who received Medicaid both pre- and post-enrollment.
 - Results show decreases of 9 percent for physical health care, 34 percent for behavioral health care, 80 percent for the judicial system (i.e., incarceration, probation, and jail), and 65 percent for shelters and vouchers.
- The average total costs per comparison group participant decreased by 12 percent over the same time period.
 - Costs remained the same for physical health care, increased 10 percent for behavioral health care, and decreased 68 percent for the judicial system (i.e., incarceration, probation, and jail).
- Participants who stay in the Fort Lyon Program longer, and those who participate in employment opportunities while in the Program, have greater odds of completing the Program and exiting to permanent housing. Participants with less severe behavioral health needs and those who participate in vocational programs tend to have higher completion rates, but there was no relationship to permanent housing. A participant's severity of drug and alcohol use history was not a significant predictor of completing the Program or exiting to permanent housing.
- Fort Lyon Program participants reported significant improvements in their levels of anxiety, depression, and overall quality of life after entering the Program.
- A benefit cost analysis performed for the Bent County Development Foundation on the Fort Lyon Program estimated that economic activity at Fort Lyon generated 119 jobs and approximately \$10.3 million of financial activity in Colorado in 2015- 2016.

BACKGROUND

- The Fort Lyon Program's primary purpose is to provide transitional housing and facilitate peer-based recovery from substance use for homeless and at-risk individuals from across Colorado, with a priority on homeless veterans.
- Funding for the Fort Lyon Program comes from State General Funds, which averaged about \$3.5 million annually, and mortgage settlement funds, which averaged \$1.2 million annually, for Fiscal Years 2014 through 2017.
- Between September 2013, when the Fort Lyon Program began, and June 30, 2017, the Program has served 968 individuals. Participation levels are set at an average of 250 per month.
- The average age of Program participants was 49 years, about 82 percent were male, and about 19 percent were veterans.
- Of the 968 individuals participating in the Fort Lyon Program, 777 (80 percent) had exited the Program as of June 30, 2017.

CHAPTER 1: HOMELESSNESS AND THE FORT LYON PROGRAM

GENERAL BACKGROUND

The U.S. Department of Housing and Urban Development (HUD) defines homelessness under four broad categories to qualify for grants and programs. The categories include:

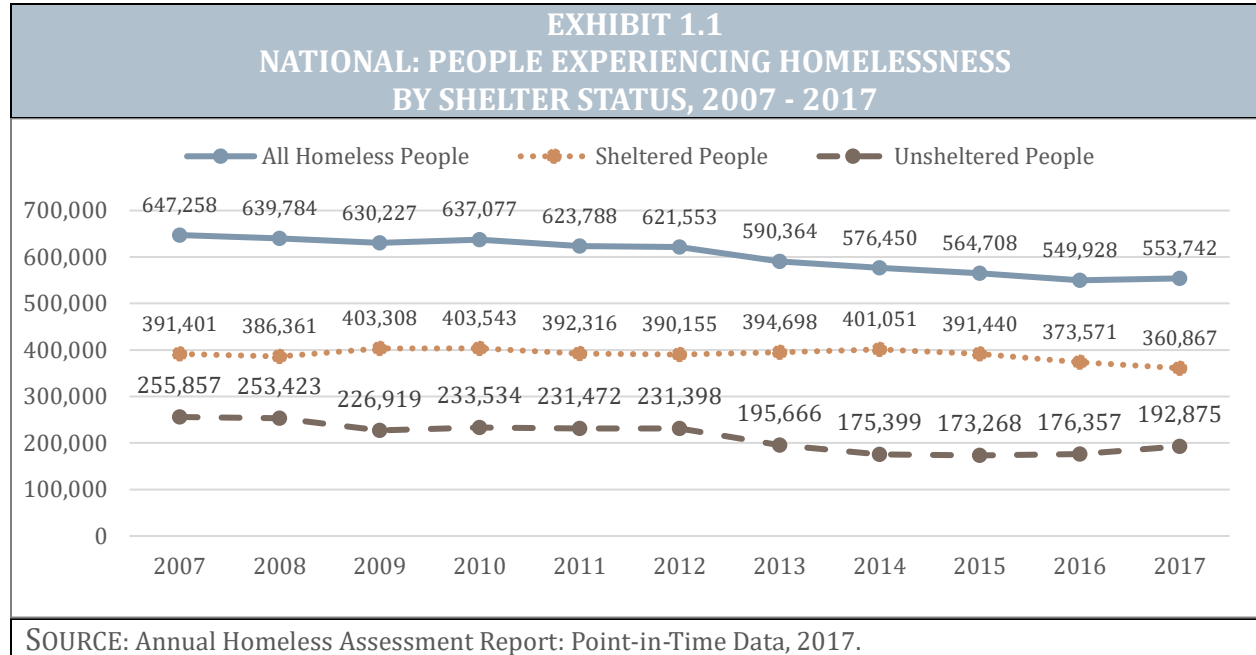
- **Literal Homelessness:** People who are living in a place not meant for human habitation (e.g., car), emergency shelter, transitional housing, or hotels paid for by a government or charitable organization. This also includes individuals exiting an institution where he/she resided for 90 days or less and who resided in a shelter or place not meant for habitation prior to entering the institution.
- **Imminent Risk of Homelessness:** Individuals or families who will lose their primary residence within 14 days, have not identified a subsequent residence, and have no other resources or support networks to obtain housing.
- **Homeless Under Other Statutes:** Unaccompanied youth under age 25 or families with children who do not meet the other categories or are homeless under other federal statutes, have not had a lease or permanent housing in 60 days, have moved two or more times in the last 60 days, and are likely to remain homeless because of special needs or barriers.
- **Fleeing Domestic Violence:** Individuals or families who are fleeing or attempting to flee domestic violence, have no other residence, and lack resources and support networks to obtain permanent housing.

In this report, we refer to homelessness in a general sense, which includes individuals across all categories, unless otherwise stated.

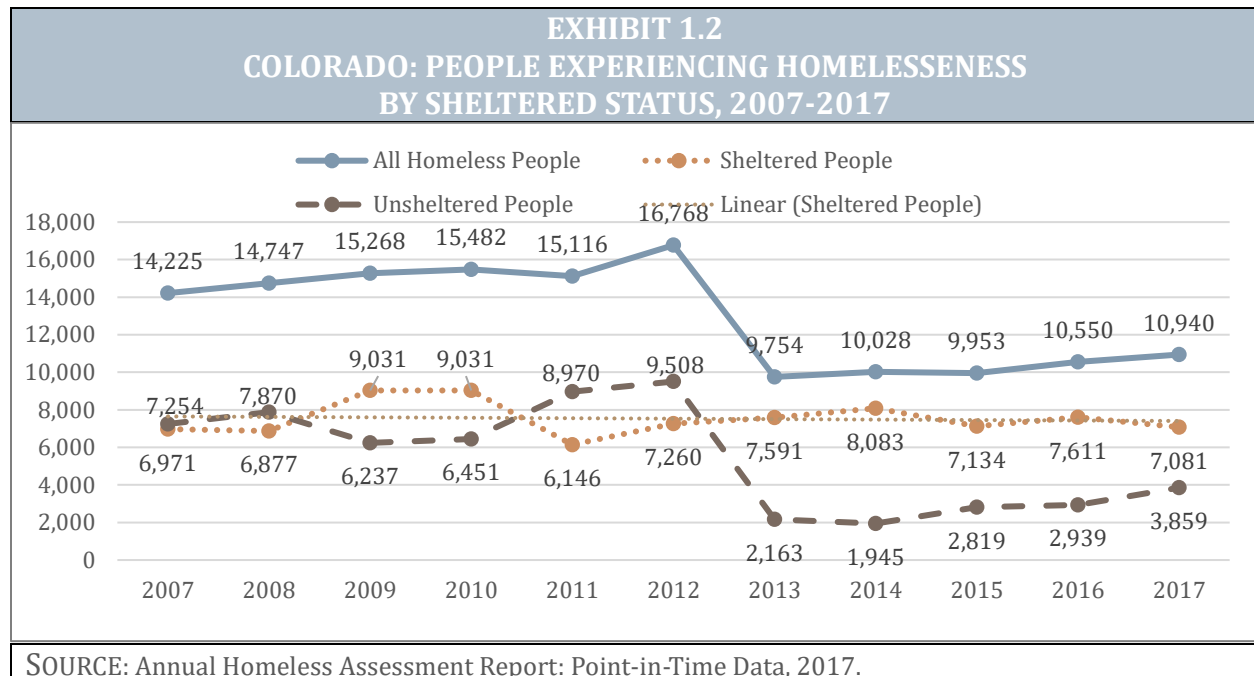
The homeless population is also categorized as sheltered or unsheltered. The sheltered homeless population includes homeless persons residing in an emergency shelter, transitional housing, or safe havens, which are semi-private long-term housing for people with severe mental illness. The unsheltered homeless population refers to individuals whose primary residence is a public or private place not designed for regular sleeping (e.g., street, vehicle, parks).

HUD has produced the Annual Homeless Assessment Report (HUD Homeless Report) on a yearly basis since 2007. The reports include Point-in-Time estimates of “literal homelessness,” which provide a snapshot of both sheltered and unsheltered individuals on a single night for particular populations. Exhibit 1.1 shows the number of people experiencing homelessness nationally from 2007 to 2017, according to the 2017 HUD

Homeless Report. During that time, there was a 14.4 percent decrease in the number of people experiencing homelessness. The number of sheltered persons has declined by 7.8 percent, and the number of unsheltered persons has declined by 24.6 percent. However, the number of unsheltered persons has increased since 2015.



The HUD Homeless Reports also provide data for those defined as literal homeless for each state. From 2007 thru 2012, Colorado’s homeless population increased 17.9 percent. Between 2013 and 2017 it increased 12.2 percent. According to the Colorado Coalition for the Homeless (CCH), in 2013, the methodology changed for counting unsheltered homeless individuals based on HUD direction and definition. This change did not represent a change in the actual number of homeless persons, just a reduction in the number reported (see Exhibit 1.2). The total number of sheltered and unsheltered persons has fluctuated over time.



A 2015 benefit cost analysis prepared for the Bent County Development Foundation analyzed the increase in homelessness through 2012 and found a strong relationship between unemployment rates in Colorado and the unsheltered populations. The findings suggest the effects of the recession from 2007 to 2009, the economy, and high unemployment rates likely contributed to the increase in homelessness through 2012. The study acknowledged that other known factors, such as mental illness and substance abuse also explain who becomes homeless.

HUD also identifies several subpopulations of homeless persons. Exhibit 1.3 shows a summary of the number of homeless persons in Colorado by subpopulation. The largest subpopulation within Colorado is the chronically homeless. According to HUD (24 CFR Parts 91 and 578 [Docket No. FR-5809-F-01] RIN 2506-AC37):

A “chronically homeless” individual is defined to mean a homeless individual with a disability who lives either in a place not meant for human habitation, a safe haven, an emergency shelter, or an institutional care facility if the individual has been living in the facility for fewer than 90 days and had been living in a place not meant for human habitation, a safe haven, or an emergency shelter immediately before entering the institutional care facility. In order to meet the “chronically homeless” definition, the individual also must have been living as described above continuously for at least 12 months, or on at least four separate occasions in the last 3 years, where the combined occasions total at least 12 months. Each period separating the occasions must include at least 7 nights of living in a situation other than a place not meant for human habitation, an emergency shelter, or a safe haven.

EXHIBIT 1.3 COLORADO: SUBPOPULATIONS OF HOMELESS PERSONS 2017			
	Sheltered	Unsheltered	Totals
Individuals with Chronic Homelessness	977	1,287	2,264 (22.9%)
Individuals with Severe Mental Illness	1,223	824	2,047 (20.7%)
Individuals with Chronic Substance Use Disorder	1,179	561	1,740 (17.6%)
Victims of Domestic Violence	1,033	629	1,662 (16.8%)
Veterans	743	335	1,078 (10.9%)
Unaccompanied Youth (Ages 18 to 24)	428	335	763 (7.7%)
Children of Parenting Youth	99	39	138 (1.4%)
Parenting Youth	74	36	110 (1.1%)
HIV/AIDS	60	27	87 (.9%)
Total	5,816	4,073	9,889 (100%)
SOURCE: Department of Housing and Urban Development: Point-in-Time Data, January 2017. NOTE: These numbers do not include all individuals represented in Exhibit 1.2, as some individuals experiencing homelessness do not fall into these subpopulations.			

Fort Lyon Supportive Residential Community Program

PROGRAM BACKGROUND

In 2013, the General Assembly enacted legislation to establish the Fort Lyon Supportive Residential Community Program (Fort Lyon Program or Program) under the Colorado Department of Local Affairs (DOLA). The Fort Lyon Program opened in September 2013 to serve as a residential community for the homeless to provide substance abuse supportive services, medical care, job training, and skill development for the participants, in accordance with statute [Section 24-32-742, C.R.S.]. According to personnel from DOLA and the CCH, the Fort Lyon Program emerged out of a need to address homelessness in the State of Colorado and a desire to test innovative programming that was built on evidence-based practices combined from different models and streams of research.

Several key factors contributed to the acuity of the need at the time the Fort Lyon Program was developed. HUD reduced funding for transitional housing around 2012, creating a significant gap in services. There was also a particular concern about the veteran population in Colorado. Overall, it was recognized that, in spite of existing programs, individuals were still “slipping through the cracks” because they did not meet requirements for some programs or the programs did not provide the combination of services needed. Thus, the Fort Lyon Program was designed to target those populations who were not being served by existing programs.

The Fort Lyon Resident Handbook (revised January 17, 2017) describes the primary purpose of the Program as follows:

To provide transitional housing and facilitate peer-based recovery from substance use for homeless and at-risk individuals from across Colorado with a priority on homeless veterans through self-directed education, vocational, and employment readiness services in a safe and supportive residential community environment that leads to long-term recovery from addictive substances.

The Program model has evolved since initial implementation, bringing greater clarity to the Program philosophy and target outcomes for participants, as well as a clearer understanding of the gaps in services for the population served by Fort Lyon. Ongoing review of the participants' needs and outcomes and the service gaps by program leaders and staff have reinforced the commitment to providing support for recovery from addiction and for acquisition of permanent housing: specifically, providing a program with few requirements beyond abstinence for individuals whose substance use is a key factor in homelessness. CCH staff noted their organizational focus is on qualifying people in and not disqualifying people out, rather than selecting participants most likely to succeed. CCH intends to fill a gap in the system by providing services for people who have no other options. These clarifications of Program mission have assisted staff in their decisions about implementation, use of resources, and outreach efforts.

The annual cost of the Fort Lyon Program from Fiscal Years 2014 through 2017 ranged from \$4.1 million to \$5.2 million, with an annual average of about \$4.7 million. Of this, roughly \$3.5 million came from state funds. More detailed information on program funding and costs is provided in Chapter 3.

LOCATION AND FACILITY

The Program is located in Bent County in the rural town of Las Animas, Colorado, on the Fort Lyon campus. The location for the Program was chosen with the thought that the rural location might benefit participants by providing a geographical buffer between the participants and the communities they come from, therefore limiting contact with the people and places that support continued substance use. Housing the Program on the campus also offered an opportunity to repurpose the Fort Lyon facility, which had previously served as the Fort Lyon Veterans Administration Hospital (from 1922 to 2001) and a state prison, which was decommissioned in 2012. Bent County manages the Fort Lyon property and facilities. More recently, according to DOLA, the Program brings additional services to the area, which are needed, because of a lack of services and closing of homeless shelters between Colorado Springs and La Junta.

The Fort Lyon facility includes men's and women's dorms. Currently, women have individual rooms. Men initially share rooms and may move to single rooms over time. There are also separate, stand-alone housing units with approximately three bedrooms, where participants can develop greater autonomy and responsibility toward independent living later in the Program. This includes preparing meals and managing a budget.

The facility features an auditorium, library, art room, workout facility, bicycle shop, sewing room, barber/cosmetology room, garden, and meeting rooms. There is also a large warehouse area with clothing, household goods, and furniture, which participants can access for free and can select from while at Fort Lyon to prepare for their lives upon exit.

ADMINISTRATION AND STAFFING

The Division of Housing within DOLA is responsible for managing the Fort Lyon Program. The Division of Housing contracts with CCH to administer the Program's residential and supportive services. CCH is a non-profit organization with a mission to work collaboratively with other agencies and organizations to prevent homelessness and to create housing solutions for homeless and at-risk families, children, and individuals.

A four-member CCH directors' team provides onsite leadership at Fort Lyon, and their work is supported by 32 additional CCH staff members both on and offsite. For Calendar Year 2018, this includes 11 case managers, four peer mentors, four kitchen staff, three administrative staff, two reintegration specialists, two security staff, an outcomes specialist, a driver, a nurse case manager, a housekeeping staff person, a warehouse staff person, and a maintenance person. The positions have shifted, and now include two full-time reintegration specialists to assist with participants' transition out of the Program and to follow-up with alumni. These staff members provide a range of practical support and guidance, such as setting up leases, obtaining basic housewares and food, and connecting with local resources. One specialist operates out of Denver and has the additional duty of providing transportation to Fort Lyon two days a week. The other position is based in Bent County.

To assist in managing onsite housing transitions, the staff has added a Housing Council, which structures the continuum of care around campus housing and coordinates housing opportunities upon exit from the program. There is also a Resource Team, which helps participants prepare for program exit. During Calendar Year 2017, the work of the Resource Team has become more structured and meets more frequently with participants.

The entire Fort Lyon staff meets weekly to review program progress and address ongoing program development and quarterly to review data reports and outcomes. Further, the Fort Lyon Program Manager from DOLA visits the Fort Lyon Program monthly for a site visit and informal monitoring. During this time, the DOLA representative attends meetings with various stakeholders (e.g., CCH and Bent County), meets with Program leaders for strategic planning and program development, meets with participants, and attends special events.

PROGRAM MODEL

Fort Lyon Program participants receive housing, food, and access to a variety of supports and services, with a focus on substance use and its role in chronic homelessness. The Program is operated using the following key service models:

- *Trauma Informed Care*, which recognizes that homelessness may be both the cause and result of trauma. According to the U.S. Department of Health and Human Services, Trauma Informed Care realizes the impact of trauma; understands potential paths for recovery; recognizes the signs and symptoms of trauma; responds by fully integrating knowledge about trauma into policies, procedures, and practices; and seeks to actively resist re-traumatization.
- *Peer support*, which incorporates social support for recovery, both formally through peer mentoring and informally through relationships among participants.
- *On-demand transitional recovery housing* that is voluntary, driven by client choice, entails minimal service requirements, and is accessible without an extensive wait period.

The Fort Lyon Program does not provide behavioral health or medical treatment but works collaboratively with local behavioral and primary health care providers to facilitate direct access to these services.

For Calendar Year 2016, the contract between DOLA and CCH set participation levels for the Fort Lyon Program at 250 participants, on average each month, with up to 10 percent vacancy. This continues to be the monthly contracted census.

PROGRAM ACCESS AND ADMISSION

To participate in the Fort Lyon Program, an individual must be referred by a homelessness service organization, health care provider, or any other public or non-profit agency that works directly with homeless persons and will follow up with that individual after he or she leaves the Program. Referrals come through CCH outreach staff and through partnerships between CCH and other agencies and organizations. CCH is the lead organization of the Denver Street Outreach Collaborative, which helps connect individuals with CCH and services, including the Fort Lyon Program. Program staff believe strong relationships with referral sources are essential to supporting participant engagement for the full length of time necessary for real change and for successful transitions back to their communities, with an informed support system in place.

To increase referrals, CCH staff members visited the State's Continuum of Care regions, which coordinate housing and services funding for homeless families and individuals, during 2017 to educate and disseminate information about the Fort Lyon Program. The staff has also worked to streamline the referral process and to reinforce their relationships with referral sources in order to support participants' community reintegration.

Client participation in the Program is entirely voluntary and cannot be court ordered, although participants may be court-involved during their residency. The entrance requirements for the Fort Lyon Program are:

1. Be homeless or at imminent risk of homelessness.
2. Be at least 21 years or older and a resident of Colorado.
3. Have a documented substance use disorder and express a motivation and desire to change.
4. Be detoxed prior to program entry – meeting the American Society of Addiction Medicine (ASAM) Level I Detox Criteria. (The ASAM criteria provide guidelines for placement, continued stay and transfer/discharge of patients with addiction and co-occurring problems.)
5. If there is a mental health diagnosis, participants must have stable symptoms and have a 30-day supply of all prescription medications at the time of transportation to the Fort Lyon campus.
6. If there are chronic health conditions, participants must be medically cleared to enter the Program and have a 30-day supply of any required medication.
7. Must not have open warrants or cases, be a registered sex offender, or have a history of sexual offenses or recent violent offenses.
8. Must agree to live in a communal living environment and comply with the Resident Handbook and Fort Lyon Policies and Procedures.

Fort Lyon Program staff have made efforts to improve the structure and efficiency of the intake process through better organization and by streamlining materials and procedures. The intake process includes both pre-entry and onsite activities designed to determine whether the intentions and expectations of the individual and the Fort Lyon Program align. The intake process includes, for example, an assessment of motivation that is subsequently used to inform case management. The logistics of entering the Program also serve to screen for readiness. Once participants complete the referral packet, they are scheduled for the next available opening on a van to Fort Lyon. Fort Lyon Program staff reported that participants generally have to wait about a week for an opening on a van. This is down from last year when the wait was generally between 14 and 30 days for males. Program leaders explained they are now at their optimal operating rate with equal numbers arriving and discharging. However, females continue to have a longer wait due to the limited number of beds. Between the initial referral and the time of transportation, there are periodic check-ins, and participants must be present and sober when the Fort Lyon van arrives to transport them to the facility.

Participants who have been actively using drugs or alcohol must have 72 hours of detox before entering the Fort Lyon Program. Participants who use methamphetamine intravenously must enter treatment for 30 days before transferring to Fort Lyon, and Fort Lyon Program staff execute a coordinated treatment plan prior to transfer. The Program has zero-tolerance substance abuse and violent behavior policies: if participants fail a random breathalyzer or urine analysis or exhibit violent behavior, they will be discharged from the Program. Fort Lyon staff reported they are intervening with problematic behavior earlier and more stringently. For example, dismissal for substance use now includes substance use off campus.

There are readmission procedures for participants who leave or are asked to leave the Fort Lyon Program, which align with the Alcoholics Anonymous (AA) 12-step process. To return to the Program, the participant must identify the reason for discharge and plan for recovery, meet with a Fort Lyon case manager, and write a letter for readmission. Fort Lyon Program staff review this information to determine if the participant can be readmitted. They are now also required to attend Friends of Fort Lyon meetings and 12-step meetings for 60 days prior to readmission. Program staff will not readmit a participant who has been verbally or physically violent.

PROGRAM SERVICES

The Fort Lyon Program offers the following supports and services to participants:

Case management – Provides intensive case management to participants in conjunction with each participant’s individual Goals and Outcomes Plan. The Goals and Outcomes Plan consists of self-determined objectives and is updated throughout a participant’s stay. Case manager support includes ensuring access to: primary, oral, and behavioral health services; substance abuse treatment and support; housing case management and advocacy; and vocational training, employment, and educational services. Case managers meet with participants at least twice a month to review goals, progress toward the goals, and steps necessary to meet those goals. The staff holds formal weekly case reviews to assess the progress of individual participants and to collaborate on how to support participants to meet their goals.

Vocational and educational training – Offers some life skills and basic employment skills classes and support, including resume writing, interviewing skills, and other job readiness proficiencies. Program participants also receive opportunities for vocational training by helping with the overall operations of the campus such as food services, facilities maintenance, grounds maintenance, and housekeeping. Additionally, Lamar Community College and Otero Junior College provide customized educational and vocational training in areas such as computer technology, construction industries, health services, and agricultural sciences.

On-site support – Provides support groups that are open to participants and members of the public. The Program does not offer clinical treatment, and activities are based on individual choices. Participants typically participate in peer-led AA or similar meetings and, at their discretion, in various educational, employment, and arts activities.

Peer Mentoring – Provides formal and informal peer support. Each dormitory is staffed with a peer mentor who serves as a role model and provides a range of support, such as talking with the client, addressing immediate needs, sharing resources, and encouraging sobriety.

Permanent housing reintegration – Works with participants to access permanent housing upon exit from the Fort Lyon Program.

For needs not met by on-site support, participants can access additional resources through partner programs or independently in the local communities. Locally, participants can access social services, attend church, attend college, hold employment, attend recovery meetings, or shop. Fort Lyon provides transportation, and there are bicycles available to visit nearby Las Animas, if preferred.

The Fort Lyon campus also houses the Fort Lyon Health Clinic, a U.S. Department of Health and Human Services' Health Resource and Services Administration-funded Health Care for the Homeless Clinic, which provides integrated primary and behavioral health services for the five-county region. It is a separate entity from, but partner to, the Fort Lyon Program that provides basic health services. For example, incoming participants typically undergo a basic health care work-up to establish a medical baseline, identify current health care needs, determine medication needs, and make referrals for deferred health care. The clinic also teaches basic skills around accessing health care, such as how to schedule and cancel appointments and how to plan ahead for obtaining medication refills. The clinic has a provider onsite two days a week, with nursing staff and telehealth providing care the other three days.

When a certain health care need cannot be met at the Fort Lyon Health Clinic or within the local community, or the wait lists to receive care are too long, participants are provided transportation to Pueblo for those services. Services sought in Pueblo include, but are not limited to, dental care, skin care, gastroenterology, urology, and cardiovascular treatment. Fort Lyon Program participants are eligible for Medicaid, which covers the cost of any services provided.

PROGRAM OPTIONS

The Fort Lyon Program is intentionally designed to allow participants the flexibility to establish their own approach to recovery. Incoming Fort Lyon Program participants undergo an orientation upon their arrival. Early in their stay, they work with their assigned case manager to create a Goals and Outcomes Plan, which consists of self-determined goals toward greater independence, sobriety, education, employment, and stable housing. In collaboration with their case manager, the participants review and update their goals periodically throughout their time in the Program. These goals help participants make decisions about which of the programs and activities offered at Fort Lyon they would like to participate in and help to define when they will complete the Program. According to Fort Lyon staff members, Goals and Outcomes Plans are initially very similar across participants. However, as their health and recovery stabilize and they begin to plan for the future, participants update their plans to reflect more personalization and diversity.

For their first 30 days in the Fort Lyon Program, participants are encouraged to rest, become physically healthy, and obtain deferred medical treatment; they are not allowed to leave campus. New participants are required to attend the New Beginnings education program that provides information and reflection on substance use and its impact. The program runs one hour a week for their first 6 weeks. All participants, throughout their stay at Fort Lyon, are required to attend a morning community meeting 3 days a week. Unexcused absences from New Beginnings or required community meetings can result in program discharge. Each dormitory has floor meetings that participants are also expected to attend, although missing these meetings does not put one at risk for discharge. Other than New Beginnings and the morning community meetings, there are no requirements to attend meetings or engage in activities for a participant to stay at Fort Lyon, and some participants choose to not participate. At the same time, there is an expectation that participants will participate in activities related to their recovery, such as attending sobriety support meetings, and other goals, as well as activities that maintain the health of the community.

After 30 days in the Fort Lyon Program, participants may leave campus during the day and after 90 days, may request an overnight pass, which is typically reserved for appointments to set up housing prior to program completion. In addition, after the first 30 days, participants may take part in additional activities, at their discretion. While participants no longer attend New Beginnings classes after their first 6 weeks, there are a number of meetings and activities, called electives, and participants are encouraged to participate in the electives that support their recovery goals throughout their stay. Electives include resident-hosted recovery meetings, such as AA and Narcotics Anonymous (NA) groups, as well as work and educational opportunities. Fort Lyon staff members believe these opportunities for engagement and leadership support individual recovery and self-advocacy. The staff encourages participants to generate new ideas for activities and provides support for these ideas to the extent they are appropriate and feasible. For example, the staff helped participants create an art room and a bike repair and check-out program. There is also a participants' council that serves as a voice for participants and plays a role in guiding and maintaining the community. The Fort Lyon Program introduced Springboard in Calendar Year 2017, a new program focused on life skills. Participants reported they would like to see more life skills offered, with an emphasis on basic knowledge essential to independent living, such as managing checking accounts, budgeting, paying bills, and establishing leases and accounts (e.g., for utilities).

Participants may also participate in paid work on campus, referred to as "work modules." For example, participants may work in the kitchen, laundry, or library; clean the facility; or assist with large improvement projects. Participants may seek multiple work modules at a given time, and they can work up to a maximum of 10 hours per week at minimum wage. This ensures that as many participants as possible can work. Further, some participants have employment within the communities surrounding the Fort Lyon campus.

The Fort Lyon Program originally employed four vocational specialists who worked directly with the participants in the areas of job preparation, resume writing, and seeking specific jobs. However, these positions were eliminated October 31, 2015 due to budget-related staff cuts, and case managers currently provide vocational guidance. Program leaders report they are currently exploring options and partnerships to create more vocational opportunities. However, they also noted the employment market local to the facility is tight, and this presents a challenge for acquiring job experience off campus.

In addition, the Fort Lyon Program provides access to educational opportunities, including GED tutoring, basic adult education, and college. Participants in the Program have access to college courses, both onsite and on the Otero Junior College and Lamar Community College campuses. Fort Lyon is an official satellite campus for Otero Junior College. Representatives from the college, including the Vice President of Student Affairs and Associate Vice President of Instruction, meet with Fort Lyon Program staff regularly to review data and programming to support participants' needs as students. Staff members reported a 25 percent increase in the number of participants accessing education.

The case manager who serves as the Program's Education Navigator helps participants set education goals, access education, and manage student loans in default. Costs for college are covered by the participant, and the staff assists participants in obtaining grants and loans. There are plans to expand academic services and opportunities, including GED preparation and basic adult education. Because some vocational education programs offered through Otero and Lamar are longer than a typical participants' stay in the Fort Lyon Program, staff are exploring ways of enabling participants to complete vocational certification either before or after they exit the Fort Lyon Program.

PROGRAM COMPLETION

Currently, *Program Completion* is defined as occurring when participants exit to permanent housing when they leave the Fort Lyon Program *and* attain one or more personal goals identified in their Goals and Outcomes Plan. Although the Fort Lyon Program is designed as a 2-year program, participants are not required to stay for any specific length of time, and length of stay is not considered in determining Program Completion. This definition has changed since the first-year evaluation report. Previously, participants self-determined when they completed the Program, using their Goals and Outcomes Plan and input from others. Fort Lyon Program staff members believed this definition was too subjective and continue to evaluate the criteria for completion, using common goals related to housing and sobriety for everyone, rather than individualized goals.

Program staff have continued to develop program support for participants' transitions into permanent housing and independent living. Transitions are viewed as a collaborative process involving the participant, case manager, referral sources, reintegration specialists, Housing Council, and Resource Team. Members of the Resource Team stated that improvement efforts made over the last year have resulted in better organization, clearer

exit procedures, and greater consideration of barriers to community re-entry. They stated that participants now have a better understanding of what it takes to move out into a community and more confidence throughout the transition. There are also clearer expectations on the part of the participant and the referral source. To support transitions out of the Fort Lyon Program, case managers and other support staff identify the paperwork, credentials, and benefit applications each participant needs, and work with participants to obtain the housing subsidies and transitional supports they will need upon exiting the Program. The Reintegration Specialists assist participants in applying for housing, accessing vouchers, and making contacts with original referral sources and essential other supports. Some participants choose to return to their original communities, while others choose new locations. A number of participants have chosen to remain in the Bent County area to maintain relationships and support systems established while at Fort Lyon and to take advantage of the low cost of living and affordable housing.

While Fort Lyon Program staff believe the process for program exit has improved, they also reported a significant contextual factor to effective community placement: a shortage of affordable housing options local to the Program and in many other communities. The Reintegration Specialists are exploring various ways to maximize housing opportunities. For example, noting waiting lists for housing, they are investigating whether they can hold spots on the lists as reintegration specialists and developing their own databases that include location, variables associated with the housing site, and the types of vouchers accepted.

Participants who complete the Program may become part of the Friends of Fort Lyon, a support network of alumni that provides continued recovery and social support. The network has continued to grow, particularly in the Arkansas Valley where there are now three meetings per week. In Denver, Friends of Fort Lyon meets weekly. Both alumni and staff noted that access to the network in larger cities can be difficult because of distance from the meetings, and this is exacerbated by lack of bus passes.

PROGRAM PARTICIPATION

Between September 2013, when the Fort Lyon Program opened, and June 30, 2017, the Program has served 968 individuals. Exhibit 1.5 details the demographics of the 968 Fort Lyon Program participants. These data are entered by Fort Lyon Program staff and maintained in the Homeless Management Information System (HMIS), which is a local technology system used to collect client-level data on the provision of housing and services to homeless individuals and persons at risk of homelessness.

EXHIBIT 1.5 DEMOGRAPHICS: FORT LYON PARTICIPANTS (n = 968)		
Demographic	# of Fort Lyon Participants	% of Fort Lyon Population
Average Age	49.5	
Demographic by Gender		
Male	793	81.9%
Female	173	17.9%
Transgender	2	.2%
Total	968	100%
Demographic by Ethnicity		
Non-Hispanic/Non-Latino	783	80.9%
Hispanic/Latino	173	17.9%
Don't Know/Client Refused	12	1.2%
Total	968	100%
Demographic by Race		
White	679	70.1%
Black or African-American	132	13.6%
American Indian or Alaska Native	80	8.3%
Mixed Race	36	3.7%
Native Hawaiian/Pacific Islander	5	0.5%
Asian	2	0.2%
Don't Know/Client Refused	34	3.5%
Total	968	100%
Veteran	187	19.3%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System (HMIS) data provided by Colorado Coalition for the Homeless.		

Participants may leave the Fort Lyon Program before completion for a variety of reasons and some of them may return. According to data from HMIS, of the 968 individuals who entered the Program between September 2013 and June 30, 2017, 11 percent (106 participants) left the Program before completion and later re-entered.

The average length of stay, per admission, in the Fort Lyon Program is 217 days, with stays ranging from 2 to 1,227 days. One individual stayed beyond 3 years because of serious medical issues at the end of their stay that prevented them from leaving. Exhibit 1.6 shows the range of participants' length of stay.

EXHIBIT 1.6 RANGE OF LENGTH OF STAY	
Length of Stay	% of Admissions
1 to 30 days	12.7%
31 to 180 days	48.1%
181 to 365 days	19.5%
366 to 730 days	14.2%
731 days to 1,095 days	5.4%
1,096 days or more ¹	0.1%

SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.
¹This includes one individual who stayed longer than 3 years because of a serious medical issue at the end of their stay.

Exhibit 1.7 shows the number of Program admissions, Program exits, and persons completing the Program by calendar year for each year since the Fort Lyon Program began, and the percent of exits with program completion. The total is more than 968 because of participants re-entering the program.

EXHIBIT 1.7 PROGRAM ADMISSIONS, EXITS, AND COMPLETIONS BY CALENDAR YEAR						
Length of Stay	2013 ¹	2014	2015	2016	2017 ¹	TOTAL
# Admissions	88	268	227	335	165	1083
# Exits	20	147	205	321	177	870
# Completions	5	32	85	140	47 ³	309
% Exits with Completion ²	25.0%	21.8%	41.4%	43.6%	26.6%	35.6%

SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.
¹ The 2013 and 2017 data do not include full years. 2013 data is from September to December 2013 and 2017 data is from January 1, 2017 to June 30, 2017.
² This percentage is calculated by dividing the number of people who completed the Program by the number of exits. There was more than one exit for about 10 percent of the population.
³In 2017 the definition of completion changed to include exit to permanent housing and attain one or more of their goals.

Exhibit 1.8 summarizes the housing status of participants prior to enrollment and at exit from the Fort Lyon Program. These results show substantial changes in housing situations, with the greatest change occurring in the percent of participants acquiring permanent and transitional housing after participating in the Fort Lyon Program. Often participants are placed in transitional housing while waiting for permanent housing.

EXHIBIT 1.8		
HOUSING STATUS - PRE-ENROLLMENT AND EXIT		
Housing Status	Pre-Enrollment	Exit
Permanent & Transitional Housing Situation (including hotel or motel paid for without emergency shelter voucher; owned by client with or without housing subsidy; permanent housing for formerly homeless persons; rental by client with or without subsidy; staying or living with family member or friend; transitional housing for homeless persons)	32.9%	60.9%
Homeless Situation (including place not meant for habitation; emergency shelter, including hotel or motel paid for with emergency shelter voucher; safe haven)	41.4%	21.7%
Institutional Situation (including hospital or other residential non-psychiatric medical facility; jail, prison, or juvenile detention; long-term care facility/nursing home; psychiatric hospital or other psychiatric facility; substance abuse treatment facility/detox)	23.0%	7.6%
Other (e.g., data not collected, client refused, client does not know, deceased)	2.8%	9.7%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.		

CHAPTER 2: METHODOLOGY

SCOPE OF PROJECT

Our evaluation of the Fort Lyon Supportive Residential Community Program (Fort Lyon Program or Program) was conducted pursuant to Section 24-32-725, C.R.S., which required the State Auditor to retain a contractor to conduct a longitudinal evaluation of the Fort Lyon Program that includes a pre- and post-evaluation of the Program, with 1 to 2 years prior to and after the participants' time in the Program, and to the extent possible to utilize a matched-comparison group. Specifically, statute required the evaluation to:

- Describe the annual direct cost of the Program.
- Describe the indirect costs associated with the Program, including life-cycle costs related to the buildings and grounds.
- Identify the annual amount spent on the Program by the Division of Housing within the Department of Local Affairs, or any other state agency, the federal government, or any local governments; any gifts, grants, or donations to the Program; and the value of any free programs provided for Program participants.
- Describe any savings, including cost avoidance, and benefits to the State, federal government, local governments, and any service providers supported with public funds as a result of the Program, including reductions for expenditures related to health care and the criminal justice system.
- Analyze outcomes for participants for the Program in general and based on length of time in the Program or severity of substance abuse history.
- Compare outcomes, costs, and benefits for the Program with a population that is similar to Program participants, and that is not receiving care.
- Compare outcomes, costs, and benefits for the Program with other programs that serve a similar client population and have similar goals for improving client well-being and reducing homelessness over the long-term.

YEAR 1 AND YEAR 2 FOCUS

Statute designed the evaluation to take place over a 2-year period, with a preliminary report due to the State Auditor by August 2017 (referred to as the Year 1 Report) and a final report due to the State Auditor by August 2018 (referred to as the Year 2 Report). The Year 1 Report included preliminary evaluation results, including information on the costs and benefits associated with the Fort Lyon Program, the outcomes for Program participants, and a comparison of the Fort Lyon Program with three other programs that serve similar populations. The findings from the comparison of the Fort Lyon Program with three other programs were reported in Year 1, and that chapter is available in Appendix A.

The Year 2 Report builds on Year 1 findings and includes additional information on Program implementation, participant cost information, and participant outcomes. The Year 2 report also includes an evaluation of individuals in a comparison group who have experienced homelessness, have substance use issues, and are demographically similar to Fort Lyon participants. The comparison group includes individuals who have received services from other programs and those who have not received any services.

METHODOLOGY

To align with the statutory objectives of this evaluation, we implemented a quasi-experimental, longitudinal, mixed methods research design. This means that we studied outcomes for participants during the time they were enrolled in the Program, we collected both quantitative and qualitative data, and we utilized a comparison group. For the cost analysis, we analyzed data over a 2- and 4-year period for the two groups, and we analyzed 1 year of post-program costs. This rigorous design provides information on the implementation and impact of the Fort Lyon Program. The collection of both quantitative and qualitative data adds scope and breadth to the evaluation in addition to providing the ability to triangulate the data, meaning that we analyzed multiple data sources to produce the results. The interrupted time-series analysis (longitudinal design) helps to demonstrate impact of the treatment by analyzing data prior to the intervention and after the intervention. The quasi-experimental design helps to compare outcomes between two similar groups.

COMPARISON GROUP

We used data provided by the Office of Behavioral Health within the Department of Human Services to develop a comparison group similar to Fort Lyon Program participants. The dataset included all individuals seeking services through the Office of Behavioral Health who identified themselves as homeless during Fiscal Year 2012. These individuals may have also been homeless prior to, or subsequent to that time. Using a matching methodology, we created a control group that matched the Fort Lyon Program participants based on age, gender, education, ethnicity, and race. In addition, as with Fort Lyon Program participants, the control group members had a history of substance abuse. After matching, the groups were virtually identical on every indicator. A broader description of the matching process is included in Appendix B.

DATA SOURCES

We used a variety of data sources, including reports and literature about other similar programs; data from the Departments of Local Affairs, Health Care Policy and Financing, Human Services, and Corrections, Judicial Department, Colorado Coalition for the Homeless, and several county sheriff's offices (Denver, El Paso, Mesa, Otero, Prowers, Pueblo, Weld); interviews and focus groups with Fort Lyon Program staff and both current

and past participants; interviews with staff and participants from other similar facilities; and a review of existing reports and data pertaining to the Program. A broader description of the data sources is included in Appendix B.

DATABASE DESCRIPTIONS

We collected and analyzed data for Fiscal Years 2012 through 2017 for the Fort Lyon Program participants. This included financial data on the total costs to operate and maintain the Fort Lyon Program; participants' demographics and lengths and dates of stay at Fort Lyon; fee-for-service data for physical and behavioral health claims for participants using Medicaid; Office of Behavioral Health data for all Fort Lyon participants receiving services through a public behavioral health provider; probation data; incarceration (prison) and movement data; housing records in the Homeless Management Information System data; and arrests, booking, and release dates (jail). A broader description of the databases is included in Appendix B.

ANALYSES

This evaluation follows a generally accepted methodology for conducting a cost study, including examining the cost of a wide variety of public services provided to Fort Lyon Program participants for a standardized time period prior to entering the Fort Lyon Program and during a standardized time period after entering the Program. In addition, for Year 2 of the evaluation, we compared public service costs for participants prior to entering the Program and during a standardized time period after exiting the Program. Each agency providing data for the evaluation collects and maintains cost and service data in different formats. In some cases, agencies reported an average annual cost per person for services; in other cases, we were able to obtain actual fee-for-service data. Due to the differences in cost data formats, we standardized the data for analysis and reporting. To compare costs for different time periods, we adjusted all cost data to Fiscal Year 2016-2017 using the Denver-Boulder-Greeley (Denver) Consumer Price Index for all Urban Consumers (CPI-U), *which is the only CPI-U for Colorado*. Exhibit 2.1 displays the CPI-U for all items in the Denver-Boulder-Greeley area for the years of the evaluation and shows the corresponding percentage adjustment to the evaluation year.

