State of Vermont
Agency of Human Services

Global Commitment to Health
Section 1115 Medicaid Demonstration
11-W-00194/1

Final Evaluation Design
Extension Period January 1, 2017 – December 31, 2021
Amended June 6, 2018, Effective July 1, 2018 (SUD IMD)
Amended December 5, 2019, Effective January 1, 2020 (SMI IMD)

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I. GENERAL BACKGROUND INFORMATION

The Vermont Global Commitment to Health Medicaid Section 1115(a) demonstration (11-W-00194/1) was originally approved on September 27, 2005 and implemented on October 1, 2005. The Global Commitment to Health Section 1115(a) demonstration is designed to use a multi-disciplinary approach to comprehensive Medicaid reform, including the basic principles of public health, the fundamentals of effective administration of a Medicaid managed care delivery system, public-private partnership, and program flexibility.

This evaluation design is in response to the State's recent amendment, effective July 1, 2018, to support a full continuum of Substance Use Disorder (SUD) treatment and recovery services, including short term stays in treatment facilities classified as Institutions for Mental Deficiency (IMD).

As of January 1, 2017, Vermont and CMS extended the Global Commitment to Health demonstration through 2021, to further promote delivery system and payment reform to meet the goals of the State working with the Center for Medicaid and CHIP Services, and the Center for Medicare and Medicaid Innovation (CMMI). Consistent with Medicare's payment reform efforts the demonstrations allow for alignment across public payers. Specifically, Vermont expects to demonstrate its ability to achieve universal access to health care, cost containment, and improved quality of care.

Since 2005, the Global Commitment to Health demonstration has reduced Vermont's uninsured rate from 11.4 percent in 2005 to approximately 2.7 percent in 2015 through expansion of eligibility and other Accountable Care Act reforms. The demonstration has also enabled Vermont to address and eliminate bias toward institutional care and offer cost-effective, community-based services. For example, the proportion of Choices for Care participants served in the community has passed fifty percent and continues to increase. In addition, Vermont no longer has a waiting list for individuals in the Highest and High Need Groups under the Choices for Care component of the demonstration.

Due to the expansion of eligibility under the Vermont State Plan, pursuant to the Affordable Care Act, expansion of eligibility is no longer the primary focus of the demonstration. However, the demonstration continues to promote delivery system reform and cost-effective community-based services as an alternative to institutional care. The State's goal in implementing the demonstration is to improve the health status of all Vermonters by:

- Promoting delivery system reform through value-based payment models and alignment across public payers;
- Increasing access to affordable and high-quality health care by assisting lower-income individuals who can qualify for private insurance through the Marketplace;
- Improving access to primary care;
- Improving the health care delivery for individuals with chronic care needs; and
- Allowing beneficiaries a choice in long-term services and supports and providing an array of home and community-based (HCBS) alternatives recognized to be more cost-effective than institutional based supports.

The State employs four major elements in achieving the above goals:

1. ***Program Flexibility***: Vermont has the flexibility to invest in certain specified alternative services and programs designed to achieve the demonstration's objectives (including the Marketplace subsidy program).

2. ***Managed Care Delivery System***: Under the demonstration the Agency for Human Services (AHS) executes an annual agreement with the Department of Vermont Health Access (DVHA), which delivers services through a managed care-like model, subject to the requirements that would be applicable to a non-risk pre-paid inpatient health plan (PIHP) as defined by the Special Terms and Conditions (STCs).

3. ***Removal of Institutional Bias***: Under the demonstration, Vermont provides a choice of settings for delivery of services and supports to older adults, people with serious and persistent mental illness, people with physical disabilities, people with developmental disabilities, and people with traumatic brain injuries who meet program eligibility and level of care requirements.

4. ***Delivery System Reform***: Under the demonstration, Vermont supports systemic delivery reform efforts using the payment flexibility provided through the demonstration to create alignment across public and private payers.

The initial Global Commitment to Health and Choices for Care demonstrations were approved in September of 2005 and became effective October 1, 2005. The Global Commitment to Health demonstration was extended for three years, effective January 1, 2011, and again for three (3) years, effective October 2, 2013. The Choices for Care demonstration was extended for five (5) years effective October 1, 2010 and became part of the Global Commitment to Health demonstration in January 2015. The following amendments have been made to the Global Commitment to Health demonstration:

- 2007: A component of the Catamount Health program was added, enabling the State to provide a premium subsidy to Vermonters who had been without health insurance coverage for a year or more, have income at or below 200 percent of the FPL, and who do not have access to cost-effective employer-sponsored insurance, as determined by the state.

- 2009: The State extended Catamount Health coverage to Vermonters at or below 300 percent of the FPL.

- 2011: The State included a palliative care program for children who are at or below 300 percent of the FPL and have been diagnosed with life limiting illness that would preclude them from reaching adulthood. This program allows children to receive curative and palliative care services such as expressive therapy, care coordination, family training and respite for caregivers.

- 2012: CMS provided authority for the State to eliminate the $75 inpatient admission co-pay and to implement nominal co-payments for the Vermont Health Access Plan (VHAP) as articulated in the Medicaid state plan.

- 2013: CMS approved the extension of the Global Commitment to Health demonstration which included sun-setting the authorities for most of the Expansion Populations, including Catamount Health coverage, because these populations would be eligible for Marketplace coverage beginning January 1, 2014. The extension also added the New Adult Group under the State Plan to the population affected by the demonstration effective January 1, 2014.

Finally, the extension also included premium subsidies for individuals enrolled in a qualified health plan whose income is at or below 300 percent of the FPL.

- 2015: In January 2015, the Global Commitment to Health demonstration was amended to include authority for the former Choices for Care demonstration. In addition, the State received Section 1115 authority to provide full Medicaid State Plan benefits to pregnant women who are determined presumptively eligible.

- 2018: Effective July 1, 2018 the demonstration was amended to allow for otherwise covered services furnished to otherwise eligible individuals who are primarily receiving treatment and withdrawal management services for substance use disorder (SUD) who are short-term residents in facilities that meet the definition of an Institution for Mental Diseases (IMD).

- 2019: Effective January 1, 2020 the demonstration was amended to allow for otherwise covered services furnished to otherwise eligible individuals who are receiving short-term psychiatric treatment in facilities that meet the definition of an IMD.

A. Demonstration Goals

The State's high-level goal for all health reforms is to create an integrated health system able to achieve the Institute of Medicine's "Triple Aim" goals of improving patient experience of care, improving the health of populations, and reducing per-capita cost.[1] This is supported in the Global Commitment to Health demonstration through supporting innovative delivery system reforms, including Medicaid Accountable Care Organizations (ACO) and the development of progressive in-home and community-based services and supports that are cost-effective and support persons who have long-term care service and support needs, complex medical, mental health and/or substance use disorder treatment needs. Overarching demonstration goals are described below:

- ***To increase access to care***: All enrollees must have access to comprehensive care, including financial, geographic, physical, and communicative access. This means having health insurance, appropriate providers, timely access to services, culturally sensitive services, and the opportunity for second opinions as needed.

- ***To contain health care cost***: Cost-effectiveness takes into consideration all costs associated with providing programs, services, and interventions. It is measurable at the category-of-service, individual enrollee, aid category, and aggregate program levels.

- ***To improve the quality of care***: Quality refers to the degree to which programs/services and activities increase the likelihood of desired outcomes. The six domains necessary for assuring quality health care identified by the Institute of Medicine (IOM, 2001) are:
    - *Effectiveness*: Effective health care provides evidence-based services to all who can benefit, refraining from providing services that are not of benefit.

[1] Crossing the Quality Chasm: A New Health System for the 21st Century. Washington DC: National Academy Press, Institute of Medicine; 2001.

- *Efficiency*: Efficient health care focuses on avoiding waste, including waste of equipment, supplies, ideas, and energy.
- *Equity*: Equal health care provides care without variation in quality due to gender, ethnicity, geographic location, or socioeconomic status.
- *Patient Centeredness*: Patient-centered care emphasizes a partnership between provider and consumer.
- *Safety*: Safe health care avoids injuries to consumers from care that is intended to help.
- *Timeliness*: Timely health care involves obtaining needed care and minimizing unnecessary delays in receiving care.

- ***To eliminate institutional bias:*** By allowing specialized program participants choices in where they receive long-term services and supports and by offering a cost-effective array of in-home and community services for older adults, people with serious and persistent mental illness, people with developmental disabilities and people with traumatic brain injuries who meet program eligibility and level of care requirements.

B. Public Managed Care Delivery System, Investments and All-Payer Model

Vermont operates the demonstration using a managed care-like model that complies with federal regulations at 42 CFR part 438 that would be applicable to a non-risk PIHP, including beneficiary rights and protections such as independent beneficiary support systems and formal grievance and appeal procedures.

In addition to the demonstration, the State has also implemented the Vermont All-Payer Accountable Care Organization Model Agreement (All-Payer Model), Section 1115A Medicare demonstration through the Center for Medicare and Medicaid Innovation (CMMI). The All-Payer Model Medicare demonstration and the Global Commitment to Health Medicaid demonstration are expected to complement each other to support systemic delivery reform efforts. Using the payment flexibility provided through both demonstrations, alignment across public and private payers is expected. A brief description of the Medicaid public managed care-like model and current reform efforts is provided below.

Public Managed Care-Like Model

The Agency of Human Services (AHS), as Vermont's Single State Medicaid Agency, is responsible for oversight of the managed care-like Medicaid delivery system. The Department of Vermont Health Access (DVHA) operates the Medicaid program as if it were a non-risk PIHP in accordance with federal managed care regulations. Program requirements and responsibilities are delineated in an inter-governmental agreement (IGA) between AHS and DVHA. DVHA also has sub-agreements with the other State entities that provide specialty care for Global Commitment (GC) enrollees (e.g., mental health services, developmental disability services, and specialized child and family services).

As such, since the inception of the GC demonstration, DVHA and its IGA partners have modified operations to meet Medicaid managed care requirements, including requirements related to network adequacy, access to care, beneficiary information, grievances, quality assurance, and quality

improvement. Per the External Quality Review Organization's annual findings, DVHA and its IGA partners have achieved exemplary compliance rates in meeting Medicaid managed care requirements. Departments of Vermont State government that participate in the provision of covered services to enrollees under the demonstration are outlined, in brief, below.

Department of Vermont Health Access (DVHA): DVHA, which operates the Medicaid program as if it were a non-risk PHIP under Global Commitment demonstration, has a three-fold mission:

- To assist beneficiaries in accessing clinically appropriate health services;
- To administer Vermont's public health insurance system efficiently and effectively; and
- To collaborate with other health care system entities in bringing evidence-based practices to Vermont Medicaid beneficiaries.

Department of Mental Health (DMH): The mission of DMH is to promote and improve the mental health of Vermonters and to provide Vermonters with access to effective prevention, early intervention, and mental health treatment and supports as needed to live, work, learn, and participate fully in their communities. DMH consists of two programmatic divisions: Adult Mental Health Services Division and the Child, Adolescent, and Family Mental Health Services Division. DMH has primary responsibility for overseeing the quality of psychiatric and mental health care provided for two of Vermont's Special Health Needs populations defined under the Global Commitment demonstration, including persons with a severe and persistent mental illness and children who are experiencing a severe emotional disturbance.

Department of Disabilities, Aging, and Independent Living (DAIL): DAIL assists older Vermonters and people with disabilities to live as independently as possible. It provides support to families of children with disabilities to help maintain them in their home. It helps adults with disabilities find and maintain meaningful employment, and it ensures quality of care and life for individuals receiving health care and/or long-term care services from licensed or certified health care providers. DAIL also protects vulnerable adults from abuse, neglect, and exploitation and provides public guardianship to elders and people with developmental disabilities. DAIL operates the several specialized Medicaid programs under the demonstration including, Choices for Care, Developmental Disability Services and Traumatic Brain Injury Services.

Vermont Department of Health (VDH): VDH's goal is to have the nation's premier system of public health, enabling Vermonters to lead healthy lives in healthy communities. VDH leads the state and communities in the development of systematic approaches to health promotion, safety, and disease prevention. VDH continuously assesses, vigorously pursues, and documents measurable improvements to the health and safety of Vermont's population. VDH will succeed through excellence in individual achievement, organizational competence, and teamwork within and outside of VDH. VDH's division of Alcohol and Drug Abuse Programs supports the innovated Medicaid Health Home program for Medication Assisted Opioid Treatment in partnerships and the 2018 SUD amendment with DVHA, as well as extensive outpatient and residential treatment and recovery support for alcohol and other drugs use disorders.

Department for Children and Families (DCF): DCF promotes the social, emotional, physical, and economic well-being of Vermont's children and families. It achieves this mission by providing Vermonters with protective, developmental, therapeutic, probation, economic, and other support services. DCF works in statewide partnership with families, schools, businesses, community leaders, and service providers. DCF offers specialized Medicaid services to children and families at risk of or experiencing trauma and early childhood intervention for families with children birth to age six with developmental needs.

Agency of Education (AOE): The AOE is responsible for overseeing coverage and reimbursement under the School-Based Health program. The Special Education Medicaid School-Based Health Services Program is used by the State to support health-related services provided to special education students who are enrolled in Medicaid and receive eligible services in accordance with their individualized education plans (IEPs). The AOE is established as an "Organized Delivery System" under Medicaid and is responsible for the program adherence to all State and Federal Medicaid and Education laws and regulations.

Delivery System Investments

Under the public managed care-like model, the demonstration provides the State with flexibility to invest in health care innovations that:

a. Reduce the rate of uninsured and/or underinsured in Vermont;
b. Increase the access to quality health care by uninsured, underinsured, and Medicaid beneficiaries;
c. Provide public health approaches and other innovative programs to improve the health outcomes, health status and quality of life for uninsured, underinsured and Medicaid-eligible individuals in Vermont; and
d. Encourage the formation and maintenance of public-private partnerships in health care, including initiatives to support and improve the health care delivery system and promote transformation to value-based and integrated models of care.

In addition, CMS has provided the State with one-time spending authority to support Accountable Care Organizations and Medicaid community providers in delivery system reform through activities such as, but not limited to:

- Infrastructure improvement;
- Quality and heath improvement information development and dissemination;
- Community related population health projects;
- Socio-economic risk assessment and mitigation; and
- Provider integration to build integration across physical health, mental health substance use disorder treatment and long-term services and supports.

Investment awards are expected to give preference to activities that promote collaboration, build capacity across the care continuum, consider social determinates of health, and promote an integrated health care system consistent with the framework set forth in the Vermont All-Payer Model Agreement and the Global Commitment demonstration. Specifically, the State would like to encourage ACO-based provider led reform that features (a) collaboration between providers, (b) reimbursement models that move away from Fee-For-Service payment, and (c) rigorous quality measurement that aligns with the All-Payer Model quality framework.

All-Payer Model Alignment

The All-Payer Model agreement between the State and the Federal government was approved by the Green Mountain Care Board (GMCB) on October 26, 2016 and signed by the Governor and the Secretary of Human Services on October 27, 2016. The agreement includes a target for a sustainable rate of growth for health care spending in Vermont across Medicaid, Medicare, and commercial payers, and

builds on past programs like Vermont's Medicaid and commercial Shared Savings programs. This model focuses on a set of health care services roughly equivalent to Medicare Parts A and B (hospital and physician services). The agreement includes quality and performance measurement and Next Generation's value-based payment models, such as capitation or global budgets. The State must provide a plan in 2020 for integrating any institutional long-term services and supports in the total cost of care in the next demonstration period.

The All-Payer Model Agreement and Global Commitment Medicaid demonstration are complementary frameworks that support Vermont's health care reform efforts. Each agreement provides federal support to further Vermont's strategic goal of creating an integrated health care system, including increased alignment across payers and providers.

C. Eligibility, Benefits and Cost Sharing

Eligibility under the demonstration includes the following Medicaid and demonstration groups:

Population 1: Mandatory State Plan populations (except for the new adult group). This group receives benefits as described in the Medicaid State Plan and may receive HCBS benefits described in the STCs if they meet additional program eligibility standards.

