What Will it Take?: Solutions to Mental Health Service Gaps in Larimer County

Mental Health and Substance Use Alliance of Larimer County
An Unincorporated Non-Profit Association and Health Alliance

April 2018

Update of previous version (Recommendations for the Development of Critical Behavioral Health Services in Larimer County), published February 23, 2016 with limited revision on April 12, 2016

"Mental illness is a leading cause of suffering, economic loss and social problems. It accounts for over 15% of the disease burden in developed countries, which is more than the disease burden caused by all cancers."

No Health Without Mental Health (2007)

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Abstract

Behavioral health disorders, including mental illness and substance use disorders (SUDs), are serious, chronic, and potentially life-threatening health issues. In Larimer County, Colorado, tens of thousands of residents suffer from these conditions. Left untreated, behavioral health disorders can lead to poor quality of life, unstable employment, poverty, chronic health conditions, early death, and suicide. The cost to the community is high as well, with frequent use of high-cost resources such as emergency rooms and criminal justice services.

These disorders *can* be treated effectively, allowing people to function better and regain control of their lives. As is true with many chronic conditions, treatment often entails a broad continuum of services, including crisis stabilization; detox: and inpatient, outpatient, short-term intensive residential treatment, and long-term residential treatment (halfway houses and sober living homes).

Unfortunately, the majority of people with these disorders never get the treatment they need. In Larimer County, most of the people who need these services simply continue to suffer, putting great physical, emotional, and financial strain on themselves, their families, and their communities.

The Mental Health and Substance Use Alliance (MHSU Alliance) of Larimer County, a partnership of local organizations, with the assistance of a national consulting firm, NIATx, has studied existing resources, identified gaps in services, and has made recommendations to fill these gaps to create a more comprehensive set of services in the report *What Will It Take? Solutions for Mental Health Services Gaps in Larimer County*.

The MHSU Alliance's key finding: *While many quality services exist here, Larimer County does not have a continuum of mental health treatment and support services that is sufficient to meet the needs of local residents.*

The MHSU Alliance recommends the development and expansion of treatment capacity to provide services for over 5,000 residents in Larimer County each year. First, the MHSU Alliance recommends the development of a 24/7 Behavioral Health Services Center, which would provide state-of-the-art care and serve as a central hub for many services. The Center would:

- Provide onsite medical clearance/triage as well as patient-centered assessment services to get people into the right level of care
- Provide stabilization services for people experiencing mental health crises (through relocation of the existing Crisis Stabilization Unit to the new facility)
- Provide a safe place for people to withdraw from alcohol and/or drugs, and begin medication-assisted treatment (MAT) when appropriate
- Facilitate entry into treatment after stabilization of mental health crises and/or after detoxification from substances
- Provide intensive residential treatment for substance use disorders

- Facilitate entry into other community-based services, assist with overcoming barriers such as transportation, and assist uninsured and underinsured individuals with affording care

Second, the MHSU Alliance also recommends that funds be earmarked for community services to expand access to step-down housing; provide ongoing assistance for those with significant disorders in permanent supportive housing and in the community; support suicide prevention efforts; and support early identification and intervention services for youth and families.

The MHSU Alliance estimates the annual cost to provide all recommended services in the center and in the community to be $15.2 million (taking into account $6.5 million in revenues). The one-time cost of construction of a new 60,000-square-foot Behavioral Health Services Center, including projected land costs, is estimated at $33.4 million if built in 2020.

Finally, outside of the recommended budget, the MHSU Alliance also recommends that existing organizations and service providers will need to continue to expand outpatient treatment for substance use disorders, including medication-assisted treatment and intensive outpatient treatment, in order to meet the treatment needs of additional individuals being engaged in treatment through new and improved Larimer County services.

There is ample evidence to demonstrate significant value and benefits of the treatment of behavioral health disorders. Patients and families benefit from increased health, well-being, and the ability to function in their family, work, community, and society (similar benefits as those seen for managing symptoms of diabetes or hypertension). Communities realize reductions in related costs. The National Institute of Health estimates that every dollar spent on addiction treatment yields a return of between $4 and $7 in reduced drug-related crime, criminal justice costs, and theft. When healthcare associated cost avoidance related to reduced use of emergency department (EDs), ambulance, and inpatient treatment are included, the total cost reductions can exceed costs by a ratio of 12 to 1.

Executive Summary

Executive Summary

Introduction

Behavioral health disorders, including mental illness and substance use disorders, are serious, chronic, and potentially life-threatening health issues. In Larimer County, Colorado, tens of thousands of residents have a mental illness, a substance use disorder, or both. Effective treatment and support services for these disorders do exist, but due to insufficient local resources and critical service gaps, only a small percentage of those who need help get it. The great majority of people who need these services in Larimer County simply continue to suffer, putting great physical, emotional, and financial strain on themselves, their families, and their communities.

In recent years, several organizations have recognized the severe gaps in local behavioral health services and called for an improved behavioral healthcare system. In 2015, the MHSU Alliance of Larimer County, a partnership of local organizations, consumer and family advocates, and treatment and service providers, declared that its highest priority was to determine the extent of the need and to create a plan to expand critical behavioral health services. *What Will It Take? Solutions for Mental Health Services Gaps in Larimer County* is the result of the MHSU Alliance's investigation.

This document is intended to:

- Delineate what is needed for a more complete continuum of care capable of providing adequate levels of affordable care for those with behavioral health needs (focusing on the best evidence, high quality, and access to care); understand what actually exists in our community; and determine the gaps
- Determine a cost estimate for filling the gaps, potential revenue sources, and the remaining need for funding

The MHSU Alliance's aim is to help citizens and service providers understand the existing challenges, garner commitment to making improvements, and stimulate significant development and expansion of critical behavioral health services in Larimer County. Ultimately, our goal is to ensure that Larimer County has the resources needed to meet the growing behavioral health needs of its citizens.

The MHSU Alliance engaged the services of the NIATx group to aid in data collection, analysis, and development of the recommendations in this document. NIATx, a multidisciplinary team of consultants with expertise in public policy, agency management, and systems engineering, has worked with more than 1,000 treatment providers and more than 50 state and county governments.

The Need for Behavioral Health Services in Larimer County

Behavioral health disorders, including mental illness and substance use disorders, are common. In Larimer County, approximately 53,800 adults (ages 18 and older) have a mental illness, and

just over 12,300 of those individuals have a serious mental illness. Approximately 26,000 have a substance use disorder (many suffer from both mental health and substance use disorders). Like other common chronic health conditions, such as diabetes and heart disease, these conditions can affect people of all ages and all socioeconomic backgrounds.

Left untreated, behavioral health disorders can lead to greater suffering from symptoms, poor quality of life, a reduced ability to function, and the use of more intensive and higher-cost treatment. People with behavioral health disorders are also at risk for unstable employment, poverty, chronic health conditions, early death, and suicide. In fact, adults living with serious mental illness die on average 25 years earlier than others. The cost to the community is high as well. Many people who don't get adequate treatment repeatedly use high-cost community services such as emergency departments and criminal justice services.

Behavioral health disorders *can* be treated effectively, allowing people to function better and regain control of their lives. As is true with many chronic conditions, ongoing treatment and support involving a broad continuum of services designed to meet evolving needs, is often necessary. This continuum of services includes assessment; crisis stabilization; detox/withdrawal management (WM) services; inpatient treatment; outpatient and intensive outpatient treatment including medication-assisted treatment, residential treatment, and step-down and supportive housing options such as halfway houses, sober living homes, and permanent supportive housing.

Effective treatment for these disorders imparts significant benefits. Patients (and their families) benefit from improved health and well-being, as well as the ability to function in the family, at work, and in the community. Communities gain active and functioning residents and see reduced law enforcement and corrections-related expenses. Indeed, every dollar spent on addiction treatment yields a return of $4 to $7 in reduced drug-related crime and criminal justice costs, according to the National Institute on Drug Abuse, part of the National Institutes of Health. When savings related to healthcare, such as a lower use of emergency departments, ambulance services, and inpatient treatment, are included, savings can exceed costs by a ratio of 12 to 1.

Unfortunately, the majority of people with these disorders never get the treatment they need. In Larimer County and many other communities, patients and family members often experience great difficulty in accessing treatment and related services, due in large part to a severe shortage of local resources. A lack of treatment resources is particularly true in the area of substance use disorders.

In Larimer County, an estimated 26,000 people have a substance use disorder and currently need treatment, yet only about 2,300 actually receive care each year. This means that, each year, tens of thousands of residents in the County need, but do not get, treatment. Although many of these people are not yet seeking treatment, about 1,200 do want or would seek help, but are unable to get it due to the absence of many critical levels of care in the County. Due to the lack of local detoxification services, many of the people not yet seeking treatment but needing to safely detox from alcohol and/or drugs, currently end up in local jails and emergency departments where they are typically released without any follow up care. This is often an ongoing strain on those resources (law enforcement, EMS, emergency departments) due to the revolving door these residents continue to go through, and is extremely costly.

In order to meet the treatment needs of our citizens in Larimer County, this investigation found that it will be necessary to make treatment and related services available for over 5,000 people each year (about 2,300 who currently get some form of treatment, plus about 1,200 who are seeking but not getting treatment due to a lack of services, plus approximately 1,200 more who might be persuaded to seek treatment given better engagement and outreach through a local detox, as well as accounting for local population growth of an additional 500).

Providing a full and improved continuum of care each year for these people is critical to their recovery. However, current local treatment and support services are insufficient to meet that demand. As a result, far too many Larimer County residents with mental illness and/or a substance use disorder simply are not getting the behavioral healthcare they need.

Key Finding

While many quality services exist here, Larimer County does not have a continuum of mental health treatment and support services that is sufficient to meet the needs of the many County residents with mental illnesses and/or substance use disorders.

Key Recommendations

The MHSU Alliance of Larimer County recommends the expansion of existing community-based treatment and support services, along with the development of a 24/7 Behavioral Health Services Center. These recommendations would provide a new state-of-the-art model of care for people with mental illness and/or substance use disorders.

The Behavioral Health Services Center and related services would:

- Bring missing levels of care to our community, so people can get the affordable care they need (Detox, residential treatment, etc.)
- Expand local services that are currently available only to limited residents (such as medication-assisted treatment, etc.)
- Enable a more thorough, formal, patient-centered assessment process that will help people enter the right level of care at the right time
- Ensure that transitions between levels of care are seamless and efficient
- Reduce the number of people who go through withdrawal in jail, an emergency room, or on the street, by providing a place to safely detox (where they can also get connected to treatment and begin a path to recovery)
- Facilitate entry into treatment from crisis and detoxification levels of care

Recommended services to be provided at the Center include:

- Triage, medical clearance examination, and various levels of assessment and re-assessment
- An existing Crisis Stabilization Unit (CSU) would be moved to the Center
- A range of withdrawal management (drug/alcohol detoxification) services

- Residential treatment for substance use disorders
- Care coordination to ensure connection to and coordination with community-based treatment
- Transportation services to reduce the burden on local law enforcement and EMS and assist with access to services in rural areas of Larimer County

Funds should also be earmarked to expand existing services in the community, including:

- Early-identification and early-intervention services and resources for youth and families at risk for, or experiencing, mental illness or substance use issues or disorders
- Suicide prevention efforts
- Staffing for long-term residential treatment (halfway houses) to help people transition from inpatient treatment to community living
- Support services to enable treatment and care coordination for people living in Permanent Supportive Housing
- Moderately intensive to intensive care coordination for people with particularly intensive and complex needs

Funds should also be earmarked to help people who can't afford to pay the full cost of care, including those who need:

- Outpatient treatment (OP)
- Intensive Outpatient treatment (IOP)
- Medication-Assisted Treatment (MAT)

Additional community services may need to be expanded or developed in order to meet the needs of additional people being engaged in treatment, including:

- Outpatient treatment (OP)
- Intensive Outpatient treatment (IOP)
- Medication-Assisted Treatment (MAT)
- Voluntary sober-living options such as Oxford Houses (more capacity is needed)

Because there are other funding sources for these services, they have not been included in the budget for recommended service expansion.

Specific Recommendations

Specific recommendations to create and support services include:

1. **Expand treatment capacity** to provide services to over 5,000 adults. The total annual utilization of all services included in the recommended model is estimated at over 10,000 admissions (defined broadly).

2. **Provide most services in one facility** to create efficiencies and a better continuum of care.

3. **Create the ability to perform medical clearance screenings and triage on-site** to reduce the need for emergency-room levels of care and transport to other levels of care.

   Provide in-depth assessment and re-assessment (differential diagnosis) on site in order to place patients in appropriate levels of care.

4. **Move the existing Crisis Stabilization Unit to the Behavioral Health Services Center,** to provide walk-in crisis assessment and short-term crisis stabilization for people whose symptoms and treatment can be managed in non-hospital settings. *Build 16 beds with the capacity to provide up to 1,700 admissions. Begin operation with approximately 10 beds for up to 700 admissions.*

5. **Create a Withdrawal Management Center (drug/alcohol detoxification) in the Behavioral Health Services Center** to support detox from alcohol or drugs and transition individuals into treatment. Provide social (clinically managed) (American Society of Addiction Medicine [ASAM level 3.2]) and medically-monitored (ASAM level 3.7) levels of detox services; start patients on medication-assisted treatment for alcohol and opioid use disorders; and support more ambulatory detox (ASAM level 2.0) managed on an outpatient basis in the community. Those with higher-level medical needs will continue to access the intensive inpatient detoxification services (ASAM level 4.0) provided in local hospital settings. *Build 32 beds with the capacity for approximately 4,300 annual admissions. Begin operations with 26 beds with the capacity for approximately 3,500 admissions per year.*

6. **Create or support several levels of residential care to support up to 795 short-term and long-term supported residential admissions,** as follows:
   - **Create a short-term, intensive residential treatment unit** in the facility, which would provide a safe therapeutic environment where clinical services and medications are available to patients who are medically stable and withdrawn from substances. *Build 16 beds with the capacity for up to 400 annual admissions. Begin operations with 13 beds with the capacity for up to 320 admissions per year.*
   - **Support low-intensity residential services** designed to build and reinforce a stable routine in a safe and supportive context for residents who lack a stable living environment. Provide 24/7 certified addiction counselors. *Encourage development of facilities (55 beds) by community providers.*
   - **Encourage the expansion/development of independent, voluntary sober housing** in the community, such as Oxford Houses, to provide safe and supportive living environments for those who choose and can pay for this type of residence. No external financing is recommended for this type of housing.

7. **Provide funding to support behavioral health support services,** including:
   - Early-identification and early-intervention services and resources for youth and families at risk for or experiencing mental illness or substance use issues or disorders
   - Suicide prevention efforts
   - Moderately intensive to intensive care coordination for up to 250 clients
   - A client assistance fund to help cover needs such as transportation, co-pays (including for IOP and OP), medication, and personal emergencies for up to 1,400 clients

- Support services in Permanent Supportive Housing for up to 100 clients with chronic health conditions who lack family/social supports and are disconnected from employment and other community functions (housing to be provided by other sources)

8. **Encourage the development of community capacity for intensive outpatient services** for individuals who require a more structured substance use disorder outpatient treatment experience than traditional outpatient treatment. *Capacity needed: 1,400 IOP admissions, an average of 30 visits per admission, and an average daily census of 63*. (Note: Since health insurance is likely to cover these services, this document's budget recommendation is for financial assistance for up to 175 uninsured or underinsured individuals.)

9. **Encourage the development of community capacity for outpatient substance use disorder treatment, including medication-assisted treatment** to provide up to 4,700 admissions. (Note: Since health insurance is likely to cover these services, this document's budget recommendation is assistance for up to 525 uninsured or underinsured people.)

Financial and Facility Needs

Financial Resources Needed

The estimated annual cost to provide these services is $15.2 million (taking into account an anticipated $6.5 million in client and payer revenues).

Projected Overall Operating Budget	
Personnel	$11.7 million
Operational (operational costs, maintenance, equipment, contracted services, etc.)	7.2 million
Client Assistance	2.3 million
Family and Youth Resources and Suicide Prevention Resources	0.5 million
TOTAL	**$21.7 million**
Less Client and Payer Revenues	6.5 million
Needed Annual Funding	**$15.2 million**

Facility Needs and Associated Costs

Estimates for facility space and costs are based on providing many services in one facility. Based on current estimates, a 60,000square-foot facility is needed. Total facility and estimated land costs are estimated at $33.4 million (if built in 2020). Facility costs have not been included for low-intensity residential services. Land costs will depend on the site selected.

Similar to other dedicated, state-of-the-art health facilities in the area, such as the $20M Cancer Center built by UCHealth in 2014, this facility will house key treatment services in one place. This “No Wrong Door” type of system is considered best practice in the health care sector. One key difference is that the services provided by other healthcare facilities, such as the Cancer Center, are paid for by health insurance; while only about 30% of costs of the recommended behavioral health treatment services would receive insurance reimbursement. This results in the funding gap of about $15 million a year.

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Report

History of the MHSU Alliance and Introduction to the Need

This report is the result of efforts of the MHSU Alliance of Larimer County (formerly the Community Mental Health and Substance Abuse Partnership of Larimer County before mid-2016) and a sub-group of Alliance Members coming together as a "Guidance Team."

The MHSU Alliance, established in 1999, is a collaborative effort between over twenty organizations, consumers, consumer and family advocates, and treatment and service providers (see Appendix G for MHSU Alliance membership list and Appendix H for Guidance Team membership list).

The overarching goal of the MHSU Alliance is to restructure our system of mental health and substance use services, significantly improving responsiveness to the needs of people affected by substance use disorders and mental illness in our community. The MHSU Alliance's vision is for a well-coordinated, well-funded continuum of substance use and mental health services, which will achieve our maximum potential for meeting community needs and promote a healthier community through healthier individuals and families.

The MHSU Alliance operates under an Unincorporated Nonprofit Association agreement, has a joint budget funded in part by its members, and is convened and staffed by the Health District of Northern Larimer County. Decision-making is by a Steering Committee and is based on recommendations made by workgroups and staff.

Since its inception, the members of the MHSU Alliance have worked on innovative, collaborative improvements. After an initial assessment in February 2001, the MHSU Alliance published its report, "Mental Illness and Substance Abuse in Larimer County: The Challenges We Face Today." That report, along with a follow-up report in 2008, "Mental Illness and Substance Abuse in Larimer County: Foundation of Progress, Future of Hope," fueled ongoing planning to address the top priorities for change. The MHSU Alliance has a long history of successful systems level changes and new programs. A few key examples of these include:

- Transforming previously separate mental health and substance use disorder treatment services into "co-occurring capable" services, including the integration of services at the nonprofit organization now called SummitStone Health Partners.
- Training professionals and community members in how to best respond to the needs of those with mental illnesses and substance use disorders.
- Development of the Connections Mental Health & Substance Use Resources program in partnership with the Health District and SummitStone Health Partners. Connections helps community members' access behavioral health treatment and support services through information, referral, care coordination, connection to low-cost services, and other supports.
- Working with the Poudre Valley Health System to develop the Crisis Assessment Center (CAC) at the Poudre Valley Hospital Emergency Room, creating a unified approach to those experiencing mental health and substance use related crises.
- Development of a "Crisis Consistency Matrix" decision-support tool to help first contacts and responders know how to assess a behavioral health crisis situation and determine the

best place to take the person in crisis for care; ongoing updates and training on use of the matrix.
- Development of Community Dual Disorders Treatment team (CDDT) based on the evidence-based practice Integrated Dual Disorder Treatment (IDDT), for those with the most severe co-occurring mental illness and substance use disorders.
- Development of transportation options from Larimer County to the (North Range Behavioral Health (NRBH) Detox facility located in Weld County.
- Placement of Integrated Care Teams, including psychiatric care, at the Fort Collins Salud Family Health Center and the Family Medicine Center, expanding the ability of primary care clinics to address behavioral health issues.

The community has also developed critically important new services over the past few years. For example:

- In 2014, an evidence-based Assertive Community Treatment (ACT) team was developed by SummitStone Health Partners and now has also incorporated the local Integrated Dual Disorders Treatment (IDDT) team within its services to provide people with severe mental illness and/or substance use disorders with intensive, evidence-based treatment and support services.
- In 2015, the Crisis Stabilization Unit began operation in Fort Collins, providing ten beds for 24/7 crisis stabilization and one 23-hour observation bed.
- From 2015-2017, due to changes in payment structures, some Intensive Outpatient Programs (IOPs) have been developed in Larimer County.
- In 2016, the Connections Program expanded its services to assist youth and families through the Child, Adolescent and Young Adult Connections (CAYAC) team, which help youth and families with potential, emerging, and existing behavioral health challenges navigate the process of assessment, treatment, and ongoing recovery.
- Since the 2016 report, the number of medication-assisted treatment providers has significantly increased. There are now at least fifteen clinics in Larimer County that provide some level of medication-assisted treatment services to their clients. A table of current medication-assisted treatment providers is included in the list of SUD treatment services provided in Appendix J.
    - SummitStone has added weekly medication-assisted treatment induction clinics for Suboxone and Vivitrol in Loveland. Induction for Vivitrol is also available in Fort Collins, and SummitStone is hoping to offer Suboxone induction in the near future. For now, Fort Collins clients can go to Loveland for induction. Many of SummitStone's medication-assisted treatment clients also choose to participate in SummitStone's Acudetox services which uses acupuncture to reduce the symptoms associated with addiction recovery including withdrawal symptoms, cravings, and anxiety.
    - Behavioral Health Group has added Suboxone services in addition to their Methadone services and is able to serve up to 200 clients between the two treatment programs.
    - Front Range Clinic has opened locations in Fort Collins and Loveland where clients can receive medication-assisted treatment (Suboxone or Vivitrol) in an outpatient setting, supported by in-house outpatient behavioral health treatment and case management. The clinic accepts all insurance, including Medicaid, and clients are

able to access services at any of the clinic's locations in order to receive more timely access to treatment.
    - The Colorado Clinic has expanded the number of providers who are licensed to prescribe Suboxone.
- SummitStone expanded its adolescent SUD team in the past year and a half. More prevention, education, and treatment is now happening in in the community and outpatient locations.
- Harmony Foundation (in Estes Park) has expanded its medically-monitored withdrawal management program from seven beds to 23 for those with private insurance or the ability to pay out of pocket.
- Larimer County law enforcement agencies received a grant to help fund their behavioral health co-responder program. The model is one where police officers team up with behavioral health specialists to respond to incidents where a person may need crisis intervention for mental health or substance abuse issues. The grant award comes from the Colorado Department of Human Services Office of Behavioral Health, and the funding will allow the Larimer County Sheriff's Office, Fort Collins Police Services, and the Loveland Police Department to pair trained behavioral health specialists with police. Behavioral health specialists from SummitStone Health Partners, as well as the police officers themselves, will be trained to work together to help individuals get access to the resources they need. In turn, officials hope it will help avoid costly alternatives for taxpayers such as sending people struggling with mental or substance use issues to emergency rooms or the jail, creating earlier diversion alternatives for individuals.
- Mountain Crest Behavioral Health Center has added eight additional hospital-level inpatient beds, and one additional Intensive Outpatient Program (IOP) for chemical dependency.

Purpose and Approach of this Document

While this community has succeeded in expanding and improving its behavioral health services, community members remain acutely aware that there are still a number of significant needs that remain unmet. Many of the current needs, such as the need for local withdrawal management (detox) services and the lack of local residential treatment, were identified early in the MHSU Alliance's history and have grown in their intensity and impact over time; to the point that several major community organizations have mentioned the need for an improved behavioral healthcare system in their strategic plans, including Larimer County, the City of Fort Collins, and the Health District of Northern Larimer County. Others are emerging as contemporary issues as the population grows and as leaders and service providers learn more about the specific needs of people with behavioral health disorders and available best practices to address those needs.

The recommendations included in this document focus primarily on adult services, however some funding is being recommended for youth and family-oriented services. The recommendations are the result of community leaders, service providers, consumers, and community members recognizing that this community must identify the extent of, and fill, these critical gaps in the system of behavioral health care in order to give people suffering from these health disorders the same chance for recovery and health that is expected from other health care.

The first three steps to improving the behavioral health care system by providing state-of-the-art services include:

1. Delineate what is needed for a more complete continuum of care capable of providing adequate levels of care for those with behavioral health needs (focusing on the best evidence, high quality, and access to care), understand what actually exists in our community, and determine the gaps.
2. Determine a cost estimate for filling the gaps, and determine potential revenue sources and the remaining need for funding.
3. Determine community interest in developing resources to fill the service gaps.

The recommendations contained in this document address the first two steps. The purpose of these recommendations is to help citizens and service providers understand existing challenges, garner commitment to making changes and improvement, and stimulate significant development and expansion of critical behavioral health services in Larimer County in order to guarantee Larimer County's capacity to meet the growing behavioral health needs of its citizens.

The Importance of Adequate Services for Those with Behavioral Health Disorders

Behavioral health disorders, including mental illness and substance use disorders, include a wide range of serious health issues – in this case, health conditions impacting the brain – that are chronic and potentially life-threatening, similar to other chronic health disorders such as diabetes, heart disease, and cancer. These disorders of the brain are common and can affect anyone at any age or socio-economic status. They are also treatable and recovery is possible. Increasingly, research is helping treatment providers hone in on the most successful treatment approaches, and treatment effectiveness is improving. Like other health disorders, early identification and access to effective treatment is critical to reducing disability and saving lives.

Though these conditions are diagnosable health disorders, consumers and families regularly report great difficulty in getting access to the recommended range of services, a situation that is quite different than access to care for other chronic illnesses such as cancer or diabetes.

The growing body of evidence for treatment success has resulted in the development of guidelines that outline the continuum of behavioral health treatment services necessary in order for a community to adequately address behavioral health disorders and minimize their impact on community members and the community itself.

When our community's services were compared to this continuum of services, our analysis (outlined in depth later in this document) indicated that many excellent treatment services for behavioral health disorders exist in Larimer County. In some areas our community is close to the amount and level of care needed, or is likely to be able to reach those levels with recently expanded payer sources, if attention is paid to developing the appropriate levels for the needs – for example, in the areas of outpatient treatment, information and referral services, and the new crisis stabilization services.

However, it was also determined that many of the more intensive levels of treatment are missing or incomplete in our community, and the necessary range of support services are also not provided at adequate levels at the current time. **The key finding of this investigation is that Larimer County does not have a continuum of mental health treatment and support services that is sufficient to meet the needs of people who have mental illnesses and/or substance use disorders.** As a result, these people often simply cannot get the level of care that they need in order to address their illness and are often not connected to the appropriate level of care as their condition changes. This creates prolonged suffering for these individuals and their families, as well as puts an unnecessary strain on local law enforcement, EMS, and the emergency departments (EDs) that are often much costlier levels of care.

While many quality services are being provided, the effectiveness of these existing services is compromised by the lack of other needed services. In order to provide those who suffer from mental health disorders with the treatment most likely to effectively impact their disorder, the development of additional levels of care and state-of-the-art treatment is critical.

Summarized, this process identified a number of key levels of care to be added or expanded in a Behavioral Health Services Center in order to provide adequate standards of care in Larimer County.

- Initial assessment, triage, and medical clearance examination
- Thorough patient-centered assessment processes to accurately guide placement and transitions into and between community levels of care
- Just-under hospitalization level of care (currently available through existing CSU, but recommended to be met through moving existing CSU to facility)
- Withdrawal management (drug/alcohol detoxification) services
  - Clinically managed detox (social model)
  - Medically-monitored detox
- Residential Treatment for substance use disorders

Services that need to be developed or expanded in the community include:

- Long-term step-down residential options including “halfway houses” and “Oxford Houses”
- Outpatient treatment for substance use disorders (including medication-assisted treatment)
- Intensive Outpatient treatment services (IOP)
- Support services (moderately intensive to intensive care coordination, support services for those with chronic conditions who live in Permanent Supportive Housing, and client assistance funds)

In careful consideration of how best to provide these services, it is recommended that many of the services be grouped together in a 24-7 Services Center providing a new state-of-the-art model of care, and enabling more seamless transitions between levels of care through a true “No Wrong Door” system. This approach is an emerging best practice because of its ability to better

coordinate services and supports while reducing the burden on individuals and families who must navigate a complicated system of care during a crisis episode.

However, other services are best provided largely in the community, such as support services for those in Permanent Supportive Housing, low-acuity longer term residential treatment for substance use disorders, care coordination, and outpatient and intensive outpatient treatment.

Some services would require additional funding; other services could be expanded by existing service providers utilizing already existing revenue sources.

Each level of care is described in more detail later in this document.

The Scope and Impact of the Problem: Why a More Complete Continuum of Behavioral Health Treatment Services is Important

Mental illness and substance use disorders have significant impacts on individuals, families, and our community. A few key statistics are included here to illustrate the scope and impact of the problem. Additional statistics are reported in a companion document entitled "Supplementary Behavioral Health Research Findings and Statistics."

Prevalence of Mental Illness and Substance Use Disorders

Mental illnesses and substance use disorders are common and can impact people at any age, ethnicity, and income level.

Mental Illness

Applying Colorado data from the 2015 and 2016 SAMHSA National Survey on Drug Use and Health (NSDUH) to Larimer County, there are approximately 53,800 adults (18 and older) in this county (20.1%) who have any mental illness. Of those 53,800 people, just over 12,300 (4.6%) have a serious mental illness.[1]

Substance Use Disorders

Again extrapolating state-level 2015 and 2016 NSDUH data to Larimer County, we estimate that 8.5% of individuals aged 12 and older (25,000 people) have a substance use disorder.[1] (An additional 1,000 individuals have been added to this number to account for populations not included in the NSDUH for a total of 26,000 people.) Thousands of these individuals have more than one substance use disorder diagnosis (alcohol, heroin, marijuana, etc.) and require different types and levels of treatment to address their specific disorder(s). Alcohol is the leading

[1] Center for Behavioral Health Statistics and Quality. (2017). *2016 National Survey on Drug Use and Health: Detailed Tables.* Substance Abuse and Mental Health Services Administration, Rockville, MD.

substance of abuse and addiction; 5.6% (16,350 people) of the population aged 12 and older is reported to have an alcohol use disorder.[2]

Co-Occurring Mental Illness and Substance Use Disorders

Mental illness and substance use disorders often occur together and are referred to as co-occurring disorders.

- About a third of all people experiencing mental illness and about half of the people living with severe mental illness also experience substance abuse.[3] Similarly, about a third of all alcohol abusers and more than half of all drug abusers report experiencing a mental illness.[4]
- Extrapolating national data to Larimer County, approximately 5.9% of adults (15,500) had co-occurring mental illness and substance use disorder, and 2.0% (5,250) had co-occurring serious mental illness and substance use disorder.

Impact on Health and Longevity

Burden of Disease/Disability Adjusted Life Years (DALY's)

Mental illnesses and substance use disorders are major health problems worldwide. In "No Health Without Mental Health," the authors state that "Mental illness is a leading cause of suffering, economic loss and social problems. It accounts for over 15% of the disease burden in developed countries, which is more than the disease burden caused by all cancers".[5] According to the Global Burden of Diseases, Injuries and Risk Factors 2010 report, mental and behavioral health disorders are the leading cause of disability in the U.S.[6]

Premature Death

Mental illness and substance use disorders can significantly reduce longevity.

- Overall, a 2015 analysis of over 200 international studies over a decade found that people with mental health conditions were more than twice as likely to die over roughly 10 years, versus people without the disorders. Their risk of death from "unnatural causes", including suicide and accidents, was seven times higher. But their odds of dying from physical health conditions were also elevated, by an average of 80 percent.[7]

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[2] Ibid.
[3] Dual Diagnosis. (n.d.). Retrieved February 05, 2016, from https://www.nami.org/Learn-More/Mental-Health-Conditions/Related-Conditions/Dual-Diagnosis
[4] Ibid.
[5] Prince, M., Patel, V., Saxena, S., Maj, M., Maselko, J., Phillips, M. R., & Rahman, A. (2007). No health without mental health. *The Lancet, 370* (9590), 859–877.
[6] Institute for Health Metrics and Evaluation. (2013). *The State of US Health: Innovations, Insights, and Recommendations from the Global Burden of Disease Study*. Seattle, WA: Author.
[7] Rubin, Rita. (2015). Mental Disorders Linked With Chronic Disease. *The Journal of the American Medical Association,* Volume 313 (2), 125.

- Adults living with serious mental illness may die on average twenty-five years earlier than other Americans[8]; and about 60% of that additional mortality may be due to physical illness.[9]
- Also contributing is the impact of substance use, misuse, and abuse. Colorado ranks second worst among all states for prescription drug misuse among people between the ages of 12 and 25. More than 255,000 Coloradans misuse prescription drugs, and deaths involving the use of opioids nearly quadrupled between 2000 and 2011.[10]

Suicide

Suicide is death caused by intentional, self-inflicted injuries. While not always associated with behavioral health issues, it is most often related to depression and substance use. Of adults committing suicide, it is estimated that 90% have a mental health disorder[11] and this number is consistent among youth who commit suicide.[12]

- Larimer County and Colorado both have a suicide rate much higher than the national average (US: 13.9 (per 100,000)[13]; Colorado: 20.5[14]; Larimer County: 20.9[15]).
- In 2015, there were eighty-three (83) deaths by suicide in Larimer County, the highest number of suicides ever recorded by the coroner's office. In comparison to the 83 deaths by suicide, 52 people died as a result of car accidents in Larimer County in 2015. Alcohol or drugs were present in 66% of the suicides, and 35% of fatalities due to motor vehicle crashes involved drivers who tested positive for alcohol and/or drugs.[16] Only 40% were actively in treatment for a behavioral health issue. [17]

Lack of Treatment for Behavioral Health Disorders

Despite the enormous health burden of behavioral health disorders, many people with mental illness or substance use disorders do not get treatment for their condition. A key 2011 study

[8]http://www.nasmhpd.org/sites/default/files/Mortality%20and%20Morbidity%20Final%20Report%208.18.08.pdf
[9] De Hert, M., et al. (2011). Physical illness in patients with severe mental disorders. I. Prevalence, impact of medications and disparities in health care. *World Psychiatry*, *10*(1), 52–77.
[10] Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013). The National Survey on Drug Use and Health Report: State Estimates of Nonmedical Use of Prescription Pain Relievers. Rockville, MD: Substance Abuse and Mental Health Services Administration
[11] American Foundation for Suicide Prevention. (n.d.). Key Research Findings. Retrieved from https://www.afsp.org/understanding-suicide/key-research-findings.
[12]Shaffer, D., Craft, L. (1999). Methods of Adolescent Suicide Prevention. *Journal of Clinical Psychiatry*, *6 (Suppl 2),* 70-74.
[13] Drapeau, C. W., & McIntosh, J. L. (for the American Association of Suicidology). (2017). U.S.A. suicide 2016: Official final data. Washington, DC: American Association of Suicidology. Retrieved from http://www.suicidology.org.
[14] Colorado Center for Health and Environmental Data. (2017). Suicides in Colorado: Crude suicide rates per 100,000 population. Retrieved from https://cohealthviz.dphe.state.co.us/t/HSEBPublic/views/CoVDRS_12_1_17/Story1?:embed=y&:showAppBanner=false&:showShareOptions=true&:display_count=no&:showVizHome=no#8
[15] Ibid.
[16] Wilkerson, J.A. (2016). 2015 Annual Report: Office of the Larimer County Coroner Medical Examiner. Loveland, CO. Retrieved from https://www.larimer.org/sites/default/files/uploads/2017/2015-annual-report.pdf
[17] D. Fairman (personal communication, September 25, 2017)

stated, "A substantial proportion of adults with common mental disorders fail to receive any treatment even when these conditions are quite severe and disabling."[18]

- According to the World Health Organization, "In developed countries with well-organized health care systems, between 44% and 70% of patients with mental disorders do not receive treatment."[19] Indeed, SAMHSA indicates that on average, 44.7% of American adults who experienced mental illness in the past year received some type of mental health care.[20]
- Even fewer people with substance use disorders receive the treatment they need. Just 10% of adults with substance use disorders receive treatment in a given year, with 29% of those who do get treatment receiving care considered to be minimally adequate.[21]

Using prevalence data from N-SSATS and NSDUH, it is estimated that approximately 25,000 people in Larimer County meet the criteria for needing treatment for substance use disorders. It is also estimated that only about 2,300 people receive care for their substance use disorder(s) each year, leaving nearly 24,000 people needing but not receiving treatment. Of those 24,000, it was estimated that approximately 1,200 are ready for treatment and seek it, but do not receive that treatment. (See pages 43-51 for information on how prevalence estimates were updated since the original 2016 publication of this report.)

A number of factors may be involved in the gap between need for treatment for behavioral health disorders and accessing that treatment. One study of barriers to mental health treatment stated, "Several factors are thought to impede appropriate mental health care seeking including lack of perceived need for treatment, stigma, pessimism regarding the effectiveness of treatments, lack of access due to financial barriers, and other structural barriers such as inconvenience or inability to obtain an appointment."[22] Additional factors may also be at play, including the lack of availability of needed treatment services in the community where people live.

The Effectiveness of Treatment of Behavioral Health Disorders as Chronic Diseases

Mental and substance use disorders affect people from all walks of life and all age groups. These illnesses are common, chronic, and often serious. However, they can be managed through ongoing treatment and support. According to the National Institute for Health (NIH), Principles of Drug Addiction Treatment: A Research-Based Guide (Third Edition):

> Like other chronic diseases, addiction can be managed successfully. Treatment enables people to counteract addiction's powerful disruptive effects on the brain

[18] Mojtabai, R., Olfson, M., Sampson, N. A., Jin, R., Druss, B., Wang, P. S., R.C., Kessler, R. C. (2011). Barriers to mental health treatment: results from the National Comorbidity Survey Replication. Psychological Medicine, 41(08), 1751–1761. http://doi.org/10.1017/S0033291710002291
[19] World Health Organization, & Noncommunicable Disease and Mental Health Cluster. (2003) *Investing in mental health.* Geneva: World Health Organization. Retrieved from http://www.myilibrary.com?id=9723
[20] SAMHSA. National Survey on Drug Use and Health. Center for Behavioral Health Statistics and Quality; 2014.
[21] SAMHSA. 2014.
[22] Andrade, L. H., Alonso, J., Mneimneh, Z., Wells, J. E., Al-Hamzawi, A., Borges, G., … Kessler, R. C. (2014). Barriers to mental health treatment: results from the WHO World Mental Health surveys. Psychological Medicine, 44(06), 1303–1317. http://doi.org/10.1017/S0033291713001943

> and behavior and to regain control of their lives. The chronic nature of the disease means that relapsing to drug abuse is not only possible but also likely, with symptom recurrence rates similar to those for other well-characterized chronic medical illnesses -- such as diabetes, hypertension, and asthma that also have both physiological and behavioral components.[23]

Unfortunately, particularly in the past, when relapse occurred, some considered treatment a failure. However, NIDA states:

> Successful treatment for addiction typically requires continual evaluation and modification as appropriate, similar to the approach taken for other chronic diseases. For example, when a patient is receiving active treatment for hypertension and symptoms decrease, treatment is deemed successful, even though symptoms may recur when treatment is discontinued. For the addicted individual, lapses to drug abuse do not indicate failure -- rather, they signify that treatment needs to be reinstated or adjusted, or that alternate treatment is needed."[24]

The figures on the following page shows that the treatment for all chronic illnesses, including substance use disorders, is effective when administered but symptoms usually return after discontinuing treatment. Addiction treatment, like treatment for all chronic diseases, requires ongoing care in order to be effective.

