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THE PACIFIC HEALTH POLICY GROUP



State of Vermont

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

Final Interim Evaluation Report #2

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## A. Executive Summary

The Vermont Global Commitment to Health Medicaid Section 1115(a) demonstration (11-W-00194/1) was originally approved by CMS 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. 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 mutual goals of the State and CMS.

The Global Commitment to Health is a long-standing demonstration. While new initiatives and programs have been introduced, the demonstration has been using largely the same policies during the extension period that existed before 2017. Therefore, these findings are longitudinal and should not be interpreted as causal evidence for the impacts of the demonstration.

This evaluation examines evidence that the demonstration supports its four defined goals:

- Increase Access to Care;
- Improve Quality of Care;
- Improve Community Integration; and
- Contain Program Costs.

These overall demonstration goals extend to Vermont’s service delivery model as described in the Substance Use Disorder (SUD) amendment (effective July 1, 2018) and the amendment for adults with a Serious Mental Illness (SMI), effective January 1, 2020.

The four goals align with seven research questions, as presented in Table A-1, below.

*Table A-1 Summary of Demonstration Goal Areas and Research Questions*

Demonstration Goal Area	Research Question
Access to Care	1. Will the demonstration result in improved access to care?
	2. Will value-based payment models increase access to care?
Quality of Care	3. Will the demonstration result in improved quality of care?
	4. Will improved access to primary care result in improved health outcomes?
Community Integration	5. Will the demonstration result in increased community integration?
Cost Containment	6. Will the demonstration maintain or reduce spending in comparison to what would have been spent absent the demonstration?
	7. Will improved access to preventive care result in lower overall costs for the healthcare delivery system?

The interim results suggest a high performing and mature delivery system. For example, in measures where national Medicaid benchmarks were available and examined, the demonstration outperformed Medicaid programs nationally for most of those studied. Over 50% of the hypotheses for six of the seven research questions returned an interim finding of “True” and 43% of the hypotheses for Research Question #3 (Quality of Care) produced an interim finding of “True.”

An overview of findings for each research question is described below.

## Access to Care

In assessing the demonstration's performance in the area of Access to Care, two research questions and ten hypotheses were examined.

### Research Question 1: Will the demonstration result in improved access to care?

Interim findings for Research Question #1 provide support that the demonstration is associated with overall improvement in Access to Care across a broad array of services. For all measures under the Access to Care goal, where a national benchmark was available and applied, the demonstration outperformed Medicaid programs nationally. Four of the seven hypotheses returned an interim assessment of "True." Three hypotheses were "Not Proven."

Hypotheses with interim findings of "True" provide support that the demonstration is associated with improvements in access to medical care. Strong performance in access to ambulatory and preventive visits, well-child visits, dental care, and adolescent well care was evident. All measures showed statistically significant improvement over baseline. Access to Medication Assisted Treatment also has increased in each year of the demonstration.

In studying the impact of premium requirements for eligible families above 195% of the Federal Poverty Level (FPL), the premiums do not appear to impede access to enrollment. At baseline and in each year of the demonstration, the State maintained a high rate of coverage for children found eligible for Dr. Dynasaur with a premium. In 2017, the percent of effectuated coverage was 95% for families with premiums. In 2018 and 2019, the results show that coverage was effectuated for over 99% of families with a premium. The State has maintained a low rate of uninsured Vermonters with the Vermont Household Survey returning an uninsured rate of 3.2% in 2018.

### Research Question 2: Will value-based payment models increase access to care?

Interim findings for Research Question #2, provide preliminary support that the value-based payment model supporting the Vermont Medicaid Next Generation Accountable Care Organization ("the Medicaid ACO") is associated with improvements in access to care. Two out of three hypotheses studied were deemed "True" with one hypothesis "Not Proven." In assessing Adolescent Access to Well-Care, ACO performance when compared to the control group was higher, with statistically significant results in each of the two years studied. In addition, each year the ACO is showing statistically significant increases in engagement with eligible enrollees.

Several hypotheses under Access to Care were not proven. Factors influencing inconclusive results included: the lack of a clear trend in statistically significant results for hypotheses with multiple measures; lack of a comparison group for all years studied; or a decline in performance.

A summary of the hypotheses considered "Not Proven" and factors influencing the results for Access to Care is provided in Table A-2, on the following page

Table A-2: Access to Care – Hypotheses “Not Proven”

Inconclusive Findings – Access to Care		
Hypothesis/Research Question	Factors Influencing Findings	Preliminary Next Steps
The demonstration will reduce the percent of potentially preventable events (Research Question #1; Hypothesis #4)	<ul style="list-style-type: none"> <li>• Four of eight of the measures showed improvement; two were statistically significant</li> <li>• Four of eight measures had a decline in performance; two were statistically significant</li> </ul>	<ul style="list-style-type: none"> <li>• Review design and analytical methods</li> <li>• Assess for Quality Improvement (QI) interventions</li> <li>• Continue monitoring</li> </ul>
The demonstration will reduce ED use for SUD per 1,000 enrollees (Research Question #1; Hypothesis #5)	<ul style="list-style-type: none"> <li>• Performance showed a statistically significant increase in ED visits per 1,000 enrollees</li> <li>• The State is piloting a program for rapid access to MAT in the ED which may drive increases</li> </ul>	<ul style="list-style-type: none"> <li>• Continue monitoring</li> <li>• Review design and analytical methods to account for MAT initiation in the ED</li> </ul>
The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage (Research Question #1; Hypothesis #7)	<ul style="list-style-type: none"> <li>• Significant operational and policy changes occurred following the baseline period</li> </ul>	<ul style="list-style-type: none"> <li>• Assess change over time absent 2016 (baseline)</li> <li>• Continue monitoring</li> </ul>
The Medicaid ACO will improve access to mental health care and SUD treatment (Research Question #2; Hypothesis #1)	<ul style="list-style-type: none"> <li>• The number of members involved in the ACO exceeded that of the comparison group in 2019</li> <li>• Demographic variables across the groups were not comparable in 2019</li> <li>• While the ACO scores were higher, statistical significance was inconsistent</li> </ul>	<ul style="list-style-type: none"> <li>• Review design and analytical methods</li> <li>• Continue monitoring</li> </ul>

## Quality of Care

In assessing the demonstration’s performance in Quality of Care, two research questions and eight hypotheses were examined.

Research Question 3: Will the demonstration result in improved quality of care?

Relative to Research Question #3 interim findings were mixed. Three out of seven hypotheses returned an interim assessment of “True.”

Findings showed that ACO enrollees had statistically significant improvement in diabetes control, while ACO enrollee control of hypertension showed no statistically significant change over baseline. Improved rates of initiation and engagement in SUD treatment were evident for Medicaid members in the general population, ACO members, and those members who received SUD IMD services. In addition, only 3% of Developmental Disabilities Services (DDS) program participants who participated in the National Core Indicators – Developmental Disabilities (NCI-DD) Survey reported their health status as “poor.”

In over 76% of the measures studied under Quality of Care, where a benchmark was available and applied, the demonstration outperformed Medicaid programs nationally.

#### Research Question 4: Will improved access to primary care result in improved health outcomes?

Relative to Research Question #4, interim findings provide support that the Blueprint for Health is associated with improved diabetes control for Medicaid members who are receiving services. Fewer than 23% of Medicaid members with diabetes show poor control in each year of the demonstration. However, over time the number of enrollees with poor control has increased from 11% at baseline to 22% in CY2018, the most recent data available. Inpatient hospitalizations, while remaining lower for those members with good control, is also increasing for the Blueprint Medicaid members studied.

With the migration of former demonstration populations to the Marketplace under the ACA and the resumption of Medicaid eligibility reviews in 2016 and 2017, Blueprint to Health Medicaid enrollees represent a population that is older with more chronic conditions than prior years.

In addition, IT challenges and the use of multiple data extracts across the demonstration period may be influencing results. Blueprint for Health results for Medicaid members historically relied on extracting information from the State's multi-payer claims database and matching it with information in the State's clinical registry. Many providers who serve Medicaid members lack the IT infrastructure to submit data to the registry, resulting in an undercount of Medicaid members. Thus, the historic data does not provide a complete assessment of program performance.

The State is making significant improvements to its Vermont Health Information Exchange (VHIE). This includes expanding the number of providers connected to the exchange and thus information available in its data warehouse. The Blueprint clinical registry has been retired. In the future, clinical information used for the Blueprint to Health Medicaid measures will be obtained through the VHIE. Prior year results will be reproduced in the final summative report to minimize potential undercounts.

Several hypotheses under Quality of Care were inconclusive. An assessment of "Not Proven" was given to hypotheses under Quality of Care for the following reasons:

- The hypothesis included multiple measures that returned a mix of statistically significant results;
- There was a statistically significant decline in performance; or
- A change in measure specifications occurred after the baseline period.

A summary of the hypotheses considered "Not Proven" and factors influencing the results is provided in Table A-3, on the following page.

Table A-3: Quality of Care – Hypotheses “Not Proven”

Inconclusive Findings – Quality of Care		
Hypothesis/Research Question	Factors Influencing Findings	Next Steps
The demonstration will improve quality of care (Research Question #3; Hypothesis #1)	<ul style="list-style-type: none"> <li>Significance testing showed mixed results for performance on the general Medicaid and ACO related measures</li> <li>Performance on all measures exceeded the national benchmark in CY2019</li> <li>Hypotheses include a broad range of services (asthma control, developmental screening in first 3 years of life, and depression screening)</li> </ul>	<ul style="list-style-type: none"> <li>Review hypothesis construction</li> <li>Assess for QI interventions</li> <li>Continue monitoring</li> </ul>
The demonstration will increase preventive health screenings for female enrollees (Research Question #3; Hypothesis #3)	<ul style="list-style-type: none"> <li>One measure showed significant improvement, while the other significantly declined</li> <li>Both measures scored below the national benchmark</li> </ul>	<ul style="list-style-type: none"> <li>Continue planned Blueprint for Health QI interventions</li> <li>Continue monitoring</li> </ul>
The demonstration will improve Mental health follow-up after psychiatric hospitalization (Research Question #3; Hypothesis #4)	<ul style="list-style-type: none"> <li>Change in HEDIS® measures specifications following baseline may have influenced the decline in performance</li> <li>Both measures were above the national benchmark</li> </ul>	<ul style="list-style-type: none"> <li>Review measure specifications and design</li> <li>Continue monitoring</li> </ul>
The demonstration will improve enrollee experience of care and rating of the health plan (Research Question #3; Hypothesis #6)	<ul style="list-style-type: none"> <li>Four measures could not be tested for significance</li> <li>Four measures showed no statistically significant change</li> <li>Three measures showed performance over 90%; four measures were over 82%</li> <li>Performance was at or above the national benchmark in over 62% of the measures</li> <li>Small sample size may result in wide variation of results</li> </ul>	<ul style="list-style-type: none"> <li>Review hypothesis testing and design options when measures are qualitative or descriptive in nature</li> <li></li> </ul>

## Community Integration

In assessing the demonstration’s performance in Community Integration, one research question and six hypotheses were examined.

Research Question 5: Will the demonstration result in increased community integration?

Relative to Research Question #5, interim findings provide support that the demonstration is associated with improvements in Community Integration for persons with LTSS and participants with behavioral

health needs. Three out of six hypotheses returned an interim assessment of “True,” two were “Not Proven,” and one was “Not Tested.”

The percent of Choices for Care (CFC) enrollees served in the home and community showed statistically significant increases in each year of the demonstration. The number of enrollees living in home and community-based settings rose from 54% at baseline to 58% in CY2019. Participants in the Developmental Disabilities Services (DDS) program reported participation in integrated community activities at 84% during baseline and participation increased to 87% in CY2018, the most recent year for which survey data is available.

The percent of National Core Indicators-Developmental Disabilities (NCI-DD) survey respondents who did not have a job, but wanted one, dropped from 52% at baseline to 48% in CY2018. Vermont employment data from the Department of Labor and other reporting agencies showed that 49% of DDS program participants of working age were employed in CY2019, up from 48% at baseline. The program target set by the State for each year of the demonstration was 45%.

Two hypotheses under Community Integration were inconclusive. An assessment of “Not Proven” was given for the following reasons:

- The hypothesis included multiple measures that returned a mix of statistically significant results; or
- There was a decline or minimal change in performance over baseline, without statistical significance.

An assessment of “Not Tested” was given when updated data for the demonstration measurement period was not available.

A summary of the hypotheses considered “Not Proven” or “Not Tested” and factors influencing the results is provided in Table A-4.

*Table A-4: Community Integration– Hypotheses “Not Proven” or “Not Tested”*

Hypothesis/Research Question	Factors Influencing Findings	Next Steps
The demonstration will increase choice and autonomy for persons needing LTSS (Research Question #5; Hypothesis #3)	<ul style="list-style-type: none"> <li>• Most recent performance (2018) declined one percentage point from baseline; per the approved design, significance testing was not applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Review hypothesis testing and design options when measures are qualitative or descriptive</li> </ul>
The demonstration will increase integrated employment options for persons with psychiatric needs (Research Question #5; Hypothesis #5)	<ul style="list-style-type: none"> <li>• There was no statistically significant change over baseline</li> <li>• Vermont is performing above the most recent national rate</li> </ul>	<ul style="list-style-type: none"> <li>• Assess for Quality Improvement (QI) interventions</li> <li>• Consider establishing a state-specific benchmark in the absence of up-to-date national measures</li> </ul>
SUD IMD service recipients maintain community living as evidenced by low rates of IMD readmission (Research Question #5; Hypothesis #6)	<ul style="list-style-type: none"> <li>• Vermont was unable to produce results due to priorities and reassignment of staff during the Public Health Emergency</li> </ul>	<ul style="list-style-type: none"> <li>• Calculate results for inclusion in Summative Evaluation Report (2022)</li> </ul>

## Cost Containment

In assessing the demonstration's performance in the area of Cost Containment, two research questions and four hypotheses were examined.

Research Question 6: Will the demonstration maintain or reduce spending?

The interim findings provide support that the demonstration is containing costs relative to what would have been spent absent the demonstration. One of two hypotheses returned an interim assessment of "True."

The State has achieved savings over expected "without waiver expenditures" in each year of the demonstration thus far. Total expenditures under the demonstration were \$1,238,718,223 in CY2017, \$1,284,417,019 in CY2018, and \$1,272,312,741 in CY2019. Expenditures without the waivers approved under the demonstration was limited to \$1,386,795,376 in CY2017, \$1,405,356,354 in CY2018, and \$1,415,544,626 in CY2019. Cumulative savings at the end of CY2019 were \$110,465,951.

In CY2018, PMPM expenses were exceeded in the SUD IMD Non-ABD group and the SUD IMD New Adult group. CY2018 represented 6 months of operation for the SUD amendment. For CY2019, the first full year of the demonstration, the Supplemental Budget Neutrality Test for SUD Expenditures shows that SUD IMD expenses for all Medicaid eligibility groups exceeded the approved limits. However, the STCs allow for overages in the SUD IMD budget neutrality if the overall Global Commitment demonstration budget neutrality cap is not exceeded. Vermont's overall cap to date can accommodate the SUD IMD overage.