EXHIBIT 2.1 CPI-U Information		
Year	CPI-U	Adjustment to Evaluation Year
2017	254.995	
2016	246.643	3.3%
2015	239.990	5.9%
2014	237.200	7.0%
2013	230.791	9.5%
2012	224.568	11.9%
SOURCE: Adapted by Illuminate Evaluation Services from https://www.colmigateway.com/vosnet/analyzer/results.aspx?session=cpi&pu=1&plang=E .		

In the outcomes section, we used both descriptive and inferential statistics. The descriptive statistics include means and frequencies. For the inferential statistics, we used a growth curve model to examine changes in behavioral health. The behavioral health growth curve models included *day*, a variable that measured the number of days between the date of assessment administration and participants' first day in the Program. To explore the relationship between specific program components and *completion of program* and *exit to permanent housing*, we employed logistic regression analysis and chi-square.

CHAPTER 3: FORT LYON PROGRAM COSTS AND BENEFITS

This chapter presents our analysis of the public costs, savings, and benefits of the Fort Lyon Supportive Residential Community Program (Fort Lyon Program or Program). This section begins with a description of the direct and indirect program costs by fiscal year and includes data on the amount of funds provided to the Program and program expenditures. This section also includes a brief overview of life cycle costs, including a description of the Fort Lyon facility, its maintenance requirements, improvements made to the facility since the Fort Lyon Program began, and a description of potential future repairs and improvements needed at the facility.

We also examined the costs of public services provided to Fort Lyon Program participants for a standardized time period prior to entering the Fort Lyon Program (referred to as pre-enrollment), a standardized time period after entering the Program (referred to as post-enrollment), and a standardized time period after exiting the Program (referred to as post-program). The post-enrollment period includes the time participants spent in the Fort Lyon Program, while the post-program period does not include time spent in the Program. Finally, this chapter discusses some additional benefits of the Fort Lyon Program, including the regional economic impact of the Program.

PROGRAM COSTS

Funding for the Fort Lyon Program comes from a combination of State General Funds and Attorney General Custodial Funds/Mortgage Settlement Funds (settlement funds) set aside for Veterans' Housing and Fort Lyon Programs. The settlement funds are a one-time allocation and are available until the Fund is depleted; these funds roll forward every year. The State General Fund dollars are depleted first and then the settlement funds. Exhibit 3.1 summarizes the total Fort Lyon Program revenue and expenditures for each fiscal year by funding source. There was an increase in State General Funds in 2017 because the Custodial Funds were depleted, and the Joint Budget Committee approved the Department of Local Affairs' (DOLA) request to fund the Fort Lyon Program with State General Funds. This was approved for Fiscal Year 2018 and 2019. Indirect costs of the Program did occur each fiscal year but were minimal.

EXHIBIT 3.1 FORT LYON PROGRAM FUNDING FISCAL YEARS 2014 THROUGH 2017 (In Millions)					
	Fiscal Year 2014 ¹	Fiscal Year 2015	Fiscal Year 2016	Fiscal Year 2017 ²	Total
Revenue					
State General Funds	\$2.8	\$3.2	\$3.2	\$5.0	\$14.2
Settlement Funds	\$1.3	\$2.0	\$1.2	\$0.1	\$4.6
Total Revenue	\$4.1	\$5.2	\$4.4	\$5.1	\$18.8
Expenditures					
DOLA – Administrative	(\$0.04)	(\$1.10)	(\$0.06)	(\$1.14)	(\$3.33)
CCH - Program Administration	(\$2.0)	(\$3.1)	(\$2.5)	(\$2.8)	(\$10.3)
Bent County – Facility Maintenance	(\$1.8)	(\$1.8)	(\$1.8)	(\$2.2)	(\$7.7)
Other ³	(\$2.4)	(\$2.2)	(\$0.6)	(\$0)	(\$5.2)
Total Expenditures	(\$4.1)	(\$5.2)	(\$4.4)	(\$5.1)	(\$18.8)
NET	\$0	\$0	\$0	\$0	\$0
SOURCE: Illuminate Evaluation Services' analysis of financial data provided by the Department of Local Affairs.					
¹ The Fort Lyon Program started in September 2013; Fiscal Year 2014 costs were for a partial year.					
² The State General Funds do not carry over into Fiscal Year 2018.					
³ Other includes expenses associated with the referral network for Fort Lyon Program participants and facility maintenance costs incurred by the Department of Corrections from July 2013 through August 2013.					

The actual cost of the Program may have been higher than indicated by the expenditure figures above except for the fact that Fort Lyon Program participants contribute to the operation and maintenance of the Fort Lyon facility. Participants can voluntarily choose to work in food service, housekeeping, and grounds and facility maintenance through the Program's work modules for vocational training and experience. According to Bent County, which provides all facility and grounds maintenance, Fort Lyon Program participants' work contributions equate to an additional 18 Full Time Equivalents (FTE), which would normally cost about \$840,000 annually. Program participants receive stipends for their contributions, which Program staff report amounts to about \$55,000 annually and is paid for through the Program's budget. Essentially, resident contributions represent a cost savings for maintaining the Fort Lyon facility of about \$785,000 per year, while also providing vocational training and experience for residents.

Additionally, the State would incur some maintenance and operations costs to maintain the Fort Lyon facility in the absence of the Fort Lyon Program [i.e., if the facility was vacant]. We estimated these costs to be about \$897,000 annually to cover utilities, light maintenance, and security, based on the costs incurred by the Department of Corrections when it was responsible for maintaining the Fort Lyon facility after the state prison was closed.

LIFE CYCLE COSTS

There are also life cycle costs associated with the Fort Lyon facility. Life cycle costs include the cost of ongoing maintenance of the buildings and grounds, and the cost of future repairs. According to Bent County, of the 110 structures on the Fort Lyon campus, 70 are in use by the Fort Lyon Program, 32 are vacant, and eight are in the process of being renovated for future use by the Program or other entities. The Fort Lyon Program utilizes approximately 65 percent of the total site area, which is about 517 acres.

All maintenance of the facility and grounds at Fort Lyon is completed through a contract with Bent County, using the funds allocated to the Program and distributed by DOLA. Under the contract, Bent County has made improvements to the Fort Lyon facility including upgrades to the water, sewer, and irrigation systems; replacing lighting with more energy efficient options; painting; and landscaping improvements. Bent County also remodeled 10 structures that are used for housing Fort Lyon Program participants using funds from the State Weatherization Program; Bent County matched the Weatherization Program funds 50/50 using contract funds. In addition, Bent County replaced the boiler for the Fort Lyon facility through a Development Grant from the Colorado Division of Housing; Bent County matched the grant funds 50/50 using contract funds. In Calendar Year 2017, Bent County expanded their responsibility for local public transit using county dollars outside of the state contract, increasing the coverage area and frequency of service to include the Fort Lyon facility. This has reduced the demand on Program staff for shuttling participants locally.

Bent County estimates that in the next 5 to 10 years, the Fort Lyon facility will need the following primary repairs, with a total cost of \$2.7 million:

- Elevator repairs—Upgrades to the elevators are needed at an estimated cost of about \$600,000, which they reported needs to be completed before 2019 in order to avoid expensive full modernization requirement costs. In addition, one elevator, in Building 5, has been out of service. Bent County has spent \$40,000 to keep the elevators operational and received \$250,000 in emergency funds from the Department of Personnel & Administration for the repair of the elevators.
- Energy system repairs—Bent County reports that updates to the energy systems would substantially improve sustainability of the Fort Lyon facility. A Technical Energy Audit was conducted in 2014 and included a number of recommendations to improve energy efficiency. The Technical Energy Audit estimated the total cost of all the recommended improvements was about \$2.1 million over 5 years. According to the Technical Energy Audit, full implementation of the improvements should generate about \$345,000 in annual energy savings. DOLA and Bent County plan to implement the recommendations incrementally as funding becomes available. Bent County personnel have begun implementing some of these improvements and report these changes have resulted in a 30 percent reduction in utility costs.

- Other repairs—Other significant areas for improvement include water heaters and heating systems in the larger buildings, sprinkler systems, replacement of maintenance equipment, and other elevators.

In addition, DOLA has obtained two grants from the Environmental Protection Agency, the most recent awarded in July 2017. These grants have enabled asbestos removal in several of the buildings on the campus. In May 2018, Bent County awarded a bid for clean-up of three additional buildings on campus.

In response to interest expressed by legislators on ideas for repurposing the parts of the Fort Lyon campus that are not being used by the Fort Lyon Program, Bent County and DOLA began discussing ways to refit the unused buildings for another purpose. Bent County, recognizing the importance of the Fort Lyon campus to its community, provided the \$30,000 required match and applied for and received funding from the State Historical Fund to commission a Preservation and Reuse Master Plan to give guidance in future redevelopment and potential uses of the Fort Lyon campus, in addition to the Fort Lyon Program. Bent County, DOLA, CCH, and the Colorado Office of the State Architect are meeting to decide on the first buildings to renovate.

SAVINGS/BENEFITS

We conducted two analyses of cost savings and benefits for Year 2 of the evaluation. Since individuals who are chronically homeless are often the highest users of community services (e.g., emergency, inpatient and outpatient physical and behavioral health care, and social services), we applied two separate methodologies to assess the impact of the Fort Lyon Program on participants' community service costs. First, in both Year 1 and 2 of the evaluation, we applied a commonly used method in these types of cost analysis studies to determine if there are any pre-enrollment to post-enrollment cost savings for community services provided to participants. See Appendix C for the cost benefit analysis literature review. One benefit of using this methodology is that it captures the critical impact to participants of obtaining housing while they are in the Fort Lyon Program. According to the extensive research performed on Housing First programs, the moment an individual gains housing, their life experience changes, regardless of any services provided (Appendix H: National Alliance to End Homelessness, 2016; HUD Housing First Supportive Housing Policy Brief). This methodology also allows for a larger number of study participants and does not exclude current participants from the analysis. Second, we included additional analyses to investigate pre-enrollment costs compared to post-program costs. This methodology excludes the time the participants were in the Fort Lyon Program and starts the post-program period upon their exit date. This methodology does not control for whether a participant had housing during the post-program period because participants may or may not have housing at the time they exit the Program.

For this analysis, we developed four study groups: (1) The first group had to have at least 1 year of available post-enrollment data, (2) the second group had to have at least 2 years of

available post-enrollment data, (3) the third group had to have at least 1 year of available post-program data, and (4) the fourth group had to have at least 2 years of available post-program data. Since the 2-year study groups had to have more post data, they include participants who entered the Program earlier in its existence. The four study groups used for the cost analysis are described in the next section. For each study group, we compared pre- and post-enrollment/program costs related to physical and behavioral health care, probation, incarceration/prison, jail, shelter, and housing vouchers. We also considered the economic benefit of the Program, which is discussed later in this chapter.

For Year 2 of the evaluation, we also collected data from the Office of Behavioral Health for a comparison group of individuals reporting homelessness in Fiscal Year 2012, and who may have been homeless prior to or subsequent to that time and who had received behavioral health services through the Office of Behavioral Health for issues such as substance use and abuse, mood and anxiety disorders, and psychotic disorders. We assembled the comparison group using nearest neighbor matching as implemented in the R module MatchIt (see Appendix B for a more detailed description of the matching methodology; Ho, Imai, King, & Stuart, 2011). The overall goal of matching is to minimize statistical bias by creating an artificial comparison group that matches the Fort Lyon group on key characteristics. We implemented nearest neighbor matching to find a comparison group participant for each Fort Lyon participant (n=968). We selected the comparison group of 968 persons from the total Office of Behavioral Health sample of 3,623. The propensity score model included age, gender, education, ethnicity, and race as predictors. The mean age of both groups is about 50 years old, with the majority of participants being white, non-Hispanic males with a GED or high school diploma, and with a history of substance use. Since each Program participant had a matching comparison individual, we were able to search for records for the comparison individual for the same time span as the Program participant. For example, if we searched for a Fort Lyon participant from January 1, 2015 through January 1, 2017, we searched for their matching comparison individual for that same time period, regardless of whether the comparison individual was seeking assistance or receiving services for homelessness.

COST ANALYSIS STUDY SAMPLE

All Fort Lyon Program participants were included in the cost analysis study sample if they had at least 1 year of post-enrollment data. Therefore, participants recently entering the Program are not included in this analysis. Additionally, participants were included only if they were on Medicaid during both the pre-enrollment and post-enrollment or post-program period. This is to control for the effect of the Medicaid expansion implemented as part of the Affordable Care Act (ACA). The Medicaid expansion went into effect January 1, 2014, which is during the period of study for our cost analysis and more specifically, is during the pre-enrollment period for some study group participants. Consequently, some participants who were not covered under Medicaid in the pre-enrollment time period were covered in the post-enrollment or post-program time period. If these individuals were

included in the study groups, it would lead to an underestimate of pre-enrollment health care costs because we were only able to collect costs paid through Medicaid. Collecting health care data for non-Medicaid participants would require accessing data directly from hospitals and medical centers throughout the state, which was not feasible for this evaluation. According to Fort Lyon Program staff, many participants did not have Medicaid until the expansion. As of April 2016, Medicaid enrollment in Colorado had grown by 72 percent since expansion began. We also conducted an analysis of all Fort Lyon participants, regardless of whether they were on Medicaid, and this information is presented in Appendix D.

Exhibit 3.2 displays the percentage of Fort Lyon participants in each study group who were on Medicaid pre-and post- enrollment/program. Additionally, we limited the sample to participants whose matching comparison subject was also on Medicaid during both the pre- and post- enrollment/program time period (see Exhibit 3.3 for n-sizes for each study group). The participants included in the 2-year study groups are a subset of the 1-year study groups. The majority of Fort Lyon and comparison group participants within the study groups are white, non-Hispanic males around 50 years of age, with a GED or high school diploma.

EXHIBIT 3.2 FORT LYON PROGRAM DESCRIPTION COST STUDY GROUPS – MEDICAID ENROLLMENT	
Study group	% of full sample on Medicaid both pre- and post-
1-Year Post-Enrollment Data	75%
2-Years Post-Enrollment Data ¹	71%
1-Year Post-Program Data	66%
2-Years Post-Program Data ¹	63%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.	
¹ The participants included in the 2-year study groups are a subset of the 1-year study groups.	

EXHIBIT 3.3 FORT LYON PROGRAM DESCRIPTION COST STUDY GROUPS – STUDY GROUP N-SIZES	
Study group	# of participants in each study group
1-Year Post-Enrollment Data	217
2-Years Post-Enrollment Data ¹	154
1-Year Post-Program Data	132
2-Years Post-Program Data ¹	77
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.	
¹ The participants included in the 2-year study groups are a subset of the 1-year study groups.	

Exhibits 3.4 and 3.5 show information on participation and length of stay in the Fort Lyon Program for each study group. The average total number of days participants stayed in the Program is a little less than 10 months for the 1-year post-enrollment group and a little less than 1 year for the 2-years post-enrollment group. Compared to the post-enrollment groups, the post-program groups had smaller average total number of days in the Program, with the 1-year post-program group averaging about 7 months, and the 2-year post-program group averaging about 6 months. We were not able to determine if any of the study group participants resided out of state for any portion of the pre- or post-enrollment/program time period. Any services received out of state during the time periods reviewed would not be captured in this cost analysis.

EXHIBIT 3.4 FORT LYON PROGRAM DESCRIPTION COST STUDY GROUPS – STAY INFORMATION POST-ENROLLMENT STUDY GROUPS		
Fort Lyon Stay Information	Participants with 1-Year Post-Enrollment Data (n=217)	Participants with 2-Years Post-Enrollment Data ¹ (n=154)
Total no. of days in Program		
Median	227	306
Average	291	348
Range	3 days-1,009 days	5 days-1,009 days
Number of times entered Fort Lyon Program		
1 time	186 (85.7%)	130 (84.9%)
2 times	31 (14.3%)	24 (15.6%)
Current Fort Lyon Program client	23 (10.6%)	14 (9.1%)
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.		
¹ The participants included in the 2-year study group are a subset of the 1-year study group.		

EXHIBIT 3.5 FORT LYON PROGRAM DESCRIPTION COST STUDY GROUPS –STAY INFORMATION POST-PROGRAM STUDY GROUPS		
Fort Lyon Stay Information	Participants with 1-Year Post-Program Data (n=132)	Participants with 2-Years Post-Program Data ¹ (n=77)
Total no. of days in Program		
Median	128	115
Average	214	180
Range	3 days-921 days	5 days-806 days
Number of times entered Fort Lyon Program		
1 time	112 (84.8%)	63 (81.8%)
2 times	20 (15.2%)	14 (18.2%)
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.		
¹ The participants included in the 2-year study group are a subset of the 1-year study group.		

DATA COLLECTION LIMITATIONS

We were able to access data from many state agencies for this evaluation and the data we collected covers many of the public service costs for Fort Lyon participants. However, we want to acknowledge several data collection limitations. First, due to privacy issues, we were not able to access data for a comparison population directly from another program serving homeless individuals in Colorado (i.e., a Permanent Supportive Housing program), which would have allowed us to access more data on the comparison group's history of homelessness, their history of physical and behavioral health issues, and their use of services for homeless individuals. This also prevented us from having some common data points for both the comparison group and Fort Lyon participants, which limited the available variables we could use for matching. For example, we did not have a common data point to use for matching on substance use or for matching on history of homelessness (i.e. times homeless in the last year). Second, we were also not able to access actual cost data for Fort Lyon Program and comparison group participants for meal services, shelter use, or housing vouchers. Third, we did not have access to hospital costs for participants not on Medicaid since there is no centralized system for this type of data. Fourth, there is no centralized system for jail data, but we were able to collect data from a sample of jails throughout the state. Regardless of these limitations, the comparison group matched Fort Lyon participants on many key characteristics.

SAVINGS DUE TO CHANGE IN COMMUNITY SERVICE COSTS PRE- TO POST- PROGRAM

The difference in pre-enrollment costs compared to post-enrollment/program costs for physical and behavioral health care, probation, incarceration/prison, jail, shelter, and housing vouchers are described below.

PHYSICAL HEALTH CARE DATA

We used Medicaid health care data provided by the Colorado Department of Health Care Policy and Financing (HCPF) to calculate pre-enrollment, post-enrollment, and post-program costs for each study group. The health care data included primarily physical health care data although there was a very small percentage of fee-for-service behavioral health claims included for individuals who received services through Medicaid. For Year 2 of the evaluation, we were able to break out physical health care data into six areas: 1) emergency room, 2) emergency transport, 3) inpatient, 4) outpatient, 5) pharmacy, and 6) other, which includes services such as dental services, nursing facilities, labs, and medical supplies.

1-Year Pre-Enrollment/1-Year Post-Enrollment. The total physical health care cost savings for Fort Lyon Program participants in the 1-year post-enrollment study group was about \$290,000, which was a 9 percent decrease from pre- to post- enrollment (see Exhibit 3.6). The comparison group showed no cost savings. Since the HCPF database specifically

captures Medicaid claims, this represents a cost savings to the public and to the federal and state government. In particular, Program participants had the highest pre- to post-enrollment cost savings for emergency room and inpatient services, while the most significant cost increases were for outpatient and pharmacy. A smaller number of Program participants were found using emergency room, emergency transport, and inpatient services during the post-enrollment period compared to the pre-enrollment period (see Appendix E for n-sizes).

This finding is consistent with other studies that have found decreases in costs for emergency and inpatient services and increases in outpatient services. Theoretically, exiting participants become more stabilized and have more physical and emotional support systems in place, which results in them seeking health care on a less emergent and more regular basis through less costly outpatient services.

EXHIBIT 3.6 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – PHYSICAL HEALTH CARE					
Participants with 1-Year Post-Enrollment Data (n=217)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
ER	Fort Lyon	\$881,000	\$541,000	(\$340,000)	-39%
	Comparison	\$247,000	\$283,000	\$36,000	+15%
Emergency Transport	Fort Lyon	\$78,000	\$68,000	(\$10,000)	-13%
	Comparison	\$23,000	\$33,000	\$10,000	+43%
Inpatient	Fort Lyon	\$1,200,000	\$670,000	(\$530,000)	-44%
	Comparison	\$432,000	\$292,000	(\$140,000)	-32%
Outpatient	Fort Lyon	\$289,000	\$600,000	\$311,000	+108%
	Comparison	\$190,000	\$198,000	\$8,000	+4%
Pharmacy	Fort Lyon	\$213,000	\$560,000	\$347,000	+163%
	Comparison	\$396,000	\$429,000	\$33,000	+8%
Other ¹	Fort Lyon	\$423,000	\$353,000	(\$70,000)	-17%
	Comparison	\$914,000	\$961,000	\$47,000	+5%
Total	Fort Lyon	\$3,080,000	\$2,790,000	(\$290,000)	-9%
	Comparison	\$2,200,000	\$2,200,000	\$0	+0%
Average per Participant	Fort Lyon	\$14,200	\$12,900	(\$1,300)	-9%
	Comparison	\$10,100	\$10,100	\$0	+0%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by the Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

2-Years Pre-Enrollment/2-Years Post-Enrollment. Program participants in the 2-year post-enrollment study group showed a cost increase for physical health care of about \$1.18 million, which was a 43 percent increase from pre- to post- enrollment (see Exhibit 3.7). The comparison group also showed a cost increase of about \$740,000, or 30 percent. In particular, Program participants had a large cost increase from pre- to post- enrollment for pharmacy and outpatient services. While the number of Program participants using physical health care services increased somewhat from pre- to post- enrollment, the cost increase appears to be more related to a large increase in the number of procedures during the post-enrollment period compared to the pre-enrollment period (see Appendix E for n-sizes).

One possible explanation for these increases is that the 2-year post-enrollment group has been out of the Program for a longer period of time and after attending the Program, may be more apt to seek services than they did prior to entering the Program. Additionally, research shows that newly enrolled Medicaid patients often use their health insurance right away (i.e., pent-up demand), but the increase in health care costs are likely temporary (Lo et al., 2014). Another possible explanation for the difference between the 1-year post-enrollment group and the 2-year post-enrollment group is that the 1-year post-enrollment group had housing at Fort Lyon during the majority of the post-enrollment period, while the 2-year post-enrollment group would have had housing at Fort Lyon for about half of the post-enrollment period. Research shows costs decline when an individual gains housing since this often results in a greater level of stability. Since post-program follow-up data is only available for a small subset of former Program participants, it is difficult to know how many had permanent housing during the post-enrollment time period after leaving the Fort Lyon Program. Finally, research shows health care costs increase as a function of increasing age (Yamamoto, 2013), which could be a factor, particularly for the 2-year study groups since they cover a longer time span.

EXHIBIT 3.7 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – PHYSICAL HEALTH CARE					
Participants with 2-Years Post-Enrollment Data (n=154)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Enrollment Costs	Difference	% Change
ER	Fort Lyon	\$731,000	\$823,000	\$92,000	+13%
	Comparison	\$343,000	\$368,000	\$25,000	+7%
Emergency Transport	Fort Lyon	\$59,000	\$94,000	\$35,000	+59%
	Comparison	\$30,000	\$39,000	\$9,000	+30%
Inpatient	Fort Lyon	\$998,000	\$1,040,000	\$42,000	+4%
	Comparison	\$500,000	\$588,000	\$88,000	+18%
Outpatient	Fort Lyon	\$295,000	\$655,000	\$360,000	+122%
	Comparison	\$297,000	\$266,000	(\$31,000)	-10%
Pharmacy	Fort Lyon	\$178,000	\$750,000	\$572,000	+321%
	Comparison	\$387,000	\$670,000	\$283,000	+73%
Other ¹	Fort Lyon	\$477,000	\$555,000	\$78,000	+16%
	Comparison	\$946,000	\$1,310,000	\$364,000	+38%
Total	Fort Lyon	\$2,740,000	\$3,920,000	\$1,180,000	+43%
	Comparison	\$2,500,000	\$3,240,000	\$740,000	+30%
Average per Participant	Fort Lyon	\$17,800	\$25,500	\$7,700	+43%
	Comparison	\$16,200	\$21,000	\$4,800	+30%
SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.					
¹ Other includes services such as dental services, nursing facilities, labs, and medical supplies.					

1-Year Pre-Enrollment/1-Year Post-Program. The total physical health care cost savings for Program participants in the 1-year post-program study group was about \$2.26 million, which was a 55 percent decrease from pre-enrollment to post-program (see Exhibit 3.8). The comparison group also showed a cost savings of about \$370,000, which was a 20 percent decrease from pre-enrollment to post-program. Since the HCPF database specifically captures Medicaid claims, this represents a cost savings to the public and to the federal and state government. Program participants had pre-enrollment to post-program cost savings in every physical health care area (see Appendix E for n-sizes). Comparison group members also experienced cost savings in all areas, except for pharmacy.

EXHIBIT 3.8 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – PHYSICAL HEALTH CARE					
Participants with 1-Year Post-Program Data (n=132)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
ER	Fort Lyon	\$1,210,000	\$556,000	(\$654,000)	-54%
	Comparison	\$262,000	\$158,000	(\$104,000)	-40%
Emergency Transport	Fort Lyon	\$99,000	\$64,000	(\$35,000)	-35%
	Comparison	\$24,000	\$22,000	(\$2,000)	-8%
Inpatient	Fort Lyon	\$1,480,000	\$619,000	(\$861,000)	-58%
	Comparison	\$448,000	\$233,000	(\$215,000)	-48%
Outpatient	Fort Lyon	\$360,000	\$199,000	(\$161,000)	-45%
	Comparison	\$151,000	\$106,000	(\$45,000)	-30%
Pharmacy	Fort Lyon	\$447,000	\$225,000	(\$222,000)	-50%
	Comparison	\$278,000	\$339,000	\$61,000	+22%
Other ¹	Fort Lyon	\$542,000	\$216,000	(\$326,000)	-60%
	Comparison	\$729,000	\$658,000	(\$71,000)	-10%
Total	Fort Lyon	\$4,140,000	\$1,880,000	(\$2,260,000)	-55%
	Comparison	\$1,890,000	\$1,520,000	(\$370,000)	-20%
Average per Participant	Fort Lyon	\$31,400	\$14,200	(\$17,200)	-55%
	Comparison	\$14,300	\$11,500	(\$2,800)	-20%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

2-Years Pre-Enrollment/2-Years Post-Program. Program participants in the 2-year post-program study group showed a cost increase for physical health care of about \$820,000, which was a 50 percent increase from pre-enrollment to post-program (see Exhibit 3.9). The comparison group showed a larger cost increase of about 73 percent, or \$715,000. Program participants had cost increases from pre-enrollment to post-program in all areas. Once again, the cost increase appears to be related to a large increase in the number of procedures during the post-program period compared to the pre-enrollment period (see Appendix E for n-sizes). As mentioned earlier, one possible explanation for these increases is that after attending the Program, participants may be more apt to seek services than they did prior to entering the Program.

EXHIBIT 3.9 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – PHYSICAL HEALTH CARE					
Participants with 2-Years Post-Program Data (n=77)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Program Costs	Difference	% Change
ER	Fort Lyon	\$403,000	\$711,000	\$308,000	+76%
	Comparison	\$175,000	\$164,000	(\$11,000)	-6%
Emergency Transport	Fort Lyon	\$32,000	\$77,000	\$45,000	+141%
	Comparison	\$16,000	\$16,000	\$0	+0%
Inpatient	Fort Lyon	\$712,000	\$900,000	\$188,000	+26%
	Comparison	\$202,000	\$320,000	\$118,000	+58%
Outpatient	Fort Lyon	\$129,000	\$237,000	\$108,000	+84%
	Comparison	\$156,000	\$103,000	(\$53,000)	-34%
Pharmacy	Fort Lyon	\$104,000	\$200,000	\$96,000	+92%
	Comparison	\$140,000	\$374,000	\$234,000	+167%
Other ¹	Fort Lyon	\$251,000	\$329,000	\$78,000	+31%
	Comparison	\$296,000	\$725,000	\$429,000	+145%
Total	Fort Lyon	\$1,630,000	\$2,450,000	\$820,000	+50%
	Comparison	\$985,000	\$1,700,000	\$715,000	+73%
Average per Participant	Fort Lyon	\$21,200	\$31,800	\$10,600	+50%
	Comparison	\$12,800	\$22,100	\$9,300	+73%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

BEHAVIORAL HEALTH CARE DATA

Behavioral health care data provided by the Office of Behavioral Health (OBH) within the Department of Human Services was used to calculate pre-enrollment, post-enrollment, and post-program behavioral health care costs. These costs include Medicaid costs. Behavioral health care data includes the cost of services such as group and individual therapy, case management, and drug and/or alcohol services. In Year 2 of the evaluation, we were able to separate behavioral health care claims into two areas: inpatient and outpatient.

1-Year Pre-Enrollment/1-Year Post-Enrollment. The total behavioral health care cost savings for Program participants in the 1-year post-enrollment study group was about \$305,000, which was a 34 percent decrease from pre- to post- enrollment (see Exhibit 3.10) and represents a cost savings to the public and to the federal and state government. The comparison group showed a cost increase of \$150,000, or 10 percent. In particular, Program participants had pre- to post- enrollment cost savings for outpatient services, while a cost increase was seen

for inpatient services. A smaller number of Program participants were found using outpatient services during the post-enrollment period compared to the pre-enrollment period and fewer units of treatment occurred during the post-enrollment period compared to the pre-enrollment period (see Appendix E for n-sizes).

EXHIBIT 3.10 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – BEHAVIORIAL HEALTH CARE					
Participants with 1-Year Post-Enrollment Data (n=217)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Inpatient	Fort Lyon	\$94,000	\$123,000	\$29,000	+31%
	Comparison	\$38,000	\$57,000	\$19,000	+50%
Outpatient	Fort Lyon	\$805,000	\$471,000	(\$334,000)	-41%
	Comparison	\$1,530,000	\$1,660,000	\$130,000	+8%
Total	Fort Lyon	\$899,000	\$594,000	(\$305,000)	-34%
	Comparison	\$1,570,000	\$1,720,000	\$150,000	+10%
Average per Participant	Fort Lyon	\$4,100	\$2,700	(\$1,400)	-34%
	Comparison	\$7,200	\$7,900	\$700	+10%
SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.					

2-Years Pre-Enrollment/2-Years Post-Enrollment. The total behavioral health care cost savings for Program participants in the 2-year post-enrollment study group was about \$44,000, which was a 5 percent decrease from pre- to post- enrollment (see Exhibit 3.11) and represents a cost savings to the public and to the federal and state government. The comparison group showed a substantial cost increase of \$996,000, or 89 percent. Once again, Program participants had pre- to post- enrollment cost savings for outpatient services, while a cost increase was seen for inpatient services. A smaller number of Program participants were found using outpatient services during the post-enrollment period compared to the pre-enrollment period and fewer units of treatment occurred during the post-enrollment period compared to the pre-enrollment period (see Appendix E for n-sizes).

EXHIBIT 3.11 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – BEHAVIORIAL HEALTH CARE					
Participants with 2-Years Post-Enrollment Data (n=154)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Enrollment Costs	Difference	% Change
Inpatient	Fort Lyon	\$60,000	\$141,000	\$81,000	+135%
	Comparison	\$22,000	\$78,000	\$56,000	+255%
Outpatient	Fort Lyon	\$805,000	\$680,000	(\$125,000)	-16%
	Comparison	\$1,100,000	\$2,040,000	\$940,000	+85%
Total	Fort Lyon	\$865,000	\$821,000	(\$44,000)	-5%
	Comparison	\$1,120,000	\$2,120,000	\$996,000	+89%
Average per Participant	Fort Lyon	\$5,600	\$5,300	(\$300)	-5%
	Comparison	\$7,300	\$13,800	\$6,500	+89%

SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.

1-Year Pre-Enrollment/1-Year Post-Program. Program participants in the 1-year post-program study group showed a small cost increase for behavioral health care of about \$26,000, which was a 4 percent increase from pre- to post- program (see Exhibit 3.12). The comparison group showed a larger cost increase of about \$188,000, or 21 percent. A larger number of Program participants used inpatient services during the post-program period compared to the pre-enrollment period and a greater number of units of inpatient treatment occurred during the post-program period compared to the pre-enrollment period (see Appendix E for n-sizes).

EXHIBIT 3.12 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – BEHAVIORIAL HEALTH CARE					
Participants with 1-Year Post-Program Data (n=132)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Inpatient	Fort Lyon	\$65,000	\$69,000	\$4,000	+6%
	Comparison	\$11,000	\$44,000	\$33,000	+300%
Outpatient	Fort Lyon	\$529,000	\$551,000	\$22,000	+4%
	Comparison	\$881,000	\$1,040,000	\$159,000	+18%
Total	Fort Lyon	\$594,000	\$620,000	\$26,000	+4%
	Comparison	\$892,000	\$1,080,000	\$188,000	+21%
Average per Participant	Fort Lyon	\$4,500	\$4,700	\$200	+4%
	Comparison	\$6,800	\$8,200	\$1,400	+21%

SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.

2-Years Pre-Enrollment/2-Years Post-Program. Program participants in the 2-year post-program study group showed a cost increase for behavioral health care of about \$279,000, which was a 140 percent increase from pre-enrollment to post-program (see Exhibit 3.13). The comparison group showed a similar cost increase of about 134 percent, or \$437,000. Similar to the 1-year post-program group, a larger number of Program participants used inpatient services during the post-program period compared to the pre-enrollment period and a greater number of units of inpatient treatment occurred during the post-program period compared to the pre-enrollment period (see Appendix E for n-sizes).

EXHIBIT 3.13 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – BEHAVIORIAL HEALTH CARE					
Participants with 2-Years Post-Program Data (n=77)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Program Costs	Difference	% Change
Inpatient	Fort Lyon	\$16,000	\$56,000	\$40,000	+250%
	Comparison	\$7,900	\$46,000	\$38,100	+482%
Outpatient	Fort Lyon	\$183,000	\$422,000	\$239,000	+131%
	Comparison	\$318,000	\$717,000	\$399,000	+125%
Total	Fort Lyon	\$199,000	\$478,000	\$279,000	+140%
	Comparison	\$325,900	\$763,000	\$437,100	+134%
Average per Participant	Fort Lyon	\$2,600	\$6,200	\$3,600	+140%
	Comparison	\$4,200	\$9,900	\$5,700	+134%
SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.					

JUDICIAL SERVICES DATA

We used probation, incarceration/prison, and jail data provided by the Colorado Judicial Branch, the Department of Corrections, and from several jails to calculate pre-enrollment, post-enrollment, and post-program costs for judicial services. Statewide data was available for probation and incarceration/prison, while jail data is housed locally at each jail. Since we could not access a centralized database for jail data, we collected data directly from a sample of jails. We utilized the enrollment and exit addresses for Program participants to determine the cities the majority of participants enter the program from or exit to. We then used this data to find what county jails were closest to those cities. Consequently, the jail data is from a subset of jails including: Denver, El Paso, Mesa, Otero, Prowers, Pueblo, and Weld counties.

1-Year Pre-Enrollment/1-Year Post-Enrollment. The total judicial system cost savings for Program participants in the 1-year post-enrollment study group was about \$801,000, which was an 80 percent decrease from pre- to post- enrollment (see Exhibit 3.14) and represents

a cost savings to the public and to the federal and state government. The comparison group also showed a cost decrease of \$741,000, or 68 percent. Program participants decreased costs by a higher percentage than the comparison group in all areas (see Appendix E for n-sizes).

EXHIBIT 3.14 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – JUDICIAL SYSTEM DATA					
Participants with 1-Year Post-Enrollment Data (n=217)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Probation	Fort Lyon	\$61,000	\$11,000	(\$50,000)	-82%
	Comparison	\$22,000	\$23,000	\$1,000	+5%
Incarceration/Prison	Fort Lyon	\$35,000	\$13,000	(\$22,000)	-63%
	Comparison	\$217,000	\$122,000	(\$95,000)	-44%
Jail	Fort Lyon	\$912,000	\$175,000	(\$737,000)	-81%
	Comparison	\$851,000	\$204,000	(\$647,000)	-76%
Total	Fort Lyon	\$1,000,000	\$199,000	(\$801,000)	-80%
	Comparison	\$1,090,000	\$349,000	(\$741,000)	-68%
Average per Participant	Fort Lyon	\$4,600	\$900	(\$3,700)	-80%
	Comparison	\$5,000	\$1,600	(\$3,400)	-68%
SOURCE: Illuminate Evaluation Services' analysis of judicial system data.					

2-Years Pre-Enrollment/2-Years Post-Enrollment. The total judicial system cost savings for Program participants in the 2-years post-enrollment study group was about \$145,000, which was a 31 percent decrease from pre- to post- enrollment (see Exhibit 3.15) and represents a cost savings to the public and to the federal and state government. Two Fort Lyon participants accounted for most of the decrease in incarceration/prison costs. The comparison group also showed a cost decrease of \$165,000, or 24 percent (see Appendix E for n-sizes).

EXHIBIT 3.15 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS - JUDICIAL SYSTEM DATA					
Participants with 2-Years Post-Enrollment Data (n=154)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Enrollment Costs	Difference	% Change
Probation	Fort Lyon	\$74,000	\$30,000	(\$44,000)	-59%
	Comparison	\$27,000	\$31,000	\$4,000	+15%
Incarceration/Prison	Fort Lyon	\$77,000	\$59,000	(\$18,000)	-23%
	Comparison	\$411,000	\$201,000	(\$210,000)	-51%
Jail	Fort Lyon	\$310,000	\$227,000	(\$83,000)	-27%
	Comparison	\$247,000	\$288,000	\$41,000	+17%
Total	Fort Lyon	\$461,000	\$316,000	(\$145,000)	-31%
	Comparison	\$685,000	\$520,000	(\$165,000)	-24%
Average per Participant	Fort Lyon	\$3,000	\$2,100	(\$900)	-31%
	Comparison	\$4,500	\$3,400	(\$1,100)	-24%

SOURCE: Illuminate Evaluation Services' analysis of judicial system data.

1-Year Pre-Enrollment/1-Year Post-Program. The total judicial system cost savings for Program participants in the 1-year post-program study group was about \$504,000, which was a 70 percent decrease from pre- to post- program (see Exhibit 3.16) and represents a cost savings to the public and to the federal and state government. The comparison group also showed a cost decrease of \$600,000, or 72 percent (see Appendix E for n-sizes).

EXHIBIT 3.16 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS - JUDICIAL SYSTEM DATA					
Participants with 1-Year Post-Program Data (n=132)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Probation	Fort Lyon	\$6,200	\$21,000	\$14,800	+239%
	Comparison	\$3,200	\$2,600	(\$600)	-19%
Incarceration/Prison	Fort Lyon	\$35,000	\$29,000	(\$6,000)	-17%
	Comparison	\$211,000	\$131,000	(\$80,000)	-38%
Jail	Fort Lyon	\$682,000	\$169,000	(\$513,000)	-75%
	Comparison	\$617,000	\$97,000	(\$520,000)	-84%
Total	Fort Lyon	\$723,000	\$219,000	(\$504,000)	-70%
	Comparison	\$831,000	\$231,000	(\$600,000)	-72%
Average per Participant	Fort Lyon	\$5,500	\$1,700	(\$3,800)	-70%
	Comparison	\$6,300	\$1,800	(\$4,500)	-72%

SOURCE: Illuminate Evaluation Services' analysis of judicial system data.

2-Years Pre-Enrollment/2-Years Post-Program. The total judicial system cost savings for Program participants in the 2-years post-program study group was about \$4,000, which was a 2 percent decrease from pre- to post- program (see Exhibit 3.17) and represents a cost savings to the public and to the federal and state government. Two Fort Lyon participants accounted for all of the increase in incarceration/prison costs. The comparison group also showed a cost decrease of \$164,000, or 52 percent. (see Appendix E for n-sizes).

EXHIBIT 3.17 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – JUDICIAL SYSTEM DATA					
Participants with 2-Years Post-Program Data (n=77)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Program Costs	Difference	% Change
Probation	Fort Lyon	\$6,900	\$19,000	\$12,100	+175%
	Comparison	\$14,000	\$4,500	(\$9,500)	-68%
Incarceration/Prison	Fort Lyon	\$33,000	\$62,000	\$29,000	+88%
	Comparison	\$208,000	\$55,000	(\$153,000)	-74%
Jail	Fort Lyon	\$208,000	\$163,000	(\$45,000)	-22%
	Comparison	\$92,000	\$90,000	(\$2,000)	-2%
Total	Fort Lyon	\$248,000	\$244,000	(\$4,000)	-2%
	Comparison	\$314,000	\$150,000	(\$164,000)	-52%
Average per Participant	Fort Lyon	\$3,200	\$3,200	\$0	-2%
	Comparison	\$4,100	\$1,900	(\$2,200)	-52%
SOURCE: Illuminate Evaluation Services' analysis of judicial system data.					

SHELTER AND HOUSING VOUCHER DATA

Staying in a shelter is typically paid for through a combination of public and private funds. In contrast, housing vouchers are funded through federal and state funding sources and are used to help pay for transitional or permanent housing. Due to data limitations, we estimated pre-enrollment, post-enrollment, and post-program costs for shelters and housing vouchers based on participants reported living situation prior to entering the Fort Lyon Program and their destination after exiting the Program. DOLA was able to provide data on the housing vouchers for some permanent supportive housing that it issued in Colorado. However, there are other public housing agencies that also issue vouchers and we were not able to obtain information from them, nor were we able to obtain data from shelters.

For participants who reported entering from or exiting to a shelter or to a living situation using a housing voucher, it was not possible to determine their length of stay at a shelter or how long they used a housing voucher, so for each of the study groups, if they reported entering from a shelter or entering from a living situation using a housing voucher, it was

assumed they had the same living situation throughout the entire pre-enrollment time period. It was also assumed that if a participant exited the Program to a shelter or to a living situation using a housing voucher that they remained there for the entire post-enrollment/program time period. This is likely an overestimate of both pre- and post- costs since it is likely participants went in and out of these systems. We used U.S. Department of Housing and Urban Development data from a national report on the costs associated with homelessness to create an average cost per day per person in a shelter, which was \$31. CCH provided an estimate of the average cost per day per person using a housing voucher in Colorado, which was \$25. Comparison group costs are not provided since data was not available for all subjects.