[23] National Institute for Health. (2012). Principles of Drug Addiction and Treatment: A research-based guide. NIH Publication No. 12-4180. Retrieved from https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/frequently-asked-questions/drug-addiction-treatment-worth-its-cost

[24] National Institute for Health (2012)

Figure 1: Why is Addiction Treatment Evaluated Differently? Both Require Ongoing Care[25]

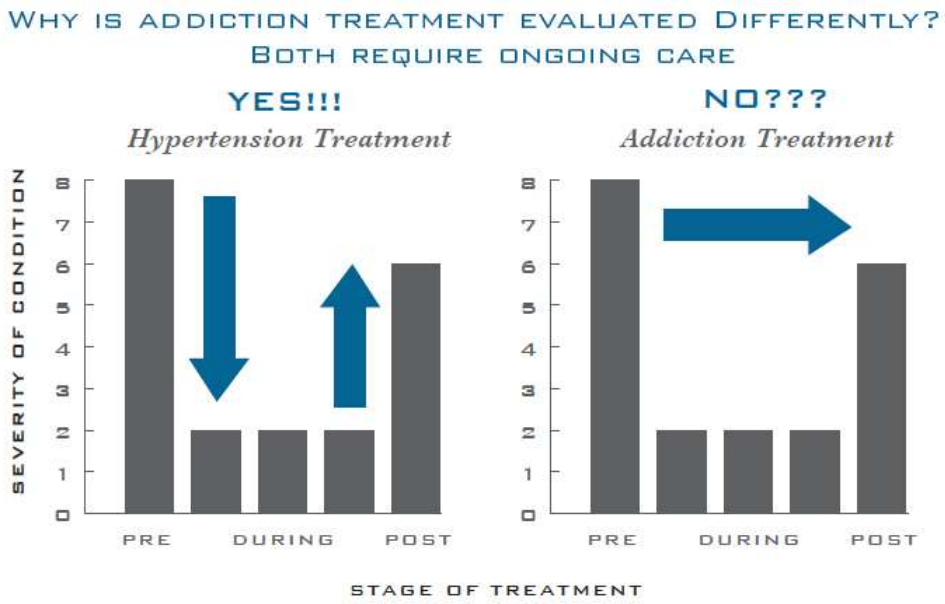
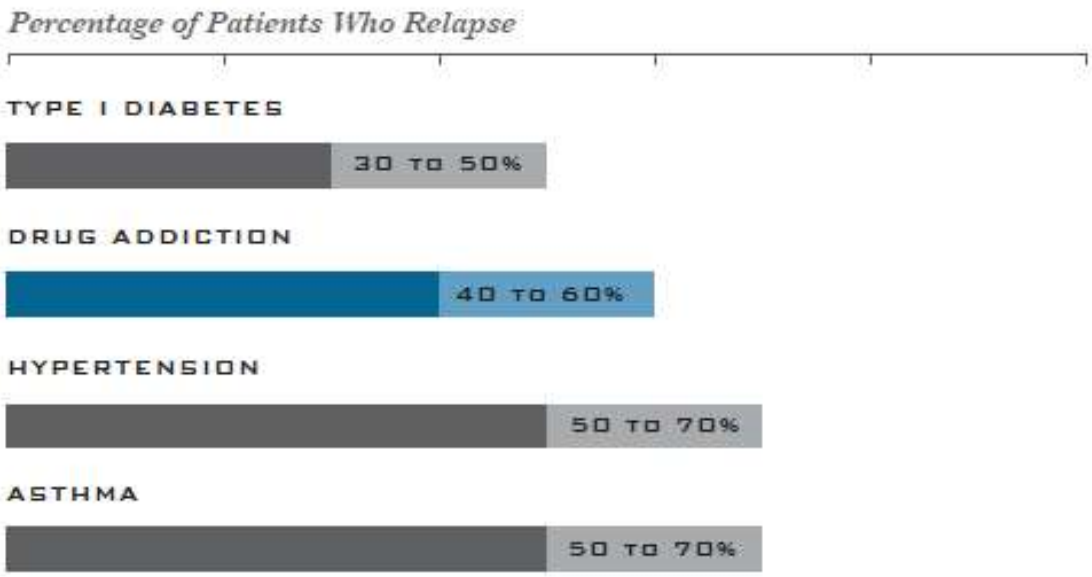


Figure 2: Percentage of Patients Who Relapse[26]



[25] National Institute for Health (2012)
[26] National Institute for Health (2012)

Additionally, the effectiveness of treatments for chronic illnesses vary depending on the specific circumstances affecting each individual situation, resulting in varying levels of treatment success and different definitions of treatment success for each individual in treatment. The National Institute on Drug Abuse states that, "In addition to stopping drug abuse, the goal of treatment is to return people to productive functioning in the family, workplace, and community." According to research that tracks individuals in treatment over extended periods, most people who get into and remain in treatment stop using drugs; decrease their criminal activity; and improve their occupational, social, and psychological functioning. For example, Methadone treatment has been shown to increase participation in behavioral therapy and decrease both drug use and criminal behavior. However, individual treatment outcomes depend on the extent and nature of the patient's problems, the appropriateness of treatment and related services used to address those problems, and the quality of interaction between the patient and his or her treatment providers.[27]

When people with behavioral health disorders do not receive appropriate, timely, or adequate treatment, the result is often greater suffering from symptoms; impacts on overall health and longevity; reduced ability to function in their families, school, work, or social activities; utilization of additional, more intensive and higher cost levels of treatment; and utilization of high cost services such as emergency departments and involvement in the criminal justice system. SAMHSA reports that those with undiagnosed, untreated, or undertreated co-occurring mental illness and substance use disorders may suffer from a higher likelihood of experiencing homelessness, incarceration, medical illnesses, suicide, and early death.[28]

Impact on Self-Sufficiency and Cost to Society

Health Problems and High Health Costs

Behavioral health conditions can be associated with poorer physical health as well as higher health costs overall:

- Medical costs for treating those patients with chronic medical and comorbid mental health/substance use disorder (MH/SUD) conditions can be 2-3 times as high as for those who don't have the comorbid MH/SUD conditions. The *additional* healthcare costs incurred by people with behavioral comorbidities were estimated to be $293 billion in 2012 across commercially-insured, Medicaid, and Medicare beneficiaries in the United States.[29]
- According to a 2015 study of 155 high utilizers of the Larimer County Jail, the high utilizers were also frequent utilizers of acute, high cost services. They had 136% higher Medicaid costs than other Larimer County Medicaid patients. Roughly 9 of every 10 of those studied were identified as having substance use problems, nearly half had a mental illness, and almost all of those with mental illnesses also had a co-occurring substance use disorder. Sixty-five percent of visits to the Emergency department at Poudre Valley

[27] National Institute for Health (2012)
[28] Substance Use Disorders. (n.d.). Retrieved February 05, 2016, from http://www.samhsa.gov/disorders/substance-use
[29] Melek, S., Norris, D., & Paulus, J..(2014). Economic Impact of Integrated Medical-Behavioral Healthcare. Denver, CO: Milliman, Inc. for American Psychiatric Association.

Hospital by these individuals were identified as related to substance use (primarily alcohol).[30]

Unemployment, Underemployment, and Poverty

Mental illness and substance use disorders are often associated with problems with employment as well as being at risk for poverty and homelessness.

- People with disabilities have high unemployment rates and people with serious mental illnesses have the highest unemployment rate of any group with disabilities.[31]
- According to a NAMI 2014 report, over 80% of those with serious mental illness are unemployed.[32]

Financial Impacts

It is difficult, if not impossible, to put a cost on human suffering. However, it is possible to at least begin to understand the staggering financial impact of behavioral health disorders, remembering that they are quite often untreated or not adequately treated.

- The Substance Abuse and Mental Health Administration estimated that the U.S. national expenditure for mental health care alone was $147 billion in 2009.[33]
- Combining these figures with updated projections of lost earnings and public disability insurance payments associated with mental illness, an estimate for the financial cost of mental disorders was at least $467 billion in the U.S. in 2012.[34]
- Illicit drug use, often related to substance use disorders and mental illness, costs Americans $193 billion in overall costs (including health care, loss of work productivity, and costs related to crime).[35]

Lost Productivity

Behavioral health disorders impair functioning, resulting in impacts on work and home life.

- One study showed that approximately 80% of persons with depression reported some level of functional impairment because of their depression, and 27% reported serious difficulties in work and home life.[36] Impacts on work functioning include reduced

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[30] TriWest Group. 2015. *Larimer County High Utilizer Study*. (2015). Larimer County, Colorado: Health District of Northern Larimer County and the Community Mental Health and Substance Abuse Partnership of Larimer County.
[31] National Governors Association. (2007). Promoting Independence and Recovery through Work: Employment for People with Psychiatric Disabilities. Washington, D.C.: National Governors Association.
[32] Dlehl, S., Douglas, D., & Honberg, R.. (2014). *Road to Recovery: Employment and Mental Illness*. Arlington, VA: National Alliance on Mental Illness. Retrieved from https://www.nami.org/About-NAMI/Publications-Reports/Public-Policy-Reports/RoadtoRecovery.pdf
[33] Substance Abuse and Mental Health Services Administration. (2013). National Expenditures for Mental Health Services and Substance Abuse Treatment, 1986–2009. HHS Publication No. SMA-13-4740. Rockville, MD: Substance Abuse and Mental Health Services Administration.
[34] Insel, T.R. (2011). Director's Blog: The Global Cost of Mental Illness. Retrieved from http://www.nimh.nih.gov/about/director/2011/the-global-cost-of-mental-illness.shtml
[35] National Institute on Drug Abuse. (2015). Trends and Statistics. Retrieved from http://www.drugabuse.gov/related-topics/trends-statistics
[36] Pratt, L. & Brody, D.. (2008). Depression in the United States household population, 2005-2006. National Center for Health Statistics Data Brief, 7. Retrieved from from:http://www.cdc.gov/nchs/data/databriefs/db07.htm#ref08

productivity due to both absenteeism as well as presenteeism, whereby workers show up to work but produce reduced results.
- According to a 2002 study, "mental illness is the number one cause of disability for American business and industry today and is second only to cardiovascular disease in total disability costs."[37]

Service Utilization and Related Costs

Many people who don't get the right service or treatment enter a cycle of repeated use of the highest cost services in our community, such as emergency departments, or may become involved with the costly criminal justice system.

- For example, according to the 2015 Frequent Utilizer Study done in Larimer County, 72% of visits to the Poudre Valley Hospital Emergency department by 155 high utilizers of the Larimer County Jail were related to mental health and/or substance use.[38]
- This same group of 155 high utilizers of acute and crisis services are costing our community over $2.2 million dollars in potentially avoidable costs each year. Despite these costs, high utilizers are not experiencing improvements in their underlying mental illnesses and substance use disorders or their service utilization over time.[39]

Criminal Justice and Community Safety

Adults with serious mental illness are at increased risk for criminal justice involvement.[40] According to a 2015 Urban Institute study, they tend to stay in jail longer than those without mental illnesses, return to jail more often, and cost local jurisdictions more money while incarcerated. More frequently than not, they are jailed for minor offenses such as trespassing, disorderly conduct, disturbing the peace, or illicit drug use.[41]

- 30% of inmates at the Larimer County Jail at a point in time in 2016 had a mental illness; 52% had substance use related issues; and 27% had co-occurring mental illness and substance use.[42]
- 26% of the general population (without mental illnesses or substance use disorder) at the Larimer County Jail recidivated (returned to jail) in 2016. Comparatively, during the same year, 66% of those with mental illnesses, 65% with substance use disorders, and 69% of those with co-occurring disorders recidivated.[43] These percentages are fairly consistent with what the jail has seen in previous years (in 2013 the percentages varied by up to two percentage points).

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[37] Marlowe, J.F. (2002). Depression's surprising toll on worker productivity. *Employee Benefits Journal*, *27*(1): 16-21.
[38] TriWest Group. 2015.
[39] TriWest Group. 2015.
[40] Munetz, M.R., Grande, T.P., Chambers, M.R. (2001). The incarceration of individuals with severe mental disorders. *Community Mental Health Journal Aug; 37(4)*: 361-372.
[41] Kim, K., Becker-Cohen, M., & Serakos, M. (2015). The Processing and Treatment of Mentally Ill Persons in the Criminal Justice System. Retrieved from http://www.urban.org/UploadedPDF/2000173-The-Processing-and-Treatment-of-Mentally-Ill-Persons-in-the-Criminal-Justice-System.pdf
[42] D. Stalls (personal communication, August 18, 2017)
[43] D. Stalls (2017)

- More than one-tenth of costs of behavioral health treatment were spent in jails in 2011, equaling more than $93 million.[44]

Timely and adequate treatment for behavioral health disorders has the potential to significantly reduce these impacts and thereby provide remarkable value to individuals impacted by mental illness and/or substance use disorders, their families and friends, workplaces, and the community itself.

Process for the Development of this Report

A report was originally released in February of 2016 as "Recommendations for the Development of Critical Behavioral Health Services in Larimer County" and was updated slightly in April of 2016. This report is the result of an update of the original 2016 report to reflect current community needs and opportunities. The initial NIATx report from 2016 is included as Appendix K of this report. The application and modification of NIATx's report by local experts in 2016 is included in Appendix L. For this update, NIATx provided a written response to the updates that were made to the original report and the current recommendations of the Guidance Team, which is included in Appendix M. Application and modification of NIATx's 2018 input is included on pages 43-51 of this report.

As work on the development of these recommendations began, the Guidance Team adopted the following objective, vision, and process:

Objective

Create recommendations to inform a future plan that would make significant headway in filling critical gaps in behavioral health care services for those experiencing the health conditions of mental illness and substance use disorders in Larimer County.

Vision

Larimer County residents with mental illnesses and/or substance use disorders will:

- Achieve their optimal recovery and health
- Have an equivalent level of support and effective treatment available as community members with other chronic and potentially life-threatening illnesses such as cancer, diabetes, and heart disease
- Receive the most effective diagnostic, treatment, and supportive services in a timely manner in the community in which they live.

[44] TriWest Group. (2011)

Our community will:

- Be a thriving, productive, and safe place to live that supports mental and emotional well-being and a high quality of life for its citizens
- Maintain and add to its world-class status through providing the standard of care for behavioral health care treatment as an integrated and critical part of its state-of-the-art healthcare system
- Make the most of limited resources and reduce the avoidable use of inappropriate and high cost acute, crisis, and intensive services such as emergency departments, hospitals, criminal justice, detention centers, etc.

Process

1. **Identify the behavioral health services most needed in the community.** Clearly identify and list the most critical gaps in services, including background to indicate why changes are needed. In evaluating and describing the needed services, utilize nationally recognized or adopted levels and standards of care and state-of-the-art treatment approaches.

2. **Determine the level of need for each identified service.** Analyze the projected need and utilization of the identified services, now and into the future.

3. **Perform financial analysis.** For the identified services and level of projected use, estimate the projected cost as well as revenues and resources potentially available for operation of the services (now and into the future); determine level of gap in funding, if any. If gaps exist, determine potential approaches for funding the gaps. Develop an estimated pro forma balancing projected funding with prioritized services.

4. **Create recommendations to inform the creation of a plan for the development and implementation of critical services.** Create basic combined recommendations listing the services (levels of care and standards of care) to be provided, the estimated amounts of care, the proposed organization of care for effectiveness and efficiency, and an estimated balanced funding approach.

5. **Analyze potential benefits to individuals and the community.** Determine how impact will be measured and create informed estimates of anticipated benefits.

Methods and Limitations

The development of these recommendations consisted of two phases:

Phase I: Mapping and Analysis of Existing Substance Use Disorder Services by American Society of Addiction Medicine (ASAM) Levels of Care

1. MHSU Alliance staff completed a project to map existing substance use disorder services in Larimer County by ASAM level, and to collect detailed information about services and gaps in those ASAM levels identified as potentially not having sufficient service capacity. Data

collection from direct service providers included: capacity information, service utilization, referral systems, and programmatic detail.

2. The MHSU Alliance and the Guidance Team identified the key mental health services listed in this document as those most needed in the community to fill current gaps in mental health services. Although a tool similar to the ASAM tool for substance use disorder services was not discovered, the need for these services was mentioned consistently in a series of discussions of need in 2014 and 2015.

Phase II: Analysis of Gaps in Services and Recommendation of Services Needed

1. To aid in data collection, analysis, and development of recommendations, the MHSU Alliance engaged the consulting services of the NIATx Group in the development of these recommendations. NIATx is a multidisciplinary team of consultants with a unique blend of expertise in public policy, agency management, and systems engineering. NIATx has the benefit of having worked with 1,000+ treatment providers and 50+ state and county governments. NIATx is also affiliated with the Addiction Treatment Technology Center (ATTC) Network. The ATTC Network is responsible for cataloging and providing training on evidence-based practices throughout the United States and its territories. The specific consultants who worked on this project are:
   - Todd Molfenter, Ph.D., Principal, NIATx
   - Victor Cappoccia, Ph.D., Senior Scientist, NIATx
   - Colette Croze, Principal, M.S.W., Croze Consulting

2. MHSU Alliance staff and NIATx consultants collaborated in data collection, and NIATx performed data analysis on data from a variety of sources, including collection of utilization data from the following organizations:
   - Colorado Access Behavioral Care: the Behavioral Health Organization (BHO) for Northeast Colorado which manages services for people with Medicaid behavioral health coverage
   - Rocky Mountain Health Plans: the Regional Care Coordination Organization (RCCO) for Larimer County which manages services for people with Medicaid medical coverage
   - Signal Behavioral Health Network: the Managed Services Organization (MSO) for Larimer County which manages and coordinates substance use treatment contracts and manages data related to SUD treatment utilization
   - Northeast Behavioral Health: the former BHO for the region and current manager of crisis stabilization services for Larimer and Weld Counties
   - Data collection from direct service providers as needed

Throughout the process, additional background information was gathered from members of the MHSU Alliance and interviews with providers, consumers, and other community members, including case examples illustrating service gaps. Additionally, the Guidance Team for this project, a Subcommittee of the MHSU Alliance, discussed findings and recommendations and provided guidance throughout the development of this document in both 2015/16 and 2017/18.

Phase I: Mapping and Analysis of Existing Substance Use Disorder Services by American Society of Addiction Medicine (ASAM) Levels of Care

Introduction to Mapping Project

The MHSU Alliance identified the goal of providing the most effective services for those with substance use disorders as their top priority in 2013, and reaffirmed this in early 2017. Staff embarked on an effort to map local service availability compared to service needs to address these illnesses at all levels of severity. As a result of the study of effective approaches, it became clear that Larimer County has specific gaps in services for individuals with substance use disorders.

To determine the levels of care that a community needs to effectively treat substance use disorders, the MHSU Alliance used the levels developed by the American Society of Addiction Medicine (ASAM). Criteria were developed by ASAM through a collaborative process "to define one national set of criteria for providing outcome-oriented and results-based care in the treatment of addiction". They have become the "most widely used and comprehensive set of guidelines for placement, continued stay, and transfer/discharge of patients with addiction and co-occurring conditions."[45]

Importance of a Quality Assessment-Based System in Placing a Person in the Right Level of Care

To determine the right level of care for an individual at any stage of needing assistance, the critical first step is a comprehensive assessment, performed by a well-trained professional. This assessment determines the appropriate level of care for that individual at that time, based on the following six (6) dimensions:[46]

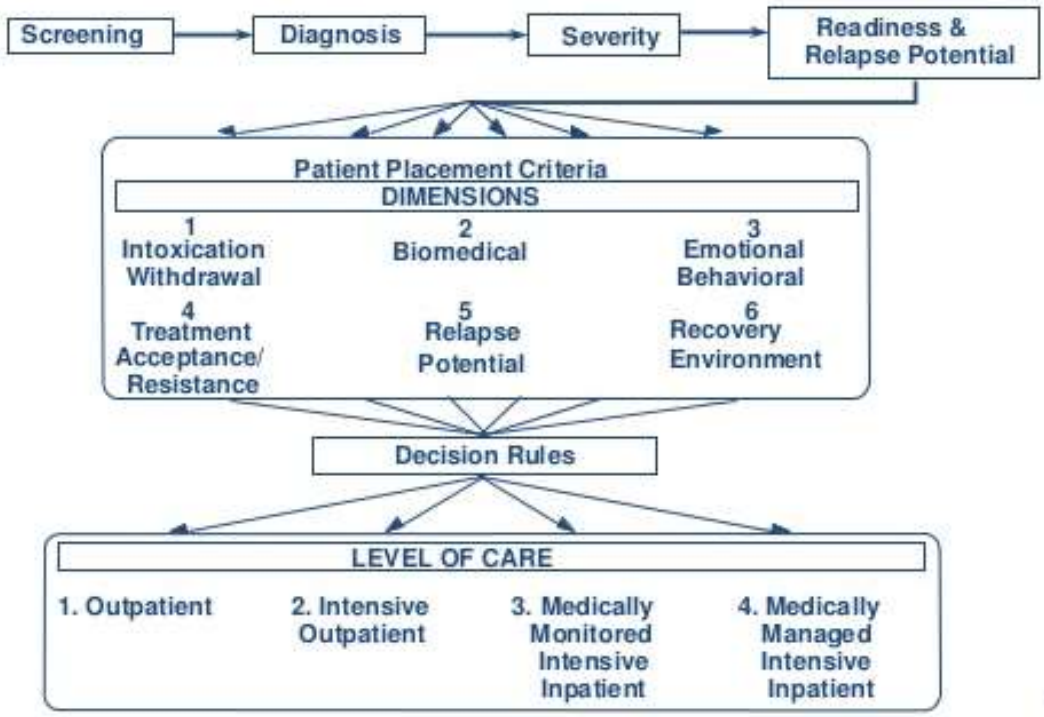
1. Acute intoxication and/or withdrawal potential
2. Biomedical conditions and complications
3. Emotional, behavioral, or cognitive conditions and complications
4. Readiness to change
5. Relapse, continued use, or continued problem potentials
6. Recovery/Living environment

The following chart describes the Placement Criteria recommended by ASAM to be used before recommending an appropriate level of care for a particular individual in need of treatment for substance use disorder.

[45] American Society of Addiction Medicine. (2013). The Six Dimensions of Multidimensional Assessment. The ASAM Criteria. Retrieved from http://asamcontinuum.org/knowledgebase/what-are-the-six-dimensions-of-the-asam-criteria/

[46] American Society of Addiction Medicine. (2013).

Figure 3: ASAM Patient Placement Criteria[47]



An assessment-based system ensures that each person's needs are assessed through an objective set of evidence-based criteria. Ideally, the individual will be assessed for all behavioral health disorders, including mental illness, and not just for their level of substance use disorder. This requires that the community have well-trained and highly skilled clinicians with state-of-the-art knowledge who can make accurate diagnostic decisions and treatment recommendations.

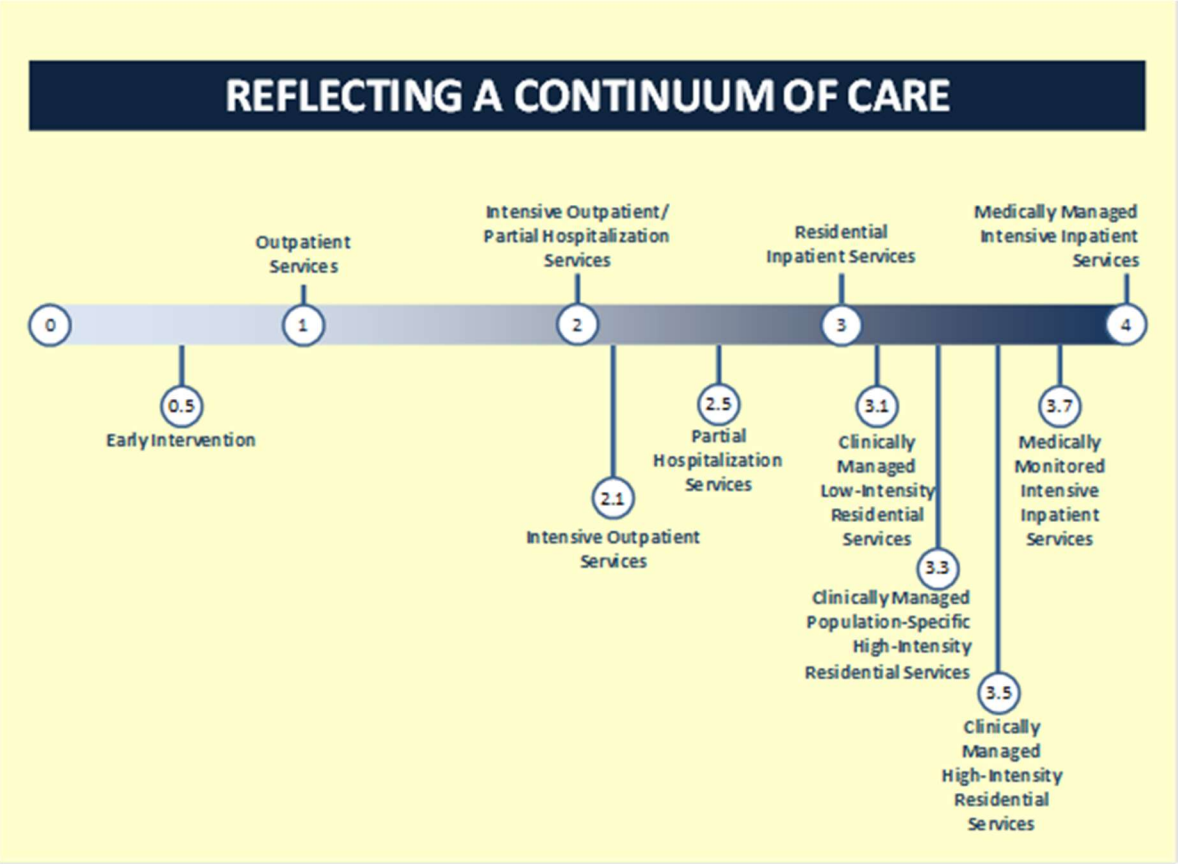
The ASAM Levels of Care for Treatment of Substance Use Disorders

The chart below illustrates ASAM's listing of the continuum of levels of care necessary in order to be able to refer a person to the level of care appropriate for their particular need. Services in the continuum range from the least intensive interventions on the left (Early Intervention, Outpatient, and Intensive Outpatient Services), to the most intensive interventions on the right (Partial Hospitalization, Residential, and Inpatient Services). When critically important service

[47] American Society of Addiction Medicine. (2013).

levels are missing, a community lacks the tools needed to give a person experiencing substance use disorder the best evidence-based chance of recovery.

Figure 4: The ASAM Continuum of Care[48]



It is important to note that, in addition to the levels of treatment, a full continuum of care also needs appropriate withdrawal management (detoxification) levels of service. Prior to placing a person in a treatment program, an individual may need a safe process and/or place that can help them through the detoxification process, help them understand their level of disorder and their options for treatment, and help them connect to the appropriate level of treatment. A medically-monitored or medically-managed level of withdrawal management has the added considerable benefit of being able to provide observed induction of medication-assisted treatment.

It is also important to note that SUD is considered a chronic disorder, and that over time, many individuals will need to be re-evaluated and placed in a different level of care. Like other chronic illnesses (asthma, diabetes, hypertension, etc.), ongoing evaluation and periodic modification of

[48] American Society of Addiction Medicine. (2013).

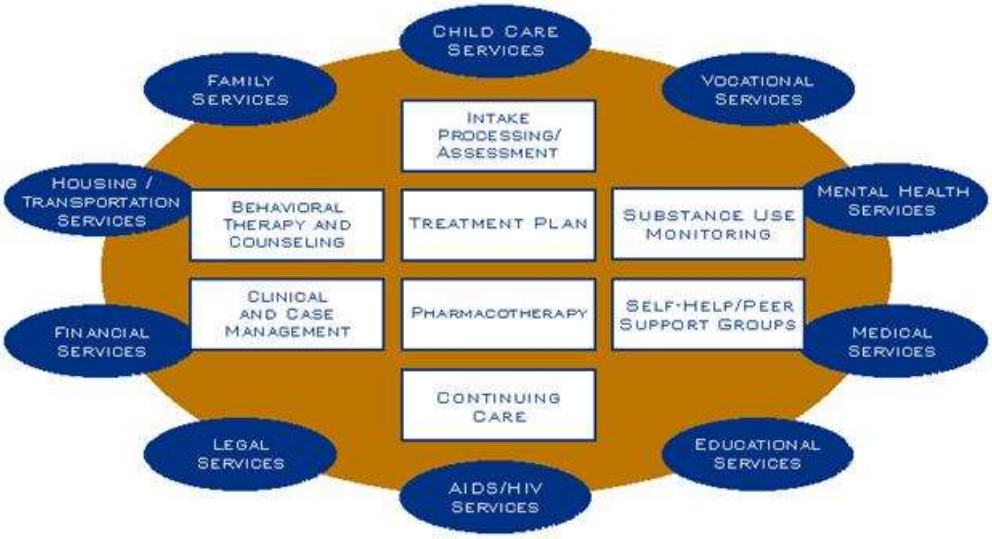
treatment services for substance use disorders based on individual need produces the best results.[49]

Components of Substance Use Disorder Treatment

The following chart illustrates the essential elements of effective treatment (listed in the center of the chart). The exact configuration of treatment, as with any disorder, will depend on the individual's particular circumstances. Different configurations of treatment are also considered to have varying levels of effectiveness. For example, for an individual with an opioid use disorder, there is evidence that indicates that the most effective treatment will include both medication-assisted treatment and counseling; the next most effective treatment includes medication-assisted treatment without counseling; and the third most effective treatment includes counseling without medication-assisted treatment. For other disorders, treatment may vary according to the substance(s) used and the individual's unique situation.

Depending on an individual's particular need, they may also need assistance linking to some of the support services surrounding the essential treatment services. The recommendations contained in this document do not seek to address the adequacy of *all* aspects of the treatment system, but instead focus on several critical areas that have been deemed the most important to address at this time; however, all elements described in the chart below need to be present in order for the system of care to be the *most* effective.

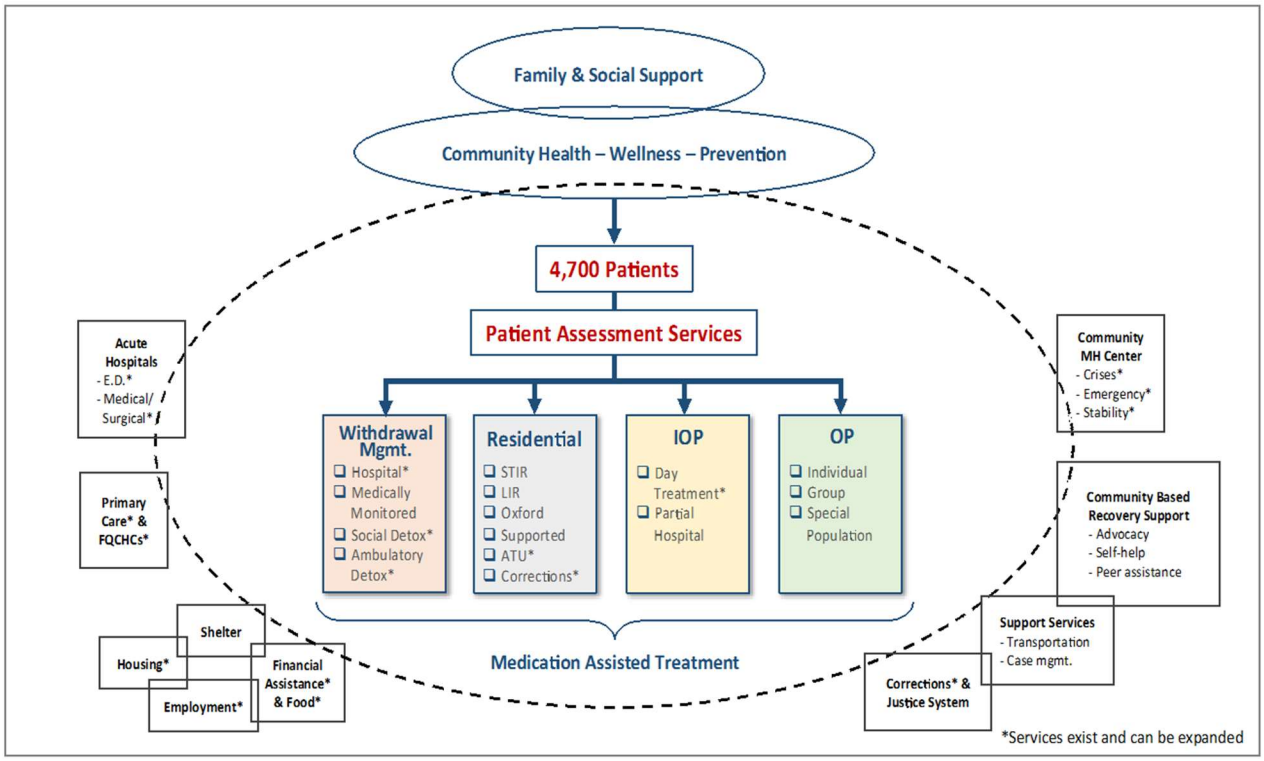
Figure 5: Components of Comprehensive Drug Abuse Treatment[50]



[49] National Institute on Drug Abuse. (2007). Components of Comprehensive Drug Treatment. Retrieved from http://www.drugabuse.gov/publications/teaching-packets/understanding-drug-abuse-addiction/section-iii/4-components-comprehensive-drug-addiction-treatm

[50] National Institute on Drug Abuse. (2007).

Similarly, according to NIATx's 2016 report, the following chart represents an Optimal Larimer County SUD Treatment System



Mapping Project: Process

The MHSU Alliance mapping project began with MHSU Alliance staff outlining existing local services as they relate to the ASAM levels of care framework. Utilizing the ASAM continuum of care framework (Figure 4), MHSU Alliance staff reviewed those treatment programs licensed by the Colorado Department of Human Services' (CDHS) Office of Behavioral Health (OBH) that are located in Larimer County or outside of the county, but frequently used by residents of Larimer County. Each licensed treatment provider was aligned with the level of care they provide. Staff then prioritized those organizations for interviews that serve the largest number of Larimer County residents, are most often referred by clinicians in the field, and represent all levels of care. A list of organizations interviewed is included in Appendix I.

In-person or phone interviews were then conducted in order to determine:

1. What services are available?
2. Are the services generally open to new clients or often full?
3. How much do services cost?
4. Do the services meet the basic standards for that level of care?

Upon completion of the interview process, staff compiled a matrix of existing community services compared to each of the ASAM levels of care previously determined to be necessary for

a complete community substance use treatment system. The Guidance Team then used this matrix to designate local services as adequate, near adequate, or in need of increased services. For those levels with a need for more services, the Guidance Team then identified key elements of each level of care in an ***ideal*** system, using literature from the field to help inform their work.

The Guidance Team then combined the results of this 2015 service mapping with previous work of the MHSU Alliance, ongoing feedback from the Interagency Group (a local group of service providers that meets regularly to reduce barriers to care for those with complex needs), and client interviews. This led to the Guidance Team reaching consensus on which services are critically needed in the community in order to achieve a more comprehensive system of care for people with substance use disorders.

In 2017, the data collected from the 2015 service mapping was updated by MHSU Alliance staff to reflect changes in community services since 2015, and the resulting information was used to update this report and the recommendations.

Analysis of Existing Levels of Care for Substance Use Disorders Available to Residents of Larimer County, Compared to ASAM Level of Care Continuum

Withdrawal Management (aka Alcohol and Drug Detoxification)

When an individual discontinues his/her use of alcohol or drugs, withdrawal management helps the person withdraw/detox as either an inpatient or outpatient by providing an environment that is safe, supportive, and when needed due to severity, medically supervised.

The levels of withdrawal management outlined by ASAM include:[51]

- Level 1-WM: **Ambulatory** withdrawal management without Extended On-Site Monitoring (e.g., physician's office, home health care agency). This level of care is an organized outpatient service monitored at predetermined intervals.
- Level 3.2-WM: **Clinically-Managed Residential** withdrawal management (e.g., nonmedical or social detoxification setting). This level emphasizes peer and social support and is intended for patients whose intoxication and/or withdrawal acuity is sufficient to warrant 24-hour support.
- Level 3.7-WM: **Medically-Monitored Inpatient** withdrawal management. Unlike Level III.2.D, this level provides 24-hour medically supervised detoxification services, which allows for monitoring and intervening in the unpredictable and potentially dangerous process of withdrawal from alcohol and other substances through evaluation and monitoring of existing medical conditions, monitoring and support for vital signs, and administration of medications to assist in the withdrawal process.
- Level 4-WM: **Medically-Managed Intensive Inpatient** Withdrawal management. This level provides 24-hour care in an acute care inpatient setting, such as an inpatient

[51] American Society of Addiction Medicine. (2014). *The ASAM Standards of Care for the Addiction Specialist Physician*. Chevy Chase, MD: Author

behavioral health hospital or a hospital, and is used when the existence of concomitant medical conditions require ongoing monitoring and intervention throughout the detoxification in order to ensure the safety of the patient.

Effectiveness of withdrawal management has the best chance when the individual receives timely care, at the right level of WM care for their situation, and when the withdrawal management service has the capacity to provide comprehensive assessment and referral/connection which results in successfully connecting the patient to the next appropriate level of treatment. Treatment close to the patient's home and support system, when possible, is important in order to encourage both support and continuation in treatment.

Local Situation

The majority of Larimer County individuals who go through supervised withdrawal management currently get their care from what is widely known as the "Detox Center" in Greeley, the closest regional "social" withdrawal management program to those living in Larimer County, located at NRBH in Weld County. The program is a Level 3.2, clinically managed residential withdrawal management program, also called "social detox". NRBH has 23 beds to serve the 12 counties in the Northeast region.

According to UCHealth's emergency departments (Poudre Valley Hospital, Medical Center of the Rockies, and the Harmony free-standing location), 591 individuals were transferred to the Weld County NRBH detox facility in 2016. Data was not available from McKee Medical Center in Loveland, the other emergency department in Larimer County. The average length of stay for individuals being served by the NRBH detox facility during this period was 2.8 days. The number of Larimer County residents being transferred to NRBH for detox services has declined significantly over the years due to transportation barriers and NRBH often operating at capacity of beds, leaving many residents to complete their detox in the local emergency departments.

If the individual is experiencing the need for inpatient hospitalization, they can be admitted to Mountain Crest Behavioral Health Center, the inpatient behavioral health hospital in Fort Collins run by UCHealth, for *medically managed intensive inpatient withdrawal management*. Mountain Crest recently expanded their beds by eight, from 26 to 34, now including seven adult inpatient beds, 14 nursing intensive psychiatric beds, five acute inpatient psychiatric beds, and eight adolescent beds. These beds can be used flexibly to meet overflow needs, and all 34 beds can be used for medically-managed withdrawal management as needed.

Clear View Behavioral Health opened a psychiatric hospital in Johnstown in 2016, which offers medically-managed withdrawal management and SUD treatment. Clear View has a contract with the VA to provide these services for local veterans. Clear View also accepts Medicaid.

Harmony Foundation, in Estes Park, also provides medically-monitored withdrawal management, particularly for those entering their treatment program, and for those with a payer source other than Medicaid (generally either insurance or private funds). Harmony Foundation recently expanded their beds from seven to 23.