Research Question 7: Will improved access to preventive care result in lower overall costs?

Relative to Research Question #7 interim findings provide support that the demonstration is meeting its overall goal of containing costs. Both hypotheses returned an interim assessment of "True."

Expenditures for members whose diabetes is in control have declined from \$16,459 to \$14,931 for Medicaid members age 1-64 years enrolled in the Blueprint for Health. Total risk-adjusted expenditures have remained relatively stable for the Medicaid members age 1-64 years enrolled in the Blueprint for Health.

## Delivery System Related Investments

The study examined two delivery system investments. Under Investment #1, OneCare Vermont ACO Advanced Community Care Coordination, results were examined for seven measures. Four of the seven measures were administrative process measures such as community care manager participation in training, care teams, and other coordination initiatives. In 2019, the number of communities participating in care coordination statewide rose to 87%; performance is on track to meet the goal of 100% participation in the coming year.

The three remaining measures are clinical process measures related to care planning for members who are designated at high or very high-risk levels. Two of the three measures are performing at or above the targets established by the State.

- The percent of high risk and very high-risk level patients who are engaged in care coordination is at 14% with an ACO target set by the State of 5%; and
- The percent of high-risk and very high-risk level patients who are engaged in care coordination who have a shared care plan initiated is at 78% with an ACO target set by the State of 50%.

For Investment #2, OneCare Vermont ACO Quality Health Management Measurement Improvement, results show 100% of Vermont’s health service areas are receiving data literacy training and technical support. Performance in this investment is meeting State expectations.

A summary of progress to date for the delivery system-related investments is presented in Table A-5.

*Table A-5: Process Measures and Results for Delivery System Related Investments*

ACO Investment Measure/Frequency of Assessment	Goal	Progress	Statistically Significant	Analysis
<b>Investment #1</b>				
Percent of communities participating in community-based care coordination model, including regular participation in “Care Coordination Core Team”	100%	87%	N/A	Descriptive
Number of care team members/leaders trained in care coordination skills/core competencies, including in the Care Navigator IT platform	150	782	N/A	Descriptive
Total amount of advanced community care coordination payments made to eligible ACO participants	N/A	\$5,218,814	N/A	Descriptive
Number of quality/health management measurement improvement activities implemented by OneCare	N/A	34	N/A	Descriptive
Percent of patients in high or very high-risk levels who are engaged in care coordination	5%	14%	Yes	One-sided T-test
Percent of high risk and very high-risk level patients who are engaged in care coordination who have a shared care plan initiated	50%	78%	Yes	One-sided T-test
Percent of high and very high-risk level patients who have a shared care plan with completed tasks and goals	25%	11%	Yes	One-sided T-test
<b>Investment #2</b>				
Percent of health service areas who received data literacy training and technical support	N/A	100%	N/A	Descriptive

Demonstration results suggest that Vermont’s delivery system and program policies are associated with access to high-quality health care and support members with Long Term Services and Supports (LTSS) in maintaining community living and integration. Positive trends are seen across the general Medicaid population as well as demonstration participants enrolled in specialized programs.

Over the course of the demonstration, the State implemented several innovative programs and delivery system reforms that have an enduring impact. These include the promotion of advanced primary care practices under the Blueprint for Health (including the Women’s Health Initiative and Specialized Health Homes for Opioid Addiction [Hub and Spoke]); and Choices for Care. In addition, one recent delivery system reform, the Vermont Medicaid Next Generation ACO, is showing promising results.

Opportunities for further study include focused quality planning in underperforming areas; further examination and modification of the technical specifications and data used to calculate results; and potential revisions to the evaluation approach or analytics. In addition, the impact of the pandemic will result in a considerable amount of uncertainty and variability in the CY2020 data and potentially CY2021 data, the last two years of the evaluation period. AHS staff and evaluators will consider how the pandemic may impact the evaluation methodology and findings for the demonstration and identify strategies to address these impacts.

As noted in Interim Evaluation Report #1 (issued in April of 2018), demonstration performance at baseline suggested a mature delivery system with strong provider participation. Evaluation designs were significantly different for the evaluation periods prior to 2017. However, five measures under the goal area Access to Care and one related to Community Integration were found in the State’s 2015 report to CMS and the current design:

- Percent of adult enrollees who had an ambulatory or preventive care visit;
- Percent of enrollees with well-child visits first 15 months of life, 6 or more visits;
- Percent of enrollees with well-child visits 3rd, 4th, 5th, & 6th year of life;
- Percent of adolescents ages 12 to 21 who receive one or more well-care visits with a PCP during the year;
- Percent of children age 2-20 years with at least one dental visit; and
- Persons served under the Choices for Care program in community settings.

In five of the six measures reported in 2015, performance has improved. Significance testing could not be conducted to assess the changes from prior demonstration periods; however, the demonstration continues to show gains across the years.

Table A-6 offers an overview of results across the demonstration years.

*Table A-6: Demonstration Results from Prior Periods*

Measure	2014	2019
Percent of adult enrollees who had an ambulatory or preventive care visit	87.32%	83.30%
Percent of enrollees with well-child visits first 15 months of life, 6 or more visits	75.96%	76.58%
Percent of enrollees with well-child visits 3rd, 4th, 5th, & 6th year of life	71.49%	77.37%
Percent of adolescents ages 12 to 21 who receive one or more well-care visits with a PCP during the year	46.97%	54.05%
Percent of children age 2-20 years with at least one dental visit	67.72%	72.37%
Percent of Choices for Care participants living in home and community settings	52.00%	58.01%

The evaluation design did not expect confounding interactions with other State initiatives. Over the past several years the State has sought to align its health care reforms across all populations and payers. The current Global Commitment to Health Medicaid Demonstration and the State’s All-Payer Model were designed to create a seamless system. For example, two multi-payer efforts, the Blueprint for Health and the Vermont Medicaid Next Generation ACO, are working together to eliminate duplication, align quality measures and create a seamless delivery system across initiatives, settings, and payers.

As part of its health care reform efforts, Vermont is also developing enhanced IT infrastructure including unified care management systems across specialized Medicaid programs, comprehensive Health

Information Exchange (HIE) networks, and improved data warehouse capacities. Table A-7 on the following pages provides an overall summary of interim findings for the demonstration by research question and hypothesis.

Table A-7: Summary of Findings by Research Question and Hypothesis

Research Question	Hypothesis	Number of Measures			
		Showing Positive Results	Designed for Statistical Testing	Showing Statistically Significant Positive Results	Above the National Benchmark, Where Applicable
1. Will the demonstration result in improved access to care?	1. The demonstration will result in improved access to community based medical care	8 of 10	4	4	8 of 8
	2. The demonstration will result in improved access to Medication Assisted Treatment for Opioid Use Disorder (OUD)	2 of 4	2	1	N/A
	3. The demonstration will result in improved access to dental care	1 of 1	1	1	1 of 1
	4. The demonstration will reduce the percentage of potentially preventable events	4 of 8	8	2	1 of 1
	5. The demonstration will reduce ED use for SUD per 1,000 enrollees	0 of 1	1	0	N/A
	6. Premium requirements for eligible families above 195% FPL will not impede access to enrollment	0 of 1 <sup>1</sup>	1	0	N/A
	7. The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage	1 of 2	1	0	N/A
2. Will value-based payment models increase access to care?	1. The Medicaid ACO will improve access to mental health care and SUD treatment	6 of 7 <sup>2</sup>	7	2	1 of 1
	2. The Medicaid ACO will improve access to adolescent well-care	1 of 1	1	1	N/A
	3. The Medicaid ACO will increase engagement of eligible members over time	2 of 2	2	2	N/A
3. Will the demonstration result in improved quality of care?	1. The demonstration will improve quality of care	2 of 4	4	1	3 of 3
	2. ACO enrollees will show improved diabetes and hypertension control	1 of 2	2	1	2 of 2
	3. The demonstration will increase preventive health screenings for female enrollees	1 of 2	2	1	0 of 2
	4. The demonstration will improve Mental health follow-up after psychiatric hospitalization	0 of 2	2	0	2 of 2

<sup>1</sup> Baseline and CY2019 rates both showed over 99% of eligible families with premiums had coverage.

<sup>2</sup> Three measures represent six comparison points.

Research Question	Hypothesis	Number of Measures			
		Showing Positive Results	Designed for Statistical Testing	Showing Statistically Significant Positive Results	Above the National Benchmark, Where Applicable
	5. The demonstration will improve Initiation and engagement in SUD treatment.	6 of 6	6	4	4 of 4
	6. The demonstration will improve enrollee experience of care and rating of the health plan	2 of 10	4	0	5 of 8
	7. The demonstration will improve self-report of health status for enrollees with LTSS needs	1 of 1 <sup>3</sup>	1	0 <sup>4</sup>	N/A
4. Will improved access to primary care result in improved health outcomes?	1. The Blueprint for Health will improve diabetes control for Medicaid members age 18-75	2 of 2	1	0	N/A
5. Will the demonstration result in increased community integration?	1. The demonstration will increase community living for Choices for Care program enrollees	1 of 1	1	1	N/A
	2. The demonstration will increase community integration for persons needing LTSS	1 of 5 <sup>5</sup>	0	N/A	N/A
	3. The demonstration will increase choice and autonomy for persons needing LTSS.	0 of 1 <sup>6</sup>	0	N/A	N/A
	4. The demonstration will increase integrated employment options for persons needing LTSS	2 of 3 <sup>7</sup>	3	0	N/A
	5. The demonstration will increase integrated employment options for persons with psychiatric needs	0 of 1	1	0	1 of 1
	6. SUD IMD service recipients maintain community living as evidenced by low rates of IMD readmission	Not Tested <sup>8</sup>	1	Not Tested	N/A
6. Will the demonstration maintain or reduce spending in comparison to what would	1. The demonstration will contain or reduce overall Medicaid spending	1 of 1	0	N/A	N/A

<sup>3</sup> Two measures include only one baseline data point and will be evaluated in 2022.

<sup>4</sup> Measure was high performing at baseline and remained high in CY2019.

<sup>5</sup> Two measures include only one baseline data point and will be evaluated in 2022.

<sup>6</sup> Two measures include only one baseline data point and will be evaluated in 2022.

<sup>7</sup> Four measures include only one baseline data point and will be evaluated in 2022.

<sup>8</sup> Data for the measurement period was not available due to the State's response to the novel coronavirus public health emergency; results will be evaluated in 2022.

Research Question	Hypothesis	Number of Measures			
		Showing Positive Results	Designed for Statistical Testing	Showing Statistically Significant Positive Results	Above the National Benchmark, Where Applicable
have been spent absent the demonstration?	2. The demonstration will contain or reduce SUD IMD budget neutrality expenditures	0 of 1	0	N/A	N/A
7. Will improved access to preventive care result in lower overall costs for the healthcare delivery system?	1. The Blueprint for Health initiative will contain or reduce expenditures for enrollees whose diabetes is in control	1 of 1	0	N/A	N/A
	2. The Blueprint for Health initiative will contain or reduce total per capita risk-adjusted expenditures for enrollees ages 1-64 years	2 of 2	0	N/A	N/A

## B. General Background Information

The Vermont Global Commitment to Health Medicaid Section 1115(a) demonstration (11-W-00194/1) was originally approved by CMS 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.

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 mutual goals of the State and CMS. 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 3 percent in 2019 through the expansion of eligibility and other Accountable Care Act reforms.

The demonstration also has 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 under 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 Global Commitment demonstration seeks 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 alternatives recognized to be more cost-effective than institutional-based supports.

The Global Commitment demonstration supports the State's efforts to achieve the goals listed above through four major program elements:

1. **Program Flexibility:** Vermont has the flexibility to invest in certain 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 of 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 apply 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 illnesses, 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 granted under 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 incomes at or below 200 percent of the federal poverty level (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 a 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) and are short-term residents in facilities that meet the definition of an Institution for Mental Disease (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.

## 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.<sup>9</sup> 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, as well as individuals with 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 costs:** 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.

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<sup>9</sup> Crossing the Quality Chasm: A New Health System for the 21<sup>st</sup> Century. Washington DC: National Academy Press, Institute of Medicine; 2001.

- **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.
  - *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 illnesses, people with developmental disabilities, and people with traumatic brain injuries who meet program eligibility and level of care requirements.

## 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 apply 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 also has implemented the Vermont All-Payer Accountable Care Organization Model (All-Payer Model), a Section 1115A Medicare demonstration granted 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 under 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 enrollees (e.g., mental health services, developmental disability services, and specialized child and family services).

As such, since the inception of the Global Commitment 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 the 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 PIHP under the 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 homes. 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 programs for three of Vermont's five Special Health Needs populations 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 a 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 Services program. The 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 under their Individualized Education Plans (IEPs). The AOE is established as an "Organized Delivery System" under Medicaid and is responsible for the program's 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 the 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 the 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 health 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 outlined 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 U.S. Secretary of Health and 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 ACO's value-based payment models, such as capitation or global budgets.

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.

## Eligibility, Benefits and Cost Sharing

Medicaid eligibility is synonymous with Global Commitment to Health enrollment. The demonstration includes all mandatory and optional State Plan populations, the new adult group, and individuals receiving HCBS services. These populations receive Medicaid State Plan services and may receive Choices for Care or other HCBS benefits described in the STCs, if they meet additional program eligibility standards.

In addition, the demonstration includes 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 is referred to as the Moderate Needs Group (MNG) in the Choices for Care program. The MNG receives a limited HCBW-like benefit including Adult Day Services, Case Management, and Homemaker services.

The demonstration also includes two Medicare groups: (1) Medicare beneficiaries 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 as described in the State Plan including Medicaid Prescriptions, eyeglasses, and related eye exams; and (2) Medicare beneficiaries 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 as described in the State Plan including maintenance drugs.

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 is contained in the Vermont approved Title XIX State Plan, Vermont statutes, regulations, and policies and procedures.

Premiums and cost-sharing for mandatory, optional and the new adult groups must follow Medicaid requirements that are outlined in statute, regulation, and policy. Standard Medicaid exemptions from cost-sharing as set forth in 42 CFR 447(b) apply 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 incomes above 195 percent of the FPL through 312 percent of the FPL. Premium populations are outlined in Table B-1 below.

*Table B-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	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 for full benefits	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

## Specialized Programs

Under the Global Commitment 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.

The demonstration also authorizes the following initiatives:

- *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 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 the mandatory, optional and new adult eligibility groups.
- *Marketplace Subsidies*: The demonstration allows the State to offer, as a Designated State Health Program, premium subsidies 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) and is part of the state-based health benefits exchange.

## Institution for Mental Disease (IMD) Coverage under the Demonstration

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 and 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. Vermont previously used this authority to purchase alternative services, provided that such services:

- 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 2011, the former State psychiatric hospital was shut down by Tropical Storm Irene. As part of the planning process for building a new 25-bed State psychiatric hospital post-Tropical Storm Irene, Vermont sought clarification from CMS in 2012 regarding its authority to access Medicaid funding to support the new facility. In response to this request, CMS indicated that costs for psychiatric inpatient services for individuals between the ages of 21 and 65 residing in an IMD could not be included in calculating the annual Medicaid managed care PMPM limits. However, Vermont was assured by CMS that it had authority under the demonstration to fund IMD services by using its “managed care savings.” Vermont planned the construction of the Vermont Psychiatric Care Hospital and entered into a new agreement with the Brattleboro Retreat, a free-standing psychiatric and addictions treatment center, to operate a new, specialized 14-bed unit for individuals with the highest level of acuity.