1-Year Pre-Enrollment/1-Year Post-Enrollment. The total shelter and housing vouchers cost savings for Program participants in the 1-year post-enrollment study group was about \$495,000, which was a 65 percent decrease from pre- to post- enrollment (see Exhibit 3.18) and represents a cost savings to the public and to the federal and state government. A decrease occurred from pre-enrollment to post-enrollment in the number of Program participants in shelters, while an increase occurred in the number of participants using housing vouchers (see Appendix E for n-sizes). This indicates participants are more likely entering from a shelter or temporary housing but exiting to permanent housing.

EXHIBIT 3.18 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – SHELTER AND VOUCHER DATA					
Participants with 1-Year Post-Enrollment Data (n=217)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Shelter	Fort Lyon	\$633,000	\$164,000	(\$469,000)	-74%
Voucher	Fort Lyon	\$127,000	\$101,000	(\$26,000)	-20%
Total	Fort Lyon	\$760,000	\$265,000	(\$495,000)	-65%
Average per Participant	Fort Lyon	\$3,500	\$1,200	(\$2,300)	-65%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.					

2-Years Pre-Enrollment/2-Years Post-Enrollment. The total shelter and housing vouchers cost savings for Program participants in the 2-years post-enrollment study group was about \$421,000, which was a 42 percent decrease from pre- to post-enrollment (see Exhibit 3.19) and represents a cost savings to the public and to the federal and state government. Once again, a decrease occurred from pre-enrollment to post-enrollment in the number of Program participants in shelters, while an increase occurred in the number of participants using housing vouchers (see Appendix E for n-sizes).

EXHIBIT 3.19 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – SHELTER AND VOUCHER DATA					
Participants with 2-Years Post-Enrollment Data (n=154)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Enrollment Costs	Difference	% Change
Shelter	Fort Lyon	\$791,000	\$256,000	(\$535,000)	-68%
Voucher	Fort Lyon	\$200,000	\$314,000	\$114,000	+57%
Total	Fort Lyon	\$991,000	\$570,000	(\$421,000)	-42%
Average per Participant	Fort Lyon	\$6,400	\$3,700	(\$2,700)	-42%

SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.

1-Year Pre-Enrollment/1-Year Post-Program. The total shelter and housing vouchers cost savings for Program participants in the 1-year post-program study group was about \$35,000, which was an 8 percent decrease from pre- to post-program (see Exhibit 3.20) and represents a cost savings to the public and to the federal and state government. Once again, a decrease occurred from pre- to post-program in the number of Program participants in shelters, while an increase occurred in the number of participants using housing vouchers (see Appendix E for n-sizes).

EXHIBIT 3.20 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – SHELTER AND VOUCHER DATA					
Participants with 1-Year Post-Program Data (n=132)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Shelter	Fort Lyon	\$339,000	\$113,000	(\$226,000)	-67%
Voucher	Fort Lyon	\$73,000	\$264,000	\$191,000	+262%
Total	Fort Lyon	\$412,000	\$377,000	(\$35,000)	-8%
Average per Participant	Fort Lyon	\$3,100	\$2,900	(\$200)	-8%

SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.

2-Years Pre-Enrollment/2-Years Post-Program. The total shelter and housing vouchers cost savings for Program participants in the 2-years post-program study group was about \$85,000, which was a 17 percent decrease from pre- to post-program (see Exhibit 3.21) and represents a cost savings to the public and to the federal and state government. Once again, a decrease occurred from pre- to post-program in the number of Program participants in shelters, while an increase occurred from pre- to post-program in the number of participants using housing vouchers (see Appendix E for n-sizes).

EXHIBIT 3.21 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – SHELTER AND VOUCHER DATA					
Participants with 2-Years Post-Program Data (n=77)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Program Costs	Difference	% Change
Shelter	Fort Lyon	\$339,000	\$181,000	(\$158,000)	-47%
Voucher	Fort Lyon	\$164,000	\$237,000	\$73,000	+45%
Total	Fort Lyon	\$503,000	\$418,000	(\$85,000)	-17%
Average per Participant	Fort Lyon	\$6,500	\$5,400	(\$1,100)	-17%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.					

COST ANALYSIS SUMMARY

Exhibits 3.22 through 3.25 summarize the results of all pre-enrollment and post-enrollment/program costs for each study group.

1-Year Pre-Enrollment/1-Year Post-Enrollment. Overall, the total costs for Program participants in the 1-year post-enrollment study group decreased by about \$1.9 million, or 33 percent from pre- to post-enrollment (see Exhibit 3.22). Costs for the comparison group also decreased by about \$590,000, or 12 percent. Program participants decreased costs from pre- to post-enrollment in every area.

EXHIBIT 3.22 SUMMARY OF PRE-ENROLLMENT AND POST-ENROLLMENT COSTS					
Participants with 1-Year Post-Enrollment Data (n=217)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Physical health care	Fort Lyon	\$3,080,000	\$2,790,000	(\$290,000)	-9%
	Comparison	\$2,200,000	\$2,200,000	\$0	+0%
Behavioral health care	Fort Lyon	\$899,000	\$594,000	(\$305,000)	-34%
	Comparison	\$1,570,000	\$1,720,000	\$150,000	+10%
Judicial system	Fort Lyon	\$1,000,000	\$199,000	(\$801,000)	-80%
	Comparison	\$1,090,000	\$349,000	(\$741,000)	-68%
Shelter & Vouchers	Fort Lyon	\$760,000	\$265,000	(\$495,000)	-65%
	Comparison	No data available			
Total	Fort Lyon	\$5,740,000	\$3,850,000	(\$1,890,000)	-33%
	Comparison	\$4,860,000	\$4,270,000	(\$590,000)	-12%
SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.					

2-Years Pre-Enrollment/2-Years Post-Enrollment. Overall, the total costs for Program participants in the 2-years post-enrollment study group increased by about 570,000, or 11 percent from pre- to post-enrollment (see Exhibit 3.23). Costs for the comparison group also increased by about \$1.57 million, or 36 percent. Program participants decreased costs from pre- to post-enrollment for behavioral health care, the judicial system, and shelter and housing vouchers, but physical health care costs went up.

EXHIBIT 3.23					
SUMMARY OF PRE-ENROLLMENT AND POST-ENROLLMENT COSTS					
Participants with 2-Years Post-Enrollment Data (n=154)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Enrollment Costs	Difference	% Change
Physical health care	Fort Lyon	\$2,740,000	\$3,920,000	\$1,180,000	+43%
	Comparison	\$2,500,000	\$3,240,000	\$740,000	+30%
Behavioral health care	Fort Lyon	\$865,000	\$821,000	(\$44,000)	-5%
	Comparison	\$1,120,000	\$2,120,000	\$996,000	+89%
Judicial system	Fort Lyon	\$461,000	\$316,000	(\$145,000)	-31%
	Comparison	\$685,000	\$520,000	(\$165,000)	-24%
Shelter & Vouchers	Fort Lyon	\$991,000	\$570,000	(\$421,000)	-42%
	Comparison	No data available			
Total	Fort Lyon	\$5,060,000	\$5,630,000	\$570,000	+11%
	Comparison	\$4,310,000	\$5,880,000	\$1,570,000	+36%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.

1-Year Pre-Enrollment/1-Year Post-Program. Overall, the total costs for Program participants in the 1-year post-program study group decreased by about \$2.8 million, or 47 percent from pre- to post-program (see Exhibit 3.24). Costs for the comparison group also decreased by about \$780,000, or 22 percent. Program participants decreased costs from pre- to post-program in every area except behavioral health care, which saw a small increase.

EXHIBIT 3.24 SUMMARY OF PRE-ENROLLMENT AND POST-PROGRAM COSTS					
Participants with 1-Year Post-Program Data (n=132)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Physical health care	Fort Lyon	\$4,140,000	\$1,880,000	(\$2,260,000)	-55%
	Comparison	\$1,890,000	\$1,520,000	(\$370,000)	-20%
Behavioral health care	Fort Lyon	\$594,000	\$620,000	\$26,000	+4%
	Comparison	\$892,000	\$1,080,000	\$188,000	+21%
Judicial system	Fort Lyon	\$723,000	\$219,000	(\$504,000)	-70%
	Comparison	\$831,000	\$231,000	(\$600,000)	-72%
Shelter & Vouchers	Fort Lyon	\$412,000	\$377,000	(\$35,000)	-8%
	Comparison	No data available			
Total	Fort Lyon	\$5,870,000	\$3,100,000	(\$2,770,000)	-47%
	Comparison	\$3,610,000	\$2,830,000	(\$780,000)	-22%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.

2-Years Pre-Enrollment/2-Years Post-Program. Overall, the total costs for Program participants in the 2-years post-program study group increased by about \$1 million, or 39 percent from pre- to post-program (see Exhibit 3.25). Costs for the comparison group also increased by about \$1 million, or 61 percent. Program participants decreased costs from pre- to post-program for the judicial system and shelter and housing vouchers, but physical and behavioral health care costs went up substantially.

EXHIBIT 3.25 SUMMARY OF PRE-ENROLLMENT AND POST-PROGRAM COSTS					
Participants with 2-Years Post-Program Data (n=77)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Program Costs	Difference	% Change
Physical health care	Fort Lyon	\$1,630,000	\$2,450,000	\$820,000	+50%
	Comparison	\$985,000	\$1,700,000	\$715,000	+73%
Behavioral health care	Fort Lyon	\$199,000	\$478,000	\$279,000	+140%
	Comparison	\$325,900	\$763,000	\$437,100	+134%
Judicial system	Fort Lyon	\$248,000	\$244,000	(\$4,000)	-2%
	Comparison	\$314,000	\$150,000	(\$164,000)	-52%
Shelter & Vouchers	Fort Lyon	\$503,000	\$418,000	(\$85,000)	-17%
	Comparison	No data available			
Total	Fort Lyon	\$2,580,000	\$3,590,000	\$1,010,000	+39%
	Comparison	\$1,620,000	\$2,610,000	\$990,000	+61%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.

SUBGROUP COST ANALYSIS

In Year 2 of the evaluation, we analyzed pre- and post- cost data based on program completion, whether Program participants participated in any programming (i.e., educational, employment, and/or vocational), and length of stay. We also analyzed a subset of Program participants who had matched comparison subjects who participated at any time in a Housing First program. We conducted these additional analyses for individuals only in the 1-year post-enrollment study group and the 1-year post-program study group. As with the prior analysis, to control for Medicaid expansion, individuals in the study groups had to have Medicaid claim data for both the pre- and post- time periods. Costs for physical and behavior health care, judicial system costs, and costs for shelter and housing vouchers are included in the analyses. *It is important to note that the sample sizes for the analyses on completers vs. non-completers, programming vs. no programming, and length of stay are not the same for each of the subgroups, so one should compare percent change rather than costs.*

COMPLETERS VS. NON-COMPLETERS

For the purpose of this analysis, completers were defined as anyone whose *Reason for Leaving* the Program was because they “completed program”. Non-completers were defined as anyone whose *Reason for Leaving* the Program was other than that, such as criminal activity, violence, non-compliance, or leaving for a housing opportunity.

1-Year Pre-Enrollment/1-Year Post-Enrollment. We compared a total of 186 program completers from the 1-year post-enrollment group to 254 non-completers (see Exhibit 3.26). Costs for completers in the 1-year post-enrollment study group decreased 34 percent from pre- to post- enrollment, while the non-completers group decreased 25 percent (see Appendix E for n-sizes).

EXHIBIT 3.26 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – COMPLETERS VS. NON-COMPLETERS					
Participants with 1-Year Post-Enrollment Data Completers (n=186), Non-Completers (n=254)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Physical					
ER	Completers	\$444,000	\$175,000	(\$269,000)	-61%
	Non-Completers	\$1,170,000	\$810,000	(\$360,000)	-31%
Emergency Transport	Completers	\$38,000	\$17,000	(\$21,000)	-55%
	Non-Completers	\$101,000	\$95,000	(\$6,000)	-6%
Inpatient	Completers	\$673,000	\$304,000	(\$369,000)	-55%
	Non-Completers	\$1,280,000	\$862,000	(\$418,000)	-33%
Outpatient	Completers	\$222,000	\$532,000	\$310,000	+140%
	Non-Completers	\$261,000	\$542,000	\$281,000	+108%
Pharmacy	Completers	\$175,000	\$529,000	\$354,000	+202%
	Non-Completers	\$418,000	\$642,000	\$224,000	+54%
Other	Completers	\$355,000	\$302,000	(\$53,000)	-15%
	Non-Completers	\$418,000	\$469,000	\$51,000	+12%
Physical Total	Completers	\$1,910,000	\$1,860,000	(\$50,000)	-3%
	Non-Completers	\$3,650,000	\$3,420,000	(\$230,000)	-6%
Behavioral					
Inpatient	Completers	\$94,000	\$68,000	(\$26,000)	-28%
	Non-Completers	\$105,000	\$123,000	\$18,000	+17%
Outpatient	Completers	\$687,000	\$340,000	(\$347,000)	-51%
	Non-Completers	\$844,000	\$816,000	(\$28,000)	-3%
Behavioral Total	Completers	\$781,000	\$408,000	(\$373,000)	-48%
	Non-Completers	\$949,000	\$939,000	(\$10,000)	-1%
Judicial					
Probation	Completers	\$55,000	\$9,000	(\$46,000)	-84%
	Non-Completers	\$44,000	\$17,000	(\$27,000)	-61%
Incarceration /Prison	Completers	\$0	\$0	\$0	NA
	Non-Completers	\$42,000	\$22,000	(\$20,000)	-48%
Jail	Completers	\$462,000	\$31,000	(\$431,000)	-93%
	Non-Completers	\$1,410,000	\$310,000	(\$1,100,000)	-78%
Judicial Total	Completers	\$517,000	\$40,000	(\$477,000)	-92%
	Non-Completers	\$1,500,000	\$349,000	(\$1,151,000)	-77%

EXHIBIT 3.26 (CONTINUED)					
FORT LYON PROGRAM					
PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – COMPLETERS VS. NON-COMPLETERS					
Participants with 1-Year Post-Enrollment Data Completers (n=186), Non-Completers (n=254)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Shelter and Housing Vouchers					
Shelter	Completers	\$463,000	\$21,000	(\$442,000)	-95%
	Non-Completers	\$723,000	\$401,000	(\$322,000)	-45%
Vouchers	Completers	\$173,000	\$203,000	\$30,000	+17%
	Non-Completers	\$127,000	\$72,000	(\$55,000)	-43%
Shelter & Vouchers Total	Completers	\$636,000	\$224,000	(\$412,000)	-65%
	Non-Completers	\$850,000	\$473,000	(\$377,000)	-44%
Total All Services					
Total All Services	Completers	\$3,840,000	\$2,530,000	(\$1,310,000)	-34%
	Non-Completers	\$6,950,000	\$5,180,000	(\$1,770,000)	-25%
SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.					

1-Year Pre-Enrollment/1-Year Post-Program. We compared a total of 121 program completers from the 1-year post-program group to 178 non-completers (see Exhibit 3.27). Costs for the completers in the 1-year post-program study group increased from pre- to post- program 2 percent, while costs for the non-completers group decreased 14 percent (see Appendix E for n-sizes).

EXHIBIT 3.27 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – COMPLETERS VS. NON-COMPLETERS					
Participants with 1-Year Post-Program Data Completers (n=121), Non-Completers (n=178)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Physical					
ER	Completers	\$311,000	\$237,000	(\$74,000)	-24%
	Non-Completers	\$907,000	\$804,000	(\$103,000)	-11%
Emergency Transport	Completers	\$23,000	\$25,000	\$2,000	+9%
	Non-Completers	\$77,000	\$90,000	\$13,000	+17%
Inpatient	Completers	\$521,000	\$383,000	(\$138,000)	-26%
	Non-Completers	\$965,000	\$941,000	(\$24,000)	-2%
Outpatient	Completers	\$158,000	\$216,000	\$58,000	+37%
	Non-Completers	\$205,000	\$235,000	\$30,000	+15%
Pharmacy	Completers	\$129,000	\$507,000	\$378,000	+293%
	Non-Completers	\$323,000	\$314,000	(\$9,000)	-3%
Other	Completers	\$247,000	\$205,000	(\$42,000)	-17%
	Non-Completers	\$291,000	\$369,000	\$78,000	+27%
Physical Total	Completers	\$1,390,000	\$1,570,000	\$180,000	+13%
	Non-Completers	\$2,770,000	\$2,750,000	(\$20,000)	-1%
Behavioral					
Inpatient	Completers	\$67,000	\$22,000	(\$45,000)	-67%
	Non-Completers	\$68,000	\$128,000	\$60,000	+88%
Outpatient	Completers	\$527,000	\$429,000	(\$98,000)	-19%
	Non-Completers	\$528,000	\$875,000	\$347,000	+66%
Behavioral Total	Completers	\$594,000	\$451,000	(\$143,000)	-24%
	Non-Completers	\$596,000	\$1,000,000	\$404,000	+68%
Judicial					
Probation	Completers	\$34,000	\$16,000	(\$18,000)	-53%
	Non-Completers	\$31,000	\$28,000	(\$3,000)	-10%
Incarceration /Prison	Completers	\$0	\$0	\$0	+0%
	Non-Completers	\$38,000	\$45,000	\$7,000	+18%
Jail	Completers	\$273,000	\$42,000	(\$231,000)	-85%
	Non-Completers	\$1,230,000	\$302,000	(\$928,000)	-75%
Judicial Total	Completers	\$307,000	\$58,000	(\$249,000)	-81%
	Non-Completers	\$1,300,000	\$375,000	(\$925,000)	-71%

EXHIBIT 3.27 (CONTINUED)					
FORT LYON PROGRAM					
PRE-ENROLLMENT AND POST-PROGRAM COSTS – COMPLETERS VS. NON-COMPLETERS					
Participants with 1-Year Post-Program Data Completers (n=121), Non-Completers (n=178)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Shelter and Housing Vouchers					
Shelter	Completers	\$226,000	\$45,000	(\$181,000)	-80%
	Non-Completers	\$475,000	\$305,000	(\$170,000)	-36%
Vouchers	Completers	\$137,000	\$573,000	\$436,000	+318%
	Non-Completers	\$101,000	\$101,000	\$0	+0%
Shelter & Vouchers Total	Completers	\$363,000	\$618,000	\$255,000	+70%
	Non-Completers	\$576,000	\$406,000	(\$170,000)	-30%
Total All Services					
Total All Services	Completers	\$2,650,000	\$2,700,000	\$50,000	+2%
	Non-Completers	\$5,240,000	\$4,530,000	(\$710,000)	-14%
SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.					

PROGRAMMING VS. NO PROGRAMMING

For the purpose of this analysis, programming was defined as anyone participating specifically in educational, employment, and/or vocational programming while at Fort Lyon. No programming was defined as anyone who did not participate in any of those programs while at Fort Lyon. This does not mean that they did not participate in other activities, such as group meetings or group therapy.

1-Year Pre-Enrollment/1-Year Post-Enrollment. We compared a total of 256 programming participants from the 1-year post-enrollment group to 234 participants who did not participate in programming (see Exhibit 3.28). Costs for programming participants in the 1-year post-enrollment study group decreased 36 percent from pre- to post-enrollment, while costs for the no programming group decreased 23 percent (see Appendix E for n-sizes).

EXHIBIT 3.28 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – PROGRAMMING VS. NO PROGRAMMING					
Participants with 1-Year Post-Enrollment Data Programming (n=256), No Programming (n=234)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Physical					
ER	Programming	\$906,000	\$290,000	(\$616,000)	-68%
	No Programming	\$927,000	\$713,000	(\$214,000)	-23%
Emergency Transport	Programming	\$88,000	\$35,000	(\$53,000)	-60%
	No Programming	\$70,000	\$81,000	\$11,000	+16%
Inpatient	Programming	\$1,160,000	\$510,000	(\$650,000)	-56%
	No Programming	\$1,050,000	\$753,000	(\$297,000)	-28%
Outpatient	Programming	\$329,000	\$833,000	\$504,000	+153%
	No Programming	\$244,000	\$455,000	\$211,000	+86%
Pharmacy	Programming	\$249,000	\$941,000	\$692,000	+278%
	No Programming	\$366,000	\$487,000	\$121,000	+33%
Other	Programming	\$510,000	\$470,000	(\$40,000)	-8%
	No Programming	\$335,000	\$407,000	\$72,000	+21%
Physical Total	Programming	\$3,240,000	\$3,080,000	(\$160,000)	-5%
	No Programming	\$2,990,000	\$2,900,000	(\$90,000)	-3%
Behavioral					
Inpatient	Programming	\$93,000	\$75,000	(\$18,000)	-19%
	No Programming	\$127,000	\$118,000	(\$9,000)	-7%
Outpatient	Programming	\$900,000	\$380,000	(\$520,000)	-58%
	No Programming	\$777,000	\$785,000	\$8,000	+1%
Behavioral Total	Programming	\$993,000	\$455,000	(\$538,000)	-54%
	No Programming	\$904,000	\$903,000	(\$1,000)	-0%
Judicial					
Probation	Programming	\$64,000	\$13,000	(\$51,000)	-80%
	No Programming	\$50,000	\$13,000	(\$37,000)	-74%
Incarceration /Prison	Programming	\$4,000	\$0	(\$4,000)	-100%
	No Programming	\$44,000	\$22,000	(\$22,000)	-50%
Jail	Programming	\$783,000	\$83,000	(\$700,000)	-89%
	No Programming	\$1,220,000	\$266,000	(\$954,000)	-78%
Judicial Total	Programming	\$851,000	\$96,000	(\$755,000)	-89%
	No Programming	\$1,310,000	\$301,000	(\$1,009,000)	-77%

EXHIBIT 3.28 (CONTINUED) FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – PROGRAMMING VS. NO PROGRAMMING					
Participants with 1-Year Post-Enrollment Data Programming (n=256), No Programming (n=234)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Shelter and Housing Vouchers					
Shelter	Programming	\$836,000	\$125,000	(\$711,000)	-85%
	No Programming	\$599,000	\$314,000	(\$285,000)	-48%
Voucher	Programming	\$109,000	\$125,000	\$16,000	+15%
	No Programming	\$200,000	\$187,000	(\$13,000)	-7%
Shelter & Vouchers Total	Programming	\$945,000	\$250,000	(\$695,000)	-74%
	No Programming	\$799,000	\$501,000	(\$298,000)	-37%
Total All Services					
Total All Services	Programming	\$6,030,000	\$3,880,000	(\$2,150,000)	-36%
	No Programming	\$6,000,000	\$4,610,000	(\$1,390,000)	-23%
SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.					

1-Year Pre-Enrollment/1-Year Post-Program. We compared a total of 101 programming participants from the 1-year post-program group to 206 participants who did not participate in programming (see Exhibit 3.29). Costs for the programming participants in the 1-year post-program study group increased 7 percent pre- to post-program, while the no programming group decreased 15 percent (see Appendix E for n-sizes).

EXHIBIT 3.29 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – PROGRAMMING VS. NO PROGRAMMING					
Participants with 1-Year Post-Program Data Programming (n=101), No Programming (n=206)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Physical					
ER	Programming	\$322,000	\$268,000	(\$54,000)	-17%
	No Programming	\$908,000	\$792,000	(\$116,000)	-13%
Emergency Transport	Programming	\$31,000	\$31,000	\$0	+0%
	No Programming	\$69,000	\$86,000	\$17,000	+25%
Inpatient	Programming	\$437,000	\$461,000	\$24,000	+5%
	No Programming	\$1,050,000	\$894,000	(\$156,000)	-15%
Outpatient	Programming	\$138,000	\$183,000	\$45,000	+33%
	No Programming	\$234,000	\$276,000	\$42,000	+18%
Pharmacy	Programming	\$108,000	\$485,000	\$377,000	+349%
	No Programming	\$348,000	\$342,000	(\$6,000)	-2%
Other	Programming	\$221,000	\$193,000	(\$28,000)	-13%
	No Programming	\$323,000	\$389,000	\$66,000	+20%
Physical Total	Programming	\$1,260,000	\$1,620,000	\$360,000	+29%
	No Programming	\$2,930,000	\$2,780,000	(\$150,000)	-5%
Behavioral					
Inpatient	Programming	\$33,000	\$78,000	\$45,000	+136%
	No Programming	\$101,000	\$74,000	(\$27,000)	-27%
Outpatient	Programming	\$425,000	\$397,000	(\$28,000)	-7%
	No Programming	\$638,000	\$925,000	\$287,000	+45%
Behavioral Total	Programming	\$458,000	\$475,000	\$17,000	+4%
	No Programming	\$739,000	\$999,000	\$260,000	+35%
Judicial					
Probation	Programming	\$21,000	\$12,000	(\$9,000)	-43%
	No Programming	\$45,000	\$32,000	(\$13,000)	-29%
Incarceration /Prison	Programming	\$0	\$0	\$0	+0%
	No Programming	\$44,000	\$45,000	\$1,000	+2%
Jail	Programming	\$398,000	\$61,000	(\$337,000)	-85%
	No Programming	\$1,170,000	\$295,000	(\$875,000)	-75%
Judicial Total	Programming	\$419,000	\$73,000	(\$346,000)	-83%
	No Programming	\$1,260,000	\$372,000	(\$888,000)	-70%

EXHIBIT 3.29 (CONTINUED)					
FORT LYON PROGRAM					
PRE-ENROLLMENT AND POST-PROGRAM COSTS – PROGRAMMING VS. NO PROGRAMMING					
Participants with 1-Year Post-Program Data Programming (n=101), No Programming (n=206)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Shelter and Housing Vouchers					
Shelter	Programming	\$226,000	\$90,000	(\$136,000)	-60%
	No Programming	\$509,000	\$283,000	(\$226,000)	-44%
Vouchers	Programming	\$46,000	\$328,000	\$282,000	+613%
	No Programming	\$191,000	\$355,000	\$164,000	+86%
Shelter & Vouchers Total	Programming	\$272,000	\$418,000	\$146,000	+54%
	No Programming	\$700,000	\$638,000	(\$62,000)	-9%
Total All Services					
Total All Services	Programming	\$2,410,000	\$2,590,000	\$180,000	+7%
	No Programming	\$5,630,000	\$4,790,000	(\$840,000)	-15%
SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.					

LENGTH OF STAY

For the purpose of this analysis, we separated Fort Lyon Program participants into four groups based on their length of stay in the Program: 1-90 days, 91-182 days, 183-365 days, and more than 365 days.

1-Year Pre-Enrollment/1-Year Post-Enrollment. We compared a total of 490 participants in the 1-year post-enrollment group based on the length of time they were in the Program. Participants who were in the Program for more than 365 days had the greatest percent decrease in cost, at about \$1.54 million dollars, or a 42 percent decrease. This was followed by a decrease of \$810,000, or 34 percent, for participants who were in the Program between 91 and 182 days and a decrease of \$620,000, or 17 percent, for participants who were in the Program between 1 and 90 days (see Exhibit 3.30). Participants who were in the Program between 183 and 365 days had a cost increase of about \$400,000, or 17% (see Appendix E for n-sizes).

EXHIBIT 3.30 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – LENGTH OF STAY					
Participants with 1-Year Post-Enrollment Data 1-90 days (n=130), 91-182 days (n=93), 183-365 days (n=104), >365 days (n=163)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Physical					
ER	1-90 days	\$618,000	\$556,000	(\$62,000)	-10%
	91-182 days	\$304,000	\$173,000	(\$131,000)	-43%
	183-365 days	\$347,000	\$171,000	(\$176,000)	-51%
	>365 days	\$565,000	\$103,000	(\$462,000)	-82%
Emergency Transport	1-90 days	\$51,000	\$60,000	\$9,000	+18%
	91-182 days	\$24,000	\$23,000	(\$1,000)	-4%
	183-365 days	\$35,000	\$22,000	(\$13,000)	-37%
	>365 days	\$48,000	\$11,000	(\$37,000)	-77%
Inpatient	1-90 days	\$505,000	\$426,000	(\$79,000)	-16%
	91-182 days	\$523,000	\$290,000	(\$233,000)	-45%
	183-365 days	\$425,000	\$254,000	(\$171,000)	-40%
	>365 days	\$758,000	\$292,000	(\$466,000)	-61%
Outpatient	1-90 days	\$123,000	\$186,000	\$63,000	+51%
	91-182 days	\$80,000	\$152,000	\$72,000	+90%
	183-365 days	\$118,000	\$340,000	\$222,000	+188%
	>365 days	\$252,000	\$610,000	\$358,000	+142%
Pharmacy	1-90 days	\$182,000	\$204,000	\$22,000	+12%
	91-182 days	\$174,000	\$173,000	(\$1,000)	-1%
	183-365 days	\$151,000	\$434,000	\$283,000	+187%
	>365 days	\$107,000	\$616,000	\$509,000	+476%
Other	1-90 days	\$164,000	\$180,000	\$16,000	+10%
	91-182 days	\$146,000	\$130,000	(\$16,000)	-11%
	183-365 days	\$173,000	\$234,000	\$61,000	+35%
	>365 days	\$361,000	\$333,000	(\$28,000)	-8%
Physical Total	1-90 days	\$1,640,000	\$1,610,000	(\$30,000)	-2%
	91-182 days	\$1,250,000	\$941,000	(\$309,000)	-25%
	183-365 days	\$1,250,000	\$1,460,000	\$210,000	+17%
	>365 days	\$2,090,000	\$1,970,000	(\$120,000)	-6%

EXHIBIT 3.30 (CONTINUED)					
FORT LYON PROGRAM					
PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – LENGTH OF STAY					
Participants with 1-Year Post-Enrollment Data					
1-90 days (n=130), 91-182 days (n=93),					
183-365 days (n=104), >365 days (n=163)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Behavioral					
Inpatient	1-90 days	\$63,000	\$52,000	(\$11,000)	-17%
	91-182 days	\$61,000	\$56,000	(\$5,000)	-8%
	183-365 days	\$41,000	\$21,000	(\$20,000)	-49%
	>365 days	\$54,000	\$65,000	\$11,000	+20%
Outpatient	1-90 days	\$534,000	\$710,000	\$176,000	+33%
	91-182 days	\$382,000	\$286,000	(\$96,000)	-25%
	183-365 days	\$264,000	\$1,115,000	\$851,000	+322%
	>365 days	\$496,000	\$54,000	(\$442,000)	-89%
Behavioral Total	1-90 days	\$597,000	\$762,000	\$165,000	+28%
	91-182 days	\$443,000	\$342,000	(\$101,000)	-23%
	183-365 days	\$305,000	\$1,140,000	\$835,000	+274%
	>365 days	\$550,000	\$119,000	(\$431,000)	-78%
Judicial					
Probation	1-90 days	\$15,000	\$10,000	(\$5,000)	-33%
	91-182 days	\$18,000	\$4,000	(\$14,000)	-78%
	183-365 days	\$35,000	\$7,000	(\$28,000)	-80%
	>365 days	\$46,000	\$6,000	(\$40,000)	-87%
Incarceration /Prison	1-90 days	\$21,000	\$8,000	(\$13,000)	-62%
	91-182 days	\$0	\$9,000	\$9,000	NA
	183-365 days	\$21,000	\$4,000	(\$17,000)	-81%
	>365 days	\$6,000	\$0	(\$6,000)	-100%
Jail	1-90 days	\$893,000	\$203,000	(\$690,000)	-77%
	91-182 days	\$397,000	\$97,000	(\$300,000)	-76%
	183-365 days	\$375,000	\$48,000	(\$327,000)	-87%
	>365 days	\$339,000	\$1,200	(\$337,800)	-100%
Judicial Total	1-90 days	\$929,000	\$221,000	(\$708,000)	-76%
	91-182 days	\$415,000	\$110,000	(\$305,000)	-73%
	183-365 days	\$431,000	\$59,000	(\$372,000)	-86%
	>365 days	\$391,000	\$7,200	(\$383,800)	-98%

EXHIBIT 3.30 (CONTINUED)					
FORT LYON PROGRAM					
PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – LENGTH OF STAY					
Participants with 1-Year Post-Enrollment Data					
1-90 days (n=130), 91-182 days (n=93),					
183-365 days (n=104), >365 days (n=163)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Shelter and Housing Vouchers					
Shelter	1-90 days	\$283,000	\$241,000	(\$42,000)	-15%
	91-182 days	\$237,000	\$133,000	(\$104,000)	-44%
	183-365 days	\$350,000	\$53,000	(\$297,000)	-85%
	>365 days	\$565,000	\$12,000	(\$553,000)	-98%
Vouchers	1-90 days	\$155,000	\$146,000	(\$9,000)	-6%
	91-182 days	\$64,000	\$75,000	\$11,000	+17%
	183-365 days	\$27,000	\$51,000	\$24,000	+89%
	>365 days	\$64,000	\$8,000	(\$56,000)	-88%
Shelter & Vouchers Total	1-90 days	\$438,000	\$387,000	(\$51,000)	-12%
	91-182 days	\$301,000	\$208,000	(\$93,000)	-31%
	183-365 days	\$377,000	\$104,000	(\$273,000)	-72%
	>365 days	\$629,000	\$20,000	(\$609,000)	-97%
Total All Services					
Total All Services	1-90 days	\$3,600,000	\$2,980,000	(\$620,000)	-17%
	91-182 days	\$2,410,000	\$1,600,000	(\$810,000)	-34%
	183-365 days	\$2,360,000	\$2,760,000	\$400,000	+17%
	>365 days	\$3,660,000	\$2,120,000	(\$1,540,000)	-42%
SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.					

1-Year Pre-Enrollment/1-Year Post-Program. We compared a total of 307 participants in the 1-year post-program group based on the length of time they were in the Program. Participants who were in the Program between 91 and 182 days had the greatest percent decrease in cost at about \$270,000, or 16 percent. This was followed by participants who were in the Program between 1 and 90 days, who had a decrease of \$480,000, or 14 percent, and participants who were in the Program between 183 and 365 days, who had a decrease of \$20,000, or 1 percent from pre- to post- program (see Exhibit 3.31). Participants who were in the Program more than 365 days had a cost increase of about \$130,000, or 9 percent (see Appendix E for n-sizes).

EXHIBIT 3.31 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS - LENGTH OF STAY					
Participants with 1-Year Post-Program Data 1-90 days (n=116), 91-182 days (n=64), 183-365 days (n=63), >365 days (n=64)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Physical					
ER	1-90 days	\$568,000	\$540,000	(\$28,000)	-5%
	91-182 days	\$223,000	\$167,000	(\$56,000)	-25%
	183-365 days	\$247,000	\$214,000	(\$33,000)	-13%
	>365 days	\$192,000	\$140,000	(\$52,000)	-27%
Emergency Transport	1-90 days	\$48,000	\$56,000	\$8,000	+17%
	91-182 days	\$15,000	\$21,000	\$6,000	+40%
	183-365 days	\$24,000	\$26,000	\$2,000	+8%
	>365 days	\$13,000	\$13,000	\$0	+0%
Inpatient	1-90 days	\$482,000	\$448,000	(\$34,000)	-7%
	91-182 days	\$453,000	\$310,000	(\$143,000)	-32%
	183-365 days	\$314,000	\$386,000	\$72,000	+23%
	>365 days	\$237,000	\$212,000	(\$25,000)	-11%
Outpatient	1-90 days	\$117,000	\$139,000	\$22,000	+19%
	91-182 days	\$70,000	\$75,000	\$5,000	+7%
	183-365 days	\$75,000	\$118,000	\$43,000	+57%
	>365 days	\$109,000	\$127,000	\$18,000	+17%
Pharmacy	1-90 days	\$169,000	\$175,000	\$6,000	+4%
	91-182 days	\$156,000	\$143,000	(\$13,000)	-8%
	183-365 days	\$75,000	\$122,000	\$47,000	+63%
	>365 days	\$56,000	\$387,000	\$331,000	+591%
Other	1-90 days	\$150,000	\$189,000	\$39,000	+26%
	91-182 days	\$114,000	\$132,000	\$18,000	+16%
	183-365 days	\$113,000	\$124,000	\$11,000	+10%
	>365 days	\$168,000	\$136,000	(\$32,000)	-19%
Physical Total	1-90 days	\$1,530,000	\$1,550,000	\$20,000	+1%
	91-182 days	\$1,030,000	\$848,000	(\$182,000)	-18%
	183-365 days	\$848,000	\$990,000	\$142,000	+17%
	>365 days	\$775,000	\$1,020,000	\$245,000	+32%

EXHIBIT 3.31 (CONTINUED)					
FORT LYON PROGRAM					
PRE-ENROLLMENT AND POST-PROGRAM COSTS - LENGTH OF STAY					
Participants with 1-Year Post-Program Data 1-90 days (n=116), 91-182 days (n=64), 183-365 days (n=63), >365 days (n=64)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Behavioral					
Inpatient	1-90 days	\$61,000	\$58,000	(\$3,000)	-5%
	91-182 days	\$37,000	\$54,000	\$17,000	+46%
	183-365 days	\$6,400	\$26,000	\$19,600	+306%
	>365 days	\$30,000	\$13,000	(\$17,000)	-57%
Outpatient	1-90 days	\$503,000	\$755,000	\$252,000	+50%
	91-182 days	\$165,000	\$268,000	\$103,000	+62%
	183-365 days	\$146,000	\$199,000	\$53,000	+36%
	>365 days	\$248,000	\$101,000	(\$147,000)	-59%
Behavioral Total	1-90 days	\$564,000	\$813,000	\$249,000	+44%
	91-182 days	\$202,000	\$322,000	\$120,000	+59%
	183-365 days	\$152,000	\$225,000	\$73,000	+48%
	>365 days	\$278,000	\$114,000	(\$164,000)	-59%
Judicial					
Probation	1-90 days	\$15,000	\$13,000	(\$2,000)	-13%
	91-182 days	\$5,300	\$6,800	\$1,500	+28%
	183-365 days	\$25,000	\$17,000	(\$8,000)	-32%
	>365 days	\$21,000	\$7,800	(\$13,200)	-63%
Incarceration /Prison	1-90 days	\$21,000	\$28,000	\$7,000	+33%
	91-182 days	\$0	\$16,000	\$16,000	NA
	183-365 days	\$17,000	\$700	(\$16,300)	-96%
	>365 days	\$5,700	\$0	(\$5,700)	-100%
Jail	1-90 days	\$817,000	\$176,000	(\$641,000)	-78%
	91-182 days	\$288,000	\$106,000	(\$182,000)	-63%
	183-365 days	\$332,000	\$68,000	(\$264,000)	-80%
	>365 days	\$132,000	\$6,000	(\$126,000)	-95%
Judicial Total	1-90 days	\$853,000	\$217,000	(\$636,000)	-75%
	91-182 days	\$293,300	\$128,800	(\$164,500)	-56%
	183-365 days	\$374,000	\$85,700	(\$288,300)	-77%
	>365 days	\$158,700	\$13,800	(\$144,900)	-91%

EXHIBIT 3.31 (CONTINUED)					
FORT LYON PROGRAM					
PRE-ENROLLMENT AND POST-PROGRAM COSTS - LENGTH OF STAY					
Participants with 1-Year Post-Program Data 1-90 days (n=116), 91-182 days (n=64), 183-365 days (n=63), >365 days (n=64)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Shelter and Housing Vouchers					
Shelter	1-90 days	\$260,000	\$113,000	(\$147,000)	-57%
	91-182 days	\$170,000	\$79,000	(\$91,000)	-54%
	183-365 days	\$158,000	\$124,000	(\$34,000)	-22%
	>365 days	\$147,000	\$57,000	(\$90,000)	-61%
Vouchers	1-90 days	\$146,000	\$173,000	\$27,000	+18%
	91-182 days	\$46,000	\$91,000	\$45,000	+98%
	183-365 days	\$9,000	\$100,000	\$91,000	+1011%
	>365 days	\$36,000	\$319,000	\$283,000	+786%
Shelter & Vouchers Total	1-90 days	\$406,000	\$286,000	(\$120,000)	-30%
	91-182 days	\$216,000	\$170,000	(\$46,000)	-21%
	183-365 days	\$167,000	\$224,000	\$57,000	+34%
	>365 days	\$183,000	\$376,000	\$193,000	+105%
Total All Services					
Total All Services	1-90 days	\$3,350,000	\$2,870,000	(\$480,000)	-14%
	91-182 days	\$1,740,000	\$1,470,000	(\$270,000)	-16%
	183-365 days	\$1,540,000	\$1,520,000	(\$20,000)	-1%
	>365 days	\$1,390,000	\$1,520,000	\$130,000	+9%
SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.					

FORT LYON VS. PERMANENT SUPPORTIVE HOUSING (PSH)

For this analysis, we compare Fort Lyon Program participants to comparison group participants who received Permanent Supportive Housing (PSH). PSH is a model that combines low-barrier affordable housing with access to physical and behavioral health care and supportive services to provide tenancy support. PSH typically targets people who are homeless, or otherwise unstably housed, and experience multiple barriers to housing. Many different types of residences in Colorado follow a PSH model. PSH programs do not require sobriety and do not necessarily offer educational, vocational, or life skills services on site. In contrast, the Fort Lyon Program does offer a variety of these services and sobriety is a requirement. The Fort Lyon Program also offers access to physical and behavioral health care. Results from this analysis should be interpreted cautiously due to small sample sizes.

1-Year Pre-Enrollment/1-Year Post-Enrollment. We compared a total of 30 Fort Lyon Program participants from the 1-year post-enrollment study group to 30 comparison group subjects who were enrolled in Permanent Supportive Housing at any point during the evaluation period (Fiscal Year 2012 through Fiscal Year 2017). The total cost savings for Program participants in the 1-year post-enrollment study group was about \$164,000, which was an 18 percent decrease from pre- to post- enrollment (see Exhibit 3.32). The Permanent Support Housing group showed a cost increase of \$25,000, or 4 percent (see Appendix E for n-sizes).