North Range Behavioral Health Detox (NRBH) in Greeley, Mountain Crest Behavioral Health, and Clearview Behavioral Health accept Medicaid for detoxification services. NRBH reports that Medicaid covers only about 50% of the cost for an individual in social detox.[52] One reason for this is that Medicaid does not cover medically-monitored inpatient detox or detox that occurs in a residential treatment facility; it only covers social model detox or detox that occurs in a hospital on a medical or psychiatric unit.

When the withdrawal management services are full locally, people sometimes must travel to the next nearest facility, located in Denver, Boulder, and Louisville. Centennial Peaks Hospital in Louisville provides an inpatient medically managed withdrawal management option with 16 dedicated beds in the chemical dependency unit. Medicaid does not cover the services provided by Centennial Peaks, and Medicaid patients must be referred to the facility through a community health center or emergency department. Mental Health Partners in Boulder has a social detox with 20 beds and does accept Medicaid and offer a sliding scale for self-pay clients.

Challenges to Receiving Appropriate, Local Withdrawal Management Services

This review of services revealed that there are multiple, serious challenges for individuals who reside in Larimer County that need withdrawal management, as well as for the providers and services that attempt to refer them into withdrawal management. Although there is adequate capacity for medically-managed withdrawal management at the inpatient hospital level of care (which costs over 10 times the amount of social detox), **there are no licensed facilities offering either social or medically-monitored withdrawal management services that are open to all residents regardless of ability to pay in Fort Collins or Loveland.**

When an individual is in need of a safe environment to detox, it can take significant time to get to a facility that provides withdrawal management. Challenges are regularly experienced, particularly when facilities are full, or transportation is not available. Often, the individual receives services in a location outside of their community, making it difficult to make a seamless connection to the next level of treatment.

Because of the difficulty of getting people into an appropriate withdrawal management program in a timely manner, it appears that increasingly, many people are simply held at the emergency department or in jail long enough to become functional again (not necessarily fully sober), and are then released. These are high cost, inefficient, and usually inappropriate settings for detox to occur. They do not have the staffing or training to specialize in effective withdrawal management, and they have limited resources, if any, for effectively connecting individuals into appropriate treatment. See page 56 for a visual representation of potential diversion opportunities from these community services into new proposed services related to this report. The process and challenges are discussed in more detail below.

[52] K. Collins (personal communication, March 13, 2015)

Impact on Hospitals

In Larimer County, when an individual is intoxicated or experiencing withdrawal, typically they will first be brought to an emergency department. Based on national rates of emergency department visits with a first-listed alcohol-related diagnosis, Larimer County emergency departments are seeing approximately 2,000 of these types of visits annually[53], which is slightly lower but similar to what local UCHealth emergency department data (approx. 2,500) is reporting for these types of visits annually. It is also important to note that these rates of emergency department visits do not include visits with a first-listed drug-related diagnosis and only account for alcohol-related diagnoses, so the rate of both alcohol and drug-related visits is likely higher. The Nationwide Emergency Department Sample (NEDS) data also tracks the rates of visits with a first-listed mental health or substance abuse related diagnosis and reported a 76% increase in alcohol-related disorders from 2006 to 2014, and a 74% increase of substance-related disorders during the same time period.[54] Compared to emergency department diagnosis categories (injury, medical, mental health/substance use, and maternal/neonatal) between 2006 and 2014, mental health/substance use was the only category that had no diagnoses decrease during that time period.

Individuals treated in UCHealth emergency rooms at the Poudre Valley Hospital, Medical Center of the Rockies, or the UCHealth Emergency Room on Harmony Road in Fort Collins are assessed by a team member from the Crisis Assessment Center (CAC). The CAC is operated by UCHealth's Behavioral Health Services team supervised by the Mountain Crest Behavioral Health Center.

The CAC staff members perform mental health and substance use assessments and work to streamline transitions to appropriate treatment for people in mental health and substance use crises. Once it is determined that the individual requires withdrawal management services, CAC staff obtain medical clearance and begin the process of locating a bed, which is most often found at either NRBH in Greeley or, if the need is for inpatient hospitalization, Mountain Crest Behavioral Health Center. This process could take from about two hours to up to five hours or more to complete.

Currently, because facilities are often at capacity or because transportation to the NRBH detox in Greeley is difficult, patients are often retained in the emergency department until their intoxication level lowers to a level judged acceptable by staff. Individuals are then released back into the community, typically without connection to comprehensive withdrawal management or treatment services.

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[53] National Institutes of Health. National Institute on Alcohol Abuse and Alcoholism. (2013). Alcohol-related emergency department visits and hospitalizations and their co-occurring drug-related, mental health, and injury conditions in the united states: findings form the 2006-2010 nationwide emergency department sample (NEDS) and nationwide inpatient sample (NIS). Retrieved from https://pubs.niaaa.nih.gov/publications/NEDS&NIS-DRM9/NEDS&NIS-DRM9.pdf

[54] Moore, B., Stocks, C., & Owens, P. (2017). Trends in Emergency Department Visits, 2006-2014. Agency for Healthcare Research and Quality. Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs/sb227-Emergency-Department-Visit-Trends.pdf

From the beginning of 2015 through October 2015, the CAC at Poudre Valley Hospital reported that NRBH refused admission to detox services nearly 500 times. Reasons for refusals vary, but most often include the following: the center is full, there are insufficient staff members to cover all the beds, there are not any beds for the gender of the individual needing services, or there is no timely transportation available. (NRBH is contracted to provide transportation for patients from the PVH CAC but sometimes has staffing shortages.)

In Southern Larimer County, individuals who are not taken to the Medical Center of the Rockies are taken to the emergency room at McKee Medical Center. Staff at McKee Medical Center work directly with NRBH to appropriately place individuals in need of their services. Data is currently not available on how many individuals are currently admitted to these emergency rooms for detoxification services.

Impact on Criminal Justice

Larimer County Jail data from 2016 shows that approximately 60 were brought to the jail for detox without any pending criminal charges, because the emergency departments and Weld County's detox was full.[55] This places a significant burden on law enforcement and jail staff, as they lack the resources, training, and time to appropriately and safely manage these individuals.

In addition to a need for those individuals that are detoxing in the jail, there were other criminal justice populations identified throughout this process that would also benefit from the addition of social or medically-monitored withdrawal management services within Larimer County. The County's Community Corrections and Work Release Departments often have individuals within their programs who could benefit from these services. Currently, if an individual reports to Work Release intoxicated they are either turned away and told to obtain a new admission date or they are admitted into the program and go through detox in the facility, but without proper medical care or staffing to supervise the detox process. Work Release staff reported that many of these individuals acknowledge that they will not be able to successfully detox on their own in the community before reporting to the program, which results in them reporting back to the program intoxicated multiple times until they are eventually revoked back to the jail for non-compliance. Community Corrections also has individuals that report to their treatment or residential programs intoxicated that could benefit from dedicated withdrawal management services in the community. This would be a great benefit for both the staff and the clients as it would allow individuals to receive proper withdrawal management care, rather than individuals having to detox in a criminal justice setting without appropriately trained staff.

The Challenge of Medical Needs

In Larimer County, the sheer numbers of individuals currently detoxifying on the street, in shelters, jail, and/or the emergency department, indicates a need to expand the original focus on medically-monitored detox in 2016 to include the flexibility to provide a range of

[55] S. Prevost (personal communication, November 20, 2017)

detoxification services that meet the needs of a wide variety of community members. Providing both clinically managed (social) and medically-monitored detox options will create the ability to determine the level of a person's detoxification process based on their individual and often changing needs over time.

As the NRBH facility is licensed as a social detox, its funding mechanism does not cover staff who are licensed and trained at the level that would be needed for medical monitoring or management. Individuals who present directly to the detox or who are dropped off by law enforcement don't always receive medical clearance, but when individuals are transferred to the detox after first presenting to an emergency department (as is usually the case for Larimer County residents), NRBH typically asks that they are cleared for social detox before completing the transfer.

Because the NRBH detox facility does not currently have medical personnel, individuals may be transferred to the emergency room at Northern Colorado Medical Center in Greeley if they (1) become non-responsive and need medical attention; (2) become too aggressive for detox staff to handle; or (3) have withdrawal symptoms so severe that they require medication. In the case of this third scenario, the individual will be transferred to the emergency room for medication management and then be returned to the NRBH detox facility. To avoid many of these transfers, NRBH staff reported in 2015 that they were investigating options to provide some of this medical care on-site, and in 2017 NRBH was actively working to develop medically-monitored service capability, and the quote below from a NRBH report echoes the recommendations being made in this report for Larimer County:

> "Our hope and dream continues to be to determine a funding mechanism to fund 24/7 nursing coverage for our detox facility. In addition, we need medical oversight and physician rounding at least several hours per day. While a fairly costly enterprise, we believe that it would have significant impacts on ER utilization (in both counties) as well as increase our ability to manage medically or psychiatrically complex clients."[56]

There is a significant difference between a detox center that can utilize medical intervention and a social detox center. According to the Treatment Improvement Protocol (TIP) 45, *Detoxification and Substance Abuse Treatment*, "Social detoxification is preferable to detoxification in unsupervised settings such as the street, shelters, or jails." However, social detoxification is not the recommended standalone standard of care:

> "The management of an individual in alcohol withdrawal without medication is a difficult matter because the indications for this have not been established firmly through scientific studies or any evidence-based methods. Furthermore, the course of alcohol withdrawal is unpredictable and currently available techniques of

[56] *North Range Behavioral Health, Health and Human Services Community Partnership Program report for January 1-June 30, 2015* (Rep.). (n.d.).

> screening and assessment do not allow us to predict with confidence who will or will not experience life-threatening complications."[57]

Importantly, many individuals, particularly those who with dependence on opioids, will benefit most from starting appropriate medical treatment at just the right point during their detoxification, and that treatment cannot begin in a social detox facility. However, that treatment can begin in a facility providing medically-monitored detoxification beds.

Some, like those currently spending approximately five hours in the Emergency department at a hospital to detox enough to be released, may utilize social detox initially; however, the specific focus of staff and programming on detoxification, and also in relationship and trust building, may result in longer stays with greater levels of detoxification, as well as better engagement in treatment over time. The ability to provide more intensive detoxification, and the ability to begin induction on medication-assisted treatment in medically-monitored detox beds, provides a key opportunity to address the current revolving door of individuals using high cost services such as emergency departments and the jail for detox.

The Challenge of Receiving Care Far From Home

Currently most Larimer County community members receiving withdrawal management must be transported to Weld County for detoxification services. This results in the need for expensive transportation and reduced efficiencies in getting people to timely detox services. It also creates burdens on Emergency departments while patients are waiting for transportation. Additionally, this also creates limitations on appropriate aftercare, follow-up, and involvement of family members in treatment processes.

Summary of Withdrawal Management Service Gaps

- The only withdrawal management beds available in Larimer County are hospital based medically managed beds, which, though needed for some, are far more expensive than needed for most individuals needing detoxification.
- The majority of Larimer County individuals receiving detoxification must be sent to Weld County (NRBH).
- Services available at NRBH are limited to social model detox. Medically-monitored withdrawal management is now considered the best practice for a large proportion of those in need of withdrawal management care.
- Both social and medically-monitored beds are needed to be able to meet the full spectrum of withdrawal management needs in Larimer County.
- Currently, without local withdrawal management beds, and with both geographic and capacity issues impacting the ability to utilize NRBH detoxification services, many Larimer County individuals are being "detoxed" in emergency rooms and in the jails, or remain on the street to detox.

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[57] *KAP keys for clinicians based on TIP 45, detoxification and substance abuse treatment*. (2006). Rockville, MD?: U.S. Dept. of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment.

- Transportation to Weld County for detox is inefficient and expensive.
- Utilization of non-local detoxification services limits appropriate aftercare, follow-up, and involvement of family members.

Residential Treatment for Substance Use Disorders

One of the levels of care on the ASAM Continuum that is largely missing from Larimer County is Clinically Managed Residential Services. Residential treatment is indicated for individuals deemed to specifically need care outside their normal living arrangement in order to bring a serious disorder under control and teach the individual how to manage it in the future. Treatment is provided in a highly structured setting within specialty substance use disorder treatment facilities or facilities with a broader behavioral health focus, and can range from short term stays of 14 days to longer-term stays up to 6-12 months, though the longer stays are unusual. Good outcomes are generally contingent on adequate treatment length. Research by the Center for Substance Abuse Treatment (CSAT) has shown that length of stay is positively related to treatment outcomes and that increasing lengths of stay improve treatment outcomes. For residential or outpatient treatment, participation for less than 90 days has been found to be of limited or no effectiveness, and treatments lasting significantly longer are often indicated.[58] Currently, substance abuse providers generally appear to interpret the data to mean that a combination of treatment methodologies for at least 90 days (which could, for example, include residential, intensive outpatient, and outpatient services) would meet that 90-day minimum.

Residential treatment is distinguishable from inpatient treatment services, which take place within specialized units in hospitals, and are more geared toward stabilization. Residential treatment services are currently considered to have the best chance of success when the client is able to receive services in the community in which she/he will live upon completion of treatment. Sending individuals across the state can alienate the family and support system from the treatment process rather than including them, and can create more struggles when transitioning back into the community.

One of the greatest barriers to receiving residential services is the cost of care. Medicaid, which provides at least partial funding for many levels of care, does not pay for residential treatment in any setting, although single case agreements have been approved on an infrequent basis.[59] Private pay residential treatment services charge $20,000 or more for a 28-day program. This can be very cost prohibitive for individuals and families; however, individuals who have the means to pay can typically get into treatment the same day they seek services.

Most often, Larimer County residents must leave their community to gain access to affordable residential treatment. For those individuals who do not have the means to pay, there are some programs in Colorado that have other funding mechanisms that help make this level of care more affordable but those are very limited, impact few people, and have waiting lists that are weeks to months long. For example, residents of Larimer County who do not have significant monetary resources and need residential care most often go to the Transitional Residential Treatment

[58] Substance Abuse Program Administrators Association. (n.d.). Treatment. Retrieved from http://www.sapaa.com/page/wp_sa_treatment
[59] K.Collins (personal communication, 2017)

(TRT) program run by NRBH in Greeley, which has 20 beds. This program has other funding that reduces the average daily charge to $230/day, far less than the $600 to $800 or more daily charges of other treatment options, as well as a sliding fee scale based on income that can further reduce the daily rate to around $40.

From January 1, 2016 through December 31, 2016, only 45 Larimer County residents were able to access this service. North Range often has a waiting list of two to six weeks for admission to residential treatment unless the client fits into one of the block grant priority populations (pregnant women, IV drug users, or women with dependent children). As part of the program, clients are encouraged and supported in seeking employment. Once employed, they are encouraged but not required to pay a certain percentage of their income to help support the cost of their treatment.

For residential treatment outside of the region, a small number of Larimer County residents have accessed the Intensive Residential Program (IRT) at Arapahoe House in the Denver area, Colorado's largest provider of addiction treatment. However, Arapahoe House ceased operations in January of 2018. Efforts are underway to fill the resulting gap in treatment through other organizations and options; therefore, it is unknown how access will be impacted for Larimer County residents.

The largest provider of residential SUD services in Larimer County is Larimer County Community Corrections (LCCC). However, the ability to access these services is limited to those involved in the criminal justice system. In 2016, at least 430 individuals received residential SUD treatment through LCCC, and another 25 individuals completed intakes but left prior to initiating treatment.[60]

For those who have significant monetary resources, there are other options, both inside and outside of Larimer County, for licensed residential SUD care. Within Larimer County, Harmony Foundation in Estes Park is a licensed provider, as is Narconon in Fort Collins. Inner Balance, Harvest Farm, and AspenRidge Recovery provide sober living environments and partial hospitalization and intensive outpatient programs for residents, but are not licensed to provide residential treatment.

Other licensed providers outside the community include the Veterans Hospital in Cheyenne whose catchment area includes Larimer County, Centennial Peaks Psychiatric Hospital in Louisville, Mental Health Partners in Boulder, and the Stout Street Foundation in the Denver metro area, but they serve few Larimer County residents. Stout Street does not charge clients for the services; their program is a work-based program where individuals are connected with employment during their stay in the program. A portion of their earnings go toward their treatment costs, while another portion of their earnings go toward individual savings plans to develop a financial foundation upon completion of this level of care.

[60] M. Ruttenberg (personal communication, August 2, 2017)

Other levels of residential care include Low Intensity Residential (LIR) (aka halfway house) services (ASAM 3.1), which are designed to build and reinforce a stable routine for residents in a safe and supportive context. Program components include education, group counseling/support by certified personnel, orientation to employment, and employment in preparation to community reintegration. LIR houses are appropriate for residents who lack a stable living environment, and other social supports. No LIR houses currently exist in Larimer County.

Independent, voluntary sober housing, like "Oxford Houses" represent safe and supportive living environments for those who choose and can pay for this type of residence. There are currently three Oxford Houses in Larimer County with a total capacity of 22 beds.

Finally, for those with chronic behavioral or somatic health conditions, who lack family/social supports, and are disconnected from employment and other community functions, supported housing is an effective and cost efficient resource to house people with chronic and severe mental health, substance use disorders, or dual diagnoses, long term disabilities, and other traditionally high users of health and social support services. A permanent supportive housing facility with 60 units exists in Larimer County and another facility is being planned; however, it is estimated by Housing Catalyst that three facilities are needed in order to meet the needs in our community. Additionally, while funding for facility construction is available, lack of funding for the supportive services indicated by the model is often the limiting factor that reduces the feasibility of creating additional permanent supportive housing projects.

The chart on the following page illustrates the residential care options that appear to be most often used by Larimer County residents, and gives a sense of length of stay and cost.

Figure 6: Licensed SUD Residential Providers Most Used by Larimer County Residents

Organization	Length of Stay	Payment (Medicaid does not cover residential treatment)			Waiting List
	90-Day Standard	Insurance	Dept. of Corrections	Self-pay cost	How long?
North Range Behavioral Health (Greeley) Level of care: TRT	35 day average	X		$230/day with sliding fee option (down to $40/day)	2-6 weeks; Always have a wait list
Larimer Co Community Corrections (Fort Collins) Level of care: IRT (Men's & Women's)	Up to 90 days		X	$0	45-90 days
Larimer Co Community Corrections (Fort Collins) Level of care: STIRRT	3 weeks residential with 9 months weekly outpatient		X	$0	Intakes every third Tuesday
Harmony Foundation, Inc. (Estes Park) Level of care: IRT	28 Days	X		$26,000	Same Day
Narconon Colorado (Fort Collins) Level of care: TRT	Avg. 4 mos.	X		$30,000	Same Day

The development of affordable local residential SUD care is considered a critically needed behavioral health service. It is vitally important that once a person is willing to participate fully in their treatment, the treatment be quickly available and that cost not be a barrier to care. Time is of the essence when an individual reaches out for treatment services: "Longer waits for treatment increase the opportunities that other events will arise, thereby further interfering with treatment entry."[61] Further, the best care will involve the family or support system, and that is best done when the treatment is provided locally. Some of the pinnacles of substance use disorder treatment include starting as early in the disorder as possible, and engaging the family and other natural supports in the treatment process.[62] When an individual has to leave his/her community to access services, family participation can be hindered.

[61] Redko, C., Rapp, R. C., & Carlson, R. G. (2006). Waiting Time as a Barrier to Treatment Entry: Perceptions of Substance Users. *Journal of Drug Issues*, *36*(4), 831–852.

[62] Werner, D., Young, N.K., Dennis, K, & Amatetti, S.. (2007). *Family-Centered Treatment for Women with Substance Use Disorders – History, Key Elements and Challenges*. Rockville, MD: Department of Health and Human Services, Substance Abuse and Mental Health Services Administration.

Summary of Residential Treatment Service Gaps

- Larimer County does not have local short-term residential treatment beds even though this is a key level of the ASAM continuum of care for substance use disorders.
- Those needing residential treatment must go outside of the community to receive care and very few individuals actually do this.
- Even when care is available outside of the community, access to this care is limited by wait lists and affordability.
- Family involvement and continuity of care in the local community is limited when non-local residential treatment services are utilized.
- Low Intensity Residential (LIR) (aka halfway house) services are not currently available in Larimer County.
- Independent, voluntary sober housing, like "Oxford Houses" are not currently available in Larimer County.
- Funding for the "supportive services" which include treatment for mental illness and substance use disorders among other services is often a limiting factor that reduces the feasibility of creating additional permanent supportive housing projects.

Intensive Outpatient Treatment Programs (IOP)

Intensive Outpatient Treatment Programs (IOP) are another vital pillar of the continuum, as IOP serves a level of care appropriate for individuals requiring more than standard outpatient treatment. IOP is defined as nine or more hours (fewer than 20 hours) of structured counseling and educational services per week. In these programs, individuals attend very intensive and regular treatment sessions multiple times a week early in their treatment for an initial period.

Individuals in IOP can secure and/or maintain employment, as well as address other aspects of their life in need of attention while remaining engaged in treatment. IOP services can be used for a variety of purposes: as an entry point into treatment for individuals assessed for that level of care; as a step-up option from regular outpatient treatment for clients in the event their condition worsens; or as a step-down from an inpatient or residential program. After completing intensive outpatient treatment, individuals often step down into regular outpatient treatment, which meets less frequently and for fewer hours per week, to help sustain their recovery.

Until 2015, Larimer County was entirely missing this critically important level of care. Due to a decision by Colorado Medicaid to cover IOP, Larimer County now has several organizations offering IOP services, shown in the chart below.

Figure 7: Chemical Dependency Intensive Outpatient Programs (IOP) in Larimer County

Organization	Length of Stay	Number of Groups/Slots	Payment			Cost
	90-Day Standard 12-13 weeks		Medicaid	Insurance	Self-Pay Cost	
SummitStone Health Partners (Fort Collins)	90 Days	Three, 3-hour groups per week plus an individual appointment/12 slots per group	X	X	Self-pay is based on a sliding scale	
Mountain Crest/PVHS (Fort Collins)	7 weeks	Two groups/12 slots per group	X	X	$350/visit	$6,452 for whole program
Harmony Foundation (Estes Park)	28 days	One group/up to 12 slots reserved for people in their transition of care program		X		
Inner Balance (Loveland)	28 days	Unknown		X		$10,000
Clear View Behavioral Health (Johnstown)	No limitation	5 groups, up to 10 per group	X	X		
AspenRidge Recovery (Fort Collins)	13 weeks	One group/12 slots per group		X		
		Total of 135 slots currently available				

It is not known whether existing services are capable of meeting the current needs for IOP.

Projections related to this update report show that 1,000 IOP admissions will be necessary to meet the needs of those individuals being served through a facility offering many of the services being recommended and this would not be able to be met with current capacity. It is obvious that the current total of 135 IOP treatment slots at any one time will not be sufficient to meet that need. However, due to insurance reimbursement for this level of care, it is hoped that additional capacity for IOP can be developed in the community to support the growing need.

One of the biggest remaining challenges to individuals needing IOP services can be for those who do not have insurance, do not have insurance that covers this care, or who have insurance

but who must still meet deductibles and copays. For instance, Medicare does not cover IOP treatment, so in order to receive care, clients must either be placed in partial hospitalization treatment or attend multiple outpatient treatment groups. Another key challenge is that since there are still few IOP services offered, there are not many options for when a person can attend, which can be difficult for people to balance with work obligations. Finally, best practices indicate that population-specific IOP groups, for example, groups based on gender, can be more effective than open groups; but the services have not grown in this community to the extent to be able to offer those yet.

Veterans can also access IOP at the Cheyenne facility, which has no waiting list, although the distance is a barrier. Program length and cost vary according to the individual's situation. Staff report that the local veterans services are attempting to establish services in Fort Collins.

Summary of Gaps in Intensive Outpatient Treatment

- While current IOP options are growing in Larimer County, it is unknown whether existing options are meeting the current need for this level of care.
- The existing IOP slots available would not be sufficient to meet the projected need for 1,000 IOP admissions related to increased engagement in treatment of those individuals who might be engaged through local detoxification and other proposed services. However, the fact that reimbursement is now available for IOP services indicates the potential for expanding these services to meet this need.
- Clients needing IOP services often cannot afford them due to not having insurance, insurance plans not covering IOP, or having high deductibles and copays.
- Currently, while IOP options are growing in the community, there is a still a need for a wider range of options for IOP services at different times and locations to accommodate client life obligations and work schedules.
- Best practice approaches such as gender or population specific IOP groups are recommended to be developed.
- There are still some uninsured individuals and underinsured individuals who have insurance plans with high deductibles and copays that limit their ability to afford intensive outpatient treatment.

Medication-Assisted Treatment Services

"Medication-Assisted Treatment (MAT) is the use of medications in combination with counseling and behavioral therapies for the treatment of substance use disorders. A combination of medication and behavioral therapies is effective in the treatment of substance use disorders, and can help some people to sustain recovery."[63]

Medications used to treat opioid use disorder include naltrexone (brand name Vivitrol), Buprenorphine (common brand names Suboxone and Probuphine), and Methadone. These can be delivered in an outpatient setting, although different restrictions apply for each medication.

[63] SAMHSA: https://www.integration.samhsa.gov/clinical-practice/mat/mat-overview

Methadone has been used for decades but must be administered in a highly structured clinic that is certified as an opioid treatment program (OTP) by SAMHSA. Naltrexone is most often used as an extended-release injectable administered monthly, and can be prescribed and administered by any healthcare provider who is licensed to prescribe medications.

Local Availability of Medication-Assisted Treatment

Local availability of medication-assisted treatment has greatly expanded in the past few years, and continues to become increasingly accessible to patients as more locations open, providers expand their caseloads, and options for sliding scale and Medicaid payments are accepted. There are several clinics that now offer medication-assisted treatment in Larimer County.

Suboxone is available through programs at SummitStone Health Partners, Sunrise Community Health, the Colorado Clinic, Front Range Clinic, and certain other providers in primary care. Family Medicine Center and the Salud Clinic offer Suboxone programs to patients of their primary care clinics, and Colorado State University offers all forms of medication-assisted treatment to enrolled students who are in need of those services. Behavioral Health Group is a certified opioid treatment program and offers both Methadone and Suboxone.

Vivitrol is now available locally to patients at the following clinics, all of which take Medicaid except for Aspen Ridge North:

- Front Range Clinics
- Aspen Ridge North
- Clear View Behavioral Health (for detox patients)
- SummitStone (and Sunrise Clinic via SummitStone)
- Harmony Foundation
- North Range Behavioral Health (took on many 1st Alliance clients so some of our Larimer people likely ended up with them)
- Cheyenne VA Hospital
- Colorado State University (students only)

A number of private physicians offer medication-assisted treatment in one form or another, and that number is increasing over time. For a list of providers offering medication-assisted treatment, see Appendix J.

Summary of Gaps in Medication-Assisted Treatment

- While access to medication-assisted treatment is improving in Larimer County, there are still challenges and barriers. Even with increased capacity for medication-assisted treatment, as the number of people with opioid use disorders grows, capacity will need to expand to meet the need.
- Limits on the number of individuals who can be served by each practitioner currently impact capacity, as does provider understanding of medication-assisted treatment and willingness to be involved with this type of treatment.

- Patients on medication-assisted treatment often have a variety of complex needs that require moderate to intensive care coordination that is limited in the community. For instance, even on medication-assisted treatment, a patient's acuity of needs can vary widely over time, requiring the need to navigate to different levels of care, some of which don't exist and others that may not allow continuation on medication-assisted treatment.
- For those on medication-assisted treatment, attitudes towards medications that reduce cravings for opioids and alcohol often impact policies and procedures that either do not allow for prescription of medication-assisted treatment in certain settings (such as residential treatment or criminal justice), or require cessation of medication-assisted treatment while in that setting.
- Some forms of medication-assisted treatment with proven effectiveness may not be prescribed due to higher associated costs, and may not be affordable to those who are uninsured, underinsured, or have insurance plans that don't cover specific forms of medication-assisted treatment.
- There are still some uninsured individuals and underinsured individuals who have insurance plans with high deductibles and copays that limit their ability to afford medication-assisted treatment.

Outpatient Treatment Services

Since outpatient services are a key part of the continuum of treatment services in any behavioral health treatment system, outpatient services were also examined in order to assess what currently exists in Larimer County.

The vast majority of substance use disorder (SUD) treatment services available to Larimer County residents fall within the outpatient category on the continuum. There are several organizations in the County providing SUD outpatient services. For instance, SummitStone Health Partners has 28 Full Time Equivalents (FTE) dedicated to outpatient services. Other organizations offering outpatient SUD services include Mountain Crest Behavioral Health, HalfMoon Resources, Heart-Centered Counseling, and A New Perspective.

In addition to general SUD outpatient services for the general population, there are outpatient treatment services available both individually and in groups for those with co-occurring mental illness and substance use disorders (through SummitStone, the HUB for those with an open Child Protection case, and the Assertive Community Treatment/Community Dual Disorder Treatment Team). There is also one SUD clinician in Fort Collins providing outpatient treatment for veterans; and there is a program offering SUD services for court-ordered domestic violence clients. Additionally, SUD treatment is available for some people involved in the criminal justice system through Alternatives to Incarceration for Individuals with Mental Health Needs (AIMM), the Wellness Court, and the Residential Dual Disorder Treatment (RDDT) program.

Over 70 private mental health providers list having a Certified Addiction Counselor (CAC) or Licensed Addictions Counselor (LAC) qualification or list substance use counseling as one of their specialties on the Larimer County referral website www.HealthInfoSource.com. However, these are independent practitioners for whom payer sources, actual availability, and connection

to other parts of the treatment system is unknown, thus it is difficult to determine the capacity of these providers for filling the need for outpatient substance use disorder treatment.

There is anecdotal evidence that organizations are having some difficulty in hiring licensed behavioral health clinicians, and this may also include those who are certified or licensed to specialize in the treatment of substance use disorders.

Finally, there are about 15 organizations providing Driving Under the Influence (DUI) services, but these services are psychoeducational in nature and are not considered outpatient treatment.

A recent change that has made a difference for those who have low incomes and are in need of outpatient treatment for substance use disorders was the 2014 expansion of Medicaid to adults with low incomes. Since Medicaid provides medically-necessary outpatient services for its clients, there is a payer source that was not previously available, which has resulted in the expansion of outpatient services and provides likelihood that outpatient services can expand even more to better meet local need.

There are still some uninsured individuals and underinsured individuals who have insurance plans with high deductibles and copays that limit their ability to afford outpatient treatment.

Summary of Gaps in Outpatient Treatment

- It is unknown whether existing options for outpatient treatment are meeting the current need for this level of care.
- It is likely that existing capacity for outpatient treatment would need to increase in order to meet the projected need for about 6,000 outpatient admissions related to increased engagement in treatment of those individuals who might be engaged through local detoxification and other proposed services. However, the fact that there are payor sources for outpatient treatment indicates the potential for expanding these services to meet this need.
- Local workforce capacity, especially for licensed providers, may hamper the expansion of outpatient services.
- There are still some uninsured individuals and underinsured individuals who have insurance plans with high deductibles and copays that limit their ability to afford outpatient treatment.
- Care coordination for individuals with complex needs who are receiving outpatient treatment and who need to access other services in the community is available for some, but many need this type of assistance and cannot access it.

Existing Capacity of Critical Treatment Services for Mental Illness in Larimer County

While a wide range of services focused specifically on the treatment of mental illness are important in a behavioral health treatment system, recommendations in the 2016 report focused primarily on one key level of treatment known to be needed in Larimer County – the Acute Treatment Unit (ATU) level of care. In 2018, with the development of a Crisis Stabilization Unit (CSU) in Larimer County in 2015, it is believed that the care provided by an ATU is now available through the CSU. However, the continuum of care would work best if the CSU were

located on site with withdrawal management services and residential treatment options for SUDs, for reasons described below.

A summary of both ATU and CSU levels of care is provided below.

Acute Treatment Unit (ATU)

As defined by the Colorado Department of Public Health and Environment (CDPHE), an Acute Treatment Unit (ATU) is a facility or a distinct part of a facility for short-term psychiatric care, which may include substance use disorder treatment, and which provides a total, 24-hour therapeutically planned and professionally staffed environment for persons who do not require inpatient hospitalization but need more intense and individual services than are available on an outpatient basis, such as crisis management and stabilization services.

ATUs serve an important purpose in a community continuum of care. Short-term sub-acute psychiatric care assists an individual who may be harmful to themselves or others and requires stabilization and evaluation. They are significantly less costly than inpatient hospitalization. ATUs also serve as a bridge to longer term care and treatment services.

There are currently no ATUs in Larimer County. The closest ATU is a 16-bed facility in Greeley, run by NRBH. The average length of stay in 2016 was 5.15 days. The annual occupancy rate is 73%. While the ATU in Weld County is not always accessible, there are other options for acute treatment in Louisville and Arapahoe County. Within the NRBH system, individuals who are intoxicated and also demonstrate a need for mental health crisis services are first admitted to the detox. Once detox is progressing, they are evaluated for mental health concerns and admitted to the ATU when appropriate. However, when individuals have to leave their community for services, there is not often seamless connection to ongoing care, which helps to prevent future crises.

Having a local ATU would give a more appropriate and lower-cost option for patients who need stabilization but don't require hospitalization. Other benefits include providing easier access for family support, and easier transition to the next level of care due to its existence in our local community. When significant care is needed, but not at the level of inpatient hospitalization, an ATU also offers a significantly less costly alternative to hospitalization. Providers have consistently stated that some admissions to Mountain Crest Behavioral Health Center have been made because of the need for quick 24/7 services with psychiatric care, but that for some patients, the care does not have to be at the inpatient hospitalization level.

Crisis Stabilization Unit (CSU)

The State of Colorado began providing partial funding to add Crisis Stabilization Units (CSU) in 2015 in various locations in the state. In Larimer County, SummitStone Health Partners opened the Community Crisis Clinic in Fort Collins in 2015, which provides 24/7 walk-in and mobile services to people with a self-identified behavioral health crisis. This facility addresses the immediate crisis needs of individuals and families in all of Larimer County. Currently, this facility takes approximately 1,700 crisis calls in a year, with over 2,000 walk-in services, and

660 admissions to crisis stabilization beds; however, the facility is operating at approximately 55% of capacity so there is room for growth. When a person is admitted, the Crisis Stabilization Unit can provide up to five days of intensive services for adults in need of stabilization, including those on a 72-hour mental health hold. In Greeley, NRBH's ATU also provides CSU services for residents of Weld County.

Change in Recommendations Regarding Crisis Stabilization Unit (CSU) vs. Acute Treatment Unit (ATU)

The differences between an Acute Treatment Unit (ATU) level of care and a Crisis Stabilization Unit (CSU) level of care are minimal. While creating a local ATU was one of the original recommendations in the 2016 "Recommendations" report, and was deemed a critical need, current recommendations have changed as a result of the local CSU that now exists in Larimer County.

The Larimer County CSU, if located at the new facility being proposed, could meet all of the needs that an ATU could, providing a close, more quickly accessible facility with ready psychiatric care for those experiencing the need for 24/7 services, and a more robust entry point into the continuum of services being developed within the facility and in the community. There would be a very significant benefit of locating the CSU in the same facility with withdrawal management services since CSUs don't provide withdrawal management. This means that currently, patients with drugs or alcohol in their system are often diverted to the Emergency Room, NRBH in Greeley, or inpatient hospitalization. A more efficient and higher standard of care for a person who is experiencing both a mental health disorder and a substance use disorder would be to be able to serve them in one facility, making it easy to flexibly and quickly place them in the level of care appropriate for their stage of need and move them as needs change.

Summary of Gaps in ATU/CSU Level of Care

- While Larimer County does not currently have an ATU, it does have a CSU, which has capacity to expand services to meet increasing needs over time and which provides the same level of care as an ATU.
- Current limitations on the existing CSU include the inability to effectively serve individuals in need of detoxification from substances, which results in individuals needing to be transported from the CSU to a detoxification facility (or often ending up in the emergency department at local hospitals) if they are in crisis but have alcohol or drugs in their system. Best practice indicates that the siting of CSU services at the same location as withdrawal management services is an effective practice.

Other Significant Community Needs Identified

In speaking with citizens, care providers, and others throughout the process of creating these recommendations, two other themes emerged in terms of community interests and needs related to behavioral health care and support: 1) An interest in early identification and intervention with youth and families; and 2) An interest in suicide prevention.

Early Identification and Intervention with Youth and Families

It is widely shown that the earlier identification of mental illness and substance use issues happens, the better the outcomes due to the ability to initiate intervention and support earlier. While the majority of services included in this report focus on adults, the Guidance Team creating these recommendations is aware of community interest in early identification and intervention and recognizes the need to support identification, treatment, and support services that will benefit families and youth. While specific recommendations would require further study to develop, potential areas of focus include supporting youth substance use prevention programming; expanding existing programming improving the connection between schools, early identification, and treatment services for youth and families; and increasing access to child and adolescent psychological and psychiatric services.

Suicide Prevention

Although Larimer County's suicide rate is higher than the national average; little funding is currently available to support dedicated suicide prevention programming, although models with evidence of effectiveness exist. Again, while specific recommendations have not yet been made, potential areas of support include supporting the sustainability of current, local and grassroots suicide prevention efforts in order to facilitate the expansion of the evidence-based ZeroSuicide model across the community, and support the expansion of suicide prevention training for community members that will increase identification of individuals at risk for suicide, and connection of these individuals to support and treatment.

Summary of Gaps in Behavioral Health Services in Larimer County

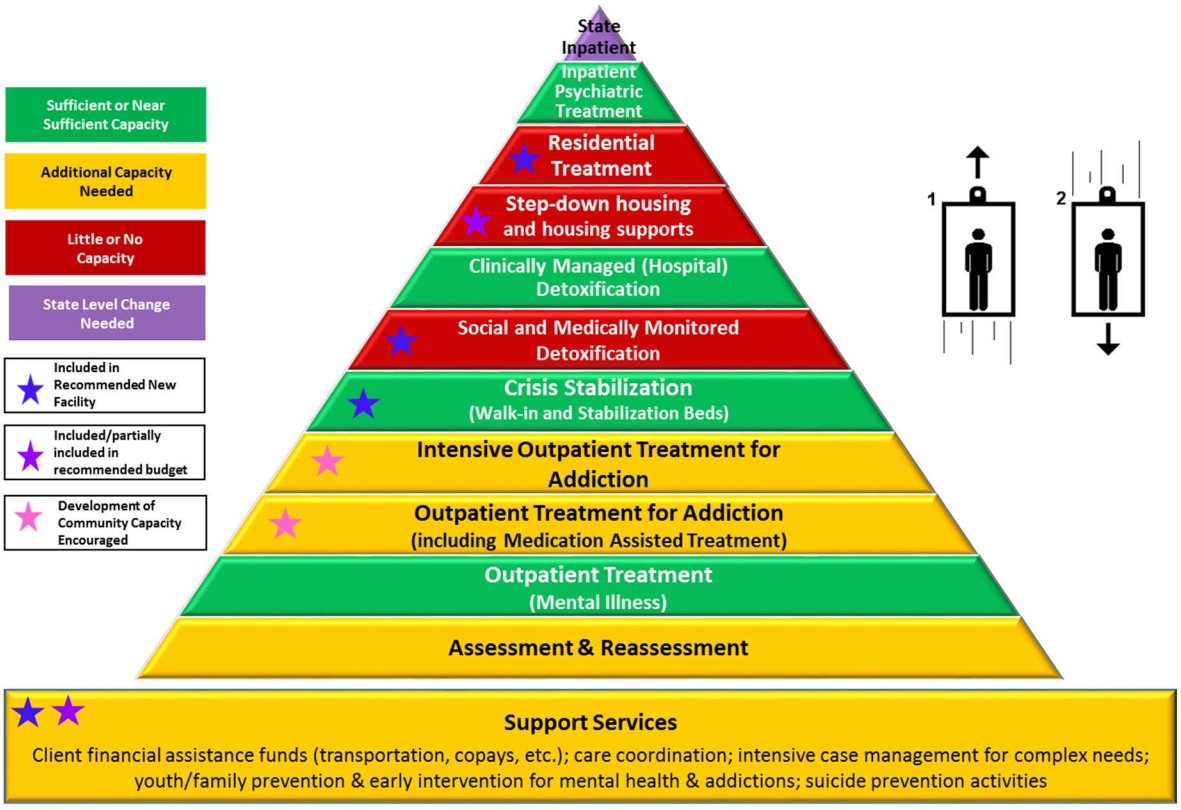
Key service gaps identified for Larimer County include:

- Local withdrawal management (drug/alcohol detoxification) services, including access to both social model beds and medically-monitored beds
- Residential treatment and residential step-down options for substance use disorders including
    - Short-term residential treatment beds
    - Long-term residential treatment ("halfway houses") to help people transition from residential treatment to supported-living in the community
    - Voluntary "sober living" houses such as Oxford Houses
    - Support services to enable treatment and care coordination for people living in permanent supportive housing
- Moderately intensive to intensive care coordination for people with particularly intensive and complex needs
- Client financial assistance to assist people with affording care
- Funding for early identification and early intervention services and resources for youth and families at risk for or experiencing mental illness and/or substance use issues or disorders
- Funding for suicide prevention efforts

The graphic below (Figure 8) illustrates the key levels of care needed in a system of care, and shows those that are currently provided at adequate levels in our community in green. Those needing increased capacity are shown in yellow. Those in red do not currently exist at all in Larimer County.