In 2017, the demonstration’s operating model was modified to that of a non-risk Prepaid Inpatient Health Plan (PIHP). CMS and Vermont collaborated over several years to move FFP for these vital IMD treatment services from the former ‘service in lieu of’ and ‘investment’ expenditure categories to the IMD demonstration authority. The final SMI amendment preserves important access to inpatient care for Vermont Medicaid beneficiaries.

## C. Evaluation Questions and Hypotheses

This evaluation examines evidence that the demonstration supports its four defined goals:

- Increase Access to Care;
- Improve Quality of Care;
- Improve Community Integration; and
- Contain Program Costs.

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 four goals align with seven research questions, as presented in Table C-1, below.

*Table C-1 Summary of Demonstration Goal Areas and Research Questions*

Demonstration Goal Area	Research Question
Access to Care	1. Will the demonstration result in improved access to care?
	2. Will value-based payment models increase access to care?
Quality of Care	3. Will the demonstration result in improved quality of care?
	4. Will improved access to primary care result in improved health outcomes?
Community Integration	5. Will the demonstration result in increased community integration?
Cost Containment	6. Will the demonstration maintain or reduce spending in comparison to what would have been spent absent the demonstration?
	7. Will improved access to preventive care result in lower overall costs for the healthcare delivery system?

Table C-2, below and on the following pages, provides a summary of the seven research questions, the hypotheses that were tested within each research question, and the number of performance measures that were evaluated for each hypothesis.

*Table C-2: Research Questions, Hypotheses and Measures*

Research Question	Hypothesis	Number of Measures Evaluated
1. Will the demonstration result in improved access to care?	1. The demonstration will result in improved access to community based medical care	10
	2. The demonstration will result in improved access to Medication Assisted Treatment for Opioid Use Disorder (OUD)	4
	3. The demonstration will result in improved access to dental care	1

Research Question	Hypothesis	Number of Measures Evaluated
	4. The demonstration will reduce the percentage of potentially preventable events	8
	5. The demonstration will reduce ED use for SUD per 1,000 enrollees	1
	6. Premium requirements for eligible families above 195% FPL will not impede access to enrollment	1
	7. The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage	2
2. Will value-based payment models increase access to care?	1. The Medicaid ACO will improve access to mental health care and SUD treatment	4
	2. The Medicaid ACO will improve access to adolescent well-care	1
	3. The Medicaid ACO will increase engagement of eligible members over time	2
3. Will the demonstration result in improved quality of care?	1. The demonstration will improve quality of care	4
	2. ACO enrollees will show improved diabetes and hypertension control	2
	3. The demonstration will increase preventive health screenings for female enrollees	2
	4. The demonstration will improve Mental health follow-up after psychiatric hospitalization	2
	5. The demonstration will improve Initiation and engagement in SUD treatment.	6
	6. The demonstration will improve enrollee experience of care and rating of the health plan	10
	7. The demonstration will improve self-report of health status for enrollees with LTSS needs	3
4. Will improved access to primary care result in improved health outcomes?	1. The Blueprint for Health will improve diabetes control for Medicaid members age 18-75	2
5. Will the demonstration result in increased community integration?	1. The demonstration will increase community living for Choices for Care program enrollees	1
	2. The demonstration will increase community integration for persons needing LTSS	3
	3. The demonstration will increase choice and autonomy for persons needing LTSS.	3
	4. The demonstration will increase integrated employment options for persons needing LTSS	7
	5. The demonstration will increase integrated employment options for persons with psychiatric needs	1
	6. SUD IMD service recipients maintain community living as evidenced by low rates of IMD readmission	1
6. Will the demonstration maintain or reduce spending in comparison to what would have	1. The demonstration will contain or reduce overall Medicaid spending	1

Research Question	Hypothesis	Number of Measures Evaluated
been spent absent the demonstration?	2. The demonstration will contain or reduce SUD IMD budget neutrality expenditures	1
7. Will improved access to preventive care result in lower overall costs for the healthcare delivery system?	1. The Blueprint for Health initiative will contain or reduce expenditures for enrollees whose diabetes is in control	1
	2. The Blueprint for Health initiative will contain or reduce total per capita risk-adjusted expenditures for enrollees ages 1-64 years	2

Substance Use Disorder IMD Coverage under the Demonstration

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, for Members whose needs align with the American Society of Addiction Medicine (ASAM) placement criteria and treatment guidelines.

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 the overall goals of the Global Commitment demonstration. The review of SUD-related authorities has been integrated into the evaluation and included under each applicable research question and hypothesis. The research questions, hypotheses, and measures addressing SUD authorities are outlined in Table C-3, on the following page.

Table C-3: SUD Related Research Questions, Hypotheses and Measures

Research Question	Hypothesis	Measure
<b>Demonstration Goal: Access to Care</b>		
Research Question 1: Will the demonstration result in improved access to care?	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
		Percent of enrollees with continuity of pharmacotherapy for opioid use disorder*
		Number of Vermont resident deaths related to drug overdose
		Number of Vermont Medicaid enrollee deaths related to drug overdose
	Hypothesis 5: The demonstration will reduce ED use for SUD per 1,000 SUD enrollees	Rate of ED use for SUD per 1,000 enrollees
Research Question 2: Will value based payment models increase access to care?	Hypothesis 1: 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 alcohol or other drug dependence (HEDIS® FUA)
<b>Demonstration Goal: Quality of Care</b>		
Research Question 3: Will the demonstration result in improved 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 HEDIS® DSF (ACO Enrollees)
	Hypothesis 5: The demonstration will improve Initiation and engagement in SUD treatment	Percent of enrollees who initiate in treatment for Alcohol or Other Drug Dependence HEDIS® IET (General Medicaid, ACO and SUD IMD service recipients)
		Percent of enrollees who engage in treatment for Alcohol or Other Drug Dependence HEDIS® IET (General Medicaid, ACO and SUD IMD service recipients)
<b>Demonstration Goal: Community Integration</b>		
Research Question 5: Will the demonstration result in increased community integration?	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.
<b>Demonstration Goal: Cost Containment</b>		
Research Question 6: Will the demonstration maintain or reduce spending in comparison to what would have been spent absent the demonstration?	Hypothesis 2: The demonstration will contain or reduce SUD IMD budget neutrality expenditures	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 (SUD IMD Service Recipients)

## Psychiatric IMD Coverage under the Demonstration

In December of 2019, CMS approved a demonstration amendment that allows federal financial participation (FFP) for IMD services provided to adult enrollees with serious mental illnesses (SMI). 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.

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 an SMI.

Measures specific to the continuation of the State's SMI IMD authorities have been submitted to CMS and are pending CMS approval. Once approved, measures for the SMI IMD study group will be produced and included in the final summative evaluation report due to CMS in 2022.

## One Time ACO Delivery System Investments

AHS included a formative assessment of its one-time delivery system related 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 reforms that feature (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. These activities and evaluation measures are exploratory and are not related to a specific Global Commitment to Health research questions or hypotheses.

CMS approved two new investments in November of 2017 in the ACO delivery system related category. These Investments and their expected outcomes are outlined in Table C-4, on the following page. In late December of 2019, four ACO investments were approved. Assessment of the most recent investments will be included in the 2022 final summative evaluation report.

Table C-4: 2018 Delivery System Related Investments

Investment Initiative (2018)	Evaluation Measures
<p><b>Investment #1: OneCare Vermont ACO Advanced Community Care Coordination investment.</b> This project is designed to support an integrated care delivery system that is person-centered, efficient, and equitable through the implementation of a community-based care coordination model.</p>	<ul style="list-style-type: none"> <li>Percent of communities participating in community-based care coordination model, including regular participation in “Care Coordination Core Team” (Annual)</li> </ul>
	<ul style="list-style-type: none"> <li>Number of care team members/leaders trained in care coordination skills/core competencies, including in the Care Navigator IT platform (Annual)</li> </ul>
	<ul style="list-style-type: none"> <li>Total amount of advanced community care coordination payments made to eligible ACO participants (Annual)</li> </ul>
	<ul style="list-style-type: none"> <li>Number of quality/health management measurement improvement activities implemented by OneCare (Annual)</li> </ul>
	<ul style="list-style-type: none"> <li>Percent of patients in high or very high-risk levels who are engaged in care coordination (Quarterly)</li> </ul>
	<ul style="list-style-type: none"> <li>Percent of high risk and very high-risk level patients who are engaged in care coordination who have a shared care plan initiated (Quarterly)</li> </ul>
<p><b>Investment #2: OneCare Vermont ACO Quality Health Management Measurement Improvement investment.</b> 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.</p>	<ul style="list-style-type: none"> <li>Percent of health service areas who received data literacy training and technical support (Annual)</li> </ul>

## D. Methodology

This evaluation relied on a quasi-experimental design to measure change over time and differential statistics to describe the population and findings. The evaluation was based on a longitudinal design using logistic regression to assess change over baseline for each year of the demonstration. Annually, the evaluator solicited information from AHS staff 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. The design approaches for each research question and hypothesis are presented in Table D-1. Results are compared to state-specific and national benchmarks, as applicable.

*Table D-1: Evaluation Research Questions, Hypotheses and Design*

Research Question	Hypotheses	Design
<b>1. Will the demonstration result in improved access to care?</b>	1. The demonstration will result in improved access to community based medical care	Longitudinal with Regression
	2. The demonstration will result in improved access to Medication Assisted Treatment for Opioid Use Disorder (OUD)	
	3. The demonstration will result in improved access to dental care	
	4. The demonstration will reduce the percentage of potentially preventable events	
	5. The demonstration will reduce ED use for SUD per 1,000 enrollees	
	6. Premium requirements for eligible families above 195% FPL will not impede access to enrollment	
	7. The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage	
<b>2. Will value-based payment models increase access to care?</b>	1. The Medicaid ACO will improve access to mental health care and SUD treatment	Propensity Score Matching w/T-test
	2. The Medicaid ACO will improve access to adolescent well-care	Longitudinal with Regression
	3. The Medicaid ACO will increase engagement of eligible members over time	
<b>3. Will the demonstration result in improved quality of care?</b>	1. The demonstration will improve quality of care	Longitudinal with Regression
	2. ACO enrollees will show improved diabetes and hypertension control	
	3. The demonstration will increase preventive health screenings for female enrollees	
	4. The demonstration will improve Mental health follow-up after psychiatric hospitalization	
	5. The demonstration will improve initiation and engagement in SUD treatment.	
	6. The demonstration will improve enrollee experience of care and rating of the health plan	
	7. The demonstration will improve self-report of health status for enrollees with LTSS needs	

Research Question	Hypotheses	Design
<p><b>4. Will improved access to primary care result in improved health outcomes?</b></p>	<p>1. The Blueprint for Health will improve diabetes control for Medicaid members age 18-75</p>	<p>Longitudinal</p>
<p><b>5. Will the demonstration result in increased community integration?</b></p>	<p>1. The demonstration will increase community living for Choices for Care program enrollees</p>	<p>Longitudinal</p>
	<p>2. The demonstration will increase community integration for persons needing LTSS</p>	
	<p>3. The demonstration will increase choice and autonomy for persons needing LTSS.</p>	
	<p>4. The demonstration will increase integrated employment options for persons needing LTSS</p>	<p>Longitudinal with Regression</p>
	<p>5. The demonstration will increase integrated employment options for persons with psychiatric needs</p>	
	<p>6. SUD IMD service recipients maintain community living as evidenced by low rates of IMD readmission</p>	
<p><b>6. Will the demonstration maintain or reduce spending in comparison to what would have been spent absent the demonstration?</b></p>	<p>1. The demonstration will contain or reduce overall Medicaid spending</p>	<p>Longitudinal</p>
	<p>2. The demonstration will contain or reduce SUD IMD budget neutrality expenditures</p>	
<p><b>7. Will improved access to preventive care result in lower overall costs for the healthcare delivery system?</b></p>	<p>1. The Blueprint for Health initiative will contain or reduce expenditures for enrollees whose diabetes is in control</p>	<p>Longitudinal</p>
	<p>2. The Blueprint for Health initiative will contain or reduce total per capita risk-adjusted expenditures for enrollees ages 1-64 years</p>	

## Target and Comparison Populations

The evaluation studied the impact of the demonstration on all enrollees (e.g., total Medicaid population) and enrollees participating in specialized programs (e.g., DD, CFC, CRT, TBI, ACO Attributed). In addition, the evaluation examined hypotheses as they relate to IMD programs for enrollees receiving SUD or psychiatric treatment.

Under Vermont's comprehensive demonstration, Medicaid eligibility is synonymous with enrollment in the public managed care-like model, making general comparison and/or control groups difficult. Also, the demonstration and all initiatives under the demonstration operate statewide. For the SUD and IMD amendments, residential placement decisions, including IMD admissions are made based on nationally recognized level of care guidelines; thus, individuals admitted to a residential SUD or SMI-IMD program have a clinically different profile and level of care need than those who are not admitted. These clinical differences eliminate the possibility of defining a matched sample of enrollees who receive IMD services versus those who did not. Given this statewide public managed care model, comparison groups were not used to study SUD and IMD demonstration authorities, Propensity Score Matching with a T-test (described below) was used for a limited analysis of two ACO-related hypotheses.

### Medicaid Study Group

Measures based on HEDIS® and HEDIS®-like guidelines were produced using the total Medicaid population as the study group. The total Medicaid population was defined as those members enrolled with full benefits and Medicaid as their primary payer. For select measures and those examining specialized programs, dual-eligible members were included in the sample.

### ACO Study Group

To establish a method for comparison, Propensity Score Matching was used to select similar looking control and treatment groups from the larger population of Medicaid members for measures related to ACO access to care. Two groups were identified:

1. ACO aligned: This group represented Medicaid members attributed to the Medicaid ACO and who met the criteria for the measure studied (e.g., the treatment group).
2. ACO eligible but not attributed: This group represented Medicaid members who were eligible for the Medicaid ACO, but who were not attributed to the ACO and who met the criteria for the measure studied (e.g., the comparison group).

ACO eligibility currently excludes members receiving specialized services through the CFC, CRT, TBI, DDS, and Children's Intensive Mental Health (HCBS) programs described in Section B of this document.

### SMI Study Group

For purposes of assessing the SMI-IMD demonstration authorities, adult Medicaid members between the ages of 21 and 64 who received IMD services during the measurement period serve as the study population. SMI-IMD specific measures begin in 2019. The baseline data for SMI measures were not available at the time of production. SMI-IMD authorities will be assessed for the CY2019 to CY2021 period and will be included in the final summative report produced in 2022.

## Evaluation Period

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 agreement. In July of 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.

The resulting evaluation includes multiple study periods across Calendar Years 2016 and 2021, with an extensive IMD study previously conducted for Calendar Years 2013 through 2016, submitted to CMS on April 1, 2018. To capture changes over time, the evaluation design includes the following baseline periods:

- 2016 for access and quality measures related to the full Medicaid program;
- 2017 baseline for ACO attributed enrollees;
- 2018 baseline for LTSS NCI measures of integration, choice and control for CFC and TBI program enrollees;
- 2018 baseline for SUD-IMD amendment measures; and
- 2019 baseline for SMI-IMD amendment measures.