EXHIBIT 3.32 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS - PERMANENT SUPPORTIVE HOUSING					
Participants with 1-Year Post-Enrollment Data (n=30)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Physical					
ER	Fort Lyon	\$248,000	\$159,000	(\$89,000)	-36%
	PSH	\$29,000	\$28,000	(\$1,000)	-3%
Emergency Transport	Fort Lyon	\$16,000	\$18,000	\$2,000	+13%
	PSH	\$2,500	\$2,700	\$200	+8%
Inpatient	Fort Lyon	\$280,000	\$249,000	(\$31,000)	-11%
	PSH	\$16,000	\$59,000	\$43,000	+269%
Outpatient	Fort Lyon	\$73,000	\$100,000	\$27,000	+37%
	PSH	\$32,000	\$26,000	(\$6,000)	-19%
Pharmacy	Fort Lyon	\$29,000	\$74,000	\$45,000	+155%
	PSH	\$67,000	\$48,000	(\$19,000)	-28%
Other	Fort Lyon	\$61,000	\$72,000	\$11,000	+18%
	PSH	\$116,000	\$57,000	(\$59,000)	-51%
Physical Total	Fort Lyon	\$707,000	\$672,000	(\$35,000)	-5%
	PSH	\$262,500	\$220,700	(\$41,800)	-16%
Behavioral					
Inpatient	Fort Lyon	\$4,600	\$2,200	(\$2,400)	-52%
	PSH	\$0	\$0	\$0	NA
Outpatient	Fort Lyon	\$53,000	\$31,000	(\$22,000)	-42%
	PSH	\$201,000	\$319,000	\$118,000	+59%
Behavioral Total	Fort Lyon	\$57,600	\$33,200	(\$24,400)	-42%
	PSH	\$201,000	\$319,000	\$118,000	+59%
Judicial					
Probation	Fort Lyon	\$15,000	\$1,000	(\$14,000)	-93%
	PSH	\$0	\$1,100	\$1,100	NA
Incarceration /Prison	Fort Lyon	\$0	\$0	\$0	+0%
	PSH	\$40,000	\$27,000	(\$13,000)	-33%
Jail	Fort Lyon	\$118,000	\$28,000	(\$90,000)	-76%
	PSH	\$52,000	\$13,000	(\$39,000)	-75%
Judicial Total	Fort Lyon	\$133,000	\$29,000	(\$104,000)	-78%
	PSH	\$92,000	\$41,000	(\$51,000)	-55%
Total All Services					
Total All Services	Fort Lyon	\$898,000	\$734,000	(\$164,000)	-18%
	PSH	\$556,000	\$581,000	\$25,000	+4%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.

1-Year Pre-Enrollment/1-Year Post-Program. We compared a total of 16 Fort Lyon Program participants from the 1-year post-program study group to 16 comparison subjects who were enrolled in Permanent Supportive Housing at some point during the evaluation period (Fiscal Year 2012 through Fiscal Year 2017). The total cost savings for Program participants in the 1-year post-program study group was about \$14,000, which was a 2 percent decrease from pre- to post- program (see Exhibit 3.33). The Permanent Supportive Housing group showed a cost increase of \$51,000, or 14 percent (see Appendix E for n-sizes).

EXHIBIT 3.33 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS - PERMANENT SUPPORTIVE HOUSING					
Participants with 1-Year Post-Program Data (n=16)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Physical					
ER	Fort Lyon	\$166,000	\$170,000	\$4,000	+2%
	PSH	\$14,000	\$16,000	\$2,000	+14%
Emergency Transport	Fort Lyon	\$15,000	\$19,000	\$4,000	+27%
	PSH	\$1,000	\$2,000	\$1,000	+100%
Inpatient	Fort Lyon	\$229,000	\$237,000	\$8,000	+3%
	PSH	\$11,000	\$40,000	\$29,000	+264%
Outpatient	Fort Lyon	\$30,000	\$33,000	\$3,000	+10%
	PSH	\$7,200	\$7,400	\$200	+3%
Pharmacy	Fort Lyon	\$15,000	\$62,000	\$47,000	+313%
	PSH	\$12,000	\$7,700	(\$4,300)	-36%
Other	Fort Lyon	\$56,000	\$51,000	(\$5,000)	-9%
	PSH	\$15,000	\$16,000	\$1,000	+7%
Physical Total	Fort Lyon	\$511,000	\$572,000	\$61,000	+12%
	PSH	\$60,200	\$89,100	\$28,900	+48%
Behavioral					
Inpatient	Fort Lyon	\$4,600	\$3,400	(\$1,200)	-26%
	PSH	\$0	\$0	\$0	+0%
Outpatient	Fort Lyon	\$40,000	\$38,000	(\$2,000)	-5%
	PSH	\$182,000	\$248,000	\$66,000	+36%
Behavioral Total	Fort Lyon	\$44,600	\$41,400	(\$3,200)	-7%
	PSH	\$182,000	\$248,000	\$66,000	+36%
Judicial					
Probation	Fort Lyon	\$1,600	\$0	(\$1,600)	-100%
	PSH	\$0	\$0	\$0	+0%
Incarceration	Fort Lyon	\$0	\$0	\$0	+0%
	PSH	\$40,000	\$27,000	(\$13,000)	-33%
Jail	Fort Lyon	\$91,000	\$22,000	(\$69,000)	-76%
	PSH	\$84,000	\$5,300	(\$78,700)	-94%
Judicial Total	Fort Lyon	\$93,000	\$22,000	(\$71,000)	-76%
	PSH	\$124,000	\$80,000	(\$44,000)	-35%
Total All Services					
Total All Services	Fort Lyon	\$649,000	\$635,000	(\$14,000)	-2%
	PSH	\$366,000	\$417,000	\$51,000	+14%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.

OTHER BENEFITS

In addition to the changes in costs associated with physical and behavioral health care and the state judicial system we compiled information on other benefits reported in a 2015 study of the Fort Lyon Program performed for the Bent County Development Foundation (BCDF). The BCDF was developed in 1989 to promote the general economic activity of the local Bent County community and to improve the standard of living for its existing and future participants.

REGIONAL ECONOMIC IMPACT

The Bent County study estimated the regional economic impact of the Fort Lyon Program using an economic multipliers analysis. According to the study, “An economic multiplier means one activity creates additional activity in the region. For example, employment at Fort Lyon (direct) creates jobs for suppliers (indirect) that would not exist otherwise. Expenditures of income by the direct and indirect employees creates additional employment for local businesses supplying local residential services.” Using economic multipliers ranging from 1.8 to 3.3 depending on the exact definition of the economic activity, the study estimated the Fort Lyon Program generated an additional 119 jobs and \$10.3 million of financial activity for 2015-2016 throughout Colorado.

Bent County and Fort Lyon Program leaders shared several anecdotal examples of how the Fort Lyon Program has enhanced the community. Fort Lyon participants operate a storefront in Las Animas where they sell their art and furniture. Program leaders explained that the Program has boosted sales at the grocery store and pharmacy, and another business has been added in town, all of which contribute to the economic benefit assessed in the Bent County study. Fort Lyon Program participants have also participated in community events and volunteered their services. As an example, a former participant formed a partnership with members of the community to start a non-profit called Women of Worth, a group that provides food and clothing to women in need. When asked, Bent County leaders did not identify any drawbacks of the Fort Lyon Program being located within their community. They acknowledged isolated incidents of Fort Lyon participants using substances and causing problems within the county. However, they indicated this was no different from incidents that have occurred with their own community members who are not part of the Fort Lyon Program.

Bent County and Fort Lyon Program leaders are also working to identify additional ways to leverage the relationship with and resources of Fort Lyon. Some ideas of programs and events that are being considered to offset program costs have included long-term supportive housing for graduates, a bed and breakfast, an equine therapy program, a greenhouse program, a solar garden, an opiate Fort Lyon and recovery non-Medicaid facility, a call center, or a laundry/commercial cleaner facility. In addition to supporting

Bent County, these programs are designed to give Fort Lyon participants additional opportunities for vocational training and volunteer experiences.

OTHER BENEFITS

Although not available for all study group participants, the majority of study group participants with data from follow-up interviews were stably housed, currently employed, and had furthered their education since being discharged from the Fort Lyon Program. Another benefit of the Program to individual participants is an increase in their reported monthly income from entry to exit of the Program. Monthly income is from any source including stipends from working at Fort Lyon, pensions, VA benefits, and Social Security Income. Program personnel work with participants to ensure they are receiving the full extent of public benefits. For many participants, this means an increase in their Supplemental Security Income, which is a government program that provides stipends to low-income people. On average, participants' monthly income increased by about \$55 per month per participant during their time in the Program.

OVERALL SUMMARY

Overall, we found cost savings from pre- to post- for both of the 1-year study groups, but found cost increases for both of the 2-year study groups. The cost savings found for the 1-year study groups were higher for Fort Lyon participants than they were for comparison group participants. Additionally, the cost increase seen for the 2-year study groups was less for Fort Lyon participants than for comparison group participants.

- For the 1-year post-enrollment study group, we found a cost savings from pre-enrollment to post-enrollment costs in all service areas (see Exhibit 3.22). Costs for the comparison group also decreased, but not as substantially.
- For the 2-years post-enrollment study group, we found a cost increase from pre-enrollment to post-enrollment, with cost savings in every service area except physical health care (see Exhibit 3.23). The cost increase for the comparison group was higher than for Program participants.
- For the 1-year post-program study group, we found a cost savings from pre-enrollment to post-program, with cost savings in every service area (see Exhibit 3.24). Costs for the comparison group also decreased, but not as substantially.
- For the 2-years post-program study group, we found a cost increase from pre-enrollment to post-program, with cost increases from pre- to post- for physical and behavioral health care (see Exhibit 3.25). The cost increase for the comparison group was higher than for Program participants.

CHAPTER 4: FORT LYON PROGRAM OUTCOMES

Fort Lyon Program staff identify two major outcomes from participation in the Program. The first outcome, *Program Completion*, is defined as participants meeting their goals as identified in their Goals and Outcomes Plan. The second outcome, *Exit to Permanent Housing*, is defined based upon the type of housing participants transition to upon exiting the Fort Lyon Program. As noted in Chapter 1, as of 2017, *Program Completion* requires *Exit to Permanent Housing* as well as attainment towards another goal. However, prior to this change, these were distinct outcomes, and we have analyzed them separately.

In this chapter, we provide information on the goals established by participants and their progress in meeting those goals. In addition, we analyzed the two major program outcomes, *Program Completion* and *Exit to Permanent Housing*, based upon participants' length of time in the Fort Lyon Program, severity of substance abuse history, severity of behavioral health issues, and participation in programming.

Further, we looked at other outcomes for participants, including changes in the use of alcohol or illegal drugs, behavioral health symptoms, and quality of life as participants progressed through the Program. These indicators are measured based upon responses to questionnaires, which the Program administers to all participants at several points during their stay, including at the time of admission and near exit.

Participant Goals

The participant, in conjunction with their case manager, determine their individual goals. Examples may include goals to stop using substances, reunify with family, pay penalties and debts, or access vocational training. We analyzed a random sample of 108 participant files (11.2 percent of all participants) to determine the types of goals participants set when arriving at the Fort Lyon Program and how the goals evolve over time. In total, 81 percent (87 participants) of the sampled participants had completed a Goals and Outcomes Plan, and 77 percent (83 participants) had updated their progress on their Goals and Outcomes Plan or they had a discharge summary with updated progress. In most cases where a Goals and Outcomes Plan was missing, the participant left the Fort Lyon Program prior to creating a plan. The quality and detail provided in the Goals and Outcomes Plans have been an area of focus for Fort Lyon Program personnel, and there is evidence they have improved since the inception of the Program. For example, previously participants may have indicated that they were working on sobriety, and the update would say they were continuing to work on that goal. In the more recent Goals and Outcomes Plans, participants described how they plan to work on sobriety, and the progress reports would include information on the actions taken, such as attendance at recovery meetings.

Exhibit 4.1 shows the results of the analyses. Initially, participants identified sobriety, housing, and education as priorities on their Goals and Outcomes Plans. Our review of the Plans showed that participants have made the most progress in the areas of sobriety, physical health, housing, and employment/vocational training. For example, 93.1 percent of participants identified sobriety as a goal upon entering the Fort Lyon Program and 88.0 percent of those participants made progress toward the goal by engaging in Alcoholics Anonymous/Narcotics Anonymous or other recovery-oriented activities.

EXHIBIT 4.1 FORT LYON PROGRAM GOALS AND OUTCOMES PLAN REVIEW		
Goals	Goals identified at Beginning of Program	Progress Toward Goals During Program
Sobriety	93.1%	88.0%
Housing	62.1%	42.2%
Obtain Education	56.3%	32.5%
Improve Physical Health	42.5%	51.8%
Obtain Employment/Vocational Training	41.4%	42.2%
Improve Mental Health	31.0%	19.3%
Obtain a Healthy Lifestyle	18.3%	6.1%
Obtain Benefits (e.g., SSI)	10.3%	12.0%
Obtain Driver's License	9.2%	7.2%
Improve Spiritual Health	4.6%	4.8%
Pay Penalties/Debts (e.g. Child Support)	3.4%	1.2%
Reunify with Family	3.4%	14.5%
Improve Non-Familial Relationships	3.4%	2.4%
Obtain Identification (e.g., birth certificates)	2.3%	3.6%
Deal with Legal Issues	1.1%	2.4%

SOURCE: Illuminate Evaluation Services' analysis of Goals and Outcomes Plans

OUTCOMES FOR PROGRAM COMPLETION AND EXIT TO PERMANENT HOUSING

A total of 968 individuals have participated in the Fort Lyon Program since it began in 2013, and 777 of those (80.3 percent) had exited the Program as of June 30, 2017. However, we did not have data for all 777 participants who had exited the Program because some refused to respond upon exiting, they did not know, were not asked, were missing data, or had died before providing the information. For those who we had data, overall, we found the following results with respect to the two major outcomes:

- About 38 percent of participants exiting the Program were determined to have completed the Program (i.e., met their goals). Specifically, Fort Lyon had completion

data on 766 of the participants who had exited the Program and 289 of these had met their goals and were determined to have completed the Program. Data were missing for 11 of the participants.

- About 47 percent of participants exiting the Program exited to permanent housing and 29 percent exited to transitional housing, for a total of 76 percent of participants exiting to some form of housing. Specifically, Ft Lyon had housing data on 715 participants who had exited the program and 333 (47 percent) of these had exited to permanent housing. An additional 209 (29 percent) participants exited to transitional housing.
- On average, the 777 participants stayed 238 days (approximately 8 months), which is less than the maximum time allowed of 3 years, or 1,095 days.

Exhibit 4.2 shows information about participants' length of stay in the Program and the percent exiting to permanent housing based upon program completion. As the exhibit shows, 77.2 percent of Fort Lyon Program participants who completed the Program, exited to permanent housing.

EXHIBIT 4.2 FORT LYON PROGRAM DESCRIPTION OF OUTCOMES - PROGRAM COMPLETION					
	Completed Program		Did Not Complete Program		Total
	Number	%	Number	%	Number
Participants exiting the Program ¹	289	37.7%	477	62.3%	766
Exit to permanent housing ²	220/285	77.2%	111/422	26.3%	707
Median total # days at Fort Lyon	323 days		104 days		
Average total # of days at Fort Lyon	363 days (~11 months)		161 days (~3.5 months)		
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.					
¹ Data about goal completion were missing for 11 of the 777 participants exiting the Program.					
² Data about exit to permanent housing were missing for 4 of the participants who completed the Program and for 55 of the participants who did not complete the Program.					

We ran several analyses to determine if the length of time participants were in the Program, the seriousness of participants' substance use histories, the seriousness of participants' behavioral health issues, and participation in Fort Lyon programming influenced the outcomes of program completion or exit to permanent housing. Additional details of the analyses are located in Appendix F.

LENGTH OF TIME IN PROGRAM

We looked at whether the number of days spent in the Fort Lyon Program was related to program completion and exit to permanent housing. We found that the number of days participants were in the Program was associated with higher odds of completing the Program and finding permanent housing. We divided the days spent in the Program into quartiles to look for differences in completion and housing. Participants in the first quartile spent less than a month in the Program (from 0 to 28 days); participants in the Low Medium quartile spent 29 to 105 days; participants in the High Medium quartile spent between 106 and 280 days; and participants in the highest quartile spent 281 days or more in the Program. Participants in the lowest quartile had lower odds of completing the Program and exiting to permanent housing. Exhibits 4.3 and 4.4 show each quartile and the likelihood of each group completing the Program and exiting to permanent housing, respectively, compared to the group that stayed the least amount of time in the Program.

EXHIBIT 4.3 LOGISTIC REGRESSION MODEL ODDS OF PROGRAM COMPLETION BY LENGTH OF TIME IN PROGRAM		
	Exp(B)	Odds of Completing Program Relative to Low Days Group
Low Days (0 to 28 days)	0.18	
Medium Low Days (29 to 105 days)	1.78	2-times as likely to complete program
Medium High Days (106 to 280 days)	1.70	2-times as likely to complete program
High Days (281 and above)	5.93	6-times as likely to complete program
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.		

EXHIBIT 4.4 LOGISTIC REGRESSION MODEL PREDICTING PERMANENT HOUSING BY LENGTH OF TIME IN PROGRAM		
	Exp(B)	Odds of Completing Program Relative to Low Days Group
Low Days (0 to 28 days)	0.09	
Medium Low Days (29 to 105 days)	3.85	4-times as likely to complete program
Medium High Days (106 to 280 days)	3.85	4-times as likely to complete program
High Days (281 and above)	17.27	17-times as likely to complete program
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.		

These findings align with the Fort Lyon Program philosophy that it takes time for participants struggling with addiction to become healthy. During participants' stay, they focus on their own health and recovery, engage in programming and Alcoholics Anonymous /Narcotics Anonymous meetings, as determined by their own needs, and work on goals to

acquire permanent housing. These data suggest a relationship between the amount of time participants stay in the Program and success in completing their goals and attaining permanent housing.

SUBSTANCE USE STATUS AND HISTORY

We found that there was no significant relationship between the severity of participants' use of alcohol, marijuana, or illegal drug use history in the 30 days prior to entering the Program and program completion or exit to permanent housing. Severity of participants' substance use histories is self-reported on the Government Performance and Results Act (GPRA) questionnaire, an instrument in which Program staff collect information on participants' alcohol, marijuana, or illegal drug use prior to entering the Program.

BEHAVIORAL HEALTH

We found a small, but statistically significant, negative relationship between the severity of participants' anxiety or depression ratings at intake and program completion, meaning participants with less severe levels of anxiety and depression tended to have higher program completion rates. There was no relationship between the severity of participants' anxiety or depression ratings at intake and exit to permanent housing. To get an overall measure of anxiety and depression for participants, we averaged the Generalized Anxiety Disorder 7-item scale (GAD-7), a widely-used measure in behavioral health to screen and measure generalized anxiety disorder, and the Patient Health Questionnaire (PHQ-9), a nine-item instrument used to screen and measure the severity of depressive symptoms for each participant just prior to them exiting the Program.

PROGRAM PARTICIPATION

We found a relationship between participating in employment programming and program completion and exit to permanent housing. Meaning participations engaged in employment programming were more likely to complete the Program and exit to permanent housing. There was also a relationship between participating in vocational programming and program completion, but there was not a relationship between vocational programming and exit to permanent housing. There was not a relationship between participating in educational programming and program completion or exit to permanent housing.

OTHER OUTCOMES

We also looked at outcomes reported by participants related to their alcohol and drug use and behavioral health after their participation in the Fort Lyon Program. We analyzed the

changes on survey responses from entry into the program until the last administration when participants completed the program.

ALCOHOL AND DRUGS

The length of time participants spent in the Program had a statistically significant, negative impact on alcohol and drug use. Meaning the longer participants stayed in the Program, the less likely they were to use alcohol or drugs. Several times throughout their stay, participants completed the GPRA, a questionnaire that asked about their drug and alcohol use in the past 30 days. Using the GPRA data, we found that for each additional day in the Program, the use of alcohol and drugs decreased by 1 percent or less.

In addition, Colorado Coalition for the Homeless (CCH) staff conducted post program interviews with 75 participants. The interview dates varied from 30 days, 6 months, and 12 months post program. Of the 75 participants, 72 percent, or 54 participants, reported using no alcohol or drugs in the past 30 days.

BEHAVIORAL HEALTH AND EMOTIONAL WELLBEING

We also analyzed results from several pre- and post-assessments to determine if participants reported improvements in anxiety, depression, and quality of life throughout their participation in the Program. We used a growth curve model to examine changes in behavioral health that included *day*, a variable that measured the number of days between the date of assessment administration and participants' first day in the Program. We found:

Generalized Anxiety. Participants experienced a statistically significant decrease in anxiety levels as they progressed through the Program, based on their scores on the GAD-7 at intake and exit. The scores can range from 0 to 21, with higher scores indicating more severe symptoms. Participants' scores decreased from the moderate anxiety range (10 to 14) to the mild anxiety range (5 to 9), as shown in Exhibit 4.5.

Depression. Participants experienced a statistically significant decrease in depressive symptoms as they progressed through the Program, based on their scores on the PHQ-9 at intake and exit. Scores can range from 0 to 27, with higher scores indicating more severe symptoms. Participants' scores decreased from the moderate depression range (10 to 14) to the mild depression range (5 to 9), as shown in Exhibit 4.5.

EXHIBIT 4.5 FORT LYON PROGRAM BEHAVIORAL HEALTH RESULTS		
	Program Intake	Program Exit
GAD-7 (Anxiety) (n=521)	11.79	7.10
PHQ-9 (Depression) (n=521)	12.57	7.72
SOURCE: Illuminate Evaluation Services' analysis of data provided by Colorado Coalition for the Homeless.		

Quality of Life. Participants showed statistically significant increases in overall quality of life and satisfaction with their health that were positively associated with the number of days they were in the Program, based on their scores on the World Health Organization Quality of Life-BREF (WHOQOL), which they complete multiple times throughout the Program. The WHOQOL contains four domains, including Physical Health (7 items), Psychological Health (6 items), Social Relationships (3 items), and Environment (8 items). Two additional items asked about quality of life and satisfaction with health. Individual questions are scored on a scale from 1 to 5. Domain scores are the averages of the questions on a scale of 1 to 5. Higher scores indicate a better perception of quality of life. Analyses of the four domains also showed positive, statistically significant relationships between each domain and the length of time participants were in the Program. Exhibit 4.6 shows the results from the WHOQOL.

EXHIBIT 4.6 QUALITY OF LIFE		
	Program Intake	Program Exit
Quality of life (n=529)		
Mean Score	2.49	3.85
% Rating Good/Very Good	18.5%	73.9%
Satisfaction with health (n=529)		
Mean Score	2.64	3.43
% Rating Good/Very Good	24.6%	54.7%
Physical Health Domain (n=529)		
Mean Score	3.07	3.53
Psychological Health Domain (n=526)		
Mean Score	2.93	3.58
Social Relationships Domain (n=528)		
Mean Score	2.64	3.26
Environment Domain (n=526)		
Mean Score	2.75	3.68
SOURCE: Illuminate Evaluation Services' analysis of data provided by Colorado Coalition for the Homeless.		

Participants' Perspectives

We surveyed Fort Lyon Program participants in January 2018 to learn more about their perspectives about the Fort Lyon Program. In total, 124 (55 percent) of the estimated 225 current participants completed the survey, which included questions about the importance the participants placed on specific outcomes (percent rated as Very Important/Some Importance) and their perceived progress towards the outcomes (percent rated as Met Outcome/Some Progress), as shown in Exhibit 4.7. It also included questions about the importance they placed on each program component in helping them prepare for a stable life (percent rated as Very Important/Some Importance), as shown in Exhibit 4.8. Each of these Appendix G includes demographics of the participants completing the survey and written responses to three questions.

EXHIBIT 4.7 FORT LYON PROGRAM PARTICIPANTS' SURVEY RESULTS		
	Importance of Each Outcome % Very/Some Importance	Progress Reaching Each Outcome % Met/Some Progress
Meeting my goals	99.2%	66.1%
Maintaining recovery/sobriety	98.3%	80.9%
Obtaining housing	95.9%	28.0%
Increasing my social community or recovery community	89.9%	62.4%
Addressing medical/health needs	87.1%	66.7%
Reuniting with family member(s)	76.5%	53.0%
Addressing mental health needs	75.9%	54.7%
Obtaining employment	75.2%	19.1%
Taking college classes	68.6%	33.6%
Paying off loans/financial debt	59.8%	13.5%
Accessing government benefits (e.g., SSI/SSDI, Medicaid, etc.)	59.5%	36.4%
Getting training in a vocation	58.8%	15.7%
Getting a college degree	57.9%	19.8%
Establishing a bank account	57.1%	24.8%
Getting a GED	19.1%	8.0%

SOURCE: Illuminate Evaluation Services' analysis of Survey Responses.

EXHIBIT 4.8 FORT LYON PROGRAM PARTICIPANTS' SURVEY RESULTS	
	Importance of Each Program Component % Very/Some Importance
Sober-living environment	93.2%
Ability to create my own individualized recovery plan	93.2%
My goals plan	88.9%
Fort Lyon's minimal program structure and meeting requirements	87.0%
Access to medical/dental care	86.3%
Fort Lyon's community meetings	85.3%
Relationships and meetings with case managers	83.2%
Relationships with other staff members	81.5%
Recovery-based support groups	80.7%
The rural location of Fort Lyon	78.6%
Support in finding housing after leaving Fort Lyon	78.4%
Access to mental health care	74.1%
Work modules (such as working in the kitchen or cleaning at Fort Lyon)	73.9%
Relationships with other participants	71.2%
Life skills training, such as managing a home, money, bills, appointments	70.9%
Having a health clinic on site	70.4%
Relationship with peer mentor	69.0%
Access to government benefits (e.g., SSI/SSDI, Medicaid, etc.)	61.9%
College classes at Fort Lyon	59.3%
Advising for education (navigator)	57.5%
College classes at the college	55.4%
Fort Lyons non-credit classes, such as art, writing and others	50.9%
Vocational training	44.2%

SOURCE: Illuminate Evaluation Services' analysis of Survey Responses.

PARTICIPANTS' REPORTED OUTCOMES

We talked with 32 current participants and 29 former participants (includes those participants who completed the Program and those who did not) of the Fort Lyon Program who agreed to participate in individual interviews and in focus groups. The participants described several benefits and outcomes from the Program, including:

- Staying sober or reducing alcohol and illegal drug use
- Acquiring permanent or temporary housing
- Developing a support network
- Addressing behavioral and physical health issues
- Learning responsibility and earning money through employment/vocational modules
- Acquiring training or education
- Reunifying with family
- Having an extended, supported period of time to address persistent concerns and behaviors, develop goals, and lay the foundation for working on those goals
- Acquiring credentials and completing deferred paperwork to access resources and benefits

Summary

The results show that almost 38 percent of participants completed the Fort Lyon Program and almost 47 percent exited to permanent housing from Program inception in 2013 through June 30, 2017. Of those who completed the Program, 77 percent exited to permanent housing. Results also show that while in the Program, participants reported a decrease in alcohol, marijuana, and illegal drug use, and Post-Program interviews showed similar results. In addition, participants reported significant improvements in their behavioral health related to anxiety and depression, physical health and health satisfaction, social relationships and the environment, and overall quality of life. Participants perceive the program components of the Fort Lyon Program are important to help them prepare for a stable life, and participants indicated specific progress toward meeting their goals, particularly in working towards their recovery.

Further, according to our analysis, a significant predictor of outcomes was days in program. These results show that the more days a participant stays in the Program, the greater the odds of completing the Program and exiting to permanent housing. This finding is consistent with the Fort Lyon Program philosophy of allowing participants time to work on their sobriety, become healthy, and complete their goals. We found a small significant negative relationship between the severity of participants' anxiety or depression ratings at intake and program completion, meaning participants with less severe levels of anxiety and depression tended to have higher program completion rates. There was no relationship between the severity of participants' anxiety or depression ratings at intake and exit to permanent housing. A client's drug and alcohol use history or participation in educational programming were not significant predictors of completing the Program or exiting to permanent housing. However, participating in employment opportunities was related to completing the program and exiting to permanent housing, and participating in vocational programming was related to completion of the program.

CHAPTER 5: ISSUES FOR FURTHER CONSIDERATION

Since its inception in 2013, leaders of the Fort Lyon Program have continued to make adjustments to the program model and its implementation with an eye toward maximizing program efficiency and outcomes. During Calendar Year 2017, they improved the recruitment and administration of volunteers, and in 2018, they have been approved for VISTA volunteers to increase support for residents' access to housing and employment. They also provided training for current staff members in order to improve skills, expertise, and resilience. Training has addressed cultural competency, trauma-informed care, and the issues and contexts of homelessness. Some staff members have also received job-specific training. For example, all peer mentors attended a state-run 3-week mentor certification class, and case managers received onsite training in assisting participants with setting goals and managing caseloads. Additional support from Program leadership this year included creation of a staff lounge, which provides a place for staff members to retreat for meals or conversation. They also improved administrative systems and communication by formalizing and improving monitoring of some processes.

There are multiple models for programs currently in use to address homelessness, and they vary in the populations they serve, their target outcomes, and their philosophical foundations and commitments. As described in detail in Appendix H, current research in best practices typically highlights the following practices or model components:

- Dual focus on addiction and homelessness
- Trauma-informed approach
- Peer mentoring/social support
- Programmatic flexibility and/or client choice
- Comprehensive and integrated services
- Coordinated assessment and outreach systems to support access
- Use of data

BEST PRACTICES IN USE AT THE FORT LYON PROGRAM

DUAL FOCUS ON ADDICTION AND HOUSING

Substance abuse can be both a cause and consequence of homelessness, and therefore it is advisable to address both issues simultaneously. This approach is central to the Fort Lyon Program model, which targets individuals dealing with substance abuse and homelessness and provides support for both. Recovery from addiction is emphasized and supported through program activities and through requirements for sobriety while participating in

the Program. Access to stable housing is also emphasized and supported, directly by assisting participants with the steps to locate and obtain housing, and indirectly by providing life skills and opportunities to gradually assume responsibilities for independent living. During Calendar Year 2017, the definition of Program Completion was refined to include exit to permanent housing, which reinforces this aspect of the dual focus. The emphasis on sobriety continues, with stringent requirements in place and a no-tolerance policy, which was influenced by participants' request.

TRAUMA-INFORMED CARE APPROACH

Trauma can also be a cause and consequence of homelessness and substance abuse. The Fort Lyon Program provides learning and reflection opportunities for staff and participants to understand the vulnerabilities associated with trauma and avenues toward healing. Trauma-informed care continues to be central to the Program's philosophy and implementation and further supported through Colorado Coalition for the Homeless (CCH) and Bent County staff training during Calendar Year 2017.

PEER MENTORING

The Fort Lyon Program incorporates social support for recovery, formally through peer mentoring and informally through relationships among participants. Peer mentoring in the Fort Lyon Program consists of a peer mentor assigned to each dorm. The peer mentors support participants in monitoring progress toward goals and selecting activities to support those goals. Peer mentors also help participants learn about the Program and locate resources, and simply listen if participants need to talk. The Fort Lyon Program also promotes informal peer support through activities and peer-led recovery groups. During Calendar Year 2017, peer mentoring was strengthened with the addition of two peer mentors and intensive training and certification of peer mentors.

PROGRAMMATIC FLEXIBILITY AND/OR CLIENT CHOICE

Some research suggests that programs with the flexibility to meet participants' differing needs and to allow them to make choices may be more successful in the long run in terms of self-management and other outcomes. The Fort Lyon Program intentionally provides a fair amount of latitude to allow participants to progress at their own pace, set their own goals and priorities, and exercise choice in most aspects of participation, including leadership. Analyses of the Goals and Outcomes Plans documents the program flexibility and client choice. During Calendar Year 2017, the Fort Lyon Program staff strengthened support for individualized client goals by increasing the role of the Resource Team and providing training for case managers on setting goals with clients.

BEST PRACTICES UNDER DEVELOPMENT AT THE FORT LYON PROGRAM

COMPREHENSIVE AND INTEGRATED SERVICES

Through the Fort Lyon Program and its partners, participants have access to a range of medical and psychological services, as well as support groups for recovery from addiction. Participants also have opportunities to develop basic employment skills and access education, although both staff and participants told us they believe these opportunities need to be expanded. Case managers work with participants individually as they develop and monitor progress toward goals and to ensure needs for services are met and, ideally, integrated. While the Fort Lyon Program does not provide comprehensive services (e.g., formal behavioral health treatment, full medical services) as part of the Program, it seeks to integrate these services on an individual basis for each client by identifying participants' needs through case management and providing referrals, contacts, and transportation for participants to obtain the needed services. Over time, staff members have been developing networks to ensure Fort Lyon participants have access to needed services. During Calendar Year 2017, changes in transportation have resulted in some improvements in access to services. The focus on strengthening relationships with referral sources is intended, in part, to enhance the networks supporting participants both during and after their stay. Early reports on the efforts to increase the effectiveness of case management and the Resource team suggest these may also enhance service integration.

COORDINATED ASSESSMENT AND OUTREACH SYSTEMS TO SUPPORT ACCESS

Coordinated assessment systems are necessary to identify, refer, and assess individuals who may benefit from a particular program. Implementing effective coordinated systems requires collaboration and efficient communication among agencies, as well as effective assessment tools and procedures. From the outset, Department of Local Affairs and Fort Lyon staff have sought to establish procedures that ensure access to the Fort Lyon Program for individuals who are eligible and in need but may not necessarily seek the assistance. They have reviewed and altered their approach as the Program has matured, and assessment and outreach processes are still under development for the Fort Lyon Program. Importantly, staff members acknowledge the significance of effective outreach and assessment for the Program's success both internally, and within the larger array of Colorado's services. During Calendar Year 2017, Program leaders augmented outreach by direct contact within the three Continuum of Care regions of Colorado to discuss program referrals.

USE OF DATA

Successful programs typically use data broadly, from identification of high utilizers, to making evidence-based decisions for individuals and the program, to monitoring outcomes. The Fort Lyon Program staff meet quarterly to review data reports. According to staff members, these reports allow them to make targeted changes in the Program and monitor the impact of those changes. For the purposes of our evaluation, we collected data from a variety of other organizations, such as the Department of Health Care Policy and Financing, the Department of Human Services' Office of Behavioral Health, the Department of Corrections, and the Judicial Branch. This required establishing new data-sharing processes. As data restrictions allow, it may be useful for Fort Lyon Program staff to develop similar agreements to monitor both short- and long-term outcomes. Access to these data can help Program leaders and oversight agencies to use data-driven and utilization-based strategies to identify individuals who are homeless and high utilizers of costly public services. Further, Program leaders and oversight agencies would be able to monitor outcomes of participants for a longer term after leaving the Program to understand the full impact of the Program. During Calendar Year 2017, DOLA and the Governor/Lt. Governor's Office have engaged with other state agencies to identify mechanisms to share data across agencies. These formalized efforts have occurred in collaboration with the University of Pennsylvania and University of Denver.

ISSUES FOR FURTHER CONSIDERATION

For the Fort Lyon Program to be more effective, it is important to coordinate data to drive decisions and provide services. Multiple systems and agencies support and interface with the Program for outreach, implementation, and follow up. A highly-coordinated system would ideally include data-driven and utilization-based strategies to identify individuals who are both chronically homeless and high utilizers of costly public services. It would also support monitoring. As stated above, our evaluation established initial data-sharing agreements, but coordination among agencies and systems to support service delivery and data is still under development; however, conversations across state agencies are occurring. For the Fort Lyon Program to function at its optimal level, systems coordination must continue to grow. With nearly 5 full years since initial implementation, this may be the time to review program design and establish long-term plans for stabilizing and growing the Program to maximize its value to the State.

Finally, a review of the literature on programs and outcomes related to homelessness (see Appendix H) suggests no single program can adequately address the combined challenges of homelessness and substance use. The population experiencing both homelessness and substance use is not monolithic, but comprised of individuals with varying histories, needs, and co-occurring conditions. Consequently, each program may work well for some segments of the population and not for others. Optimally, there are multiple options within a system, and clients easily can move among them based on choice and need. This requires

systemic communication and information sharing, as well as supportive policies and practices to ensure the system has a continuum of options. Thus, the Fort Lyon Program may best be conceptualized as one element of a service array dealing with homelessness, and ideally, not in isolation.

APPENDIX A: COMPARISON TO OTHER SIMILAR PROGRAMS

During Year 1, we visited three different facilities that share similar goals to the Fort Lyon Program. The purpose of these visits was to learn more about differences and similarities in program implementation and to explore outcomes. In most cases, the outcomes are self-reported from the facilities. Although there are Housing First programs in Colorado and other states, which connect individuals to permanent housing, we did not compare outcomes of Fort Lyon to Housing First programs. The Housing First programs do not require sobriety but do offer access to treatment and educational, vocational, and life skills services. In contrast, while Fort Lyon does not require treatment, it does offer a variety of services and sobriety is a requirement. Therefore, we did not believe this would be a valid comparison.

Comparison of Program Outcomes

The Fort Lyon Program is unique in its approach to recovery-oriented transitional housing for individuals who are homeless, and this makes it difficult to make direct program-to-program comparisons. The Fort Lyon Program serves to address both homelessness and substance addiction, while other programs typically focus on one or the other. The location also is unique, as Fort Lyon is in a rural setting, while most other programs are located in urban or suburban settings. Some programs require a fee to participate, while others do not. The Fort Lyon Program structure differs as well. Some programs are structured and require participants to work through specific phases before moving to the next phase, while others are flexible. Some have a peer mentor component, while others do not. All programs described below provide case management and offer vocational, educational, and employment support, although the intensity and structure varies considerably.

Although the programs are not exactly the same as the Fort Lyon Program, they serve similar populations, and they are examples of the different types of programs/options available to this population. Following is a brief description of the programs and some cross-program comparisons.

HARVEST FARM

The Harvest Farm New Life Program, located outside Fort Collins, Colorado, was established in 1989 by the Denver Rescue Mission. According to the resident handbook, the goal of Harvest Farm is to “help men attain a life of self-sufficiency by developing and maintaining healthy relationships and life-giving habits.” There are clear similarities between the programs. Like the Fort Lyon Program, Harvest Farm is a residential program in a rural setting, and there are opportunities to work toward education and employment goals through work on the farm and through partnerships with education programs.

Harvest Farm differs from the Fort Lyon Program in that it serves men only, is smaller than Fort Lyon with approximately 70 participants, and will accept participants from outside Colorado. It has a strong spiritual and religious foundation and incorporates spiritual development and Christian Counseling into the program. Compared to the Fort Lyon Program, progression through the Harvest Farm Program is more structured, with an initial intake and candidacy period. Participants must choose one of three tracks for focused development: education, career, or life skills. Case management is more intensive and includes weekly meetings with the participants. Participants are required to undergo counseling as part of their treatment. Extracurricular activities include sports, addiction recovery meetings, volunteering at local missions, and a hobby workshop.

SOBRIETY HOUSE

Sobriety House, located in Denver, was established in 1967 and is the oldest residential treatment center in Colorado. It is an alcohol and drug rehabilitation center serving men and women. Originally, Sobriety House's primary target population was the homeless. However, the program has expanded, and the priority populations now include veterans, pregnant women, IV drug users, and women with dependent children, with less of a focus on persons experiencing homelessness.

Sobriety House differs from the Fort Lyon Program in that it is a residential program with only 84 beds, and substance abuse treatment is provided onsite. Participants can proceed through a variety of phases. Phase 1 is an intensive residential treatment program; participants participate in 50 hours of group therapy and 1 hour of individual counseling per week. The program also includes a family education day. Participants may transition to Phase 2, which is a transitional residential treatment program. During Phase 2, participants are expected to work either onsite or offsite, unless they are a full-time student or are disabled. They also participate in mandatory group therapy for 2 hours, three times per week, and in 1 hour of individual counseling each week. Phase 3 includes outpatient treatment, or participants can live onsite in a sober living environment. Sobriety House is a non-profit corporation partially funded by Colorado through the Department of Human Services' Office of Behavioral Health. There is a sliding scale to ensure that Sobriety House meets the needs of their target population. According to information provided to us by Sobriety House, full-pay participants pay a fee of \$5,280 for Phase 1, \$2,000 per month for Phase 2, and \$75 per counseling session for Phase 3, plus reduced rent if they choose to live in sober living.

CENTRAL CITY CONCERN

Central City Concern, located in Portland Oregon, was established in 1979 to serve adults and families who are impacted by homelessness, poverty, and addiction. Central City Concern has several different housing programs, with over 800 staff, serving over 13,000 participants. The goal of Central City Concern is to provide "comprehensive solutions to ending homelessness and achieving self-sufficiency." It meets the mission by (1) providing

direct access to housing to support lifestyle change, (2) integrating healthcare services, (3) developing peer relationships that nurture and support personal transformation and recovery, and (4) attaining income through employment and accessing benefits.

Similar to Fort Lyon, Central City Concern focuses on peer mentoring to support recovery, and clinical services are provided offsite. However, unlike Fort Lyon, all participants participating in the program must also be in treatment, and participants are required to attend 12-step or faith-based support groups. Most participants transfer directly from treatment programs or detox, and they participate in ongoing outpatient treatment while in the program. To increase accountability, participants are expected to participate in check-in groups with their case manager on a daily basis. Case managers are also part of the substance use teams, and they meet with counselors to coordinate care. Central City Concern has an 80-hour community volunteer program that participants must complete over a three- to four-month period, and they also offer supportive employment services. Because of the size of Central City Concern and the number of different programs, there is a pipeline of permanent housing available to participants after completing the program.

Exhibit A.1 shows some similarities and differences in the programs we visited.

EXHIBIT A.1 FORT LYON PROGRAM COMPARISON OF OTHER SIMILAR PROGRAMS				
	Fort Lyon	Harvest Farm	Sobriety House	Central City Concern
Program Focus	Homelessness/ Substance Abuse	Homelessness/ Substance Abuse	Substance Abuse	Homelessness/ Substance Abuse
Location	Rural	Rural	Urban	Urban
Fee-for-Service	No	No	Yes	No
Substance Abuse Treatment Required	No	Yes	Yes	Yes – prior to admission/ Outpatient Treatment
Behavioral Health Treatment	Access to Services	Provides Services	Provides Services	Access to Services
Structure	Flexible	Phased Program	Phased Program	Flexible
Peer Mentors	Yes	No	No	Yes
Length of Participation	2 Years (additional year if making progress towards goals)	52 weeks to 27 months	28 days/Phase 1 Up to 6 months/Phase 2	2 Years (additional time if making progress towards goals)
SOURCE: Illuminate Evaluation Services' analysis of qualitative data.				