Expanding both the services in yellow as well as developing local services currently depicted in red is the focus of the recommendations in this document.

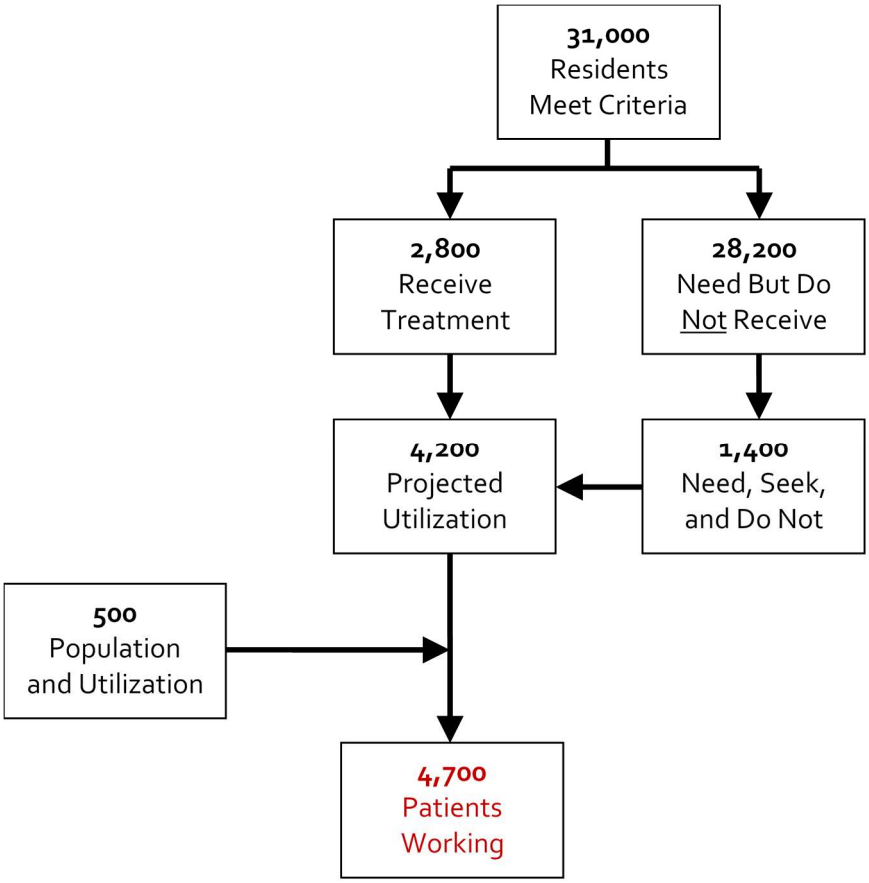
Figure 8: Current Behavioral Health Service Capacity in Larimer County



Calculation of Need and Number of Individuals to be Served

In the original 2016 report, NIATx provided a rationale for the calculation of need and resulting number of individuals to be served by the recommended development and expansion of services. This was based on Colorado prevalence data from the 2014 National Survey of Drug Use and Health, a calculation of the number of individuals currently estimated to be receiving treatment, and the number of individuals who therefore can be calculated that need but do not receive treatment. Additionally, data estimates were applied to identify a smaller number of individuals who need and seek treatment but still do not get treatment. These data points were used to project a working hypothesis of serving about 4,700 patients. However, MHSU Alliance project staff have taken a more in-depth look at our local community need and service utilization, applied updated national data, and assessed other existing withdrawal management services in Colorado in order to determine that now, over 5,000 individuals would need to be served.

Figure 9: Original Projected Substance Use Disorder Need Diagram (From NIATx 2016 Report using 2014 data)



The following is a description of the key differences between the NIATx estimates of people with substance use disorders and the MHSU Alliance staff estimates.

NIATx's original SUD prevalence estimate (31,000) combined 2014 NSDUH data categories of individuals with alcohol dependence (8.4%), with the number of individuals with drug dependence (2.8%), giving them a total of 31,000, or roughly 11% of Larimer County's population aged 12 and older in 2016. However, the NIATx estimates did not account for the thousands of individuals who have both alcohol dependence and drug dependence, which can artificially inflate the totals if they are simply added together. This would, then, result in a total number of substance use disorders in the County, but not the number of people with a substance use disorder.

In order to eliminate duplication, MHSU Alliance staff utilized the most current 2016 NSDUH data, which does now account for individuals with more than one substance use disorder diagnosis, thus giving an updated estimate of approximately 25,000 (8.5%) residents in Larimer County with a substance use disorder.

Additionally, because the NSDUH prevalence data does not include individuals that are homeless or transient that are not sheltered, or individuals who are incarcerated in correctional facilities, it is missing critical populations. These two populations of people account for a large percentage of emergency, law enforcement, and behavioral health services utilization across the County; and prevalence of mental illness and substance use disorders in these populations are often higher than the general population. Thus, it was critical for MHSU Alliance staff to include these populations in the updated recommendations, as these sub-groups are frequently utilizing local resources and emergency services and would benefit the most from a full continuum of care services.

Table 1 below illustrates the 2017 Average Daily Criminal Justice Population Totals for Larimer County that would not have been included in the NIATx 2016 SUD prevalence estimates. Jail data reported that approximately 50% of this total daily population of 1,054 have substance use-related issues (or over 500 individuals).[64]

Table 1: Larimer County Average Daily Criminal Justice Population Totals

Avg. Daily Population (2017)	Jail	Community Corrections	Work Release
	584	297	173
Total	**1,054** (approximately 500 with substance use related issues)		

MHSU Alliance staff also included estimates for the local homeless population, as this population was also not accounted for in the 2016 SUD prevalence estimates. Larimer County currently has a monthly population of individuals experiencing non-chronic homelessness between 200-400 and approximately 325 individuals experiencing chronic homelessness[65]. National data indicates that about two-thirds of those experiencing chronic homelessness have SUD-related issues and approximately 37% of the nation's general homeless population has either a serious mental illness and/or SUD-related issues[66]. Applying these national statistics to the local population would indicate that Larimer County has between 300-350 individuals experiencing homelessness with some SUD treatment needs.

In order to account for the additional incarcerated individuals (500) and the homeless population with treatment needs (325), staff added an additional 1,000 individuals to the total SUD prevalence in the county (26,000).

The Guidance Team also asked staff to dig deeper into local realities regarding utilization data of emergency departments, law enforcement, jail, behavioral health providers, and service payers. As a result of this work, changes were made to the NIATx working hypothesis of 4,700 people being served that was used in the 2016 report. A new working hypothesis of over 5,000 people was developed as a result of the updated prevalence data (26,000 individuals with SUDs in

[64] D. Stalls (personal communication, August 18, 2017)
[65] H. LeMasurier (personal communication, March 21, 2018)
[66] SAHMSA. (2018). Homelessness and Housing. Accessed from https://www.samhsa.gov/homelessness-housing

Larimer County), additional utilization information gathered by MHSU Alliance staff, and the addition of two new populations of individuals to the working hypothesis.

The first new population the Guidance Team identified includes those individuals who don't meet the criteria for treatment but who may occasionally need to use detoxification services. This is likely a small number of admissions who have had heavy binge drinking episodes (sporting events, music festivals etc.). Larimer County has much higher reported binge drinking rates compared to the state[67], as well as a high prevalence for music/beer festivals and has a local university student population. Therefore, it seemed critical to include this population in the new estimates and need for services.

The second new population that was included by staff were those individuals who do meet the clinical criteria for treatment, but are not generally seeking it. NIATx focused on those individuals currently receiving treatment and those who needed treatment and were seeking it, but do not currently get treatment. However, staff identified a large number of individuals who needed treatment services but weren't actively seeking it, yet these were the individuals that were taking up a large portion of the local law enforcement and emergency service resources on a consistent basis. It is these reasons that this population of individuals needs to be accounted for when considering how to improve current services, because these are the individuals that have the best opportunities to be diverted away from the jail and emergency department systems (see Figure 16). UCHealth documented approximately 2,300 admissions to their local emergency departments in 2016 for alcohol detox only[68]. Mountain Crest also identified several hundred individuals currently utilizing their hospital-level of care for detox that could be served more appropriately at a local lower level detoxification facility. There were an additional 60 individuals in 2016 brought to the jail to detox, either because the emergency departments were busy or the Greeley detox was full[69]. We have estimated that these approximately 2,400 total emergency department visits and jail admits represent approximately 1,000 individuals accounting for about 2.5 emergency department visits per person/per year.

Finally, MHSU Alliance staff also accounted for people who are currently detoxing in some of our other correctional facilities (Work Release, Community Corrections, etc.). Staff gathered this admissions data from the various sources mentioned above to calculate an estimated total of projected admissions to a local detoxification facility. See Table 2 below for these projections.

[67] 2016 Community Health Survey. Health District of Northern Larimer County. Retrieved from https://www.healthdistrict.org/2016-community-health-assessment
[68] C. Lowe, UCHealth (personal communication, 2017)
[69] S. Prevost, LCSO (personal communication, 2017)

Table 2: Withdrawal Management (Detox) Admission Projections

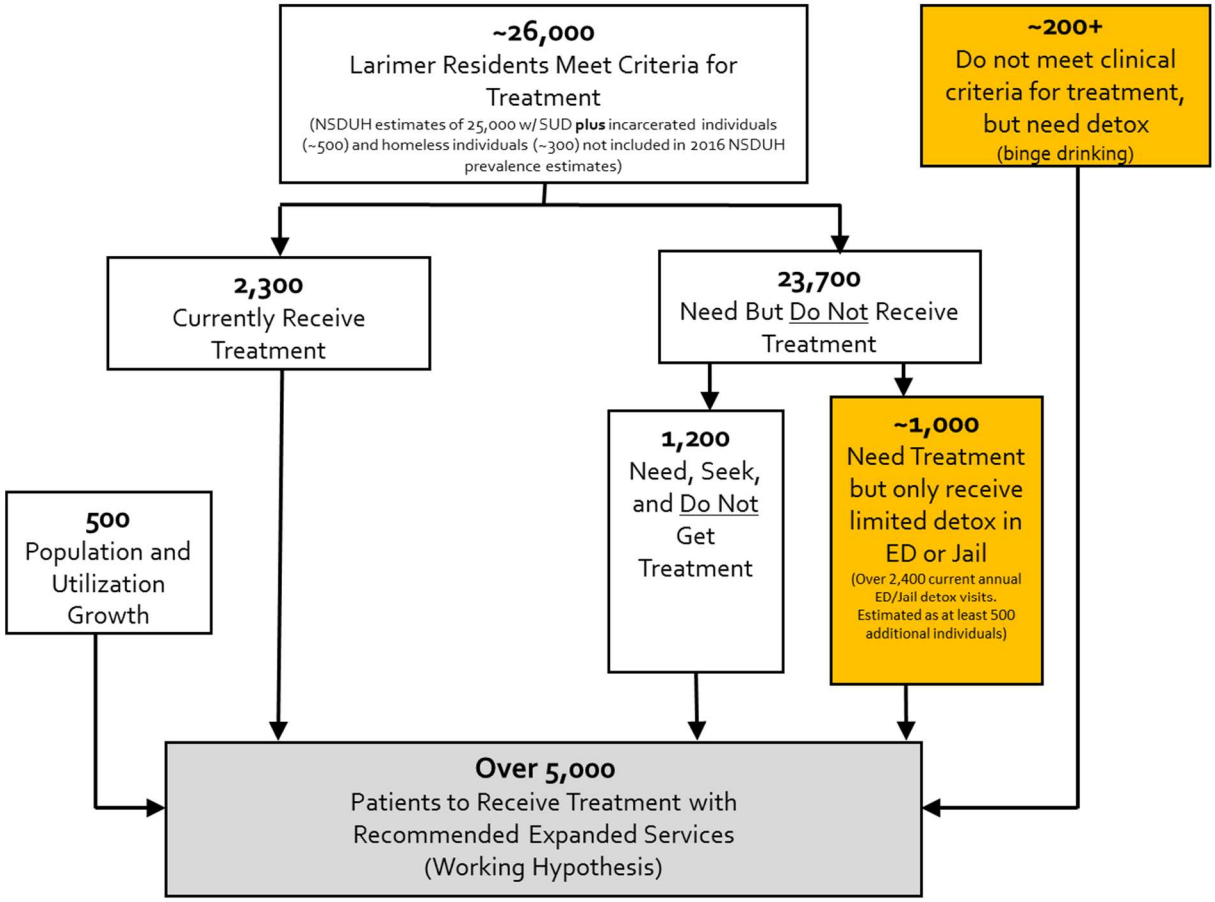
Admissions Source	WM/Detox Admissions	Comments
UCHealth Transfers to Greeley NRBH Detox – 2016	591	Number of individuals transferred from UCHealth care to NRBH Greeley Detox in 2016
UCHealth Emergency Departments – 2016	2,000	Emergency department visits with first-listed alcohol-related diagnosis (number is higher if drug-related diagnoses were included)
UCHealth Mountain Crest	500	Projected individuals who could have been served by Greeley detox but no beds or transportation was available
LC Jail – 2016	60	Individuals brought to jail for detox only, without any pending charges
Work Release/Community Corrections – Estimate	75	Projected individuals detoxing in other correctional settings because no local detox facility exists
Community Walk-Ins	350	Local dedicated detox facility would encourage walk-ins
Projected Admissions Totals	***3,500 admissions** (not patients)	

**Staff was able to project a total admissions/visit count based on local utilization data. This does not represent a total number of patients that would be served. More information is needed in order to accurately project the total number of patients served within the projected 3,500 admissions, as it is very likely that many of these patients would account for multiple admits.*

These individuals could instead be brought to a local detoxification facility, if available, reducing the burden on the local jail, correctional facilities, and the emergency departments. This addition of a local detoxification facility would also allow individuals to be properly assessed and possibly retained into other levels of treatment, rather than just being released back into the community without a referral. It would also ensure that individuals would have the proper medical care and access to medications that is needed for individuals to safely and more comfortably detox.

Based on the additional individuals being served and previously unidentified populations in NSDUH's prevalence estimates (i.e., homeless/transient and institutionalized in correctional facilities), as well as the additional individuals identified in need of detoxification services, we have increased the overall patient working hypothesis from the NIATx 4,700 people to over 5,000.

Figure 10: Substance Use Disorder Need Diagram (Updated by Staff, 2018)



Note that NIATx states in Appendix M, "Despite the unique withdrawal management environment in Colorado, NIATx group continues to think the Larimer Group's "capture rate" could be overstated."

Projection of Admissions to Specific Levels of Care

In their 2016 report, NIATx projected the number of direct admissions into specific services as well as the step-down admissions into various levels of service for approximately 4,700 patients. The figure on the following page describes areas where changes were made to NIATx projections during the 2018 update.

Figure 11: NIATx 2016 Patient Flow: Direct and Step-Down Admissions for 4,700 patients

DIRECT ADMISSIONS		STEP-DOWN ADMISSIONS			
		Withdrawal Management	Residential	IOP	OP
Withdrawal Management	1,175 25%		294 25%	295 25%	589 50%
Residential	470 10%			94 20%	330 70%
IOP	700 15%				630 90%
OP	2,350 50%				
MAT	25% of all direct				
Care Coordination	30% of all direct				
Sub-Total Direct Admissions	4,700 100%	1175	470	700	2350
Subtotal Step-Down Admissions			294	389	1,550
Total Admissions By Service		1,175	764	1,089	3,900

Local utilization data (ED, MtnCrest, Corrections etc.) indicated a much greater need for detox services in the community than NIATx estimated in 2016. This number has been increased by staff to **3,500 admissions**, to be served at both the medically-monitored and the "social" level of withdrawal management.

The "social" detox level has much shorter lengths of stay and typically serves those populations who are not actively seeking treatment and are likely less motivated. This equates to much higher admission rates than other levels of care and many individuals being re-admitted multiple times into this level of care. Step-down into other levels of ongoing treatment are likely to be lower for social detox than for other levels of detox. Because of this, staff broke the detox population into two distinct groups (Seeking TX v. Not Seeking TX). The "social" detox group would likely utilize detox services multiple times before being motivated enough to access other levels of care (Residential, IOP, OP etc.)

NIATx assumed a 25% step-down rate from Withdrawal Mgmt. into Residential, 25% into IOP, and 50% into OP services.

Colorado historically has much lower step-down rates from Withdrawal Mgmt. into Residential care (3-5%). Because of this staff reduced NIATx's 25% rate down to 10%, which still assumes a better retention rate than state rates due to thorough patient assessments and care coordination efforts recommended by staff.

Staff also applied much lower step-down percentages into these other levels of care for the population accessing "social" detox due to them not actively seeking treatment and likely decreased personal motivation for treatment services.

Figure 12 below provides updated projected admissions totals from MHSU Alliance staff work in 2018.

Figure 12: Updated 2018 Direct and Step-Down Admissions (MHSU Alliance)

DIRECT ADMISSIONS		STEP-DOWN ADMISSIONS			
		Withdrawal Management	Residential	IOP	OP
Withdrawal Management	3,500		325 5-10%	600 10-25%	1,425 25-50%
Residential	470			94 20%	330 70%
IOP	700				630 90%
OP	2,350				
MAT	25% of all direct				
Care Coordination	30% of all direct				
Sub-Total Direct Admissions	7,020	3,500	470	700	2350
Subtotal Step-Down Admissions			325	694	2384
Total Admissions By Service		3,500	795	1,394	4,734
Total Admissions Across Services					10,423

The new estimates of over 5,000 patients represents over 10,000 total admissions. These updated totals were used to estimate the number of beds, facility space, staffing, and other resources that would be needed to accommodate the community need.

Figure 13: Updated 2018 Patient Distribution and Capacity Estimates (MHSU Alliance)

Residential (595 total admissions)			
Loc.	**No. of Admits**	**Calculation**	**Est. Cap.**
STIR 12 days	318 53%	318@12 ALOS=3816/328days	12 beds
STIR 21(C) days	318 53%	318@21 ALOS=6678 per request	20 beds
LIR	198 33%	398@90 ALOS= 35,820/328/2 =	55 beds
SH	40 7%	Permanent housing. Service budget impact only	
SbH	40 7%		

The area circled in red is different from original NIATx calculations. Alliance staff calculated the total number of LIR beds needed, but then reduced the number by half due to budget considerations and the feasibility of going from no capacity to 155 beds. This meant also reducing the total Residential admissions by 200 and re-calculating the distribution percentages across the various residential levels of care.

LIR 398/2 = 198 & 110 beds/2 = 55 beds

Total Admissions 795 – 200 = 595

Intensive Outpatient (IOP) (1,394 total admissions)
No. of Admissions: 1394 patients
Calculation: 1,394 @ 12days ALOS = 16,728 treatment days/263 average days
Result: 63 patient census per day = 6 groups of 10

Outpatient (OP) (4,734 total admissions)
No. of Admissions: 4734 patients
Calculation: 4,734 @ 10 session average = 43,740 treatment hours/26 hrs per week per clinician / 50 weeks
Result: Staff capacity = 34 FTE clinicians

Recommendations to Fill Gaps in Behavioral Health Services in Larimer County

The previous information has been used to develop specific recommendations to create and support adequate services in each of the areas where gaps have been identified. It is recommended that many of the proposed services be provided in one facility in order to create efficiencies and a better continuum of care; however, many services will also be supported throughout the community. The following is a summary of these recommendations:

1. **Expand treatment capacity** to provide services to over 5,000 adults. The total annual utilization of all services included in the recommended model is estimated at over 10,000 admissions (defined broadly).

2. **Create the ability to perform medical clearance screenings and triage on-site** to reduce the need for emergency-room levels of care and transport to other levels of care.

   Provide in-depth assessment and re-assessment (differential diagnosis) on site in order to place patients in appropriate levels of care.

3. **Move the existing Crisis Stabilization Unit to the Behavioral Health Services Center** to provide walk-in crisis assessment and short-term crisis stabilization for people whose symptoms and treatment can be managed in non-hospital settings. *Build 16 beds with the capacity to provide up to 1,700 admissions. Begin operation with approximately 10 beds and 700 admissions.*

4. **Create a Withdrawal Management Center (drug/alcohol detoxification) in the Behavioral Health Services Center** to support detox from alcohol or drugs and transition individuals into treatment. Provide social (clinically managed) (American Society of Addiction Medicine [ASAM level 3.2]) and medically-monitored (ASAM level 3.7) levels of detox services; start patients on medication-assisted treatment for alcohol and opioid use disorders; and support more ambulatory detox (ASAM level 2.0) managed on an outpatient basis in the community. Those with higher-level medical needs will continue to access the intensive inpatient detoxification services (ASAM level 4.0) provided in local hospital settings. *Build 32 beds with the capacity for approximately 4,300 annual admissions. Begin operations with 26 beds with the capacity for approximately 3,500 admissions per year.*

5. **Create or support several levels of residential care to support up to 795 short-term and long-term supported residential admissions** as follows:
   - **Create a short-term, intensive residential treatment unit** in the facility, which would provide a safe therapeutic environment where clinical services and medications are available to patients who are medically stable and withdrawn from substances. *Build 16 beds with the capacity for up to 400 annual admissions. Begin operations with 13 beds with the capacity for up to 320 admissions per year.*
   - **Support low-intensity residential services** designed to build and reinforce a stable routine in a safe and supportive context for residents who lack a stable living

environment. Provide 24/7 certified addiction counselors. Encourage development of facilities (55 beds) by community providers.
- **Encourage the expansion/development of independent, voluntary sober housing** in the community, such as Oxford Houses, to provide safe and supportive living environments for those who choose and can pay for this type of residence. No external financing is recommended for this type of housing.

6. **Provide funding to support behavioral health support services,** including:
   - Early-identification and early-intervention services and resources for youth and families at risk for, or experiencing, mental illness or substance use issues or disorders
   - Suicide prevention efforts
   - Moderately intensive to intensive care coordination for up to 250 clients
   - A client assistance fund to help cover needs such as transportation, co-pays (including for IOP and OP), medication, and personal emergencies for up to 1,380 clients
   - Support services in permanent supportive housing for up to 100 clients with chronic health conditions who lack family/social supports and are disconnected from employment and other community functions (housing to be provided by other sources)

7. **Encourage the development of community capacity for intensive outpatient services** for individuals who require a more structured substance use disorder outpatient treatment experience than traditional outpatient treatment. Capacity needed: 1,400 IOP admissions, an average of 30 visits per admission, and an average daily census of 63. (Note: Since health insurance is likely to cover these services, this document's budget recommendation is for financial assistance for up to 175 uninsured or underinsured individuals.)

8. **Encourage the development of community capacity for outpatient substance use disorder treatment including medication-assisted treatment** to provide up to 4,700 admissions. (Note: Since health insurance is likely to cover these services, this document's budget recommendation is assistance for up to 525 uninsured or underinsured people.)

Impact of Implementation of Recommendations on Service Levels in the Community

Implementation of the recommendations contained in this document would result in a greatly expanded and more complete continuum of care for mental illnesses and addictions in Larimer County.

Figure 14 on the following page shows how the implementation of the recommendations contained in this document would impact the local availability of services compared to Figure 15, which shows current services and local capacity.

Figure 14: Projected Behavioral Health Service Capacity in Larimer County after Implementation of Recommendations

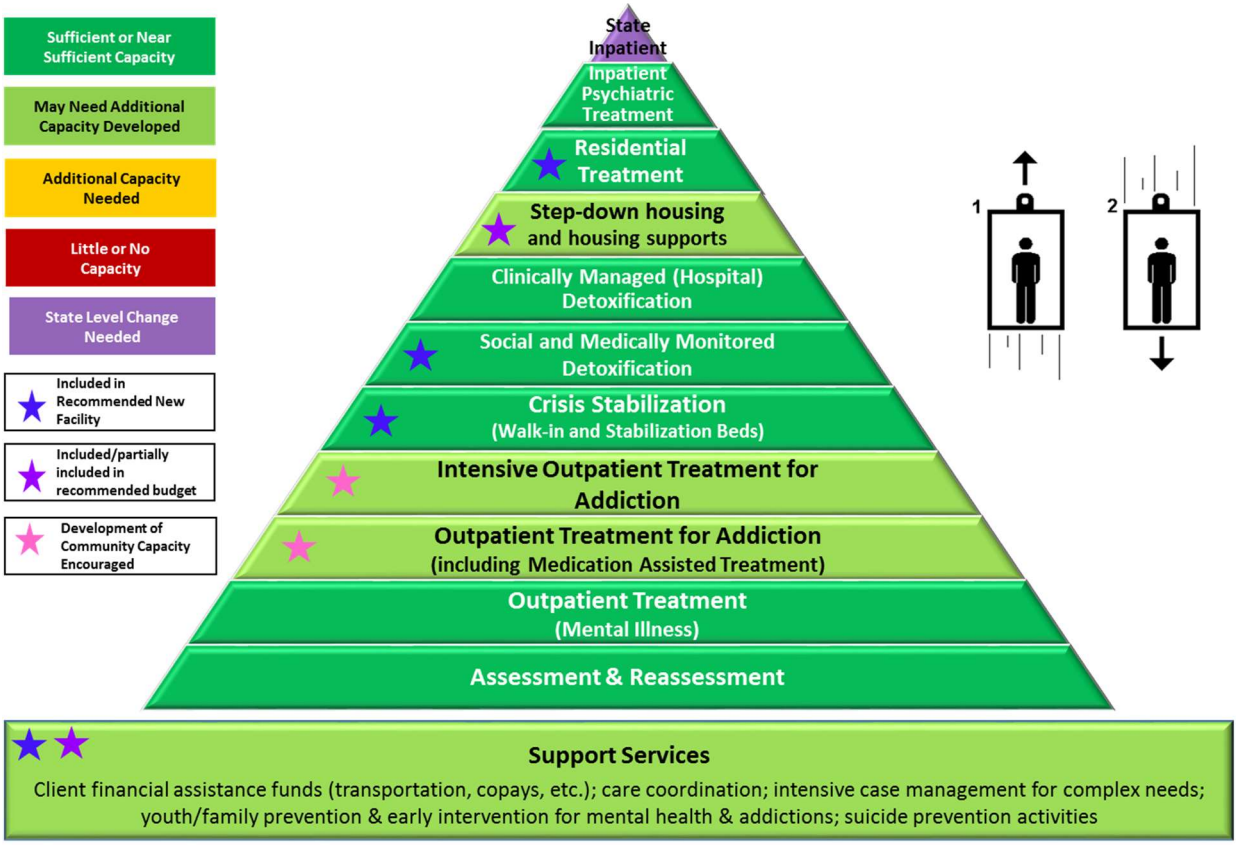
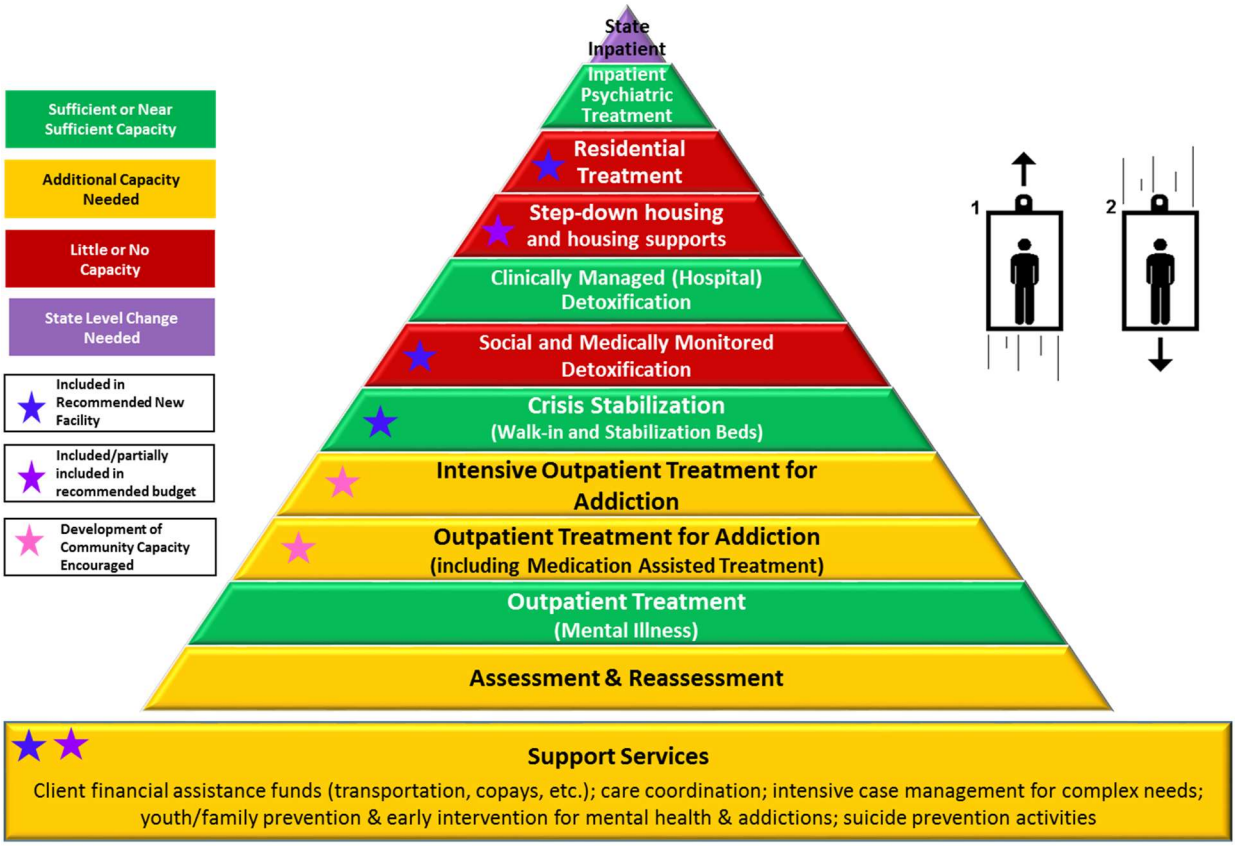


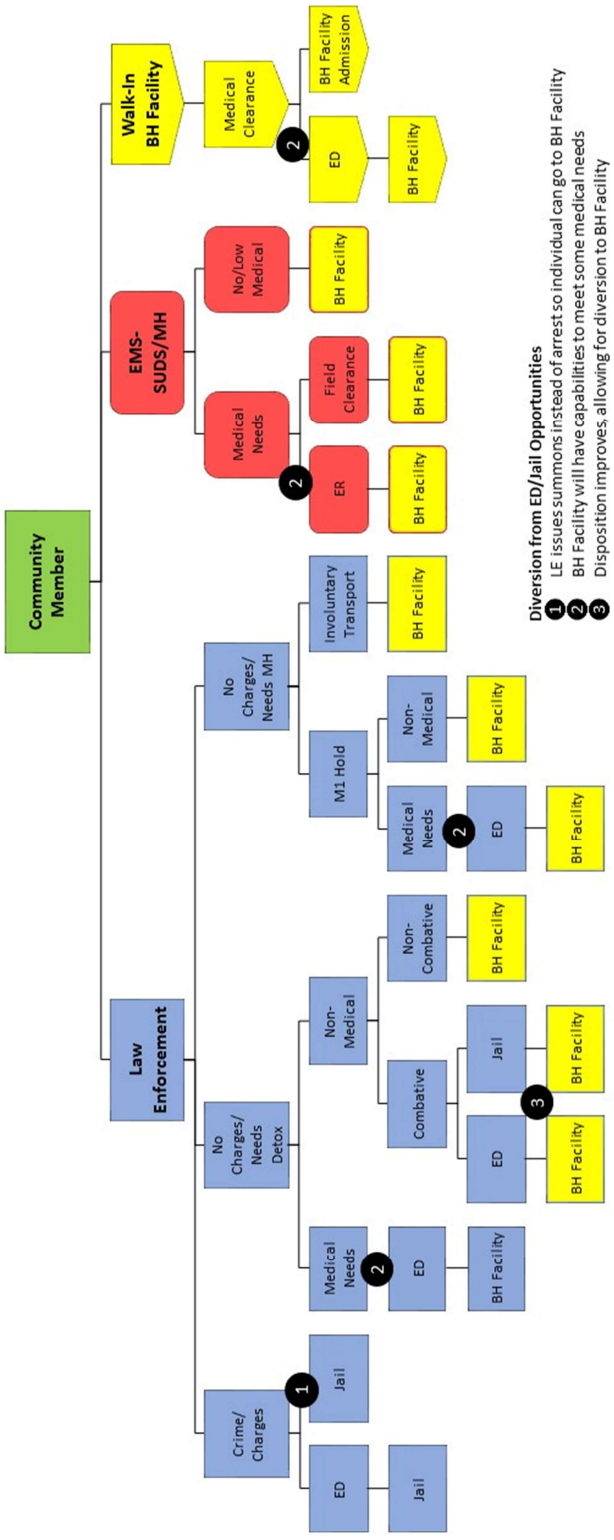
Figure 15: Current Behavioral Health Service Capacity in Larimer County



Impact on Other Community Services and Organizations

Having the recommended service array available in a 24/7 Behavioral Health Service facility will also have key impacts on other local community services and organizations. Figure 16 on the following page illustrates the many opportunities for earlier diversion to the new treatment facility and away from our more costly jail and emergency departments. These opportunities for diversion to the facility, where a range of detoxification services can be provided as a potential entry point into other treatment services in the facility and/or community, represent a key reason for configuring the services in the facility so that medical clearance, mental health and substance use related crises, and treatment are all available in one location. During this investigation of need for services, our local law enforcement, emergency responders, and hospital emergency department staff continually stressed how critical this expansion of services would be for their day to day operations. By creating a dedicated detox and crisis stabilization center under one roof, first responders will have a place to bring individuals where they can be properly assessed and housed. This will help reduce "bouncing" of individuals between various locations in the community and free up law enforcement and EMS to respond to more calls. It will also reduce the current reliance on jails and emergency departments to no longer have to provide this low-level of detoxification that generally does not result in connection to other levels treatment or follow-up care, and is much more costly.

Figure 16: Diversion to Behavioral Health Facility Flow Chart



Financial and Facility Needs

Financial Resources Needed

A comprehensive budget has been developed, and the estimated annual cost to provide these services is $15.2 million (taking into account an anticipated $6.5 million in client and payer revenues). For more detailed budget information, see Appendices D and E.

Projected Overall Operating Budget	
Personnel	$11.7 million
Operational (operational costs, maintenance, equipment, contracted services, etc.)	7.2 million
Client Assistance	2.3 million
Family and Youth Resources and Suicide Prevention Resources	0.5 million
TOTAL	**$21.7 million**
Less Client and Payer Revenues	6.5 million
Needed Annual Funding	**$15.2 million**

Facility Needs and Associated Costs

Estimates for facility space and costs are based on providing many services in one facility. Based on current estimates, a 60,000 square-foot facility is needed. Total facility and project land costs are estimated at $33.4 million if built in 2020. Facility costs have not been estimated for low-intensity residential services. Land costs will depend on the site selected.

Similar to other dedicated, state-of-the-art health facilities in the area, such as the $20M Cancer Center built by UCHealth in 2014, this facility will house key treatment services in one place. One key difference is that the services provided by other healthcare facilities, such as the Cancer Center, are paid for by health insurance; while only about 30% of costs of the recommended behavioral health treatment services would receive insurance reimbursement. This results in the funding gap of about $15 million a year.

For a more detailed list of recommended services, see Appendix A (List of Recommended Services and Capacity). For information on how proposed services impact local service capacity, See Appendix B. For a comparison of 2018 service recommendations to 2016 service recommendations, see Appendix C. For more detailed facility and budget information, see Appendices D and E.

Benefits and Value to the Community *(From the "Development of Critical Behavioral Health Services Report by NIATx, February 19, 2016)*

There is ample evidence to demonstrate significant value and benefits of behavioral health disorder treatment. Patients and families benefit from increased health, well-being, and ability to function in their family, work, community, and society (similar benefits as those seen for managing symptoms of diabetes or hypertension). Communities realize reductions in related costs. Additionally, the National Institute of Health estimates that every dollar spent on addiction treatment yields a return of between $4 and $7 in reduced drug-related crime, criminal justice costs, and theft. When healthcare related savings, such as savings from reduced use of emergency departments, ambulance, and inpatient treatment are included, total savings can exceed costs by a ratio of 12 to 1.