## Evaluation Measures

To limit administrative burden on providers, consumers, and staff and to eliminate duplicative evaluation efforts, the demonstration evaluation compiled 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;
- AHS Results-Based Accountability Scorecards;
- National Core Indicators Survey, (Developmental Disability and Aging and Other Disability Program Surveys) for Choices for Care, Developmental Disabilities and Traumatic Brain Injury program enrollees;
- HEDIS® 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.

The evaluation design plan includes an exploratory analysis of measures related to utilization and cost of care for SUD IMD service recipients. Due to the State's response and priorities established under the COVID-19 Public Health Emergency, the State did not have the staff resources to generate these data. All exploratory SUD IMD cost measures will be included in the final summative evaluation report due in 2022.

A provides a complete list of measures and population subgroups studied in this Interim Evaluation Report #2. Over the course of the demonstration, several measures were removed from the ACO contract and/or national survey instruments. An inventory of measures eliminated from the design is provided in the change log found in Attachment B.

## Data Sources

Encounter, claims, and cost data were derived from the Medicaid Management Information System (MMIS). Vermont data sources used to evaluate performance against demonstration goals are described in Table D-2.

Table D-2: Global Commitment to Health 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 an SMI
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

## Analytic methods

Analysis methods included Logistic Regression 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 receiving different treatments, or with one group engaging in treatment while others do not. The traditionally accepted risk of error ( $p \leq 0.05$ ) was used for all comparisons. Two methods of statistical significance were used: one-way ANOVA and Tukey's Honest Significance Differences.

### Logistic Regression

A longitudinal design with regression was used to examine the statewide impact of the demonstration on evaluation measures. Outcomes (which are always binary in these cases) were calculated annually for each of three demonstration years (calendar year 2017-2019) and a baseline period (CY2016).

which is solved

$$l = \ln \frac{p}{1-p} = \beta_0 + \beta_1(\text{year}) + \varepsilon$$

algebraically for  $p$ :

$$p = \frac{1}{1 + e^{-(\beta_0 + \beta_1(\text{year}) + \varepsilon)}}$$

The outcome of interest in most measures is binary, in that the member either received/engaged in the outcome of interest or did not (yes or 1 /no or 0) as denoted. The probability of 'yes' is 'p' and the probability of 'no' is thus '1-p'. 'l = log(p/1-p)' is the log odds (or logit) which we estimated with year where the base year is typically 2016 (effect is captured in the intercept) and the years following 2016 are interpreted as incremental effects compared to base year 2016.

The design examines whether the incremental years are statistically significant on the log-odds of saying yes vs no to the measures of interest. If they are statistically significant, the interpretation is that the year in question (e.g., each year of the demonstration extension) shows a marked difference compared to the base year. This combined with a comparison of the rates ( $p = \# \text{ saying yes} / \text{total} \# \text{ of that year}$ ), shows that there was a statistically significant increase (or decrease) in the rate of yes to a measure from base year 2016 to a future year.

### Propensity Score Matching

Propensity Score Matching with T-test was used for evaluating ACO and non-ACO comparison groups. Propensity Score Matching was used to reduce confounding variables associated with the observational data. These variables included age, geography (recipient county of residence), aid category code and gender. Geography was characterized as "North" and "South" with Vermont counties classified as depicted in Table D-3, on the following page.

Table D-3: Propensity Score Matching Geographical Categories

PSM Geographic Category	Vermont County (Recipient Place of Residence)
North	Franklin, Grand Ilse, Chittenden, Orleans, Caledonia, Essex, Lamoille, Washington, Addison
South	Bennington, Rutland, Windham, Windsor, Orange

The analysis accounted 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. Approximately 200 cases where the county of residence was listed as ‘out-of-state’ were removed from the sample.

A logit regression was used to estimate propensity scores and matching using the propensity score. After the matching, sample means were compared between the treatment and control groups to verify that they were comparable before regressing the outcome of interest. This allowed for an estimate of the effect of the program intervention on the outcome.

Propensity Score Matching was performed in alignment with Rosenbaum and Rubin (1983)<sup>10</sup> where the propensity score is the probability of treatment assignment conditional on observed baseline covariates (the demographic factors: gender, age, year, geography, and the various GCMEG values enumerated below):

$$P(Z_i | \text{gender, age, year, geo, one-hot encoded GCMEG variables}) = p = \frac{1}{1 + e^{-(\beta_0 + \beta_1(\text{year}) + \beta_2(\text{gender}) + \beta_3(\text{age}) + \beta_4(\text{geo}) + \beta_5(\text{GCMEG}_{\text{newadultnochild}}) + \beta_6(\text{GCMEG}_{\text{ABD}}) + \beta_7(\text{GCMEG}_{\text{newadultwithchild}}) + \beta_8(\text{GCMEG}_{\text{SCHIP}}) + \beta_9(\text{GCMEG}_{\text{underinsured}}) + \varepsilon)}}$$

The GC MEG field, which determines how a member qualified for Medicaid, was one-hot encoded to become the following binary variables: GCMEG new adult no child, GCMEG ABD, GCMEG new adult with child, GCMEG SCHIP, and GCMEG underinsured;  $p$  denotes the probability of the outcome measure being true/yes/fulfilled, i.e.,  $Y = 1$  and  $e$  is the natural log base.

The propensity score provides balancing such that conditional on a propensity score, the distribution of the demographic variables enumerated above is not statistically significantly different. After deriving the propensity scores, the control and treatment groups are matched, without replacement, to the nearest neighbor for distance. Then the design verified that the covariates above are all balanced in the post-matching groups and then compared the results using a T-test.

In Calendar Year 2019, raw data yielded fewer control group members who met measure criteria. Members were matched in random order; however, a resulting comparison group could not be established and thus comparison analysis was not performed for Calendar Year 2019 data.

Propensity score balance tables are found in Attachment C.

<sup>10</sup> The central role of the propensity score in observational studies for causal effects. Rosenbaum P.R., Rubin D. B., Biometrika (1983), 70, 1, pp. 41-55

## Blueprint for Health Population Adjustments

Blueprint for Health is a multi-payer reform effort and as such data is typically aggregated for the entire population irrespective of payer. Blueprint measures related to diabetes control were stratified to include Medicaid Members only. 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 were used by insurers for the VHCURES data. Using this method, the vendor can link records between the two de-identified datasets using the hashed, or encrypted, identifiers.

Blueprint to Health diabetes measures were analyzed by its vendor and 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.

Risk-adjusted expenditures are reported for general and specialized Medicaid services. Specialized services include dental, residential, school-based health services, day treatment, transportation, and case management. See Attachment D for the risk adjustment methodology and service categories.

Due to migration to a new clinical registry system, CY2019 data was not available for the Blueprint clinical and cost measures. These measures will be collected for inclusion in the final summative evaluation report, due in 2022.

## National Core Indicators – Aging and Disabilities Adjustments

In CY2018, Vermont initiated participation in the National Core Indicators – Aging and Disabilities (NCI-AD) Survey for the CFC and TBI programs. The core indicators are standard measures used across states to assess key areas such as service planning, rights, community inclusion, choice, health and care coordination, safety, and relationships. Surveys were completed in 2018 for community-based programs and in 2019 for nursing facility and residential programs.

Following the completion of the 2018 NCI-AD Survey, Vermont data was compiled by the Survey vendor. The final report included data for the CFC program compiled by community-based setting type. Data were also weighted based on the sample size for each question and collapsed to produce a statewide average for the two programs combined.

PHPG relied on CY2018 community survey data for Global Commitment evaluation measures. However, for the metrics included in the evaluation design, PHPG used unweighted, un-collapsed data, reported for the NCI-AD in the Vermont Survey Report. PHPG analyzed discrete outcomes for community-based participants in each of the two programs, CFC and TBI individually. Responses that were scored as “unclear” or “don’t know” were not included in this analysis. The specific NCI-AD indicators examined, and the corresponding number of respondents used for each question by the program are presented in Table D-4, on the following page.

Table D-4: Number of respondents for each NCI-AD Indicator used for unweighted, un-collapsed analysis.

NCI-AD Question	Respondents	
	TBI	CFC
Proportion of people who describe their overall health as poor	21	405
Proportion of participants needing assistance who always get enough assistance with everyday activities when needed	18	389
Proportion of people who would like a job (if not currently employed)	17	310
Proportion of people who have a paying job in the community, either full-time or part-time	22	400
Proportion of people who can choose or change what kind of services they get	22	329
Proportion of people who can choose or change how often and when they get services	22	345
Proportion of people who are as active in the community as much as they would like	21	309
Proportion of people who do things they enjoy outside of their home as much as they want	21	307

## Delivery System Related Investments

The formative assessment of Vermont’s ACO delivery system related investments is based on data submitted by the ACO. The ACO investments were first incorporated into the Vermont Medicaid Next Generation ACO contract in 2018, which defined the ACO reporting requirements. Table D-5 provides an overview of annual and quarterly process measures examined in the evaluation.

Table D-5: ACO Investment Formative Assessment Measures

Measure/Frequency of Assessment	Analysis
Percent of communities participating in community-based care coordination model, including regular participation in “Care Coordination Core Team” (Annual)	Descriptive
Number of care team members/leaders trained in care coordination skills/core competencies, including in the Care Navigator IT platform (Annual)	Descriptive
Total amount of advanced community care coordination payments made to eligible ACO participants (Annual)	Descriptive
Number of quality/health management measurement improvement activities implemented by OneCare (Annual)	Descriptive
Percent of health service areas who received data literacy training and technical support (Annual)	Descriptive
Percent of patients in high or very high-risk levels who are engaged in care coordination (Quarterly)	One-sided T-test
Percent of high risk and very high-risk level patients who are engaged in care coordination who have a shared care plan initiated (Quarterly)	One-sided T-test
Percent of high and very high-risk level patients who have a shared care plan with completed tasks and goals (Quarterly)	One-sided T-test

## E. 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. The demonstration served individuals and families up to 300% of the FPL prior to the Affordable Care Act (ACA) eligibility expansion. In 2013, Vermont transitioned to the ACA and the State's LTSS program, Choices for Care, also was 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. Prior to the application of demonstration authority in SUD and psychiatric treatment, FFP was available using "services-in-lieu-of" and MCO "investment" authorities. 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-populations of enrollees who receive specialized services was impractical in most circumstances.

### Existing Payment Reforms

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. 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<sup>®</sup> protocols include state-specific provider and payment model codes to assure complete and accurate results, especially when stratified for specialized mental health and SUD populations.

### Use of Administrative Data

The VHCURES data warehouse provides 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 can link records between the two de-identified datasets using the hashed, or encrypted, identifiers. Providers who are unable to submit information through the clinical registry are not included in the data set. In addition, extracts are produced from the data warehouse at different times for each year studied. Thus, Medicaid members for various Blueprint for Health measures are often undercounted and measures do not provide a complete assessment of program performance. All Blueprint for Health measures will be reproduced in the final summative report to minimize potential undercounts.

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 the 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 enrollment fluctuates on an annual basis related to eligibility reviews and changes in circumstances. 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, membership in any potential comparison group decreases over time.

## F. Results

Findings for the Vermont Global Commitment demonstration are presented by goal area, research question and hypothesis. Hypotheses for the SUD IMD amendment are embedded in each goal area. Where relevant, these measures are specific to the sub-group of members receiving SUD treatment services. Major goal areas for the demonstration include Access to Care, Quality of Care, Community Integration and Cost Containment.

For each logistic regression, a linear probability also was calculated to determine the robustness of the results. Differences in results of these two methods were not significant for any of the measures tested. Significance was determined as  $p \leq .05$ . The remainder of this section provides detailed findings, including the statistical analyses used for each measure.

### Access to Care

In assessing the demonstration's performance relative to Access to Care, two research questions and ten hypotheses were examined. A summary of these questions and corresponding hypotheses are presented in Table F-1 below. Findings are presented by research question and hypothesis for Access to Care on the following pages.

*Table F-1: Access to Care Research Questions and Hypotheses*

Research Question	Hypotheses
1. <i>Will the demonstration result in improved access to care?</i>	1. The demonstration will result in improved access to community based medical care
	2. The demonstration will result in improved access to Medication Assisted Treatment for Opioid Use Disorder (OUD)
	3. The demonstration will result in improved access to dental care
	4. The demonstration will reduce the percent of potentially preventable events
	5. The demonstration will reduce ED use for SUD per 1,000 enrollees
	6. Premium requirements for eligible families above 195% FPL will not impede access to enrollment
	7. The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage
2. <i>Will value-based payment models increase access to care?</i>	1. The Medicaid ACO will improve access to mental health care and SUD treatment
	2. The Medicaid ACO will improve access to adolescent well-care
	3. The Medicaid ACO will increase engagement of eligible members over time

Research Question 1: Will the demonstration result in improved access to care?

Hypothesis 1. The demonstration will result in improved access to community based medical care

Measure(s)

- 1.1.1 Percent of adult enrollees who had an ambulatory or preventive care visit
- 1.1.2 Percent of enrollees with well-child visits first 15 months of life, 6 or more visits
- 1.1.3 Percent of enrollees with well-child visits 3rd, 4th, 5th, & 6th year of life
- 1.1.4 Percent of adolescents ages 12 to 21 who receive one or more well-care visits with a PCP during the year
- 1.1.5 Percent of respondents indicating they received necessary care (Adult Survey)
- 1.1.6 Percent of respondents indicating they received necessary care (Child Survey)
- 1.1.7 Percent of respondents who rate their ability to get desired appointment or information as usually or always (Blueprint Program Enrollees)
- 1.1.8 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 Program Enrollees)
- 1.1.9 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 (Adult Survey)
- 1.1.10 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 (Child Survey)

**Measure 1.1.1: Percent of Adult Enrollees Who Had an Ambulatory or Preventive Care Visit**

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 1. The demonstration will result in improved access to community based medical care.

**Measure Description:** The percentage of members 20 years and older who had an ambulatory or preventive care visit during the measurement year, presented as the total score (HEDIS® AAP-Total).