OUTCOMES

Because our comparison programs vary in structure, the programs collect data and define outcomes differently. Exhibit A.2 shows some general comparisons of the programs. Data

were self-reported by the programs. These data should be used for general comparison purposes rather than decision-making. It is notable that the average length of stay at Fort Lyon, Harvest Farm, and Central City Concern is similar, and the costs of the Fort Lyon Program and Central City Concern are similar. These only include findings from Year 1 of this evaluation, as they represent the same time period comparison.

EXHIBIT A.2 CLIENT COST AND COMMUNITY SAVINGS OF FORT LYON RESIDENTIAL COMMUNITY				
	Fort Lyon ¹	Harvest Farm ²	Central City Concern ²	Sobriety House ²
% Participants Completing Program	39.7% (Complete personalized goals)	17.0% (Complete five phases)	72% (Complete personalized goals)	98.0% (Reduced Drinking after 28 days)
Average Length of Stay	220 days	210 days	240 days	24 days (28 day program)
% Participants Acquiring Housing Upon Exit	38.6%	Not Available	67%	Not Available
Average Cost per participant for a full year	\$18,000/year	\$26,706/year	\$19,788/year	\$30,560/year ³
SOURCE: ¹ Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by the Colorado Coalition for the Homeless. ² Data provided by program leaders. Data has not been validated by Illuminate Evaluation Services. ³ Participants only stay up to 6 months. To create a full year cost, we included the cost for two full-pay participants. NOTE: The outcomes for Fort Lyon represent findings from Year 1 because the time period for these data align with the analyses for the other programs.				

Comparison of Cost Studies

We reviewed the literature to identify cost studies for programs addressing homelessness or addressing homelessness and substance abuse (See Appendix C). While these programs differ from the Fort Lyon Program, they provide some context of cost savings. Comparing pre- to- post enrollment costs is difficult because the studies differ substantially in population demographics, location, number of participants, study design, data analyzed, and length of study. All studies, except for Albuquerque's Heading Home Initiative, occurred prior to Medicaid expansion.

Exhibit A.3 includes a comparison of the Fort Lyon Program cost savings results to four other Permanent Supportive Housing programs. The studies of these programs compared

the service costs (e.g., for medical and behavioral health care, probation, and incarceration) before participants entered the program and once they began participation. These studies did not include the program costs in the comparison. It is important to note the four other studies included different data, including local data, which were not included in this preliminary Fort Lyon report.

EXHIBIT A.3 COMPARISON OF COST STUDIES IMPACT ON SERVICE COSTS			
Program	% Change in Cost Pre- to Post- Program	Number of Participants	Year of Study
Fort Lyon	-33%	217	2018
City of Albuquerque Heading Home Initiative	-35%	73	2016
Denver Housing First Collaborative	-61%	19	2006
Permanent Supportive Housing (Maine)	-63%	99	2007
Housing First Seattle, WA	-53%	95	2007
SOURCE: Illuminate Evaluation Services' cost analysis and review of other cost studies.			

APPENDIX B: COMPARISON GROUP AND DATA SOURCES

METHODOLOGY

COMPARISON GROUP MATCHING

To complete the Fort Lyon Supportive Residential Community Program (Fort Lyon Program or Program) evaluation, we assembled the comparison group using nearest neighbor matching as implemented in the R module MatchIt (Ho, Imai, King, & Stuart, 2011). The overall goal of matching is to minimize statistical bias by creating an artificial control group that matches the treatment group on key characteristics. The procedure consists of three steps. First, we create propensity scores using a logistic regression model. The model predictors include group characteristics (typically demographics) and the outcome consists of group membership (treatment or control group). Second, using the nearest neighbor algorithm, we identified a group of control cases that match the treatment group. Third, after identifying the matching cases, we created a data file consisting of the treatment group and the subset of matching control cases.

In the present case, we implemented nearest neighbor matching to find a control group for a treatment group of 968 Fort Lyon participants. We selected the control group of 968 persons from a sample of 3,623 who were identified as homeless in Fiscal Year 2012 by OBH and who may have been homeless prior to or subsequent to that time and who had received behavioral health services for issues such as substance use and abuse, mood and anxiety disorders, and psychotic disorders. The propensity score model included age, gender, education, ethnicity, and race as predictors. Exhibit B.1 shows the balance statistics. Before matching, the treatment group had a much smaller proportion of females (18%) relative to the control group (46%). After matching, the two groups have an identical proportion of females. Similarly, before matching, the treatment group was an average of about 5 years older than the control group (49.52 vs. 44.12). After matching, the two groups are virtually identical with regard to age.

EXHIBIT B.1 BALANCE STATISTICS FOR TREATMENT AND CONTROL GROUPS BEFORE AND AFTER MATCHING								
Predictor	Before Matching				After Matching			
	Means Treated	Means Control	SD Control	Mean Diff.	Means Treated	Means Control	SD Control	Mean Diff.
Gender	0.18	0.46	0.50	-0.28	0.18	0.18	0.38	0.00
Grade Level	5.39	5.46	1.62	-0.07	5.39	5.43	1.64	-0.04
Age	49.52	44.21	12.28	5.30	49.52	50.24	11.63	-0.72
Ethnicity	0.18	0.18	0.39	0.00	0.18	0.15	0.36	0.03
Race								
American Indian	0.11	0.04	0.20	0.07	0.11	0.09	0.29	0.02
Asian	0.00	0.00	0.07	0.00	0.00	0.01	0.07	0.00
Black	0.14	0.16	0.36	-0.01	0.14	0.15	0.35	0.00
Client refused	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Don't Know	0.03	0.00	0.00	0.03	0.03	0.00	0.00	0.03
Missing	0.00	0.03	0.17	-0.03	0.00	0.01	0.08	0.00
Native Hawaiian	0.01	0.00	0.07	0.00	0.01	0.01	0.07	0.00
White	0.70	0.77	0.42	-0.06	0.70	0.74	0.44	-0.04
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless and data provide by Office of Behavioral Health.								

TOOLS AND DATA SOURCES

For the evaluation, we used the following tools and data sources.

Literature review. We conducted a literature review to provide context for the evaluation. The review included an analysis of data on other, similar residential programs and outcomes, if available, throughout Colorado. We also conducted a research review of program implementation, costs and benefits, best practices of other programs throughout the nation serving the homeless population, and housing first models.

Existing data. We developed data-sharing agreements and accessed existing data from a variety of sources. This included the Colorado Departments of Local Affairs, Health Care Policy and Financing, Human Services, and Corrections; the Colorado Judicial Branch; the Colorado Coalition for the Homeless (CCH), and seven sheriff's offices (Denver, El Paso, Mesa, Otero, Prowers, Pueblo, Weld)

Interviews and focus groups. Over the 2 years, we conducted interviews and focus groups with a total of 167 people. This included Fort Lyon Program and DOLA leadership (n=16), Program staff (n=47), current Fort Lyon participants (n=32), former Fort Lyon participants (n=29), stakeholders from other agencies (e.g., Bent County, Otero College, outreach workers) (n=33), and staff and participants at the comparison sites (n=10).

Fort Lyon site visit. We visited Fort Lyon over the course of 4 days in Year 1 and 4 days in Year 2 to conduct interviews and focus groups; tour the facility; and observe classes, groups, the intake process, and staff and participant meetings. In Year 2, we also reviewed case files and goals and outcomes forms of a sample of Fort Lyon Program participants.

Fort Lyon Survey. We administered a survey to Fort Lyon Program participants on January 31, 2018 during a community meeting. The survey included items about the importance participants placed on specific outcomes, their progress in reaching the outcomes, and the importance of specific program activities. In total, 124 participants completed the survey.

Comparison facility site visit. In Year 1, we visited three other facilities that offer similar services, including Harvest Farm in Wellington, Colorado; Sobriety House in Denver, Colorado; and Central City Concern in Portland, Oregon. Harvest Farm and Central City Concern offer supportive residential services to individuals struggling with homelessness and addiction. Fort Lyon Program leaders previously visited both organizations to inform programming at Fort Lyon while it was under development. Sobriety House offers recovery services to individuals struggling with addiction. Sobriety House program leaders wrote a letter of support for Fort Lyon. During our visits, we interviewed the site directors, other staff members, and some participants, and we toured the facilities. At Central City Concern, we sat in on an informational presentation by program leaders and listened to four participants describe their experience at Central City Concern. We also conducted an interview with a member of the senior leadership team at the Denver Rescue Mission, which sponsors Harvest Farm.

Program documents, existing reports, and data. We reviewed documents pertaining to Fort Lyon's implementation of programming, including schedules, quarterly and yearly data reports produced by the CCH, and publicly available reports.

DATABASE DESCRIPTIONS

This section provides a brief description of each dataset used for the cost analysis and an explanation of how costs were calculated. Using these datasets, we calculated the program costs and pre-enrollment, post-enrollment, and post-program costs for each participant for the use of several public services.

Department of Local Affairs (DOLA) data. DOLA provided financial data from the Colorado Operations Resource Engine (CORE) on the total costs to operate and maintain the Fort Lyon Program for Fiscal Years 2014 through 2017. The financial data provided includes both direct costs and indirect costs. Using this data, we calculated costs for the housing and services provided by the Fort Lyon Program.

Colorado Coalition for the Homeless (CCH) data. CCH provided data on participants' demographics, length and dates of stay at Fort Lyon, and pre- and post-survey results for September 2013 through June 30, 2017 obtained from the Homeless Management Information System (HMIS) and a CCH-run supplemental database. We used this data to

calculate program and housing costs, determine the pre- and post- period costs for each participant, and analyze participant outcomes. CCH also provided data from HMIS for comparison group members.

Colorado Department of Health Care Policy and Financing (HCPF) data. HCPF provided actual data on Fort Lyon Program participants and the comparison group for Fiscal Years 2012 through 2017. This database included fee-for-service and capitation payments for both physical and behavioral health claims for participants using Medicaid.

Colorado Department of Human Services, Office of Behavioral Health (OBH) data. OBH provided encounter data for all Fort Lyon Program participants and the comparison group receiving services through a public mental health provider from Fiscal Years 2012 through 2017. Rates for behavioral health services were provided by HCPF and matched to the OBH dataset. Due to the complex nature of the cost data provided, we used costs for the behavioral health care provider used by the majority of Fort Lyon Program participants - Mental Health Center of Denver - as a proxy for all other behavioral health care providers.

Judicial system data. The Colorado Judicial Branch provided probation data on Fort Lyon Program participants and the comparison group for Fiscal Years 2012 through 2017. The data included the annual cost per offender for each fiscal year. We calculated the number of probation days for each participant by subtracting the actual term date (date probation ended) from the start date. In cases where the actual term date was blank, we used the expected term date. We calculated the cost per day per offender for each fiscal year.

Colorado Department of Corrections (DOC) data. DOC provided data on Fort Lyon Program participants and the comparison group for Fiscal Years 2012 through 2017. This data included information on incarceration but does not include jail time. DOC also provided movement data for each client, including the facility the client was housed in and the date they were moved to a different facility. The cost data included the daily cost at each facility by fiscal year. We used movement dates to calculate the number of days each client was at each facility and the cost per day at the corresponding facility.

County sheriff's office data. Seven sheriff's offices, including Denver, El Paso, Mesa, Otero, Prowers, Pueblo, Weld counties provided jail records for Fort Lyon participants and the comparison group for Fiscal years 2012 through 2017. We selected these jails based on where clients came from prior to admission to the Fort Lyon Program and where they exited. This data included booking information, booking date, and arrest date. We calculated the county jail costs per day using the rate provided by the Colorado DOC for each fiscal year.

APPENDIX C: COST BENEFIT ANALYSIS LITERATURE REVIEW

Individuals who are chronically homeless are often the highest users of community services. These individuals are more likely than non-homeless people to use emergency services, and inpatient and outpatient medical and social services. The criminal justice system is another community resource which is significantly impacted by homelessness. CCH estimates that Colorado taxpayers spend over \$43,000 each year for each homeless individual to cover costs ranging from emergency health care to legal services.¹ According to HUD point-in-time estimates of homelessness, a total of 10,940 individuals were homeless in Colorado on a single night in January of 2017, therefore costing Colorado taxpayers about \$470 million per year.

Public programs are increasingly being required to show whether their services are a good investment of public funds, and whether program costs are justified by program outcomes.² An analysis of the costs and benefits of a program can help assess whether a particular treatment benefits society by reducing the burden on the health care system, the criminal justice system, and other social services. Several approaches to this type of analysis are outlined in the literature: cost analysis, cost-effectiveness analysis, and cost-benefit analysis. A cost analysis is a thorough description of the type and amount of all resources used in the providing of services. A cost analysis often covers general information such as the total cost of a program for a defined period for an average participant and more specific information related to the cost of certain aspects of a program. A cost-effectiveness analysis investigates the relationship between program costs and program outcomes. Typically, cost-effectiveness studies compare different programs and/or different treatment modalities or techniques. A cost-benefit analysis measures both the costs and the benefits of a program in monetary terms. The intent of such an analysis is to determine whether program expenditures are less than, similar to, or greater than program benefits.

How and when supportive/residential treatment should be offered to homeless individuals remains up for debate.³ Some have argued that residential programs are cost-effective

¹ Perlman, J., & Parvensky, J. (2006). *Cost benefit analysis and program outcomes report*. Retrieved from http://denversroadhome.org/files/FinalDHFCCostStudy_1.pdf.

² Yates, B. T. (1999). *Measuring and improving cost, cost-effectiveness, and cost-benefit for substance abuse treatment programs*. Report for the National Institute on Drug Abuse. Division of Clinical and Services Research. Retrieved from www.drugabuse.gov/PDF/Costs.pdf.

³ Drake, R. E., Osher, F. C., Wallach, M. A. (1991). Homelessness and dual diagnosis. *American Psychologist*, 46, 1149–1158.

President's New Freedom Commission on Mental Health. (2003). *Achieving the promise: transforming mental health care in America*. Retrieved from <http://www.mentalhealthcommission.gov/reports/FinalReport/toc.html>.

Rosenheck, R. A., Kasprow, W., Frisman, L., & Liu-Mares, W. (2003). Cost-effectiveness of supported housing for homeless persons with mental illness. *Archives of General Psychiatry*, 60, 940–951.

alternatives to time-limited housing or hospitalization.⁴ Others view residential treatment as unnecessary and expensive.⁵ Nationwide, the housing model called Housing First is becoming increasingly popular since it is an evidence-based nationally recognized best practice. This model offers homeless participants immediate, non-time limited, independent housing with limited requirements for engaging in treatment or for remaining sober.⁶ As national and state policies shift toward the Housing First model, several recent cost studies have been conducted. We provide the summarized results of these cost studies below. It should be noted that although these studies are similar to the Fort Lyon Supportive Residential Community Program (Fort Lyon Program or Program) study, there are important differences. For example, most of these studies took place over multiple years and included a much smaller number of participants so the amount and type of data collected varied.

Although program models, population demographics, location, and study design differed, overall, the studies reviewed showed significant economic benefits for housing homeless individuals suffering from co-occurring behavioral health and substance abuse issues. The methods and results of these studies were used to inform the cost analysis for the evaluation of the Fort Lyon Program. In particular, the 2016 cost study conducted on Albuquerque's Heading Home Initiative served as a guide for the current study.

The study on Albuquerque's Heading Home (AHH) Initiative conducted by the Institute of Research at the University of New Mexico used a long-term cost study approach similar to the one we used in this evaluation.⁷ The Albuquerque study compared the cost of different services for a set time period before study participants entered the program to the cost of services after participants entered the program. Through an in-depth record request from a variety of agencies, the researchers were able to gather data on jail bookings, substance

⁴ Anderson, A. (1999). Comparative impact evaluation of two therapeutic programs for mentally ill chemical abusers. *International Journal of Psychosocial Rehabilitation*, 4, 11–26.

Fenton, W. S., Mosher, L.R., Herrell, J. M., & Blyler, C. R. (1998). Randomized trial of general hospital and residential alternative care for patients with severe and persistent mental illness. *American Journal of Psychiatry*, 155, 516–522.

Hawthorne, W. B., Green, E. E., Gilmer, T., Garcia, P., Hough, R. L., Lee, M., et al. (2005). A randomized trial of short-term acute residential treatment for veterans. *Psychiatric Services*, 56, 1379–1386.

McHugo, G.J., Bebout, R.R., Harris, M., Cleghorn, S., Herring, G., Xie, H., et al. (2004). A randomized controlled trial of integrated versus parallel housing services for homeless adults with severe mental illness. *Schizophrenia Bulletin*, 30(4), 969–982.

⁵ Carling, P. J. (1992). Housing, community support, and homelessness: Emerging policy in mental health systems. *New England Journal of Public Policy*, 8, 281–295.

Hogan, M. F., & Carling, P. J. (1992). Normal housing: A key element of a supported housing approach for people with psychiatric disabilities. *Community Mental Health Journal*, 28, 215–226.

Tsemberis, S., Gulcur, L., & Nakae, M. (2004). Housing first, consumer choice, and harm reduction for homeless individuals with a dual diagnosis. *American Journal of Public Health*, 94, 651–656.

⁶ Tsemberis, S. (1999). From streets to homes: An innovative approach to supported housing for homeless adults with psychiatric disabilities. *Journal of Community Psychology*, 27, 225–241.

⁷ Guerin, P., & Minssen, A. (2016). *City of Albuquerque Heading Home Initiative Cost Study Report Final*. University of New Mexico, Institute for Social Research.

abuse treatment, ambulance pick-ups and transports, emergency room usage, outpatient and inpatient treatment for physical and behavioral health issues, arrests, emergency shelter usage, meal site usage, and other services (i.e., case management, dentistry, etc.). The researchers conducting the AHH study acknowledged the difficulties in obtaining this data and that each agency collects and reports cost data in different formats and using different methods. Some agencies provided data to researchers on the actual cost per service, while others provided cost per day or costs per year or provided charges and not costs. Researchers reported the number of services in different areas utilized before the program and after entry to the program. Overall, researchers found that ambulance/emergency rescue services, emergency room visits, hospital inpatient Fort Lyon, jail bookings, and shelter services decreased. The researchers also reported the cost difference associated with these changes (see Exhibit C.1). The total service cost reduction was 34.5 percent. After factoring in the cost of housing and services provided by AHH, the cost of services decreased by 15.2 percent for study group participants who were in the study a minimum of 2 years and a maximum of 3 years.

EXHIBIT C.1				
ALBUQUERQUE'S HEADING HOME INITIATIVE: COSTS FOR 73 STUDY PARTICIPANTS				
	Pre-Costs	Post-Costs	Difference	Percent Change
Ambulance/Emergency Rescue	\$338,400	\$229,900	(\$108,500)	-32.1
Emergency Room	\$810,400	\$188,000	(\$622,500)	-76.8
Hospital Inpatient	\$3,938,100	\$1,735,200	(\$2,202,900)	-55.9
Outpatient Behavioral	\$125,400	\$113,100	(\$12,300)	-9.8
Outpatient Medical	\$1,245,100	\$1,793,800	\$548,600	+44.1
Jail	\$132,100	\$58,500	(\$73,500)	-55.7
Shelter	\$105,300	\$38,400	(\$67,000)	-63.6
Social Services	\$168,800	\$337,200	\$168,400	+99.8
Total	\$6,863,500	\$4,494,000	(\$2,369,500)	-34.5
AHH Housing Costs	\$0	\$889,600	\$889,600	+100.0
AHH Service Costs	\$0	\$439,900	\$439,900	+100.0
Grand Total	\$6,863,500	\$5,821,200	(\$1,042,300)	-15.2

SOURCE. Table adapted from Guerin & Minssen, 2016, page 30. Table only includes study group members who were in the study a minimum of 2 years and a maximum of 3 years (n=73).

A similar study was conducted by Perlman and Parvensky in 2006 on the Denver Housing First Collaborative (DHFC).⁸ Similar to the Albuquerque study, this study investigated the actual health and emergency service records of a sample of 19 participants of the DHFC for the 24 month period prior to entering the program and the 24 month period after entering the program. Cost data for several different service areas were collected, including emergency room, inpatient medical or psychiatric, outpatient medical, detox services, incarceration, and shelter costs and utilization. Researchers reported the number of

⁸ Perlman, J., & Parvensky, J. (2006). *Cost benefit analysis and program outcomes report*. Retrieved from http://denversroadhome.org/files/FinalDHFCostStudy_1.pdf.

services in different areas utilized before the program and after entry to the program as well as the costs associated with each service (see Exhibit C.2). The costs went down from pre-entry to post-entry in every service area except for outpatient. The total service cost reduction was 61.4 percent.

EXHIBIT C.2 DENVER HOUSING FIRST COLLABORATION: COSTS FOR 19 STUDY PARTICIPANTS				
	Pre-Costs	Post-Costs	Difference	Percent Change
Emergency Room	\$99,900	\$65,600	(\$34,300)	-34.4
Inpatient	\$197,200	\$67,100	(\$130,200)	-66.0
Outpatient	\$33,200	\$50,200	\$17,000	+51.2
Detox	\$197,100	\$31,600	(\$165,900)	-84.2
Incarceration	\$34,200	\$8,100	(\$26,000)	-76.2
Emergency Shelter	\$13,700	\$0	(\$13,700)	-100.0
Total	\$575,200	\$222,600	(\$353,100)	-61.4

SOURCE: Table adapted from Perlman & Parvensky, 2006.

A 2007 study by Mondello, Gass, McLaughlin, and Shore in the State of Maine investigated the cost-effectiveness of permanent-supportive housing (PSH).⁹ For this study, researchers examined the cost of different services for study participants 1 year prior to being provided PSH and 1 year after. Cost data for emergency shelter, ambulance, emergency room, police contacts, jail, and physical and behavioral health care were collected on 99 study participants. The costs went down from pre-entry to post-entry in every service area examined, with a total service cost reduction of 62.5 percent (see Exhibit C.3).

EXHIBIT C.3 MAINE PERMANENT SUPPORTIVE HOUSING: COST FOR 99 STUDY PARTICIPANTS				
	Pre-Costs	Post-Costs	Difference	Percent Change
Ambulance	\$45,900	\$15,400	(\$30,500)	-66.5
Emergency Room	\$206,500	\$78,100	(\$128,400)	-62.2
Physical Health care	\$197,100	\$31,600	(\$165,500)	-84.0
Behavioral Health care	\$569,400	\$338,300	(\$231,100)	-40.6
Police Contacts	\$22,900	\$7,800	(\$15,100)	-65.9
Jail	\$61,800	\$23,500	(\$38,300)	-62.0
Emergency Shelter	\$241,500	\$9,100	(\$232,400)	-96.2
Total	\$1,345,000	\$503,800	(\$841,200)	-62.5

SOURCE: Table adapted from Mondello, Gass, McLaughlin, and Shore, 2007.

In another study using a propensity score matched group of wait-list control participants compared to Housing First program participants in Seattle, researchers found a significant

⁹ Mondello, M., Glass, A., McLaughlin, T., and Shore, N. (2007). *Cost of homelessness, cost analysis of permanent supportive housing*. Retrieved from http://shnny.org/uploads/Supportive_Housing_in_Maine.pdf.

reduction in median monthly costs for program participants.¹⁰ This study examined the cost of jail and incarceration, shelter and sobering center use, hospital medical services, detoxification and treatment, emergency medical services, and Medicaid-funded services. The median monthly costs for participants decreased from \$4,066 per person to \$1,492 after 6 months and then to \$958 after 12 months. A total cost rate reduction of 53 percent was found for participants compared to the control group.

A study of the Reaching Out and Engaging to Achieve Consumer Health (REACH) program in San Diego (a Housing First model) is one of the few studies to examine the costs of a program relative to a control group.¹¹ This study specifically examined behavioral health service costs (i.e., case management, outpatient services, inpatient and emergency services, and behavioral health services provided in the criminal justice system) for 177 REACH participants compared to a propensity matched control group of 161 participants. Researchers investigated the cost of services for REACH participants from up to 2 years before entry into the program and 2 years after entry. The control group was matched in demographic and clinical characteristics and were initiating services at the same time. The researchers found an increase in the cost of case management and outpatient services for REACH participants compared to the control group, but these costs were offset by reduced spending on inpatient and emergency services, and behavioral health services provided by the justice system.

One of the first studies performing a benefit-cost analysis of a modified therapeutic community (MTC) for homeless individuals with both mental illness and chemical abuse was published by French et. al. in 2002.¹² The study compared three treatment groups to one another using data from 12 months pre-admission and 12 months post-admission. Participants were sequentially assigned to either a MTC of moderate intensity, a MTC of low intensity, or to treatment-as-usual (TAU). The main outcomes investigated were criminal activity, healthcare utilization, and productivity (employment). Researchers used the Drug Abuse Treatment Cost Analysis Program (DATCAP) to calculate costs. Standardizing everything to 1994 dollars, the researchers estimated the average economic cost of MTC per treatment episode at \$20,361 and the benefit for MTC relative to TAU at \$273,698, which represents a net benefit of \$253,337 (\$273,698 - \$20,361) and a benefit-cost ratio of \$13.44 (\$273,698/\$20,361). In other words, researchers found the economic benefit of MTC is more than 13 times greater than the incremental economic cost.

¹⁰ Larimer, M., Malone, D., Garner, M., et al. (2009). Health Care and public service use and costs before and after provision of housing for chronically homeless persons with severe alcohol problems. *The Journal of the American Medical Associations*, 301(13), 1347-1357.

¹¹ Gilmer, T, Manning, W., & Ettner, S. (2009). A cost analysis of San Diego County's REACH program for homeless persons. *Psychiatric Services*, 60(4), 1-6.

¹² French, M. T., McCollister, K. A., Sacks, S., McKendrick, K., & DeLeon, G. (2002). Benefit-cost analysis of a modified therapeutic community for mentally ill chemical abusers. *Evaluation and Program Planning*, 25(2), 137-48.

APPENDIX D: COST ANALYSIS STUDY – FULL SAMPLE

PARTICIPANTS

The cost analysis presented here is for the full sample of Program participants and does not exclude participants who were not on Medicaid during the pre-enrollment period (see Exhibit D.1 for n-sizes for each study group). The participants included in the 2-year study groups are a subset of the 1-year study groups. The majority of Fort Lyon and comparison group participants within the study groups are white, non-Hispanic males around 50 years of age, with a GED or high school diploma.

EXHIBIT D.1 FORT LYON PROGRAM DESCRIPTION COST STUDY GROUPS – STUDY GROUP N-SIZES FULL SAMPLE	
Study group	# of participants in each study group
1-Year Post-Enrollment Data	660
2-Years Post-Enrollment Data ¹	437
1-Year Post-Program Data	466
2-Years Post-Program Data ¹	253
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.	
¹ The participants included in the 2-year study groups are a subset of the 1-year study groups.	

Exhibits D.2 and D.3 show information on participation and length of stay in the Fort Lyon Program for all of the study groups. The average total number of days participants stayed in the Fort Lyon Program is a little less than 1 year for both of the post-enrollment groups, while the 1-year post-program group averaged about an 8 month stay and the 2-year post-program group averaged about a 6 month stay. The majority of participants in all groups entered the program one time. We were not able to determine if any of the study group participants resided out of state for any portion of the pre- or post- enrollment time period. Any services received out of state during the time periods reviewed would not be captured in this cost analysis.

EXHIBIT D.2 FORT LYON PROGRAM DESCRIPTION COST STUDY GROUPS –STAY INFORMATION FULL SAMPLE		
Fort Lyon Stay Information	Participants with 1-Year Post-Enrollment Data (n=660)	Participants with 2-Years Post-Enrollment Data¹ (n=437)
Total no. of days in Program		
Median	227	289
Average	305	347
Range	2 days-1227 days	2 days-1227 days
Number of times entered Fort Lyon Program		
1 time	558 (84.5%)	361 (82.6%)
2 times	95 (14.4%)	70 (16.0%)
3 times	5 (0.8%)	4 (0.9%)
4 times	2 (0.3%)	2 (0.5%)
Current Fort Lyon Program client	70 (10.6%)	32 (7.3%)
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.		
¹ The participants included in the 2-year study group are a subset of the 1-year study group.		

EXHIBIT D.3 FORT LYON PROGRAM DESCRIPTION COST STUDY GROUPS –STAY INFORMATION FULL SAMPLE		
Fort Lyon Stay Information	Participants with 1-Year Post-Program Data (n=466)	Participants with 2-Years Post-Program Data¹ (n=253)
Total no. of days in Program		
Median	147	126
Average	343	199
Range	2 days-1168 days	2 days-1168 days
Number of times entered Fort Lyon Program		
1 time	389 (83.5%)	203 (80.2%)
2 times	71 (15.2%)	45 (17.8%)
3 times	4 (0.9%)	3 (1.2%)
4 times	2 (0.4%)	2 (0.8%)
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.		
¹ The participants included in the 2-year study group are a subset of the 1-year study group.		

SAVINGS DUE TO CHANGE IN COMMUNITY SERVICE COSTS PRE- TO POST- PROGRAM

The difference in pre-enrollment costs compared to post-enrollment program costs for physical and behavioral health care, probation, incarceration, jail, shelter, housing vouchers, and other costs are described below.

PHYSICAL HEALTH CARE DATA

We used health care data provided by the Colorado Department of Health Care Policy and Financing (HCPF) to calculate pre-enrollment, post-enrollment, and post-program costs for each study group. The health care data included primarily physical health care data although there were a very small percentage of fee-for-service behavioral health claims included for individuals who received services through Medicaid. For Year 2 of the evaluation, we were able to break out physical health care data into six areas: 1) emergency room, 2) emergency transport, 3) inpatient, 4) outpatient, 5) pharmacy, and 6) other, which include services such as dental services, nursing facilities, labs, and medical supplies.

1-Year Pre-Enrollment/1-Year Post-Enrollment. The total physical health care costs for Program participants in the 1-year post-enrollment study group increased by about \$170,000, which was a 3 percent increase from pre- to post- enrollment (see Exhibit D.4). The comparison group showed a cost savings of \$340,000 or 10 percent. In particular, Program participants had pre- to post- enrollment cost increases for outpatient, pharmacy, and other services, while cost savings were seen for emergency room, emergency transport, and inpatient. A smaller number of Program participants were found using emergency room, emergency transport, and inpatient services during the post-enrollment period compared to the pre-enrollment period (see Exhibit D.5 for n-sizes). This finding is consistent with other studies that have found decreases in costs for emergency and inpatient services and increases in outpatient services.

EXHIBIT D.4 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – PHYSICAL HEALTH CARE FULL SAMPLE					
Participants with 1-Year Post-Enrollment Data (n=666)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
ER	Fort Lyon	\$1,850,000	\$1,090,000	(\$760,000)	-41%
	Comparison	\$444,000	\$457,000	\$13,000	+3%
Emergency Transport	Fort Lyon	\$159,000	\$124,000	(\$35,000)	-22%
	Comparison	\$43,000	\$50,000	\$7,000	+16%
Inpatient	Fort Lyon	\$2,260,000	\$1,350,000	(\$910,000)	-40%
	Comparison	\$695,000	\$460,000	(\$235,000)	-34%
Outpatient	Fort Lyon	\$585,000	\$1,440,000	\$855,000	+146%
	Comparison	\$373,000	\$275,000	(\$98,000)	-26%
Pharmacy	Fort Lyon	\$619,000	\$1,520,000	\$901,000	+146%
	Comparison	\$599,000	\$593,000	(\$6,000)	-1%
Other ¹	Fort Lyon	\$857,000	\$987,000	\$130,000	+15%
	Comparison	\$1,330,000	\$1,300,000	(\$30,000)	-2%
Total	Fort Lyon	\$6,330,000	\$6,500,000	\$170,000	+3%
	Comparison	\$3,480,000	\$3,140,000	(\$340,000)	-10%
Average per Participant	Fort Lyon	\$9,600	\$9,800	\$200	+3%
	Comparison	\$5,300	\$4,800	(\$500)	-10%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

EXHIBIT D.5 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA - PHYSICAL HEALTH CARE FULL SAMPLE						
Participants with 1-Year Post-Enrollment Data (n=660)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Enrollment	Difference	% Change
ER	# of participants	Fort Lyon	414	354	(60)	-14%
		Comparison	210	206	(4)	-2%
	Total # of procedures	Fort Lyon	6,313	4,123	(2,190)	-35%
		Comparison	1,685	1,470	(215)	-13%
Emergency Transport	# of participants	Fort Lyon	261	224	(37)	-14%
		Comparison	109	115	6	+6%
	Total # of procedures	Fort Lyon	1,344	1,026	(318)	-24%
		Comparison	390	569	179	+46%
Inpatient	# of participants	Fort Lyon	165	130	(35)	-21%
		Comparison	76	57	(19)	-25%
	Total # of procedures	Fort Lyon	351	254	(97)	-28%
		Comparison	123	77	(46)	-37%
Outpatient	# of participants	Fort Lyon	390	552	162	+42%
		Comparison	228	217	(11)	-5%
	Total # of procedures	Fort Lyon	3,125	6,684	3,559	+114%
		Comparison	1,567	1,378	(189)	-12%
Pharmacy	# of participants	Fort Lyon	378	499	121	+32%
		Comparison	220	225	5	+2%
	Total # of procedures	Fort Lyon	10,867	20,945	10,078	+93%
		Comparison	8,887	8,175	(712)	-8%
Other ¹	# of participants	Fort Lyon	455	555	100	+22%
		Comparison	305	299	(6)	-2%
	Total # of procedures	Fort Lyon	8,447	9,350	903	+11%
		Comparison	6,737	7,131	394	+6%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

2-Years Pre-Enrollment/2-Years Post-Enrollment. The total physical health care costs for Program participants in the 2-years post-enrollment study group increased by about \$4.6 million, which was an 89 percent increase from pre- to post- enrollment (see Exhibit D.6). The comparison group also showed a cost increase of \$400,000, or 10 percent. Program participants had pre- to post- enrollment cost increases for in every service area. Larger numbers of Program participants were found using all services during the post-enrollment period compared to the pre-enrollment period (see Exhibit D.7 for n-sizes).

EXHIBIT D.6 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – PHYSICAL HEALTH CARE FULL SAMPLE					
Participants with 2-Years Post-Enrollment Data (n=437)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Enrollment Costs	Difference	% Change
ER	Fort Lyon	\$1,460,000	\$1,480,000	\$20,000	+1%
	Comparison	\$523,000	\$595,000	\$72,000	+14%
Emergency Transport	Fort Lyon	\$111,000	\$158,000	\$47,000	+42%
	Comparison	\$47,000	\$64,000	\$17,000	+36%
Inpatient	Fort Lyon	\$1,760,000	\$2,150,000	\$390,000	+22%
	Comparison	\$975,000	\$873,000	(\$102,000)	-10%
Outpatient	Fort Lyon	\$485,000	\$1,430,000	\$945,000	+195%
	Comparison	\$503,000	\$373,000	(\$130,000)	-26%
Pharmacy	Fort Lyon	\$564,000	\$2,120,000	\$1,556,000	+276%
	Comparison	\$620,000	\$770,000	\$150,000	+24%
Other ¹	Fort Lyon	\$765,000	\$1,370,000	\$605,000	+79%
	Comparison	\$1,440,000	\$1,830,000	\$390,000	+27%
Total	Fort Lyon	\$5,150,000	\$9,710,000	\$4,560,000	+89%
	Comparison	\$4,110,000	\$4,510,000	\$400,000	+10%
Average per Participant	Fort Lyon	\$11,800	\$22,200	\$10,400	+89%
	Comparison	\$9,400	\$10,300	\$900	+10%
SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.					
¹ Other includes services such as dental services, nursing facilities, labs, and medical supplies.					

EXHIBIT D.7 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – PHYSICAL HEALTH CARE FULL SAMPLE						
Participants with 2-Years Post-Enrollment Data (n=437)						
	Type of Data	Group	2-years Pre- Enrollment	2-years Post- Enrollment	Difference	% Change
ER	# of participants	Fort Lyon	265	294	29	+11%
		Comparison	191	181	(10)	-5%
	Total # of procedures	Fort Lyon	5,045	5,371	326	+6%
		Comparison	2,192	2,023	(169)	-8%
Emergency Transport	# of participants	Fort Lyon	160	197	37	+23%
		Comparison	93	113	20	+22%
	Total # of procedures	Fort Lyon	892	1,303	411	+46%
		Comparison	339	685	346	+102%
Inpatient	# of participants	Fort Lyon	118	119	1	+1%
		Comparison	77	65	(12)	-16%
	Total # of procedures	Fort Lyon	283	333	50	+18%
		Comparison	160	131	(29)	-18%
Outpatient	# of participants	Fort Lyon	243	380	137	+56%
		Comparison	191	171	(20)	-10%
	Total # of procedures	Fort Lyon	2,679	6,490	3,811	+142%
		Comparison	1,930	1,755	(175)	-9%
Pharmacy	# of participants	Fort Lyon	232	357	125	+54%
		Comparison	183	172	(11)	-6%
	Total # of procedures	Fort Lyon	9,072	23,870	14,798	+163%
		Comparison	10,252	9,473	(779)	-8%
Other ¹	# of participants	Fort Lyon	278	387	109	+39%
		Comparison	231	227	(4)	-2%
	Total # of procedures	Fort Lyon	7,103	11,164	4,061	+57%
		Comparison	8,652	9,141	489	+6%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

1-Year Pre-Enrollment/1-Year Post-Program. The total physical health care costs for Program participants in the 1-year post-program study group increased by about \$900,000, which was a 21 percent increase from pre-enrollment to post-program (see Exhibit D.8). The comparison group also showed a cost increase of \$340,000 or 14 percent. The only pre- to post- cost decrease for Program participants was in the area of emergency room, while all other services were cost increases. A larger number of Program participants were found using each of the services during the post-program period compared to the pre-enrollment period (see Exhibit D.9 for n-sizes).

EXHIBIT D.8 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – PHYSICAL HEALTH CARE FULL SAMPLE					
Participants with 1-Year Post-Program Data (n=466)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
ER	Fort Lyon	\$1,240,000	\$1,160,000	(\$80,000)	-6%
	Comparison	\$309,000	\$317,000	\$8,000	+3%
Emergency Transport	Fort Lyon	\$101,000	\$128,000	\$27,000	+27%
	Comparison	\$30,000	\$44,000	\$14,000	+47%
Inpatient	Fort Lyon	\$1,500,000	\$1,680,000	\$180,000	+12%
	Comparison	\$538,000	\$522,000	(\$16,000)	-3%
Outpatient	Fort Lyon	\$382,000	\$534,000	\$152,000	+40%
	Comparison	\$251,000	\$189,000	(\$62,000)	-25%
Pharmacy	Fort Lyon	\$457,000	\$899,000	\$442,000	+97%
	Comparison	\$358,000	\$539,000	\$181,000	+51%
Other ¹	Fort Lyon	\$549,000	\$731,000	\$182,000	+33%
	Comparison	\$876,000	\$1,090,000	\$214,000	+24%
Total	Fort Lyon	\$4,230,000	\$5,130,000	\$900,000	+21%
	Comparison	\$2,360,000	\$2,700,000	\$340,000	+14%
Average per Participant	Fort Lyon	\$9,100	\$11,000	\$1,900	+21%
	Comparison	\$5,100	\$5,800	\$700	+14%
SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.					
¹ Other includes services such as dental services, nursing facilities, labs, and medical supplies.					

EXHIBIT D.9 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – PHYSICAL HEALTH CARE FULL SAMPLE						
Participants with 1-Year Post-Program Data (n=466)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
ER	# of participants	Fort Lyon	271	276	5	+2%
		Comparison	149	143	(6)	-4%
	Total # of procedures	Fort Lyon	4,398	4,084	(314)	-7%
		Comparison	1,279	1,102	(177)	-14%
Emergency Transport	# of participants	Fort Lyon	162	198	36	+22%
		Comparison	70	81	11	+16%
	Total # of procedures	Fort Lyon	816	1,123	307	+38%
		Comparison	239	511	272	+114%
Inpatient	# of participants	Fort Lyon	108	112	4	+4%
		Comparison	55	43	(12)	-22%
	Total # of procedures	Fort Lyon	239	253	14	+6%
		Comparison	90	80	(10)	-11%
Outpatient	# of participants	Fort Lyon	257	302	45	+18%
		Comparison	162	145	(17)	-10%
	Total # of procedures	Fort Lyon	2,037	2,316	279	+14%
		Comparison	1,079	928	(151)	-14%
Pharmacy	# of participants	Fort Lyon	243	301	58	+24%
		Comparison	145	155	10	+7%
	Total # of procedures	Fort Lyon	7,103	10,130	3027	+43%
		Comparison	5,521	5,015	(506)	-9%
Other ¹	# of participants	Fort Lyon	300	342	42	+14%
		Comparison	214	206	(8)	-4%
	Total # of procedures	Fort Lyon	5,393	6,750	1357	+25%
		Comparison	4,555	5,356	801	+18%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

2-Years Pre-Enrollment/2-Years Post-Program. The total physical health care costs for Program participants in the 2-years post-enrollment study group increased by about \$2.4 million, which was a 74 percent increase from pre-enrollment to post-program (see Exhibit D.10). The comparison group also showed a cost increase of \$840,000, or 41 percent. Program participants had pre-enrollment to post-program cost increases in every service area. Larger numbers of Program participants were found using all services during the post-program period compared to the pre-enrollment period (see Exhibit D.11 for n-sizes).

EXHIBIT D.10 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – PHYSICAL HEALTH CARE FULL SAMPLE					
Participants with 2-Years Post-Program Data (n=253)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Program Costs	Difference	% Change
ER	Fort Lyon	\$885,000	\$1,250,000	\$365,000	+41%
	Comparison	\$313,000	\$318,000	\$5,000	+2%
Emergency Transport	Fort Lyon	\$69,000	\$135,000	\$66,000	+96%
	Comparison	\$24,000	\$36,000	\$12,000	+50%
Inpatient	Fort Lyon	\$1,220,000	\$2,000,000	\$780,000	+64%
	Comparison	\$457,000	\$522,000	\$65,000	+14%
Outpatient	Fort Lyon	\$280,000	\$528,000	\$248,000	+89%
	Comparison	\$342,000	\$182,000	(\$160,000)	-47%
Pharmacy	Fort Lyon	\$390,000	\$849,000	\$459,000	+118%
	Comparison	\$277,000	\$465,000	\$188,000	+68%
Other ¹	Fort Lyon	\$396,000	\$888,000	\$492,000	+124%
	Comparison	\$616,000	\$1,350,000	\$734,000	+119%
Total	Fort Lyon	\$3,240,000	\$5,650,000	\$2,410,000	+74%
	Comparison	\$2,030,000	\$2,870,000	\$840,000	+41%
Average per Participant	Fort Lyon	\$12,800	\$22,300	\$9,500	+74%
	Comparison	\$8,000	\$11,300	\$3,300	+41%
SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.					
¹ Other includes services such as dental services, nursing facilities, labs, and medical supplies.					