Benefits to the Community

Substance abuse costs our nation over $600 billion annually.[70] However, adequate treatment can help reduce these costs:

- Drug addiction treatment has been shown to reduce associated health and social costs by more than the cost of treatment and to be much less expensive than its alternatives, such as incarcerating those with addictions.[71] [72]
- According to several conservative estimates, every dollar spent on addiction treatment programs yields a return of between $4 and $7 in reduced drug-related crime, criminal justice costs, and theft. When savings related to healthcare are included, total savings can exceed costs by a ratio of 12 to 1.[73]
- For those who received treatment, the likelihood of being arrested decreased 16 percent and the likelihood of felony convictions dropped 34 percent, further contributing to cost savings for the state.[74] Washington State estimated that it will save $2.58 in criminal justice costs for every dollar spent on treatment, and realize an overall $3.77 offset per dollar of treatment costs.[75]
- Over the first four years of operation, the Community Dual Disorder Treatment (CDDT) program in Larimer County, an Integrated Dual Disorder Treatment (IDDT) program, significantly reduced overall inappropriate service usage by 58 percent. ER visits among participants fell by 84 percent, ambulance usage went down by 78 percent, in-patient psychiatric treatment was reduced by 92 percent, and arrests were lowered by 62 percent,

[70] National Institute for Health. (2012).
[71] National Institute for Health. (2012).
[72] Anglin, M. D., Nosyk, B., Jaffe, A., Urada, D., & Evans, E. (2013). Offender Diversion Into Substance Use Disorder Treatment: The Economic Impact of California's Proposition 36. *American Journal of Public Health*, *103*(6), 10.2105/AJPH.2012.301168. http://doi.org/10.2105/AJPH.2012.301168
[73] National Institute for Health. (2012).
[74] Estee, S. and Norlund, D. (2003). Washington State Supplemental Security Income (SSI) Cost Offset Pilot Project: 2002 Progress Report. R.a.D.A. Division and W.S.Do.S.a.H. Services, Washington State.
[75] Mancuso, D., & Felver, B. (2010). Health Care Reform, Medicaid Expansion and Access to Alcohol/Drug Treatment: Opportunities for Disability Prevention. (RDA Report No. 4.84) Olympia, WA: Washington State Department of Social and Health Services.

resulting in savings to the community of over $174,000 after program costs were factored in.[76]

- A 2013 study found that people receiving medication for their mental health disorder were significantly less likely to be arrested, and that receipt of outpatient services also resulted in a decreased likelihood of arrest. The researchers also compared criminal justice costs with mental health treatment costs. Individuals who were arrested received less treatment and each cost the government approximately $95,000 during the study period. Individuals who were not arrested received more treatment and each cost the government approximately $68,000 during the study period.[77]

Benefits to Payers

There are also proven benefits of effective behavioral health disorder treatment to those organizations that pay for healthcare, such as health insurance companies and state and federal healthcare plans such as Medicaid and Medicare. Values reaped by payers may result in helping to reduce growth in premiums for individuals and organizations as well as controlling taxpayer costs for federal and state programs.

- In one study of four different modalities of substance abuse/use treatment, including inpatient, residential, detox/methadone, and outpatient drug-free modalities; when compared to other health interventions, all of the substance abuse treatment modalities examined appear to be cost-effective when compared to ongoing substance abuse/use.[78]
- Some states have found that providing adequate mental health and addiction-treatment benefits can dramatically reduce healthcare costs and Medicaid spending. A study of alcohol and drug abuse treatment programs in Washington State found that providing a full addiction-treatment benefit resulted in a per-patient savings of $398 per month in Medicaid spending.[79]
- Kaiser Permanente Northern California analyzed the average medical costs during 18 months pre and post substance use treatment and found that the SU treatment group had a 35% reduction in inpatient cost, 39% reduction in ER cost, and a 26% reduction in total medical cost, compared with a matched control group.[80] [81]
- Kaiser also found that family members of patients with substance use disorders had high healthcare costs and were more likely to be diagnosed with a number of medical conditions than family members of similar persons without a substance use condition.[82]

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[76] Cooper, Bruce. (2013). *Larimer County Community Dual Disorder Treatment Program, Program Evaluation of First Four Years*. Fort Collins, CO: Health District of Northern Larimer County.

[77] Van Dorn, R. A., Desmarais, S. L., Petrila, J., Haynes, D., & Singh, J. P. (2013). Effects of outpatient treatment on risk of arrest of adults with serious mental illness and associated costs. *Psychiatric Services*. Retrieved from http://focus.psychiatryonline.org/doi/10.1176/appi.ps.201200406

[78] Mojtabai, R., & Graff Zivin, J. (2003). Effectiveness and Cost-effectiveness of Four Treatment Modalities for Substance Disorders: A Propensity Score Analysis. *Health Services Research*, *38*(1p1), 233–259.

[79] Estee, S. and Norlund, D. (2003). Washington State Supplemental Security Income (SSI) Cost Offset Pilot Project: 2002 Progress Report. R.a.D.A. Division and W.S.Do.S.a.H. Services, Washington State.

[80] Weisner C. Cost Studies at Northern California Kaiser Permanente. Presentation to County Alcohol & Drug Program Administrators Association of California Sacramento, California. January 28, 2010

[81] Weisner C, Mertens J, Parthasarathy S, et al. Integrating primary medical care with addiction treatment: A randomized controlled trial. Journal of the American Medical Association, 2001; 286: 1715-1723.

[82] Weisner C, Mertens J, Parthasarathy S, et al. 2001.

For families of SU patients who were abstinent at one-year after treatment began, the healthcare costs of family members were no longer higher than other Kaiser members.[83]

Conclusions on Value and Benefits of Effective Substance Use Disorder Treatment

In the 21st century there is ample evidence that substance use disorders are treatable health conditions. There is also a strong body of evidence that treatment of substance use disorders is cost-effective and results in significant benefits to patients, families, the community, and payers. For an additional review of value and benefits, see Appendix F, Treatment is Cost Effective, and Benefits are Spread Between Many Different Pockets.

[83] Ray GT, Mertens JR, Weisner C. The excess medical cost and health problems of family members of persons diagnosed with alcohol or drug problems. Medical Care. February 2007. Vol. 45 Issue 2: 116-122.

Appendices

APPENDIX A

List of Recommended Services and Capacity (February 2018 Update)

SERVICES TO BE PAID FOR WITH PROJECTED BUDGET, IN A NEW 24/7 BEHAVIORAL HEALTH SERVICES FACILITY

1) Medical Clearance/Triage, and Various Levels of Assessment and Re-Assessment

- **Medical Clearance:**
  - Ability to do 24/7 quick medical screen/clearance onsite to ensure that symptoms are not caused by physical condition, and to determine appropriateness and any risk for level of care indicated.
- **Assessment/Reassessment** (up to 8,500 assessments/re-assessments)
  - Clinically strong, evidence-based assessment of both mental illness and substance use disorders provided by psychiatrists, licensed clinicians with differential diagnosis expertise.
  - Assessment results used to make connections to appropriate level of care

2) Crisis Stabilization Unit (CSU)

- Move existing walk-in and crisis stabilization services from the existing Riverside Avenue location to the new facility
  - **a) Walk-in crisis assessments** (2,500 assessments)
  - **b) Crisis Stabilization Unit**
    - **Begin operations with**: 10 beds (9 beds plus 1 23-hour observation bed), and 700 admissions, ALOS 3.1 days (up to 5 days)
    - **Build:** 16 beds (15 beds plus 1 23-hour observation bed), potential for 1,700 admissions, ALOS 3.1 days (up to 5 days)
  - **c) Crisis calls** (Begin operations with capacity for approximately 2,000 calls)

3) Withdrawal Management Services (also known as "detox")

- **a) Social Model Withdrawal Management,** ALOS 2.8 days
- **b) Medically Monitored Withdrawal Management,** ALOS 5 days
  - **Begin operations with:**
    - 26 beds (flex beds for either social or medically monitored as needed)
    - Potential admissions: approximately 3,500 (at approximate ratio of 10 social to 16 medically monitored beds)
  - **Build:**
    - 32 beds (flex beds for either social or medically monitored as needed)
    - Potential admissions: approximately 4,300 (at approximate ratio of 13 social to 19 medically monitored beds)

Includes adequate staff to enable good triage and assessment, flow between levels of care, engagement of clients in treatment to the greatest level possible, administering of personal meds and meds for initial withdrawal, start medication-assisted treatment for opioid withdrawal, and support ambulatory detox

4) Short Term Intensive Residential (STIR), average LOS 12 days. Short term intensive treatment for substance use disorders.

- **Begin operations with:** 13 beds, capacity for up to 320 admissions
- **Build:** 16 beds, capacity for up to 400 admissions

SERVICES TO BE PAID FOR WITH PROJECTED BUDGET, IN THE COMMUNITY

5) Moderately Intensive to Intensive Care Coordination: 250 caseload
Provides higher level care coordination for those with most complex needs, more significant behavioral health disorders (expands existing community model)

6) Supportive Services for those in Permanent Supportive Housing (PSH): 100 caseload. Provides behavioral supportive services for those whose level of functional impairment are appropriate for permanent supportive housing. (Could potentially become available as the 2nd PSH facility is built).

SERVICES TO BE SUPPORTED WITH PROJECTED BUDGET, IN THE FACILITY AND IN THE COMMUNITY

7) **Care coordination:** 1,650 clients to receive care coordination between facility and community
8) **Assistance Funds ($2,310,000)** to provide **limited help** with Intensive Outpatient (IOP) and Outpatient (OP) Services, Medication-Assisted Treatment (MAT) costs, and flexible funding to assist with medications, transportation, deductibles/co-pays, etc.

   IOP: average LOS 30 visits; 1,400 annual admissions total capacity needed (175 patients estimated in need of financial assistance: $660,000)

   OP: average LOS 10 visits; 4,700 annual admissions total capacity needed (520 estimated in need of financial assistance: $310,000)

   Medication-Assisted Treatment: approximately 1,800 annual admissions total capacity needed (180 estimated in need of financial assistance: $635,000)

   Other assistance: Approximately 500 patients annually, $1,400 each ($700,000)

Existing providers will be encouraged to expand IOP and OP services for substance use disorders. While **insurance is anticipated to pay for most of the cost of IOP and OP, and some of the costs of MAT**, some of the client assistance funds are anticipated to be needed to assist with deductibles and copays for IOP and OP services for substance use disorders.

SERVICES TO BE PARTIALLY SUPPORTED WITH PROJECTED BUDGET, IN THE COMMUNITY

9) **24/7 Certified Addictions Counselors (CACs)** for Long Term Low Intensity Residential Care (LIR):
   - 55 beds, 400 admissions, average LOS 90 days
   - Other organizations would provide facilities, projected funding would pay for 24/7 CAC staffing

SUMMARY

	Initial	**Total to Build**
Total Beds in Facility	49	64
Total Approximate Annual Admissions to Services in Facility	7,000	9,000
Total Potential Beds Recommended to be Developed in Community (Long Term Low Intensity Residential Care - LIR)	TBD	55
Total Approximate Annual Admissions to Services Recommended to be Developed in Community – LIR)	TBD	400
Total clients (duplicated) accessing support services in facility and in community (care coordination; moderately intensive to intensive care coordination; support services in permanent supportive housing; financial assistance; assessment and re-assessment). (Many will receive multiple services)		8,500

APPENDIX B

Summary of Estimated Increased Service Capacity to be Developed with Proposed Budget (February 2018 Update) at Start of Operations

TREATMENT SERVICES TO BE PROVIDED IN FACILITY			
Service Description	**ALOS**	**Beds**	**Admissions**
Medically Monitored Withdrawal Mgmt. & Social WD Mgmt.	15 hrs to 5 days	26 beds (10 social, 16 MM)	3,500 admissions
Short-term Residential (STIR) SUD Treatment	12-21 days	13 beds	320 admissions
Crisis Stabilization Unit (Existing – to be moved to facility)	3 days	10 beds	700 admissions
Crisis Walk-in (Existing – to be moved to facility)	NA	NA	2,500 admissions
Total Treatment Services in Facility		**49 beds**	**7,000 admissions**
Total Increase in Treatment Capacity (Through Services being Provided in Facility)		**39 new beds** **(due to 10 existing CSU beds being moved to facility)**	**4,400 new admissions** **(due to 2,000 existing crisis walk-ins and 660 existing crisis stabilization services to be moved to facility)**

ADDITIONAL SUPPORT SERVICE CAPACITY (IN FACILITY AND IN COMMUNITY)	
Service Description	**Annual Utilization**
Support Services in Permanent Supportive Housing	100 clients
Care Coordination	1,900 clients *(25-30% of direct admissions to facility, including 250 clients receiving mod to intensive)*
Client Financial Assistance	1,380 clients *185 MAT, 175 IOP, 520 OP, 500 Other*
Patient-Centered Assessment	Up to 8,500 assessments and re-assessments for approximately 5,200 duplicated clients
Total Increase in Individuals Receiving Support Services	**8,500 duplicated clients** (many will receive multiple services)

ADDITIONAL SUBSTANCE USE DISORDER TREATMENT CAPACITY NEEDED AND TO BE ENCOURAGED IN THE COMMUNITY			
Service Description		**ALOS**	**Capacity Needed**
Low-Intensity Residential (LIR) SUD Treatment	24/7 Certified Addictions Counselors being supported by proposed budget. Facilities not included in budget – development to be encouraged by community.	90 days	55 Beds 200 admissions
SUD Intensive Outpatient (IOP)	Insurance coverage available. Client financial assistance for approximately 175 patients included in budget.	30 visits	1,400 admissions
SUD Outpatient	Insurance coverage available. Client financial assistance for approximately 520 patients included in budget.	10 sessions	4,700 admissions
Medication-Assisted Treatment (MAT)	Some insurance coverage available. Client financial assistance for approximately 185 patients included in budget.	varies	1,840 patients

APPENDIX C

Comparison of 2018 Service Recommendations to 2016 Recommendations

SERVICES WITH CHANGES RECOMMENDED	
SERVICES TO BE PAID FOR WITH PROJECTED BUDGET, IN A <u>NEW 24/7 BEHAVIORAL SERVICES FACILITY</u>	
Previous Recommendation (February 2016)	**New Recommendation (January 2018)**
1) Thorough Assessments: (7,600 assessments) • Clinically strong, evidence-based, assess both mental illness and substance use disorder • Provided by psychiatrists, licensed therapists, CACs with differential diagnosis expertise • Connections to appropriate community service	**0) Triage/Medical Clearance** • Ability to do 24/7 quick medical screen/clearance onsite to ensure that symptoms are not caused by physical condition, and to determine appropriateness and any risk for level of care indicated. **and** **1) Thorough Assessments** (up to 8,500 assessments and re-assessments) • Clinically strong, evidence-based assessment of both mental illness and substance use disorders provided by psychiatrists, licensed clinicians, CACs with differential diagnosis expertise. • Assessment results used to make connections to appropriate level of care either internally or in the community.
2) Acute Treatment Unit: • 12 beds, 990 admissions, average length of stay (LOS) 5 days • Acute mental illness stabilization when hospitalization not required; more than crisis stabilization center but less than inpatient hospitalization	**2) Crisis Stabilization Unit:** • Fill need for "ATU" level of care through Crisis Stabilization Unit now operational. • Move existing walk-in crisis services from Riverside Avenue to facility. • Mobile services will continue to be located throughout community. **2a) Walk-in crisis assessments** (2,500 assessments) **2b) Crisis Stabilization Unit** • **Begin operations with**: 10 beds (9 beds plus 1 23-hour observation bed), and potential for up to 700 admissions, ALOS 3.1 days (up to 5 days); • **Build:** 16 beds (15 beds plus 1 23-hour observation bed), potential for 1,700 admissions, ALOS 3.1 days (up to 5 days) **2c) Crisis calls** (2,000 calls)

SERVICES TO BE PAID FOR WITH PROJECTED BUDGET, IN A <u>NEW 24/7 BEHAVIORAL SERVICES FACILITY (CON'T)</u>	

3) Medically Monitored Withdrawal Management (formerly known as "detox")
• 12 beds, 820 admissions, average LOS 5 days
• Includes adequate medical staff to be able to administer person's personal meds, meds for initial withdrawal if needed, and start medication-assisted treatment for opioid withdrawal
• Medical detox to go to Mountain Crest Behavioral Health & other
• Social detox to continue to go to Weld County
	3) Withdrawal Management Services (also known as "detox")
	
	3a) Social Model Withdrawal Management, ALOS 15 hours to 2.8 days
	
	3b) Medically Monitored Withdrawal Management, ALOS 5 days
	
	• **Begin operations with:**
	  • 26 beds (flex beds for either social or medically monitored as needed)
	  • Potential admissions: approx. 3,500 (at approximate ratio of 10 social to 16 medically monitored beds)
	• **Build:**
	  • 32 beds (flex beds for either social or medically monitored as needed)
	  • Potential admissions: approx. 4,300 (at approximate ratio of 13 social to 19 medically monitored beds)
	Includes adequate staff to enable good triage and assessment, flow between levels of care, engagement of clients in treatment to the greatest level possible, administer personal meds, meds for initial withdrawal if needed, start medication-assisted treatment for opioid withdrawal, and support ambulatory detox as appropriate.

4) Short Term Intensive Residential Treatment (STIR) for SUDs: 11 beds, 300 admissions, average LOS 12 days	**4) Short Term Intensive Residential Treatment (STIR) for SUDs,** average LOS 12 days. • **Begin operations with:** 13 beds, capacity for approximately 320 admissions • **Build:** 16 beds, capacity for approximately 400 admissions
SERVICES TO BE PARTIALLY SUPPORTED WITH PROJECTED BUDGET, IN THE <u>COMMUNITY (AND FACILITY)</u>	
5) Assistance Funds ($2,401,300) to provide **limited help** to 2,173 people with Intensive Outpatient (IOP) and Outpatient (OP) Services, Medication-Assisted Treatment (MAT) costs, and flexible funding to assist with medications, transportation, deductibles/co-pays, etc. IOP: average LOS 30 visits; 1,089 annual admissions total capacity needed (218 estimated in need of financial assistance: $817,500)	**5) Assistance Funds ($2,309,891)** to provide **limited help** to approximately 1,383 people with Intensive Outpatient (IOP) and Outpatient (OP) Services, Medication-Assisted Treatment (MAT) costs, and flexible funding to assist with medications, transportation, deductibles/co-pays, etc. IOP: average LOS 30 visits; 1,400 annual admissions total capacity needed (175 estimated in need of financial assistance: $658,125)

SERVICES TO BE PARTIALLY SUPPORTED WITH PROJECTED BUDGET, IN THE COMMUNITY (AND FACILITY) (CON'T)	
OP: average LOS 10 visits; 3,800 annual admissions total capacity needed (780 estimated in need of financial assistance: $468,000) Medication-Assisted Treatment: 1,175 annual admissions total capacity needed (117 estimated in need of financial assistance: $415,800) Other assistance: Approximately 500 patients annually, $1,400 each ($700,000) Existing providers will be encouraged to expand IOP and OP services for substance use disorders. While **insurance is anticipated to pay for most of the cost of IOP and OP, and some of the costs of MAT**, some of the client assistance funds are anticipated to be needed to assist with deductibles and copays for IOP and OP services for substance use disorders.	OP: average LOS 10 visits; 4,700 annual admissions total capacity needed (523 estimated in need of financial assistance: $313,860) Medication-Assisted Treatment: 1,841 annual admissions total capacity needed (184 estimated in need of financial assistance: $637,907) Other assistance: Approximately 500 patients annually, $1,400 each ($700,000) Existing providers will be encouraged to expand IOP and OP services for substance use disorders. While **insurance is anticipated to pay for most of the cost of IOP and OP, and some of the costs of MAT**, some of the client assistance funds are anticipated to be needed to assist with deductibles and copays for IOP and OP services for substance use disorders.

SERVICES WITH NO CHANGES RECOMMENDED
SERVICES TO BE PAID FOR WITH PROJECTED BUDGET, IN THE COMMUNITY
6) Moderately Intensive to Intensive Care Coordination: 250 caseload Provides higher level care coordination for those with most complex needs, more significant behavioral health disorders (expands existing community model)
7) Supportive Services for those in Permanent Supportive Housing: 100 caseload Provides behavioral supportive services for those whose level of functional impairment are appropriate for permanent supportive housing
SERVICES TO BE PARTIALLY SUPPORTED WITH PROJECTED BUDGET, IN THE COMMUNITY
8) 24/7 Certified Addictions Counselors (CACs) for Long Term Low Intensity Residential Care (LIR) aka "Halfway Houses": 55 beds, 200 admissions, average LOS 90 days While other organizations would provide the facilities, projected funding would cover the cost of CACs 24/7

TREATMENT SERVICES					
INSIDE FACILITY					
		2016		**2018**	
Service	**ALOS**	**Capacity**	**Annual Utilization**	**Capacity**	**Annual Utilization**
Medically Monitored Withdrawal Mgmt. & Social WD Mgmt.	15 hrs to 5 days	12 beds MM only	822 admissions MM only	26 beds (10 social 16 MM)	3,500 admissions
Short-term Residential (STIR) SUD Treatment	12-21 days	11 beds	305 admissions	13 beds	320 admissions
Crisis Stabilization Unit (ATU in 2016)	5 days	12 beds (ATU)	986 admissions (ATU)	10 beds	700 admissions
Crisis Walk-in	NA	NA	NA	NA	2,500 walk-ins
Subtotal Treatment Services in Facility		**35 beds**	**2,100 admissions**	**49 beds**	**7,000 admissions**

IN THE COMMUNITY					
		2016		**2018**	
Service	**ALOS**	**Capacity**	**Annual Utilization**	**Capacity**	**Annual Utilization**
Low-Intensity Residential (LIR) SUD Treatment	90 days	52 beds	190 admissions	55 beds	200 admissions
Total All Treatment Services		**93 beds**	**7,200 admissions**	**87 beds**	**2,300 admissions**

SUPPORT SERVICES (IN FACILITY AND IN COMMUNITY)					
		2016		2018	
Service	**ALOS**	**Capacity**	**Annual Utilization**	**Capacity**	**Annual Utilization**
Support Services in Permanent Supportive Housing		100 clients	100 clients	100 clients	100 clients
Care Coordination (25%-30% of all direct admissions)	Long-term	1,400 clients (including 250 clients receiving mod to intensive)	1,400 clients (including 250 clients receiving mod to intensive)	1,900 clients (including 250 clients receiving mod to intensive)	1,900 clients (including 250 clients receiving mod to intensive)
Patient-Centered Assessment	NA	NA	7,600 assessments and re-assessments (~4,700 clients)	NA	8,500 assessments and re-assessments (~5,200+ clients)
Client Assistance	Long-term	NA	1,618 clients 120 MAT, 218 IOP, 780 OP, 500 Other	NA	1,383 clients 184 MAT, 176 IOP, 523 OP, 500 Other
Total Clients Receiving Support Services		**7,800 duplicated clients** (many will receive multiple services)		**8,500 duplicated clients** (many will receive multiple services)	

ADDITIONAL SUBSTANCE USE DISORDER TREATMENT CAPACITY NEEDED AND TO BE ENCOURAGED IN THE COMMUNITY (INSURANCE COVERAGE AVAILABLE, CLIENT ASSISTANCE BUDGETED TO ASSIST CLIENTS IN ACCESSING SERVICES)					
		2016		2018	
Service	**ALOS**	**Capacity**	**Annual Utilization**	**Capacity**	**Annual Utilization**
SUD Intensive Outpatient (IOP)	30 visits	50 patients/day	1,089 admissions	63 patients/day	1,400 admissions
SUD Outpatient	10 sessions	30 FTE	3,800 admissions	34 FTE	4,700 admissions

SUMMARY		
Item	**2016**	**2018**
Total Beds	87	108
Total Admissions	2,100	7,200
Total Clients receiving Support Services	7,800 (duplicated)	8,500 (duplicated)
Total Beds to be Developed in Community	52	55
Total Admissions to Beds to be Developed in Community	190	200
Total Additional IOP Admissions Needed in Community	1,089	1,400
Total Additional OP Admissions Needed in Community	3,800	4,700

APPENDIX D

24/7 Behavioral Health Services Center Budget and Facilities Plan Summary
February 2018 Update

Services Plan Summary		
Expenditures		
	Notes	**Amount**
Personnel Costs		
Salaries	~167 FTE	$9,237,729
Benefits		$2,431,398
Total Personnel Costs		**$11,669,127**
Operational Costs		
30% of Total Budget plus CSU/Walk-in actual		$5,002,154
Annual Facility Operating and Maintenance Costs		$547,699
Client assistance funds		$2,309,892
24/7 security contracting		$300,000
Transportation		$350,000
Youth Prevention/Suicide initiatives		$500,000
Contracted food/Pharma		$800,000
Contracted laundry		$31,500
Overtime allowance		$125,000
Total Operational Costs		**$9,966,244**
Total Expenditures		**$21,635,372**
Revenues		
Client and Payer Revenues		$6,539,683
Total Revenues		**$6,539,683**
Needed Funding		**$15,095,688**

Facilities Plan Summary		
	Notes	**Sq. Footage**
Total Program Space		**44,339**
Plus Building Grossing Factor		15,519
Total Square Footage		**59,858**
Facility Project Costs		**Amount**
Design		$1,496,445
Construction		$15,263,735
FF&E		$3,591,467
Misc. Costs		$1,197,156
2016 Land Cost Estimate (4-7 acres)		$2,036,430
2016 Grand Total Facility Cost		**$23,585,233**
Construction Costs Per Square Foot (recommended 10% increase per year starting in 2018)		$394
Projected Grand Total Facility Cost (without land cost)		**$30,781,866**
Projected Construction Costs Per Square Foot		$514
Projected Grand Total Facility Cost (with 2016 est. land cost)		**$32,818,296**

APPENDIX E

Comparison of 2018 Services and Facilities Plan Budgets to 2016 Budgets

Expenditures	2016		2018	
	Notes	Amount	Notes	Amount
Personnel Costs				
Salaries	~125 FTE	$6,746,250	~167 FTE	$9,237,729
Benefits		$1,821,488		$2,431,398
Total Personnel Costs		**$8,567,738**		**$11,669,127**
Operational Costs				
General Operational	30% of Total Budget	$3,672,000		$5,002,154
Operations, Maintenance, Replacement Costs		$467,283		$547,699
Client Assistance Funds	Uninsured, underinsured, medication, etc.	$2,401,300		$2,309,892
Contracted Services	Security, food, laundry, personnel	$659,000		$2,106,500
Total Operational Costs		**$7,199,583**		**$9,966,244**
Total Expenditures		**$15,767,320**		**$21,635,372**

Revenues	2016		2018	
	Notes	Amount	Notes	Amount
Client and Payer Revenues		$3,996,220		$6,539,683
Total Revenues		**$3,996,220**		**$6,539,683**
Needed Funding		**$11,771,100**		**$15,095,688**

Facilities Plan Budget Summary		
	2016	2018
Total Square Footage	**51,069 sq. ft.**	**59,858 sq. ft.**
Facility Project Costs		
Design	$1,276,729	$1,496,445
Construction	$13,022,633	$15,263,735
Furniture, Fixtures & Equipment (FF&E)	$3,064,149	$3,591,467
Misc. Costs	$1,021,383	$1,197,156
Land	$2,036,430	$2,600,000
Projected Grand Total Facility and Land Cost	**$20,421,324**	**$24,148,803**
	2020	
Projected Grand Total Facility and Land Cost	**$33,381,866**	

*Facility cost projections provided by Larimer County staff.

APPENDIX F

Treatment is Cost Effective, and Benefits are Spread Between Many Different Pockets

Compiled by Henrick Harwood, Deputy Executive Director/Director of Research & Program Applications National Association of State Alcohol & Drug Abuse Directors (NASADAD) May 2016

The National Institutes of Health (NIH) concludes that substantial research shows for every $1 spent on substance use disorder (SUD) treatment there are about $4 to $7 in economic benefits.

(National Institute for Health. (2012). Principles of Drug Addiction and Treatment: A research-based guide/third edition).

The same report concludes that economic costs of substance abuse (illicit drug, alcohol and tobacco) are about $600 billion per year, or nearly $2,000 per person in the US. The economic cost of mental disorders is cited by the National Institute on Mental Illness at over $300 billion per year, or almost $1,000 per person in the US. Extrapolating that amount to Larimer County, the estimated economic costs of both substance use disorders and mental illness locally are about $900 million.

The cost per person with SUD or a mental disorder is literally tens of thousands of dollars per year, depending on their diagnosis, severity, age, and treatment status.

These costs come in many forms, affect many institutions, and permeate society and communities:

- **The Person Impacted by the Disorder:** Nearly half of costs fall on the nearly 50 million experiencing mental disorders (estimated 44,000 locally) and over 20 million (estimated 31,000 locally) with SUD disorders - in terms of impaired workplace and household productivity, lost jobs and derailed careers.
- **Workplaces and Governments: Impact of Lost Productivity and Disability**
    - Workplaces are significantly harmed when workers develop mental or SUD disorders (days out, days less productive, turnover).
    - Lost productivity and disability has a significant impact on tax payers - through lost tax revenues and social assistance payments.
- **Families** (spouses, children) of those with mental disorders and SUD also bear unfathomable impacts, often have their own health and emotional problems and require assistance from communities (health, housing, food, school supports, etc.).
- **Health Care System (payers and providers):** About a third of mental illness costs and 10 percent of SUD costs are for treatment (hospital care, doctors, therapists, medicines).
    - Most of these costs are paid through public and private insurance, although states and communities pay a significant share, as well as families.
- **Criminal Justice System:** Tragically, un/undertreated mental disorders and SUD is associated with a great deal of disruption and harm in the broader community through public disturbances, status offenses, violence (actual as well as threatened), theft/burglary and system crime.
    - These impact police, jails, prisons, courts, prosecutors, probation and parole, across local, state and federal authorities. Victim loss can also include property theft or damage and bodily and mental health harm.

RICE, D.P.; Kelman, S.; Miller, L.S.; and Dunmeyer, S. The Economic Costs of Alcohol and Drug Abuse and Mental Illness: 1985. Rockville, MD: National Institute on Drug Abuse, 1990.

Harwood, H, Fountain, D. and Livermore, G. The Economic Costs of Alcohol and Drug Abuse in the United States – 1992. Rockville, MD: National Institute on Drug Abuse, 1998.

A great many quality studies have been performed to estimate the costs of the disorders and the subsequent cost-offsets of treatment. Cost offset or cost benefit studies measure the economic return from investment in treatment and/or prevention. While studies vary in which impacts and costs they consider, they consistently yield both large aggregate costs and sizeable estimates of benefits from treatment services. The diverse and diffuse nature of the impacts and the costs, however, means that no single agency or institution captures all of the economic benefits. The economic rewards are spread throughout the community (family, workplace, local organizations and governments), and on to the state and federal levels.

Findings and Citations from Selected Studies

National Institutes of Health:
"According to several conservative estimates, every dollar spent on addiction treatment programs yields a return of between $4 and $7 in reduced health, crime, criminal justice costs, and impaired work".

National Institute on Drug Abuse. Principles of Drug Addiction Treatment: A Research-Based Guide (Third Edition), National Institute of Health, 2012.

Kaiser Permanente Northern California analyzed the average medical costs during 18 months pre- and post-substance use (SU) treatment and found that the SU treatment group had a 35% reduction in inpatient cost, 39% reduction in ER cost, and a 26% reduction in total medical cost, compared with a matched control group.

Weisner C, Mertens J, Parthasarathy S, et al. Integrating primary medical care with addiction treatment: A randomized controlled trial. Journal of the American Medical Association, 2001; 286: 1715-1723.

In another study, **Kaiser** also found that family members of patients with substance use disorders (SUD) had high healthcare costs and were more likely to be diagnosed with a number of medical conditions than family members of similar persons without a substance use condition. For families of SUD patients who were abstinent at one-year after treatment began, the healthcare costs of family members were no longer higher than other Kaiser members.

Ray GT, Mertens JR, Weisner C. The excess medical cost and health problems of family members of persons diagnosed with alcohol or drug problems. Medical Care. February 2007. Vol. 45 Issue 2.

California Department of Drug & Alcohol Programs:
In a study of the state treatment system a team at UCLA found that, on average, substance abuse treatment costs $1,583 and is associated with a monetary benefit to society of $11,487, representing a greater than 7:1 ratio of benefits to costs. These benefits were primarily because of reduced costs of crime and increased employment earnings.

"California Treatment Outcome Project," Ettner, Huang, Evans et al. for the California Department of Drug and Alcohol Programs, the Center for Substance Abuses Treatment, and the Robert Wood Johnson Foundation), 2008.

Washington (state) studied 557 indigent clients with substance use disorder (SUD) and estimated that those that received substance abuse treatment had Medicaid expenses $4,500 less than similar untreated individuals, which compared favorably to the $2,300 TX cost. Savings were consistent across the five years.

Luchansky, B. & Longhi, D., 1997. Cost Savings in Medicaid Medical Expenses: An Outcome of Publicly Funded Chemical Dependency Treatment in Washington State. Washington State Department of Social and Health Services.

Washington (state) studied SSI enrollees in need of substance abuse treatment. 50% got treatment. Those treated achieved: lower medical costs of $311/month; and reduced: arrests of 16%, convictions of 15%, felony convictions of 34%.

Estee S, Nordlund D. Washington State Supplemental Security Income (SSI) cost offset pilot project: 2002 progress report. Washington State DSHS, Research and Data Analysis Division, Olympia, WA. February 2003.

Washington (state) analyzed the impact of $21 million treatment expansions in FYs 2005-07. Realized savings in Medicaid alone were $17.8 million.

David Mancuso, PhD, Daniel J. Nordlund, PhD, et al. DASA Treatment Expansion: April 2008 Update. WASHINGTON STATE Department of Social and Health Services

Washington (state) estimated that it will save $2.58 in criminal justice system and victim costs for every dollar spent on treatment.

Mancuso, David. Providing chemical dependency treatment to low-income adults results in significant public safety benefits. Washington State Department of Social and Health Services Research and Data Analysis Division, February 2009.

South Dakota: Before treatment (based on more than 1,000 persons followed 12 months after treatment), the cost of treatment ($1,382) was significantly less than the benefits ($11,653), resulting in a very favorable cost-benefit

ratio. The cost benefit in this study was $8.43 for every dollar invested. The cost benefit results presented here are similar (although somewhat higher -- $8.43 compared to $7.00) to those reported elsewhere.

"Substance Abuse Treatment Produces Savings in South Dakota," Gary Leonardson, Mountain Plains Research, for Division of Alcohol and Drug Abuse State of South Dakota , Dec, 2005. http://dhs.sd.gov/ada/Publications/SDImpactTreatment3.pdf

Oregon: A cohort of treatment completers produced cost savings of $83,147,187 for the two and a half years following treatment. The cost for treating all adults in 1991–92 was $14,879,128. ◆ Thus, every tax dollar spent on treatment produced $5.60 in avoided costs to the taxpayer.

"Societal Outcomes and Cost Savings of Drug and Alcohol Treatment in the State of Oregon". Finigan, M. for Office of Alcohol and Drug Abuse Programs, Oregon Department of Human Resource, 1996.

Louisiana: "We conclude that for each dollar the state puts into alcohol and drug abuse treatment programs, it will reduce future expenditures on criminal justice, medical care, and public assistance by approximately $3.83."

"Potential Cost Savings to the State of Louisiana from the Expansion of Substance Abuse Treatment Programs," Report Prepared by Loren Scott & Associates, Inc. for Louisiana Department of Health and Hospitals Office for Addictive Disorders, 2003.

Kentucky: The reductions in self-reported arrests for Kentucky clients, combined with cost estimates for their crimes and increased earnings and tax revenues, suggest a cost benefit for Kentucky taxpayers estimated at a ratio of 4.98 to 1. In other words, Kentucky saved $4.98 for every dollar spent on treatment.

"Kentucky Substance Abuse Treatment Outcome Study FY 2006 Follow-Up Findings," Robert Walker, Allison Mateyoke-Scrivner, Jennifer Cole, TK Logan, Erin Stevenson, Carl Leukefeld, Tom Jackson. Center on Drug Abuse Research, U. Kentucky, JUNE 2008 .http://cdar.uky.edu/ktos/downloads/report/Section%20Four.pdf

Systemic Review of Acute Residential Mental Health Services:

One paper reviewed 26 studies on Acute Residential Mental Health Services, and concluded they provide treatment outcomes equivalent to those of inpatient units, with users reporting high satisfaction. Acute residential services offer a cost-effective alternative to inpatient services.

Kerry A. Thomas, et al. Clinical and Cost-Effectiveness of Acute and Subacute Residential Mental Health Services: A Systematic Review Kerry A. Thomas, et al. Psychiatric Services, Nov. 2013.

APPENDIX G

Mental Health and Substance Use Alliance Membership List

Michael Allen
Executive Director
SummitStone Health Partners

Kimberly Collins
Administrative Director
North Range Behavioral Health

Michele Christensen
Director of Program Development
Housing Catalyst

Gary Darling
Division Director, Criminal Justice Services
Larimer County

Chris Gastelle
Chief Probation Officer
State of Colorado

Anne Hudgens
Executive Director, CSU Health Network
Colorado State University

Andy Lewis
Chief Deputy District Attorney
District Attorney's Office

Marla Maxey
Case Management Director
Foothills Gateway, Inc.