**Population:** Medicaid members.

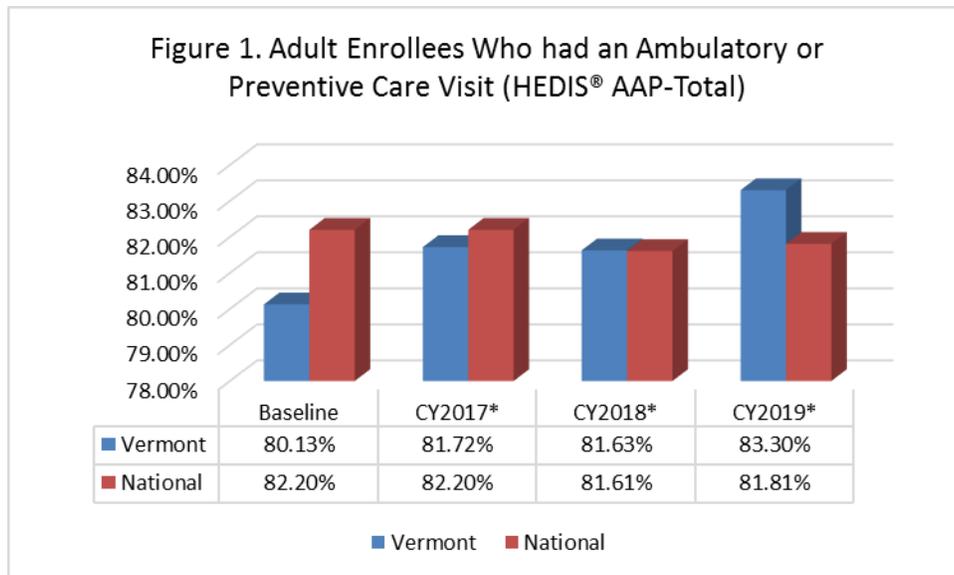
**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using paid claims. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** HEDIS® Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 80% of adult enrollees had an ambulatory or preventive care visit during each demonstration year. Baseline performance was 80.13%; performance rose to 81.72%, 81.63% and 83.30% in each year 2017 – 2019, respectively. Relative to baseline performance, the demonstration improved each year, with a 1.98% improvement in CY2017, a 1.87% improvement in CY2018 and a 3.96% improvement over baseline in CY2019. The change over baseline was statistically significant in each demonstration year.

In CY2017, Vermont performed less than 1% lower than Medicaid programs nationally. CY2018 results aligned with national performance. CY2019 outperformed Medicaid plans nationally. In CY2019 the demonstration performed 1.82% higher than the national benchmark.



*\*VT results show a statistically significant change over baseline performance*

### Measure 1.1.2: Percent of Enrollees with Well-Child Visits First 15 Months of Life, 6 Or More Visits

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 1. The demonstration will result in improved access to community based medical care.

**Measure Description:** Percentage of children that turned 15 months old during the measurement year and had six or more well-child visits with a primary care practitioner (PCP) during their first 15 months of life (HEDIS® W15).

**Population:** Medicaid members.

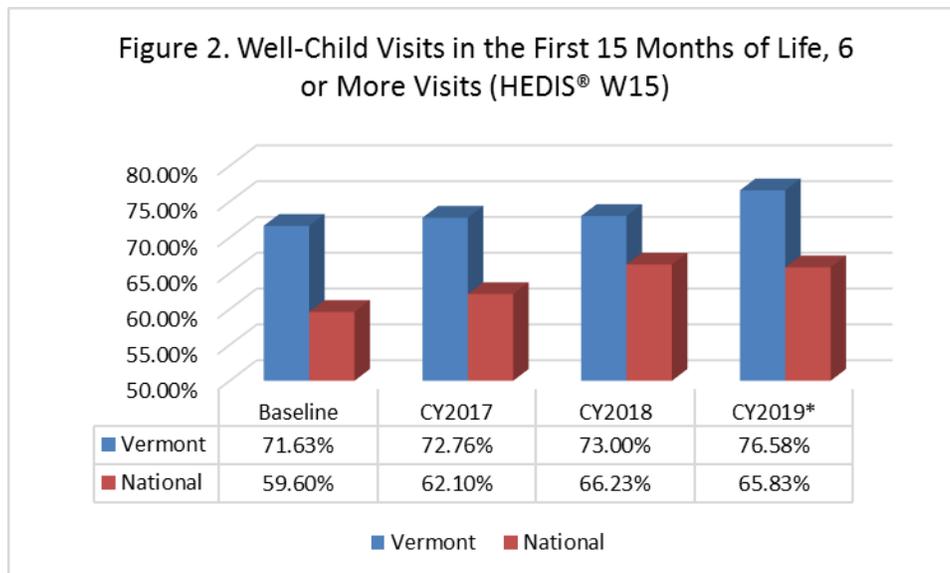
**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** HEDIS® Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 70% of children in the first 15 months of life received 6 or more well-child visits in each demonstration year. Baseline performance was 71.63%, performance rose to 72.76%, 73.00%, and 76.58% in each year 2017 – 2019, respectively. Relative to baseline performance the demonstration improved each year, with a 1.58% improvement in CY2017, a 1.91% improvement in CY2018, and a 6.91% improvement over baseline in CY2019. Change over baseline was statistically significant in CY2019.

Vermont outperformed Medicaid plans nationally in each year of the demonstration, including the baseline period. In CY2019, Vermont performed 16.33% higher than the national benchmark.



*\*VT results show a statistically significant change over baseline performance*

### Measure 1.1.3: Percent of Enrollees with Well-Child Visits 3rd, 4th, 5th, & 6th Year of Life

- Goal: Access to care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 1. The demonstration will result in improved access to community based medical care.

**Measure Description:** Percentage of members 3-6 years of age who received one or more well-child visits with a PCP during the measurement year (HEDIS® W34).

**Population:** Medicaid members.

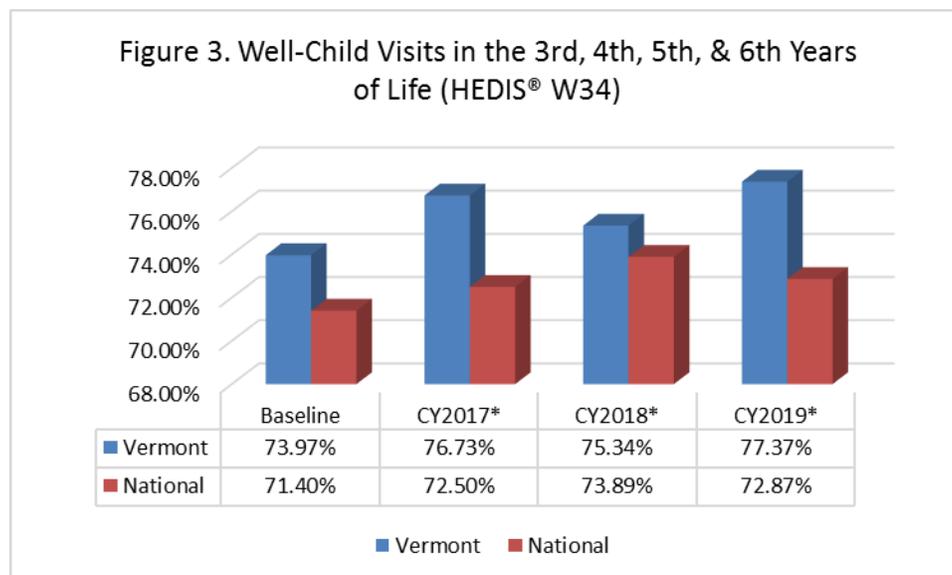
**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** HEDIS® Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 75% of young children age 3-6 years received 6 or more well-child visits in each of the demonstration years. Baseline results were 73.97% and rose to 76.73% before declining slightly to 75.34% and rising again to 77.37% in each year 2017 – 2019, respectively. Relative to baseline performance, the demonstration improved each year with a 3.73% improvement in CY2017, a 1.85% improvement in CY2018 and a 4.60% improvement over baseline in CY2019. Change over baseline was statistically significant for each year of the demonstration.

Vermont outperformed Medicaid plans nationally in each year of the demonstration, including baseline. In CY2019 Vermont performed 6.18% above the national benchmark.



*\*VT results show a statistically significant change over baseline performance*

**Measure 1.1.4: Percent of Adolescents Ages 12 to 21 Who Receive One Or More Well-Care Visits with a PCP During the Year**

- Goal: Access to care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 1. The demonstration will result in improved access to community based medical care.

**Measure Description:** Percentage of adolescents ages 12 to 21 that had at least one comprehensive well-care visit with a PCP or an obstetrical/gynecological practitioner during the measurement year (HEDIS® AWC – Total Score).

**Population:** Medicaid members.

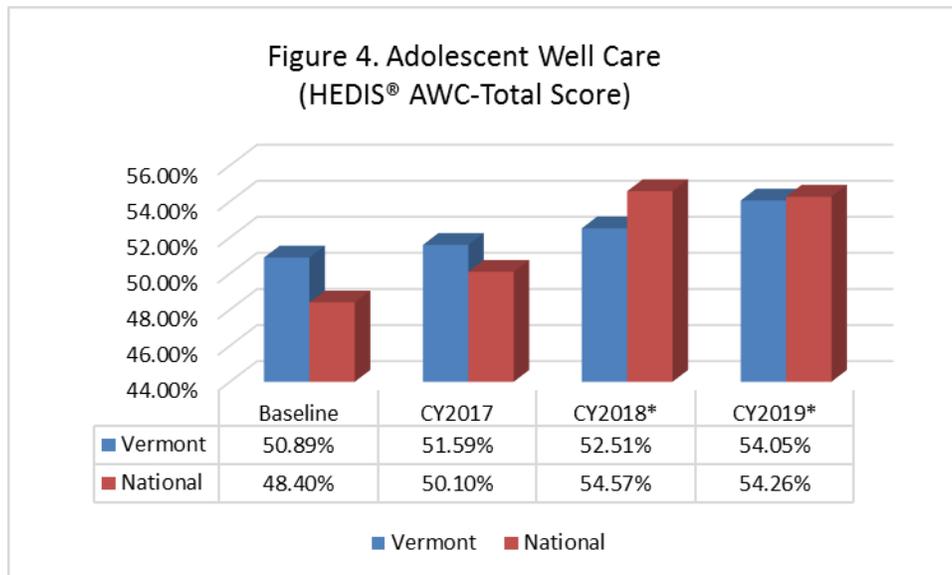
**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** HEDIS® Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 51% of adolescents received a well-care visit during each demonstration year. Baseline performance was 50.89%; performance rose to 51.59%, 52.51% and 54.05% in CY2017 – 2019, respectively. Relative to baseline, performance improved each year, with a 1.38% improvement in CY2017, a 3.18% improvement in CY2018 and a 6.21% improvement over baseline in CY2019. Change over baseline was statistically significant in CY2018 and CY2019.

Vermont outperformed Medicaid plans nationally during the baseline period and in CY2017. The demonstration was 3.77% lower in CY2018 and aligned closely with national rankings in CY2019.



*\*VT results show a statistically significant change over baseline performance*

### Measure 1.1.5: Percent of Adult Respondents Indicating They Received Necessary Care

Goal: Access to care

Research Question: 1. Will the demonstration result in improved access to care?

Hypothesis: 1. The demonstration will result in improved access to community based medical care.

**Measure Description:** Percent of adult CAHPS survey respondents indicating they “usually” or “always” receive necessary care (composite score).

**Population:** Representative sample of adult Medicaid beneficiaries.

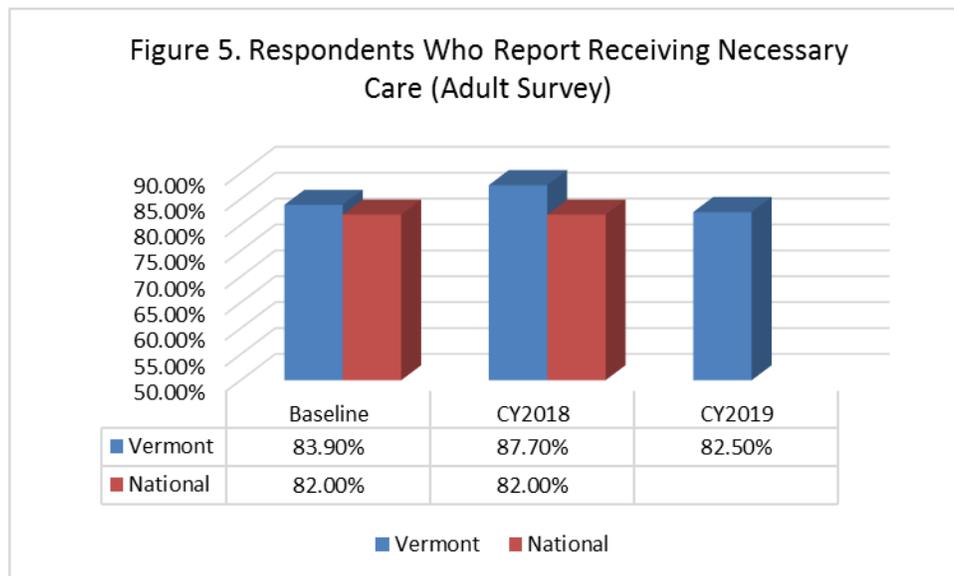
**Data Source and Time Period:** CAHPS Adult Survey results for CY2017-CY2019.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Descriptive statistics.

**Findings:** Over 82% of adult respondents reported they always received needed care in each year of the demonstration. Baseline results were 83.90%; performance rose to 87.70% in CY2018, before a decline to 82.50% in CY2019. Relative to baseline performance Vermont showed a 4.53% improvement in CY2018, a 1.67% decline in CY2019.

Vermont outperformed Medicaid plans nationally during baseline and CY2018; benchmark results for CY2019 were not available at the time of production.



### Measure 1.1.6: Percent of Child Survey Respondents Indicating They Received Necessary Care

Goal: Access to care

Research Question: 1. Will the demonstration result in improved access to care?

Hypothesis: 1. The demonstration will result in improved access to community based medical care.

**Measure Description:** Percent of children’s CAHPS survey respondents indicating they “usually” or “always” receive necessary care (composite score).

**Population:** Representative sample of child Medicaid beneficiaries.

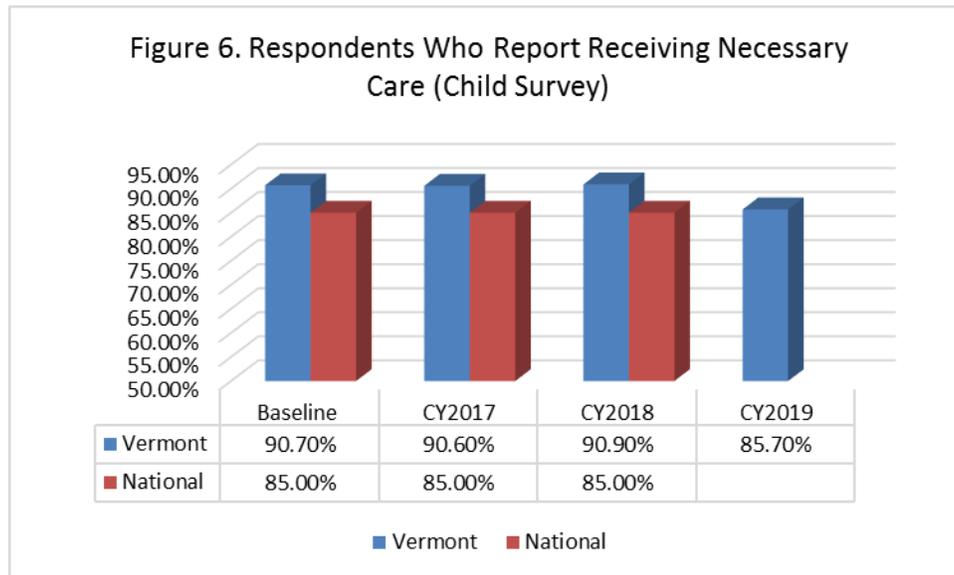
**Data Source and Time Period:** CAHPS Children Survey results for CY2016-CY2019.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Descriptive statistics.