EXHIBIT D.11 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – PHYSICAL HEALTH CARE FULL SAMPLE						
Participants with 2-Years Post-Program Data (n=253)						
	Type of Data	Group	2-years Pre- Enrollment	2-years Post- Program	Difference	% Change
ER	# of participants	Fort Lyon	140	175	35	+25%
		Comparison	115	106	(9)	-8%
	Total # of procedures	Fort Lyon	2,942	4,479	1,537	+52%
		Comparison	1,357	1,140	(217)	-16%
Emergency Transport	# of participants	Fort Lyon	90	129	39	+43%
		Comparison	53	63	10	+19%
	Total # of procedures	Fort Lyon	535	1,199	664	+124%
		Comparison	189	441	252	+133%
Inpatient	# of participants	Fort Lyon	67	85	18	+27%
		Comparison	46	36	(10)	-22%
	Total # of procedures	Fort Lyon	182	284	102	+56%
		Comparison	92	81	(11)	-12%
Outpatient	# of participants	Fort Lyon	129	175	46	+36%
		Comparison	113	96	(17)	-15%
	Total # of procedures	Fort Lyon	1,560	2,441	881	+56%
		Comparison	1,146	1,029	(117)	-10%
Pharmacy	# of participants	Fort Lyon	127	177	50	+39%
		Comparison	109	103	(6)	-6%
	Total # of procedures	Fort Lyon	5,298	9,630	4,332	+82%
		Comparison	4,934	4,634	(300)	-6%
Other ¹	# of participants	Fort Lyon	152	199	47	+31%
		Comparison	135	135	0	+0%
	Total # of procedures	Fort Lyon	3,943	7,027	3,084	+78%
		Comparison	4,506	5,553	1,047	+23%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

BEHAVIORAL HEALTH CARE DATA

Behavioral health care data provided by the Office of Behavioral Health (OBH) within the Department of Human Services was used to calculate pre-enrollment, post-enrollment, and post-program behavioral health care costs. Behavioral health care data includes the cost of services such as group and individual therapy, case management, and drug and/or alcohol services. In Year 2 of the evaluation, we were able to separate behavioral health care claims into two areas: inpatient and outpatient.

1-Year Pre-Enrollment/1-Year Post-Enrollment. The total behavioral health care cost savings for Program participants in the 1-year post-enrollment study group was about \$2 million, which was a 92 percent decrease from pre- to post- enrollment (see Exhibit D.12) and represents a cost savings to the public and to the federal and state government. The comparison group showed a cost savings of about \$3.1 million, or 87 percent. Program participants had pre- to post-enrollment cost savings for both inpatient and outpatient services. Program participants used a much smaller number of units of both of these services during the post-enrollment period compared to the pre-enrollment period (see Exhibit D.13 for n-sizes).

EXHIBIT D.12 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – BEHAVIORIAL HEALTH CARE FULL SAMPLE					
Participants with 1-Year Post-Enrollment Data (n=660)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Inpatient	Fort Lyon	\$238,000	\$53,000	(\$185,000)	-78%
	Comparison	\$81,000	\$49,000	(\$32,000)	-40%
Outpatient	Fort Lyon	\$1,920,000	\$125,000	(\$1,795,000)	-93%
	Comparison	\$3,420,000	\$393,000	(\$3,027,000)	-89%
Total	Fort Lyon	\$2,160,000	\$178,000	(\$1,982,000)	-92%
	Comparison	\$3,500,000	\$442,000	(\$3,058,000)	-87%
Average per Participant	Fort Lyon	\$3,300	\$300	(\$3,000)	-92%
	Comparison	\$5,300	\$700	(\$4,600)	-87%

SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.

EXHIBIT D.13 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – BEHAVIORIAL HEALTH CARE FULL SAMPLE						
Participants with 1-Year Post-Enrollment Data (n=660)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Enrollment	Difference	% Change
Inpatient	# of participants	Fort Lyon	94	106	12	+13%
		Comparison	24	44	20	+83%
	Total # of units	Fort Lyon	2,956	2,805	(151)	-5%
		Comparison	758	2,248	1,490	+197%
Outpatient	# of participants	Fort Lyon	286	249	(37)	-13%
		Comparison	256	258	2	+1%
	Total # of units	Fort Lyon	23,207	13,301	(9,906)	-43%
		Comparison	36,250	30,321	(5,929)	-16%

SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.

2-Years Pre-Enrollment/2-Years Post-Enrollment. The total behavioral health care costs for Program participants in the 2-years post-enrollment study group increased by about \$80,000, which was a 4 percent increase from pre- to post- enrollment (see Exhibit D.14). The comparison group showed a cost increase of about \$1.3 million, or 41 percent. Program participants had pre- to post- enrollment cost increases for inpatient, while costs stayed about the same for outpatient services. Program participants used a smaller number of units of outpatient services and a higher number of units of inpatient services during the post-enrollment period compared to the pre-enrollment period (see Exhibit D.15 for n-sizes).

EXHIBIT D.14 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS - BEHAVIORIAL HEALTH CARE FULL SAMPLE					
Participants with 2-Years Post-Enrollment Data (n=437)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Enrollment Costs	Difference	% Change
Inpatient	Fort Lyon	\$139,000	\$231,000	\$92,000	+66%
	Comparison	\$43,000	\$156,000	\$113,000	+263%
Outpatient	Fort Lyon	\$1,710,000	\$1,700,000	(\$10,000)	-1%
	Comparison	\$3,140,000	\$4,310,000	\$1,170,000	+37%
Total	Fort Lyon	\$1,850,000	\$1,930,000	\$80,000	+4%
	Comparison	\$3,180,000	\$4,470,000	\$1,290,000	+41%
Average per Participant	Fort Lyon	\$4,200	\$4,400	\$200	+4%
	Comparison	\$7,300	\$10,200	\$2,900	+41%

SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.

EXHIBIT D.15 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA - BEHAVIORIAL HEALTH CARE FULL SAMPLE						
Participants with 2-Years Post-Enrollment Data (n=437)						
	Type of Data	Group	2-years Pre- Enrollment	2-years Post- Enrollment	Difference	% Change
Inpatient	# of participants	Fort Lyon	43	92	49	+114%
		Comparison	16	51	35	+219%
	Total # of units	Fort Lyon	1,270	2,609	1,339	+105%
		Comparison	32,900	1,456	(31,444)	-96%
Outpatient	# of participants	Fort Lyon	186	187	1	+1%
		Comparison	252	194	(58)	-23%
	Total # of units	Fort Lyon	23,919	14,595	(9,324)	-39%
		Comparison	47,524	35,594	(11,930)	-25%

SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.

1-Year Pre-Enrollment/1-Year Post-Program. The total behavioral health care costs for Program participants in the 1-year post-program study group increased by about \$230,000, which was a 15 percent increase from pre- to post- program (see Exhibit D.16). The comparison group showed a cost savings of about \$30,000, or 1 percent. Program participants had pre-enrollment to post-program cost increases for both inpatient and outpatient services. Program participants used a smaller number of units of outpatient services and a higher number of units of inpatient services during the post-program period compared to the pre-enrollment period (see Exhibit D.17 for n-sizes).

EXHIBIT D.16 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – BEHAVIORIAL HEALTH CARE FULL SAMPLE					
Participants with 1-Year Post-Program Data (n=466)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Inpatient	Fort Lyon	\$171,000	\$175,000	\$4,000	+2%
	Comparison	\$55,000	\$114,000	\$59,000	+107%
Outpatient	Fort Lyon	\$1,340,000	\$1,560,000	\$220,000	+16%
	Comparison	\$2,330,000	\$2,250,000	(\$80,000)	-3%
Total	Fort Lyon	\$1,510,000	\$1,740,000	\$230,000	+15%
	Comparison	\$2,390,000	\$2,360,000	(\$30,000)	-1%
Average per Participant	Fort Lyon	\$3,200	\$3,700	\$500	+15%
	Comparison	\$5,100	\$5,100	(\$0)	-1%
SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.					

EXHIBIT D.17 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – BEHAVIORIAL HEALTH CARE FULL SAMPLE						
Participants with 1-Year Post-Program Data (n=466)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
Inpatient	# of participants	Fort Lyon	56	100	44	+79%
		Comparison	15	45	30	+200%
	Total # of units	Fort Lyon	1823	2,916	1,093	+60%
		Comparison	495	1,070	575	+116%
Outpatient	# of participants	Fort Lyon	192	187	(5)	-3%
		Comparison	182	166	(16)	-9%
	Total # of units	Fort Lyon	16,764	14,606	(2,158)	-13%
		Comparison	25,300	19,254	(6,046)	-24%
SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.						

2-Years Pre-Enrollment/2-Years Post-Program. The total behavioral health care costs for Program participants in the 1-year post-program study group increased by about \$791,000, which was a 91 percent increase from pre-enrollment to post-program (see Exhibit D.18). The comparison group showed a cost increase of about \$890,000 or 58 percent. Program participants had pre-enrollment to post-program cost increases for both inpatient and outpatient services. Program participants used a higher number of units of both inpatient and outpatient services during the post-program period compared to the pre-enrollment period (see Exhibit D.19 for n-sizes).

EXHIBIT D.18 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – BEHAVIORIAL HEALTH CARE FULL SAMPLE					
Participants with 2-Years Post-Program Data (n=253)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Program Costs	Difference	% Change
Inpatient	Fort Lyon	\$50,000	\$156,000	\$106,000	+212%
	Comparison	\$23,000	\$82,000	\$59,000	+257%
Outpatient	Fort Lyon	\$819,000	\$1,500,000	\$681,000	+83%
	Comparison	\$1,510,000	\$2,340,000	\$830,000	+55%
Total	Fort Lyon	\$869,000	\$1,660,000	\$791,000	+91%
	Comparison	\$1,530,000	\$2,420,000	\$890,000	+58%
Average per Participant	Fort Lyon	\$3,400	\$6,600	(\$3,200)	+91%
	Comparison	\$6,000	\$9,600	(\$3,600)	+58%
SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.					

EXHIBIT D.19 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – BEHAVIORIAL HEALTH CARE FULL SAMPLE						
Participants with 2-Years Post-Program Data (n=253)						
	Type of Data	Group	2-years Pre- Enrollment	2-years Post- Program	Difference	% Change
Inpatient	# of participants	Fort Lyon	22	67	45	+205%
		Comparison	6	35	29	+483%
	Total # of units	Fort Lyon	655	1,803	1,148	+175%
		Comparison	168	834	666	+396%
Outpatient	# of participants	Fort Lyon	96	117	21	+22%
		Comparison	157	111	(46)	-29%
	Total # of units	Fort Lyon	12,338	13,040	702	+6%
		Comparison	25,867	16,574	(9,293)	-36%
SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.						

JUDICIAL SERVICES DATA

We used probation, incarceration/prison, and jail data provided by the Colorado Judicial Branch, the Department of Corrections, and from several jails to calculate pre-enrollment, post-enrollment, and post-program costs for judicial services. Statewide data was available for probation and incarceration/prison, while jail data is housed locally at each jail. Since we could not access a centralized database for jail data, we collected data directly from a sample of jails. We utilized the enrollment and exit addresses for Program participants to determine the cities the majority of participants enter the program from or exit to. We then used this data to find what county jails were closest to those cities. Consequently, the jail data is from a subset of jails including: Denver, El Paso, Mesa, Otero, Prowers, Pueblo, and Weld counties.

1-Year Pre-Enrollment/1-Year Post-Enrollment. The total judicial system cost savings for Program participants in the 1-year post-enrollment study group was about \$2.3 million, which was an 82 percent decrease from pre- to post- enrollment (see Exhibit D.20) and represents a cost savings to the public and to the federal and state government. The comparison group also showed a cost decrease of about \$2 million, or 70 percent. Program participants decreased costs by a higher percentage than the comparison group in all areas. Fewer Program participants were found in probation, incarceration/prison, and jail records in the post-enrollment period compared to the pre-enrollment period (see Exhibit D.21 for n-sizes).

EXHIBIT D.20 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – JUDICIAL SYSTEM DATA FULL SAMPLE					
Participants with 1-Year Post-Enrollment Data (n=660)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Probation	Fort Lyon	\$145,000	\$45,000	(\$100,000)	-69%
	Comparison	\$42,000	\$40,000	(\$2,000)	-5%
Incarceration/Prison	Fort Lyon	\$48,000	\$36,000	(\$12,000)	-25%
	Comparison	\$382,000	\$347,000	(\$35,000)	-9%
Jail	Fort Lyon	\$2,570,000	\$427,000	(\$2,143,000)	-83%
	Comparison	\$2,390,000	\$462,000	(\$1,928,000)	-81%
Total	Fort Lyon	\$2,760,000	\$508,000	(\$2,252,000)	-82%
	Comparison	\$2,810,000	\$849,000	(\$1,961,000)	-70%
Average per Participant	Fort Lyon	\$4,200	\$800	(\$3,400)	-82%
	Comparison	\$4,300	\$1,300	(\$3,000)	-70%

SOURCE: Illuminate Evaluation Services' analysis of judicial system data.

EXHIBIT D.21 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – JUDICIAL SYSTEM DATA FULL SAMPLE						
Participants with 1-Year Post-Enrollment Data (n=660)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Enrollment	Difference	% Change
Probation	# of participants	Fort Lyon	62	25	(37)	-60%
		Comparison	23	26	3	+13%
	# of days on probation	Fort Lyon	38,049	12,062	(25,987)	-68%
		Comparison	9,532	9,867	335	+4%
Incarceration /Prison	# of participants	Fort Lyon	8	4	(4)	-50%
		Comparison	23	19	(4)	-17%
	# of days incarcerated	Fort Lyon	1,418	854	(564)	-40%
		Comparison	5,151	6,182	1,031	+20%
Jail	# of participants	Fort Lyon	457	154	(303)	-66%
		Comparison	394	122	(272)	-69%
	# of nights in jail	Fort Lyon	49,520	7,729	(41,791)	-84%
		Comparison	46,529	8,336	(38,193)	-82%
SOURCE: Illuminate Evaluation Services' analysis of judicial system data.						

2-Years Pre-Enrollment/2-Years Post-Enrollment. The total judicial system cost savings for Program participants in the 2-years post-enrollment study group was about \$160,000, which was a 17 percent decrease from pre- to post- enrollment (see Exhibit D.22) and represents a cost savings to the public and to the federal and state government. The comparison group also showed a cost decrease of about \$310,000, or 23 percent. Fewer Program participants were found in probation, incarceration/prison, and jail records in the post-enrollment period compared to the pre-enrollment period (see Exhibit D.23 for n-sizes).

EXHIBIT D.22 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS - JUDICIAL SYSTEM DATA FULL SAMPLE					
Participants with 2-Years Post-Enrollment Data (n=437)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Enrollment Costs	Difference	% Change
Probation	Fort Lyon	\$139,000	\$92,000	(\$47,000)	-34%
	Comparison	\$62,000	\$50,000	(\$12,000)	-19%
Incarceration/Prison	Fort Lyon	\$125,000	\$131,000	\$6,000	+5%
	Comparison	\$755,000	\$424,000	(\$331,000)	-44%
Jail	Fort Lyon	\$669,000	\$550,000	(\$119,000)	-18%
	Comparison	\$533,000	\$565,000	\$32,000	+6%
Total	Fort Lyon	\$933,000	\$773,000	(\$160,000)	-17%
	Comparison	\$1,350,000	\$1,040,000	(\$310,000)	-23%
Average per Participant	Fort Lyon	\$2,100	\$1,800	(\$300)	-17%
	Comparison	\$3,100	\$2,400	(\$700)	-23%

SOURCE: Illuminate Evaluation Services' analysis of judicial system data.

EXHIBIT D.23 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA - JUDICIAL SYSTEM DATA FULL SAMPLE						
Participants with 2-Years Post-Enrollment Data (n=437)						
	Type of Data	Group	2-years Pre- Enrollment	2-years Post- Enrollment	Difference	% Change
Probation	# of participants	Fort Lyon	53	51	(2)	-4%
		Comparison	38	33	(5)	-13%
	# of days on probation	Fort Lyon	34,289	25,951	(8,338)	-24%
		Comparison	15,504	12,732	(2,772)	-18%
Incarceration /Prison	# of participants	Fort Lyon	6	5	(1)	-17%
		Comparison	25	16	(9)	-36%
	# of days incarcerated	Fort Lyon	2,704	1,929	(775)	-29%
		Comparison	11,466	7,131	(4,335)	-38%
Jail	# of participants	Fort Lyon	226	151	(75)	-33%
		Comparison	149	120	(29)	-19%
	# of nights in jail	Fort Lyon	12,005	9,947	(2,058)	-17%
		Comparison	9,536	10,188	652	+7%

SOURCE: Illuminate Evaluation Services' analysis of judicial system data.

1-Year Pre-Enrollment/1-Year Post-Program. The total judicial system cost savings for Program participants in the 1-year post-program study group was about \$1.6 million, which was a 74 percent decrease from pre-enrollment to post-program (see Exhibit D.24) and represents a cost savings to the public and to the federal and state government. The comparison group also showed a cost decrease of about \$1.5 million, or 75 percent. Fewer Program participants were found in probation and jail records in the post-program period compared to the pre-enrollment period (see Exhibit D.25 for n-sizes).

EXHIBIT D.24 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – JUDICIAL SYSTEM DATA FULL SAMPLE					
Participants with 1-Year Post-Program Data (n=466)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Probation	Fort Lyon	\$93,000	\$68,000	(\$25,000)	-27%
	Comparison	\$31,000	\$25,000	(\$6,000)	-19%
Incarceration/Prison	Fort Lyon	\$44,000	\$69,000	\$25,000	+57%
	Comparison	\$317,000	\$257,000	(\$60,000)	-19%
Jail	Fort Lyon	\$2,080,000	\$441,000	(\$1,639,000)	-79%
	Comparison	\$1,670,000	\$216,000	(\$1,454,000)	-87%
Total	Fort Lyon	\$2,220,000	\$578,000	(\$1,642,000)	-74%
	Comparison	\$2,020,000	\$498,000	(\$1,522,000)	-75%
Average per Participant	Fort Lyon	\$4,800	\$1,200	(\$3,600)	-74%
	Comparison	\$4,300	\$1,100	(\$3,200)	-75%
SOURCE: Illuminate Evaluation Services' analysis of judicial system data.					

EXHIBIT D.25 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – JUDICIAL SYSTEM DATA FULL SAMPLE						
Participants with 1-Year Post-Program Data (n=466)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
Probation	# of participants	Fort Lyon	44	47	3	+7%
		Comparison	16	15	(1)	-6%
	# of days on probation	Fort Lyon	26,136	22,007	(4,129)	-16%
		Comparison	7,054	6,155	(899)	-13%
Incarceration /Prison	# of participants	Fort Lyon	7	5	(2)	-29%
		Comparison	16	14	(2)	-13%
	# of days incarcerated	Fort Lyon	1,263	1,025	(238)	-19%
		Comparison	3,805	4,148	343	+9%
Jail	# of participants	Fort Lyon	327	149	(178)	-54%
		Comparison	279	81	(198)	-71%
	# of nights in jail	Fort Lyon	40,389	7,984	(32,405)	-80%
		Comparison	32,490	3,920	(28,570)	-88%
SOURCE: Illuminate Evaluation Services' analysis of judicial system data.						

2-Years Pre-Enrollment/2-Years Post-Program. The total judicial system costs for Program participants in the 2-year post-program study group increased by about \$64,000, which was an 11 percent increase from pre-enrollment to post-program (see Exhibit D.26). The comparison group showed a cost savings of about \$297,000, or 41 percent. Fewer Program participants were found in jail records in the post-program period compared to the pre-enrollment period (see Exhibit D.27 for n-sizes).

EXHIBIT D.26 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – JUDICIAL SYSTEM DATA FULL SAMPLE					
Participants with 2-Years Post-Program Data (n=253)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Program Costs	Difference	% Change
Probation	Fort Lyon	\$35,000	\$48,000	\$13,000	+37%
	Comparison	\$15,000	\$15,000	\$0	+0%
Incarceration	Fort Lyon	\$80,000	\$156,000	\$76,000	+95%
	Comparison	\$408,000	\$197,000	(\$211,000)	-52%
Jail	Fort Lyon	\$457,000	\$432,000	(\$25,000)	-5%
	Comparison	\$307,000	\$221,000	(\$86,000)	-28%
Total	Fort Lyon	\$572,000	\$636,000	\$64,000	+11%
	Comparison	\$730,000	\$433,000	(\$297,000)	-41%
Average per Participant	Fort Lyon	\$2,300	\$2,500	\$200	+11%
	Comparison	\$2,900	\$1,700	(\$1,200)	-41%

SOURCE: Illuminate Evaluation Services' analysis of judicial system data.

EXHIBIT D.27 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – JUDICIAL SYSTEM DATA FULL SAMPLE						
Participants with 2-Years Post-Program Data (n=253)						
	Type of Data	Group	2-years Pre- Enrollment	2-years Post- Program	Difference	% Change
Probation	# of participants	Fort Lyon	22	41	19	+86%
		Comparison	23	12	(11)	-48%
	# of days on probation	Fort Lyon	13,828	19,045	5,217	+38%
		Comparison	8,155	4,140	(4,015)	-49%
Incarceration	# of participants	Fort Lyon	4	5	1	+25%
		Comparison	13	9	(4)	-31%
	# of days incarcerated	Fort Lyon	2,177	2,017	(160)	-7%
		Comparison	6,032	4,105	(1,927)	-32%
Jail	# of participants	Fort Lyon	145	112	(33)	-23%
		Comparison	88	59	(29)	-33%
	# of nights in jail	Fort Lyon	8,187	7,823	(364)	-4%
		Comparison	5,478	3,999	(1,479)	-27%

SOURCE: Illuminate Evaluation Services' analysis of judicial system data.

SHELTER AND HOUSING VOUCHER DATA

Staying in a shelter is typically paid for through a combination of public and private funds. In contrast, housing vouchers are funded through federal and state funding sources and are used to help pay for transitional or permanent housing. Due to data limitations, we estimated pre-enrollment, post-enrollment, and post-program costs for shelters and housing vouchers based on participants reported living situation prior to entering the Fort Lyon Program and their destination after exiting the Program. DOLA was able to provide data on the housing vouchers for permanent supportive housing that it issued in Colorado. However, there are other public housing agencies that also issue vouchers and we were not able to obtain information from them, nor were we able to obtain data from shelters.

For participants who reported entering from or exiting to a shelter or to a living situation using a housing voucher, it was not possible to determine their length of stay at a shelter or how long they used a housing voucher, so for each of the study groups, if they reported entering from a shelter or entering from a living situation using a housing voucher, it was assumed they had the same living situation throughout the entire pre-enrollment time period. It was also assumed that if a participant exited the Program to a shelter or to a living situation using a housing voucher that they remained there for the entire post-enrollment/program time period. This is likely an overestimate of both pre- and post- costs since it is likely participants went in and out of these systems. We used U.S. Department of Housing and Urban Development data from a national report on the costs associated with homelessness to create an average cost per day per person in a shelter, which was \$31. CCH provided an estimate of the average cost per day per person using a housing voucher in Colorado, which was \$25. Comparison group costs are not provided since data was not available for all subjects.

1-Year Pre-Enrollment/1-Year Post-Enrollment. The total shelter and housing vouchers cost savings for Program participants in the 1-year post-enrollment study group was about \$1.2 million, which was a 52 percent decrease from pre- to post- enrollment (see Exhibit D.28) and represents a cost savings to the public and to the federal and state government. A decrease occurred from pre-enrollment to post-enrollment in the number of Program participants in shelters, while an increase occurred from pre- to post- enrollment in the number of participants using housing vouchers (see Exhibit D.29 for n-sizes).

EXHIBIT D.28 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS - SHELTER AND VOUCHER DATA FULL SAMPLE					
Participants with 1-Year Post-Enrollment Data (n=660)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Shelter	Fort Lyon	\$1,850,000	\$534,000	(\$1,316,000)	-71%
Voucher	Fort Lyon	\$400,000	\$534,000	\$134,000	+34%
Total	Fort Lyon	\$2,250,000	\$1,070,000	(\$1,180,000)	-52%
Average per Participant	Fort Lyon	\$3,400	\$1,600	(\$1,800)	-52%

SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.

EXHIBIT D.29 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA - SHELTER AND VOUCHER DATA FULL SAMPLE						
Participants with 1-Year Post-Enrollment Data (n=660)						
	Type of Data	Group	1-year Pre-Enrollment	1-year Post- Enrollment	Difference	% Change
Shelter	# of participants	Fort Lyon	164	75	(89)	-54%
Voucher	# of participants	Fort Lyon	44	76	32	+73%

SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.

2-Years Pre-Enrollment/2-Years Post-Enrollment. The total shelter and housing vouchers cost savings for Program participants in the 2-years post-enrollment study group was about \$1 million, which was a 37 percent decrease from pre- to post- enrollment (see Exhibit D.30) and represents a cost savings to the public and to the federal and state government. A decrease occurred from pre-enrollment to post-enrollment in the number of Program participants in shelters, while an increase occurred from pre- to post- enrollment in the number of participants using housing vouchers (see Exhibit D.31 for n-sizes).

EXHIBIT D.30 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT COSTS – SHELTER AND VOUCHER DATA FULL SAMPLE					
Participants with 2-Years Post-Enrollment Data (n=437)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Enrollment Costs	Difference	% Change
Shelter	Fort Lyon	\$2,170,000	\$800,000	(\$1,370,000)	-63%
Voucher	Fort Lyon	\$564,000	\$931,000	\$367,000	+65%
Total	Fort Lyon	\$2,730,000	\$1,730,000	(\$1,000,000)	-37%
Average per Participant	Fort Lyon	\$6,300	\$4,000	(\$2,300.00)	-37%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.					

EXHIBIT D.31 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – SHELTER AND VOUCHER DATA FULL SAMPLE						
Participants with 2-Years Post-Enrollment Data (n=437)						
	Type of Data	Group	2-years Pre-Enrollment	2-years Post- Enrollment	Difference	% Change
Shelter	# of participants	Fort Lyon	96	49	(47)	-49%
Voucher	# of participants	Fort Lyon	31	97	66	+213%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.						

1-Year Pre-Enrollment/1-Year Post-Program. The total shelter and housing vouchers cost for Program participants in the 1-year post-program study group increased by about \$190,000, which was a 13 percent increase from pre-enrollment to post-program (see Exhibit D.32). A decrease occurred from pre-enrollment to post-program in the number of Program participants in shelters, while an increase occurred in the number of participants using housing vouchers (see Exhibit D.33 for n-sizes).

EXHIBIT D.32 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – SHELTER AND VOUCHER DATA FULL SAMPLE					
Participants with 1-Year Post-Program Data (n=466)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Shelter	Fort Lyon	\$1,100,000	\$576,000	(\$524,000)	-48%
Voucher	Fort Lyon	\$328,000	\$1,040,000	\$712,000	+217%
Total	Fort Lyon	\$1,430,000	\$1,620,000	\$190,000	+13%
Average per Participant	Fort Lyon	\$3,100	\$3,500	\$400.00	+13%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.					

EXHIBIT D.33 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – SHELTER AND VOUCHER DATA FULL SAMPLE						
Participants with 1-Year Post-Program Data (n=466)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
Shelter	# of participants	Fort Lyon	97	51	(46)	-47%
Voucher	# of participants	Fort Lyon	36	114	78	+217%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.						

2-Years Pre-Enrollment/2-Years Post-Program. The total shelter and housing vouchers cost for Program participants in the 2-years post-program study group increased by about \$200,000, which was a 13 percent increase from pre-enrollment to post program (see Exhibit D.34). A decrease occurred from pre-enrollment to post-program in the number of Program participants in shelters, while an increase occurred in the number of participants using housing vouchers (see Exhibit D.35 for n-sizes).

EXHIBIT D.34 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM COSTS – SHELTER AND VOUCHER DATA FULL SAMPLE					
Participants with 2-Years Post-Program Data (n=253)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Program Costs	Difference	% Change
Shelter	Fort Lyon	\$1,060,000	\$836,000	(\$224,000)	-21%
Voucher	Fort Lyon	\$491,000	\$910,000	\$419,000	+85%
Total	Fort Lyon	\$1,550,000	\$1,750,000	\$200,000	+13%
Average per Participant	Fort Lyon	\$6,100	\$6,900	\$800.00	+13%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.					

EXHIBIT D.35 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – SHELTER AND VOUCHER DATA FULL SAMPLE						
Participants with 2-Years Post-Program Data (n=253)						
	Type of Data	Group	2-years Pre- Enrollment	2-years Post- Program	Difference	% Change
Shelter	# of participants	Fort Lyon	47	37	(10)	-21%
Voucher	# of participants	Fort Lyon	27	50	23	+85%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.						

COST ANALYSIS SUMMARY

Exhibits D.36 through D.39 summarize the results of all pre-enrollment and post-enrollment/program costs for each study group.

1-Year Pre-Enrollment/1-Year Post-Enrollment. Overall, the total costs for Program participants in the 1-year post-enrollment study group decreased by about \$5.2 million, or 39 percent from pre- to post- enrollment (see Exhibit D.39) and represents a cost savings to the public and to the federal and state government. Costs for the comparison group also decreased by about \$5.4 million, or 55 percent. Program participants experienced decreased costs from pre- to post-enrollment in every area except physical health care.

EXHIBIT D.36 FORT LYON PROGRAM SUMMARY OF PRE-ENROLLMENT AND POST-ENROLLMENT COSTS FULL SAMPLE					
Participants with 1-Year Post-Enrollment Data (n=660)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Enrollment Costs	Difference	% Change
Physical health care	Fort Lyon	\$6,330,000	\$6,500,000	\$170,000	+3%
	Comparison	\$3,480,000	\$3,140,000	(\$340,000)	-10%
Behavioral health care	Fort Lyon	\$2,160,000	\$178,000	(\$1,982,000)	-92%
	Comparison	\$3,500,000	\$442,000	(\$3,058,000)	-87%
Judicial system	Fort Lyon	\$2,760,000	\$508,000	(\$2,252,000)	-82%
	Comparison	\$2,810,000	\$849,000	(\$1,961,000)	-70%
Shelter & Vouchers	Fort Lyon	\$2,250,000	\$1,070,000	(\$1,180,000)	-52%
	Comparison	No data available			
Total	Fort Lyon	\$13,500,000	\$8,256,000	(\$5,244,000)	-39%
	Comparison	\$9,790,000	\$4,431,000	(\$5,359,000)	-55%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.

2-Years Pre-Enrollment/2-Years Post-Enrollment. The total costs for Program participants in the 2-years post-enrollment study group increased by about \$3.5 million, or 33 percent from pre- to post- enrollment (see Exhibit D.37). Costs for the comparison group also increased by about \$1.4 million, or 16 percent. Program participants experienced decreased costs from pre- to post-enrollment for the judicial system and for shelter and housing vouchers.

EXHIBIT C.37 FORT LYON PROGRAM SUMMARY OF PRE-ENROLLMENT AND POST-ENROLLMENT COSTS FULL SAMPLE					
Participants with 2-Years Post-Enrollment Data (n=437)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Enrollment Costs	Difference	% Change
Physical health care	Fort Lyon	\$5,150,000	\$9,710,000	\$4,560,000	+89%
	Comparison	\$4,110,000	\$4,510,000	\$400,000	+10%
Behavioral health care	Fort Lyon	\$1,850,000	\$1,930,000	\$80,000	+4%
	Comparison	\$3,180,000	\$4,470,000	\$1,290,000	+41%
Judicial system	Fort Lyon	\$933,000	\$773,000	(\$160,000)	-17%
	Comparison	\$1,350,000	\$1,040,000	(\$310,000)	-23%
Shelter & Vouchers	Fort Lyon	\$2,730,000	\$1,730,000	(\$1,000,000)	-37%
	Comparison	No data available			
Total	Fort Lyon	\$10,663,000	\$14,143,000	\$3,480,000	+33%
	Comparison	\$8,640,000	\$10,020,000	\$1,380,000	+16%
SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.					

1-Year Pre-Enrollment/1-Year Post-Program. The total costs for Program participants in the 1-year post-program study group decreased by about \$322,000 or 3 percent from pre-enrollment to post-program (see Exhibit D.38) and represents a cost savings to the public and to the federal and state government. Costs for the comparison group also decreased by about \$1.2 million, or 18 percent. Program participants decreased costs from pre- to post-program for the judicial system.

EXHIBIT D.38 FORT LYON PROGRAM SUMMARY OF PRE-ENROLLMENT AND POST-PROGRAM COSTS FULL SAMPLE					
Participants with 1-Year Post-Program Data (n=466)					
	Group	1-year Pre-Enrollment Costs	1-year Post-Program Costs	Difference	% Change
Physical health care	Fort Lyon	\$4,230,000	\$5,130,000	\$900,000	+21%
	Comparison	\$2,360,000	\$2,700,000	\$340,000	+14%
Behavioral health care	Fort Lyon	\$1,510,000	\$1,740,000	\$230,000	+15%
	Comparison	\$2,390,000	\$2,360,000	(\$30,000)	-1%
Judicial system	Fort Lyon	\$2,220,000	\$578,000	(\$1,642,000)	-74%
	Comparison	\$2,020,000	\$498,000	(\$1,522,000)	-75%
Shelter & Vouchers	Fort Lyon	\$1,430,000	\$1,620,000	\$190,000	+13%
	Comparison	No data available			
Total	Fort Lyon	\$9,390,000	\$9,068,000	(\$322,000)	-3%
	Comparison	\$6,770,000	\$5,558,000	(\$1,212,000)	-18%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.

2-Years Pre-Enrollment/2-Years Post-Program. The total costs for Program participants in the 2-years post-program study group increased by about \$3.5 million, or 56 percent from pre-enrollment to post-program (see Exhibit D.39). Costs for the comparison group also increased by about \$1.4 million, or 33 percent.

EXHIBIT D.39 FORT LYON PROGRAM SUMMARY OF PRE-ENROLLMENT AND POST-PROGRAM COSTS FULL SAMPLE					
Participants with 2-Years Post-Program Data (n=253)					
	Group	2-years Pre-Enrollment Costs	2-years Post-Program Costs	Difference	% Change
Physical health care	Fort Lyon	\$3,240,000	\$5,650,000	\$2,410,000	+74%
	Comparison	\$2,030,000	\$2,870,000	\$840,000	+41%
Behavioral health care	Fort Lyon	\$869,000	\$1,660,000	\$791,000	+91%
	Comparison	\$1,530,000	\$2,420,000	\$890,000	+58%
Judicial system	Fort Lyon	\$572,000	\$636,000	\$64,000	+11%
	Comparison	\$730,000	\$433,000	(\$297,000)	-41%
Shelter & Vouchers	Fort Lyon	\$1,550,000	\$1,750,000	\$200,000	+13%
	Comparison	No data available			
Total	Fort Lyon	\$6,231,000	\$9,696,000	\$3,465,000	+56%
	Comparison	\$4,290,000	\$5,723,000	\$1,433,000	+33%
SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.					

APPENDIX E: N-SIZES FROM COST ANALYSES

All n-sizes used in Chapter 3 are included in the following Exhibits.

EXHIBIT E.1 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – PHYSICAL HEALTH CARE						
Participants with 1-Year Post-Enrollment Data (n=217)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Enrollment	Difference	% Change
ER	# of participants	Fort Lyon	176	140	(36)	-20%
		Comparison	136	138	2	+1%
	Total # of procedures	Fort Lyon	2,957	2,243	(714)	-24%
		Comparison	1,013	950	(63)	-6%
Emergency Transport	# of participants	Fort Lyon	110	92	(18)	-16%
		Comparison	71	74	3	+4%
	Total # of procedures	Fort Lyon	645	557	(88)	-14%
		Comparison	240	417	177	+74%
Inpatient	# of participants	Fort Lyon	76	53	(23)	-30%
		Comparison	47	36	(11)	-23%
	Total # of procedures	Fort Lyon	168	129	(39)	-23%
		Comparison	72	47	(25)	-35%
Outpatient	# of participants	Fort Lyon	168	205	37	+22%
		Comparison	144	145	1	+1%
	Total # of procedures	Fort Lyon	1,412	2,848	1436	+102%
		Comparison	999	911	(88)	-9%
Pharmacy	# of participants	Fort Lyon	164	186	22	+13%
		Comparison	145	148	3	+2%
	Total # of procedures	Fort Lyon	5,106	8,475	3,369	+66%
		Comparison	6,188	5,822	(366)	-6%
Other ¹	# of participants	Fort Lyon	195	204	9	+5%
		Comparison	200	201	1	+1%
	Total # of procedures	Fort Lyon	4,079	3,997	(82)	-2%
		Comparison	4,428	5,074	646	+15%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

EXHIBIT E.2 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – PHYSICAL HEALTH CARE						
Participants with 2-Years Post-Enrollment Data (n=154)						
	Type of Data	Group	2-years Pre-Enrollment	2-years Post-Enrollment	Difference	% Change
ER	# of participants	Fort Lyon	132	123	(9)	-7%
		Comparison	113	117	4	+4%
	Total # of procedures	Fort Lyon	2,575	2,995	420	+16%
		Comparison	1,419	1,326	(93)	-7%
Emergency Transport	# of participants	Fort Lyon	77	87	10	+13%
		Comparison	59	71	12	+20%
	Total # of procedures	Fort Lyon	461	762	301	+65%
		Comparison	242	424	182	+75%
Inpatient	# of participants	Fort Lyon	63	52	(11)	-17%
		Comparison	43	43	0	+0%
	Total # of procedures	Fort Lyon	157	179	22	+14%
		Comparison	81	82	1	+1%
Outpatient	# of participants	Fort Lyon	122	149	27	+22%
		Comparison	113	109	(4)	-4%
	Total # of procedures	Fort Lyon	1,456	2,891	1435	+99%
		Comparison	1,196	1,128	(68)	-6%
Pharmacy	# of participants	Fort Lyon	111	136	25	+23%
		Comparison	111	113	2	+2%
	Total # of procedures	Fort Lyon	4,634	10,316	5,682	+123%
		Comparison	7,050	7,526	476	+7%
Other ¹	# of participants	Fort Lyon	139	147	8	+6%
		Comparison	139	143	4	+3%
	Total # of procedures	Fort Lyon	3,792	5,099	1,307	+34%
		Comparison	5,199	6,009	810	+16%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

EXHIBIT E.3 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – PHYSICAL HEALTH CARE						
Participants with 1-Year Post-Program Data (n=132)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
ER	# of participants	Fort Lyon	249	96	(153)	-61%
		Comparison	121	81	(40)	-33%
	Total # of procedures	Fort Lyon	4,295	2,091	(2,204)	-51%
		Comparison	1,133	616	(517)	-46%
Emergency Transport	# of participants	Fort Lyon	153	73	(80)	-52%
		Comparison	60	46	(14)	-23%
	Total # of procedures	Fort Lyon	796	573	(223)	-28%
		Comparison	208	270	62	+30%
Inpatient	# of participants	Fort Lyon	104	38	(66)	-63%
		Comparison	47	22	(25)	-53%
	Total # of procedures	Fort Lyon	235	114	(121)	-51%
		Comparison	78	39	(39)	-50%
Outpatient	# of participants	Fort Lyon	233	109	(124)	-53%
		Comparison	130	82	(48)	-37%
	Total # of procedures	Fort Lyon	1,925	946	(979)	-51%
		Comparison	854	525	(329)	-39%
Pharmacy	# of participants	Fort Lyon	224	104	(120)	-54%
		Comparison	115	87	(28)	-24%
	Total # of procedures	Fort Lyon	6,878	3,618	(3,260)	-47%
		Comparison	4,488	3,129	(1,359)	-30%
Other ¹	# of participants	Fort Lyon	279	119	(160)	-57%
		Comparison	176	117	(59)	-34%
	Total # of procedures	Fort Lyon	5,289	2,671	(2,618)	-49%
		Comparison	3,901	3,221	(680)	-17%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

EXHIBIT E.4 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – PHYSICAL HEALTH CARE						
Participants with 2-Years Post-Program Data (n=77)						
	Type of Data	Group	2-years Pre- Enrollment	2-years Post- Program	Difference	% Change
ER	# of participants	Fort Lyon	63	61	(2)	-3%
		Comparison	56	55	(1)	-2%
	Total # of procedures	Fort Lyon	1,325	2,556	1,231	+93%
		Comparison	779	660	(119)	-15%
Emergency Transport	# of participants	Fort Lyon	40	44	4	+10%
		Comparison	31	31	0	+0%
	Total # of procedures	Fort Lyon	251	690	439	+175%
		Comparison	126	217	91	+72%
Inpatient	# of participants	Fort Lyon	32	28	(4)	-13%
		Comparison	21	22	1	+5%
	Total # of procedures	Fort Lyon	100	142	42	+42%
		Comparison	34	43	9	+26%
Outpatient	# of participants	Fort Lyon	60	61	1	+2%
		Comparison	58	50	(8)	-14%
	Total # of procedures	Fort Lyon	778	1,076	298	+38%
		Comparison	533	535	2	+0%
Pharmacy	# of participants	Fort Lyon	59	66	7	+12%
		Comparison	58	57	(1)	-2%
	Total # of procedures	Fort Lyon	2,600	3,890	1,290	+50%
		Comparison	2,557	3,100	543	+21%
Other ¹	# of participants	Fort Lyon	68	68	0	+0%
		Comparison	69	73	4	+6%
	Total # of procedures	Fort Lyon	2,076	3,031	955	+46%
		Comparison	2,004	3,255	1,251	+62%

SOURCE: Illuminate Evaluation Services' analysis of physical health care data provided by The Colorado Department of Health Care Policy and Financing.

¹Other includes services such as dental services, nursing facilities, labs, and medical supplies.