Janice Mierzwa
Senior Director of Emergency Services
University of Colorado Health

Karen Morgan
Consumer and Family Representative

Bill Nelson
Under Sheriff
Larimer County Sheriff's Office

Carol Plock
Executive Director
Health District of Northern Larimer County

Jerry Schiager
Assistant Chief of Police
Fort Collins Police Department

Monica Smith
Administrator
Mountain Crest Behavioral Healthcare

Beth Sowder
Social Sustainability Dept. Head
City of Fort Collins

Laurie Stolen
Behavioral Health Project Director
Larimer County

Bryan Sutherland
Substance Abuse Recovery Advocate

Darcie Votipka
Director of Student Services
Poudre School District

Holly LeMasurier
Homeward 2020

APPENDIX H

Guidance Team Membership List

2018 Updated Publication

Health District of Northern Larimer County
Carol Plock – Executive Director
Lin Wilder – Director Community Impact
Kiley Floren – Project Implementation Coordinator Community Impact
Ann Noonan – Behavioral Health Strategy and Implementation Organizer
Brian Ferrans – Behavioral Health Strategy and Implementation Manager

SummitStone Health Partners
Michael Allen – Chief Executive Officer
Brooke Lee – Director of Access and Adult Services

Larimer County
Laurie Stolen – Behavioral Health Project Director
Gary Darling – Division Director, Larimer County Criminal Justice Services
Michael Ruttenberg – Clinical Director, Larimer County Community Corrections
Josh Bellendir – Lieutenant, Larimer County Jail

UCHealth
Janice Mierzwa – Senior Director of Emergency Services

2016 Publication

Health District of Northern Larimer County
Carol Plock, Executive Director
Lin Wilder, Director, Healthy Mind Matters
Vanessa Fewell, Project Manager, Healthy Mind Matters

SummitStone Health Partners
Randy Ratliff, Chief Executive Officer
Osvaldo Cabral, Consultant

Larimer County
Gary Darling, Division Director, Larimer County Criminal Justice Services
Laurie Stolen, Director, Alternative Sentencing Department
Michael Ruttenberg, Assistant Director/Clinical Director at Larimer County Community Corrections
Staci Shaffer, Lieutenant at Larimer County Sheriff's Office

APPENDIX I

Organizations Interviewed for Mapping Project

1st Alliance Treatment Services – Fort Collins*

Arapahoe House – Denver*

AspenRidge Recovery North – Fort Collins*

Behavioral Health Group – Fort Collins, Longmont*

Centennial Peaks – Louisville*

Clear View Behavioral Health – Johnstown*

Colorado State University – Fort Collins*

Front Range Clinic – Fort Collins*

HalfMoon Resources – Fort Collins*

Harmony Foundation – Estes Park*

Heart Centered Counseling – Fort Collins*

Inner Balance Health Center – Loveland*

Larimer County Community Corrections – Fort Collins*

Larimer County Jail – Fort Collins*

Mental Health Partners – Boulder*

Narconon – Fort Collins

North Range Behavioral Health – Greeley*

SummitStone Health Partners – Fort Collins*

Step 13 – Denver

Stout Street Foundation – Denver

The Raleigh House – Denver

The Circle Program – Pueblo

The Counseling Place – Estes Park

UCHealth Emergency Departments – Fort Collins*

UCHealth Mountain Crest Behavioral Health Center – Fort Collins*

Wellness Court – Fort Collins

**Interviewed for report update in July-December 2017*

APPENDIX J

Organizations Providing MAT (From the 2018 Update)

Services in Larimer County

Location	MAT Providers	Insurance and Notes	Services Offered				Payers	
			Detox	Residential	IOP or EOP	MAT	Medicaid	Private Ins.
AspenRidge North 706 S College Ave #201, Fort Collins, CO 80524 877-212-1238		Offers sober living.			IOP, EOP			Yes
Behavioral Health Group 2114 Midpoint Dr Unit 4, Fort Collins, CO 80525 970-372-3144		Self-pay, Medicaid. Suboxone clients must follow methadone protocol.				Methadone and Suboxone	Yes	Yes
Clear View Behavioral Health 4770 Larimer Pkwy, Johnstown, CO 80534 970-461-5061		Accepts VA.	Med		IOP, Partial hospitalization		Yes	Yes
Colorado Clinic 3810 North Grant Avenue Loveland, CO 80538 970-221- 9451	Brad Sisson, M.D. Alicia Feldman, M.D. Jacqueline Carbone, PA Jaclyn Summers, PA-C Doug Larner, BS	Takes most insurances including Medicaid. Offer sliding scale.				Suboxone	Yes	Yes
Colorado State University 600 South Drive Fort Collins, CO 970-491- 7121	Irena Danczik, M.D.	Takes all insurance. Only sees CSU students.			Approx. equal to day	Suboxone and Vivitrol	Yes	Yes

Location	MAT Providers	Insurance and Notes	Services Offered				Payers	
			Detox	Residential	IOP or EOP	MAT	Medicaid	Private Ins.
Front Range Clinic 1040 E. Elizabeth St. Fort Collins, CO 80524 3320 W. Eisenhower Blvd Loveland, CO 80537 970-493-9193	Jeremy Dubin, D.O.	Takes all insurance including Medicaid. Able to get patients in same-day if they are willing to travel to one of the other North Front Range locations.				Suboxone, Vivitrol	Yes	Yes
Harmony Foundation 1600 Fish Hatchery Rd, Estes Park, CO 80517 866-686-7867			Med	IRT	IOP	Suboxone - detox only		Yes
Harvest Farm 4240 E Co Rd 66, Wellington, CO 80549 970-568-9803		Offers sober living.						
Inner Balance 1414 W 28th St, Loveland, CO 80538 800-900-2252		Offers sober living.			Day	Suboxone via Front Range Clinic		Yes
Miramont 4674 Snow Mesa Dr #140 Fort Collins, CO 80528 970-482-0213	John Bender, M.D	Private insurance. Not taking new pts. as of 6/29/17).				Suboxone		Yes
Mountain Crest 4601 Corbett Dr Fort Collins, CO 80528 970-207-4800			Med		IOP		Yes	Yes
Narconon Colorado 1225 Redwood St. Fort Collins, CO 80524 970-484-2023		Associated with church of Scientology	Social	TRT	IOP			

Location	MAT Providers	Insurance and Notes	Services Offered				Payers	
			Detox	Residential	IOP or EOP	MAT	Medicaid	Private Ins.
Salud Clinic 1635 Blue Spruce Dr # 101 Fort Collins, CO 80524 970-484- 0999		Salud must be medical home				Suboxone	Yes	Yes
SummitStone Health Partners 1250 N. Wilson Ave. Loveland, CO 80537 970-494- 4200 114 Bristlecone Drive Fort Collins, CO 80524 970-494- 4200		Medicaid, self-pay, private insurance. Also prescribes Vivitrol. Must be in therapy.			IOP	Suboxone and Vivitrol	Yes	Yes
UCHealth Family Medicine Center 1025 Pennock Place Fort Collins, CO 80524 970-495- 8800		Sliding scale, Medicaid, self-pay, private insurance. Accepting new patients with no limit.				Suboxone	Yes	Yes
Wholeness Center 2620 E Prospect Rd., Ste #190 Fort Collins, CO 80525 970-221- 1106	Craig Heacock, M.D	Out of pocket only, no sliding scale.				Suboxone		

Services outside of Larimer County

Location	MAT Providers	Notes	Services Offered				Payers	
			Detox	Residential	IOP or EOP	MAT	Medicaid	Private Ins.
Aurora Mental Health 15 Locations in Aurora 303-617-2300			Social		?	?	yes	?
Centennial Peaks Hospital			Medical	IRT	IOP	Suboxone induction		Yes

Location	MAT Providers	Notes	Services Offered				Payers	
			Detox	Residential	IOP or EOP	MAT	Medicaid	Private Ins.
2255 S 88th St Louisville, CO 80027 303-673-9990								
Community Reach Center 4371 E 72nd Ave Commerce City, CO 80022 303-853-3456			Social	?	?	?	?	?
Front Range Clinic 3400 W 16th Street, Unit 1-DD, Greeley, CO 80634 970-702-2705		Medicaid, self-pay, and private insurance. Initial visit is $200, follow up visits are $120.				Suboxone	Yes	Yes
Jefferson Center for Mental Health Several locations in Jeffco 303-425-0300			Social	?	?	?	?	?
Mental Health Partners Locations in Boulder and Broomfield Counties 303-443-8500		Community MHC, Medicaid, some private insurances, indigent care	Social	TRT	IOP and Day	Suboxone, Vivitrol, must be in therapy	Yes	Yes
North Range Behavioral Health 1300 North 17th Avenue Greeley, CO 80631 970-347- 2120	Thad Makowski, M.D Collaboration with Sunrise Community Health	Medicaid, sliding scale, some private insurance. Do not have to be NRBH clients. Clients will be required to do weekly groups and random weekly UAs in the 1st phase.	Social	TRT	IOPDay	Suboxone, Vivitrol	Yes	Yes
Stout Street Foundation			?	TRT and IRT	?	?	?	?

Location	MAT Providers	Notes	Services Offered				Payers	
			Detox	Residential	IOP or EOP	MAT	Medicaid	Private Ins.
7251 E 49th Ave Commerce City, CO 80022 866-722-7040								
Sunrise Clinic 2930 11th Avenue Evans, CO 80620 970-353- 9403	Gregory J. Finnoff, D.O	Takes all insurance except Kaiser. Clients need to set up a consult with Michelle before being scheduled with doc.				Suboxone	Yes	Yes
VA Medical Center 2360 E Pershing Blvd, Cheyenne, WY 82001 307-778-7550		No IOP services in Ft. Collins. Clients have to go to Cheyenne VA Medical Center and must be enrolled IOP.	?	?	?	Suboxone		

APPENDIX K

Analysis of Gaps in Services and Recommendation of Services Needed (From the Original 2016 Report)

INTRODUCTION TO APPENDIX K

The next section of this document contains the report created by NIATx during Phase II of the study published in 2016, in which gaps in services were identified and recommendations were made for services to fill those gaps.

Note that figures and recommendations in parts of the Phase II report may not match those included in the rest of this 2018 report update. This is due to the fact that we did not replicate the entire study performed in 2015 and published in 2016. Certain areas were updated where changes were indicated while other assumptions and data remained the same. See Appendix M for NIATx 2018 contribution to the update of this report. As in 2016, some of NIATx's recommendations from a national perspective have been amended or modified in 2018 by local experts in behavioral health, budgeting, and facilities in order to represent local circumstances and input. These modifications are described on pages 43-51 of the report.

DEVELOPMENT OF CRITICAL BEHAVIORAL HEALTH SERVICES

Presented to:
The Health District of Northern Larimer County
And
The Mental Health and Substance Use Alliance of Larimer County

Prepared By:
The NIATx Foundation, Inc.
Victor Capoccia, Ph.D., Consultant
Colette Croze, MSW, Consultant
Todd Molfenter, Ph.D., Project Lead Consultant

February 19, 2016

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List of Acronyms

ASAM = American Society of Addiction Medicine

ATTC = Addiction Treatment Technology Center

ATU = Acute Treatment Unit

ALOS = Average Length of Stay

IOP = Intensive Outpatient

CCC = Community Crisis Clinic

I/DD = Individual/Developmental Disabilities

LCSW = Licensed Clinical Social Worker

LIR = Low Intensity Residential

MACC = Medicaid Accountable Care Community Collaborative

MAT = Medication Assisted Therapy (*for addictions*)

MH = Mental Health

MSW = Master Social Work

N-SSATS = National Survey of Substance Use Treatment Services

NSDUH = National Survey of Drug Use and Health

OP = Outpatient

PSH = Permanent Supportive Housing

SAMHSA = Substance Abuse and Mental Health Administration

STIR = Short-Term Intensive Residential

SUD = Substance Use Disorder

TBI = Traumatic Brain Injury

WM = Withdrawal Management

1. Charge to the NIATx Foundation

The NIATx Foundation was contracted to provide an assessment of Larimer County's substance use disorder and mental health crisis delivery systems. The NIATx group is a multidisciplinary team of consultants with a unique blend of expertise in public policy, agency management, and systems engineering. NIATx has the benefit of having worked with 1000+ treatment providers and 50+ state and county governments. NIATx is also affiliated with the Addiction Treatment Technology Center (ATTC) Network. The ATTC Network is responsible for cataloging and providing training on evidence-based practices throughout the United States and its territories.

NIATx conducted the assessment of the Larimer County substance use disorder (SUD) and mental health (MH) crisis service systems with four assumptions: a) the SUD system in Larimer County should provide the full continuum of care, b) that evidence-based practices should be utilized, c) the most cost effective approaches would be suggested, and d) recommendations and findings represent "best estimates" (given point-in-time local and national data) that can be built upon being given new information.

NIATx began the assessment by collecting information that was available the last quarter of 2015 on how the current system operates, and then collected utilization data on frequency of use of these services by Larimer County residents. Data collection resulted in conversations with and data acquisition from Signal Behavioral Health and its provider agencies: Rocky Mountain Health Plan; North Range Behavioral Health, Poudre Valley Hospital Emergency Department, and Larimer County Jail.

The collected information was used to develop the following information to guide Larimer County in developing a fully functional behavioral health continuum of care. This report includes: Estimates of prevalence, need, current utilization, and projected services and capacity; recommended services and supports for persons with MH and/or SUD; insurance and coverage status for Larimer residents and proposed services; budgets, sources of revenue, and related gaps between revenues and expenses for the proposed services; benefits to patients, community and payers; and tracking and reporting results.

The intent of this report is to provide a solid foundation of the core services that are recommended for Larimer County's behavioral health care system. All estimates represent point-in-time judgments based on available information in that time frame and it is anticipated that some of the numbers used to create these estimates will evolve. The behavioral health environment is dynamic. The number of people covered by insurance; the services covered by different insurance plans; as well as other factors such as staff salary levels can change. Our recommendations are designed to give Larimer County the ability to incorporate updated information from local experts without altering the core recommendations provided in this report. In this context, the point-in-time estimates in this report are starting points to be built upon by adding information as local and national standards and circumstances evolve.

Targeted service areas of need

Larimer County alerted the project team that the following services areas had been historic areas of weakness in past assessments of the behavioral health system in Larimer County.

The project team discussed and tested these assumptions during its analysis of the treatment system and focused on the following five areas:

- A full complement of Withdrawal Management (Drug/Alcohol Detoxification) services with seamless connections to next stage of assessment/treatment
- Residential treatment for SUDs
- Acute Treatment Unit (ATU) for just-under-hospitalization level of care
- Intensive Outpatient Services (IOP), in graduated levels
- Support services for those with behavioral health needs, including moderately intensive to intensive care coordination, medications, and support services for individuals living in Permanent Supportive Housing, client assistance funds, and patient-centered assessment systems.

SUD Services will be addressed in Section 3.A., mental health crisis services are covered in Section 3.B., and support services are contained in Section 3.C.

2. Building Fully Functioning Substance Use Disorder Treatment and Key Mental Health Services Systems That Reflect Current Evidence

The aim of the proposed substance use disorder (SUD) and mental health treatment and recovery services' package is to provide the most effective and efficient systems for the citizens of Larimer County. This package is based on current research evidence and prominent national trends.

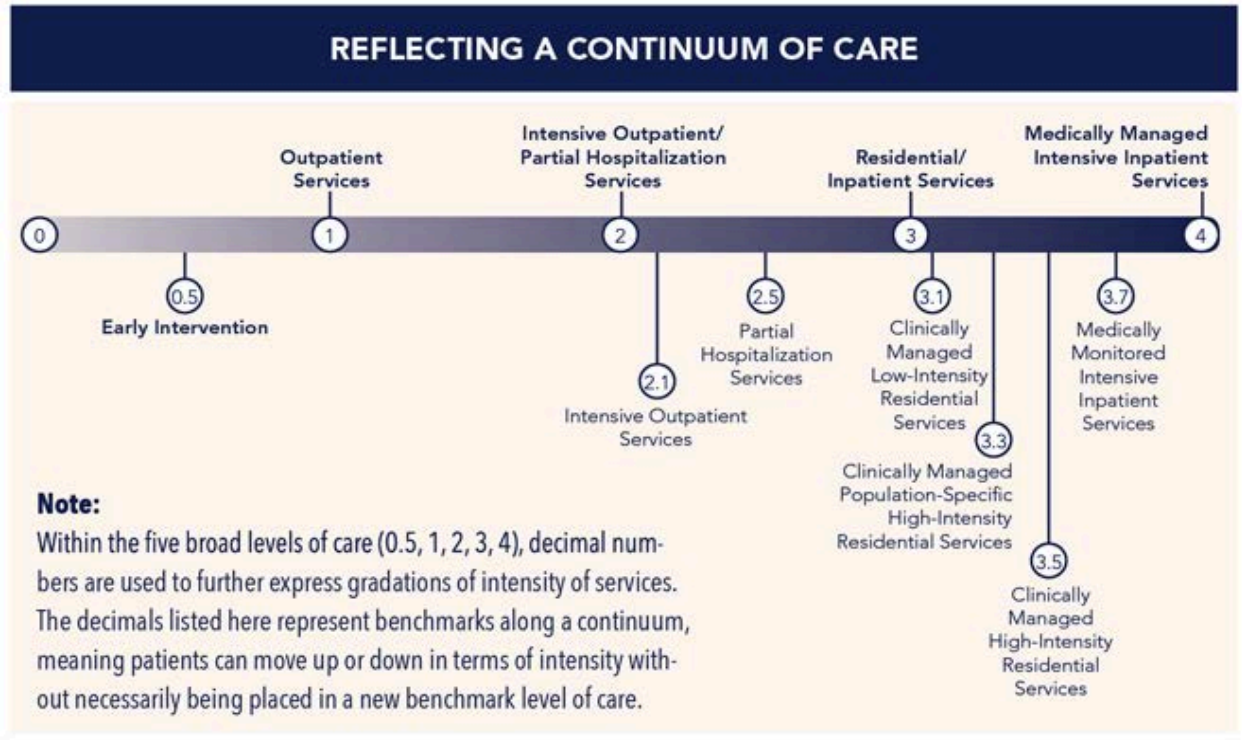
Full Continuum of Care

The American Society of Addiction Medicine (ASAM) recommends that the SUD treatment services continuum include: Outpatient Services; Intensive Outpatient; Residential/Inpatient Services, and Medically Managed Intensive Inpatient Services (Figure 1).

The implicit reasoning behind providing a full-continuum of SUD care is to not over- or under-treat individuals due to only having certain levels of care reasonably accessible. A full SUD continuum of care, as compared to a partial continuum, results in greater reductions in alcohol and drug use.[1]

[1] McKay, J. R., Pettinati, H. M., Morrison, R., Feeley, M., Mulvaney, F. D., & Gallop, R. (2002). Relation of depression diagnoses to 2-year outcomes in cocaine-dependent patients in a randomized continuing care study. *Psychology of Addictive Behaviors*, *16*(3), 225.

Figure 1: American Society of Addiction Medicine Substance Use Disorder (SUD) Treatment System



While not as widely used as the American Society of Addiction Management (ASAM) Criteria, the Level of Care and Utilization System was developed by the American Association of Community Psychiatrists as a parallel classification tool for mental health treatment. The American Association of Community Psychiatrists recommends that a continuum include Prevention and Health Maintenance; Recovery Maintenance and Health Management; Low and High Intensity Community Services; Medically Monitored Non-Residential and Residential Services; and Medically Managed Residential Treatment. As is true for SUD treatment, the absence of critical service elements results in inappropriate utilization of other levels of care and diminished treatment outcomes.

3. Prevalence, Current Utilization, Need, and Projected Services and Capacity

A. Substance Use Disorder (SUD) Services

Prevalence

The most consistent estimates of prevalence for Substance Use Disorders are based on data from the National Survey of Drug Use and Health published by the Substance Abuse and Mental Health Services Administration of the US Department of Health and Human Services (SAMHSA). According to the latest available data (2013) published in *Behavioral Health Barometer: Colorado, 2014*[2] *for* Colorado residents over 12 years old, 2.8% or about 117,000 were

[2] Substance Abuse and Mental Health Administration (SAMHSA) (2015) *Publication No. SMA–15–4895CO*. Rockville, MD.

dependent on drugs, and 8.4 % or 353,000 were dependent on alcohol. These percentages have stayed consistent between 2009-2013.

Extrapolating for 340,217 residents of Larimer County, it is estimated that 293,100 residents are over 12 years of which **7,800 (2.8%)** are dependent on drugs, **and 23,400 (8.4%)** are dependent on alcohol. This rate of 31,200 or over 10% of adult population in Larimer County, who experience drug and alcohol dependency, is consistent with national, as well as Colorado state estimates of prevalence of substance use disorder.[3]

Current Utilization

Several approaches were taken to estimate the current utilization of treatment for those experiencing a substance use disorder. Data on the current utilization of SUD treatments was available in limited formats from three basic sources: Guidance Team estimates; public payers; and the National Survey of Substance Abuse Treatment Services (N-SSATS).

First, seeking a ballpark number, at the September 15, 2015 meeting of the project's Guidance Team, providers were asked to estimate the number of annual admissions to SUD treatment programs in their agencies. The response from those agencies present indicated an estimate of **around 2,000** admissions, although not all agencies providing SUD treatment are represented on this team.

Second, three payers provided data for SUD treatment for their covered lives. The payers include Signal MSO, responsible for managing Block Grant and state-appropriated funds for uninsured residents, Colorado Access, the MCO responsible for managing Medicaid behavioral health services for the northeastern Colorado region including Larimer County, and Rocky Mountain Health Plan, responsible for Medicaid medical, inpatient and pharmacy benefits. Signal reported a total of **1,844 admissions** with Larimer zip codes and another 956 admissions to North Range with no zip code identifiers. Colorado Access reported **1,192 admissions** of Larimer residents of which 118 are to mental health residential programs. Rocky Mountain Health Plan reported **92 hospital admissions** for SUD and reported **243** individuals in the county **received prescriptions** for medications whose primary purpose is to assist with SUD treatment. The extent to which any of these admissions are duplicates or readmissions is unknown from available data. In addition, about 200 other admissions of unknown geographic origin were reported by private pay and physician based treatment services.

Third, the N-SSATS survey is a point-in-time census of treatment programs, and represents a fair estimate of treatment utilization. According to the National Survey of Substance Use Treatment Services (N-SSATS) Profile –Colorado 2013, approximately 42,000 people in Colorado received treatment, a figure that represents 9% of the prevalence noted above. Assuming the same rate of treatment penetration for Larimer as the state (9% of prevalence) there would be **2,800 Larimer residents receiving treatment.**

[3] The NDHDU estimates for SUD dependence or abuse, exclude 'heavy drinking, occasional use etc, and are based on criteria that indicate a potential benefit from treatment interventions.

Table 1: Current Utilization Summary Table

Guidance Team Estimate (Own Services Only)	2,000
N-SSATS Estimate	2,800
Payer Sources	3,200

Taking the three sources together, it is reasonable to assume that **between 2,500-3,000 Larimer county residents are currently treated** (annually) for SUD. Looking further into the data reported by Signal and Colorado Access, about **60% were admitted to outpatient services; 30% to detoxification; 6+% to residential; 1% to Intensive out-patient; and none to MAT treatment services (however, the 243 prescriptions, if used for SUD treatment, indicate some limited MAT services likely by private providers).**

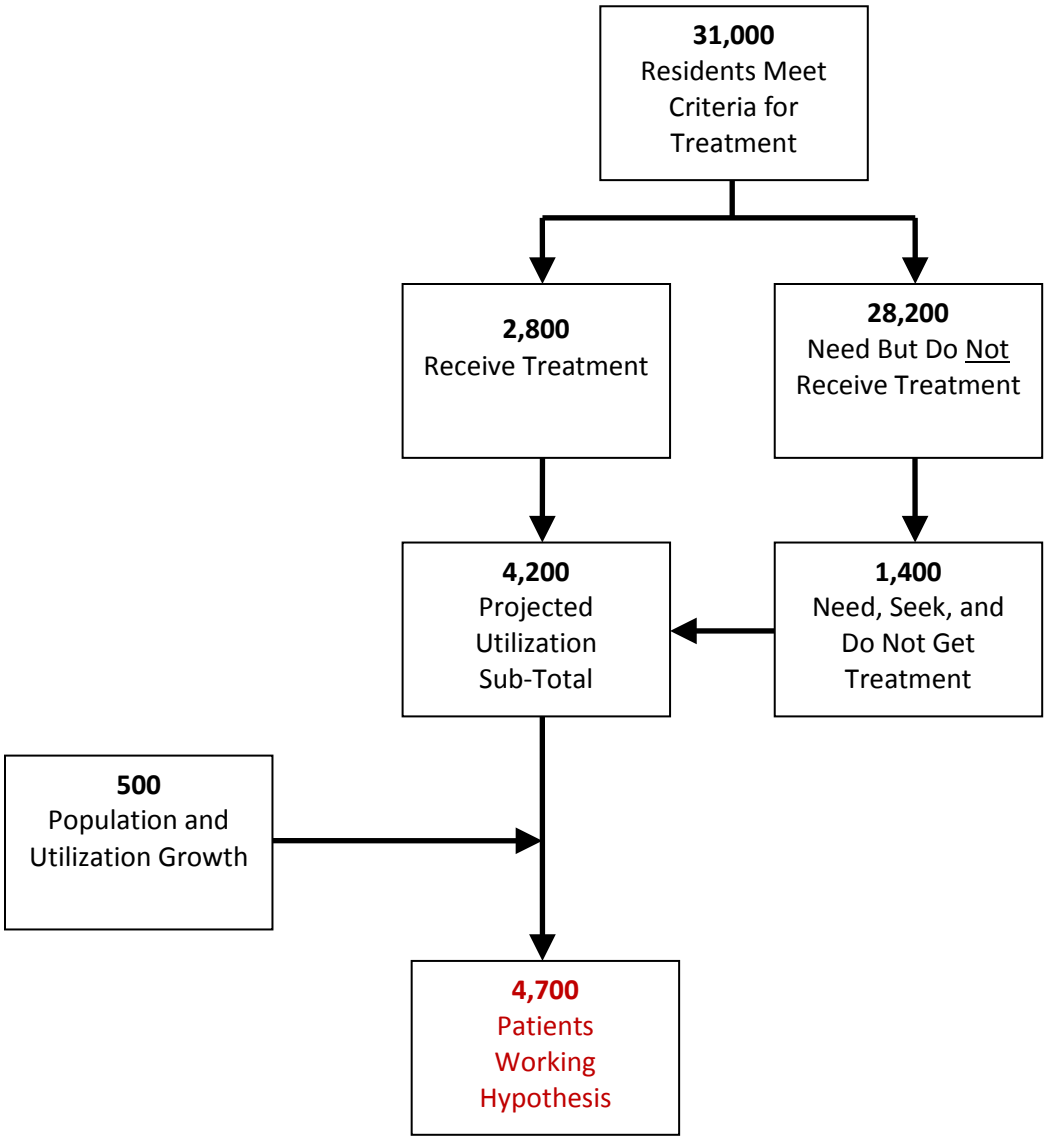
Remaining Need

On a gross level, need equals the difference between the estimated 31,000 residents who would benefit, and the 2,800 residents who receive treatment, or 28,200 people in Larimer County. The gross estimate requires refinement from three factors: the estimated percent of those with the condition that will *access available* treatment resources; the location as well as available capacity of different evidence-based SUD services; and estimated growth due to population expansion and outreach over time.

According to NSDUH 2013, "5% of those who need treatment want but do not get treatment." Reasons for this may include: "not ready (40%), affordability or lack of insurance coverage (30%), negative consequence from job, family etc. (20%), lack of program info or fit (9%)."[4] Using these reference points, a reasonable estimate is that a well-organized, fully accessible, highly visible and patient-centered treatment continuum might increase penetration into prevalence by the full 5% of those needing and seeking but not receiving treatment, or an additional **1,410 people.** In addition, Health District staff noted that county population is projected to grow by 2% per year. Lacking age distribution of this estimated growth, and using adult population (279,000) data, prevalence estimates (of 10%) and treatment penetration rate (of 9%) noted above, a 2% increase in population will add about 50 people to the treatment system. Assuming aggressive screening and outreach as well as elimination of the access barrier, it is possible that an additional 1-2% (or an average of 1.5%) of the 28,200 people needing but not receiving treatment, or slightly over 400 additional people, might be reached. Taken together and rounded up, the population increase and outreach efforts could add up to **500 people** to the treatment system.

[4] Substance Abuse and Mental Health Administration (SAMHSA) (2015).

Figure 2: Projected SUD Need Diagram



Projected Services and Capacity

For planning purposes, the capacity of a treatment system is recommended to accommodate current utilization (2,750 is the mid-point between 2,500-3,000) plus the additional 1,410 people who need, seek but do not get treatment, and an allowance of 500 people for anticipated growth, for **a projected total of 4,660 expected residents receiving treatment (rounded up to 4,700)**.

Given current policies and practices in Colorado, capacity estimates for needed services are based on the above estimated 4,700 Larimer residents currently and potentially accessing SUD treatment. Projecting future capacity need over a long period of time is challenging, because the regulatory, legal and treatment technology employed does not remain static. For example,

assuming 2% population growth in persons over the age of 12 annually for 10 years, and no change in how treatment is delivered, paid for or available, the system would need a capacity to treat more than 14,000 people in 2026, given current utilization and penetration rates. However, the system is not static; research is rapidly developing new pharmacological and behavioral interventions; Colorado has set a goal to integrate behavioral and primary health care; and health systems have growing incentives to address behavioral health conditions. Therefore, the accuracy of the 10-year extrapolation of 14,000 residents using treatment becomes impossible to assess.

The second dimension of need focuses on the distribution of treatment geographically and by level of care. When local services are compared to ASAM levels of care, there are some obvious gaps (Figure 1). The most obvious service gaps include, the dearth of intensive outpatient services, and absence of residential care (except within the corrections system), the absence of medication-assisted treatment, and the lack of medically monitored withdrawal management (detoxification services) within the county.

One result of the absence of these services is that two-thirds of all current admissions, are to outpatient care, almost one-third to withdrawal management in a 'non-medical', 'social detox', and little is available in between those two levels. A more *patient-centered assessment system* when matched with availability of all levels of care opens more points of access to treatment and results in a distribution of admissions based on patient acuity rather than the availability of a level of treatment.

*Based on a review of admissions in Massachusetts,[5] and N-SSATS data, (see Table 2) a more "balanced"' continuum of care might admit 25**% of all patients into WM; 10% into residential care; 15% into IOP and 50% into outpatient, providing medications at all levels as appropriate.**

Table 2
Percent of Admission by Level of Care: Comparative Analysis

	Withdrawal Management	Residential	IOP	OP
Larimer current	29%	6%	<1%	60%
Massachusetts (opiate)	49%	8%	7%	10%
SAMHSA Barometer	<1%	4%	0	95%
Recommendation	25%	10%	15%	50%

[5] Center for Health Information and Analysis .(2015). *Access to Substance Use Disorder Treatment in Massachusetts.* Boston, MA.

B. Substance Use Disorder Treatment

The Planning Implication: Recommended Capacity by Level of Care

Direct and Step-down Admissions:

Assuming approximately 4,700 Larimer resident admissions to SUD treatment annually, and the recommended distribution of admissions (Table 2 above) the available (current and new) treatment system would need to have a capacity to admit the following number of patients directly to each of the following levels of care as appropriate:

Withdrawal Management (a.k.a Detoxification)

- Up to 1,175 (25%) detoxification admissions spread over 3 WM levels: Ambulatory (ASAM level 2.0), or managed on an outpatient basis; medically monitored (ASAM level 3.7), and Intensive Inpatient (ASAM level 4.0) provided in a hospital setting. The major change recommended is the creation of a medically monitored detox in Larimer County. Creating a social detox within Larimer County is not recommended for two reasons: First, the model does not have the medical capacity to address the acuity seen in patients with alcohol and opiate-based addictions today, as evidenced by the 'shuttling' of patients admitted to Greeley back to emergency departments because of acuity or need for medications; it is primarily a residential setting absent treatment. Second, the 'social detox' that currently serves Larimer residents in Greeley will continue to be available for those who want that context.

  Ambulatory, Medically Monitored, and Hospital-based inpatient care are recommended for several reasons. First, the combination of the three is more representative of a patient-centered continuum of treatment services that encourages intervention to continue over time at appropriate levels of intensity. Second, the ASAM standards of practice identify medications that reduce risks associated with alcohol withdrawal and discomfort associated with opiate withdrawal, both highly prevalent substances (prevalence section). Finally, taken together, the three recommended options provide more complete access to patients by differentiating the patient's social supports availability, severity of addiction, types of substances used, and associated medical/health conditions.

Residential Services

- Up to 470 (10%) short term, long term, and supported residential admissions. Several levels of residential care are recommended. First, Short-Term Intensive Residential (STIR) Treatment (ASAM 3.3 or 3.5) is designed to provide a safe and therapeutic environment where clinical services and (if appropriate) medications are available to treat patients who are medically stable and withdrawn from substances. The program includes a minimum of five hours per week of individual and/or group treatment by licensed personnel, medical screening, education, and other socially constructive activities over a period of days that vary according to patient need. Most insurance covers up to 12 days, and requires review for additional care. Second, Low Intensity Residential (LIR) (a.k.a halfway house) services (ASAM 3.1) are designed to build and reinforce a stable routine for residents in a safe and supportive context. Program components include education, group counseling/support by certified personnel, orientation to employment and employment in preparation to community reintegration. LIR houses are appropriate

for residents who lack a stable living environment, and other social supports. Third, independent, voluntary sober housing, like "Oxford Houses" represent safe and supportive living environments for those who choose and can pay for this type of residence. No external financing is recommended for this type of housing. Finally, for those with chronic health conditions, behavioral or somatic, who lack family/social supports, and are disconnected from employment and other community functions, supported housing is an effective and cost efficient resource to house people with chronic and severe mental health, substance use disorders, or dual diagnoses, long term disabilities, and other traditionally high users of health and social support services.

Intensive Outpatient Services (IOP) (ASAM 2.0, 2.5)

- Up to 700 (15%) Intensive Outpatient (IOP) admissions. IOP services may take several forms and names, including: partial hospitalization (2.5); day treatment; partial day treatment, and intensive outpatient services (2.0). Intensive outpatient treatment programs are generally intended for individuals who require a more structured substance use disorder outpatient treatment experience than can be received from traditional outpatient treatment. Individuals may or may not have resources in the form of family, friends, employment or housing that provides support during the course of treatment. Intensive outpatient treatment may reflect an increase in treatment intensity, such as outpatient to intensive outpatient, or a decrease in treatment intensity, such as residential to intensive outpatient treatment. Intensive Outpatient services require a minimum of nine clinical hours of counseling in a minimum of three days engagement/week, while partial hospitalization requires a minimum 20 clinical hours/week.

Outpatient Services

- Up to 2,350 (50%) outpatient admissions.

Medications

- AND of those 4,700 admissions, 25% or 1,175 also receive appropriate medication as part of their treatment. As with other chronic health conditions, medications are available that manage symptoms and complement other interventions, especially for alcohol, opiate and tobacco dependence. Specific medications for opioid dependence include Methadone, buprenorphine and, for some individuals, Naltrexone; and for alcohol dependence: Naltrexone, acamprosate, and disulfiram. A fourth, topiramate, is showing encouraging results.

Treatment System Assumptions and Principles

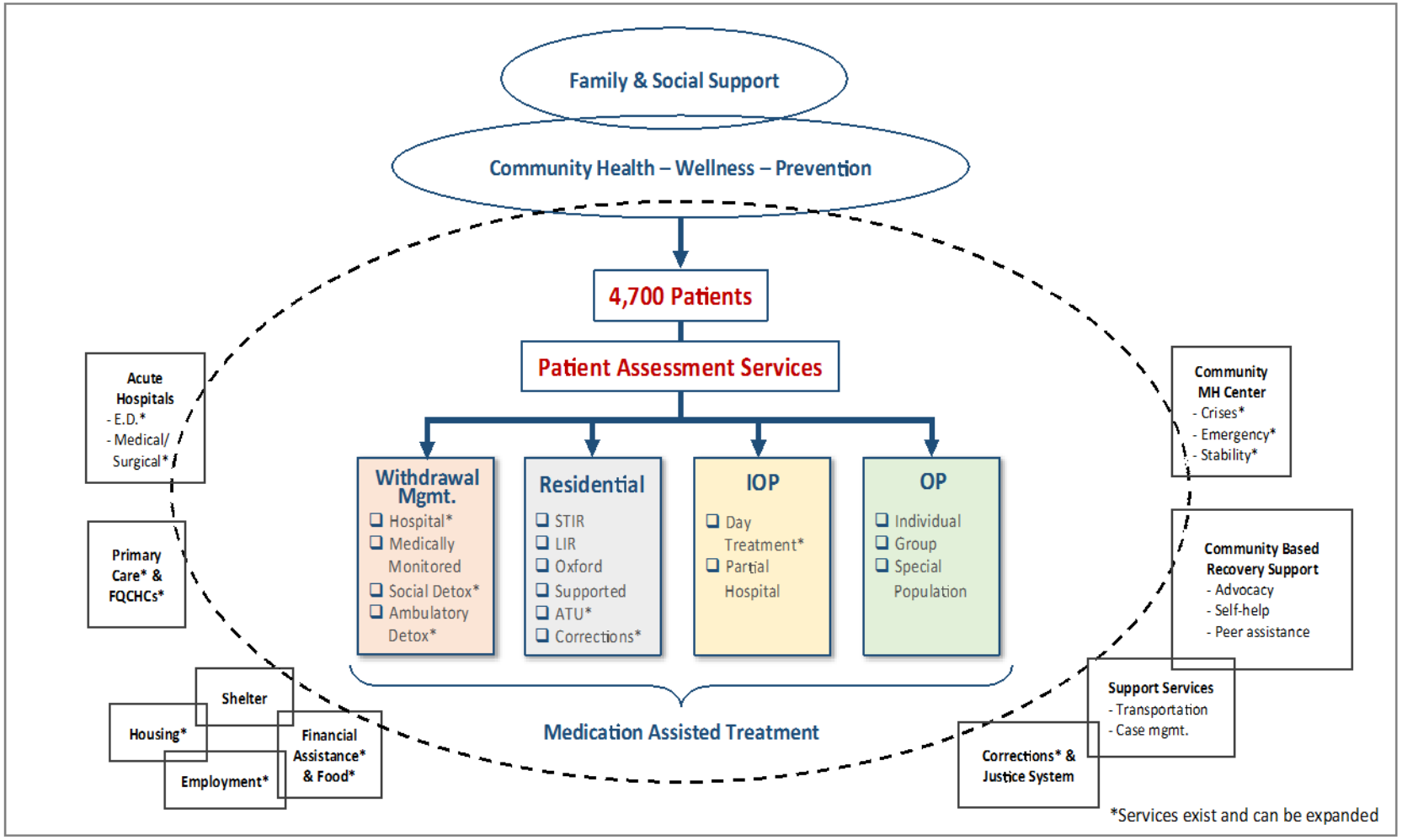
Recommendations for Larimer County are built on a number of important assumptions, specifically:

1. Existing health and treatment capacity remains involved and integral to the overall system. Specifically, the hospital emergency departments, two community health centers, and both North Range Behavioral Health and SummitStone Health Partners all have explicit designated roles and responsibilities in the system.
2. The SUD Treatment system is also connected with the broader community resource system including; housing, employment, financial assistance, social service, justice, education, and related systems.
3. New services delivered by existing or to be determined providers become part of the integrated system noted above.
4. Differential assessment of patient condition drives patient placement in appropriate level of care.
5. Treatment options are based on evidence and are available to all in all settings. This is especially relevant to the use of medication for both alcohol and opiate dependence, which are incorporated in WM, OP, IOP, and residential settings; and delivered by appropriately licensed medical staff.
6. The treatment system as a whole is connected to health and wellness education, and efforts to prevent or reduce risky behaviors that lead to SUD.
7. Recovery support and care coordination services through volunteer, self-help, peer support and other sources are available during and post treatment.

Treatment System Components

The context for the optimal system, Figure 3, in Larimer County includes family, social and community supports and connections. The SUD system components represent a full continuum of services that include: prevention and wellness; withdrawal management; residential based care; intensive outpatient/day treatment; and outpatient services; all of which are based on a thorough assessment and infused with medication, care management and recovery supports as appropriate. These system components interact on the patient's behalf with: other acute and ambulatory mainstream health; mental health; corrections/justice system; housing; employment; financial aid; and other support services.

Figure 3
Optimal Larimer County SUD Treatment System



Patient Flow Between Levels of Care

In addition to direct admission to an appropriate level of care as indicated above, patients will move between levels of care after initial assessment and placement. The movement between levels of care assures that each patient is offered the least restrictive context and affords the most time connected to a treatment. This is important because as with any chronic health condition, the longer a patient follows a healthy protocol, the better the chance that the condition remains benign.

The estimate of total admission to each level of care is the sum of direct admission from the community (4,700) plus related transfer between levels of care (2,200). Table 3 illustrates the estimated flow of patients between levels of care.

Using representative distribution proportions, Table 3 below illustrates the estimate of how 4,700 Larimer residents will enter treatment and move from one level of care to another through their treatment. As referenced earlier it says that: 25% will enter treatment through withdrawal management; 10% will enter through residential care; 15% will enter through IOP; and 50% will enter through outpatient treatment. It also says that of the total number entering treatment, 25% will need medication with their treatment.

Table 3 also illustrates the estimate of patients entering each level for treatment that will 'step-down' or continue their treatment by entering a less intense level of care. Specifically it estimates the following: 1) Of all the patients entering WM, 25% will be discharged to residential care, 25% to IOP, and 50% to OP; 2) Of all the patients entering residential care, 20% will move to IOP and 70% will move to OP (10% will not go on); and 3) Of all the patients entering IOP, 90% will move to OP. In total, 4,700 patients are estimated to represent about 6,900 admissions to all levels of treatment.

Table 3
Patient Flow: Direct and Step-down Admissions for 4,700 patients

DIRECT ADMISSIONS		STEP-DOWN ADMISSIONS			
		Withdrawal Management	Residential	IOP	OP
Withdrawal Management	1,175 25%		294 25%	295 25%	589 50%
Residential	470 10%			94 20%	330 70%
IOP	700 15%				630 90%
OP	2,350 50%				
MAT	25% of all direct				
Care Coordination	30% of all direct				
Sub-Total Direct Admissions	4,700 100%	1175	470	700	2350
Subtotal Step-Down Admissions			294	389	1,550
Total Admissions By Service		1,175	764	1,089	3,900

Distribution of Patients: Figure 4

Given estimates of 4,700 patients representing about 6,900 admissions, the next question is how many admissions are expected for each specific service. These estimates will eventually determine needed capacity and associated budgets. Figure 6 provides the rationale for breakdown of patients within SUD levels of care.