Population 2: Optional State Plan populations. This group receives benefits as described in the Medicaid State Plan and may receive HCBS benefits described in the STCs if they meet additional program eligibility standards.

Population 3: Affordable Care Act new adult group. This group receives benefits as described in the Medicaid State Plan and may receive HCBS benefits described in the STCs if they meet additional program eligibility standards.

Population 4: Individuals receiving home and community based waiver (HCBW)-like services who meet the clinical standard in the Choices for Care program for the Highest Need Group. This group receives benefits as described in the Medicaid State Plan and Choices for Care program benefits as described in the STCs.

Population 5: Individuals receiving HCBW-like services who met the clinical standard in the Choices for Care program for the High Need Group. This group receives benefits as described in the Medicaid State Plan and Choices for Care program benefits as described in the STCs.

Population 6: Individuals who are not otherwise eligible under the Medicaid State Plan and who would not have been eligible had the state elected eligibility under 42 CFR 435.217, but are at risk for institutionalization and need home and community-based services. This group receives a limited HCBW-like service benefit including Adult Day Services, Case Management, and Homemaker services in the Choices for Care program as outlined in the (STCs).

Population 7: Medicare beneficiaries who are 65 years or older or have a disability with income at or below 150 percent of the FPL, who may be enrolled in the Medicare Savings Program (MSP) but are not otherwise eligible for full benefits. This group receives a limited pharmacy benefit including

Medicaid Prescriptions, eyeglasses and related eye exams; MSP beneficiaries also receive benefits as described in the Title XIX state plan.

Population 8: Medicare beneficiaries who are 65 years or older or have a disability with income above 150 percent and up to and including 225 percent of the FPL, who may be enrolled in the MSP, but are not otherwise eligible for full benefits. This group receives a limited pharmacy benefit including maintenance Drugs; MSP beneficiaries also receive benefits as described in the Title XIX state plan.

All covered services may be subject to review and prior approval by DVHA and/or its partner departments in the Agency of Human Services, based on medical appropriateness. A complete listing of covered services and limitations are contained in the Vermont approved Title XIX State Plan, Vermont statutes, regulations, and policies and procedures.

Premiums and cost-sharing for populations 1, 2, and 3, must follow Medicaid requirements that are set forth in statute, regulation and policy. Standard Medicaid exemptions from cost-sharing set forth in 42 CFR 447(b) applies to the demonstration. The state must not apply co-payment requirements to excluded populations (children under age 21, pregnant women or individuals in long-term care facilities) or for excluded services/supplies (e.g., family planning).

Vermont charges premiums for children through age 18 in families with income above 195 percent of the FPL through 312 percent of the FPL. Premium populations are outlined in Exhibit 1-1 below.

Exhibit 1-1: Vermont Premium Populations

Population	Premiums	Co-Payments	State Program Name
Children with income > 195% percent through 237% of the FPL	$15/month/family	N/A	Dr. Dynasaur
Underinsured Children with income > 237% through 312% FPL	$20/month/family	N/A	Dr. Dynasaur
Uninsured Children with income > 237% through 312% of the FPL	$60/month/family	N/A	Dr. Dynasaur
Medicare beneficiaries with income at or below 150 percent of the FPL, who may be enrolled in the Medicare Savings Program but are not otherwise categorically eligible for full benefits (demonstration Population 7).	0-150% FPL: $15/month/person	Not to exceed the nominal co-payments specified in the Medicaid State plan.	VPharm1
Medicare beneficiaries with income above 150 percent and up to and including 225 percent of the FPL, who may be enrolled in the Medicare Savings Program, but are not otherwise categorically eligible (demonstration Population 8).	151-175% FPL: $20/month/person 176-225% FPL: $50/month/person	Not to exceed the nominal co-payments specified in the Medicaid State plan.	VPharm2; VPharm3

D. Specialized Programs

Under the GC demonstration, Vermont is authorized to provide an array of cost-effective in-home and community services. Providers of these services must meet designation, certification and/or additional licensing requirements to be approved by the State to serve the most vulnerable of Vermont's citizens. These specialized programs are designed to support a unique group of beneficiaries, each is outlined below.

- *Choices for Care*: long-term services and supports for persons with disabilities and older Vermonters. The demonstration authorizes HCBS waiver-like and institutional services such as: nursing facility; enhanced residential care; personal care; homemaker services; companion care; case management; adult day services; and adult family care.

- *Developmental Disability Services*: provides long-term services and supports for persons with intellectual disabilities. The demonstration authorizes HCBS waiver-like services, including service coordination, residential habilitation, day habilitation, supported employment, crisis services, clinical intervention, respite and self-directed care.

- *Traumatic Brain Injury Services*: provides recovery oriented and long-term services and supports for persons with a traumatic brain injury. The demonstration authorizes HCBS waiver-like services including crisis/support services, psychological and counseling supports, case management, community supports, habilitation, respite care, supported employment, environmental and assistive technology and self-directed care.

- *Intensive Home and Community Based Services (formerly Enhanced Family Treatment)*: provides intensive in-home and community treatment services for children who are experiencing a severe emotional disturbance and their families. The demonstration authorizes HCBS waiver-like services including service coordination, flexible support, skilled therapy services, environmental safety devices, counseling, residential treatment, respite, supported employment, crisis and community supports.

- *Community Rehabilitation and Treatment Program*: provides recovery oriented, in-home and community treatment services for adults who have a severe and persistent mental illness. The demonstration authorizes HCBS waiver-like services including service coordination, flexible support, skilled therapy services, environmental safety devices, counseling, residential treatment, respite, supported employment, crisis and community supports.

  Through a special provision as a Designated State Health Program, Community Rehabilitation and Treatment benefits can be extended to individuals with severe and persistent mental illness with incomes between 133 and 150 percent of the federal poverty level, under the demonstration.

In addition, the demonstration authorizes the:

- *Children's Palliative Care Program*: provides care coordination, respite care, expressive therapies, family training, and bereavement counseling, for children under the age of 21 years in populations 1, 2, and 3 who have been diagnosed with a life- limiting illness that is expected

to be terminal before adulthood.

- *Adult Hospice Program*: allows for hospice services to be delivered concurrently with curative therapy to adults in populations 1, 2, and 3.

Lastly, as a Designated State Health Program, the demonstration allows:

- *Marketplace Subsidies*: The State offer subsidies for premiums for individuals with incomes at or below 300 percent of the federal poverty level who are purchasing health care coverage from a Qualified Health plan in Marketplace. The program is known as Vermont Premium Assistance (VPA) as part of the state-based health benefits exchange.

E. Institutions for Mental Diseases (IMD) Treatment

Since its inception, Vermont's demonstration has included payment flexibilities to support cost-effective alternatives to traditional Medicaid State Plan benefits. As part of its original 1115 demonstration for the Vermont Health Access Plan (VHAP) Medicaid Expansion, Vermont received a waiver of the IMD exclusion. This waiver, effective January 1, 1996, permitted Vermont to reimburse IMDs for individuals enrolled under the 1115 demonstration. The rationale behind this waiver was to permit the use of IMDs as alternatives to potentially more costly, general acute hospital services.

In 2004, CMS elected to no longer grant IMD waivers under its 1115 demonstration authority; states with existing IMD waivers (including Vermont) were given a schedule to phase out available Medicaid reimbursement. Under the phase-out terms Vermont was permitted to continue Medicaid reimbursement of IMD services through Calendar Year 2004; reimbursement was limited to 50% of allowable expenditures in Calendar Year 2005.

The Global Commitment to Health demonstration, approved in 2005, historically enabled Vermont to operate under a statewide, public managed care model. The Global Commitment demonstration provided the State with additional flexibility regarding health care service financing, including the purchase of healthcare services that are not traditionally covered by Medicaid. In the past Vermont used this authority to purchase alternative services, provided that:

- Are determined to be medically appropriate;
- Are delivered by a licensed (and not Medicare de-certified) healthcare provider; and
- Achieve program objectives related to cost, quality and/or access to care in the least restrictive, clinically appropriate setting possible.

Since 2005 Vermont has used its public managed care model authority under Global Commitment to purchase in-state residential SUD treatment in lieu of more costly hospital-based care. In 2017 the demonstration's operating model was modified to that of a non-risk Prepaid Inpatient Health Plan (PIHP). Vermont and CMS collaborated to continue the provision of these vital services.

SUBSTANCE USE DISORDER IMD TREATMENT

In 2018, Vermont was granted approval to amend the demonstration to include SUD IMD authority to sustain the continuum of treatment programs, including inpatient treatment, detoxification and residential treatment for SUD, in IMD settings, for Members whose needs align with the American Society of Addiction Medicine (ASAM) placement criteria and treatment guidelines.

In addition to the overall demonstration goals presented in Section I.(A) above, the goals for the continuation and enhancement of SUD programs in Vermont include:

1. Increased rates of identification initiation, and engagement in treatment;
2. Increase adherence to and retention in treatment;
3. Reductions in overdose deaths, particularly those due to opioids;
4. Reduced utilization of emergency department and inpatient hospital settings for treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services;
5. Fewer readmissions to the same or higher level of care where the readmission is preventable or medically inappropriate; and
6. Improved access to care for physical health conditions among beneficiaries.

These SUD amendment goals align with overall goals of the overall GC demonstration as illustrated in Exhibit 1-2.

Exhibit 1-2: SUD Amendment Goal Alignment

Global Commitment to Health Goals	SUD Amendment Goals
To increase access to care	Increase rates of identification, initiation, and engagement in treatment (Goal #1)
	Improve access to care for physical health conditions among beneficiaries (Goal #6)
To improve the quality of care	Increase adherence to and retention in treatment (Goal #2)
	Reduce overdose deaths, particularly those due to opioids (Goals #3)
	Reduce utilization of emergency departments and inpatient hospital settings for treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services (Goal #4)
To eliminate institutional bias	Reduce readmissions to the same or higher level of care where the readmission is preventable or medically inappropriate (Goal #5)

SUD residential treatment facilities that are considered IMD's as of November 2018 are described in Exhibit 1-3.

Exhibit 1-3: Type and Size of SUD IMD Facilities as of November 2018

Facility	Type and Target Group(s)	# of beds
Lund Home	Residential treatment for pregnant and parenting women w/children under 5 years old. Both mothers and children live on-site. Pregnant women may enroll in the program for the length of their pregnancy and through a post-partum period based on their individual needs	26
Valley Vista - Bradford	Residential treatment for women, men, and adolescents	80
Valley Vista - Vergennes	Residential treatment for women	19
Serenity House	Residential treatment adults	24
Brattleboro Retreat: SUD Program	Inpatient detoxification and treatment for adults	30

PSYCHIATRIC IMD TREATMENT

In December of 2019, CMS approved federal financial participation (FFP) for IMD services, provided to adult enrollees with a serious mental illness (SMI), under a demonstration amendment. The amendment, effective January 1, 2020, transitions authority for these services from the Global Commitment Investments to the IMD waiver authority granted under the amendment. Parameters of the agreement exclude stays for forensic purposes and clinically necessary stays over 60 days. CMS concurrently approved the State's SMI Implementation Plan. The SMI Implementation Plan outlines Vermont's alignment with CMS-defined milestones for the mental health system and psychiatric IMD treatment. IMD facilities included in the demonstration are free standing psychiatric care hospitals (see Exhibit 1-4). Vermont's delivery system does not currently include residential (non-hospital based) psychiatric IMD facilities.

Exhibit 1-4: Psychiatric IMD Facilities

Facility	Type and Target Group(s)	# of beds
Vermont Psychiatric Care Hospital	Inpatient hospital services for adults	25
Brattleboro Retreat: Psychiatric Treatment Program*	Inpatient hospital services for adults and children	89

*The Brattleboro Retreat is discussing the potential for an additional 12 psychiatric care beds with the State.

Vermont's amendment allows the State to maintain and enhance access to mental health services and continue delivery system improvements to provide coordinated and comprehensive treatment for Medicaid beneficiaries with a SMI. CMS goals for the SMI amendment include:

1. Reduced utilization and lengths of stay in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment in specialized settings;

2. Reduced preventable readmissions to acute care hospitals and residential settings;

3. Improved availability of crisis stabilization services including services made available through call centers and mobile crisis units, intensive outpatient services, as well as services provided during acute short-term stays in residential crisis stabilization programs and psychiatric hospitals and residential treatment settings throughout the state;

4. Improved access to community-based services to address the chronic mental health care needs of beneficiaries with SMI or SED including through increased integration of primary and behavioral health care; and

5. Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.

The State's current Demonstration and approach are fully aligned to realize these goals, as illustrated in Exhibit 1-5 below.

Exhibit 1-5: SMI IMD Goals and Alignment

Global Commitment to Health Goals	SMI Amendment Goals
To increase access to care	Improved access to community-based services to address the chronic mental health care needs of beneficiaries with SMI or SED including through increased integration of primary and behavioral health care. (Goal #4)
	Improved availability of crisis stabilization services including services made available through call centers and mobile crisis units, intensive outpatient services, as well as services provided during acute short-term stays in residential crisis stabilization programs and psychiatric hospitals and residential treatment settings throughout the state. (Goal #3)
	Reduced utilization and lengths of stay in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment in specialized settings. (Goal #1)
To improve the quality of care	Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities. (Goal #5)
	Reduced preventable readmissions to acute care hospitals and residential settings. (Goal #2)
To contain health care costs	Reduced utilization and lengths of stay in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment in specialized settings. (Goal #1) Reduced preventable readmissions to acute care hospitals and residential settings. (Goal #2)
To eliminate institutional bias	Improved access to community-based services to address the chronic mental health care needs of beneficiaries with SMI or SED including through increased integration of primary and behavioral health care. (Goal #4)

II. EVALUATION QUESTIONS, HYPOTHESES AND MEASURES

This evaluation will examine evidence that the demonstration supports its overarching goals: increased access to care; improved quality of care; cost containment; and stable in-home and community alternatives to institutional care. These overall demonstration goals extend to Vermont's service delivery model as described in the SUD amendment (effective July 1, 2018) and the amendment for adults with a SMI (effective January 1, 2020).

The plan utilizes both performance measurement results (providing more real-time data focused on whether a program is achieving measurable objectives) and more rigorous program evaluation findings that analyzes findings against national benchmarks, changes over time and attempts to isolate key variables influencing outcomes. Where appropriate measures will be examined for impact specific to SUD enrollees and other sub-groups.

To ensure that the new aspects of the demonstration and its 2018 SUD amendment are implemented as intended and achieve the related goals/objectives and desired outcomes, this evaluation plan includes strategic alignment with the State's Comprehensive Quality Strategy and SUD Monitoring Protocol.

A. Comprehensive Quality Strategy, Rapid Cycle Assessment, SUD and SMI Monitoring Protocols

Vermont has a Comprehensive Quality Strategy (CQS) that integrates all aspects of quality improvement programs, processes, and requirements across the State's Medicaid program. The CQS is intended to serve as a blueprint or road map for Vermont and its Medicaid managed care-like operations in assessing the quality of care that beneficiaries receive, as well as for setting forth measurable goals and targets for improvement.

As approved by CMS, the CQS is the vehicle for demonstrating Vermont's compliance with the new HCBS regulations (comparable to 'transition plans' in other states). The CQS meets all requirements of 42 CFR 438 and includes LTSS and HCBS quality components. Key elements addressed in the CQS include: goals; responsibilities; performance improvement projects; performance measures; populations; timelines; monitoring and evaluation; and performance improvement accountability.

The demonstration's evaluation will align with the goals, measures and monitoring activities outlined in the AHS CQS. AHS will regularly monitor the demonstration on the key outcome measures and performance targets and make changes as appropriate (obtaining CMS or legislative approval where needed). The CQS is reviewed and updated as needed, but no less than once every three years.

The State may also routinely evaluate policy changes and new initiatives to rapidly assess effectiveness, promote continuous improvement and to identify success and barriers without delay. The State will retain responsibility and discretion for conducting rapid cycle assessments for new payment and service delivery and/or payment reforms implemented or supported by the demonstration (e.g., Next Generation Medicaid ACO, Dental Incentives, Blueprint to Health) as well as any new Delivery System Reform Investments.