**Findings:** Over 85% of respondents reported always receiving needed care in each year of the demonstration. Baseline performance was 90.70% and remained stable at 90.60% in CY2017 and 90.90% in CY2018 before a decline to 85.70% in CY2019. Relative to baseline, Vermont showed a 5.51% decrease in performance from baseline in CY2019.

Vermont outperformed Medicaid plans nationally during each year of the demonstration, including baseline; benchmark results for CY2019 were not available at the time of production.



**Measure 1.1.7: Percent of Blueprint Respondents Who Rate Their Ability to Get Desired Appointment or Information as “Always”**

- Goal: Access to care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 1. The demonstration will result in improved access to community based medical care.

**Measure Description:** Percent of Blueprint for Health survey respondents who rate their ability to get desired appointment or information as “always” (composite score).

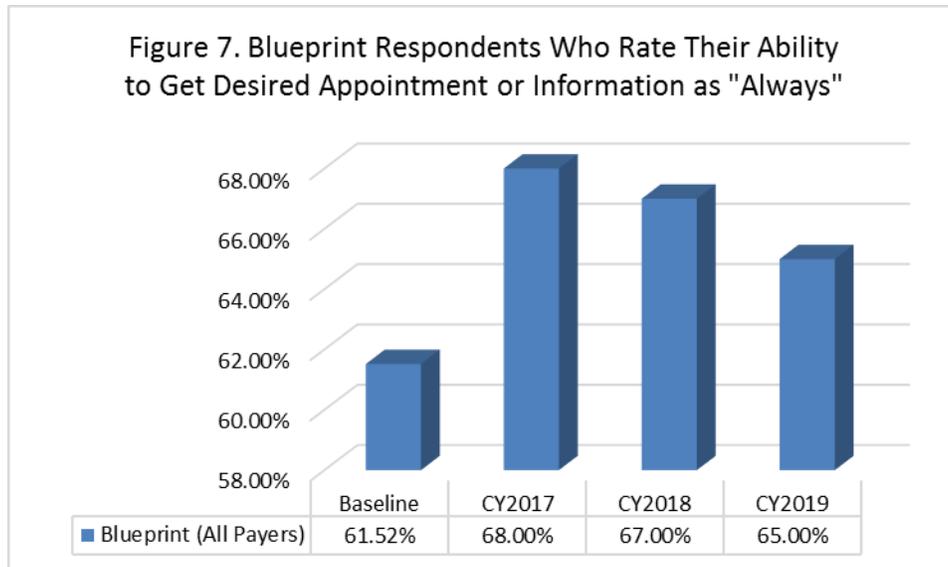
**Population:** Blueprint for Health enrollees, adult and child, all payers.

**Data Source and Time Period:** CAHPS Patient Centered Medical Home Survey CY2016 – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Sixty-five percent or more of respondents reported they could always get desired appointment or information in each year of the demonstration. Baseline performance was 61.52% and rose to 68%, 67% and 65% CY2017-2019, respectively. Relative to baseline, performance increased by 10.53% in CY2017, 8.91% in CY2018 and 5.66% in CY2019.



**Measure 1.1.8: Percent of Blueprint Respondents Who Rate How Well Their Physician Explains Things, Listens to Their Concerns, Shows Respect and Spends Enough Time with Them as “Always”**

- Goal: Access to care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 1. The demonstration will result in improved access to community based medical care.

**Measure Description:** Percent of Blueprint for Health survey respondents who rate how well their physician explains things, listens to their concerns, shows respect and spends enough time with them as “always” (composite score).

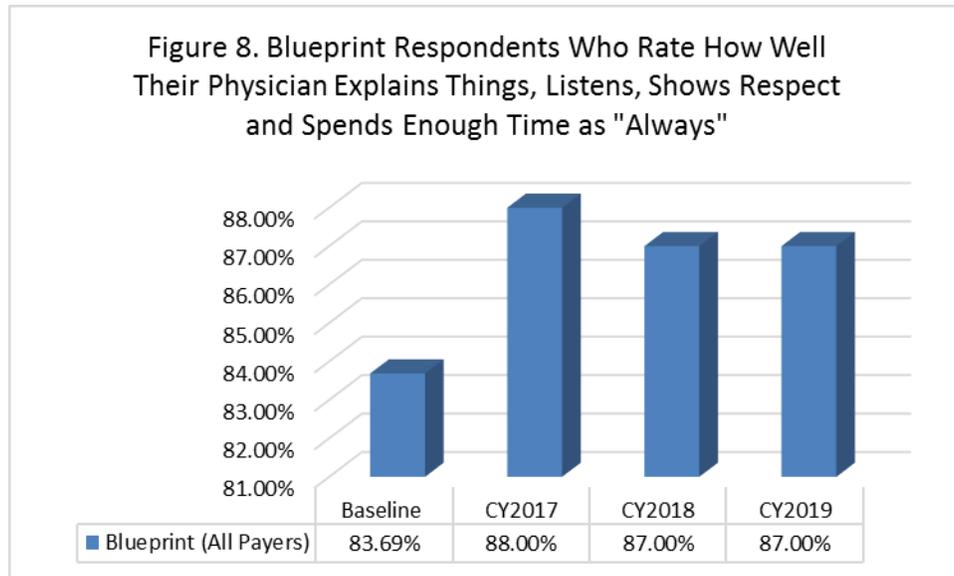
**Population:** Blueprint for Health enrollees, adult and child, all payers.

**Data Source and Time Period:** CAHPS Patient Centered Medical Home Survey CY2016 – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Eighty-seven percent or more of respondents reported their physician always listens, shows respect, and spends enough time with them, in each year of the demonstration. Baseline performance was 83.69% and rose to 88% and 87% in each of CY2018 and CY2019. Relative to baseline, Vermont's results show an improvement over baseline with a 5.15% increase in CY2017 and a 3.96% increase in CY2018 and CY2019.



**Measure 1.1.9: Percent of Adult 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”**

- Goal: Access to care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 1. The demonstration will result in improved access to community based medical care.

**Measure Description:** Percent of adult CAHPS survey 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 (composite score).

**Population:** Representative sample of adult Medicaid beneficiaries.

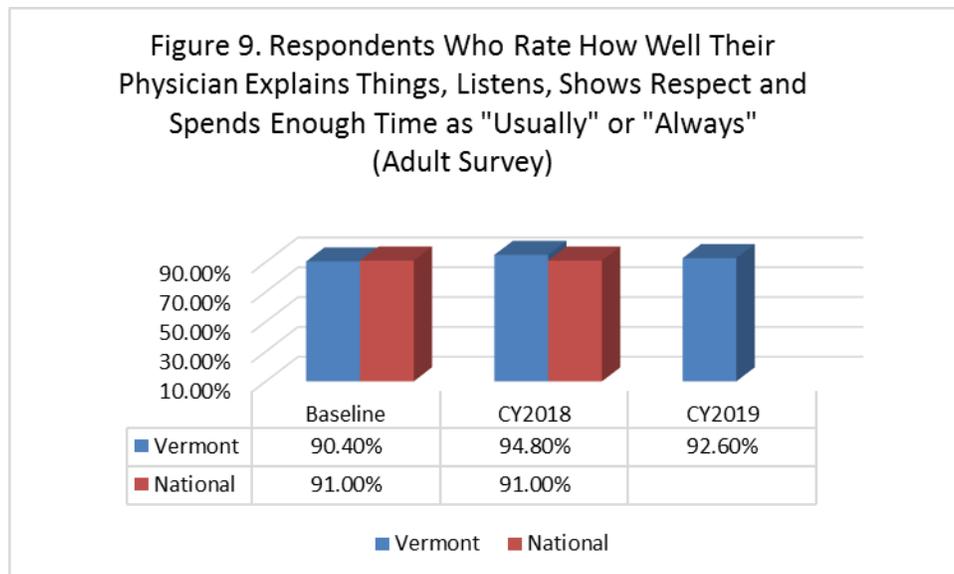
**Data Source and Time Period:** CAHPS Adult Survey results for CY2017-CY2019.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Descriptive statistics.

**Findings:** Over 92% of respondents reported their physician always listens, shows respect, and spends enough time with them, in each year of the demonstration. Baseline performance was 90.40%; scores increased to 94.80% and 92.60% in CY2018 and CY2019, respectively. Relative to baseline, Vermont showed improvement with a 4.87% increase in CY2018 and a 2.43% increase in CY2019.

Vermont outperformed Medicaid programs nationally in baseline and CY2018; benchmarks were not available for CY2019 at time of production.



**Measure 1.1.10: Percent of Children’s 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”**

- Goal: Access to care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 1. The demonstration will result in improved access to community based medical care.

**Measure Description:** Percent of children’s CAHPS survey 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 (composite score).

**Population:** Representative sample of children’s Medicaid beneficiaries.

**Data Source and Time Period:** CAHPS Adult Survey results for CY2016-CY2019.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Descriptive statistics.

**Findings:** Over 96% of respondents reported their physician always listens, shows respect, and spends enough time with them, in each year of the demonstration. Baseline performance was 95.90%; scores increased to 97.20%, 96.10% and 96.30% in CY2017 - CY2019, respectively. Relative to baseline, Vermont performance shows a slight improvement over baseline with a 1.36% increase in CY2017, a 0.21% increase in CY2018 and a .42% increase in CY2019.

Vermont outperformed Medicaid programs nationally each year of the demonstration, including baseline; benchmarks were not available for CY2019 at time of production.

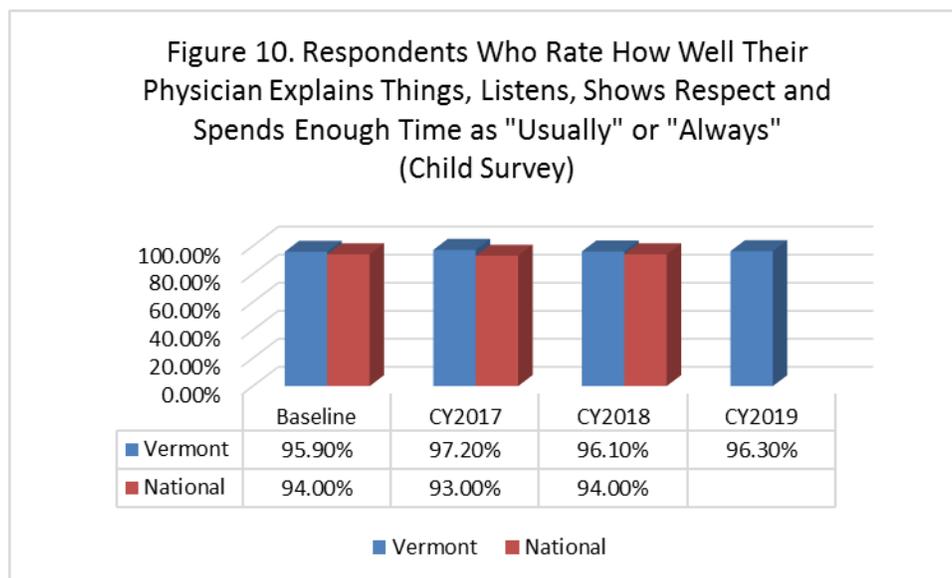


Table F-2 provides an overview of the results for Research Question #1, Hypothesis #1.

Table F-2: Overview of Research Question #1, Hypothesis #1 Results

Access to Care					
Research Question 1: Will the demonstration result in improved access to care?					
Hypothesis 1: The demonstration will result in improved access to community based medical care					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of adult enrollees who had an ambulatory or preventive care visit (HEDIS® AAP Total Score)	Medicaid	+	✓	✓	Logistic Regression
Percent of enrollees with Well-child visits first 15 months of life, 6 or more visits (HEDIS® W15)	Medicaid	+	✓	✓	Logistic Regression
Percent of enrollees with Well-child visits 3rd, 4th, 5th, & 6th year of life (HEDIS® W34)	Medicaid	+	✓	✓	Logistic Regression
Percent of adolescents ages 12 to 21 who receive one or more well-care visits with a PCP during the year (HEDIS® AWC)	Medicaid	+	✓	✓	Logistic Regression
Percent of respondents indicating they received necessary care (CAHPS)	Medicaid (Children)	-	N/A	✓	Descriptive
Percent of respondents indicating they received necessary care (CAHPS)	Medicaid (Adults)	-	N/A	✓	Descriptive
Percent of respondents who rate their ability to get desired appointment or information as always (CAHPS-PCMH)	Blueprint All Payers	+	N/A	N/A	Descriptive
Percent of respondents who rate how well their physician explains things, listens to their concerns, shows respect, and spends enough time with them as always (CAHPS-PCMH)	Blueprint All Payers	+	N/A	N/A	Descriptive
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 (CAHPS)	Medicaid (Children)	+	N/A	✓	Descriptive
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 (CAHPS)	Medicaid (Adults)	+	N/A	✓	Descriptive

Research Question 1: Will the demonstration result in improved access to care?

Hypothesis 2: The demonstration will result in improved access to Medication Assisted Treatment (MAT) for OUD

**Measure(s)**

- 1.2.1 Number of People Receiving MAT Per 10,000 Vermonters Age 18-64
- 1.2.2 Percent of Enrollees with Continuity of Pharmacotherapy for Opioid Use Disorder
- 1.2.3 Number of Vermont Resident Deaths Related to Drug Overdose
- 1.2.4 Number of Vermont Medicaid Enrollee Deaths Related to Drug Overdose

**Measure 1.2.1: Number of People Receiving Medication Assisted Treatment Per 10,000 Vermonters Age 18-64**

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 2. The demonstration will result in improved access to Medication Assisted Treatment (MAT) for OUD.

**Measure Description:** Total number of Vermonters 18-64 receiving MAT in Specialized Health Homes for Opioid Use through Hubs (center-based programs) and Spokes (office-based programs) during the first month of quarter.

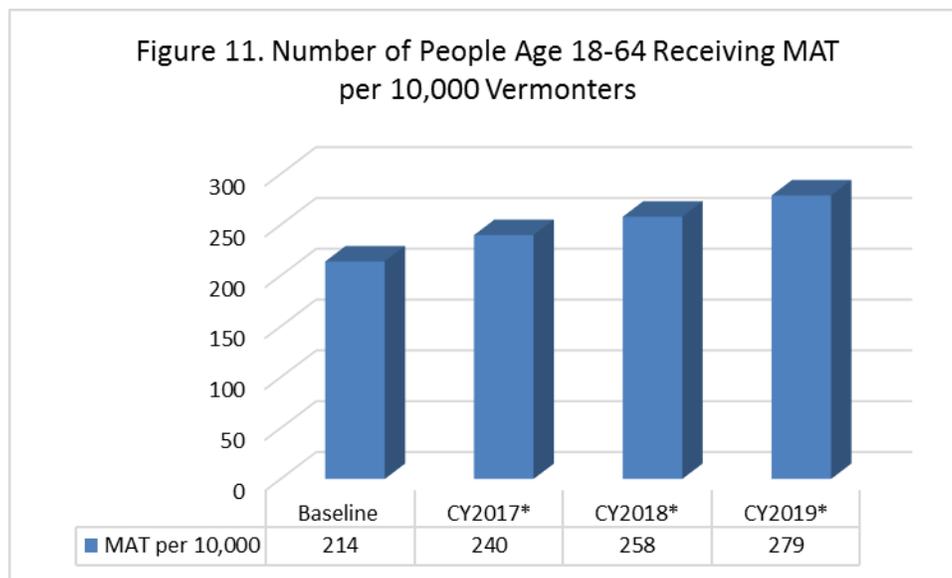
**Population:** Vermont residents.