The following assumptions are included in the calculation:

1. Bed-based services are assumed at 90% occupancy rates =328 days;
2. Intensive Outpatient (IOP) services are based on a 5-day week or 263 treatment days annually;
3. Clinician hours are computed based on a 26/hour productivity standard per 40-hour week;
4. Hospital Withdrawal Management (WM); Ambulatory Withdrawal Management; social detox, and sober housing, are referenced as part of system, but do not have budget implications for this project; and
5. Average Length of Stay (ALOS) and other standards employed are generally accepted standards of practice and payment unless otherwise noted by request.

Figure 4. Patient Distribution and Capacity Estimates for 4,700 People

Withdrawal Management (1,175 total admissions)			
Loc.	**No. of Admits**	**Calculation**	**Est. Cap.**
H	59 5%	60 x ALOS 5days = 300	1 +/- beds*
MM	822 70%	822 x ALOS 5days = 4112/328days =	12 beds
S	117 10%	Available in Greeley	*
A	176 15%	Available from PC and FQHC	*

Residential (764 total admissions)			
Loc.	**No. of Admits**	**Calculation**	**Est. Cap.**
STIR 12 days	305 40%	305@12 ALOS=3667/328days	11 beds
STIR 21(C) days	305 40%	305@21 ALOS=6405 per request	20 beds
LIR	382 50%	382@90 ALOS= 34,380/328 =	105 beds
SH	38 5%	Permanent housing. Service budget impact only	
SbH	138 5%		*

4,700 Patients

Intensive Outpatient (IOP) (1,089 total admissions)
No. of Admissions: 1089 patients
Calculation: 1,089 @ 12days ALOS = 13,068 treatment days/263 average days
Result: 50 patient census per day = 5 groups of 10 (See footnote A)

Outpatient (OP) (3,900 total admissions)
No. of Admissions: 3900 patients
Calculation: 3,900 @ 10 session average = 39,000 treatment hours/26 hrs per week per clinician / 50 weeks
Result: Staff capacity = 30 FTE clinicians (See footnote B)

KEY:
H = Hospital
* No budget impact
MM = Medically Monitored
S = Social
A = Ambulatory

STIR = Short Term Intensive Residential
LIR = Low-Intensity Residential

SbH = Sober Housing
SH = Supported Housing
ALOS = Average Length of Stay
Loc = Location

Figure 4 Notes:

(A) Note regarding budget impact: IOP is a covered benefit in most public and private insurance plans; most plans require a clinical rationale for more than 2 weeks (10 days) IOP. Funds for residents without insurance are included in the Client Assistance budget in this plan.

(B) Note regarding budget impact: OP is a covered benefit in most public and private insurance plans; funds for residents without insurance are included in the Client Assistance budget in this report.

(C) 21 days average length of stay (ALOS) was added because of a suggestion of the guidance team, but was not used for staffing, space, or budget projections.

Summary Findings: SUD System

Based on the above analysis, the following components of a comprehensive SUD treatment system emerged from the available data, discussion, and policy context of SUD treatment for Larimer County.

1. All components of SUD treatment system are based on and assume that each patient is thoroughly assessed and referred to a level of intervention appropriate for their physical, social, and psychological condition.

2. Withdrawal Management is available in several settings: For a small number of medically complex patients, inpatient hospital detoxification is available. For most patients addicted to alcohol and or opioids, 12 new medically monitored detoxification beds are recommended. For a few patients involved with other substances, the social detoxification program in Greeley remains available; and for patients with strong social supports, and connections to primary care, ambulatory detoxification combined with either day treatment or outpatient counseling is recommended. Existing financial resources (block grant or insurance coverage) are currently available for all but the medically monitored withdrawal management. As withdrawal from substances is a stabilization procedure, not treatment, it is essential that all patients admitted to any form of withdrawal management have clear and specific appropriate arrangements made for treatment to follow.

3. Residential care is appropriate both as a source of direct admission and as a step-down resource from detoxification. The system includes: From 11-20 short term variable length of stay clinically intensive residential beds (ALOS options were 12 and 21 days) targeted at persons who need both clinically intensive and stable/safe housing contexts; an estimated 105 beds of residences providing low intensity treatment that serve as step-down from both Short Term Intensive Residential (STIR) and Withdrawal Management programs; and intensive services in supported housing for about 40 patients. Current resources support residential care primarily for mental health and incarcerated and court supervised residents. While block grant funds are eligible to support these forms of residential care, it is assumed that these funds are already committed. Some private insurance plans and Medicaid managed care plans could help support STIR residents, while Low Intensity Residential (LIR) revenues are expected to include resident fees

from disability payments or employment. Additional funding would be required to support STIR, LIR, and supportive services for those in permanent supportive housing.

4. Intensive Outpatient Care for almost 1,100 admissions either direct from assessment or step-down from WM, STIR and HH programs. IOP requires a minimum of 3 days per week treatment of a minimum of 3 clinical hours per treatment day, and extend to 20 clinical hours per week. Private insurance as well as Medicaid covers most IOP services. Any expense gap would extend to the uninsured and possibly co-pays if required and eligible for payment from an external source.

5. Outpatient counseling in individual and or group formats that use clinically effective interventions are expected to serve some 3,900 admissions either direct or from step-down from more intense levels of care. Outpatient treatment is a covered benefit in both public and private insurance plans available to all insured patients, but more outpatient capacity would need to be developed. Budget gaps for this service apply to uninsured or underinsured patients.

6. Supportive services: Care Coordination for approximately 25-30% of patients; medication to complement treatment for approximately 25% of patients; transportation where applicable; and patient financial assistance for those who lack means or coverage to pay for services.

All of the above components exist within and need to relate to a larger system of health, social support, and recovery support services. These include primary care resources, employment, housing, education, financial assistance, family support and education, as well as self-help and voluntary recovery peer support.

C. Mental Health Crisis Treatment Services

Acute Treatment Unit (ATU)

One of the critical services in a behavioral health continuum of care is sub-acute inpatient or residential treatment; which, in Colorado's service array, is delivered in Acute Treatment Units (ATU). ATUs provide short-term crisis stabilization for individuals whose symptoms can be managed in non-hospital settings and for whom treatment can be effective outside a hospital environment. In addition to stabilization, ATUs evaluate the precipitants of admissions and the factors that necessitated crisis intervention, review the existing treatment and recovery plan for its effectiveness, and assure warm handoffs from residential to community treatment.

While Larimer County residents have access to ATU services, they currently must travel to Greeley for Acute Treatment Unit (ATU) services, creating a barrier to accessing this important level of care. Reduced access to an ATU may also create greater demand for acute inpatient treatment, resulting in over-utilization of local inpatient resources. For those reasons, a key component of the recommendations for service development is establishing much needed ATU capacity within Larimer County. The analysis of Larimer County's ATU need involved review of the current utilization of North Range's ATU by Larimer County residents, application of national data on mental health utilization to Larimer County, creation of some synthetic estimates of acute and sub-acute utilization and recommendations for expanding capacity.

Current ATU Capacity, Utilization and Predicted Need

Specific ATU utilization was obtained from North Range and showed the following for the program as a whole and for Larimer County specifically. Although the ATU has 16 beds, on the average only 12 are in use, based on a 73% occupancy rate. Larimer County's current utilization of the ATU would require the establishment of seven beds to maintain the status quo.

Table 4. Current Acute Treatment Unit (ATU) Utilization

	ATU as a Whole	Larimer County Residents
Current Capacity in Greeley	16 Beds	N/A
Total Bed Days Available	5,840	NA
Current Occupancy Rate	73%	73%
Current Bed Days Utilized	4, 285	2,357
Bed Equivalent*	12 Beds	7 (at 90% Occupancy)
ALOS	7.2 Days	Unknown
Utilization	100%	55%

*Calculated by dividing bed days utilized by 365 days.
Source: North Range Behavioral Health

However, considering that current utilization may not actually be meeting demand, given the difficulty in traveling to Greeley for services, consultants reviewed the most recent National Survey of Drug Use and Health (NSDUH)[6] and applied national data to Larimer's population. The NSDUH provides national and state level data on the prevalence, patterns and consequences of behavioral health disorders. Applying NSDUH national data to Larimer County would predict that 41,000 adult residents would access any mental health treatment and that 2,790 of those would receive inpatient treatment.

[6] Substance Abuse and Mental Health Administration (SAMHSA) (2015) *2014 National Survey of Drug Use and Health, Substance Abuse and Mental Health Services Administration*. Rockville, Maryland.

Table 5. NSDUH Penetration Rates Applied to Larimer County (2014)

Type of Treatment	% Adult Population Receiving Treatment (NSDUH)	Estimated Larimer County Residents Receiving Treatment
Any	14.8%	41,300
Medication	12.5%	34,900
Outpatient	6.7%	18,700
Inpatient	1%	2,790

Source: 2014 National Survey of Drug Use and Health, Substance Abuse and Mental Health Services Administration

The NSDUH also provides specific data on treatment utilization for individuals with 'any mental illness' (AMI) and for those with 'serious mental illness' (SMI). As shown in Table 6., smaller percentages of individuals with AMI use each of the three service types, but the ranking of service utilization is the same, with medication first, outpatient second and inpatient third.

Table 6. NSDUH Treatment Utilization by Service Type and Sub-Population (2014)

Sub Population	Medication	Outpatient	Inpatient
AMI	39%	24%	4%
SMI	61%	44%	9%

Source: 2014 National Survey of Drug Use and Health, Substance Abuse and Mental Health Services Administration

The NSDUH estimates that Larimer County's population is comprised of 44,000 residents with AMI and 10,000 residents with SMI. Applying the expected utilization rate to the sub-populations produces a current estimate of approximately 2,700 individuals currently using acute inpatient treatment.

Table 7. NSDUH Inpatient Utilization Rates Applied to Larimer County

Larimer County Population with Mental Health Disorders	NSDUH Inpatient Utilization Rate	Larimer County Expected Utilization (People)
Any Mental Illness	4%	1,760
Serious Mental Illness	9%	900

Source: 2014 National Survey of Drug Use and Health, Substance Abuse and Mental Health Services Administration

However, current combined ATU and Inpatient Psychiatric capacity would only provide access to 1,400 individuals, as Table 8 shows.

Table 8. Current Acute and Sub-Acute Larimer County Capacity

Service	Beds	Bed Days	ALOS	People/Admissions
ATU	7	2,357	7	337
Inpatient Psychiatric	10*	3,285	4	820
Total	17	5,642	4	1,157

Sources: ATU Beds from North Range Behavioral Health and Inpatient Psychiatric projections by consultants, based on 40% current capacity used for adult treatment*

Although the consultants were able to access total utilization for the Greeley ATU (Table 4 above), only Medicaid utilization data for ATU and Acute Inpatient Treatment were provided. No utilization data was received for private or other public payer sources for these services. North Range Behavioral Health provided revenue by payer source and this was factored into the analysis of met and unmet need.

Table 9. State Fiscal Year (SFY) 15 Medicaid Beneficiaries Served

Total Duplicated	Outpatient	Intensive Outpatient	Residential	ATU	Inpatient Psychiatric
10,955	9,937	19*	120	470	409
100%	90%	0.2%	1.1%	4.3%	3.7%

Source: Colorado Access Behavioral Health Organization
*IOP Utilization is MH and SUD combined

Table 10. Total SFY15 ATU Total Revenues and Expenses ($ in 000s)

Expenses	Revenues	Difference	Revenue Breakdown			
			State/Federal	Medicaid	Insured/Self	Other
$2,175	$1,777	$398	0	$600	$687	$490
			0%	34%	39%	27%

Source: North Range Behavioral Health

Recommended ATU Capacity

In order to compare the proposed acute and sub-acute inpatient utilization with the NSDUH, future projections for both the ATU and Larimer County's inpatient capacity were developed. Currently, the local psychiatric inpatient unit has 25 beds, some of which are used for SUD withdrawal management and specialized geriatric treatment. With the beds that Mountain Crest Behavioral Health Center plans to add (16 more for a total of 41), this analysis assumes that, on the average, 20 beds will be used for adult psychiatric admissions. With a 90% occupancy rate and a 4-day length of stay, Mountain Crest will have the capacity to serve 1,640 people. Since the Larimer County ATU recommended capacity is 12 beds, with a 4-day length of stay and 90% capacity, the facility will be able to serve 986 people/admissions. This would almost double Larimer County's acute and sub-acute capacity and almost reach the NSDUH benchmark 1% utilization target. Having adequate ATU capacity within the county would also result in more targeted utilization of local acute inpatient capacity.

Table 11. Recommended Capacity

Service	Beds	Bed Days	ALOS	People/Admissions
ATU	12	3,942	4	986
Inpatient Psychiatric	20	6,570	4	1,642
Total	32	10,512	4	2,628

Distinct Levels of Care

In order to maximize the use of the County's array of acute and crisis stabilization beds, several changes are recommended to the specifications for ATU and Community Crisis Clinic/Crisis Stabilization Unit so that they each represent distinct levels of care. Information in the following grid was extracted from North Range and SummitStone documents, with underlines representing recommended additions and recommended deletions indicated with strikeouts.

Table 12. Current Service Specifications
(From North Range and Summit Stone documents)

Service Specifications	**ATU** (Acute Treatment Unit)	**CCC** (Community Crisis Clinic/Crisis Stabilization Unit)
Description	24-hour psychiatric treatment program that provides supervision in a safe environment that is medically staffed or has medical consultation available. (ATU can keep people up to 14 days.)	Short-term 24-hour crisis services with capacity for immediate clinical intervention and stabilization, including residential stabilization up to 5 days.
Target Population	Persons with serious mental illness	• Persons in behavioral health crisis and whose needs cannot be accommodated safely in the community or in a less restrictive environment. This includes people with I/DD or co-occurring SUD conditions that do not require detox.
Admission Status	Voluntary or Involuntary	Voluntary or Involuntary
Admission Criteria	• Significant current risk of more restrictive care • Significant risk of harm to self or others • Risk or deterioration of functioning the absence of ATU services	• Significant current risk of more restrictive care • Significant risk of harm to self or others • Risk or deterioration of functioning the absence of CCC services
Exclusionary Criteria	In need of detox or is acutely intoxicated or is experiencing significant withdrawal symptoms from drugs or alcohol or is incapacitated due to a substance use disorder	In need of detox or is acutely intoxicated or is experiencing significant withdrawal symptoms from drugs or alcohol or is incapacitated due to a substance use disorder
Setting	Non-secured community setting with delay egress lock	Non-secured community setting
Seclusion & Restraint	Able to provide seclusion and restraint	Without the need for seclusion or restraint

Table 13. Recommended Service Specifications

Service Specifications	ATU	CCC
Description	Short-term 24-hour psychiatric treatment program that provides supervision in a safe environment that is medically staffed or has medical consultation available.	Short-term 24-hour crisis services with capacity for immediate clinical intervention and stabilization, including residential stabilization. Medically staffed.
Target Population	Persons in behavioral health crisis whose needs cannot be accommodated safely in the community but who can be stabilized without inpatient psychiatric treatment	• Persons in behavioral health crisis and whose needs cannot be accommodated safely in the community or in a less restrictive environment. This includes people with I/DD or co-occurring SUD conditions that do not require detox.
Admission Status	Voluntary or Involuntary	Voluntary or Involuntary
Admission Criteria	• Significant current risk of more restrictive care • Significant risk of harm to self or others • Risk or deterioration of functioning the absence of ATU services	• Significant current risk of more restrictive care • ~~Significant risk of harm to self or others~~ • Risk or deterioration of functioning the absence of CCC services
Setting	Secure community setting	Non-secure community setting
Seclusion & Restraint	Seclusion is available, if necessary.	Seclusion is available, if necessary.

D. Services and Supports for Persons with Mental Health and/or Substance Use Disorders

Based on a review of existing service utilization, the County's continuum of care and research on evidence-based practice, the Alliance has identified several additional service areas that are critically needed components of the local system. Those services are Care Coordination for persons with mental health and/or substance use disorders, housing support services for individuals residing in Permanent Supportive Housing (PSH), access to Client Assistance Funds in order to remove barriers to treatment and increase the system's recovery support capacity, and a patient-centered assessment system.

Care Coordination

Community health and human services providers have identified the need for more moderately intensive to intensive care coordination in Larimer County for high healthcare utilizers with behavioral health needs. Those who have complex needs that may include any combination of co-occurring mental health, substance use disorder, and/or medical conditions often need assistance in order to manage their health and health care. Additional care coordination, at the right levels and for the right population, can improve health status and functionality for the targeted population. At the same time, adequate care coordination combined with appropriate health and behavioral health services has been shown to reduce inappropriate utilization of services such as ambulance, emergency department, and the criminal justice system, saving those costs as it improves an individual's quality of life.

The level of need for local care coordination was estimated by extrapolating national and Colorado statistics to the local population. Current research estimates that while 20% of Medicaid enrollees nationally have a diagnosis of a MH and/or SUD, over half of the Medicaid enrollees in the top 5% of healthcare spending had a mental health condition and 20% had a substance use disorder.[7] Nationwide, 5% of the Medicaid beneficiaries account for 60% of the healthcare spending.[8] Applying these statistics locally indicates that approximately 2,584 people in Larimer County who are high healthcare utilizers (and have either a mental health disorder, a substance use disorder, or both) come from the 'complex needs' population most likely to benefit from care coordination. Although at least 260 of those are already receiving care coordination from existing services, there are as many as 2,324 people remaining who are either Medicaid recipients or uninsured in Larimer County who are most likely to benefit from moderately intensive to intensive care coordination but not receiving it.

Since Larimer County's existing Medicaid Accountable Care Coordination (MACC) Team provides an operational platform for care coordination, 500 additional Medicaid beneficiaries and/or insured persons should be offered this service.

Support Services for Individuals in Permanent Supportive Housing

Permanent Supportive Housing (PSH) is widely recognized as an evidence-based practice for formerly homeless people with chronic behavioral health and medical conditions. Extensive research has demonstrated that, as a key social determinant of health, housing plays a critical role in facilitating an individual's health status and wellbeing. The provision of PSH, however, must be accompanied by an array of support services that allow a person with chronic behavioral health conditions or disabilities to survive and thrive in an independent living environment. While the type and intensity of support services may vary, housing arrangements are permanent. Recently, a Permanent Supportive Housing project, Redtail Ponds, has been developed within Larimer County by the Fort Collins Housing Authority, and another project is being planned. The Housing Authority reports that while they have been able to secure housing funding, it has been far more difficult to secure adequate resources to provide the necessary level of support services.

[7] Government Accountability Board. Accessed website www.gao.gov/assets. Accessed on November 19, 2015.
[8] Pew Charitable Trust. Mental Health Spending Report. http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2014/12/15/some-states-retreat-on-mental-health-funding. Accessed on November 19, 2015.

Housing related services may be provided in a stand-alone model, may be provided within a specific program, or may constitute a dedicated unit in a larger behavioral health organization. Services restore and increase an individual's ability to live successfully in the community.

Some of the services are housing-specific but others are tailored to the treatment and recovery needs of the persons being served. Residents of PSH may also receive additional behavioral health treatment that addresses clinical, psychiatric or medical needs. Support services provide the structure that allows individuals to access vouchers from public housing authorities or to live in commercially managed housing stock. Interventions may include housing search, assisting an individual to meet housing eligibility criteria and make applications and requests for reasonable accommodations, as needed. Staff assists individuals in applying for rental subsidies, with move-in assistance, and building and maintaining landlord relationships to prevent eviction or loss of housing.

Pre-tenancy services can include assertive outreach and engagement to facilitate the individual's interest in permanent housing and to determine what support services will be necessary. Staff assists with the search process and work with the individual on a housing support plan so that services can be initiated prior to the move-in date. All move-in needs are addressed, including purchasing household items, arranging for utility connections, etc. Staff helps the individual understand the role, rights and responsibilities of being a tenant and the roles and responsibilities of the landlord. Assisting the individual to learn how to manage their living arrangement as well as self-care and daily living skills are all part of the support service package.

As a best practice, PSH support services are delivered through a team approach by staff who are experienced in providing behavioral health treatment and recovery support and who have received "community and tenancy support" training prior to service initiation. Staff provides 'first responder' coverage for crises, are mobile and make arrangements for crisis intervention on a 24/7 basis. The majority of services are delivered face-to-face. Each housing support team can serve 80 to 100 clients.

Support services for PSH are increasingly being financed through Medicaid, especially in states that expanded eligibility through the Affordable Care Act. A growing number of Medicaid Health Plans are financing these services, understanding the connection between housing and health, especially as Medicaid puts these Plans financially at risk for the health status of enrolled beneficiaries. Although Colorado's Medicaid plan doesn't currently cover these support services, it's possible that, in the future, the behavioral health benefit may include them.

Client Assistance Funds

Based on the targeted critical services and the expected needs of the County's population who are either uninsured or Medicaid beneficiaries, client assistance allocations are critical to enhance service provision and advance recovery supports. The proposed fund would be flexible and would help cover needs such as transportation, medications, reduction of other barriers to treatment (e.g. co-pays) and personal emergency funds.

*Estimate of Need***:** Ten percent of the 1,175 persons projected to need MAT will be individuals who are uninsured and, therefore, require financial subsidy from NLCHD. In addition, assistance in reducing barriers to treatment (e.g. co-pays) and/or assisting with emergency expenses would be made available through the fund for approximately 500 individuals.

Patient-Centered Assessment System

In order to maximize the use of existing and new services and capacity, the Larimer County behavioral health service system needs clinically strong, evidence-based assessment and seamless linkage to required services. To meet this need a more robust assessment unit will be developed, with nursing, social work/CAC and psychiatric staffing so that comprehensive evaluations can guide the provision of appropriate treatment and referrals to care. The unit will conduct MH and SUD assessments that direct patients to the appropriate level of care based on acuity; provides outreach; assists clients in accessing benefits; and manages client assistance funds. All staff will have specialized training and experience in differential diagnosis. Staffed by five clinical practitioners, the unit would have the capacity to conduct 7,600 assessments per year.

Summary

The aggregate of the individual recommendations made on capacity expansion for critical services produces the following profile (Table 14 – Below).

Table 14. Summary of Increased Capacity for Critical Services

Service	Capacity	ALOS	Annual Utilization
MEDICALLY MONITORED WITHDRAWAL MANAGEMENT	12	5 Days	822 admissions
SUBSTANCE USE (SUD) RESIDENTIAL TREATMENT			
Short Term Intensive	11 Beds	12 Days	305 admissions
Low-Intensity Residential	105 Beds	90 Days	382 admissions
SUD INTENSIVE OUTPATIENT	50 ADC	30 Visits	1089 admissions
SUD OP	30 FTE	10 Sessions	3800 admissions
ACUTE TREATMENT UNIT	12 Beds	5 Days	986 admissions
BH SUPPORTIVE SERVICES			
Support Services for Permanent Supportive Housing	100 clients	Long-term	100 clients
Care Coordination	500	Long-Term	500
Client Assistance	NA	NA	620 clients
Patient-Centered Assessment System	NA	NA	7,655 assessments
Subtotal			12,439

4. Insurance Profile and Covered Services

As part of evaluative activities for this project, the consultants profiled the insurance status of Larimer County residents and analyzed Colorado's covered behavioral health benefits. As is true across the country, Larimer County residents have a diverse set of coverage options (Table 15. below). Most residents are privately insured and the county has a relatively low rate of uninsured individuals. There is moderately high Medicaid/Children's Health Insurance Program (CHIP) enrollment and typical Medicare rates.

Table 15
Insurance and Coverage Status for Larimer Residents and Proposed Services

	Uninsured	Other Public	Medicaid/CHIP		Subtotal (Uninsured, MCD/CHP+, Other Public)	Medi-care	Market-place	Private	Private & Marketplace
			Medicaid	Medicaid/CHIP					
Larimer County									
#	19,400	-	63,000	65,870	85,270	35,650	10,440	183,760	194,200
%	6%	-	19.5%	20%	26%	11%	3%	57%	60%
CO	11%	4%	-	20%	35%	12%	-	53%	-
US	10%	2%	-	19%	31%	13%	-	55%	-

Benefits packages, of course, vary across payers. Focusing on the critical services the Alliance wishes to add to the continuum, the landscape is checkered. For Withdrawal Management, many payers cover Social/Ambulatory Detoxification, but for Medically Monitored or Managed settings, private coverage may be available but Medicaid is not. Only the State provides funding for SUD Residential Treatment; Medicaid does not and coverage by private insurers is likely mixed. Acute Treatment (ATU) is probably covered by all payers except Medicare, and MAT is likely a covered benefit for all payer sources. Care Coordination is usually a Health Plan function within either a Medicaid or private insurance environment.

Table 16
Colorado Covered Behavioral Health Benefits

Targeted Svc	Payer					
	Medicaid	State/Block Grant	Medicare	Private Ins.	Marketplace	CO's Benchmark Plan[9]
Withdrawal Management	Social/Ambulatory Detox[10] Social Detox[11]	Detox (Level III.2)	NO	YES	YES	
Medically Monitored	NO	NO	NO	YES	YES	
Medically Managed	NO	NO	YES	YES	YES	X (Inpatient)
SUD Resid Treatment	NO	Trans. (Level III.1) Low-Intensity Residential	NO	NO	NO	X[12]
		Therapeutic Community (Level III.5)	NO	Possibly	Possibly	
		Clinically Mgd High Intensity (Level III.5)	NO	Likely	Likely	
		IntensRes Tx (Level III.7)	NO	YES	YES	
Acute Treatment Unit	YES	YES	NO	YES	YES	
MAT	Methadone Acamprosate Buprenorphine, Disulfram, Naltrexone	Opioid MAT	Could	Likely	Likely	
SUD Intensive Outpatient	Outpatient Day Treatment[13] Intensive Outpatient Treatment[14]	NO	YES	YES	YES	X[15]
Care Coordination	RCCO Function[16]	Case Management	Medicare Advantage	YES, if managed care	Yes, if managed care	

[9] Centers for Medicaid and Medicare Services (CMS) *Kaiser Foundation Health Plan of Colorado Benchmark Plan.* www.cms.gov/CCIIO/Resources/Data-Resources/Downloads/colorado-ehb-benchmark-plan.pdf . Accessed November 20, 2015
[10] Colorado Access. *February 2014. Procedures billed are: Physical Assessment, Evaluation of Motivation, Safety Assessment, and Provision of Daily Needs*. http://www.coaccess.com/access-behavioral-care. Accessed November 20, 2015..
[11] Colorado Access, *Overview of Colorado Medicaid Behavioral Health Organizations.* http://www.coaccess.com/access-behavioral-care. Ace
[12] Kaiser's "Evidence of Coverage" statement includes "residential rehabilitation" under "chemical dependency covered services"
[13] CO SPA
[14] Colorado Access, op cit
[15] Kaiser's "Evidence of Coverage" lists 'partial hospitalization' as a covered service
[16] "Every ABC Member has a direct care manager", Colorado Access, op cit

5. Financing Critical Services

Financing the Service System: Expense and Revenue Estimates by Service

Introduction

For each of the targeted services, the consultants have developed preliminary budgets or costs and potential revenue sources. Services included in these estimations include:

- Withdrawal Management (3.7)
- SUD Residential Treatment
  - Short Term Intensive Residential Treatment (3.5)
  - Low-Intensity Residential (3.1)
- Intensive Outpatient Treatment
- Outpatient Treatment
- Acute Treatment Unit
- Support Services
  - Moderately Intensive to Intensive Care Coordination
  - Support Services for those in Permanent Supportive Housing
  - Client Assistance (Transportation, , medications, IOP, OP and Emergency/Transitional Needs)
  - Patient-Centered Assessment System

Cost Estimates

The cost estimates that follow represent the best estimate of the expenses (cost) and potential revenue associated with each service. Together, the expenses when combined with potential revenue represent a budget that results in a surplus or deficit for that service.

Preliminary budget calculations were developed for Withdrawal Management, Intensive Residential Treatment, Low-Intensity Residential, Service Center Assessment Unit, Care Coordination, and Support Services for those in Permanent Supportive Housing. Client utilization projections and typical rates were used to calculate revenues for Intensive Outpatient, Outpatient, and Client Assistance. These calculations are contained in a separate working document.

Estimates of the *expenses* for each service delivered through a program model are based on the following assumptions:

1. Where applicable, Colorado Office of Behavioral Health Licensure Standards were used as a baseline for personnel coverage. In most instances, staffing levels are estimated at the highest end of staffing ranges required by codes.

2. Salary levels are based on a round number representing salaries found in equivalent positions in Denver listed on www.Salaries.com and Craigslist. The salaries were adapted by applying local rates reported by participating organizations.

3. Benefits are computed at a rate of 30% of total direct salary.

4. The community-based health care service industry is based primarily on human resources: Experience with budgets for this type of not-for-profit or public entity indicates that 80% or more of total expenses are represented by personnel including salary and benefit expenses; administrative overhead for services represents 10-15% of total expenses; direct service personnel would therefore represent about 65% of total expenses; non personnel, or 'Other Expenses' are calculated at 35% of total expenses.

5. Residential programs and the assessment team are budgeted assuming they're located in one facility with opportunities for cross-staffing as volume and demand fluctuate across programs; this assumption explicitly includes administrative personnel. It does not include the cost of the LIR houses themselves (for the vendor should provide those).

6. Other expenses include: administrative overhead, and all other operating expenses including, but not limited to: insurance, utility, space/capital carrying costs, travel, training, food, supplies, non-capital equipment, etc.

Table 17 summarizes preliminary costs and revenues for each service. Detailed preliminary budget calculations for each service are included in a separate working document. For clarity, some explanatory information and assumptions resulting in preliminary cost projections for additional specific support services are also outlined briefly below.

Care Coordination Services

Using the Medicaid Accountable Care Community Collaborative (MACC) Team current budget as a prototype, the cost of providing moderately-intensive to intensive care coordination services for 500 additional individuals would be approximately $1,116,000.

Client Assistance Funds

Based on the targeted critical services and the expected needs of the County's population who are either uninsured, underinsured, or Medicaid beneficiaries, some client assistance allocations would enhance service provision and advance recovery supports by helping these clients cover the costs of transportation, medication, and personal and emergency treatment-related needs. The total client assistance fund amount is estimated at approximately $1.1 million. Components of this fund are outlined below:

a) Medications

Funds will be allocated for Medication-Assisted Treatment (MAT) for uninsured individuals; costs of $415,800 are projected for 10% of the 1,175 clients estimated to be in need of MAT. MAT projections are based on the Vermont systems' MAT utilization since this state represents one of the country's most mature MAT delivery systems. Vermont's system relies on a combination of SUD treatment providers serving patients who have complex needs and are receiving MAT and affiliations of buprenorphine-certified physicians. One-third of the patients are served in the specialty system and two-thirds receive treatment from waivered physicians.

MAT Projections for Larimer County

Provider	% Patients	#Patients	Annual Cost/Patient	Total Annual Cost
SUD Providers	35%	42	$6,000	$252,000
Physicians	65%	78	$2,100	$163,800
Totals		**120**		**$415,800**

b) Living and Emergency Expense Component

Other Client Assistance Funds will be available for emergency or transitional personal or household expenses, such as food, shelter, medical care, insurance co-pays or deductibles and/or transportation. Funds will be administered by staff who will develop guidelines for authoring the emergency funds. Using an average of $1,400/client and 500 clients, $700,000 would be required for this Client Assistance component.

Additionally, funding should be set aside to assist uninsured clients in accessing Intensive Outpatient Treatment (IOP) and Outpatient Treatment (OP), two key levels of care that are available in the community, but are not always accessible and affordable to all who need them.

c) Intensive Outpatient Treatment

The assumption is that 20% of the projected 1,089 admissions are uninsured individuals (218). An IOP episode of treatment includes three visits per week for 9 hours total; each episode of care lasts 30 visits (10 weeks duration). At a reimbursement rate of $125/visit, an episode of care costs $3,750, requiring a subsidy of approximately $817,500 to cover these individuals.

d) Outpatient Treatment

The assumption is that 20% of the projected 3,900 admissions are uninsured individuals (780) who average 10 sessions each at a cost of $60/session (rounded current Medicaid reimbursement rate.) Total cost would be $468,000.

Revenue Estimates

Estimates of *revenues* for each budgeted service appear in Appendix 1 and are based on the following assumptions:

1. Where reimbursement data was available from Medicaid or other payers, those rates are used to generate revenue.

2. Where reimbursement data was not available from Medicaid or other payers, actual charges were used (e.g. ATU and Withdrawal Management) or typical charges from other jurisdictions (e.g. IOP, STIR).

3. The proportions of Larimer County residents who are uninsured, insured by Medicaid, insured by public subsidized plans, or insured by private plans was used to determine the level of reimbursement when data was available; and the percent of patients who would require 'free care', and therefore an alternate source to cover the cost of their service was used to estimate need for non-insurance revenues.

4. The category of "under-insured" represents individuals who have insurance coverage but for whom the targeted service is not covered; they can't pay required deductibles and/or co-pays; or whose behavioral health provider is not part of their insurer's network.

In Table 17, estimates of positive margins and shortfalls represent the difference between estimated expenses and estimated known revenues. Both margins and shortfall estimates are influenced by estimates of the percent of Larimer residents who are currently uninsured. Nationally, and in all likelihood in Colorado, many remain uninsured because they have not been enrolled for either subsidized insurance plans, expanded Medicaid options, or standard Medicaid. Aggressive enrollment practices may well close the gap of revenue shortfalls.

Summary

Based on the analysis of need, feasible growth in capacity and projection of revenue and expenses for critical services, approximately $10 million would be required to install or expand the targeted services and meet the gap between the cost of these services and the revenues available to support them (See Table 17 below).

Table 17. Summary of Service Budgets, Projected Revenues, and Gaps (in ,000s)*

Service	Personnel	Other	Total	Revenues	Gap
WITHDRAWAL MANAGEMENT (3.7)	$867	$298	$1,165	$154	1,011
SUD RES TX					
Short Term Intensive Residential (3.5)	$780	$295	$1,075	$412	$663
Low-Intensity Residential (3.1)	$2,721	$1,466	$4,187	$1,713	$2,474
SUD IOP	NA	NA	$818	NA	$818
SUD OP	NA	NA	$468	NA	$468
ACUTE TREATMENT UNIT	$1,360	$732	$2,133	$1,380	$753
BH SUPPORTIVE SERVICES					
Support Services for PSA	$377	$215	$592	0	$592
Care Coordination	$918	$314	$1,232	0	$1,116
Client Assistance	NA	NA	$1,116	0	$1,116
Assessment	$1,365	$736	$2,101	$746	$1,355
TOTAL	$8,592	$4,018	$14,418	$4,405	$10,366

*** = The calculations based on the reimbursable services for the different services by the different payers on the market resulted in 30% of services being reimbursable by existing payers and 70% of services are not anticipated to receive reimbursement (or payment).**

6. Facility Configuration and Estimates

A basic estimate of facility space needed to accomplish the recommended services was completed as part of this study. Estimation of space and facility needs focused on basic functions and usable space and did not consider specific design considerations e.g. # floors, building footprint, or arrangement of proposed shared spaces. Additional work will need to be done to outline total space needs using department spacing factors and building grossing factors, etc. which likely will expand the square footage needed in a facility.

An assumption made in developing the space projections is that some staff and space will be shared between programs when needed and allowable through licensure and facility codes; and that land and building acquisition includes consideration of future needs.

Additional space needs were based on The Colorado Office of Behavioral Health Codes, *Code of Colorado Regulations 2 CCR 502-1*, Section 21.110, "Physical facilities that meet all current and applicable local and state health, safety, building, plumbing and fire codes and zoning ordinances;" and in 21.120.3, as described in FACILITIES DESIGNATED TO PROVIDE MENTAL HEALTH SERVICES [Eff. 11/1/13]. The application of additional relevant local

state, and federal building and life safety codes fall outside of the designated scope of work, but should be accounted for in these estimates.

According to the preliminary estimate, approximately 20,000 square feet of facility space would be needed (calculations are included in a separate document) to provide the recommended services.

In choosing a site, the community may also want to consider the possibility of a site with some flexibility for expansion in case future services (such as primary care or crisis stabilization), funded separately from this proposal, and would be appropriate to have nearby.

7. Benefits to Patients, Community, and Payers

The majority of individuals with mental health and/or substance use disorders who receive appropriate treatment improve. The current research and understanding of substance use disorder as a treatable health condition based on changes in neuro-biologic as well as psycho-social conditions has strong evidence that demonstrates what treatments work, and the resulting 'value' or benefit to: the patient, their family, community and payers.

In short, there is ample evidence summarized below with references that follow to demonstrate that the benefit of treatment:

- For *the patient:* Is well-being and ability to function with family, work, community and society - the same as benefits for managing symptoms of diabetes or hypertension: well-being, work, family and community engagement;
- For *the family*: Is reengagement of the patient and parents, children and other family members improving the functioning of family units;
- For t*he community:* Is realized in concrete terms as reductions in cost of law enforcement and corrections related expenses, (as 80+% of law enforcement and local corrections system resources are related to SUD), and in less concrete terms as active participants in the work, civic, cultural and economic functions of a community; and
- For *payers:* Ranges from concrete dollar offsets associated with reduced health care utilization and expenditures when SUD is treated to less quantifiable effects related to improved population health.

For purpose of this analysis, emphasis on material cited will be on benefits to the patient, community, and payer.

Benefits to Patients

A number of benefits to the individual themselves are seen as a result of effective treatment, including:

- Improvement rates for mental health treatment are comparable to improvement rates for other health conditions. For example, the rate of improvement following treatment for individuals with bipolar disorder is about 80 percent; for major depression, panic disorder and obsessive-compulsive disorder, improvement rates are about 70 percent. The success rate for those with schizophrenia is 60 percent. These rates are quite comparable to rates of improvement for individuals who suffer from physical disorders, including asthma and diabetes at 70% - 80%, cardiovascular disease from 60% – 70% and heart disease at 41% to 52%."[17]
- Major savings to the individual and to society related to substance use disorder treatment stem from fewer interpersonal conflicts; greater workplace productivity; and fewer drug-related accidents, including overdoses and deaths.[18]
- Patients with chronic health conditions - especially diabetes and hypertension - who also have a substance use disorder, and receive SUD treatment are more likely to better manage their diabetes and or hypertension. They require few medical services and cost less than patients who do not receive SUD treatment.[19]

Benefits to the Community

Substance abuse costs our nation over $600 billion annually.[20] However, adequate treatment can help reduce these costs:

- Drug addiction treatment has been shown to reduce associated health and social costs by more than the cost of treatment and to be much less expensive than its alternatives, such as incarcerating those with addictions.[21] [22]
- According to several conservative estimates, every dollar spent on addiction treatment programs yields a return of between $4 and $7 in reduced drug-related crime, criminal justice costs, and theft. When savings related to healthcare are included, total savings can exceed costs by a ratio of 12 to 1.[23]
- For those who received treatment, the likelihood of being arrested decreased 16 percent and the likelihood of felony convictions dropped 34 percent, further contributing to cost savings for the state.[24] Washington State estimated that it will save $2.58 in criminal

[17] *Mental Health: The Business Case* (Rep.). (2005, August 03). Retrieved February 9, 2016, from Ohio Department of Mental Health website: http://www.dmahealth.com/pdf/Business Case MH fin 9 1 05.pdf

[18] National Institute for Health. (2012). Principles of Drug Addiction and Treatment: A research-based guide. NIH Publication No. 12-4180. Retrieved from https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/frequently-asked-questions/drug-addiction-treatment-worth-its-cost

[19] Ghitza, U., Wu, L.-T., & Tai, B. (2013). Integrating substance abuse care with community diabetes care: implications for research and clinical practice. *Substance Abuse and Rehabilitation*, 3. http://doi.org/10.2147/SAR.S39982

[20] National Institute for Health. (2012).