Documenting the development of new initiatives and their operational impact provides an understanding of the reasons for successful or unsuccessful performance, provides direction in shaping program

modifications and improvement, and provides information about whether assessment findings can be generalized.

This rapid analysis will be based on grantee reporting, key informant information from the AHS, as well as community leaders, administrators, physician leaders, and others directly responsible for, or knowledgeable about, the new initiative or investment. As appropriate, fiscal analysis will be conducted to analyze expenditure information. Reports will be used to provide program staff with specific details for the month, quarter, or year, and/or provide direction in shaping modifications that may be required to support more effective investments.

This type of rapid cycle approach blurs some of the classic differentiation between formative and summative evaluation approaches. The selection of similar evaluation methods for different purposes will allow the State and providers to focus on adjusting the process aspects of an innovation – while at the same time improving the impact of the innovation overall. It is important to note that the rigor of the evaluation should not be sacrificed for the sake of speed. To do so, advanced statistical methods to measure effectiveness should be used, including the appropriate selection of comparison groups whenever possible.

The State has added a SUD Monitoring Protocol (SUD MP), SUD Mid-Point Assessment, SMI Monitoring Protocol and SMI Mid-Point Assessment to its quality improvement activities. The Monitoring Protocols for both populations include: monthly, quarterly and annual descriptive detail (e.g., number of enrollees and service delivered); annual outcome and quality metrics (e.g., HEDIS® measures); and milestone specific process measures (e.g., use of IT strategies to improve SUD and psychiatric treatment services).

The MPs for both amendments identify a baseline, a target to be achieved by the end of the demonstration and an annual goal for closing the gap between baseline and target expressed as percentage points. Key elements addressed in the SUD and SMI MPs will also be used in the design of this evaluation. In addition, the revised design will include a mid-point assessment of progress specific to the effectiveness of each demonstration amendment (SUD and SMI).

This alignment of performance oversight will create a feedback loop across quality activities, Mid-Point Assessments, quarterly assessment reports, rapid cycle projects and summative evaluation findings. The State's process of regularly measuring, monitoring, and making changes should result in continuous improvement in terms of achieving its performance targets and intended outcomes.

B. Demonstration Driver Diagrams and SMI IMD Amendment Logic Model

The Global Commitment to Health has been in operation for over 14 years. It offers a comprehensive statewide demonstration designed to use public health and managed care techniques for the design and delivery of behavioral and physical health services; and through its investments, address social determinants of health. The demonstration also equalizes the entitlement for long term care services in the home and community for Medicaid enrollees with developmental and other disabilities and elders.

Over the past 14 years the State has successfully improved access, supported quality and community integration and contained costs. Tools and techniques from managed care, such as alternatives to fee for service and enhanced care coordination payment models (e.g., Blueprint for Health), value-based contracting (e.g., VMNG ACO), and comprehensive quality monitoring. Public Health approaches include

promoting health education and awareness, improving access to primary and preventative care (e.g., immunization clinics, expanded health coverage) and addressing social determinants of health. In achieving its outcomes, the demonstration offers multiple interrelated drivers of success. Driver diagrams in support of demonstration goals are provided in Figures 1-4.

Figure 1: Access to Care Driver Diagram

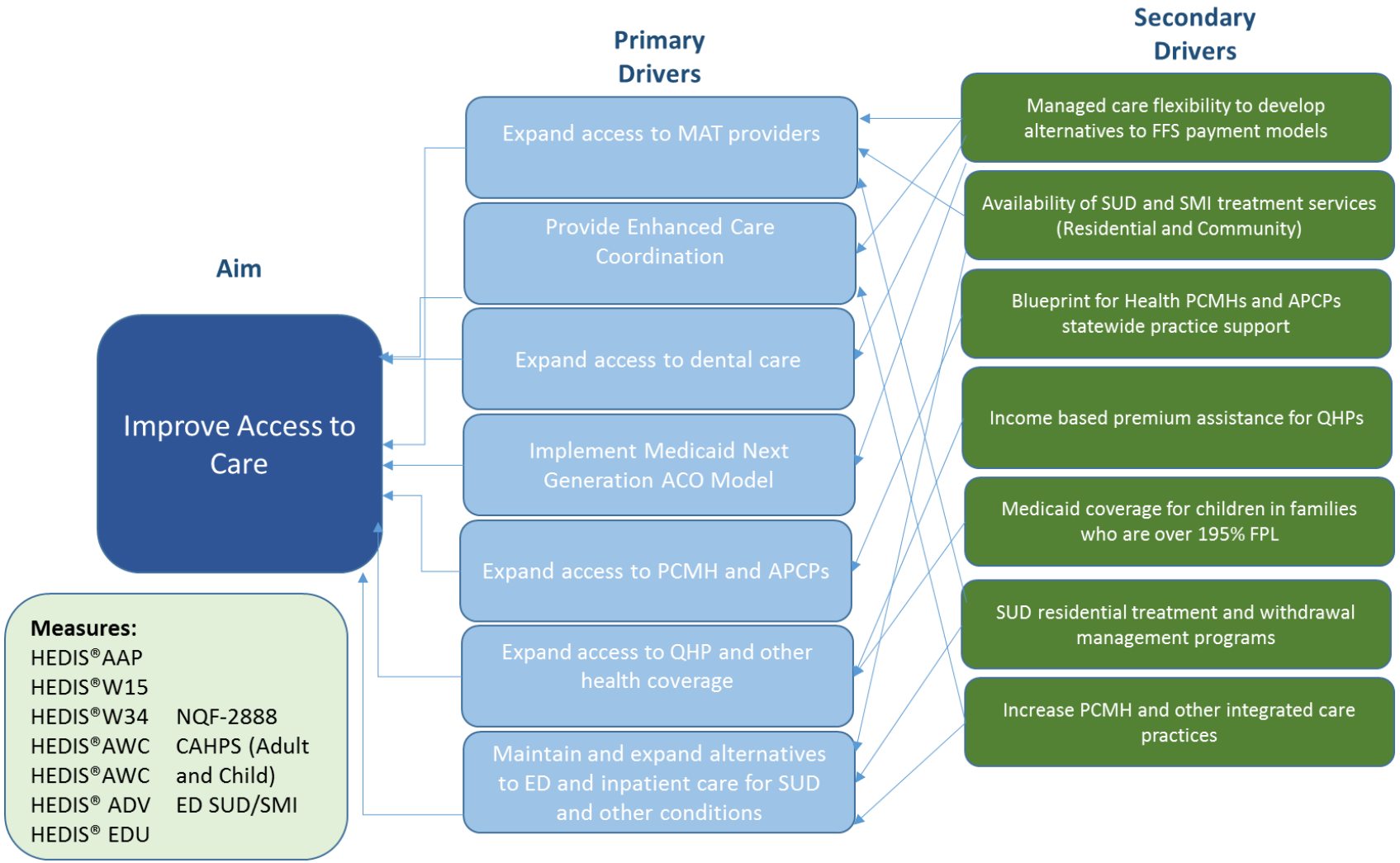


Figure 2: Quality of Care Driver Diagram

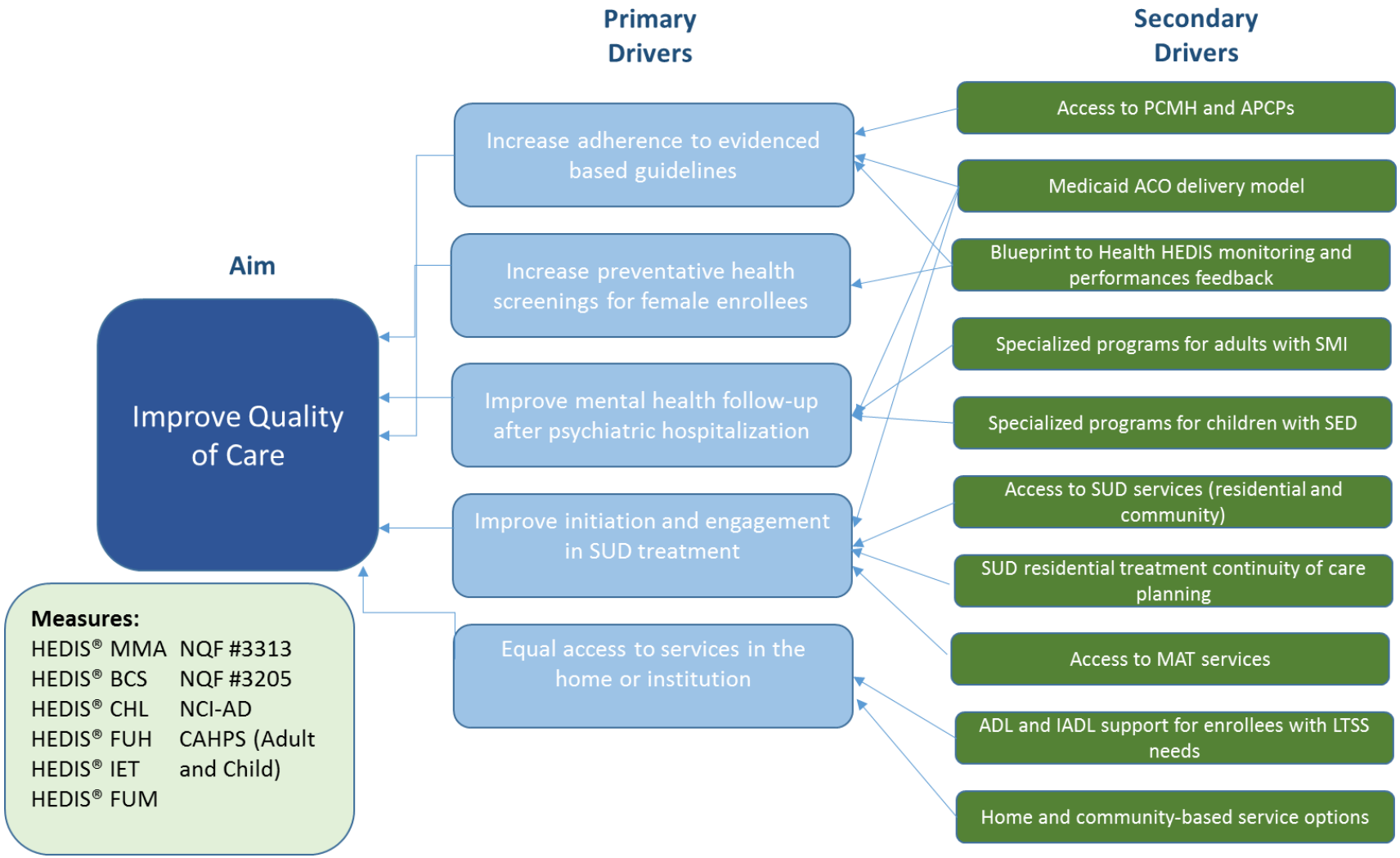


Figure 3: Community Integration Driver Diagram

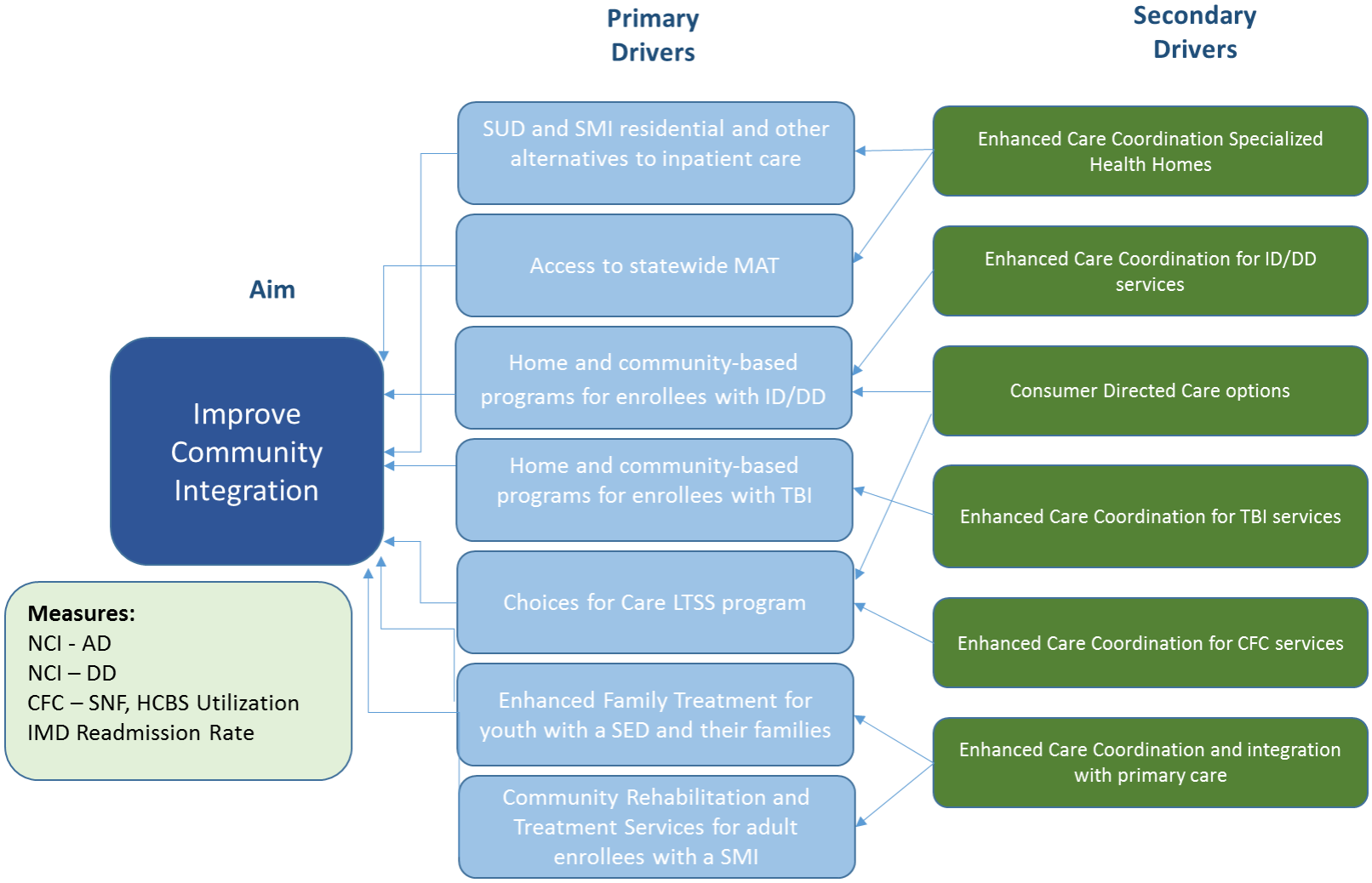
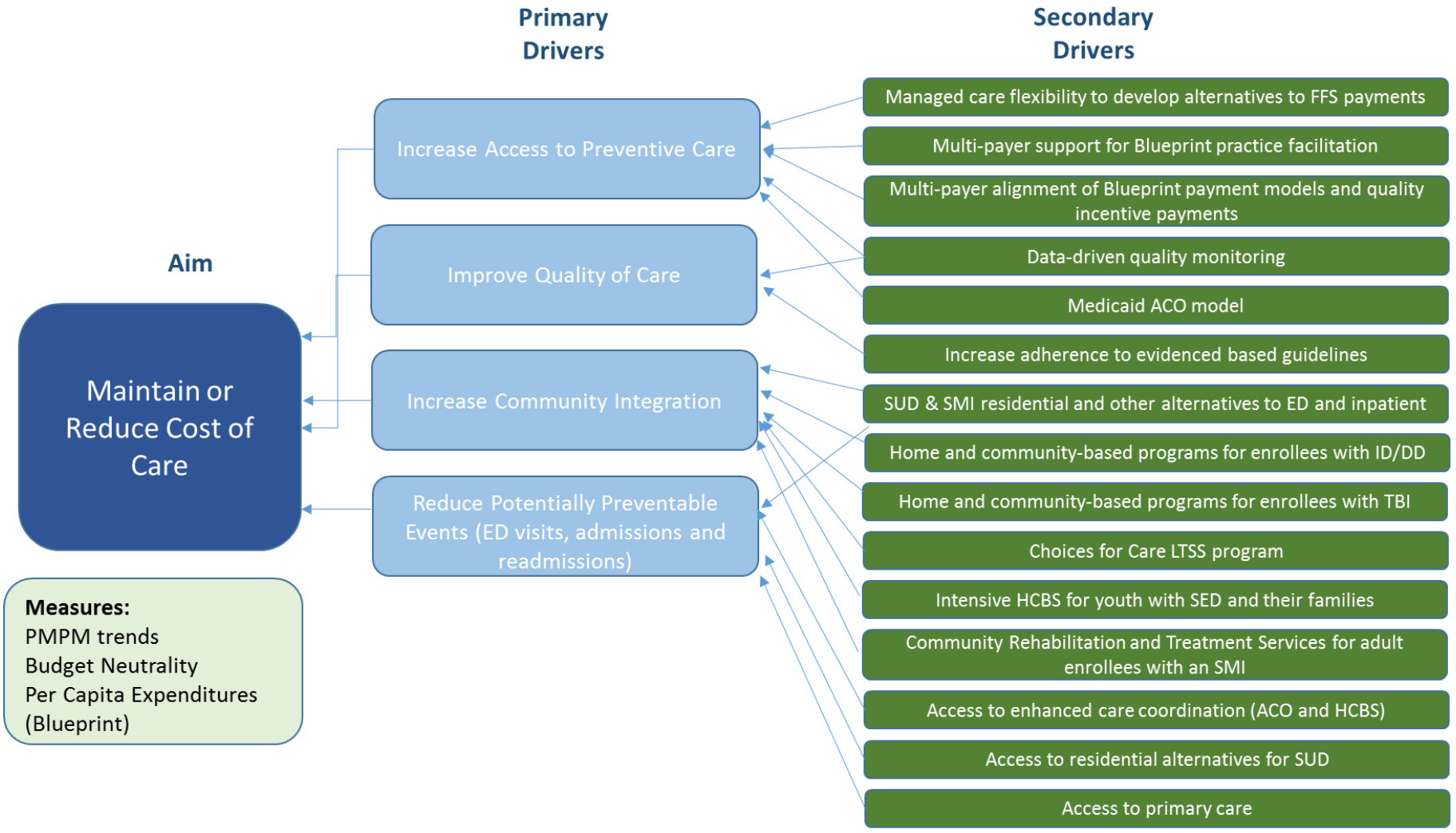