**Data Source and Time Period:** Vermont Prescription Monitoring System (VPMS); Substance Abuse Treatment Information System (SATIS); Vermont resident counts derived by the Vermont Department of Health using US Census data, CY2016 – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Vermont increased access to MAT over baseline in each year measured. During baseline period, 214 individuals per 10,000 Vermonters received MAT. Performance increased to 240 per 10,000 in CY2017 and 258 per 10,000 in CY2018. Preliminary results for CY2019 are 279 per 10,000. Improvements over baseline were statistically significant in each year.



*\*VT results show a statistically significant change over baseline performance*

### Measure 1.2.2: Percent of Enrollees with Continuity of Pharmacotherapy for Opioid Use Disorder

Goal: Access to Care

Research Question: 1. Will the demonstration result in improved access to care?

Hypothesis: 2. The demonstration will result in improved access to Medication Assisted Treatment (MAT) for OUD.

**Measure Description:** Percentage of adults with pharmacotherapy for OUD who have at least 180 days of continuous treatment (NQF #3175).

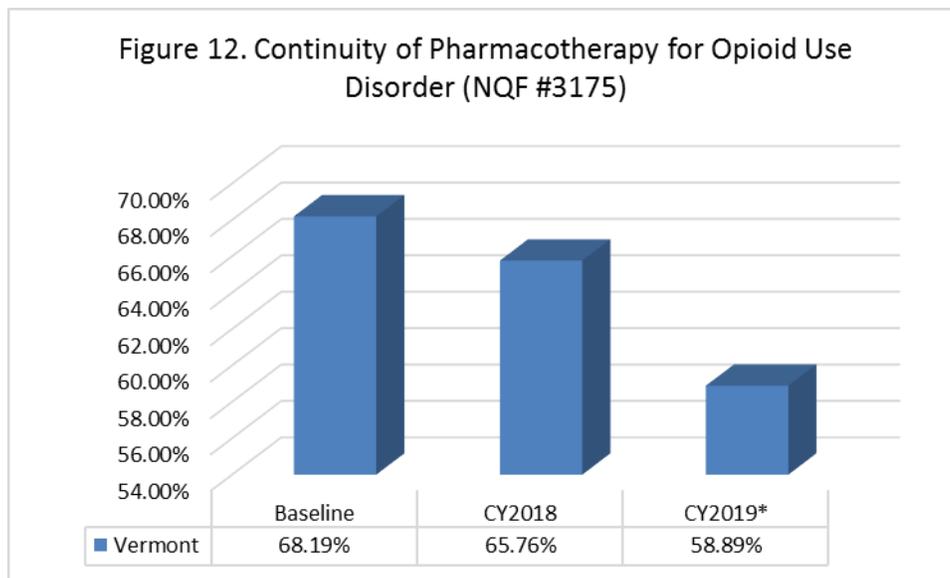
**Population:** Medicaid members.

**Data Source and Time Period:** The results were calculated in accordance with NQF and CMS guidelines for SUD Medicaid demonstrations, Technical Specification Manual version 2, using paid claims. Results are for CY2017 (baseline) – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** The percent of adults with pharmacotherapy for OUD for at least 180 days of continuous treatment decreased over baseline in each year. Baseline performance was 68.19%; CY2018 was 65.76% and CY2019 was 58.89%. CY2018 showed a 2.90% decrease, while CY2019 showed a 19.64% decrease over baseline. Decline over baseline was statistically significant in CY2019.



*\*VT results show a statistically significant change over baseline performance*

### Measure 1.2.3: Number of Vermont Resident Deaths Related to Drug Overdose

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 2. The demonstration will result in improved access to Medication Assisted Treatment (MAT) for OUD.

**Measure Description:** The number of Vermont resident deaths (regardless of where the death occurred) attributed to drug overdose.

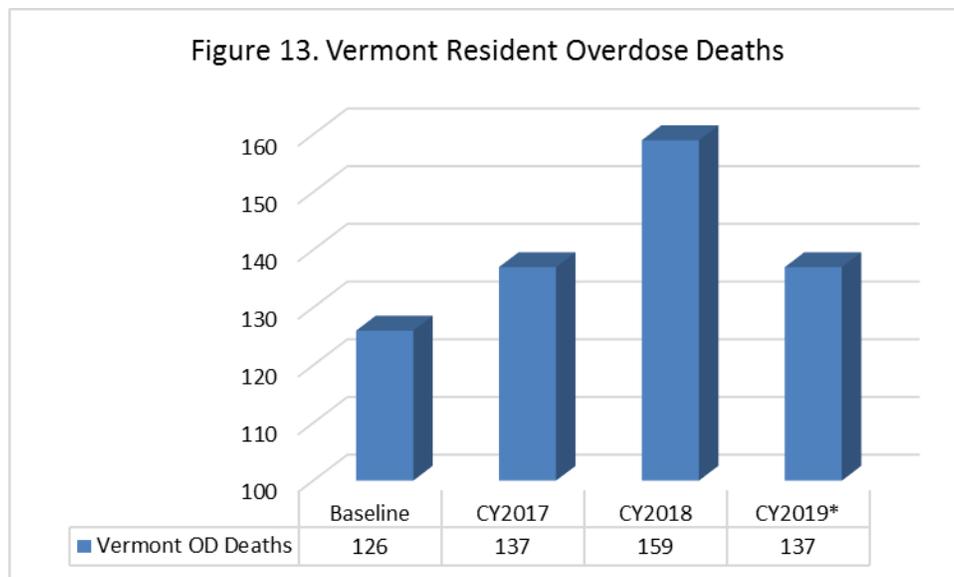
**Population:** Vermont residents.

**Data Source and Time Period:** Vermont Department of Health Vital Statistics, Death Records CY2016-CY2019. Data lags up to one year, CY2019 results are considered preliminary.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Vermont resident deaths have risen each year since the baseline period, with a peak in CY2018 at 159 overdose deaths. Relative to baseline, CY2017 increased by 8.73%, CY2018 increased by 26.73% and CY2019 increased over baseline by 8.73%. Preliminary data for CY2019 suggests deaths may be declining, with 137 deaths. However, data lags by one year and final tallies may be higher for CY2019.



\*CY2019 is preliminary, data lags up to one year

### Measure 1.2.4: Number of Vermont Medicaid Enrollee Deaths Related to Drug Overdose

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 2. The demonstration will result in improved access to Medication Assisted Treatment (MAT) for OUD.

**Measure Description:** Number of overdose deaths during the measurement period among Vermont Medicaid beneficiaries.

**Population:** Medicaid members.

**Data Source and Time Period:** The results were calculated in accordance with CMS guidelines for SUD Medicaid demonstrations, Technical Specification Manual version 2, using Medicaid eligibility files, paid claims and Vermont Department of Health, Vital Statistics, Death Records. Death record data lags up to one year, CY2019 results are considered preliminary. Results are for CY2017 (baseline) – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Medicaid enrollee deaths related to drug overdose increased from 72 at baseline to 84 in CY2018 before dropping to 70 in CY2019. Relative to baseline CY2018 increased by 16.67%. The count then declined 2.78% below baseline in CY2019. The number of overdose related deaths was less than 1% of the total Medicaid population in each year of the demonstration. However, death record data lags by one year and final tallies for 2019 may be higher. Change over baseline was not significant for any year of the demonstration.

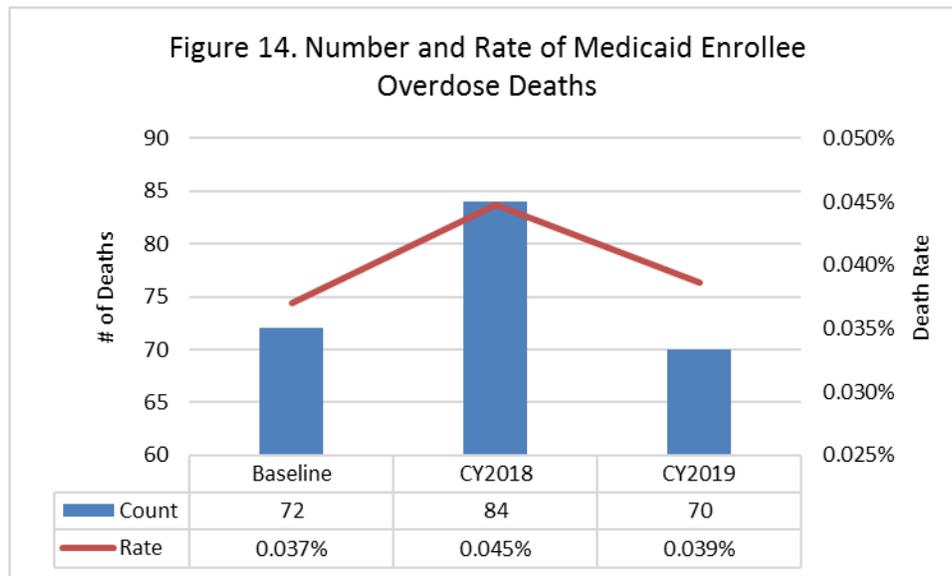


Table F-3 provides an overview of the results for Research Question #1, Hypothesis #2.

Table F-3: Overview of Research Question #1, Hypothesis #2 Results

Access to Care					
Research Question 1: Will the demonstration result in improved access to care?					
Hypothesis 2: The demonstration will result in improved access to Medication Assisted Treatment (MAT) for OUD					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Number of people receiving MAT per 10,000 Vermonters age 18-64	Vermont Residents	+	✓	N/A	Logistic Regression
Percent of enrollees with continuity of pharmacotherapy for opioid use disorder*	Medicaid	-	✓	N/A	Logistic Regression
Number of Vermont resident deaths related to drug overdose	Vermont Residents	-	N/A	N/A	Descriptive
Number of Vermont Medicaid enrollee deaths related to drug overdose**	Medicaid	+	N/A	N/A	Descriptive

\*Bundled payment billing processes are not in alignment with technical specifications and may result in undercount of continuity of care

\*\* Positive change denotes lower counts

Research Question 1: Will the demonstration result in improved access to care?

Hypothesis 3: The demonstration will result in improved access to dental care

**Measure(s)**

**1.3.1 Percent of Children Age 2-20 Years with At Least One Dental Visit**

**Measure 1.3.1: Percent of Children Age 2-20 Years with At Least One Dental Visit**

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 3. The demonstration will result in improved access to dental care.

**Measure Description:** Children age 2-20 years with at least one dental visit during the measurement period (HEDIS® ADV-Total Score).

**Population:** Medicaid members.

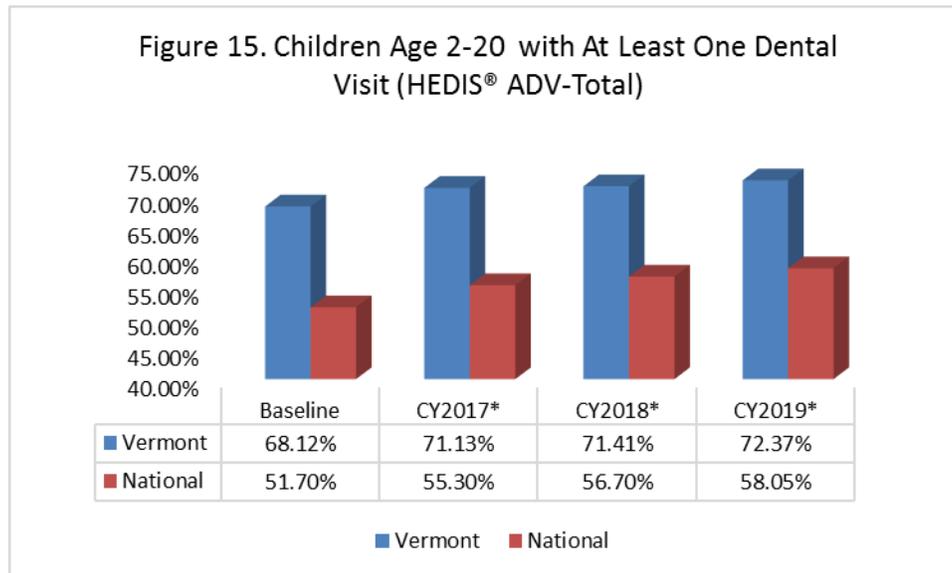
**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** HEDIS® Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 71% of members ages 2 to 20 years received dental care in each year of the demonstration. Baseline performance was 68.12%; scores increased to 71.13%, 71.41% and 72.37% in CY2017 - CY2019, respectively. Relative to baseline, Vermont showed an improvement with a 4.42% in CY2017, 4.83% increase in CY2018 and in CY2019 a 6.24% increase. Change over baseline is statistically significant in each year of the demonstration.

Vermont outperformed Medicaid programs nationally each year of the demonstration, including baseline. In CY2019 the demonstration 24.67% above the national benchmark.



*\*VT results show a statistically significant change over baseline performance*

Research Question 1: Will the demonstration result in improved access to care?

Hypothesis 4: The demonstration will reduce the percent of potentially preventable events.

Measure(s)

- 1.4.1 Percent of Potentially Avoidable ED Utilization
- 1.4.2 Percent of All Cause Unplanned Admissions for Patients with Multiple Chronic Conditions
- 1.4.3 Rate of ED Visits Per 1,000-Member Months (Medicaid only and dual eligible populations)
- 1.4.4 Rate of ED Visits Per 1,000-Member Months for CFC Enrollees
- 1.4.5 Rate of ED Visits Per 1,000-Member Months for DDS Enrollees
- 1.4.6 Rate of ED Visits Per 1,000-Member Months for TBI Program Enrollees
- 1.4.7 Rate of ED Visits Per 1,000-Member Months for Children’s Mental Health Program Enrollees
- 1.4.8 Rate of ED Visits Per 1,000-Member Months for CRT Program Enrollees

### Measure 1.4.1: Percent of Potentially Avoidable ED Utilization

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 4. The demonstration will reduce the percent of potentially preventable events.