EXHIBIT E.5 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – BEHAVIORAL HEALTH CARE						
Participants with 1-Year Post-Enrollment Data (n=217)						
	Type of Data	Group	1-year Pre-Enrollment	1-year Post-Enrollment	Difference	% Change
Inpatient	# of participants	Fort Lyon	43	45	2	+5%
		Comparison	12	23	11	+92%
	Total # of units	Fort Lyon	1,343	1,557	214	+16%
		Comparison	361	532	171	+47%
Outpatient	# of participants	Fort Lyon	113	94	(19)	-17%
		Comparison	133	129	(4)	-3%
	Total # of units	Fort Lyon	9,260	5,002	(4,258)	-46%
		Comparison	14,969	13,647	(1,322)	-9%

SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.

EXHIBIT E.6 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – BEHAVIORAL HEALTH CARE						
Participants with 2-Years Post-Enrollment Data (n=154)						
	Type of Data	Group	2-years Pre-Enrollment	2-years Post-Enrollment	Difference	% Change
Inpatient	# of participants	Fort Lyon	22	44	22	+100%
		Comparison	8	24	16	+200%
	Total # of units	Fort Lyon	595	1,579	984	+165%
		Comparison	212	824	612	+289%
Outpatient	# of participants	Fort Lyon	82	74	(8)	-10%
		Comparison	115	98	(17)	-15%
	Total # of units	Fort Lyon	10,443	6,244	(4,199)	-40%
		Comparison	19,104	18,258	(846)	-4%

SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.

EXHIBIT E.7 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – BEHAVIORAL HEALTH CARE						
Participants with 1-Year Post-Program Data (n=132)						
	Type of Data	Group	1-year Pre-Enrollment	1-year Post-Program	Difference	% Change
Inpatient	# of participants	Fort Lyon	25	41	16	+64%
		Comparison	5	19	14	+280%
	Total # of units	Fort Lyon	745	1,215	470	+63%
		Comparison	105	357	252	+240%
Outpatient	# of participants	Fort Lyon	63	66	3	+5%
		Comparison	74	67	(7)	-9%
	Total # of units	Fort Lyon	6,622	5,754	(868)	-13%
		Comparison	10,596	10,157	(439)	-4%

SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.

EXHIBIT E.8 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – BEHAVIORAL HEALTH CARE						
Participants with 2-Years Post-Program Data (n=77)						
	Type of Data	Group	2-years Pre-Enrollment	2-years Post-Program	Difference	% Change
Inpatient	# of participants	Fort Lyon	8	26	18	+225%
		Comparison	1	13	12	+1200%
	Total # of units	Fort Lyon	209	914	705	+337%
		Comparison	91	461	370	+407%
Outpatient	# of participants	Fort Lyon	36	41	5	+14%
		Comparison	60	45	-15	-25%
	Total # of units	Fort Lyon	2,527	4,098	1571	+62%
		Comparison	6,816	5,434	-1382	-20%

SOURCE: Illuminate Evaluation Services' analysis of behavioral health care data provided by the Office of Behavioral Health.

EXHIBIT E.9 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA - JUDICIAL SYSTEM DATA						
Participants with 1-Year Post-Enrollment Data (n=217)						
	Type of Data	Group	1-year Pre-Enrollment	1-year Post-Enrollment	Difference	% Change
Probation	# of participants	Fort Lyon	27	7	(20)	-74%
		Comparison	11	13	2	+18%
	# of days on probation	Fort Lyon	14,550	3,400	(11,150)	-77%
		Comparison	4,698	6,131	1,433	+31%
Incarceration /Prison	# of participants	Fort Lyon	4	2	(2)	-50%
		Comparison	9	6	(3)	-33%
	# of days incarcerated	Fort Lyon	856	612	(244)	-29%
		Comparison	2,064	2,073	9	+0%
Jail	# of participants	Fort Lyon	157	55	(102)	-65%
		Comparison	142	45	(97)	-68%
	# of nights in jail	Fort Lyon	18,280	3,169	(15,111)	-83%
		Comparison	16,353	3,676	(12,677)	-78%

SOURCE: Illuminate Evaluation Services' analysis of judicial system data.

EXHIBIT E.10 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA - JUDICIAL SYSTEM DATA						
Participants with 2-Years Post-Enrollment Data (n=154)						
	Type of Data	Group	2-years Pre-Enrollment	2-years Post-Enrollment	Difference	% Change
Probation	# of participants	Fort Lyon	25	20	(5)	-20%
		Comparison	16	20	4	+25%
	# of days on probation	Fort Lyon	17,801	8,993	(8,808)	-49%
		Comparison	7,035	8,129	1,094	+16%
Incarceration /Prison	# of participants	Fort Lyon	4	3	(1)	-25%
		Comparison	11	7	(4)	-36%
	# of days incarcerated	Fort Lyon	1,543	1,136	(407)	-26%
		Comparison	4,802	3,598	(1,204)	-25%
Jail	# of participants	Fort Lyon	82	58	(24)	-29%
		Comparison	57	54	(3)	-5%
	# of nights in jail	Fort Lyon	5,571	4,111	(1,460)	-26%
		Comparison	4,429	4,207	(222)	-5%

SOURCE: Illuminate Evaluation Services' analysis of judicial system data.

EXHIBIT E.11 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – JUDICIAL SYSTEM DATA						
Participants with 1-Year Post-Program Data (n=132)						
	Type of Data	Group	1-year Pre-Enrollment	1-year Post-Program	Difference	% Change
Probation	# of participants	Fort Lyon	15	18	3	+20%
		Comparison	6	2	(4)	-67%
	# of days on probation	Fort Lyon	6,247	6,393	146	+2%
		Comparison	3,198	545	(2,653)	-83%
Incarceration /Prison	# of participants	Fort Lyon	4	3	(2)	-25%
		Comparison	8	6	(268)	-31%
	# of days incarcerated	Fort Lyon	856	588	(229)	-11%
		Comparison	2,076	1,847	(1,204)	-25%
Jail	# of participants	Fort Lyon	95	52	(43)	-45%
		Comparison	85	32	(53)	-62%
	# of nights in jail	Fort Lyon	13,801	3,055	(10,746)	-78%
		Comparison	11,758	1,769	(9,989)	-85%

SOURCE: Illuminate Evaluation Services' analysis of judicial system data.

EXHIBIT E.12 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – JUDICIAL SYSTEM DATA						
Participants with 2-Years Post-Program Data (n=77)						
	Type of Data	Group	2-years Pre-Enrollment	2-years Post-Program	Difference	% Change
Probation	# of participants	Fort Lyon	11	14	3	+27%
		Comparison	9	4	(5)	-56%
	# of days on probation	Fort Lyon	6,906	5,507	(1,399)	-20%
		Comparison	3,384	1,014	(2,370)	-70%
Incarceration /Prison	# of participants	Fort Lyon	2	3	1	+50%
		Comparison	5	3	(2)	-40%
	# of days incarcerated	Fort Lyon	1,016	917	(99)	-10%
		Comparison	2,376	1,383	(993)	-42%
Jail	# of participants	Fort Lyon	47	46	(1)	-2%
		Comparison	29	23	(6)	-21%
	# of nights in jail	Fort Lyon	3,737	2,945	(792)	-21%
		Comparison	1,648	1,622	(26)	-2%

SOURCE: Illuminate Evaluation Services' analysis of judicial system data.

EXHIBIT E.13 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – SHELTER AND VOUCHER DATA						
Participants with 1-Year Post-Enrollment Data (n=217)						
	Type of Data	Group	1-year Pre-Enrollment	1-year Post-Enrollment	Difference	% Change
Shelter	# of participants	Fort Lyon	56	25	(31)	-55%
Voucher	# of participants	Fort Lyon	14	21	7	+50%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.						

EXHIBIT E.14 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – SHELTER AND VOUCHER DATA						
Participants with 2-Years Post-Enrollment Data (n=154)						
	Type of Data	Group	2-years Pre-Enrollment	2-years Post-Enrollment	Difference	% Change
Shelter	# of participants	Fort Lyon	35	17	(18)	-51%
Voucher	# of participants	Fort Lyon	11	36	25	+227%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.						

EXHIBIT E.15 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – SHELTER AND VOUCHER DATA						
Participants with 1-Year Post-Program Data (n=132)						
	Type of Data	Group	1-year Pre-Enrollment	1-year Post-Program	Difference	% Change
Shelter	# of participants	Fort Lyon	30	10	(20)	-67%
Voucher	# of participants	Fort Lyon	8	29	21	+263%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.						

EXHIBIT E.16 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – SHELTER AND VOUCHER DATA						
Participants with 2-Years Post-Program Data (n=77)						
	Type of Data	Group	2-years Pre-Enrollment	2-years Post-Program	Difference	% Change
Shelter	# of participants	Fort Lyon	15	8	(7)	-47%
Voucher	# of participants	Fort Lyon	9	13	4	+44%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data.						

EXHIBIT E.17 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – COMPLETERS VS NON-COMPLETERS						
Participants with 1-Year Post-Enrollment Data Completers (n=186), Non-Completers (n=254)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Enrollment	Difference	% Change
ER	# of participants	Completers	145	91	(54)	-37%
		Non-Completers	212	196	(16)	-8%
	Total # of procedures	Completers	1,695	635	(1,060)	-63%
		Non-Completers	3,156	3,111	(45)	-1%
Emergency Transport	# of participants	Completers	92	54	(38)	-41%
		Non-Completers	137	137	0	+0%
	Total # of procedures	Completers	334	152	(182)	-54%
		Non-Completers	833	786	(47)	-6%
Physical Inpatient	# of participants	Completers	53	21	(32)	-60%
		Non-Completers	93	87	(6)	-6%
	Total # of procedures	Completers	105	37	(68)	-65%
		Non-Completers	209	185	(24)	-11%
Physical Outpatient	# of participants	Completers	137	175	38	+28%
		Non-Completers	195	235	40	+21%
	Total # of procedures	Completers	1,174	2,386	1212	+103%
		Non-Completers	1,450	2,680	1230	+85%
Pharmacy	# of participants	Completers	138	157	19	+14%
		Non-Completers	189	218	29	+15%
	Total # of procedures	Completers	3,984	7,529	3545	+89%
		Non-Completers	5,677	8,754	3077	+54%
Other	# of participants	Completers	166	170	4	+2%
		Non-Completers	229	240	11	+5%
	Total # of procedures	Completers	2,922	2,861	(61)	-2%
		Non-Completers	4,532	4,708	176	+4%
Behavioral Inpatient	# of participants	Completers	30	25	(5)	-17%
		Non-Completers	46	66	20	+43%
	Total # of units	Completers	875	803	(72)	-8%
		Non-Completers	1,573	1,735	162	+10%
Behavioral Outpatient	# of participants	Completers	99	59	(40)	-40%
		Non-Completers	127	125	(2)	-2%
	Total # of units	Completers	7,955	2,497	(5,458)	-69%
		Non-Completers	9,918	7,820	(2,098)	-21%

EXHIBIT E.17 (CONTINUED) FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – COMPLETERS VS NON-COMPLETERS						
Participants with 1-Year Post-Enrollment Data Completers (n=186), Non-Completers (n=254)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Enrollment	Difference	% Change
Probation	# of participants	Completers	21	4	(17)	-81%
		Non-Completers	24	12	(12)	-50%
	# of days on probation	Completers	14,103	3,942	(10,161)	-72%
		Non-Completers	11,907	3,992	(7,915)	-66%
Incarceration /Prison	# of participants	Completers	0	0	0	NA
		Non-Completers	7	3	(4)	-57%
	# of days incarcerated	Completers	0	0	0	NA
		Non-Completers	1,266	710	(556)	-44%
Jail	# of participants	Completers	122	27	(95)	-78%
		Non-Completers	194	92	(102)	-53%
	# of nights in jail	Completers	8,440	567	(7,873)	-93%
		Non-Completers	27,980	5,621	(22,359)	-80%
Shelter	# of participants	Completers	41	3	(38)	-93%
		Non-Completers	64	59	(5)	-8%
Vouchers	# of participants	Completers	19	42	23	+121%
		Non-Completers	14	12	(2)	-14%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.

EXHIBIT E.18 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – COMPLETERS VS NON-COMPLETERS						
Participants with 1-Year Post-Program Data Completers (n=121), Non-Completers (n=178)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
ER	# of participants	Completers	99	80	(19)	-19%
		Non-Completers	155	142	(13)	-8%
	Total # of procedures	Completers	1,175	817	(358)	-30%
		Non-Completers	3,156	2,855	(301)	-10%
Emergency Transport	# of participants	Completers	55	54	(1)	-2%
		Non-Completers	101	111	10	+10%
	Total # of procedures	Completers	204	239	35	+17%
		Non-Completers	599	787	188	+31%
Physical Inpatient	# of participants	Completers	41	24	(17)	-41%
		Non-Completers	65	69	4	+6%
	Total # of procedures	Completers	78	42	(36)	-46%
		Non-Completers	159	181	22	+14%
Physical Outpatient	# of participants	Completers	91	98	7	+8%
		Non-Completers	146	140	(6)	-4%
	Total # of procedures	Completers	831	870	39	+5%
		Non-Completers	1,090	1,075	(15)	-1%
Pharmacy	# of participants	Completers	91	96	5	+5%
		Non-Completers	137	140	3	+2%
	Total # of procedures	Completers	2,634	3,877	1243	+47%
		Non-Completers	4,207	4,723	516	+12%
Other	# of participants	Completers	112	106	(6)	-5%
		Non-Completers	171	160	(11)	-6%
	Total # of procedures	Completers	2,000	2,031	31	+2%
		Non-Completers	3,258	3,650	392	+12%
Behavioral Inpatient	# of participants	Completers	20	24	4	+20%
		Non-Completers	26	60	34	+131%
	Total # of units	Completers	660	650	(10)	-2%
		Non-Completers	920	1,887	967	+105%
Behavioral Outpatient	# of participants	Completers	62	47	(15)	-24%
		Non-Completers	87	93	6	+7%
	Total # of units	Completers	5,939	3,265	(2,674)	-45%
		Non-Completers	6,997	8,078	1,081	+15%

EXHIBIT E.18 (CONTINUED) FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – COMPLETERS VS NON-COMPLETERS						
Participants with 1-Year Post-Program Data Completers (n=121), Non-Completers (n=178)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
Probation	# of participants	Completers	12	10	(2)	-17%
		Non-Completers	18	21	3	+17%
	# of days on probation	Completers	9,478	6,865	(2,613)	-28%
		Non-Completers	9,068	7,624	(1,444)	-16%
Incarceration /Prison	# of participants	Completers	0	0	0	NA
		Non-Completers	6	4	(2)	-33%
	# of days incarcerated	Completers	0	0	0	NA
		Non-Completers	1,111	772	(339)	-31%
Jail	# of participants	Completers	75	29	(46)	-61%
		Non-Completers	142	84	(58)	-41%
	# of nights in jail	Completers	5,026	769	(4,257)	-85%
		Non-Completers	24,802	5,466	(19,336)	-78%
Shelter	# of participants	Completers	20	4	(16)	-80%
		Non-Completers	42	27	(15)	-36%
Vouchers	# of participants	Completers	15	63	48	+320%
		Non-Completers	11	11	0	+0%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.

EXHIBIT E.19 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – PROGRAMMING VS NO PROGRAMMING						
Participants with 1-Year Post-Enrollment Data Programming (n=256), No Programming (n=234)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Enrollmen	Difference	% Change
ER	# of participants	Programming	211	130	(81)	-38%
		No Programming	190	175	(15)	-8%
	Total # of procedures	Programming	2,944	1,094	(1,850)	-63%
		No Programming	3,329	2,749	(580)	-17%
Emergency Transport	# of participants	Programming	147	74	(73)	-50%
		No Programming	106	124	18	+17%
	Total # of procedures	Programming	751	274	(477)	-64%
		No Programming	577	688	111	+19%
Physical Inpatient	# of participants	Programming	89	44	(45)	-51%
		No Programming	72	72	0	+0%
	Total # of procedures	Programming	183	93	(90)	-49%
		No Programming	163	143	(20)	-12%
Physical Outpatient	# of participants	Programming	203	249	46	+23%
		No Programming	172	212	40	+23%
	Total # of procedures	Programming	1,699	3,722	2,023	+119%
		No Programming	1,350	2,261	911	+67%
Pharmacy	# of participants	Programming	202	230	28	+14%
		No Programming	163	190	27	+17%
	Total # of procedures	Programming	5,775	11,394	5,619	+97%
		No Programming	4,969	7,597	2,628	+53%
Other	# of participants	Programming	232	243	11	+5%
		No Programming	211	218	7	+3%
	Total # of procedures	Programming	4,610	4,384	(226)	-5%
		No Programming	3,729	4,074	345	+9%
Behavioral Inpatient	# of participants	Programming	40	49	9	+23%
		No Programming	44	44	0	+0%
	Total # of units	Programming	1,374	1,012	(362)	-26%
		No Programming	1,425	1,549	124	+9%
Behavioral Outpatient	# of participants	Programming	137	97	(40)	-29%
		No Programming	110	101	(9)	-8%
	Total # of units	Programming	10,415	3,231	(7,184)	-69%
		No Programming	9,377	7,197	(2,180)	-23%

EXHIBIT E.19 (CONTINUED) FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA – PROGRAMMING VS NO PROGRAMMING						
Participants with 1-Year Post-Enrollment Data Programming (n=256), No Programming (n=234)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Enrollmen	Difference	% Change
Probation	# of participants	Programming	27	6	(21)	-78%
		No Programming	23	10	(13)	-57%
	# of days on probation	Programming	14,625	3,661	(10,964)	-75%
		No Programming	14,609	4,273	(10,336)	-71%
Incarceration /Prison	# of participants	Programming	1	0	(1)	-100%
		No Programming	7	3	(4)	-57%
	# of days incarcerated	Programming	155	0	(155)	-100%
		No Programming	1,263	710	(553)	-44%
Jail	# of participants	Programming	173	38	(135)	-78%
		No Programming	179	87	(92)	-51%
	# of nights in jail	Programming	15,671	1,519	(14,152)	-90%
		No Programming	23,560	4,801	(18,759)	-80%
Shelter	# of participants	Programming	74	25	(49)	-66%
		No Programming	53	38	(15)	-28%
Vouchers	# of participants	Programming	12	25	13	+108%
		No Programming	22	32	10	+45%
SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.						

EXHIBIT E.20 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – PROGRAMMING VS NO PROGRAMMING						
Participants with 1-Year Post-Program Data Programming (n=101), No Programming (n=206)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
ER	# of participants	Programming	84	73	(11)	-13%
		No Programming	178	155	(23)	-13%
	Total # of procedures	Programming	1,191	844	(347)	-29%
		No Programming	3,175	2,917	(258)	-8%
Emergency Transport	# of participants	Programming	57	50	(7)	-12%
		No Programming	101	119	18	+18%
	Total # of procedures	Programming	236	267	31	+13%
		No Programming	570	771	201	+35%
Physical Inpatient	# of participants	Programming	36	24	(12)	-33%
		No Programming	70	71	1	+1%
	Total # of procedures	Programming	77	73	(4)	-5%
		No Programming	160	154	(6)	-4%
Physical Outpatient	# of participants	Programming	83	93	10	+12%
		No Programming	162	151	(11)	-7%
	Total # of procedures	Programming	724	711	(13)	-2%
		No Programming	1,253	1,271	18	+1%
Pharmacy	# of participants	Programming	77	84	7	+9%
		No Programming	156	158	2	+1%
	Total # of procedures	Programming	2,209	3,383	1,174	+53%
		No Programming	4,820	5,530	710	+15%
Other	# of participants	Programming	93	91	(2)	-2%
		No Programming	199	184	(15)	-8%
	Total # of procedures	Programming	1,788	1,920	132	+7%
		No Programming	3,553	3,866	313	+9%
Behavioral Inpatient	# of participants	Programming	11	39	28	+255%
		No Programming	35	47	12	+34%
	Total # of units	Programming	423	1,265	842	+199%
		No Programming	1,157	1,295	138	+12%
Behavioral Outpatient	# of participants	Programming	57	52	(5)	-9%
		No Programming	96	93	(3)	-3%
	Total # of units	Programming	4,625	3,624	(1,001)	-22%
		No Programming	8,468	7,796	(672)	-8%

EXHIBIT E.20 (CONTINUED) FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA – PROGRAMMING VS NO PROGRAMMING						
Participants with 1-Year Post-Program Data Programming (n=101), No Programming (n=206)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
Probation	# of participants	Programming	11	6	(5)	-45%
		No Programming	20	26	6	+30%
	# of days on probation	Programming	5,240	3,151	(2,089)	-40%
		No Programming	13,594	11,501	(2,093)	-15%
Incarceration /Prison	# of participants	Programming	0	0	0	NA
		No Programming	7	4	(3)	-43%
	# of days incarcerated	Programming	0	0	0	NA
		No Programming	1,263	772	(491)	-39%
Jail	# of participants	Programming	66	30	(36)	-55%
		No Programming	158	87	(71)	-45%
	# of nights in jail	Programming	8,399	1,114	(7,285)	-87%
		No Programming	22,621	5,321	(17,300)	-76%
Shelter	# of participants	Programming	20	8	(12)	-60%
		No Programming	45	25	(20)	-44%
Vouchers	# of participants	Programming	5	36	31	+620%
		No Programming	21	39	18	+86%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.

EXHIBIT E.21 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA - LENGTH OF STAY						
Participants with 1-Year Post-Enrollment Data 1-90 days (n=130), 91-182 days (n=93), 183-365 days (n=104), >365 days (n=163)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Enrollment	Difference	% Change
ER	# of participants	1-90 days	104	99	(5)	-5%
		91-182 days	76	65	(11)	-14%
		183-365 days	83	72	(11)	-13%
		>365 days	138	69	(69)	-50%
	Total # of procedures	1-90 days	2,165	2,091	(74)	-3%
		91-182 days	1,066	675	(391)	-37%
		183-365 days	1,118	668	(450)	-40%
		>365 days	1,924	409	(1,515)	-79%
Emergency Transport	# of participants	1-90 days	68	82	14	+21%
		91-182 days	45	43	(2)	-4%
		183-365 days	56	46	(10)	-18%
		>365 days	84	27	(57)	-68%
	Total # of procedures	1-90 days	432	545	113	+26%
		91-182 days	205	191	(14)	-7%
		183-365 days	285	153	(132)	-46%
		>365 days	406	73	(333)	-82%
Physical Inpatient	# of participants	1-90 days	44	46	2	+5%
		91-182 days	26	22	(4)	-15%
		183-365 days	31	25	(6)	-19%
		>365 days	60	23	(37)	-62%
	Total # of procedures	1-90 days	93	88	(5)	-5%
		91-182 days	68	45	(23)	-34%
		183-365 days	70	53	(17)	-24%
		>365 days	115	50	(65)	-57%
Physical Outpatient	# of participants	1-90 days	99	110	11	+11%
		91-182 days	70	87	17	+24%
		183-365 days	79	101	22	+28%
		>365 days	127	163	36	+28%
	Total # of procedures	1-90 days	760	963	203	+27%
		91-182 days	469	811	342	+73%
		183-365 days	536	1,549	1,013	+189%
		>365 days	1,284	2,660	1,376	+107%

EXHIBIT E.21 (CONTINUED) FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA - LENGTH OF STAY						
Participants with 1-Year Post-Enrollment Data 1-90 days (n=130), 91-182 days (n=93), 183-365 days (n=104), >365 days (n=163)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Enrollment	Difference	% Change
Pharmacy	# of participants	1-90 days	96	100	4	+4%
		91-182 days	62	78	16	+26%
		183-365 days	84	96	12	+14%
		>365 days	123	146	23	+19%
	Total # of procedures	1-90 days	3,113	3,334	221	+7%
		91-182 days	2,056	3,006	950	+46%
		183-365 days	2,016	4,845	2,829	+140%
		>365 days	3,556	7,806	4,250	+120%
Other	# of participants	1-90 days	121	113	(8)	-7%
		91-182 days	85	85	0	+0%
		183-365 days	91	98	7	+8%
		>365 days	146	160	14	+10%
	Total # of procedures	1-90 days	2,166	2,387	221	+10%
		91-182 days	1,379	1,190	(189)	-14%
		183-365 days	1,721	1,940	219	+13%
		>365 days	3,073	2,941	(132)	-4%
Behavioral Inpatient	# of participants	1-90 days	31	41	10	+32%
		91-182 days	19	22	3	+16%
		183-365 days	15	20	5	+33%
		>365 days	19	10	(9)	-47%
	Total # of units	1-90 days	946	1,117	171	+18%
		91-182 days	789	607	(182)	-23%
		183-365 days	474	300	(174)	-37%
		>365 days	590	537	(53)	-9%
Behavioral Outpatient	# of participants	1-90 days	67	65	(2)	-3%
		91-182 days	48	45	(3)	-6%
		183-365 days	55	49	(6)	-11%
		>365 days	77	39	(38)	-49%
	Total # of units	1-90 days	6,395	6,489	94	+1%
		91-182 days	3,079	2,412	(667)	-22%
		183-365 days	3,507	999	(2,508)	-72%
		>365 days	6,811	528	(6,283)	-92%

EXHIBIT E.21 (CONTINUED) FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA - LENGTH OF STAY						
Participants with 1-Year Post-Enrollment Data 1-90 days (n=130), 91-182 days (n=93), 183-365 days (n=104), >365 days (n=163)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Enrollment	Difference	% Change
Probation	# of participants	1-90 days	9	6	(3)	-33%
		91-182 days	11	4	(7)	-64%
		183-365 days	15	4	(11)	-73%
		>365 days	15	2	(13)	-87%
	# of days on probation	1-90 days	4,705	2,314	(2,391)	-51%
		91-182 days	4,663	904	(3,759)	-81%
		183-365 days	9,729	2,644	(7,085)	-73%
		>365 days	10,137	2,072	(8,065)	-80%
Incarceration /Prison	# of participants	1-90 days	5	1	(4)	-80%
		91-182 days	0	1	1	NA
		183-365 days	2	1	(1)	-50%
		>365 days	1	0	(1)	-100%
	# of days incarcerated	1-90 days	788	270	(518)	-66%
		91-182 days	0	98	98	NA
		183-365 days	478	342	(136)	-28%
		>365 days	152	0	(152)	-100%
Jail	# of participants	1-90 days	104	61	(43)	-41%
		91-182 days	65	29	(36)	-55%
		183-365 days	69	23	(46)	-67%
		>365 days	114	12	(102)	-89%
	# of nights in jail	1-90 days	17,491	3,678	(13,813)	-79%
		91-182 days	7,381	1,763	(5,618)	-76%
		183-365 days	6,777	858	(5,919)	-87%
		>365 days	7,582	21	(7,561)	-100%
Shelter	# of participants	1-90 days	25	24	(1)	-4%
		91-182 days	21	18	(3)	-14%
		183-365 days	31	19	(12)	-39%
		>365 days	50	2	(48)	-96%
Vouchers	# of participants	1-90 days	17	19	2	+12%
		91-182 days	7	13	6	+86%
		183-365 days	3	21	18	+600%
		>365 days	7	2	(5)	-71%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.

EXHIBIT E.22 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA - LENGTH OF STAY						
Participants with 1-Year Post-Program Data 1-90 days (n=116), 91-182 days (n=64), 183-365 days (n=63), >365 days (n=64)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
ER	# of participants	1-90 days	96	90	(6)	-6%
		91-182 days	55	47	(8)	-15%
		183-365 days	56	46	(10)	-18%
		>365 days	55	45	(10)	-18%
	Total # of procedures	1-90 days	2,025	1,960	(65)	-3%
		91-182 days	795	630	(165)	-21%
		183-365 days	796	713	(83)	-10%
		>365 days	750	468	(282)	-38%
Emergency Transport	# of participants	1-90 days	61	71	10	+16%
		91-182 days	28	37	9	+32%
		183-365 days	39	35	(4)	-10%
		>365 days	30	26	(4)	-13%
	Total # of procedures	1-90 days	405	538	133	+33%
		91-182 days	133	188	55	+41%
		183-365 days	163	190	27	+17%
		>365 days	105	122	17	+16%
Physical Inpatient	# of participants	1-90 days	39	43	4	+10%
		91-182 days	20	19	(1)	-5%
		183-365 days	24	21	(3)	-13%
		>365 days	23	12	(11)	-48%
	Total # of procedures	1-90 days	87	88	1	+1%
		91-182 days	46	45	(1)	-2%
		183-365 days	59	57	(2)	-3%
		>365 days	45	37	(8)	-18%
Physical Outpatient	# of participants	1-90 days	93	81	(12)	-13%
		91-182 days	54	47	(7)	-13%
		183-365 days	48	57	9	+19%
		>365 days	50	59	9	+18%
	Total # of procedures	1-90 days	709	699	(10)	-1%
		91-182 days	411	380	(31)	-8%
		183-365 days	306	437	131	+43%
		>365 days	551	466	(85)	-15%

EXHIBIT E.22 (CONTINUED) FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA - LENGTH OF STAY						
Participants with 1-Year Post-Program Data 1-90 days (n=116), 91-182 days (n=64), 183-365 days (n=63), >365 days (n=64)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
Pharmacy	# of participants	1-90 days	89	84	(5)	-6%
		91-182 days	45	51	6	+13%
		183-365 days	53	57	4	+8%
		>365 days	46	50	4	+9%
	Total # of procedures	1-90 days	2,839	2,904	65	+2%
		91-182 days	1,554	1,926	372	+24%
		183-365 days	1,222	1,814	592	+48%
		>365 days	1,414	2,269	855	+60%
Other	# of participants	1-90 days	112	102	(10)	-9%
		91-182 days	63	57	(6)	-10%
		183-365 days	57	59	2	+4%
		>365 days	60	57	(3)	-5%
	Total # of procedures	1-90 days	1,960	2,295	335	+17%
		91-182 days	1,010	932	(78)	-8%
		183-365 days	1,132	1,266	134	+12%
		>365 days	1,239	1,293	54	+4%
Behavioral Inpatient	# of participants	1-90 days	25	37	12	+48%
		91-182 days	10	18	8	+80%
		183-365 days	4	19	15	+375%
		>365 days	7	12	5	+71%
	Total # of units	1-90 days	843	1,149	306	+36%
		91-182 days	427	705	278	+65%
		183-365 days	78	377	299	+383%
		>365 days	232	329	97	+42%
Behavioral Outpatient	# of participants	1-90 days	58	59	1	+2%
		91-182 days	27	28	1	+4%
		183-365 days	37	35	(2)	-5%
		>365 days	31	23	(8)	-26%
	Total # of units	1-90 days	6,125	6,582	457	+7%
		91-182 days	1,743	2,125	382	+22%
		183-365 days	1,975	1,699	(276)	-14%
		>365 days	3,250	1,014	(2,236)	-69%

EXHIBIT E.22 (CONTINUED) FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA - LENGTH OF STAY						
Participants with 1-Year Post-Program Data 1-90 days (n=116), 91-182 days (n=64), 183-365 days (n=63), >365 days (n=64)						
	Type of Data	Group	1-year Pre- Enrollment	1-year Post- Program	Difference	% Change
Probation	# of participants	1-90 days	9	10	1	+11%
		91-182 days	5	5	0	+0%
		183-365 days	11	12	1	+9%
		>365 days	6	5	(1)	-17%
	# of days on probation	1-90 days	4,705	3,231	(1,474)	-31%
		91-182 days	2,083	2,163	80	+4%
		183-365 days	7,512	7,253	(259)	-3%
		>365 days	4,534	2,005	(2,529)	-56%
Incarceration /Prison	# of participants	1-90 days	5	2	(3)	-60%
		91-182 days	0	1	1	NA
		183-365 days	1	1	0	+0%
		>365 days	1	0	(1)	-100%
	# of days incarcerated	1-90 days	788	496	(292)	-37%
		91-182 days	0	184	184	NA
		183-365 days	323	92	(231)	-72%
		>365 days	152	0	(152)	-100%
Jail	# of participants	1-90 days	94	58	(36)	-38%
		91-182 days	45	25	(20)	-44%
		183-365 days	41	21	(20)	-49%
		>365 days	44	13	(31)	-70%
	# of nights in jail	1-90 days	16,110	3,185	(12,925)	-80%
		91-182 days	5,372	1,917	(3,455)	-64%
		183-365 days	6,002	1,223	(4,779)	-80%
		>365 days	3,536	110	(3,426)	-97%
Shelter	# of participants	1-90 days	23	10	(13)	-57%
		91-182 days	15	7	(8)	-53%
		183-365 days	14	11	(3)	-21%
		>365 days	13	5	(8)	-62%
Vouchers	# of participants	1-90 days	16	19	3	+19%
		91-182 days	5	10	5	+100%
		183-365 days	1	11	10	+1000%
		>365 days	4	35	31	+775%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.

EXHIBIT E.23 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA - PERMANENT SUPPORTIVE HOUSING						
Participants with 1-Year Post-Enrollment Data (n=30)						
	Type of Data	Group	1-year Pre-Enrollment	1-year Post-Enrollmen	Difference	% Change
ER	# of participants	Fort Lyon	28	18	(10)	-36%
		PSH	19	15	(4)	-21%
	Total # of procedures	Fort Lyon	724	584	(140)	-19%
		PSH	90	286	196	+218%
Emergency Transport	# of participants	Fort Lyon	17	13	(4)	-24%
		PSH	8	8	0	+0%
	Total # of procedures	Fort Lyon	139	152	13	+9%
		PSH	35	69	34	+97%
Physical Inpatient	# of participants	Fort Lyon	14	9	(5)	-36%
		PSH	4	4	0	+0%
	Total # of procedures	Fort Lyon	53	44	(9)	-17%
		PSH	4	5	1	+25%
Physical Outpatient	# of participants	Fort Lyon	25	29	4	+16%
		PSH	18	19	1	+6%
	Total # of procedures	Fort Lyon	243	447	204	+84%
		PSH	216	155	(61)	-28%
Pharmacy	# of participants	Fort Lyon	25	28	3	+12%
		PSH	21	21	0	+0%
	Total # of procedures	Fort Lyon	824	1,338	514	+62%
		PSH	1,320	989	(331)	-25%
Other	# of participants	Fort Lyon	25	27	2	+8%
		PSH	26	24	(2)	-8%
	Total # of procedures	Fort Lyon	779	885	106	+14%
		PSH	666	515	(151)	-23%
Behavioral Inpatient	# of participants	Fort Lyon	5	6	1	+20%
		PSH	0	0	0	+0%
	Total # of units	Fort Lyon	83	6	(77)	-93%
		PSH	0	0	0	+0%
Behavioral Outpatient	# of participants	Fort Lyon	19	12	(7)	-37%
		PSH	24	18	(6)	-25%
	Total # of units	Fort Lyon	582	289	(293)	-50%
		PSH	2,408	1,850	(558)	-23%

EXHIBIT E.23 (CONTINUED) FORT LYON PROGRAM PRE-ENROLLMENT AND POST-ENROLLMENT DATA - PERMANENT SUPPORTIVE HOUSING						
Participants with 1-Year Post-Enrollment Data (n=30)						
	Type of Data	Group	1-year Pre-Enrollment	1-year Post-Enrollmen	Difference	% Change
Probation	# of participants	Fort Lyon	6	1	(5)	-83%
		PSH	0	1	1	NA
	# of days on probation	Fort Lyon	3,589	211	(3,378)	-94%
		PSH	0	501	501	NA
Incarceration /Prison	# of participants	Fort Lyon	0	0	0	+0%
		PSH	1	1	0	+0%
	# of days incarcerated	Fort Lyon	0	0	0	+0%
		PSH	258	286	28	+11%
Jail	# of participants	Fort Lyon	18	5	(13)	-72%
		PSH	19	6	(13)	-68%
	# of nights in jail	Fort Lyon	3,551	523	(3,028)	-85%
		PSH	1,391	239	(1,152)	-83%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-enrollment cost data.

EXHIBIT E.24 FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA - PERMANENT SUPPORTIVE HOUSING						
Participants with 1-Year Post-Program Data (n=16)						
	Type of Data	Group	1-year Pre-Enrollment	1-year Post-Program	Difference	% Change
ER	# of participants	Fort Lyon	15	12	(3)	-20%
		PSH	10	10	0	+0%
	Total # of procedures	Fort Lyon	564	579	15	+3%
		PSH	50	59	9	18%
Emergency Transport	# of participants	Fort Lyon	11	9	(2)	-18%
		PSH	5	4	(1)	-20%
	Total # of procedures	Fort Lyon	116	161	45	+39%
		PSH	7	26	19	+271%
Physical Inpatient	# of participants	Fort Lyon	10	5	(5)	-50%
		PSH	2	2	0	+0%
	Total # of procedures	Fort Lyon	44	42	(2)	-5%
		PSH	2	2	0	+0%
Physical Outpatient	# of participants	Fort Lyon	14	15	1	+7%
		PSH	10	10	0	+0%
	Total # of procedures	Fort Lyon	156	137	(19)	-12%
		PSH	73	51	(22)	-30%
Pharmacy	# of participants	Fort Lyon	15	15	0	+0%
		PSH	8	9	1	+13%
	Total # of procedures	Fort Lyon	440	556	116	+26%
		PSH	286	221	(65)	-23%
Other	# of participants	Fort Lyon	15	14	(1)	-7%
		PSH	12	13	1	+8%
	Total # of procedures	Fort Lyon	579	653	74	+13%
		PSH	153	195	42	+27%
Behavioral Inpatient	# of participants	Fort Lyon	3	4	1	+33%
		PSH	0	0	0	+0%
	Total # of units	Fort Lyon	54	54	0	+0%
		PSH	0	0	0	+0%
Behavioral Outpatient	# of participants	Fort Lyon	9	6	(3)	-33%
		PSH	13	10	(3)	-23%
	Total # of units	Fort Lyon	469	369	(100)	-21%
		PSH	4,739	1,339	(3,400)	-72%

EXHIBIT E.24 (CONTINUED) FORT LYON PROGRAM PRE-ENROLLMENT AND POST-PROGRAM DATA - PERMANENT SUPPORTIVE HOUSING						
Participants with 1-Year Post-Program Data (n=16)						
	Type of Data	Group	1-year Pre-Enrollment	1-year Post-Program	Difference	% Change
Probation	# of participants	Fort Lyon	2	0	(2)	-100%
		PSH	0	0	0	+0%
	# of days on probation	Fort Lyon	398	0	(398)	-100%
		PSH	0	0	0	+0%
Incarceration /Prison	# of participants	Fort Lyon	0	0	0	+0%
		PSH	1	1	0	+0%
	# of days incarcerated	Fort Lyon	0	0	0	+0%
		PSH	258	286	28	+11%
Jail	# of participants	Fort Lyon	11	4	(7)	-64%
		PSH	11	5	(6)	-55%
	# of nights in jail	Fort Lyon	3,072	394	(2,678)	-87%
		PSH	1,928	96	(1,832)	-95%

SOURCE: Illuminate Evaluation Services' analysis of pre-enrollment and post-program cost data.

APPENDIX F: DATA FROM OUTCOMES ANALYSES

The information below details the data supporting the Fort Lyon Supportive Residential Community Program (Fort Lyon Program or Program) outcomes analyses completed for Chapter 4.

OUTCOMES

LENGTH OF TIME IN PROGRAM

We analyzed whether the number of days spent in the Fort Lyon Program was related to program completion and exit to permanent housing using logistic regression models. Exhibits F.1 through F.4 show the results. We divided the days spent in the program into quartiles and tested for differences in completion and housing by quartile. Participants in the first quartile spent less than a month in the Program (from 0 to 28 days); participants in the Low Medium quartile spent 29 to 105 days; participants in the High Medium quartile spent between 106 and 280 days; and participants in the highest quartile spent 281 days or more in the program. Participants in the lowest quartile had lower odds of completing the Program than participants in the other three quartiles. The odds of completing the Program were nearly double for participants in the Medium Low and Medium High categories. Participants in the highest quartile were 6 times more likely to complete the program relative to the lowest quartile. There was also a relationship between length of time in the program and exiting to permanent housing. Participants in the Medium Low and Medium High categories were 4 times as likely to exit to permanent housing relative to the lowest quartile, and participants in the highest quartile were 17 times as likely to exit to permanent housing.

EXHIBIT F.1 LOGISTIC REGRESSION MODEL PREDICTING PROGRAM COMPLETION					
	B	Exp(B)	Se	z-value	Pr(> z)
Days	0.00	1.00	0.00	9.16	<.001
Intercept	-1.14	0.32	0.20	-5.71	0.00

SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.

EXHIBIT F.2 LOGISTIC REGRESSION MODEL PREDICTING PROGRAM COMPLETION BY DOSAGE					
	B	Exp(B)	Se	z-value	Pr(> z)
Medium Low Days	0.57	1.78	0.24	2.40	0.02
Medium High Days	0.53	1.70	0.24	2.24	0.03
High Days	1.78	5.93	0.22	8.01	<.001
Intercept	-1.74	0.18	0.26	-6.77	<.001

SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.

EXHIBIT F.3 LOGISTIC REGRESSION MODEL PREDICTING PERMANENT HOUSING					
	B	Exp(B)	Se	z-value	Pr(> z)
Days	0.00	1.00	0.00	11.04	<.001
Intercept	-1.88	0.15	0.24	-7.81	.00
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.					

EXHIBIT F.4 LOGISTIC REGRESSION MODEL PREDICTING PERMANENT HOUSING BY DOSAGE					
	B	Exp(B)	Se	z-value	Pr(> z)
Medium Low Days	1.35	3.85	0.27	5.08	<.001
Medium High Days	1.45	3.85	0.27	5.08	<.001
High Days	2.85	17.27	0.26	10.80	<.001
Intercept	-2.45	0.09	0.31	-7.99	0.00
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.					

SUBSTANCE USE STATUS AND HISTORY

We looked at whether participants' substance use history as self-reported on the Government Performance and Results Act questionnaire, an instrument in which program leaders collect information on participants' alcohol, marijuana, or illegal drug use prior to entering the Program, was related to program completion and exit to permanent housing. Using logistic regression modeling, we found that there was no significant relationship as shown in Exhibits F.5 through F.10.

EXHIBIT F.5 LOGISTIC REGRESSION MODEL PREDICTING PROGRAM COMPLETION BY ALCOHOL USE					
	B	Exp(B)	Se	z-value	Pr(> z)
Alcohol Use	-2.12	0.12	2.51	-0.85	0.40
Intercept	-0.40	0.21	3.65	1.00	0.06
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.					