Figure 4: Maintain or Reduce Cost Driver Diagram



SMI IMD AMENDMENT LOGIC MODEL

As part of the SMI-IMD Amendment, the State also received CMS approval for its SMI Implementation Plan. The Implementation Plan outlines milestones established by CMS for all Section 1115 SMI IMD Demonstrations and how Vermont meets or will achieve those milestones. Vermont has had a decades long commitment to community based mental health and psychiatric care. This has resulted in a comprehensive continuum of care, including crisis stabilization and mobile crisis outreach services, as well as recognition that high quality inpatient psychiatric care is an essential element of the treatment continuum. Vermont's delivery system includes extensive investment in community based mental health services, including peer run alternatives and early detection and intervention for mental health challenges.

Due to the comprehensiveness of the Global Commitment to Health Demonstration (e.g., encompassing the full Medicaid program) and Vermont's existing mental health delivery system, the current evaluation design already includes metrics related to mental health services and related hypotheses. Exhibit 2-1 below, offers an overview of Vermont's evaluation elements, specific to mental health and psychiatric care, already included in the approved evaluation design. Full detail relative to research questions, data sources and analytics for these hypotheses/measures can be found in the Exhibit 2-3 through 2-6 in Subsection C.

Exhibit 2-1: Existing Design Elements for Mental Health and Psychiatric Care (pre-SMI IMD Amendment)

Goal Area	Hypotheses	Measure	Population
Access to Care	Hypothesis 4: The demonstration will reduce the percent of potentially preventable events (PPEs)	Rate of ED visits per 1,000-member months for SED program enrollees	IHCBS enrollees
	Hypothesis 8: The Medicaid ACO will improve access to mental health and substance use disorder treatment	Percent of enrollees who received follow-up after discharge from ED for mental health (30-days)	Medicaid ACO enrollees
		Percent of enrollees discharged who had follow-up at after hospitalization for mental illness (7 and 30-days)	
Quality of Care	Hypothesis 1: The demonstration will improve quality of care	Percent of enrollees screened for clinical depression and who have a follow-up plan	
	Hypothesis 4: The demonstration will improve mental health follow-up after psychiatric hospitalization	Percent of enrollees discharged who had follow-up after hospitalization for mental illness (7 and 30-days)	All Medicaid enrollees
Community Integration	Hypothesis 5: The demonstration will increase integrated employment options for persons with psychiatric needs	CRT Program Enrollees who are employed	CRT program enrollees

At the outset of the SMI-IMD Demonstration Amendment, Vermont's Implementation Plan indicates that the majority of CMS Milestones and requirements have been met, with the exception of Milestone #2c. Milestone #2 relates to "Improving Care Coordination and Transition to Community-Based Care." Milestone #2c requires states to ensure IMD facilities contact members and their community-based Providers, through the most effective means possible, e.g., email, text or phone, within 72-hours of discharge. While extensive discharge planning is an element in Vermont's system, a 72-hour post-discharge contact is not currently a state requirement.

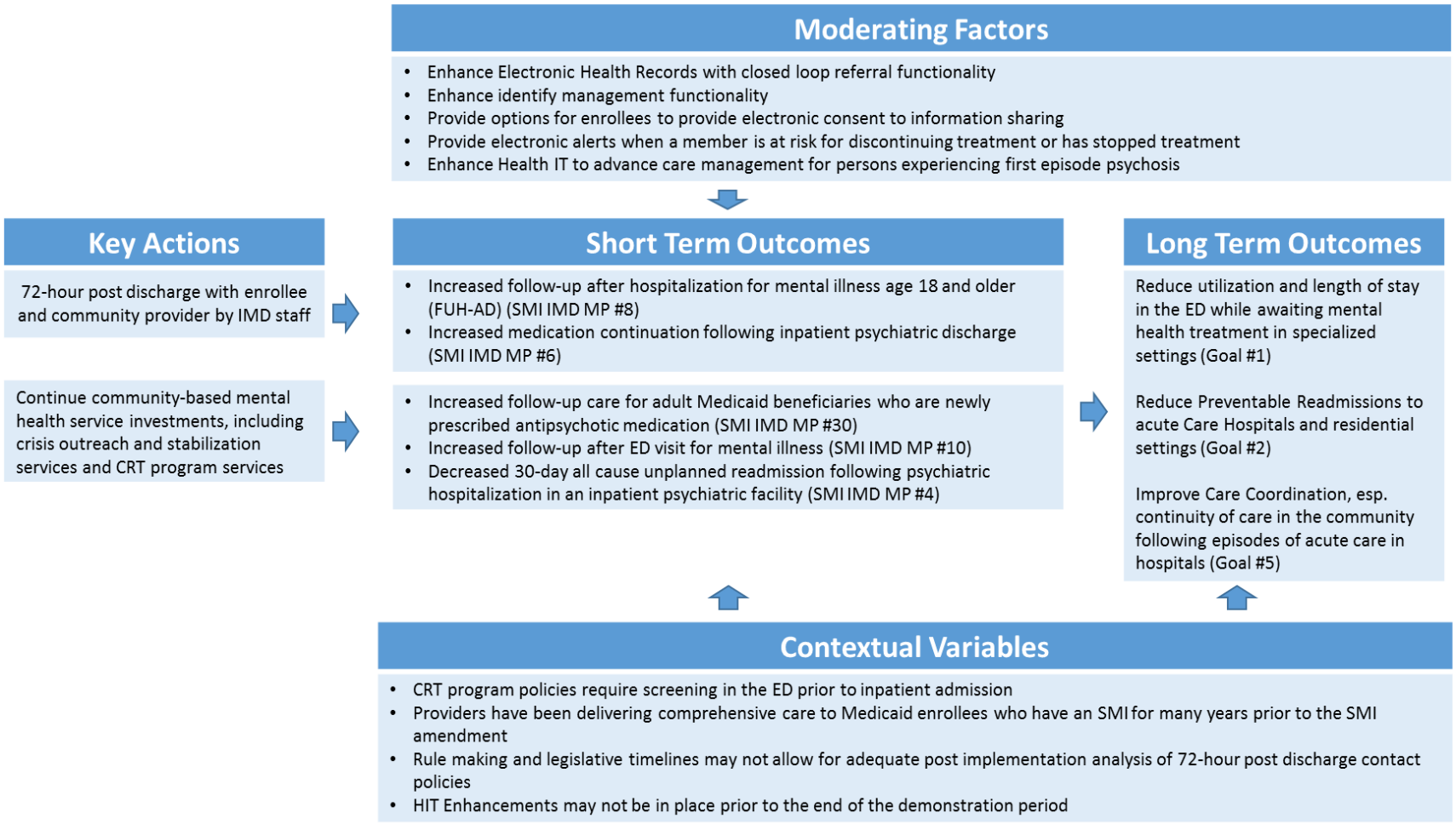
The State has identified several areas for enhancement in its Health Information Technology (HIT) Plan related to behavioral health services. These enhancements include IT support for:

- Closed loop referrals (e.g., between physicians and BH providers; institutions to providers; and providers to community service supports);
- Electronic transmission of records between providers and during transitions of care;
- Electronic consent;
- Alerting analytics; and
- Identity management.

The State has committed to planning for these enhancements in the next 12-18 months. Implementation of each element will occur within the context and timeline of the State's HIT Roadmap as new IT components come online across the system of care.

Figure 5 offers a logic model for the SMI IMD enhancements outlined in Vermont's CMS approved SMI Implementation Plan.

Figure 5: SMI Logic Model and Goals: Milestone #2



To assess the impact of enhancing post discharge contact requirements and evaluate Vermont's continued investment in mental health and psychiatric care, the evaluation will examine additional measures outlined in Exhibit 2-2 below and detailed in Exhibits 2.3 through 2.6 in Subsection c.

Exhibit 2-2. Additional and Revised SMI-Specific Hypotheses and Metrics

Goal Area	Hypotheses	Measure
Access to Care	Hypothesis 4: The demonstration will reduce the percent of potentially preventable events (PPEs)	Rate of ED visits for MH per 1,000 member months for SMI enrollees (adapted from SMI MP #16)
Quality of Care	Hypothesis 1: The demonstration will improve quality of care	Follow-up care for adult Medicaid beneficiaries who are newly prescribed an antipsychotic medication (SMI MP #30) Follow-up after ED visit for mental illness (SMI MP #10)
	Hypothesis 4: The demonstration will improve mental health follow-up after psychiatric hospitalization	Percent of enrollees discharged who had follow-up after hospitalization for mental illness (at 7 and 30 days) (SMI MP #8) Medication continuation following inpatient psychiatric discharge (SMI MP #6)
Community integration	Hypothesis 6: IMD service recipients will maintain community living as evidenced by low rates of inpatient readmission	The rate of 30-day all-cause unplanned readmissions following psychiatric hospitalization in an inpatient facility (SMI MP #4)
Cost	Hypothesis 1: the demonstration will maintain or reduce spending in comparison to what would have been spent absent the demonstration	The SMI IMD PMPM trend rates and per capita cost estimates for each eligibility group defined in STC 67 for each year of the demonstration
	Exploratory (not associated with a hypothesis)	Total cost associated with MH services (non-inpatient), with breakouts for federal and state expenditures (SMI MP #32)
		Total costs associated with MH inpatient services, with breakouts for IMD (SMI MP #33)
		Total annual cost of care with breakouts for outpatient (non-ED), pharmacy, outpatient-ED, inpatient physical health and IMD services

C. Hypothesis

The State has identified the following overarching hypotheses for the demonstration.

1. The demonstration will result in improved access to care;
2. The demonstration will result in improved quality of care;
3. Value-based payment models will improve access to care;
4. Improved access to preventive care will result in lower overall costs for the healthcare delivery system;
5. Improved access to primary care will result in improved health outcomes;
6. The demonstration will result in increased community integration; and
7. The demonstration will maintain or reduce spending in comparison to what would have been

spent absent the demonstration.

An overview of each goal, primary drivers, hypothesis, and measures is outlined in Exhibit 2-3 through 2-6, on the following pages and further defined in Section III.

Exhibit 2-3 – 2-6 notes:

Where standardized measures for HEDIS®, National Quality Forum (NQF), Consumer Assessment of Healthcare Provides and Systems (CAHPS) Survey, and the National Core Indicators Project (NCI-AD, NCI-DD) Survey are used, the numerator and denominator will align with standard specifications for Medicaid populations unless otherwise noted. Baseline Periods are indicated as Calendar Year (CY) or State Fiscal Year (SFY) in each Exhibit.

The use of analytic methods used in the following Exhibits are described below (see Section III-C for additional detail):

- Analysis of variance (ANOVA): Year over year change will be measured with the ANOVA test -- across all years, comparing differences in the means (i.e. the rates of a certain health outcome measure) among all the years for measures where indicated
- Propensity Score Matching with T-test: Where indicated, this analytic method will be used to control for potential variances in demographic and delivery system characteristics between samples
- Descriptive Statistics: For all measures statistics such as frequency, average, percent change, and comparison to national results, where applicable, will be employed

Exhibit 2-3: Evaluation Hypothesis, Measures, Cohorts and Analytic Approach: ACCESS

Demonstration Goal: Improve Access to Care							
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
Research Question: Will the demonstration result in improved access to care?							
Expand Access to PCMH and APCPs	Hypothesis 1: The demonstration will result in improved access to community based medical care						
	Percent of adult enrollees who had an ambulatory or preventive care visit	DVHA	HEDIS® AAP (Total Score)		MMIS	CY2016	ANOVA; Descriptive Statistics
	Percent of enrollees with Well-child visits first 15 months of life, 6 or more visits	DVHA	HEDIS® W15		MMIS	CY2016	
	Percent of enrollees with Well-child visits 3rd, 4th, 5th, & 6th year of life	DVHA	HEDIS® W34		MMIS	CY2016	
	Percent of adolescents ages 12 to 21 who receive one or more well-care visits with a PCP during the year	DVHA	HEDIS® AWC		MMIS	CY2016	
	Percent of respondents indicating they received necessary care	DVHA	CAHPS-CPC for Representative Sample of Medicaid Enrollees		CAHPS Survey	CY2016	ANOVA; Descriptive Statistics
			CAHPS-CPA for Representative Sample of Medicaid Enrollees			CY2017	
	Percent of respondents who rate their ability to get desired appointment or information as usually or always	Blueprint	CAHPS-PCMH for Representative Sample of Blueprint Enrollees		CAHPS Survey	CY2016	
	Percent of respondents who rate how well their physician explains things, listens to their concerns, shows respect and spends enough time with them as usually or always	Blueprint	CAHPS-PCMH for Representative Sample of Blueprint Enrollees		CAHPS Survey	CY2016	
	Percent of respondents who rate how well their physician explains things, listens to their concerns, shows respect and spends enough time with them as usually or always	DVHA	CAHPS-CPC for Representative Sample of Medicaid Enrollees		CAHPS Survey	CY2016	
			CAHPS-CPA for Representative Sample of Medicaid Enrollees			CY2017	