[21] National Institute for Health. (2012).

[22] Anglin, M. D., Nosyk, B., Jaffe, A., Urada, D., & Evans, E. (2013). Offender Diversion Into Substance Use Disorder Treatment: The Economic Impact of California's Proposition 36. *American Journal of Public Health*, *103*(6), 10.2105/AJPH.2012.301168. http://doi.org/10.2105/AJPH.2012.301168

[23] National Institute for Health. (2012).

[24] Estee, S. and Norlund, D. (2003). Washington State Supplemental Security Income (SSI) Cost Offset Pilot Project: 2002 Progress Report. R.a.D.A. Division and W.S.Do.S.a.H. Services, Washington State.

justice costs for every dollar spent on treatment, and realize an overall $3.77 offset per dollar of treatment costs.[25]

- Over the first four years of operation, the Community Dual Disorder Treatment (CDDT) program in Larimer County, an Integrated Dual Disorder Treatment (IDDT) program, significantly reduced overall inappropriate service usage by 58 percent. ER visits among participants fell by 84 percent, ambulance usage went down by 78 percent, in-patient psychiatric treatment was reduced by 92 percent, and arrests were lowered by 62 percent - resulting in savings to the community of over $174,000 after program costs were factored in.[26]
- A 2013 study found that people receiving medication for their mental health disorder were significantly less likely to be arrested, and that receipt of outpatient services also resulted in a decreased likelihood of arrest. The researchers also compared criminal justice costs with mental health treatment costs. Individuals who were arrested received less treatment and each cost the government approximately $95,000 during the study period. Individuals who were not arrested received more treatment and each cost the government approximately $68,000 during the study period.[27]

Benefits to Payers

There are also proven benefits of effective behavioral health disorder treatment to those organizations that pay for healthcare, such as health insurance companies and state and federal healthcare plans such as Medicaid and Medicare. Values reaped by payers may result in helping to reduce growth in premiums for individuals and organizations as well as controlling taxpayer costs for federal and state programs.

- In one study of four different modalities of substance abuse/use treatment, including inpatient, residential, detox/methadone and outpatient drug-free modalities; when compared to other health interventions, all of the substance abuse treatment modalities examined appear to be cost-effective when compared to ongoing substance abuse/use.[28]
- Some states have found that providing adequate mental health and addiction-treatment benefits can dramatically reduce healthcare costs and Medicaid spending. A study of alcohol and drug abuse treatment programs in Washington State found that providing a full addiction-treatment benefit resulted in a per-patient savings of $398 per month in Medicaid spending.[29]
- Kaiser Permanente Northern California analyzed the average medical costs during 18 months pre and post substance use treatment and found that the SU treatment group had a 35% reduction in inpatient cost, 39% reduction in ER cost, and a 26% reduction in total medical cost, compared with a matched control group.[30] [31]

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[25] Mancuso, D., & Felver, B. (2010). Health Care Reform, Medicaid Expansion and Access to Alcohol/Drug Treatment: Opportunities for Disability Prevention. (RDA Report No. 4.84) Olympia, WA: Washington State Department of Social and Health Services.

[26] Cooper, Bruce. (2013). *Larimer County Community Dual Disorder Treatment Program, Program Evaluation of First Four Years*. Fort Collins, CO: Health District of Northern Larimer County.

[27] Van Dorn, R. A., Desmarais, S. L., Petrila, J., Haynes, D., & Singh, J. P. (2013). Effects of outpatient treatment on risk of arrest of adults with serious mental illness and associated costs. *Psychiatric Services*. Retrieved from http://focus.psychiatryonline.org/doi/10.1176/appi.ps.201200406

[28] Mojtabai, R., & Graff Zivin, J. (2003). Effectiveness and Cost-effectiveness of Four Treatment Modalities for Substance Disorders: A Propensity Score Analysis. *Health Services Research*, *38*(1p1), 233–259.

[29] Estee, S. and Norlund, D. (2003). Washington State Supplemental Security Income (SSI) Cost Offset Pilot Project: 2002 Progress Report. R.a.D.A. Division and W.S.Do.S.a.H. Services, Washington State.

[30] Weisner C. Cost Studies at Northern California Kaiser Permanente. Presentation to County Alcohol & Drug Program Administrators Association of California Sacramento, California. January 28, 2010

[31] Weisner C, Mertens J, Parthasarathy S, et al. Integrating primary medical care with addiction treatment: A randomized controlled trial. Journal of the American Medical Association, 2001; 286: 1715-1723.

- Kaiser also found that family members of patients with substance use disorders had high healthcare costs and were more likely to be diagnosed with a number of medical conditions than family members of similar persons without a substance use condition.[32] For families of SU patients who were abstinent at one-year after treatment began, the healthcare costs of family members were no longer higher than other Kaiser members.[33]

Conclusions on Value and Benefits of Effective Substance Use Disorder Treatment

In the 21st century there is ample evidence that substance use disorders are treatable health conditions. There is also a strong body of evidence that treatment of substance use disorders is cost-effective and results in significant benefits to patients, families, the community, and payers.

A succinct summary of benefits is described in the Open Society Foundation Report, Unforeseen Benefits: Addiction Treatment Reduces HealthCare Costs, available at: https://www.opensocietyfoundations.org/reports/unforeseen-benefits-addiction-treatment-reduces-health-care-costs

8. Tracking and Reporting Results Using Outcomes and Measures

The first question often asked about treatment for substance use disorders is, "What's your success rate?"

The question on one hand assumes a simple response: Is the patient "cured"? On the other hand, the response to the question of "success" for any chronic illness is about managing the symptoms and improving the overall health status and functioning of the patient, and not their cure.

Fortunately, there has been significant progress in identifying, formulating, testing and gaining consensus on indicators that measure the results of substance use disorder treatment. These indicators measure results on several levels: the patient, the treatment program performance, and the overall performance of the system including payers.

Thus for example, a search of performance measures of the effectiveness of SUD treatment will include: patient abstention and or reduction of substance use; patient engagement with employment; service provider use of medication for alcohol or opiate based diagnoses; and connection to ongoing treatment post withdrawal management support.

To be useful, any measure must first be specified (able to be measured); tested (proven that it represents what is intended); based on data that is consistently available and aggregated (the same definitions and units are recorded, aggregated); and reported back to original sources (to be accountable).

For behavioral health outcomes and measures, there are essentially three widely recognized sources of measures that meet these criteria:

[32] Weisner C, Mertens J, Parthasarathy S, et al. 2001.
[33] Ray GT, Mertens JR, Weisner C. The excess medical cost and health problems of family members of persons diagnosed with alcohol or drug problems. Medical Care. February 2007. Vol. 45 Issue 2: 116-122.

Substance Abuse and Mental Health Services Administration (SAMHSA)
http://www.samhsa.gov/data/national-behavioral-health-quality-framework

National Quality Forum
http://www.qualityforum.org/Project_Pages/Behavioral_Health_Endorsement_Maintenance.aspx

American Society of Addiction Medicine (ASAM)
http://www.asam.org/practice-support/standards-and-guidelines

In addition, the Colorado Medicaid Agency identifies behavioral health measures for the behavioral health organizations contracted to manage dollars and services. The measures employed are essentially consistent with those referenced by SAMHSA, NQF, and ASAM: *Colorado Medicaid Community Mental Health Services Program, FY 2012-2013 Validation of Performance Measures for Behavioral Healthcare, Inc.*
https://www.colorado.gov/pacific/sites/default/files/Behavioral%20Healthcare%20Inc.%20Performance%20Measure%20Validation%202012.pdf

Recommended Measures and Outcomes

Based on a review of these sources, and considering the capacity of providers to track, record, aggregate, report; and payers and regulators to synthesize and feedback data, the following nine measures and outcomes are recommended for the Larimer system:

Patient

1. Patient functioning: employment; and social/family connections
2. Abstinence or reduced use of substance
3. Readmission to inpatient, residential, following relapse

Provider/system

1. Time to treatment from initial contact
2. Screening for substance, tobacco, mental health and related health issues
3. Percent of patients with alcohol and or opioid diagnoses who are prescribed medication
4. Active discharge to treatment (appropriate level) from withdrawal management with 7-day max active follow-up

Payer

1. The percentage of members who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of the diagnosis
2. The percentage of members who initiated treatment and who had two or more additional services with a diagnosis of AOD within 30 days of the initiation visit.

Summary

Identifying, tracking and using indicators of performance are continuous functions. They should be developed over time as a system and knowledge evolve. The indicators above represent a basic beginning suggested for Larimer County.

For the ***patient*** you want to know if they have reconnected with family/social network and employment; and, if they have continued a course of treatment or peer support.

For the ***treatment system***, you want to know: if they get patients into treatment within two days of a request; if they are prescribed medication when diagnosed with alcohol or opioid dependence; and if they have an active follow up appointment post detoxification.

For the ***payer***, you want to know: that evidence-based interventions are covered; and that the penetration or percent of enrollees who access mental or substance use disorder treatment is reasonable. Unfortunately, there is no universal accepted standard of "reasonable penetration." The range of actual penetration for access to SUD treatment by beneficiaries of insurance plans is 1-5% of enrollees with the lower end representing private and the higher end representing public insurance plans. When combined with mental health access, and the combination of SUD and mental health, considered as behavioral health, the range shifts to 12-23% of enrollees. It is reasonable to establish penetration rate targets that are consistent with "need for treatment" rates for SUD and MH conditions.

9. Summary of Service Recommendations

Based on the analysis of need, feasible growth in capacity and projection of revenue and expenses for critical services, approximately $10 million would be required to install or expand the targeted services and meet the gap between the cost of these services and the revenues available to support them (see Table 17 below).

Table 17. Summary of Service Budgets, Projected Revenues and Gaps ($ in 000s)

Service	Personnel	Other	Total	Revenues	Gap
WITHDRAWAL MANAGEMENT (3.7)	$867	$298	$1,165	$154	$1,011
SUD RES TX					
Short Term Intensive Residential (3.5)	$780	$295	$1,075	$412	$663
Low-Intensity Residential (3.1)	$2,721	$1,466	$4,187	$1,713	$2,474
SUD Intensive Outpatient (IOP)	NA	NA	$818	NA	$818
SUD Outpatient (OP)	NA	NA	$468		$468
ACUTE TREATMENT UNIT	$1,360	$732	$2,133	$1,380	$753
BH SUPPORTIVE SERVICES					
Support Services for PSH	$377	$215	$592	0	$592
Care Coordination	$918	$314	$1,232	0	$1,116
Client Assistance	NA	NA	$1,116	0	$1,116
Assessment	$1,365	$736	$2,101	$746	$1,355
TOTAL	$8,592	$4,018	$14,418	$4,405	$10,366

Appendix 1. Revenue Profiles

Larimer Critical Services Revenue Profile

[Note: "Net"= total revenue minus uninsured and underinsured rows]

	Utilization	%	Payer's	Charge	Revenue	Net
Assessment	7,655					
Uninsured		30%	2296.5	$150	$344,475	
State/Fed		10%	765.5	$150	$114,825	
Medicaid		35%	2679.25	$150	$401,887.50	
Medicare		5%	382.75	$150	$57,412.50	
Marketplace		5%	382.75	$150	$57,412.50	
Self/Insured		10%	765.5	$150	$114,825.00	
Under-Insured		5%	382.75	$150	$57,412.50	
TOTAL					**$1,148,250**	**$746,363**
	Utilization	**%**	**Payer's**	**Charge**	**Revenue**	**Net**
Acute Treatment Unit (ATU)	3,942					
Uninsured		20%	788.4	$500	$394,200	
State/Fed		30%	1182.6	$500	$591,300	
Medicaid		35%	1379.7	$500	$689,850.00	
Medicare		0%	0	$500	$0.00	
Marketplace		5%	197.1	$500	$98,550.00	
Self/Insured		10%	394.2	$500	$197,100.00	
Under-Insured		5%	197.1	$150	$29,565.00	
TOTAL					**$2,000,565**	**$1,576,800**
	Utilization	**%**	**Payer's**	**Charge**	**Revenue**	**Net**
Medically Monitored Withdrawal Management (WM)	4,112					
Uninsured		20%	822.4	$250	$205,600	
State/Fed		0%	0	$250	$0	
Medicaid		0%	0	$250	$0.00	
Medicare		0%	0	$250	$0.00	
Marketplace		5%	205.6	$250	$51,400.00	
Self/Insured		10%	411.2	$250	$102,800.00	
Under-Insured		65%	2672.8	$250	$668,200.00	
TOTAL					**$1,028,000**	**$154,200**
	Utilization	**%**	**Payer's**	**Charge**	**Revenue**	**Net**

	Utilization	%	Payer's	Charge	Revenue	Net
Short term Intensive Residential Tx (SIRT)	3,667					
Uninsured		20%	733.4	$250	$183,350	
State/Fed		30%	1100.1	$250	$275,025	
Medicaid		0%	0	$250	$0.00	
Medicare		0%	0	$250	$0.00	
Marketplace		5%	183.35	$250	$45,837.50	
Self/Insured		10%	366.7	$250	$91,675.00	
Under-Insured		35%		$250	$0.00	
TOTAL					**$595,888**	**$412,538**
	Utilization	**%**	**Payer's**	**Charge**	**Revenue**	**Net**
Low Intensity Residential (LIR)	30,942					
Uninsured		0%	0	$135	$0	
State/Fed		10%	3094.2	$135	$417,717	
Medicaid		0%	0		$0.00	
Medicare		0%	0		$0.00	
Marketplace		0%	0		$0.00	
Self Pay		31%	9592.02	$135	$1,294,922.70	
Under-Insured		0%			$0.00	
TOTAL					**$1,712,640**	**$1,712,640**

APPENDIX L

Local Application and Adjustment of NIATx Budget and Facility Projections (From the Original 2016 Report)

After NIATx completed their report with preliminary cost, revenue and facilities estimations, local experts in behavioral health, budgeting and facilities amended these figures to represent local circumstances and input. The following are a few of the key factors that were changed that impacted the final budget and facility projections:

Personnel

- Some salaries were increased to reflect local hiring realities;
- Some staffing levels (FTE) were increased to ensure adequate staffing levels to meet 24/7/365 operating needs and staff safety;
- A few additional positions were added to support program oversight, billing, and other operational needs.

Operating Costs

- The estimate of general operating costs was changed from 35% of personnel costs to 30% of the total budget;
- Additional expenditures outside of general operating costs were added (including security, food and laundry contracts, etc.);
- Additional annual operations, maintenance, and component replacement costs were calculated based upon the projected facility size;

Facility Estimates

- Initial estimates of space were built upon to ensure adequate space for positions added or staffing levels increased;
- Additional review and consideration of patient and staff flow was completed, resulting in a number of added spaces (such as family visitation space, dining space, patient TV/recreation rooms, loading dock for shipping, laundry space, etc.)
- Facility space for Detox, ATU and Intensive Residential Treatment were each increased from 12 beds for each unit to 16 beds for each unit to enable expansion of these services over time.
- A department spacing factor of 35% was applied to initial square footage estimates to account for hallways, walls, etc.
- An assumption was made that the facility would be a single story building, and a building grossing factor of 25% was applied to account for mechanical shafts, utility closets, IT routing, facility wide restrooms, etc.
- Project costs were estimated (including design, construction, FF&E, and land costs)

The budget and facilities summaries below represent the total projections after initial local application and adjustment of the NIATx preliminary projections. Actual in-depth program and facility design is expected to further alter these figures over time.

APPENDIX M

2017 UPDATE OF RECOMMENDATIONS FOR THE DEVELOPMENT OF CRITICAL BEHAVIORAL HEALTH SERVICES IN LARIMER COUNTY

A Review and Recommendations for Approaching the 2017 Update Process

Presented to:
The Health District of Northern Larimer County
And
The Mental Health and Substance Use Alliance of Larimer County

Prepared By:
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October 23, 2017

Section I: Background & Charge

In 2015, The NIATx Foundation was contracted to provide an assessment of Larimer County's substance use disorder (SUD) continuum of care and mental health crisis delivery systems to determine projected need by service type, to identify service gaps, and to project how these needs could be addressed through a stand-alone county run facility and community-based agencies. That engagement provided a detailed report in 2016 called "Recommendations for the Development of Critical Behavioral Health Services in Larimer County (Recommendations Report).

In 2017, the Health District of North Larimer County asked the NIATx Foundation to help update the Recommendations Report. The NIATx Foundation reviewed data provided by Rocky Mountain Health Plan, North Range Behavioral Health, Poudre Valley Hospital Emergency Department, and Larimer County Jail; had three conversations with the "Guidance Team" (a workgroup supporting the update of the Recommendations Report, and several conversations with the Health District of Northern Larimer County Executive Director and Project Management team in order to provide a preliminary assessment and determine if a full revision (or update) of the 2016 "Recommendations Report was warranted. The NIATx Foundation concluded that the 2016 projections continue to be relevant in the planning for the Larimer County Health District behavioral health facility.

Correspondingly, this report update provides the rationale for the agreement made during our September 27, 2017 call between NIATx and Health District Project Management staff, where the NIATx Foundation recommended using projections from the 2016 report for three key reasons:

1. The time lapse between the original and current analysis is too short (less than two years) to detect significant changes in population, prevalence, or utilization trends.
2. The available data on utilization and system capacity was more robust in the original analysis than data available at this time.
3. Adjustments in population projections for the 2016 report were less refined for persons under 12 years old. Adjustments in population projections in the current estimates are more refined for persons over 65, whose prevalence rates tend to be lower than those of young and mid-life adults. The result is that the underestimating of children in 2016 is offset by lower utilization of elderly in the current analysis.

Section II: Population/Need Analysis

Attachment 1 reflects the current population-need analysis for Larimer County compared with the 2016 report and is summarized below:

Summary Population Need Analysis: Current Analysis-2016 Report

	Current Analysis	2016 Report
Population 12+	289,000	279,000
SUD Prevalence	30,056	31,200
SUD Tx Penetration	2,800 (mid pt.)	2,600 (mid pt.)
Unmet Need for Tx	1,360	1,410
Total Utilization Hypothesis	4,200	4,700

Section III: Changes in Utilization: IOP, MAT, and Detoxification Services

Based on current capacity data, three levels of care demonstrate increased capacity since the 2016 report: Intensive Outpatient Services (IOP), medication-assisted treatment (MAT), and detoxification (or withdrawal management) services.

IOP: The 2016 report projected a need for 700 admissions to IOP programs; current capacity data reported several organizations with undefined occupancy, and two organizations reported treating 60 patients. Assuming that the unreported occupancy of the additional groups equals another 60 patients, the remaining need (700−120) is still significant, and does not substantially change the original need projected.

MAT: The 2016 report estimated that 25% of the total projected utilization of 1,175 patients would benefit from MAT. Current evidence suggests that at least 50−75% (2,350−3,525) of patients would benefit from available medications for alcohol and opiate-based drugs. Current capacity data reported for MAT indicates that approximately 900 patients are receiving MAT services in Larimer County. Again, it is reasonable to use projections from 2016 report for MAT, given the efficacy of MAT and the new projections of greater utilization (e.g., 50−75%).

Detoxification Services (or withdrawal management): While there is an apparent increase from 2016 in the number of beds identified/reported by the county for withdrawal management in 2017, these were hospital inpatient medical detoxification beds provided by Mountaincrest and Clearview Hospital. The 12 beds recommended in the 2016 report remain reasonable because medically-managed (ASAM 3.7) beds are not fully available for patients with Medicaid or for indigent patients with no insurance and there is still a need for Social Detox services.

Section IV: Acute Treatment Unit (ATU) Projections

As is true for SUD, there is no need to revise previous projections for ATU capacity, since utilization projections from the National Survey of Drug Use and Health (NSDUH) have not

substantially changed since 2015, and Larimer County has experienced a 400% growth in inpatient psychiatric treatment beds.

Expected Utilization of Mental Health Treatment

	2016 ANALYSIS		2017 ANALYSIS	
Treatment Type	2014 NSDUH REPORT		2015 NSDUH REPORT	
	% Adults Receiving Treatment	Larimer Projections	% Adults Receiving Treatment	Larimer Projections
Any	14.8%	41,300	14.2%	41,038
Medication	12.5%	34,900	11.8%	34,102
Outpatient	6.7%	18,700	7.1%	19,363
Inpatient	1%	2,790	.9%	2,601

Source: National Survey of Drug Use and Health

Conclusion: Expected number of Larimer County residents utilizing inpatient treatment has not substantially changed.

2016 ATU Recommendation Added to Inpatient Capacity

Service	Beds	Bed Days	ALOS	Admissions	% Larimer Pop
ATU	12	3942	4	986	
Inpatient Psych	20	6570	4	1642	
Total	**32**	**10512**	**4**	**2628**	**.9%**

2017 Acute Residential and Inpatient Capacity

Service	Beds	Bed Days	ALOS	Admissions	% Larimer Pop
Acute Residential Services					
Crisis Residential	10	3285	3	1095	
ATU	12	3942	5	788.4	
Subtotal	**22**			**1883.4**	**.65%**
Inpatient Hospitalization					
Mount Crest*	34	11169	4	2792.25	
Clear View	76	24966	7	3566.57	
Subtotal	**110**			**6358.82**	**2.2%**
TOTAL	**132**			**8242.22**	**2.85%**

* Mountain Crest has 42 beds, but is only using 34 due to lack of need and lack of staff.

Conclusion: With the additional residential and inpatient capacity added since 2016, Larimer County can accommodate three times the national inpatient utilization rate if payer sources are available. The 2016 projection of 12 ATU beds remains adequate.

Section V: New Services

Although Larimer County has discussed the addition of several new services (e.g., Medical Clearance, Clinically Managed Residential Withdrawal Management, or (Social Detox) etc.) we haven't received specific clinical descriptions of these services or sufficiently detailed utilization data (as is the case for social versus medical detoxification services, ATU versus crisis services,

current medical clearances conducted in Emergency Departments, etc.). Accordingly, we are unable to create any methodologies for projecting needs.

However, from our understanding of best practices and our involvement in Guidance Team discussions of Larimer County community service needs, we support the addition of crisis stabilization unit services (replacing ATU services), social detox, and medical clearance to the recommendations. In addition, we continue to support the guidance team's decisions to not construct a Sobering Station or Unit or a locked-down unit within the new facility.

Section VI: 2017 Estimates

The overall recommendation is to use the prevalence, need, and revenue estimates from the 2016 report.

For the revenue, we had no reason to change the estimated revenue projections based on the data provided. It should be noted this data was limited, and the estimates that were provided did not support a change.

Also, in the 2016 report, the estimate was for 4,700 patients in Larimer County and the 2017, the estimate is for 4,200 patients. The rationale for not changing all calculations due to revising the estimate from 4700 to 4200 is threefold:

A. These are estimates versus exact numbers, so care must be given not to read too much into making smaller changes.
B. In 2016, we added 500 patients/year due to population growth and suggestions from the Health District of Northern Larimer County. In 2017, we added 100/year due to population growth and did not add any patients based on local projections. These patients can be added if the Health District feels this is warranted again in 2017.
C. If you take the 500 additional patients included in the 2016 estimate and distribute their admissions across the levels of care (25% detox, 50% OP, etc.) the actual impact of the numbers is small; i.e., 125 detox admissions doesn't equal a bed. Accordingly, our recommendation would change from 12 to 12.7 beds, which does not warrant a change to the overall calculations.

NIATx Attachment 1

**** = Numbers Located in "Figure 2: Projected Need Diagram"**
Larimer County Prevalence and Need Estimate 2018

Larimer Total Population

Larimer pop. Estimate 2016=339,993
https://www.census.gov/quickfacts/fact/map/larimercountycolorado/PST045216#viewtop

2018 – Larimer Total Population 2016=340,228
https://demography.dola.colorado.gov/population/data/sya-county/

2016 – Larimer Total Population estimate for 2016 Report=324,000

Larimer Population 12 and Older

2018 – Larimer Population 12+2016 =288,932
https://demography.dola.colorado.gov/population/data/sya-county/

> Colorado Pop ≤11 is 15% of total Colorado pop. This results in .15 x 340,228 = 51,034 children

Larimer Pop >11 2016 = 289,193 (Larimer Total Pop. (340,228) less Children Pop. (51,034)) ***2018 – This number was rounded to 289,000 for future calculations***.

http://datacenter.kidscount.org/data/tables/101-child-population-by-age-group#detailed/2/7/false/870,573,869/62,63/419,420

2016 – Larimer Population 12+ for 2016 Report = 279,000

Two sources of data place the Larimer county population 12 years and older in 2016 at 289,000 adults.

Population Growth

The Colorado Department of Local Affairs demography data reported a 5% growth people 12 and older in Larimer County over the two years covering 2014–2016.
https://demography.dola.colorado.gov/population/data/sya-county/

Residents 65+ represent the largest increase in Larimer County, growing from 12% of total in 2010 to 14% in 2014, according to the state demographer.
http://www.coloradoan.com/story/news/2015/07/01/larimer-county-senior-citizens/29597119/

Prevalence of SUD

https://www.samhsa.gov/data/sites/default/files/2015_Colorado_BHBarometer.pdf

7.5% 12+ Colorado dependent or abuse of alcohol
2.9% 12+ Colorado dependent or abuse of drugs
10.4% 12+ Colorado alcohol or drugs

Larimer County Alcohol Prevalence = 289,000 x 7.5% = 21,675
Larimer County Drug Prevalence = 289,000 x 2.9% = 8, 381

2018 – Total Larimer Prevalence = 30,056**

2016 – Total Larimer Prevalence for 2016 report = 31,200

Treatment Penetration (Current)

https://www.samhsa.gov/data/sites/default/files/2015_Colorado_BHBarometer.pdf

10.9 % of 21,675 prevalent alcohol population received treatment = 2,362
15.7 % of 8,381 prevalent drug use population received Treatment = 1,316

2018 – Total Treatment penetration (High) Estimate = 3,678

Source: National Survey of Substance Abuse Treatment Services (NSSATS):
https://www.samhsa.gov/data/sites/default/files/2016_NSSATS.pdf

> Table 6.25a. Clients in treatment, according to facility operation, by state or jurisdiction: Number, March 31, 2016
> Colorado = 27,890
>
> Table 6.26a. Clients in treatment according to type of care received, by state or jurisdiction:
> Colorado = 26,528 outpatient; 1,237 residential; 273 inpatient

Substance Abuse and Mental Health Services Administration: *Behavioral Health Barometer: Colorado, 2015*:
https://www.samhsa.gov/data/sites/default/files/2015_Colorado_BHBarometer.pdf

Total Colorado prevalence: 457,000
Colorado Penetration = 27,528 / 457,000 = 6%
6% of 31,200 =
2018 – Total Treatment penetration (Low) estimate = 1,880

2016 – Total Larimer Treatment Penetration for 2016 report = 2,000 (Low)–3,200 (High)

Unmet Need

Gross need = the difference between prevalence rate and current penetration

2016 – Total gross estimated need 2016 report= 31,000-2,800 =28,200 people in Larimer County.

2018 – Total gross need estimated need=30,056-2,800= 27,256**

Unmet need = the % of gross who want but do not receive treatment for a variety of reasons: 4.6%.
https://www.samhsa.gov/data/sites/default/files/report_2716/ShortReport-2716.html

2018 – Unmet need based on untreated prevalence 27,256 X .046 = 1,254**

2016 – Unmet Need based on untreated prevalence 2016 report = 1,410

Unmet need based on population growth untreated prevalence:

2016 Larimer population 12+ = 289,000
Growth of 5% over 2 years=14,450 people over 2 years, or 7,225 over a one-year period.
Prevalence of 10.4% x 7,225= 750 people affected
10% of 750 affected people=75
4.6% of 75 affected people =31

2018 – 106 (=75+31) people would need treatment each year based on projected population growth.

Working Utilization Hypothesis for Planning SUD Treatment Capacity:

A reasonable estimate of the number of Larimer County residents that would use SUD treatment interventions based in Larimer County is:

Current penetration (midpoint between high of 3678 and low of 1880=2,780 (2,800)
Untreated prevalence= 1,254 (1,300)
Population growth allowance =106**

2018 – Utilization Hypothesis Total= 4,200**
2016 – Utilization Hypothesis 2016 report= 4,700

Figure 1: Projected SUD Need Diagram 2016 report

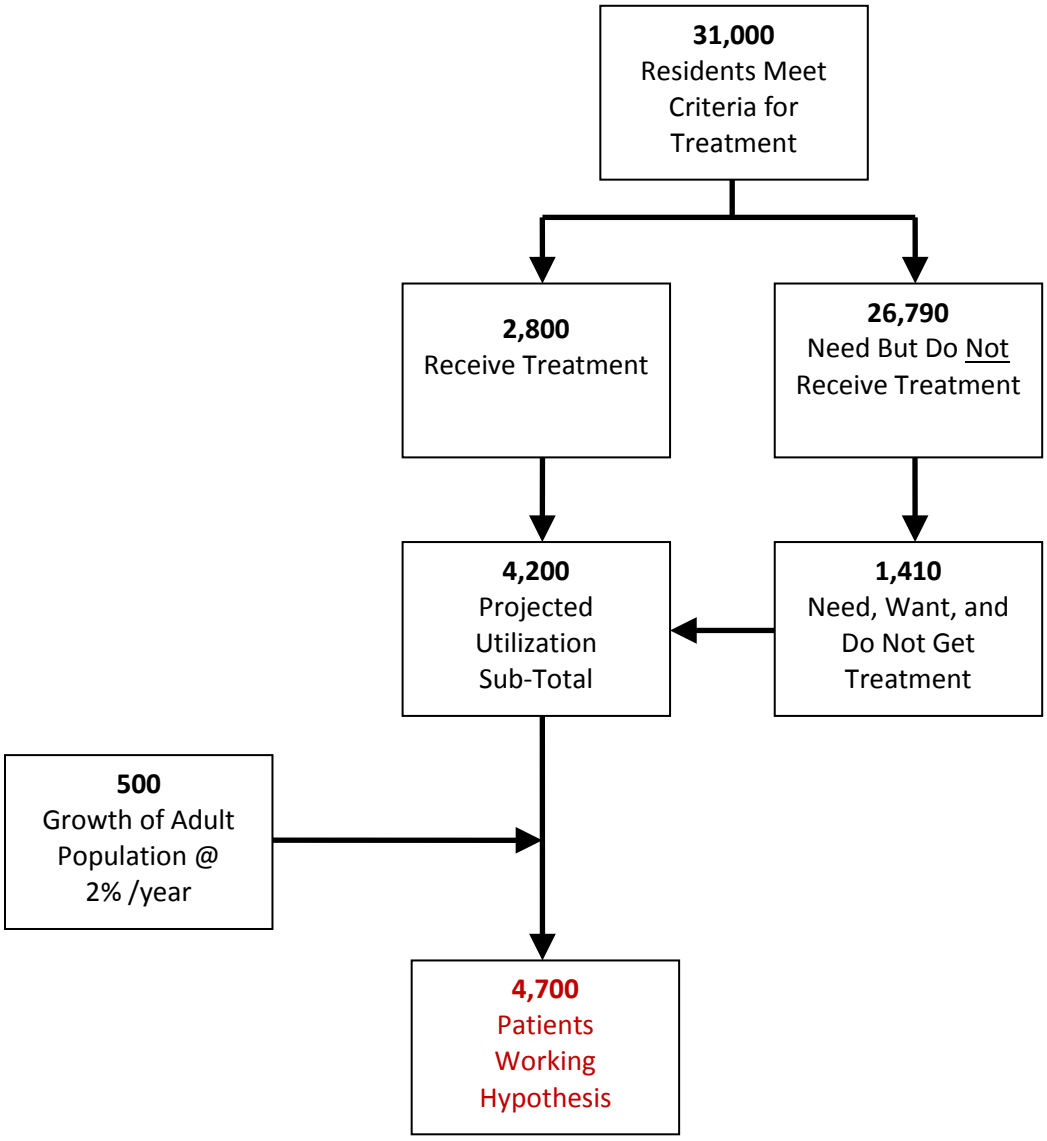
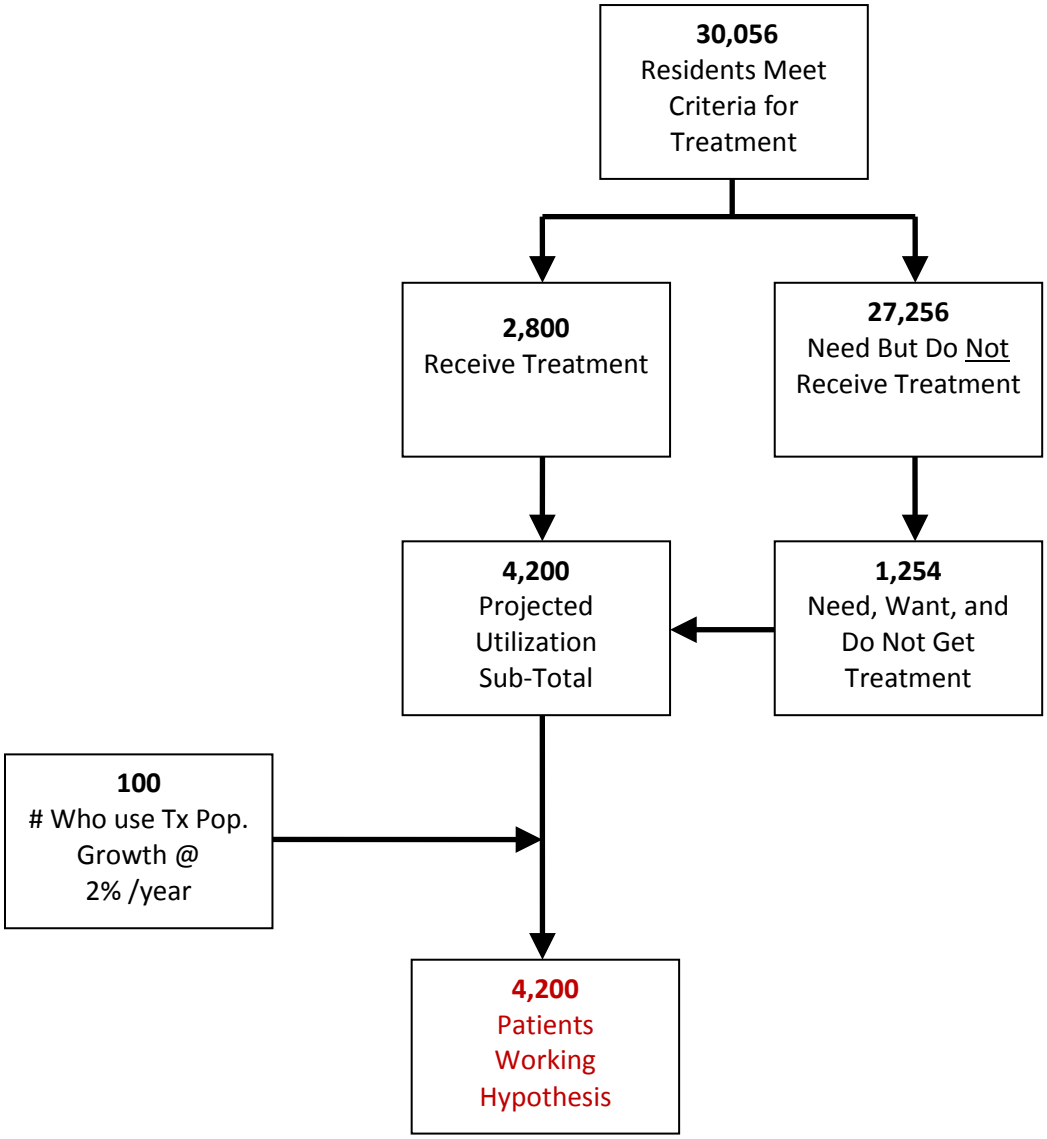


Figure 2: Projected SUD Need Diagram 2017 Estimate



March 2018 Addendum to "2017 Update of Recommendations for the Development of Critical Behavioral Health Services in Larimer County (dated October 23, 2017)"

Background:

This summary provides a comparison of bed calculations generated during the NIATx 2016 Report Prepared for the Health District of Northern Larimer County in 2016 and the consequent bed calculations developed by the Larimer County Health District "Workgroup" through Lin Wilder and Brian Ferrans based on guidance group input during January 2018.

Short-term Residential Beds
The projected beds between the Larimer Work Group and the NIATx Report for Short-term Residential (STIR) SUD Treatment were similar (13 Beds for Larimer Work Group v. 12 Beds for NIATx). These projections were similar despite using different approaches for predicting bed capacity (that will be described in the Withdrawal Management section).

Mental Health Stabilization
The bed calculations, were also similar for Mental Health Stabilization Services (10 Beds for Larimer Work Group v. 12 Beds for NIATx). In the NIATx report, the beds were focused on Acute Treatment Unit beds. In the Larimer Workgroup projections, the beds were based on Crisis Stabilization beds. Both type of beds would meet a need for Larimer County to provide short-term mental health residential services.

Withdrawal Management Beds
Where the beds projections were different were with the Withdrawal Management bed projections. Larimer Work Group had a 26-bed projection versus the NIATx Report projection of 12 beds.

The two potential reasons for these differences are the following.

1. The NIATx projections in 2016 were based on *prevalence* of Substance Use Disorders plus an expansion factor of around 12%. And the Larimer projections are based on *encounters* between people (or consumers) and a select number of major institutions in the County. Prevalence projects how much of the condition exists based state and national statistics. Encounters are based on current and projected volumes by the different institutions where a patient can enter the system. The guidance group provided this data and their impressions affected how the Larimer Work Group made their projections. One weakness in the prevalence estimates in the current environment is adequate data could not be obtained for the 2018 Larimer report. A weakness in the use of encounters is "double counts" can occur as the same patient can be counted by several institutions, resulting in potentially inflated utilization estimates.

2. The NIATx projected utilization of all services, by 4200-4700 people is based on individuals that *meet clinical criteria for a substance use disorder*. NIATx projected the "capture rate" of those with substance use disorder (SUD) need entering into service based on national trends. The Larimer Workgroup used capture rates based on guidance group suggestions of projected needs by local law enforcement, emergency department, SUD providers, and academic centers. "Capture rate" acknowledges that there is a significant percentage of individuals who need SUD services, but will not voluntarily access them. The heavy reliance on Social Detox services in Colorado provides an environment that differs from most of the country where use of Medical Detox services is the prominent approach. For this reason, the difference in withdrawal management admissions between NIATx (1,175) and Larimer (3,845) is due, in part, to people who would not meet ASAM withdrawal management clinical criteria in other parts of the country. Despite the unique withdrawal management environment in Colorado, NIATx group continues to think the Larimer Group's "capture rate" could be overstated.

APPENDIX N

Local Application and Adjustment of NIATx Review and Input on 2018 Update (Appendix L)

The local application and adjustment of NIATx review and input on the 2018 update process is included in the main body of the report on pages 43-51.