EXHIBIT F.6 LOGISTIC REGRESSION MODEL PREDICTING PERMANENT HOUSING BY ALCOHOL USE					
	B	Exp(B)	Se	z-value	Pr(> z)
Alcohol Use	-2.12	0.12	2.51	-0.85	0.40
Intercept	-63.41	0.00	12004.34	-0.01	1.00
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.					

EXHIBIT F.7 LOGISTIC REGRESSION MODEL PREDICTING PROGRAM COMPLETION BY ILLEGAL DRUG USE					
	B	Exp(B)	Se	z-value	Pr(> z)
Illegal Drug Use	-0.42	0.65	0.23	-1.83	0.07
Intercept	-1.23	0.29	0.26	-4.79	0.00
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.					

EXHIBIT F.8 LOGISTIC REGRESSION MODEL PREDICTING PERMANENT HOUSING BY ILLEGAL DRUG USE					
	B	Exp(B)	Se	z-value	Pr(> z)
Illegal Drug Use	0.80	2.23	1.64	0.49	0.63
Intercept	-62.19	0.00	12699.01	-0.01	1.00
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.					

EXHIBIT F.9 LOGISTIC REGRESSION MODEL PREDICTING PROGRAM COMPLETION BY MARIJUANA USE					
	B	Exp(B)	Se	z-value	Pr(> z)
Marijuana Use	-0.44	0.64	0.22	-2.05	0.04
Intercept	-1.28	0.28	0.25	-5.06	0.00
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.					

EXHIBIT F.10 LOGISTIC REGRESSION MODEL PREDICTING PERMANT HOUSING BY MARIJUANA USE					
	B	Exp(B)	Se	z-value	Pr(> z)
Marijuana Use	0.14	1.15	1.65	0.08	0.94
Intercept	-61.74	0.00	12896.04	-0.01	1.00
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.					

BEHAVIORAL HEALTH

We looked at whether behavioral health was related to program completion and exit to permanent housing. At intake, participants completed the Generalized Anxiety Disorder 7-item scale (GAD-7), a widely-used measure in behavioral health to screen and measure generalized anxiety disorder. Participants also completed the Patient Health Questionnaire (PHQ-9), a nine-item instrument to screen and measure the severity of depressive symptoms. To get an overall measure of anxiety and depression for participants, we averaged GAD-7 and PHQ-9 scores from survey administrations prior to the end of the Program. We found a small, but statistically significant negative relationship, between the

severity of participants' anxiety or depression ratings at intake and program completion or exit to permanent housing, meaning individuals with less severe depression and anxiety levels had higher rates of program completion. See exhibits F.11 to F.14.

EXHIBIT F.11 LOGISTIC REGRESSION MODEL PREDICTING PROGRAM COMPLETION BY GAD-7 AVERAGE						
	B	Se	χ^2	df	p	
GAD7 Score	-0.03	0.97	0.01	-2.37	0.02	
Intercept	-0.74	0.48	0.26	-2.89	<.001	
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.						

EXHIBIT F.12 LOGISTIC REGRESSION MODEL PREDICTING PERMANENT HOUSING BY GAD-7 AVERAGE						
	B	Se	χ^2	df	p	
GAD7 Score	-0.03	0.97	0.04	-0.78	0.44	
Intercept	-5.88	0.00	1.29	-4.55	0.00	
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.						

EXHIBIT F.13 LOGISTIC REGRESSION MODEL PREDICTING PROGRAM COMPLETION BY PHQ-9 AVERAGE						
	B	Se	χ^2	df	p	
PHQ-9 Score	-0.02	0.98	0.01	-2.12	0.03	
Intercept	-0.84	0.43	0.24	-3.50	0.00	
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.						

EXHIBIT F.14 LOGISTIC REGRESSION MODEL PREDICTING PERMANT HOUSING BY PHQ-9						
	B	Se	χ^2	df	p	
PHQ-9 Score	-0.04	0.96	0.04	-1.00	0.32	
Intercept	-5.87	0.00	1.26	-4.64	0.00	
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.						

PROGRAM PARTICIPATION

Exhibit F.15 shows the percent of participants enrolled in vocational, educational, or employment programs.

EXHIBIT F.15 PROGRAM PARTICIPATION	
Programming	% of Fort Lyon Participants
Vocational Programming (modules)	65.1%
Educational Programming	31.7%
Employment	11.2%
SOURCE: Illuminate Evaluation Services' analysis of Homeless Management Information System data provided by Colorado Coalition for the Homeless.	

We used chi-square models to examine whether participation in vocational modules was related to program completion or placement in permanent housing. Vocational program participation was related to completion ($\chi^2[1] = 6.31, p = <.05$) but not permanent housing ($\chi^2[1] = 2.446, p = \text{n.s.}$). Similarly, educational program participation was not related to either completion ($\chi^2[1] = .388, p = \text{n.s.}$) or permanent housing ($\chi^2[1] = 0.020, p = \text{n.s.}$). Finally, employment program participation was related to both completion ($\chi^2[1] = 11.018, p = <.001$) and permanent housing ($\chi^2[1] = 8.696, p = <.01$).

APPENDIX G: SURVEY DEMOGRAPHICS AND RESPONSES

DEMOGRAPHICS

Exhibit G.1 details the demographics of the 124 Fort Lyon Program participants who completed the survey during the community meeting.

EXHIBIT G.1 DEMOGRAPHICS: FORT LYON PARTICIPANTS COMPLETING SURVEY (n = 124)	
Demographic	% of Survey Participants
% Completing 1st Stay at Fort Lyon	72.4%
Average # of Substance Treatment Programs before Fort Lyon	2.8
Average Age	46.8
Demographic by Gender	
Male	83.3%
Female	15.7%
Transgender	1.0%
Demographic by Race/Ethnicity	
White	62.4%
Hispanic	14.9%
Black or African-American	10.9%
American Indian or Alaska Native	5%
Mixed Race	5%
Asian	1%
Other	1%
Highest Level of Education Completed	
GED or Alternative Credential	24.2%
Some College Credits, but less than 1 year	22.5%
1 or More Years of College Credits	16.7%
Less than a High School Diploma or GED	15.0%
High School Diploma	12.5%
Associates Degree	5.0%
Bachelor's Degree	2.5%
Master's Degree	.8%
Doctorate Degree	.8%
Veteran	14.2%
Average Age First Experienced Homelessness	32.4
SOURCE: Illuminate Evaluation Services' analysis of Survey Responses.	

PARTICIPANT RESPONSES

Exhibits G.2 through G.4 include participants' written comments to three prompts on the survey. The responses are verbatim but spelling and punctuation has been corrected to aid in readability.

EXHIBIT G.2 RESPONSE TO SURVEY PROMPT
For me, the most important thing about Fort Lyon is:
The ability to have room to grow/time to put my recovery into action in a safe place, with resources available to deal with trauma/mental health issues.
The freedom to create my own 'recovery program' without strict and trivial rules to adhere to.
Sobriety, staying sober, my health.
Sobriety.
The 'middle of nowhere' aspect, that literally everyone has made me feel welcome and offers assistance - staff and residents alike.
A stable and sober environment.
Still early for me to say.
It makes me sober.
Being independent
I can have a life again.
Re-uniting with family, gaining trust and honesty back, getting education, staying sober.
They give you the tools to change your life, but you have to take action yourself.
The environment to reach sobriety and keep it and learn from all my experiences.
Is the way you have your own choices and plenty of opportunities to choose from and all the space here.
Being sober and learning life skills.
Its recovery structure and realistic situations for giving an addict a second chance in life. I will make the best of it and not use any shortcuts.
Accountability, room to breathe, not just a heavy-handed program, and just what I needed.
The opportunity to maintain sobriety and time to get personal problems taken care of and additional programs offered.
The program allows me the freedom and structure to create a program for myself. I think the location and opportunity are key factors.
Getting back on level ground.
I am here and love it. It keeps me sober.
Why I came here and that with God. I want to leave sober and equipped to live on my own in my own home, have my job, my vehicle, things in life I lost because of alcohol.
Change.
Peace, hope, joy learning to love = sobriety.
Sober, clean mind.
Being safe and sober.
Everything.

EXHIBIT G.2 (CONTINUED) RESPONSE TO SURVEY PROMPT
For me, the most important thing about Fort Lyon is:
The chance to actually slow down and have the peace and time to figure out a better way of life.
That it is a program that I choose to do, I'm not required.
Maintaining my sobriety in a safe environment.
Changing my ways of thinking, learning to cope sober. Finding myself.
Working on my recovery not being forced and the help we obtain in community.
Having the time and space to grow at my own rate.
Other residents relationships & low access to drugs/alcohol.
Maintain sobriety.
It's a good place to learn to live a better life.
Learning to live sober.
Giving me a time and a chance to get healthy.
I can work my own program. No one forcing things on me.
Staying clean, working a program, taking care of mental health, etc.
It's your own pace.
Allowing me to stay clean and sober.
Sober living time to heal.
An environment for sober living.
Mental health (sobriety).
Getting my health back so I can get my life back.
Beginning stability.
The help needed to be successful when I leave.
Finding peace so I can move forward and when I do so all else is possible.
Minimal micromanagement.
Being here for help.
Individualized open program - able to build my own program.
Sobriety.
Residents.
Is my sobriety.
Sobriety.
Clean.
Working on myself.
My sobriety and having the option to working at my own pace.
To teach me how to get help with the programs to overcome being an addict for the rest of my life by helping me to get my housing and to also stay sober from drinking.
Care and support from staff to accomplish my goals through a complete life plan.
Time to reflect.
Sobriety and trying to get my bipolar disorder under control. There are no real psych doctors nearby that can prescribe medication.
Time to observe myself, to learn a new path. The time to continuously practice what's right in the long run.
Working my program.

EXHIBITG.2 (CONTINUED) RESPONSE TO SURVEY PROMPT
For me, the most important thing about Fort Lyon is:
The enormous generosity of all who were responsible for creating a safe environment for all residents to have a chance to change their lives. A sober and productive existence.
Sobriety and addressing my medical needs.
Housing. There is not job training just a chance to make 20 dollars a month.
The freedom to recover without the pressure of some overbearing blowhard.
Sobriety and shelter.
A chance to heal, mentally and physically, a place to change my life by being without the hassles of life.
Quiet.
Being in a sober community, safe, housing, and food.
We have time to access resources. We are given support and follow-up or follow through as needs/problems arise. The program is young!
Fort Lyon's functions ability.
AA.
The ability to make my own decisions.
Mental health.
Maintaining sobriety and working towards my college degree.
Recovery. Building a sober life. Learning from others. Support group.
My sobriety, health, staying sober to get my kids.
That we have over 200 people (clients) that live here sober and it's awesome for my recovery.
All the help you get with whatever needs you have.
The opportunity they have here for us.
Getting my life together and getting good recovery skills.
The ability to structure my own program and discipline on a routine.
Location - I'm bipolar and anything goes wrong, I get screwed up and the vicious cycle continues.
Meeting needs for people without SSI.
Safety.
Able to help myself.
The community.
Sobriety. All of it.
Getting my life back in order.
Flexibility to grow individually and with group support as circumstances require.
Sobriety, housing.
Makes it available to be diligent around working on the truth.
They don't push you - program is up to you long-term. Everything here.
It is safe.
Sobriety.
That you can make your own recovery plan without strictness. They have a lot of resources available if you seek them.
Creativity dental mental.

EXHIBIT G.2 (CONTINUED) RESPONSE TO SURVEY PROMPT
For me, the most important thing about Fort Lyon is:
Finding my own path now that I am sober.
Time to pull together.
That it's a safe environment, they are giving me a place to life off the streets and they helped me get into college.
That is here and available. Peace of mind.
Minimal structure.
Peace of mind.
A recovery-based environment and future planning.
Community.
Obtain a life I can be happy with.
Getting and staying sober and my education.
Staying sober.
Life. I'm still alive.
The setting, space, allowing opportunity to focus.
Getting sober, getting housing, driver license, my van which I have to have.
Programs, meetings, interactions with others, space for self-awareness, meditation, walks, mother nature, good food, health care, staff, place to sleep easily and many more.
The ability to be far away from home to recover. The home-like setting.
The opportunity to become and practice being sober.
Getting housing and SSI.
Learning from others and more about myself to succeed in life better and give back to community.
SOURCE: Illuminate Evaluation Services' analysis of Survey Responses.

EXHIBIT G.3 RESPONSE TO SURVEY PROMPT
One thing I would change about Fort Lyon is:
I would find a way to have adequate staffing and better communication between them allowing residents to be more well informed.
The peer population and the location (more urban-based).
I'm not sure.
I can't think of anything really.
A few (very few) staff need to honor their appointment schedules.
Make housing on site. Fix houses and rent them out.
Nothing.
Nothing.
I don't know.
Housing people in different units when first arriving, making sure their personal belongings are clean and sterile, a lot are coming in with smelly clothing and dirty bodies. Get them washed up, no lice and all, then put them in the general population.
Better case managers and benefit managers.

EXHIBIT FG3 (CONTINUED) RESPONSE TO SURVEY PROMPT
One thing I would change about Fort Lyon is:
Get all the old houses up to date for more living space and better reintegration into society.
Nothing.
Nothing.
Improve the Fort Lyon transportation. Not the county. The county does a good job. Reduce community meetings to twice a week. Three times a week is just not necessary.
Vocational training and jobs available.
Get baseball fields in better condition.
Reduce the number of people here that are not interested in recovery. More random BAs and UAs.
Me.
So far, I'm still new. This is my second day.
Nothing.
Nothing.
Nothing.
Nothing.
None.
Having more jobs available in the area.
Nothing.
Case managers' participation more with residents.
Have a little stricter acceptance process. Some people need a different program.
More transportation to other towns.
Nothing.
Ice cream served. Needs to be (doesn't exist).
60 days clean! I play bass guitar.
Nothing.
Nothing.
Better money for the modules. That's hard to survive on so little money.
Dinner on Thursday.
More classes, more structure, etc.
Communication, specifically between staff.
Fix elevator in Bldg. #5. Counseling or someone to talk to.
Not sure.
Lack of urgency.
Nothing its great the way it is right now.
Incorporate employment.
The food. I'm Vegan limited choices.
Getting rid of my biases in the staff/client relationships. Otherwise fine.
More variety in food.
Food.
Greater communication from staff ie: scheduling office hours.
Better peer mentoring.
Structure.

EXHIBIT G.3 (CONTINUED) RESPONSE TO SURVEY PROMPT
One thing I would change about Fort Lyon is:
More rules.
Location.
Control of smokers.
Work options.
To improve on work programs to help with money situations so we don't have to be broke and can't afford our own stuff.
The transportation system which I believe is a work in progress.
Support from case manager.
Take out the ones that put no effort in program. They tend to stick together and pick on the weak that want to be sober. Please get rid of them!!!!
NA.
The petty resentments. Jealousy and bickering.
More strict on rules about AOD, and more room check-ins.
The clothes. The clothes are used not very good at all.
Nothing.
Security.
Too many people here that are not here for recovery.
Nothing.
More activities, more supplies in art room, paints, beads...
Offering skills to unskilled people around PTSD, anxiety and upheaval around being in a house after living in the street.
Continued progress.
N/A.
Nothing.
Nothing.
Nothing.
None.
Nothing. It's a God send.
Keep it the same. It's all good.
Nothing.
Helping people without SSI.
Nothing.
I could not make that decision.
Myself while being here.
Gossip.
Expunging my past.
More mental illness support for those who need it in order to begin recovery and closer support/adjusted treatment per required.
N/A.
I'm here to make a positive transformation in me, not change Ft. Lyon.
Offer help with smoking cigs. I don't smoke but it seems everyone else does. Smoking is an addiction and drug holding on to old behavior.

EXHIBIT G.3 (CONTINUED) RESPONSE TO SURVEY PROMPT
One thing I would change about Fort Lyon is:
Nothing.
Some of the menu and more staff assistance.
Great program.
Available work/income.
No roommates.
More staff.
Don't know.
Nothing.
A longer based program.
Nothing. It's great.
Better qualified staff (not all, most are good).
Nothing.
N/A.
N/A.
Get people to go to work.
Get people involved - not the Hyatt!
Apply more staff-involved classes, such as some life skills.
Increased meal portions.
Having medical and mental help because I have no money for copays.
The food structure.
SOURCE: Illuminate Evaluation Services' analysis of Survey Responses.

EXHIBIT FG3 RESPONSE TO SURVEY PROMPT
Additional feedback for comments that would help us learn more about or improve the Fort Lyon Program:
Fort Lyon is a blessing. Thank God for Fort Lyon.
Not sure - seems to be a stable environment - food, activities, free time. Everything seems well balanced.
So far, I think it is a good program, and I like that it is not in the city.
Thank you, Fort Lyon.
I have only been here two weeks.
Like I said, my life's changing, but I had to take action which is what I needed. I'm grateful for this place. My life is getting better every day.
No.
Fort Lyon has been a very good experience and so much help in all areas of my life. Now after Fort Lyon I can really have a Life. Praise the Lord for Fort Lyon.
It is just wonderful having lived in India and South Africa. Fort Lyon needs more recognition throughout the United States and the outside world if possible.
NA
Fort Lyon is a terrific program if people utilize the opportunity.

EXHIBIT G.3 (CONTINUED) RESPONSE TO SURVEY PROMPT
Additional feedback for comments that would help us learn more about or improve the Fort Lyon Program:
Not at this time.
If not for Fort Lyon, I would be homeless. Thank you for your support so this program can have funding to continue.
None.
More job opportunity in Las Animas area would be nice.
Fort Lyon is unique and no other place like it.
Put together a grant writing team.
None at this time.
Fort Lyon is unique in that it gives you all the possibilities, space to walk around, exercise, time with nature, groups with peers, and so on. The staff is exceptionally understanding and helpful. I thank you for considering my thoughts.
None.
I can say that after 5 previous programs, this one is absolutely different. The more funding the better, please!
I appreciate and love Fort Lyon.
Case manager is not very helpful, uninformed and non-responsive to my questions.
Besides the lack of people (staff) being more efficient. Fort Lyon is a wonderful place.
We need to be able to incorporate real employment while we're here. Also, far more help finding housing and moving our stuff.
I love Fort Lyon.
No.
None.
Better peer mentoring.
Nope.
This is a great place for people who would like a new beginning which will benefit themselves and the chance to help others understand that they can have what we have.
More work programs.
I've been at Fort Lyon 6-7 weeks and only met with case manager 3-4 times and those were not very helpful. Need a counselor on grounds.
People leave here because of their psych. Doctors. Southeast Health group is not very experienced with providing care for mental illness.
More staff. Hopefully they experience homeless and alcohol and drug so we can relate.
NA
Someone to talk to those that decide who gets work module.
No comment.
No comment.
More testing for drugs and alcohol use on campus.
Fort Lyon is evolving. We need extra care and support as we are young, only been operating less than five years long. Learning on the way is difficult, and I pray not life threatening to our longevity. Long live Fort Lyon Please!
Continue funding and support for programs like Fort Lyon.

EXHIBIT G.3 (CONTINUED) RESPONSE TO SURVEY PROMPT
Additional feedback for comments that would help us learn more about or improve the Fort Lyon Program:
Not as this time.
Program is great. Would like more attentiveness with staff (specifically case managers) resolution to resident problems.
The support people need is available here if they want to change.
Don't close this place ever. It's the only place I've ever been for treatment that is working.
Treat everyone the same. Some get help quicker than others. Thanks a lot!
Help those without SSI.
No.
People need to be continuously encouraged to look for help and it is out there.
Everything is run so wonderfully and greatly appreciated.
N/A.
Stress gratitude as a critical foundation "By grace we are saved". Yes we are all worthy. Thank you for all you do ya all!
Fort Lyons is the best program I've been to like I said something to help people stop smoking cigs.
GREAT.
No more severe mental patients.
Too early in the program to tell, but more help with financial or work support.
I feel this is a great program but sometimes it feels like they are understaffed and it would be good if they put more focus on finding residents employment. But I am so happy to be able to go to school.
Make something work for the next person if not me. THANKS.
Add a dietician to staff.
NA.
Not as this time.
Have some sort of work experience and maybe actual work in the community or job training.
None.
My only hope is that this community program continues and reaches others.
They are still learning but they are doing a good job. I am thankful to have been here.
Not as this time, I'm doing very well and for the most part happy.
Great survey.
This place is a God send. It saved my life.
Being harassed by a resident and the staff/case manager did nothing about is accept move me to a different room
Not at this time although with everything there is always room for improvement.
SOURCE: Illuminate Evaluation Services' analysis of Survey Responses.

APPENDIX H: HOMELESSNESS OUTCOMES RESEARCH/BEST PRACTICES LITERATURE REVIEW

The Fort Lyon Supportive Residential Community Program (Fort Lyon Program or Program) provides recovery-oriented transitional housing to individuals in Colorado who are homeless. The Program combines housing with peer support and educational, vocational, and employment services. Many participants of the Fort Lyon Program have complex histories characterized by trauma, multiple years of homelessness and financial instability, and/or addiction.

OUTCOMES AND BEST PRACTICE RESEARCH

Research on programs addressing homelessness is challenged by the complexities of the population studied, as well as variations in definitions of the type of program (e.g., housing first, transitional housing) and in criteria for determining successful outcomes for both housing and health. Research suggests that there is no single solution and different approaches are more successful in some contexts than in others. This literature review highlights key best practices in addressing homelessness, as relevant to the Fort Lyon Program.

COORDINATED ASSESSMENT AND OUTREACH SYSTEMS

In the last decade, efforts to address homelessness have emphasized the systems that support reduction of homelessness, rather than the successes of individual programs. These systems approaches intend to improve the collective efforts of the organizations and agencies directly or indirectly providing resources to end homelessness. This includes coordination of intake and assessment processes to improve the outreach, integration, and responsiveness of existing systems:

Coordinated Assessment, if comprehensive and well-integrated with mainstream service systems, can help communities move toward their goal of ending homelessness by improving the speed, accuracy, and consistency of the client screening and assessment process and targeting scarce resources more efficiently and accurately in order to be most effective.¹³

¹³ CHS (2015). *Improving Community-wide Targeting of Supportive Housing to End Chronic Homelessness: The Promise of Coordinated Assessment*. New York: CSH. Available at: <http://www.csh.org/resources/improving-community-wide-targeting-of-supportive-housing-to-end-chronic-homelessness-the-promise-of-coordinated-assessment/>

Coordinated assessment systems are tailored to the local community's needs, existing resources, and systems that serve the homeless population either directly or indirectly. Active partners may include emergency services, hospitals, shelters, jails, courts, welfare agencies, detox centers, and street outreach programs. Inclusion of entities that serve the broader population is essential for a coordinated system to prioritize highest-cost utilizers and quickly move them into housing where they can also receive needed services and be stabilized. In this way, centralized assessment and intake processes can reduce costly crises care interventions.

Coordinated systems rely on strong linkages and communication with mainstream public systems and institutions to support efficient identification, referral, and assessment processes. This includes data-sharing agreements and data-matching to identify high-cost utilizers across agencies, and to identify points of contact for these individuals for outreach purposes.

DUAL FOCUS ON ADDICTION AND HOMELESSNESS

Substance abuse can be both a cause and a result of homelessness, and therefore both issues must be addressed. However, there are debates about whether housing support should be provided contingent on participation in substance abuse treatment and evidence of treatment progress.

While multiple theories and approaches to housing for the homeless exist, two are prevalent in discussions and research: the linear housing model and the housing first model. In the linear housing model, participants move progressively through stages, improving skills, clinical stabilization, and self-sufficiency. In a stepwise fashion, the client moves through housing arrangements that are progressively less restrictive and improved in quality, from homelessness, to emergency shelters, then transitional housing, and ultimately to permanent supportive housing. Failing to meet criteria or having a setback can result in the client moving back to a previous level of support and housing, because it is assumed they are not ready to successfully maintain their current level of placement.

For people and/or programs dealing with addiction, this progression often requires substance abuse treatment and increasing evidence of sobriety as clients move through housing stages. Because of the requirements to participate in substance use treatment and to demonstrate sobriety prior to accessing permanent housing, this approach is often referred to as the "treatment first" approach.

In contrast, the housing first provides permanent housing that is not contingent on other factors such as sobriety, development of specific skill sets, participation in treatment, and other requirements that may be in place in linear housing models. Clients move from homelessness to permanent supportive housing. According to the National Alliance to End Homelessness, "The housing first approach views housing as the foundation for life improvement and enables access to permanent housing without prerequisites or

conditions beyond those of a typical renter.”¹⁴ In a brief on housing first,¹⁵ HUD notes that housing first can support improvements in health, behavioral health, substance use, and employment, and that “sobriety, compliance in treatment, or even criminal histories are not necessary to succeed in housing.” The emphasis is often on harm reduction, or reducing the negative consequences and risky behaviors of substance use. Harm reduction strategies range on a continuum from safer drug use, to managed substance use, to abstinence, focusing on what is achievable. Although the earliest housing first approaches opened in the late 1980s, they did not become prevalent until more recently. Housing first approaches are now being used and assessed in communities across the United States. As an example, the Denver Housing First Collaborative was established in 2003 by the Colorado Coalition for the Homeless.

Research on the most effective housing model for individuals struggling with addiction has been mixed. This may be due, in part, to differences in measures of addiction severity, definitions of sobriety, outcome measures (e.g., sobriety versus reduction in substance use, cost/benefits, housing retention), the presence or absence of co-occurring behavioral or physical health issues, and other ways of understanding the composition of the study populations. In addition, there are differences among housing first programs and among treatment first programs, with different approaches working for different people. Research methodologies have also varied, and randomized controlled trials are limited. While there has been support for and proponents of both treatment first¹⁶ and housing first¹⁷ for individuals with addictions, recent studies have highlighted the benefits of housing first programs for housing and treatment outcomes. Some studies suggest the perceived value of treatment first – reducing substance use and addiction – does not persist and may actually be less robust when compared to ongoing substance use of housing first participants. Further, programs focused on housing first and harm reduction are not linked to increased substance abuse.¹⁸

It is worth noting, however, that some reviews of the literature suggest substance abuse may be associated with lower housing retention rates for some populations but not

¹⁴ National Alliance to End Homelessness. (2016) *Fact Sheet: Housing First*. Available at: <http://www.endhomelessness.org/page/-/files/2016-04-26%20Housing%20First%20Fact%20Sheet.pdf>

¹⁵ See <https://www.hudexchange.info/resources/documents/Housing-First-Permanent-Supportive-Housing-Brief.pdf>

¹⁶ For example: Kertesz, S., Crouch, K., Milby, J., Cusimano, R, and Schumacher, J. (2009). Housing first for homeless persons with active addiction: Are we overreaching? *Milbank Quarterly* 87(2): 495-534.

¹⁷ For example: Padgett, D., Stanhope, V., Henwood, B., and Stefancic. (2011). Substance abuse outcomes among homeless clients with serious mental illness: Comparing housing first with treatment first programs. *Community Mental Health Journal* 47(2): 227-232; Collins, S., Clifasefi, S., Dana, E., Andrasik, M., Stahl, A., Kirouac, M., Welbaum, C., King, M., and Malone, D. (2012). Where harm reduction meets Housing First: Exploring alcohol’s role in a project-based Housing First setting. *International Journal of Drug Policy*, 23(2): 111-119; and Tsembris, S., Gulcur, L., and Nakae, M. Housing First, consumer choice, and harm reduction for homeless individuals with a dual diagnosis. *American Journal of Public Health*, 94(4): 651-656.

¹⁸ Padgett, D.K., Gulcar, L., & Tsembris, S. (2006). Housing first services for people who are homeless with co-occurring serious mental illness and substance abuse. *Research on Social Work Practice*, 16(1): 74-83; Tsemberis, s., Gulcur, L., & Nakae, M. (2004). Housing first, consumer choice, and harm reduction for homeless individuals with a dual diagnosis. *American Journal of Public Health*, 94 (4): 651-656.

others.¹⁹ Regardless of the approach, there is agreement that substance abuse is both a cause and a result of homelessness, and both issues need to be addressed simultaneously.²⁰

Therapeutic communities (TC) represent one integrated strategy for addressing homelessness and substance abuse. While TC programs differ, most are long-term, residential, recovery-oriented communities with strong self-help and social support components. Originally organized and led by peers, TCs have evolved over time ranging from sober living houses to larger programs that include certain forms of treatment, medical services, and medical staff.²¹ After reviewing 30 studies on the effectiveness of TCs, researchers observed that while outcomes were variable across communities, there was evidence of beneficial outcomes in diverse treatment settings, particularly for higher levels of addiction in some groups, such as those who are homeless. The variations in outcomes were less reflective of type of TC than the needs of the participants: “Not the differential effectiveness of TCs, but rather individuals’ assets and community resources and their personal needs and goals will determine whether TC treatment is indicated on the road to recovery.”²² They concluded, “TCs can be supportive places where participants can learn some of the internal control and refusal skills conducive to stable recovery. Motivation, social support and coping with stress without using substances appear to be key factors in successful recovery.

Research suggests there is little empirical evidence for the fundamental component of treatment first approaches: requiring clients to undergo mandatory treatment before receiving housing services. Relevant to Fort Lyon, there is evidence of positive housing and clinical outcomes from housing that *supports* sustained recovery²³ and that mandatory treatment is not essential for living independently in the community.²⁴ However, there may

¹⁹ Johnsen, S., and Teixeira, L. (2010). *Staircases, elevators, and cycles of change: ‘Housing First’ and other housing models for homeless people with complex support needs*. London: Crisis and Centre for Housing Policy; Perl, L., and Bagalman, E. (2015). *Chronic homelessness: Background, research, and outcomes* (CRS Report No. R44302). Retrieved from Congressional Research Service website <https://fas.org/sgp/crs/misc/R44302.pdf>; Zenger, S. (2002). *Substance abuse treatment: What works for homeless people? A review of the literature*. Nashville, TN: National Health Care for the Homeless Council.

²⁰ Gillis, L., Dickerson, G., and Hanson, J. (2010). Recovery and homeless services: New directions for the field. *The Open Health Services and Policy Journal*, 3: 71-79.

²¹ See <https://www.drugabuse.gov/>

²² Vanderplasschen, W., Colpaert, K., Autrique, M., Rapp, R., Pearce, S., Broekaert, E., and Vandeveldel, S. (2013). Therapeutic Communities for Addictions: A review of their effectiveness from a recovery-oriented perspective. *The Scientific World Journal*, vol. 2013, Article ID 427817.

²³ Polcin, D.L., Korcha, R., Bond, J., & Galloway, G. (2010). What did we learn from our study on sober living houses and where do we go from here? *Journal of Psychoactive Drugs*, 42(4): 425–433; Munthe-Kaas, H., Berg, R.C., & Blaasvær, N. (2016) Effectiveness of interventions to reduce homelessness: a systematic review. Folkehelseinstituttet, ISBN (digital): 978-82-8082-782-1, accessed May 3, 2018, at www.fhi.no/en; Wittman, F., Polcin, D., & Sheridan, D. (2017). The architecture of recovery: two kinds of housing assistance for chronic homeless persons with substance use disorders. *Drugs and Alcohol Today*, 17(3): 157-167;

²⁴ Munthe-Kaas, H., Berg, R.C., & Blaasvær, N. (2016) Effectiveness of interventions to reduce homelessness: a systematic review. Folkehelseinstituttet, ISBN (digital): 978-82-8082-782-1, accessed May 3, 2018, at www.fhi.no/en; Wittman, F., Polcin, D., & Sheridan, D. (2017). The architecture of recovery: two kinds of

be some limitations to the outcomes dependent on the nature of the addiction (e.g., type of substance use).²⁵ Across studies, authors note the significant challenges of conducting rigorous, valid, and generalizable research of the impact of these various programs. There are many variables at play, some of which are difficult to measure. For example, substance use is often self-reported, and key program implementation variables may not be documented. Consequently, they offer the findings as preliminary or tentative and recommend cautious use of the outcomes.

In discussions of policy and practice implications of their findings, researchers observed that program models addressing homelessness, substance use, and other mental or behavioral health issues lead to better outcomes than usual services, and the positive outcomes are not exclusive to a single program model. They suggest a variety of program options are needed to meet the range of needs presented by people experiencing homelessness and substance use issues. Further, they recommend that policies and services support a triaging of people into various housing options, according to need and preference, and that programs allow for fluid movement among parallel tracks to optimize individual outcomes.²⁶

TRAUMA-INFORMED APPROACH

The Substance Abuse and Mental Health Services Administration (SAMHSA), an agency within the U.S. Department of Health and Human Services, is committed to reducing “the impact of substance abuse and mental illness on America's communities.”²⁷ SAMHSA promotes trauma-informed care and identifies a program, organization, or system as trauma-informed if it:

1. *Realizes* the widespread impact of trauma and understands potential paths for recovery;
2. *Recognizes* the signs and symptoms of trauma in participants, families, staff, and others involved with the system;
3. *Responds* by fully integrating knowledge about trauma into policies, procedures, and practices; and
4. Seeks to actively resist *re-traumatization*.²⁸

housing assistance for chronic homeless persons with substance use disorders. *Drugs and Alcohol Today*, 17(3): 157-167.

²⁵ Kirst, M., Zenger, S., Misir, V., Hwang, S., & Stergiopoulos, V. (2015). The impact of a housing first randomized controlled trial on substance use problems among homeless individuals with mental illness. *Drug and Alcohol Dependence* 146: 24–29.

²⁶ Munthe-Kaas, H., Berg, R.C., & Blaasvær, N. (2016) Effectiveness of interventions to reduce homelessness: a systematic review. Folkehelseinstituttet, ISBN (digital): 978-82-8082-782-1, accessed May 3, 2018, at www.fhi.no/en; Wittman, F., Polcin, D., & Sheridan, D. (2017). The architecture of recovery: two kinds of housing assistance for chronic homeless persons with substance use disorders. *Drugs and Alcohol Today*, 17(3): 157-167; Paquette, K., & Pannella Winn, L.A. (2016). The role of recovery housing: prioritizing choice in homeless services. *Journal of Dual Diagnosis*, 12(2): 153-162.

²⁷ <https://www.samhsa.gov/about-us>

²⁸ *ibid.*

Following an extensive review of the principles of trauma-informed care proposed by multiple workgroups, organizations, expert panels, and researchers, Hopper, Bassuk, and Olivet (2010) offered the following definition:

Trauma-Informed Care is a strengths-based framework that is grounded in an understanding of and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety for both providers and survivors, and that creates opportunities for survivors to rebuild a sense of control and empowerment.²⁹

Research shows correlations between homelessness and previous exposure to trauma. In an extensive review of the literature, SAMHSA reports that individuals who have been homeless for more than one week during adulthood are significantly more likely than those who have not experienced homelessness to report exposure to traumatic environments or experiences, including experiencing personal violence or witnessing violence toward others.³⁰ Based on their review of studies of trauma-informed care, Hopper, et al., conclude that service settings that provide trauma-informed care are associated with reductions in substance use and psychiatric symptoms and may be associated with a reduction in use of crisis-based services and improved housing stability. Providers utilizing trauma-informed approaches reported improved relationships with participants and among staff, along with stronger perceptions of safety. The authors conclude that integrated trauma-informed care services are cost-effective as they do not cost more than standard programming.

PEER MENTORING/SOCIAL SUPPORT

Peer-based support services have a long history in the field of addiction and recovery. The implementation and outcomes of peer-based support have been extensively addressed in research literature.³¹ Peer support can provide emotional, informational, and practical support, and can facilitate additional social contacts to create community and a sense of belonging. In programs addressing recovery and homelessness, peer support can range from informal but essential relationships among participants to formal roles for peers as mentors, practitioners, and leaders in the design, delivery, and evaluation of services.³² Peer support is integral to the philosophy of TCs, to 12-step approaches to recovery, and in many

²⁹ Hopper, E., Bassuk, E., and Olivet, J. (2010). Shelter from the storm: Trauma-informed care in homelessness services settings. *The Open Health Services and Policy Journal*, 3, 80-100.

³⁰Center for Substance Abuse Treatment (US). *Trauma-Informed Care in Behavioral Health Services*. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 2014. (Treatment Improvement Protocol (TIP) Series, No. 57.) Available from: <https://www.ncbi.nlm.nih.gov/books/NBK207201/>

³¹ For example, White, W. (2008). *Recovery management and recovery-oriented systems of care: Scientific rationale and promising practices*. Pittsburgh, Pa, USA: Northeast Addiction Technology Transfer Center, Great Lakes Addiction Technology Transfer Center and Philadelphia Department of Behavioral Health & Mental Retardation Services; and Center for Substance Abuse Treatment (2009). *What are Peer Recovery Support Services?* HHS Publication No. (SMA) 09-4454. Rockville, MD: Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services.

³² Gillis, L., Dickerson, G, and Hanson, J. (2010). Recovery and homeless services: New directions for the field. *The Open Health Services and Policy Journal*, 3: 71-79.

housing first models. One author observed, “Peer-based recovery support services can help shift the larger treatment system from a focus on brief biopsychosocial stabilization to a focus on the long-term recovery process.”³³

COMPREHENSIVE AND INTEGRATED SERVICES

The needs of homeless individuals are often complex, requiring access to multiple services across systems. Research from trauma-informed care settings, for example, suggests that integrated care is associated with better outcomes and is cost-effective.³⁴ However, services may be fragmented at both the systems and service delivery levels.

At the systems level, there are multiple challenges to integration of services and programs, such as policy, program priorities, limited resources, accountability structures, and philosophical differences regarding outcomes and approach. At the level of service delivery, efforts to reduce fragmentation of service delivery and to provide comprehensive and integrated services have been underway for a number of years. One approach, the Assertive Community Action Treatment (ACT), has been in existence since the 1970s but has re-emerged more recently. ACT teams include representatives of services, such as social workers, nurses, psychiatrists, peer counselors, and employment workers. There are multiple models for how ACT interfaces with systems and participants through outreach, program implementation, and follow up. Other service delivery models for providing integrated and comprehensive services exist. Agencies and organizations across the country, including the Colorado Coalition for the Homeless,³⁵ are developing local efforts to improve integration of services at the systems and service delivery levels.

PROGRAMMATIC FLEXIBILITY AND/OR CLIENT CHOICE

In some settings, approaches to addressing homelessness and substance abuse have extrapolated from studies in primary health care that have found positive outcomes when patients have opportunities for self-management.³⁶ Applying these principles, they have similarly shifted toward client choice and consumer-driven programming and allowing for programming flexibility.³⁷ These approaches take into consideration individual variation in recovery, rate of progress, and capacity for healing at a given point in time. Although program structures differ from program-to-program, consumer-driven models allow

³³ White, W. (2009). *Peer-based addiction recovery support: History, theory, practice, and scientific evaluation*. Chicago, IL: Great Lakes Addiction Technology Transfer Center and Philadelphia Department of Behavioral Health and Mental Retardation Services.

³⁴ Hopper, E., Bassuk, E., and Olivet, J. (2010). Shelter from the storm: Trauma-informed care in homelessness services settings. *The Open Health Services and Policy Journal*, 3, 80-100.

³⁵ Colorado Coalition for the Homeless. (2013). *Developing an Integrated Health Care Model for Homeless and Other Vulnerable Populations in Colorado*. Denver, CO: Colorado Coalition for the Homeless.

³⁶ White, W. (2008). *Recovery management and recovery-oriented systems of care: Scientific rationale and promising practices*. Pittsburgh, Pa, USA: Northeast Addiction Technology Transfer Center, Great Lakes Addiction Technology Transfer Center and Philadelphia Department of Behavioral Health & Mental Retardation Services.

³⁷ Gillis, L., Dickerson, G., and Hanson, J. (2010). Recovery and homeless services: New directions for the field. *The Open Health Services and Policy Journal*, 3: 71-79.

participants to make choices in key areas, such as whether to use substances, seek treatment for substance use, seek psychiatric treatment, take medications, etc. These choices do not impact housing status or access to other supports offered by the program.

Several studies have found positive outcomes in programs that provide client choice regarding personal goals, treatments, housing options, and length of time to complete goals. For example, one study found participants of a consumer-driven housing first program reported higher levels of choice and maintained high housing retention rates relative to participants in a more restrictive model, without exacerbation of psychiatric symptoms or increased substance abuse.³⁸ Another study of adults dealing with homelessness and mental illness compared a “consumer-driven housing first program” with “treatment as usual” that required psychiatric treatment and sobriety before housing. The results showed direct relationships between the consumer-driven housing first model, a decrease in homelessness, and an increase in perceptions of choice.³⁹

USE OF DATA

Data for tracking program outcomes and evidence-based programming decisions is essential to ensure program effectiveness, for resource allocation, and to compare treatment approaches. Program monitoring requires reliable and valid data collection tools, consistent data collection processes, appropriate analytic strategies, unbiased interpretation, and efficient dissemination. Client confidentiality issues must also be addressed. Multi-agency data-sharing agreements and policies that support them are necessary, particularly with integrated service delivery and for monitoring post-program client outcomes. Evidence of the importance of data collection practices is increasingly apparent in comprehensive efforts to provide integrated service delivery,⁴⁰ and there are multiple sources of support for developing these practices.⁴¹

³⁸ Tsembris, S., Gulcur, L., and Nakae, M. (2004). Housing First, consumer choice, and harm reduction for homeless individuals with a dual diagnosis. *American Journal of Public Health, 94(4)*: 651-656.

³⁹ Greenwood, R., McDaniel, N, Winkel, G, and Tsembris, S. (2005). Decreasing psychiatric symptoms by increasing choice in services for adults with histories of homelessness. *American Journal of Community Psychiatry, 36 (3/4)*: 223-238.

⁴⁰ For example, Colorado Coalition for the Homeless. (2013). *Developing an Integrated Health Care Model for Homeless and Other Vulnerable Populations in Colorado*. Denver, CO: Colorado Coalition for the Homeless.

⁴¹ For example, The National Center on Family Homelessness. (2012). *Evaluating Programs: Strategies and Tools for Providers Serving Homeless Families*. Needham, MA: National Center on Family Homelessness.; and HUD’s *Homeless Programs Resource Allocation and Monitoring Strategies* presentation (2010) available at <https://www.hudexchange.info/resource/1725/homeless-programs-resource-allocation-and-monitoring-strategies/>