Demonstration Goal: Improve Access to Care							
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
Expand Access to MAT	Hypothesis 2: The demonstration will result in improved access to Medication Assisted Treatment (MAT) for OUD						
	Number of people receiving MAT per 10,000 Vermonters age 18-64	VDH	The number of hub and spoke service recipients in a month	Number of Vermonters aged 18-64 divided by 10,000	MMIS; VPMS;	CY2016	Descriptive Statistics
	Percent of enrollees with continuity of pharmacotherapy for Opioid Use Disorder	DVHA	Enrollees meeting specifications for SUD MP #22 (NQF #3175)		MMIS	CY2018	ANOVA; Descriptive Statistics
	Number of Vermont resident deaths related to drug overdose	VDH	N/A	N/A	Vital Statistics	CY2016	Descriptive Statistics
	Number of Vermont Medicaid enrollee deaths related to drug overdose	DVHA	N/A	N/A	Vital Statistics; MMIS	CY2018	
Expand Access to Dental Care	Hypothesis 3: The demonstration will result in improved access to dental care						
	Percent of children age 2-20 years with at least one dental visit	DVHA	Enrollees meeting specifications for HEDIS® ADV (Total Score)		MMIS	CY2016	ANOVA; Descriptive Statistics
Provide Enhanced Care Coordination	Hypothesis 4: The demonstration will reduce the percent of potentially preventable events (PPEs)						
	Percent of Potentially Avoidable ED Utilization	DVHA	Potentially avoidable ED visits	Total number of ED visits	MMIS	CY2016	ANOVA; Descriptive Statistics
	Percent of all cause unplanned admissions for patients with multiple chronic conditions	DVHA	ACO enrollees meeting NQF-2888 specifications		MMIS	CY2017	
	Rate of ED visits per 1,000-member months	DVHA	HEDIS® AMB-ED (All Age Groups)		MMIS	CY2016	
	Rate of ED visits per 1,000-member months for CFC enrollees	DVHA	Number of CFC Program Enrollee visits to ED	CFC program enrollee member months divided by 1,000	MMIS	CY2016	
	Rate of ED visits per 1,000-member months for DDS enrollees	DVHA	Number of DDS Program Enrollee visits to ED	DDS program enrollee member months divided by 1,000	MMIS	CY2016	
	Rate of ED visits per 1,000-member months for TBI program enrollees	DVHA	Number of TBI Program Enrollee visits to ED	TBI program enrollee member months divided by 1,000	MMIS	CY2016	
	Rate of ED visits per 1,000-member months for SED program enrollees	DVHA	Number of SED Program Enrollee visits to ED	SED program enrollee member months divided by 1,000	MMIS	CY2016	
	Rate of ED visits for mental health per 1,000 member	DVHA	Enrollees with SMI meeting specifications for SMI MP #16	SMI MP #16 member months divided by 1,000	MMIS	CY2020	Descriptive Statistics

Demonstration Goal: Improve Access to Care							
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
	months for enrollees with an SMI						
Maintain and expand alternatives to ED	Hypothesis 5: The demonstration will reduce ED use for SUD per 1,000 SUD enrollees						
	Rate of ED use for SUD per 1,000 SUD enrollees	DVHA	Enrollees meeting specifications for SUD MP #23		MMIS	CY2018	ANOVA; Descriptive Statistics
Expand Access to CHIP and Other Health Coverage	Hypothesis 6: Premium requirements for eligible families above 195% FPL will not impede access to enrollment						
	Percent of children found eligible for Dr. Dynasaur with premium whose families paid the premium necessary to effectuate coverage	DVHA	Number of children whose families paid the premium necessary to effectuate coverage	Number of children found eligible for Dr. Dynasaur premium plans	Medicaid Eligibility Files	CY2016	ANOVA; Descriptive Statistics
	Hypothesis 7: The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage						
	Percent of members with VPA who had coverage from the month they signed up through the end of the year, without any gaps in coverage or VPA	DVHA	Number of individuals with no gap in coverage from the month VPA was applied through December of the measurement year	Number of individuals who had VPA applied for any month of measurement year	VPA Eligibility Files	CY2016	ANOVA; Descriptive Statistics
	Percent of uninsured Vermonters	VDH	Representative Sample of Vermonters for the Household Health Insurance Survey (assessed every 3 years)		VDH Survey	CY2014	
Research Question: Will value based payment models increase access to care?							
Implement Medicaid Next Generation ACO Model	Hypothesis 8: The Medicaid ACO will improve access to mental health and substance use disorder treatment						
	Percent of enrollees who received 30-day follow-up after discharge from ED for mental health	DVHA	ACO enrollees meeting HEDIS® FUM specifications		MMIS	CY2017	Propensity Score Matching with T-test; Descriptive Statistics
	Percent of enrollees who received 30-day follow-up after discharge from ED for alcohol or other drug dependence	DVHA	ACO enrollees meeting HEDIS® FUA specifications		MMIS	CY2017	
	Percent of enrollees discharged who had follow-up at 7 days after	DVHA	ACO enrollees meeting HEDIS® FUH[2] specifications		MMIS	CY2017	

[2] *Vermont's measure is aligned with HEDIS FUH, however, it has been modified to include codes for follow-up received through Designated and Specialized Agencies for individuals with mental health needs, including integrated primary care*

Demonstration Goal: Improve Access to Care							
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
	hospitalization for mental illness						
	Percent of enrollees discharged who had follow-up at 30 days after hospitalization for mental illness	DVHA	ACO enrollees meeting HEDIS® FUH[3] specifications		MMIS	CY2017	
	Hypothesis 9: The Medicaid ACO will improve access to adolescent well-care						
	Percent of adolescents ages 12 to 21 who receive one or more well-care visits with PCP	DVHA	ACO enrollees meeting HEDIS® AWC specifications		MMIS	CY2017	Propensity Score Matching with T-test; Descriptive Statistics
	Hypothesis 10: The Medicaid ACO will increase engagement with eligible enrollees						
	Percent Total Medicaid Enrollees aligned with ACO	DVHA	Number of enrollees aligned with the ACO	Number of enrollees	Enrollment Files (PCP Selection); and MMIS	CY2017	ANOVA; Descriptive Statistics
	Percent ACO Eligible Enrollees aligned with ACO	DVHA	Number of eligible enrollees aligned with the ACO	Number of enrollees eligible to receive ACO services	Enrollment Files (PCP Selection); and MMIS	CY2017	

[3] *Ibid*

Exhibit 2-4: Evaluation Hypothesis, Measures, Cohorts and Analytic Approach: QUALITY

Demonstration Goal: Improve Quality of Care						
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
Research Question: Will the demonstration result in improved quality of care?							
Increased Adherence to Evidenced Based Guidelines	Hypothesis 1: The demonstration will improve quality of care						
	Percent of enrollees receiving appropriate asthma medication management 50% Compliance	DVHA	HEDIS® MMA (Total Score)		MMIS	CY2016	ANOVA; Descriptive Statistics
	Percent of enrollees receiving appropriate asthma medication management 75% Compliance	DVHA	HEDIS® MMA (Total Score)		MMIS	CY2016	
	Percent of enrollees screened for clinical depression and who have a follow-up plan	DVHA	ACO enrollees meeting HEDIS® DSF specifications		MMIS; ACO Records	CY2017	
	Percent of enrollees who received Developmental Screening in the first 3 years of life	DVHA	ACO enrollees meeting NQF-1448 specifications		MMIS	CY2017	
	Percent of adult enrollees who are newly prescribed antipsychotic medication and received follow-up care within 28 days	DVHA	As per SMI MP #30		MMIS	CY2020	ANOVA; Descriptive Statistics
	Percent of adult enrollees who receive follow-up within 7-days after ED visit for mental illness	DVHA	As per SMI MP #10		MMIS	CY2020	ANOVA; Descriptive Statistics
	Percent of adult enrollees who receive follow-up within 30-days after ED visit for mental illness	DVHA	As per SMI MP #10		MMIS	CY2020	ANOVA; Descriptive Statistics
	Hypothesis 2: ACO enrollees will show improved diabetes and hypertension control						
	Percent of patients 18-75 years of age with diabetes (type 1 and type 2) whose most recent HbA1c level during the measurement year was greater than 9.0% (poor control) or was missing a result, or if an HbA1c test was not done during the measurement year	DVHA	ACO enrollees meeting NQF-0059 specifications		MMIS; ACO Medical Records	CY2017	ANOVA; Descriptive Statistics
	Percent of adults 18–85 years of age with a diagnosis of hypertension and whose blood pressure was adequately controlled	DVHA	ACO enrollees meeting HEDIS® CBP specifications		MMIS; ACO Medical Records	CY2017	
Increase Preventive Health Screenings for	Hypothesis 3: The demonstration will increase preventive health screenings for female enrollees						
	Percent of female enrollees age 50 to 74 who receive breast cancer screening appropriate intervals	DVHA	HEDIS® BCS		MMIS	CY2016	ANOVA; Descriptive Statistics

Demonstration Goal: Improve Quality of Care							
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
Female Enrollees	Percent of female enrollees screened for Chlamydia	DVHA	HEDIS® CHL (Total Score)		MMIS	CY2016	
Improve Mental Health Follow-up after psychiatric hospitalization	Hypothesis 4: The demonstration will improve mental health follow-up after psychiatric hospitalization						
	Percent of enrollees discharged who had follow-up at 7 days after hospitalization for mental illness	DVHA	HEDIS® FUH[4]		MMIS	CY2016	ANOVA; Descriptive Statistics
	Percent of enrollees discharged who had follow-up at 30 days after hospitalization for mental illness	DVHA	HEDIS® FUH[5]		MMIS	CY2016	
	Percent of enrollees discharged who had follow-up at 7 days after hospitalization for mental illness	DVHA	As per SMI MP #8		MMIS; VPCH	CY2020	ANOVA; Descriptive Statistics
	Percent of enrollees discharged who had follow-up at 30 days after hospitalization for mental illness	DVHA	As per SMI MP #8		MMIS; VPCH	CY2020	ANOVA; Descriptive Statistics
	Medication continuation following inpatient psychiatric discharge	DVHA	As per SMI MP #6		MMIS; VPCH	CY2020	ANOVA; Descriptive Statistics
Improve Initiation and Engagement in SUD treatment	Hypothesis 5: The demonstration will improve Initiation and engagement in SUD treatment						
	Percent of enrollees using substances who initiate in treatment	DVHA	HEDIS® IET[6] (Total Score)		MMIS	CY2016	ANOVA; Descriptive Statistics
	Percent of enrollees using substances who engage in treatment	DVHA	HEDIS® IET[7] (Total Score)		MMIS	CY2016	
	Percent of enrollees using substances who initiate in treatment	DVHA	SUD IMD service recipients meeting HEDIS® IET specifications (Total Score)[8]		MMIS	CY2018	
	Percent of enrollees using substances who engage in treatment	DVHA	SUD IMD service recipients meeting HEDIS® IET specifications (Total Score)[9]		MMIS	CY2018	
	Percent of enrollees using substances who initiate in treatment	DVHA	ACO members meeting HEDIS® IET specifications (Total Score)[10]		MMIS	CY2017	

[4] *Vermont's measure is aligned with HEDIS FUH, however, it has been modified to include codes for follow-up received through Designated and Specialized Agencies for individuals with mental health needs, including integrated primary care*
[5] *Ibid*
[6] *Vermont's IET measure is aligned with NCQA NQF measure 0004 (HEDIS IET), however, it has been modified to incorporate billing practices unique to Vermont's Specialized Health Home model and includes enrollees whose treatment was received through a specialized health home provider*
[7] *Ibid*
[8] *Ibid*
[9] *Ibid*
[10] *Ibid*

Demonstration Goal: Improve Quality of Care						
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
	Percent of enrollees using substances who engage in treatment	DVHA	ACO members meeting HEDIS® IET specifications (Total Score)[11]		MMIS	CY2017	
Maintain equal access to services in the home or institution	Hypothesis 6: The demonstration will improve enrollee experience of care and rating of the health plan.						
	Percent of respondents who rate the health plan as a 7, 8, 9 or 10 on a scale of 0-10 where 0 is the worst and 10 is the best	DVHA	CAHPS-CPC for Representative Sample of Medicaid Enrollees		CAHPS Survey	CY2016	ANOVA; Descriptive Statistics
			CAHPS-CPA for Representative Sample of Medicaid Enrollees			CY2017	
	Percent of respondents who rate their ability to get care quickly as usually or always	DVHA	CAHPS-CPC for Representative Sample of Medicaid Enrollees		CAHPS Survey	CY2016	
			CAHPS-CPA for Representative Sample of Medicaid Enrollees			CY2017	
	Percent of respondents who rate the care they received as a 7, 8, 9 or 10 on a scale of 0-10 where 0 is the worst and 10 is the best	DVHA	CAHPS-CPC for Representative Sample of Medicaid Enrollees		CAHP Survey	CY2016	
			CAHPS-CPA for Representative Sample of Medicaid Enrollees			CY2017	
	Percent of respondents who rate customer service as a 7, 8, 9 or 10 on a scale of 0-10 where 0 is the worst and 10 is the best	DVHA	CAHPS-CPC for Representative Sample of Medicaid Enrollees		CAHPS Survey	CY2016	
			CAHPS-CPA for Representative Sample of Medicaid Enrollees			CY2017	
	Proportion of participants needing assistance who always get enough assistance with everyday activities when needed	DAIL	NCI-AD for Representative Sample of CFC program enrollees		NCI-AD Survey	CY2018	
	Proportion of participants needing assistance who always get enough assistance with everyday activities when needed	DAIL	NCI-AD for Representative Sample of TBI program enrollees		NCI-AD Survey	CY2018	
	The rate at which people report that they do not get the services they need	DAIl	NCI-AD for Representative Sample of DDS program enrollees		NCI-DD Survey	CY2016	
	Hypothesis 7: The demonstration will improve enrollee self-report of health status for enrollees with LTSS needs						
	The proportion of people who describe their overall health as poor	DAIL	NCI-AD for Representative Sample of CFC program enrollees		NCI-AD Survey	CY2018	Descriptive Statistics
	The proportion of people who describe their overall health as poor	DAIL	NCI-AD for Representative Sample of TBI program enrollees		NCI-AD Survey	CY2018	
	The proportion of people who were reported to be in poor health	DAIL	NCI-AD for Representative Sample of DDS program enrollees		NCI-DD Survey	CY2016	

[11] *Ibid*

Demonstration Goal: Improve Quality of Care							
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
Research Question: Will improved access to primary care result in improved health outcomes?							
Expand Access to PCMH and APCPs	Hypothesis 8: The Blueprint for Health will improve diabetes control for members age 18-75.						
	Number of continuously enrolled Medicaid members, ages 18-75 whose Diabetes HbA1c was in control compared to those with poor control (HbA1c <9%)[12]	Blueprint	N/A	N/A	VCHURES; Medical Records	CY2016	Descriptive Statistics
	Inpatient hospitalizations per 1,000 members for continuously enrolled Medicaid members, ages 18-75 whose Diabetes HbA1c was in control compared to those with poor control[13]	Blueprint	N/A	N/A	VCHURES; Medical Records	CY2016	

[12] Blueprint enrolled Medicaid members with diabetes who have one or more inpatient visits, one or more outpatient emergency department visits, or two or more non-hospital outpatient visits with ICD-9 diagnosis codes of 250, 357.2, 362.0, 366.41, and 648.0 or ICD-10 diagnosis codes of E10, E11, E13, and O24 or who were dispensed insulin oral hypoglycemics/antihyperglycemics during the measurement year or the year prior to the measurement year. Additionally, members must be linked to the Blueprint Clinical Registry database and have at least one valid HbA1c measurement.

[13] ibid

Exhibit 2-5: Evaluation Hypothesis, Measures, Cohorts and Analytic Approach: COMMUNITY INTEGRATION

Demonstration Goal: Improve Community Integration							
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
Research Question: Will the demonstration result in increased community integration?							
Home and Community Based Programs (TBI, DDS and CFC)	Hypothesis 1: The demonstration will increase community living for Choices for Care enrollees						
	Average number of CFC enrollees served per month in a nursing facility	DAIL	Number of CFC enrollees living in a nursing facility per month	Number of CFC enrollees, excluding the Moderate Needs Group	MMIS	CY2016	Descriptive Statistics
	Average number of CFC enrollees served per month in a home setting	DAIL	Number of CFC enrollees living in a home setting per month	Number of CFC enrollees, excluding the Moderate Needs Group	MMIS	CY2016	
	Average number of CFC enrollees served per month in a licensed residential facility	DAIL	Number of CFC enrollees living in a licensed residential facility per each month	Number of CFC enrollees, excluding the Moderate Needs Group	MMIS	CY2016	
	Hypothesis 2: The demonstration will increase community integration for persons needing LTSS						
	Proportion of people who do things they enjoy outside of their home when and with whom they want to	DAIL	NCI-AD for Representative Sample of CFC program enrollees		NCI-AD Survey	CY2018	Descriptive Statistics
	Proportion of people who do things they enjoy outside of their home when and with whom they want to	DAIL	NCI-AD for Representative Sample of TBI program enrollees		NCI-AD Survey	CY2018	
	Proportion of people who regularly participate in integrated activities in their communities	DAIL	NCI-DD for Representative Sample of DDS program enrollees		NCI-DD Survey	CY2016	
	Hypothesis 3: The demonstration will increase choice and autonomy for persons needing LTSS						
	Proportion of people who can choose or change what kind of services they get and determine how often and when they get them	DAIL	NCI-AD for Representative Sample of CFC program enrollees		NCI-AD	CY2018	Descriptive Statistics
	Proportion of people who can choose or change what kind of services they get and determine how often and when they get them	DAIL	NCI-AD for Representative Sample of TBI program enrollees		NCI-AD	CY2018	
	The proportion of people who make choices about their everyday lives	DAIL	NCI-DD for Representative Sample of DDS program enrollees		NCI-DD	CY2016	
	Hypothesis 4: The demonstration will increase integrated employment options for persons needing LTSS.						
	Proportion of people who have a paying job in the community, either full-time or part-time	DAIL	NCI-AD for Representative Sample of CFC program enrollees		NCI-AD	CY2018	Descriptive Statistics

Demonstration Goal: Improve Community Integration							
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
	Proportion of people who have a paying job in the community, either full-time or part-time	DAIL	NCI-AD for Representative Sample of TBI program enrollees		NCI-AD	CY2018	
	Proportion of people who would like a job (if not currently employed)	DAIL	NCI-AD for Representative Sample of CFC program enrollees		NCI-AD	CY2018	
	Proportion of people who would like a job (if not currently employed)	DAIL	NCI-AD for Representative Sample of TBI program enrollees		NCI-AD	CY2018	
	The proportion of people who do not have a job in the community but would like to have one	DAIL	NCI-DD for Representative Sample of DDS program enrollees		NCI-DD	CY2016	
	Employment rate of people of working age receiving DDS services	DAIL	DDS Program Enrollees who are employed	DDS Program Enrollees who are eligible for employment	VT DOL; DVR	SFY2016	Descriptive Statistics
	Employment rate of people of working age receiving TBI rehabilitation services	DAIL	TBI Program Enrollees who are employed	TBI Program Enrollees who are eligible for employment	VT DOL; DVR	SFY2016	
CRT Services for Adult Enrollees with a SPMI	Hypothesis 5: The demonstration will increase integrated employment options for persons with psychiatric needs						
	Employment rate of people of working age receiving CRT services	DMH	CRT Program Enrollees who are employed	CRT Program Enrollees who are eligible for employment	VT DOL; MSR	SFY2016	Descriptive Statistics
Treatment and other Alternatives to Inpatient Care	Hypothesis 6: IMD service recipients maintain community living as evidenced by low rates of inpatient readmission						
	The percent of SUD IMD stays during the measurement period followed by a SUD IMD readmission for SUD within 30 days.	DVHA	Number of readmissions to any SUD IMD that occurred within 30-days of discharge from a SUD IMD	Total number of SUD IMD admissions	MMIS	CY2018	ANOVA ; Descriptive Statistics
	The rate of 30-day all-cause unplanned readmissions following psychiatric hospitalization in an inpatient facility	DVHA	As per SMI MP #4		MMIS	CY2020	ANOVA; Descriptive Statistics

Exhibit 2-6: Evaluation Hypothesis, Measures, Cohorts and Analytic Approach: MAINTAIN OR REDUCE COSTS

Demonstration Goal: To Maintain or Reduce Cost of Care							
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
Research Question: Will the demonstration maintain or reduce spending in comparison to what would have been spent absent the demonstration?							
Increase Community Integration	Hypothesis 1: The demonstration will maintain or reduce spending in comparison to what would have been spent absent the demonstration						
	Actual aggregate expenditures versus budget neutrality limit	AHS/CO	N/A	N/A	MMIS	CY2017	Descriptive Statistics
	The SUD IMD PMPM trend rates and per capita cost estimates for each eligibility group defined in STC 66 for each year of the demonstration	AHS/CO	N/A	N/A	MMIS	CY2018	
	The SMI IMD PMPM trend rates and per capita cost estimates for each eligibility group defined in STC 67 for each year of the demonstration	AHS/CO	N/A	N/A	MMIS	CY2020	Descriptive Statistics
Research Question: Will improved access to primary care result in lower overall cost?							
Improve Quality of Care	Hypothesis 3: The Blueprint for Health initiative will contain or reduce per capita expenditures for Medicaid enrollees whose diabetes is in control						
	Expenditures per capita for continuously enrolled Medicaid members, ages 18-75 whose Diabetes HbA1c was in control compared to those with poor control[14]	DVHA	N/A	N/A	VCHURES; Medical Records; MMIS	CY2016	Descriptive Statistics
Increase Access to Preventive Care	Hypothesis 4: The Blueprint for Health initiative will contain or reduce total per capita expenditures for Medicaid enrollees ages 1-64 years						
	Total risk adjusted expenditures per capita, excluding specialized program services, for Medicaid enrollees ages 1-64 years[15]	DVHA	N/A	N/A	VCHURES; Medical Records; MMIS	CY2016	Descriptive Statistics
	Specialized program risk adjusted expenditures per capita, for Medicaid enrollees ages 1-64 years[16]	DVHA	N/A	N/A	VCHURES; Medical Records; MMIS	CY2016	

[14] *Total Expenditures are measured based on the allowed amount on claims, which included both the plan payments and the member's out-of-pocket payments (i.e., deductible, coinsurance, and copayments).*
[15] *Ibid*
[16] *Ibid*

Demonstration Goal: To Maintain or Reduce Cost of Care							
Primary Driver	**Measure**	**Steward**	**Numerator**	**Denominator**	**Data Source**	**Baseline Year**	**Analytic Approach**
Patterns and Trends in Medicaid Costs associated with IMD service recipients will be examined. These measures capture all costs for the measurement year and are not associated with a demonstration hypothesis or SUD and SMI demonstration amendment budget neutrality reporting.							
Exploratory	Per member per month (PMPM) Medicaid cost for individuals who received an IMD service in the measurement year	DVHA	Total Cost of Care, with breakouts for federal and state expenditures and Non-SUD related cost	Total member months during measurement year	MMIS	CY2018	Descriptive Statistics
			Total SUD-related cost, with breakouts for SUD-IMD, SUD-other treatment		MMIS	CY2018	Descriptive Statistics
			Total annual cost of with breakouts for outpatient (non-ED), pharmacy, outpatient-ED, inpatient and Long-Term Care services.		MMIS	CY2018	
	Per member per month (PMPM) Medicaid cost for individuals who received an IMD service in the measurement year	DVHA	Total cost associated with MH services (non-inpatient) with breakouts for federal and state expenditures (SMI MP #32)	Total member months during measurement year	MMIS	CY2020	Descriptive Statistics
			Total cost associated with MH inpatient services, with breakouts for IMD (SMI MP #33)				
			Total annual cost of care with breakouts for outpatient (non-ED), pharmacy, outpatient-ED, inpatient and Long-Term Care services.				

In addition, AHS will undertake a formative evaluation of its one-time delivery system reform investments to support Accountable Care Organizations (ACO) and Medicaid community providers in delivery system reforms. Specifically, the State expects to encourage ACO-based provider led reform that features (a) collaboration between providers, (b) reimbursement models that move away from Fee-For-Service payment, and (c) rigorous quality measurement that aligns with the APM quality framework. CMS approved two new investments, during November of 2017, in the ACO delivery system reform category. These Investments and their expected outcomes are outlined in Exhibit 2-7.

Exhibit 2-7: 2018 Delivery System Reform Investments

ACO Delivery System Reform Investments	
Investment Initiative	**Expected Outcome**
OneCare Vermont ACO Quality Health Management Measurement Improvement investment. This project is designed to assist the ACO in providing technical assistance to network providers in setting quality improvement targets and using a suite of new and enhanced information dissemination tools and reports	• OneCare's analytics platform will be enhanced to meet the needs of OneCare's multi-payer risk bearing ACO participants and the State's All Payer ACO model.
	• Care Navigator functionality will be improved to address the needs of care coordinators and patients with complex care coordination needs.
	• OneCare's information dissemination tools to support population health care coordination, and financial performance initiatives will show increased adoption and demonstrate value to OneCare providers.
OneCare Vermont ACO Advanced Community Care Coordination investment. This project is designed to support integrated care delivery system that is person-centered, efficient and equitable through the implementation of a community-based care coordination model.	• OneCare will support the development of a standardized team-based care model that integrates PCMHs with the continuum of care provider network.
	• OneCare's care coordination model for complex needs populations will expand to additional communities served in 2018 with several core components in place, bringing stability, scalability, and consistency to the care model.
	• OneCare's expanded investments in team-based care coordination will provide the resource necessary to build upon and strengthen existing partnerships between PCMHs and community-based providers; thus, enabling more individuals with complex needs to have access to care coordination services.
	• OneCare will have an actionable framework and sustainable care coordination payment model and corresponding outcome (savings) model to effectively evaluate the long-term return on investment.

D. Data Collection and Assurances

Vermont's public managed care-like model is managed by AHS through delegation to DVHA. Encounter, claims and cost data are available through the MMIS and will be made available to evaluators as needed for purpose of evaluation. Existing agreements require that all IGA partners, ACOs and SUD programs included under the demonstration make data available to support evaluations and performance monitoring efforts. AHS does not anticipate problems with data collection and reporting.

AHS will use a variety of sources and methods to test the above hypotheses, including beneficiary surveys and provider claims data. AHS staff and independent evaluators will also analyze data from third-party sources, such as the U.S. Census Bureau and, if available through the All-Payer Model, Medicare claims data. Vermont data sources used to evaluate performance against demonstration goals will include:

Exhibit 2-8: Global Commitment to Health Data Sources

	Global Commitment to Health Evaluation Data Sources	
Data Lead	**Data Source**	**Brief Description**
DAIL	Social Assistance Management System (SAMS)	Encounter data submitted to the State by providers used to identify residential settings used by enrollees in the Choices for Care program
	National Core Indicators Project (NCI)	Point in time survey data collected on LTSS and HCBS program participants used to assess community integration, choice and control for enrollees in Choices for Care, Developmental Disabilities and Traumatic Brain Injury programs
DMH	Monthly Service Reports (MSR)	Encounter data submitted to the State by providers used to identify consumers receiving specialized mental health services and to support the development of employment statistics for persons with a SPMI
DOL	Employment database	Wage and employment information submitted by employers to the State Department of Labor used to support the development of employment statistics for specialized populations
DVHA	Medicaid Management Information System (MMIS)	Claims data submitted to the State by providers used to support HEDIS® and HEDIS®-like performance, Medication Assisted Treatment, service utilization and cost metrics for all enrollees
	State Medicaid Eligibility and Enrollment files, including VT Health Connect Premium Assistance (VPA) files	Eligibility and enrollment detail for Medicaid beneficiaries used to determine enrollee aid category and stratify data into sub-groups, when applicable, including measures of health coverage for persons who received marketplace subsidies to purchase a QHP
	Consumer Assessment of Healthcare Providers and Systems (CAHPS)	Point in time survey data collected on Medicaid beneficiaries used to assess enrollee experience of care
VDH	Vital Statistics System	Public health birth, death and other vital records used to track overdose deaths attributed to Vermont residents
	Substance Abuse Treatment Information System (SATIS)	Provider, enrollee and encounter data used to assess rates of Medication Assisted Treatment and successful completion of residential treatment
	Household Health Insurance Survey	Point in time survey data collected on Vermonters used to determine rates of uninsured Vermonters
	Vermont Prescription Monitoring System (VPMS)	VPMS collects, monitors, and analyzes electronically transmitted data on all dispensed Schedule II, III, and IV controlled substances. Data on each prescription includes the prescribed drug, the recipient, the health care provider who wrote the prescription, and pharmacy that dispensed the prescription
GMCB	Vermont Health Care Uniform Reporting and Evaluation System (VHCURES)	Claims data submitted by all health plans in the State of Vermont used to assess outcomes for Blueprint to Health enrollees
ACO	Provider Encounter Data and Outcome Reports	Provider medical record and HEDIS® outcomes reported to the State and used to assess outcomes for ACO attributed enrollees

To limit administrative burden on providers, consumers, and staff and to eliminate duplicative evaluation efforts, the demonstration evaluation will coordinate and compile existing measures aimed at studying the impact of various health care initiatives under the demonstration. These include the:

- Global Commitment to Health Comprehensive Quality Strategy, including HEDIS® metrics;
- Global Commitment to Health SUD Monitoring Plan, including HEDIS® metrics;
- AHS Results Based Accountability Scorecards;
- National Core Indicators Project, (Developmental Disability and Aging and Other Disability Program Surveys) for Choices for Care, Developmental Disabilities and Traumatic Brain Injury program enrollees;
- Medicaid Quality Measures for enrollees attributed to an ACO; and
- Blueprint for Health Multi-Payer Delivery Reform Initiative for enrollees attributed to a Patient Centered Medical Home (PCMH) or Advanced Primary Care Practice.

E. Performance Measures, Data Source, Frequency and Sampling Methods

This evaluation incorporates the use of performance measures based on the following criteria: 1) evidenced based; 2) potential for improvement; 3) prevalence or incidence; 4) substantial impact on health status and/or health outcomes; 5) alignment with national measures; and 6) to the extent possible, adaptable measures across various practice settings.

The demonstration uses HEDIS® and AHS Results Based Accountability Scorecards for most of the targeted performance measures. Additionally, the evaluation will align measures and priorities with those collected as part of the All-Payer Model Medicare demonstration Agreement Appendix 1 Found Here on page 36, which includes alignment with the development of the Global Commitment to Health Medicaid ACO.

Using the measures identified in Exhibit 2-1 – 2-4 (above), AHS will determine whether efforts to improve access (e.g., primary care visits, ED visits, and providers accepting Medicaid), enhance quality (e.g., follow-up after hospitalization, medication management for those with asthma, and patient experience of care), contain costs (e.g., budget neutrality, and SUD IMD) and improve community integration were achieved. Performance measures specific to specialized programs and in-home and community services will also be included, such as ability of participants to live longer in their communities and experience an improved quality of life, choice and control.

Reported HEDIS rates will be benchmarked to NCQA Medicaid HEDIS means and percentiles as appropriate. Current performance targets and national benchmarks are identified in the States Comprehensive Quality Strategy Found Here and SUD Monitoring Protocol Found Here

One other important source of information to initiate and guide improvement efforts is the beneficiary. The most widely used instrument for collecting reports and ratings of health care services from the beneficiary's perspective is the CAHPS. CAHPS survey data allows entities to: 1) analyze performance compared to benchmarks; 2) identify changes or trends in performance; and/or 3) consider other indicators of performance. Vermont will combine CAHPS data with information collected through periodic surveys of targeted groups of demonstration enrollees.

Two hypotheses (listed below) will be measured through evaluation efforts associated with the Blueprint for Health Multi-Payer Advance Primary Care Practice initiative:

- Improved access to primary care will result in positive health outcomes;
- Improved access to primary care will result in overall lower cost for the healthcare delivery system.

The Blueprint for Health is a state-led, multi-payer program dedicated to achieving well-coordinated and seamless health services, with an emphasis on prevention and wellness. As such, the Blueprint employs several different approaches to incentivizing delivery system reform and increased quality and performance through payment reform. The foundation of the Blueprint model is a Multi-Payer Advanced Primary Care Practice (MAPCP) program. Participation is optional for providers, but mandatory for Vermont's commercial payers (with the exception of self-insured plans) and Medicaid.

Current participating payers in the Blueprint for Health include Medicaid, Medicare, Blue Cross Blue Shield of Vermont, MPV and CIGNA. As such, some measures reflect population health outcomes across payers and are not specifically stratified for Medicaid enrollees. As feasible within available resources, Blueprint performance and evaluation findings may include sub-analysis relative to Medicaid only participants.

III. EVALUATION DESIGN AND METHODS

In updating its existing Medicaid demonstration evaluation strategy as reflected in this document, the State has refined overarching demonstration hypotheses and identified study populations and levels of stratification for specialized programs, including SUD programs. The design identifies data sources, reviews general methods, data analytics and defines annual reporting requirements for the term of the demonstration. However, final techniques, technical specifications and study groups will be determined following a review of available data for integrity and completeness by the evaluator.

A. DESIGN

The evaluation will rely on quasi-experimental design to measure change over time and differential statistics to describe the population and findings. Results will be compared to statewide or national benchmarks, as applicable; and be assessed relative to a baseline to test the associated hypotheses. Evaluators may employ secondary analysis to reexamine existing data to address demonstration hypothesis or isolate Medicaid enrollees from the general population.

Both qualitative and quantitative methods will be used to address the hypotheses and research questions. Qualitative methods will be used to better understand new delivery system reforms supported with demonstration investment funds, and will include the use of interviews, and inductive analysis to discover patterns, themes, and interrelationships. Qualitative methods will also be explored for the SUD and SMI Mid-Point Assessments, in conjunction with quantitative performance analysis.

Quantitative methods will be used to better understand the impact of demonstration implementation (i.e., the relationship that demonstration participation has on: access to care; quality of care; cost containment; and stable in-home and community alternatives to institutional care) and will include the use of descriptive/inferential statistics, and deductive analysis to generate relationships between variables that can be generalized to the broader Medicaid population.

The evaluation will rely predominately on a Pre/Post design. However, propensity score matching methods will be used to characterize differences between Medicaid enrollees aligned with the ACO and Medicaid enrollees who are not aligned with the ACO. Propensity score matching will be used to control for potential variances in demographic and delivery system characteristics between the ACO-aligned and non-ACO groups.

Where employed, the length of the pre/post study period is expected to be a minimum of 12 months. If necessary, to examine change over time, evaluators may employ an extended pre-period for those measures that have been in place longer than 12-months.

Evaluation of change over time will be used for measures associated with aggregate demonstration and specialty program populations (including SUD IMD and those impacted by premium payments and subsidies). When using these methods, the evaluator is expected to consider and address various issues that might compromise the results, such as unexpected changes in program operations, enrollment or implementation of new program initiatives. If necessary, alternative methods might be required. Design approaches for each research question and hypothesis are presented in Exhibit 3-1.

Exhibit 3-1: Amended Evaluation Research Questions, Hypotheses and Design

Amended Evaluation Research Questions, Hypotheses and Design		
Research Question	**Hypothesis**	**Design**
Will the demonstration result in improved access to care?	The demonstration will result in improved access to community based medical care	Pre/Post
	The demonstration will result in improved access to Medication Assisted Treatment for Opioid Use Disorder (OUD)	
	The demonstration will result in improved access to dental care	
	The demonstration will reduce the percent of potentially preventable events*	
	The demonstration will reduce ED use for SUD per 1,000 SUD enrollees	
	Premium requirements for eligible families above 195% FPL will not impede access to enrollment	
	The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage	
Will value-based payment models increase access to care?	The Medicaid ACO will improve access to mental health care and SUD treatment*	Propensity Score Matching
	The Medicaid ACO will improve access to adolescent well-care	
	The Medicaid ACO will increase engagement of eligible members overtime	Pre/Post
Will the demonstration result in improved quality of care?	The demonstration will improve quality of care*	Pre/Post
	ACO enrollees will show improved diabetes and hypertension control	
	The demonstration will increase preventive health screenings for female enrollees	
	The demonstration will improve Mental health follow-up after psychiatric hospitalization*	
	The demonstration will improve Initiation and engagement in SUD treatment.	
	The demonstration will improve enrollee experience of care and rating of the health plan	
	The demonstration will improve self-report of health status for enrollees with LTSS needs	
Will improved access to primary care result in improved health outcomes?	The Blueprint for Health will improve diabetes control for Medicaid members age 18-75	Pre/Post
Will the demonstration result in increased community integration?	The demonstration will increase community living for Choices for Care program enrollees	Pre/Post
	The demonstration will increase community integration for persons needing LTSS	
	The demonstration will increase choice and autonomy for persons needing LTSS.	
	The demonstration will increase integrated employment options for persons needing LTSS	Pre/Post
	The demonstration will increase integrated employment options for persons with psychiatric needs	
	SUD and SMI IMD service recipients maintain community living as evidenced by low rates of IMD readmission*	
Will the demonstration maintain or reduce spending in comparison to what would have been spent absent the demonstration?	The demonstration will contain or reduce overall Medicaid spending	Pre/Post
	The demonstration will contain or reduce SUD and SMI IMD spending*	
Will improved access to preventive care result in lower overall costs for the healthcare delivery system?	The Blueprint for Health initiative will contain or reduce per capita risk-adjusted expenditures for enrollees whose diabetes is in control	Pre/Post
	The Blueprint for Health initiative will contain or reduce total per capita risk-adjusted expenditures for enrollees ages 1-64 years	

* Hypotheses with SMI related metrics and population cohorts

Delivery System Reform Investments

AHS will conduct an internal assessment of Vermont's ACO delivery system reform investments, implemented in 2018. The assessment will be based on grantee reporting, key informant information from AHS program staff, as well as community leaders, administrators, physician leaders, and others directly responsible for, or knowledgeable about, the new initiative or investment. As appropriate, fiscal analysis will be conducted to analyze expenditure information. Reports will be used to provide program staff and provide direction in shaping modifications that may be required to support more effective investments. Findings from the AHS assessment of these onetime awards will be included in state's second Interim Evaluation Report due December 31, 2020.

SUD IMD Mid-Point Assessment

The GC Evaluation will include a mid-point assessment of the SUD amendment submitted to CMS by December 31, 2020. The evaluator will collaborate with key stakeholders, including representatives of AHS, SUD treatment providers, beneficiaries, and other key partners in the design, planning and conducting of the mid-point assessment. The assessment will include an examination of progress toward meeting each milestone and timeframe approved in the SUD Implementation Protocol, and toward closing the gap between baseline and target each year in performance measures as approved in the SUD MP. The assessment will also include a determination of factors that affected achievement on the milestones and performance measure gap closure percentage points to date, and a determination of selected factors likely to affect future performance in meeting milestones and targets not yet met and about the risk of possibly missing those milestones and performance targets. The mid-point assessment will also provide a status update of budget neutrality requirements. For each milestone or measure target at medium to high risk of not being met, the evaluator will provide, for consideration by the state, recommendations for adjustments in the state's implementation plan or to pertinent factors that the state can influence that will support improvement. The evaluator will provide a report to the state that includes the methodologies used for examining progress and assessing risk, the limitations of the methodologies, its determinations and any recommendations.

SMI IMD Mid-Point Assessment

The GC Evaluation will include a Mid-Point Assessment of the SMI amendment submitted to CMS by February 28, 2021. The assessment will include an examination of progress toward meeting each milestone in the approved SMI Implementation Protocol, and toward closing the gap in performance on the SMI metrics as approved in the SMI MP. The assessment will also include a determination of factors that affected achievement on the milestones and gap closure, and a determination of selected factors likely to affect future performance in meeting milestones and targets not yet met and about the risk of possibly missing those milestones and performance targets. The assessment will also provide a status update of budget neutrality requirements. For each milestone or measure target at medium to high risk of not being met, the evaluator will provide, for consideration by the state, recommendations for adjustments in the state's implementation plan or to pertinent factors that the state can influence that will support improvement. The evaluator will provide a report to the state that includes the methodologies used for examining progress and assessing risk, the limitations of the methodologies, its determinations and any recommendations.

Evaluation Period and Reporting

The Global Commitment demonstration is an all-inclusive program designed to align efforts in primary care, behavioral health and LTSS. The 2017 demonstration extension was designed to align Medicaid's Next Generation ACO model with Vermont's All Payer Model Medicare demonstration. In July 1, 2018 the demonstration was amended to continue SUD residential services delivered in IMD settings. In December of 2019, the demonstration was amended to continue FFP for psychiatric services in IMD settings. To capture changes overtime, the evaluation design includes several baseline measurement periods including: an overall baseline period of 2016 for most population measures; a 2017 baseline for ACO attributed Medicaid enrollees; a 2018 baseline for LTSS NCI measures of integration, choice and control for Choices for Care enrollees and Medicaid enrollees who have a TBI; a 2018 baseline for certain measures of SUD program change, and a 2020 baseline for certain measures related to the SMI amendment. The resulting evaluation includes multiple study periods across calendar years 2016-2021, with an extensive IMD study previously conducted for years 2012-2017, submitted to CMS on April 1, 2018. The evaluation period is depicted in Exhibit 3-2.

Exhibit 3-2 Evaluation Study and Reporting Period

Evaluation Study Period 2016 -2021						
	Year 1	Year 2	Year 3	Year 4	Year 5	
CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
Extension Baseline	ACO Baseline	NCI-AD Baseline (LTSS) SUD Baseline				
		Interim Findings and IMD Report April 1 2018	SUD Amendment July 1, 2018	Interim Report SUD Mid-Point Assessment		Final Evaluation Report
				SMI Amendment and Revised Design SMI Baseline	SMI Mid-Point Assessment	

In addition to the five evaluation report deliverables listed below, the State will compile data and summarize demonstration performance to-date for CMS in quarterly and annual reports and SUD Monitoring report. An independent evaluator will support all demonstration evaluation reporting requirements.

- Interim Evaluation Report and IMD Study (Draft April 1, 2018, final due 60-days post CMS feedback)
- Interim Evaluation Report (Draft December 31, 2020, final due 60-days post CMS feedback)
- SUD Mid-Point Assessment (December 31, 2020)
- SMI Mid-Point Assessment (February 28, 2021)
- Summative Evaluation Report (Draft within 18 months of the end of the approval period, December 21, 2021, final due 60-days post CMS feedback)

The independent evaluator will support the State of Vermont, as needed, in its efforts to complete rapid cycle assessments for new payment and service delivery reform models including but not limited to ACO model enhancements, efforts to support integration across providers and new delivery system investments.

B. TARGET AND COMPARISON POPULATION

In Vermont's demonstration, Medicaid eligibility is synonymous with enrollment in the public managed care-like model making general comparison and/or control groups difficult. However, two health care initiatives were identified where data for Medicaid comparison groups may be available over time, the Blueprint for Health and the Vermont Medicaid Next Generation ACO. Whenever possible matched samples for participants in these reforms and those not receiving programs services will be used to explore differences.

The evaluation will study the impact of the demonstration on all enrollees e.g., total Medicaid population (enrollees participating in specialized programs (e.g., ID/DD, CFC, CRT, TBI, ACO Attributed), enrollees participating in non-specialized programs) as well as examine hypothesis as they relate to specialized programs and for enrollees with SUD treatment needs.

The SUD and psychiatric treatment continuums in Vermont represent statewide models. IMD treatment facilities serve residents from across the state. Thus, regional comparison groups for enrollees with SUD and SMI are not available. In addition, residential placement decisions for SUD are made based on nationally recognized ASAM level of care guidelines; thus, individuals admitted to a residential SUD program have a clinically different profile and level of care need than those who are not admitted. These clinical differences eliminate the possibility of matched sample of enrollees who receive services versus those who did not. Screening for admission to psychiatric care facilities also includes standardized level of care assessments to determine clinical need. Lastly, all Medicaid beneficiaries are enrolled in the demonstration. Those who meet SUD or SMI criteria are eligible for services under each amendment. Given this statewide public managed care model, no comparison groups are anticipated for enrollees with a SUD or SMI diagnosis.

SMI STUDY GROUP

As noted in Section I, the Community Rehabilitation and Treatment Program (CRT) provides recovery oriented, in-home and community treatment services for adults who have a severe and persistent mental illness. Vermonters who meet clinical criteria for the program are eligible for services regardless of income. Through a special provision as a Designated State Health Program, Community Rehabilitation and Treatment benefits paid for with Medicaid FFP can be extended to adults with severe and persistent mental illness with incomes between 133 and 150 percent of the federal poverty level. For purposes of the GC evaluation, participants who are enrolled in the CRT program with full Medicaid benefits (CRT-Medicaid only) will serve as the study population.

C. Data Analysis

The evaluation data analysis will consist of both exploratory and descriptive strategies and incorporate univariate, bi-variate, and multi-variate techniques. Analysis will be performed to systematically apply statistical and/or logical techniques to describe, summarize, and compare data within the state and across time, and to prepare data, wherever possible in a manner that permits comparison to results from other states applying the same methodology (e.g., HEDIS reports).

Descriptive statistics will be used to describe the basic features of the data and what they depict, and to provide simple summaries about the sample and the measures. Together with simple graphics analysis, the descriptive statistics form the basis of quantitative analysis of data. They are also used to provide simple summaries about the participants and their outcomes. An exploratory data analysis is used to compare many variables in the search for organized patterns. Data will be analyzed as rates, proportions, frequencies, measures of central tendency (e.g., mean, median, mode), and/or qualitatively analyzed for themes.

As appropriate, analysis methods include ANOVA, and Propensity Score Matching with T-test. These tests are used for comparing sample and population means against each other; this can be the same population across time or within the same time but receive different treatments, or one group does not treatment while others do. T-test and ANOVA are appropriate when granular data (patient level) is not available but population level means and standard deviations are and the objective is to determine whether the mean of a certain outcome variable of interest is significantly different between two or more groups. T-tests allow for comparison of means between two groups whereas ANOVA allows this to be done for more than two groups. The traditionally accepted risk of error ($p \leq 0.05$) will be used for all comparisons.

A pre-post design will be used to examine the statewide impact of the Demonstration on evaluation measures. Outcomes will be calculated annually for each of the five demonstration years and a baseline period. Propensity Score Matching with T-test will be used for evaluating ACO and non-ACO comparison groups. Propensity Score Matching is intended to reduce confounding variables associated with the observational data such as age, geography, aid category code and gender. The analysis will account for these variables by selecting similar looking control and treatment groups from the larger population such that the groups look comparable across the demographic factors. A logit regression will be used to estimate propensity scores and matching using the propensity score. After the matching, sample means will be compared between the treatment and control groups to verify that they are indeed comparable before regressing the outcome of interest. This allows for an estimate of the effect of the treatment on the outcome.

SUD IMD Analysis

SUD evaluation measures associated with each goal and hypothesis are outlined in Exhibits 2-1 through 2-4. In addition to hypothesis testing, the evaluation will monitor the impact of IMD stays on total Medicaid expenditures for SUD IMD recipients. Cost of care measures for SUD IMD recipients, not associated with a hypothesis will be examined for year over year change and utilization trends. Cost will be examined relative to drivers such as ED utilization, inpatient hospitalization and pharmacy services. For example, access to IMD services may result in improved engagement in MAT treatment, and subsequently increase expenditures; while a decline in SUD related ED use and hospitalizations may result in corresponding decreases in expenditures. The evaluation will include an exploratory examination of utilization and cost patterns and trends, for SUD IMD recipients, by categories of service. The evaluation may engage further analysis and impact assessments depending on staff and budget, data availability, administrative burden and value to program managers and policy makers.

SUD hypothesis will be examined, where indicated in Exhibits 2-3 through 2-6, using the ANOVA test for year over year change throughout the evaluation period. Descriptive statistics such as frequency, average, percent change, and comparison to national results, where applicable, will be employed for all SUD measures.

SMI IMD Analysis

Mental health evaluation measures associated with each goal and hypothesis are outlined in Exhibits 2-3 through 2-6. Hypotheses will be examined, where indicated in Exhibits 2-3 through 2-6, using the ANOVA test for year over year change throughout the evaluation period. In examining the impact of changes in ED utilization, the evaluation will consider potentially confounding policy in the CRT program. CRT program enrollees who may require inpatient care to stabilize acute exacerbation of their condition, must be screened by a designated mental health professional prior to admission. This screening typically occurs in the ED. This policy will impact SMI Demonstration Goal Area #1(Reduced utilization and lengths of stay in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment in specialized settings). Descriptive statistics such as frequency, average, percent change, and comparison to national results, where applicable, will be employed for all SMI IMD measures. The evaluation will include an exploratory examination of utilization and cost patterns and trends, for SMI IMD recipients, by categories of service. The evaluation may engage further analysis and impact assessments depending on staff and budget, data availability, administrative burden and value to program managers and policy makers.

Adjustments for Alternative Payment Models

Vermont has been engaged in health care and payment reform since the inception of the demonstration in 2005. In many cases, specialized programs no longer employ fee-for-service claiming and encounter data may be stored in multiple Medicaid legacy systems across AHS. In cases where programs have moved away from fee-for-service payment models, modified HEDIS® protocols will be used to assure data is complete and accurately adjusted. Specifically, modifications will be made to the following HEDIS® measures to account for alternative payment models: follow-up after hospitalization for mental illness (7 and 30-days); and initiation and engagement in treatment for alcohol and other drug dependence. Any additional modifications will be determined by the evaluators and AHS and catalogued in each evaluation report.

Blueprint for Health Population Adjustments

Blueprint for Health is a multi-payer reform effort, as such data is typically aggregated for the entire population irrespective of payer. Through its analytics vendor, Onpoint Health Data, Blueprint to Health links provider reported clinical data to de-identified VHCURES claims data. Onpoint de-identifies the clinical data using the same algorithms to hash the identifiers as was used by insurers for the VHCURES data, using this method the vendor is able to link records between the two de-identified datasets using the hashed, or encrypted, identifiers. Blueprint to Health diabetes measures will be analyzed by its vendor and a stratified for the Medicaid population.

Annually, the Blueprint to Health examines total expenditures and specialized program expenditures for Medicaid patients attributed to Blueprint practices. However, prior to examining findings, the vendor first risk-adjusts the expenditure values. To do so, extreme values are capped, and a regression-based adjustment procedure is used to create an individual-level risk-adjusted expenditure value. The average of this risk-adjusted value is reported.

Historical Data

Vermont's baseline data refers to historical data points available for review, trend analysis and longitudinal examination. The most recent findings for overall GC efforts, including a focused study of Vermont IMD authorities can be found in the Interim Evaluation Report #1 submitted April 1, 2018 to CMS Found Here. On-going performance monitoring and existing evaluation efforts generated in addition to the formal evaluation reports identified in the STCs can be found online as outlined below.

Blueprint for Health Found Here
Medicaid HEDIS Measures Found Here
Medicaid CAHPS Survey Results Found Here
Medicaid ACO Shared Savings Found Here
Developmental Disability Services National Core Indicators Results Found Here
AHS Results Based Scorecards Found Here

IV. METHODOLOGICAL LIMITATIONS

Vermont's Global Commitment to Health Section 1115 demonstration, is a long-standing project initiated in 2005, which incorporated a Medicaid expansion project that began in 1999. Demonstrations served individuals and families up to 300% FPL prior to the most recent Affordable Care Act (ACA) changes. In 2013 Vermont transitioned to the ACA and the State's LTSS program was also incorporated under the overarching umbrella of the Global Commitment to Health demonstration.

Under the demonstration, Medicaid eligibility is synonymous with enrollment in the public managed care-like model. This makes traditional time series, comparison and/or control groups not attributed to the demonstration difficult. Vermont's decade long commitment to health care reform and the comprehensive nature of the demonstration offer several additional challenges for evaluation design, as outlined in the remainder of this section.

Dual Eligible Members

Many participants in Vermont's specialized programs are dually eligible for Medicare and Medicaid. The absence of Medicare claims data presents challenges for certain metrics such as total cost of care, rates of preventive screens, follow-up after hospitalization. The stratification of measures for sub-population of enrollees who receive specialized services is impractical in most circumstances. As Medicare reforms mature, the AHS will seek access to Medicare data as part of its involvement in the All-Payer Model Medicare demonstration.

Existing Payment Reforms

As reported earlier, Vermont has been engaged in health care and payment reform since the inception of the demonstration in 2005. In many cases, specialized programs no longer employ fee-for-service claiming and encounter data may be stored in multiple legacy systems across AHS. In cases where programs have moved away from fee-for-service payment models, modified HEDIS® protocols, noted above, will be used to assure data is complete and accurately adjusted when stratified for specialized populations.

Isolation from Other Initiatives

In general, external factors are not expected to significantly affect the assessment of hypotheses presented in this evaluation plan. Over the past several years the State sought to align its health care reforms across all populations and payers. The final Medicaid demonstration extension and Medicare All-Payer Model were designed to create a seamless system. However, where market conditions and other contextual factors (e.g., provider or geographical differences) could have an impact, AHS and its evaluators will develop approaches to quantify and/or isolate the impact of such factors.

Based on staff, budget and data considerations, the State will explore the feasibility of comparing outcomes for members who may be attributed to a specific initiative with those who are not involved in the initiative.

Administrative Data Limitations

Data used in this analysis includes multiple administrative data sets. Limitations include: inconsistent data collection across sub-populations; inclusion of other payers; inconsistent data entry across provider or service types; lack of available data for all study years due to changes in IT systems or data storage methods. These inconsistencies will be reviewed to limit the impact on design rigor.

The VHCURES data warehouses provide valuable information on claims over time, however information is de-identified. Through its analytics vendor Onpoint Health Data Blueprint to Health links clinical data to de-identified VHCURES claims data. Onpoint de-identifies the clinical data using the same algorithms to hash the identifiers as was used by insurers for the VHCURES data, using this method the vendor is able to link records between the two de-identified datasets using the hashed, or encrypted, identifiers.

Lack of True Experimental Comparison Groups

IMD facilities serve residents from across the state. Thus, regional comparison groups are not available. In addition, residential placement decisions are made based on nationally recognized ASAM level of care guidelines; thus, individuals admitted to a residential SUD program have a clinically different profile and level of care need than those who are not admitted. These clinical differences eliminate the possibility of matched sample of enrollees who receive services versus those who did not. Lastly, all Medicaid enrollees who meet SUD and SMI criteria are eligible for the demonstration.

Continuity of Services

The GC demonstration is a long-standing demonstration. In addition, all SUD and SMI IMD treatment facilities are existing statewide providers who have been delivering care to Medicaid enrollees prior to the implementation of the SUD demonstration amendment on July 1, 2018 and the SMI IMD amendment on January 1, 2020. The SUD and SMI amendments allow the state to continue services that have been in place since the inception of the demonstration, the amendments do not offer new independent variables expected to result in change over the course of the demonstration.

Reliance on Administrative Data for SUD Measures

The SUD aspects of the evaluation may be limited by its reliance on claims and diagnostic codes to identify the beneficiary population with SUD. These codes may not capture all participants especially if the impact or severity of the SUD is not evident on initial assessment. For example, an ED visit for a broken arm due to inebriation may not be coded as SUD related, if the member does not present as inebriated, the ED provider has not ascertained causation, or the member fails to disclose the cause.

Medicaid Enrollment/Disenrollment

Medicaid membership changes on an annual basis related to eligibility, for example, someone may be attributed to a study cohort in year one, disenroll in year two and reenroll in year three. In addition, as innovations such as the Medicaid ACO or Blueprint for Health expand in membership or focus overtime, membership in any potential comparison group decreases overtime.

ATTACHMENTS

1. PROCUREMENT STRATEGY AND EVALUATOR QUALIFICATIONS

Procurement for an evaluation contractor to assist the State in executing its demonstration evaluation plan was pursuant to the State of Vermont Agency of Administration Bulletin 3.5 processes found here.

The State retains responsibility for rapid cycle assessment reports, monitoring delivery system and other investments and overall demonstration performance monitoring, including the SUD Monitoring Plan. Global Commitment to Health HEDIS® measures are independently validated by the State's External Quality Review Organization (EQRO). To mitigate any potential conflict of interest, the evaluation contractor is responsible for secondary analysis of the State's findings, benchmarking performance to national standards, evaluating changes over time, isolating key variables and interpreting results. As part of the focused IMD evaluation, the evaluator was responsible for final measure selection, identifying, if viable, other State systems that may serve as comparisons, conducting all data analysis, and measuring change overtime to address study questions.

The State issued one procurement for all evaluation activities and the production of required CMS reports. Bidders were given the option of working with a subcontractor on the IMD and/or other components of the design. The successful bidder demonstrated, at a minimum, the following qualifications:

- The extent to which the evaluator can meet State RFP minimum requirements;
- The extent to which the evaluator has sufficient capacity to conduct the proposed evaluation, in terms of technical experience and the size/scale of the evaluation;
- The evaluator's prior experience with similar evaluations;
- Past references; and
- Value, e.g., the assessment of an evaluator's capacity to conduct the proposed evaluation with their cost proposal, with consideration given to those that offer higher quality at a lower cost.

2. EVALUATION TIMELINE

The State's evaluation budget and timelines are tentative pending data sharing schedules established with the evaluation contractor and annual legislative budget approvals. The timeline and budget may be modified if terms of the current demonstration agreement are amended during the project period. AHS will report on progress and any known challenges to the evaluation budget, timelines and implementation in its quarterly and annual demonstration reports to CMS. Attachment 3 provides an overview of the AHS proposed evaluation budget. Outlined below and on the following pages are the expected timelines and major evaluation related milestones.

Demo Year 12: (1/1/2017-12/31/2017)

	Extension Year 1 (2017)											
	Month											
Activity/Milestone	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Draft Evaluation Design	X	X										
CMS Review			X									
Incorporate CMS Revisions				X								
Final Evaluation Design									X			
Publish Evaluation Design									X			
Procure Independent Evaluator				X	X	X	X	X				
Finalize Research Methods									X	X		
Finalize Performance Measures									X	X	X	
Collect, Analyze, Interpret Data											X	X
Disseminate AHS Rapid Cycle Assessment Findings for Feedback				X			X			X		

Demo Year 13: (1/1/2018-12/31/2018)

	Extension Year 2 (2018)											
	Month											
Activity/Milestone	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Collect, Analyze, Interpret Data	X	X	X	X	X	X	X	X	X	X	X	X
Create Draft Interim Evaluation Report #1	X	X										
Disseminate Preliminary Findings for Feedback		X										
Submit Draft Interim Evaluation Report #1 to CMS (including IMD study)				X								
Develop SUD Monitoring Protocol							X	X	X	X	X	
Revised Evaluation Design for SUD Amendment									X	X	X	X
Disseminate AHS Rapid Cycle Assessment Findings for Feedback				X			X			X		

Demo Year 14: (1/1/2019-12/31/2019)

	Extension Year 3 (2019)											
	Month											
Activity/Milestone	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Collect, Analyze, Interpret Data	X	X	X	X	X	X	X	X	X	X	X	X
Incorporate CMS Comments in Revised Evaluation Design		X	X	X								
Submit and Final Evaluation Design			X	X	X							
Disseminate AHS Rapid Cycle Assessment Findings for Feedback				X			X			X		

Demo Year 15: (1/1/2020 – 12/31/2020)

	Extension- Year 4 (2020)											
	Month											
Activity/Milestone	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Collect, Analyze, Interpret Data	X	X	X	X	X	X	X	X	X	X	X	X
Conduct SUD Mid-Point Assessment							X	X	X	X	X	X
Conduct SMI Mid-Point Assessment									X	X	X	
Create Draft Interim Evaluation Report, including SUD Mid-Point Assessment									X	X		
Disseminate Interim Evaluation Report Findings and SUD Mid-Point Assessment for Feedback									X	X		
Finalize Draft Interim Evaluation Report and SUD Mid-Point Assessment											X	X
Submit Interim Evaluation Report and SUD Mid-Point Assessment to CMS												X
Create and Disseminate SMI Mid-Point Assessment Report												X
Disseminate AHS Rapid Cycle Assessment Findings for Feedback				X			X			X		

Demo Year 16: (1/1/2021-12/31/2021)

	Extension Year 5 (2021)											
	Month											
Activity/Milestone	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Collect, Analyze, Interpret Data	X	X	X	X	X	X	X	X	X	X	X	X
Finalize Draft SMI Mid-Point Assessment Report	X											
Submit SMI Mid-Point Assessment Report to CMS		X										
Incorporate CMS Comments on Draft Interim Evaluation Report		X	X									
Submit Final Interim Evaluation Report and SUD Mid-Point Assessment			X	X								
Incorporate CMS Comments on SMI Mid-Point Assessment Report					X							
Submit Final SMI Mid-Point Assessment						X						
Publish Final Interim Evaluation Report and SUD Mid-Point Assessment							X					
Publish Final SMI Mid-Point Assessment							X					
Disseminate AHS Rapid Cycle Assessment Findings for Feedback				X			X			X		

Post Demo: (1/1/2022-9/30/2022)

	Post Extension (2022)											
	Month											
Activity/Milestone	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Create Summative Evaluation Report	X	X										
Disseminate Draft Summative Evaluation Report Findings for Feedback			X	X								
Submit Draft Summative Evaluation Report to CMS						X						
Incorporate CMS Comment								X				
Submit Final Summative Evaluation Report to CMS								X				
Publish Final Summative Evaluation Report									X			

3. AHS PROPOSED EVALUATION BUDGET

The Vermont Global Commitment to Health Section 1115 demonstration evaluation includes state administrative staff and an independent evaluator. Assuming no further changes to the Evaluation Design, independent evaluator costs are expected to be $844,520 for the evaluation period 2017-2022. The estimated budget amount will cover independent evaluation expenses, including salary, fringe, administrative costs, other direct costs such as travel for data collection, conference calls, etc., as well as, all costs related to quantitative and qualitative data collection and analysis, and report development.

Vermont AHS will also incur costs for state staff to efficiently and effectively support the independent evaluator. State costs are expected to be similar to the level needed by the independent evaluator. That is, state data, analytic, and research staff will have to undertake data gathering, prepping, and submitting information to the evaluator in line with the research goals and objectives.

State researchers will provide technical assistance, will create intermediate data products, will share their in-depth knowledge of existing state programs; state populations; Medicaid operations; and will leverage existing relationships with partner organizations. They will also provide information on state IT, local and provider information technology systems as well as; data structures, collections, definitions; and compliance with state policies such as privacy and security.

A description of external evaluator costs by deliverable area is provided in Exhibit A-1 below.

Exhibit A-1 Independent Evaluation Budget

Evaluation Budget: Global Commitment to Health Section 1115 Demonstration (w/SMI Amendment Effective Jan. 1, 2020)							
Project Task Area	**Year 1 (2017)**	**Year 2 (2018)**	**Year 3 (2019)**	**Year 4 (2020)**	**Year 5 (2021)**	**Year 6 (2022)**	**Total by Task Area**
Project Initiation & Final Evaluation Design	$21,720						$21,720
Initiate IMD Sub-evaluation	$46,800	$31,200					$78,000
Periodic Rapid Cycle Assessment Reports and Innovative Changes	$5,680	$8,240	$7,680	$7,680	$7,680		$36,960
Interim Evaluation Report #1	$38,960	$114,600	$10,240				$163,800
Interim Evaluation Report #2			$30,600	$101,320	$10,240		$142,160
SUD Mid-Point Assessment			$41,960	$61,800			$103,760
Summative Evaluation Report #2					$66,800	$66,800	$133,600
Other Project Activities	$7,360	$7,360	$7,360	$7,360	$7,360		$36,800
Revised GC Evaluation Design w/SMI amendment				$41,200	$14,480		$55,680
SMI/SED Mid-Point Assessment				$61,800	$10,240		$72,040
Annual Total	**$113,160**	**$161,400**	**$97,840**	**$281,160**	**$116,800**	**$74,160**	**$844,520**