**Measure Description:** The percent of ED visits that are potentially avoidable in the measurement year.

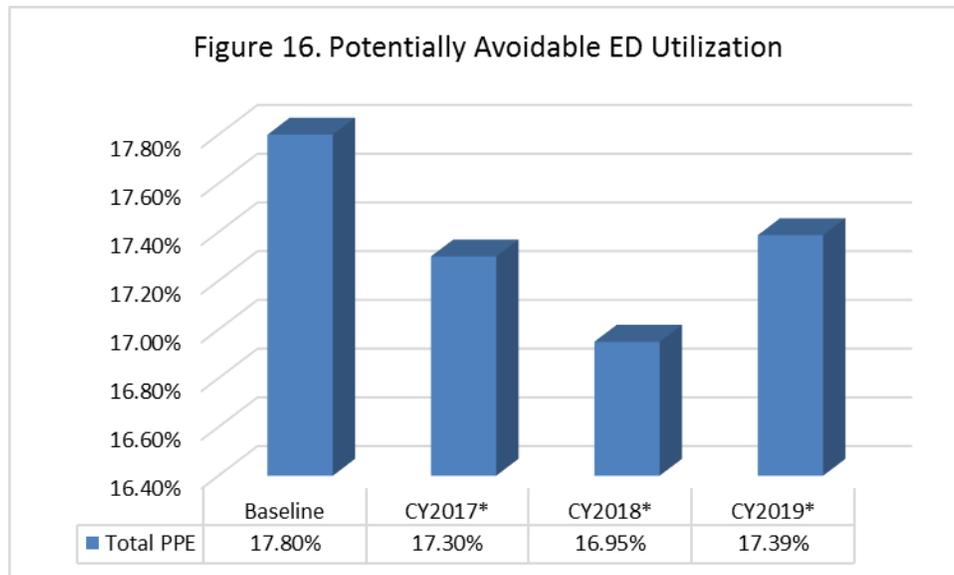
**Population:** Total Medicaid, including dual eligible members.

**Data Source and Time Period:** The results were calculated using MMIS paid claims, including crossover claims. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Lower scores are preferred when measuring potentially avoidable ED use. Vermont maintained a low rate of potentially preventable ED visits (17%) in each year of the demonstration. Results show a steady decline over the baseline rate of 17.80% for CY2017 and CY2018 with rates of 17.30% and 16.95% respectively. ED visits rose slightly in CY2019 to 17.39%, however the rate remained under baseline performance; CY2019 showed a 2.32% reduction in ED admissions over baseline. Changes over baseline performance were statistically significant in each demonstration year.



*\*VT results show a statistically significant change over baseline performance*

### Measure 1.4.2: Percent of All Cause Unplanned Admissions for Patients with Multiple Chronic Conditions

Goal: Access to Care

Research Question: 1. Will the demonstration result in improved access to care?

Hypothesis: 4. The demonstration will reduce the percent of potentially preventable events.

**Measure Description:** Percent of all cause unplanned admissions for patients with multiple chronic conditions (NQF #2888).

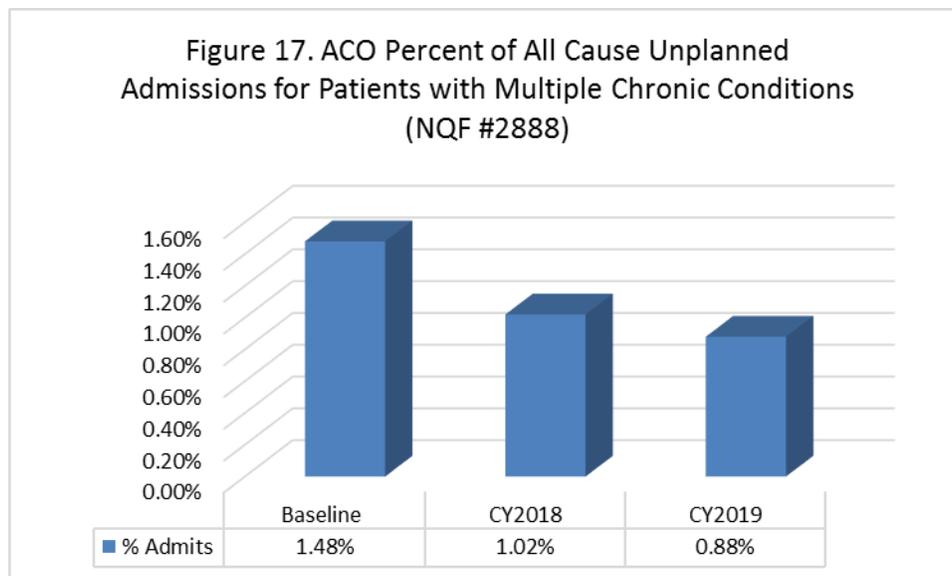
**Population:** Medicaid ACO Enrollees.

**Data Source and Time Period:** The results were calculated in accordance with NQF guidelines, using MMIS paid claims. Results are for CY2017 (baseline) – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Lower scores are preferred when measuring unplanned admissions. ACO results show a decline in unplanned admissions year over year from the baseline of 1.48%, with CY2018 equal to 1.02% and CY2019 equal to 0.88%. CY2019 performance was 40% lower than the demonstration baseline. Changes from baseline are not statistically significant in any year.



### Measure 1.4.3: Rate of ED Visits Per 1,000-Member Months

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 4. The demonstration will reduce the percent of potentially preventable events.

**Measure Description:** Rate of ED visits per 1,000-member months (HEDIS® AMB-ED All Ages).

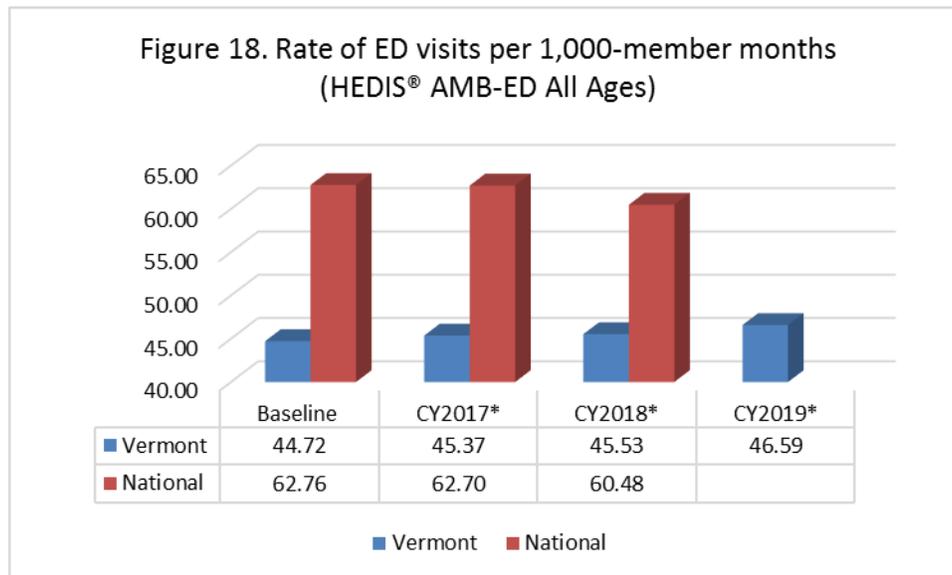
**Population:** Medicaid members, including dual eligible members.

**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** HEDIS® Medicaid Programs 50<sup>th</sup> percentile.

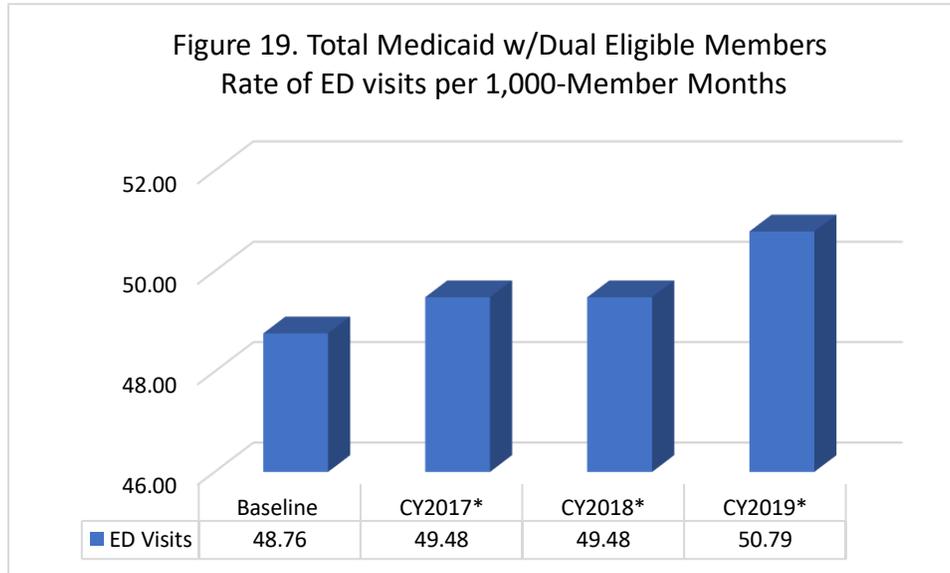
**Analytical Approach:** Logistic Regression.

**Findings:** Lower scores are preferred when measuring ED visits. Figure 18 provides results for the Medicaid population; Figure 19 provides results for the Medicaid population including dual eligible members. For the Medicaid only population, Vermont outperformed Medicaid programs nationally, including during the baseline period. Benchmark data was not available for 2019 at time of production. However, compared to baseline, Vermont ED rates are trending upward. Rates per 1,000 member months were 44.72 at baseline, 45.37 in CY2017, 45.53 in CY2018 and 46.59 in CY2019. CY2017 shows a 1.45% increase over baseline; CY2018 shows a 1.81% increase over baseline; and CY2019 shows a 4.18% increase over baseline performance. Change over baseline was statistically significant in each year of the demonstration.



*\*VT results show a statistically significant change over baseline performance*

This upward trend is also seen in Figure 19 when dual eligible members are included in the calculation. Rates per 1,000 member months were 48.76 at baseline, 49.48 in each year CY2017-2018 and 50.79 in CY2019. An increase in ED rates of 1.48%, 1.48% and 4.16% over baseline performance are seen in each of CY2017, CY2018 and CY2019 respectively, for the total population, including dual eligible members.



*\*VT results show a statistically significant change over baseline performance*

### Measure 1.4.4: Rate of ED Visits Per 1,000-Member Months for Choices for Care (CFC) Program Enrollees

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 4. The demonstration will reduce the percent of potentially preventable events.

**Measure Description:** Rate of ED visits per 1,000-member months for persons who are enrolled in LTSS through the CFC program.

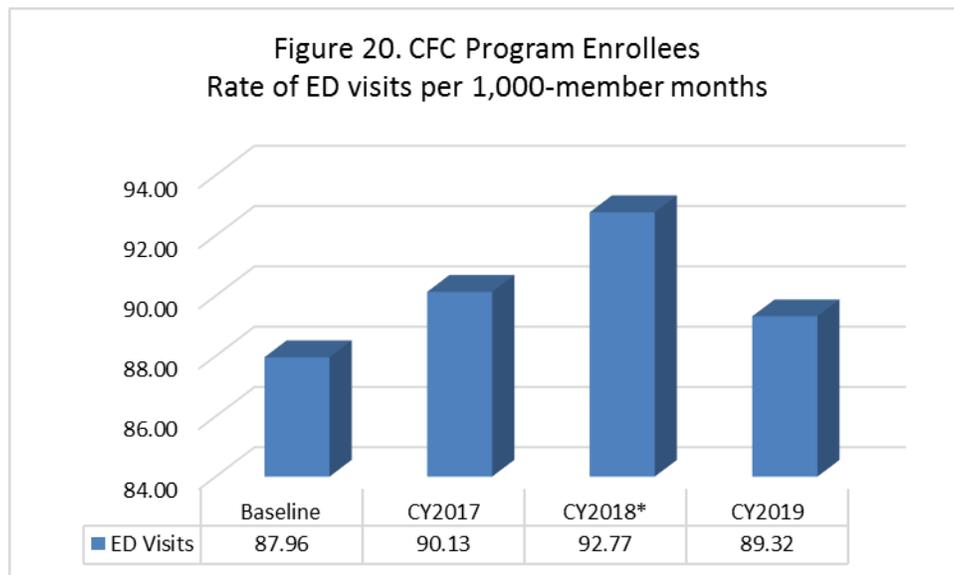
**Population:** Medicaid CFC program enrollees, including dual eligible members.

**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims, modified to include only CFC program enrollees. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Lower scores are preferred when measuring ED visits. Vermont results show an increase in ED use over baseline for each of the demonstration years. Rates per 1,000 member months were 87.96 at baseline, 90.13 in CY2017, 92.77 in CY2018 and 89.32 in CY2019. CY2017 resulted in a 2.47% increase, CY2018 a 5.47% and CY2019 ending with a 1.55% increase over baseline performance. Change over baseline was statistically significant for CY2018 only.



*\*VT results show a statistically significant change over baseline performance*

**Measure 1.4.5: Rate of ED Visits Per 1,000-Member Months for Developmental Disabilities Services (DDS) Program Enrollees**

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 4. The demonstration will reduce the percent of potentially preventable events.

**Measure Description:** Rate of ED visits per 1,000-member months for persons who are enrolled in LTSS through the DDS program.

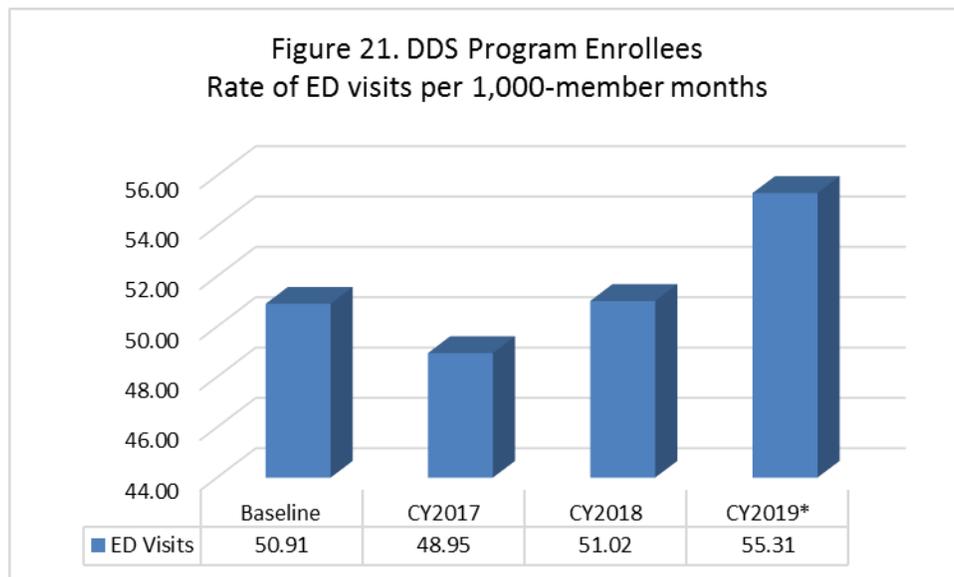
**Population:** Medicaid DDS program enrollees, including dual eligible members.

**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims, modified to include only DDS program enrollees. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Lower scores are preferred when measuring ED visits. Rates per 1,000 member months were 50.91 at baseline, 48.95 in CY2017, 51.02 in CY2018 and 55.31 in CY2019. Vermont results show an initial decline of 3.85% in ED use for CY2017, before increases are seen in both CY2018 (0.22%) and CY2019 (8.64%). Change over baseline was statistically significant for CY2019 only.



*\*VT results show a statistically significant change over baseline performance*

### Measure 1.4.6: Rate of ED Visits Per 1,000-Member Months for Traumatic Brain Injury (TBI) Program Enrollees

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 4. The demonstration will reduce the percent of potentially preventable events.

**Measure Description:** Rate of ED visits per 1,000-member months for persons who are enrolled in treatment services through the TBI program.

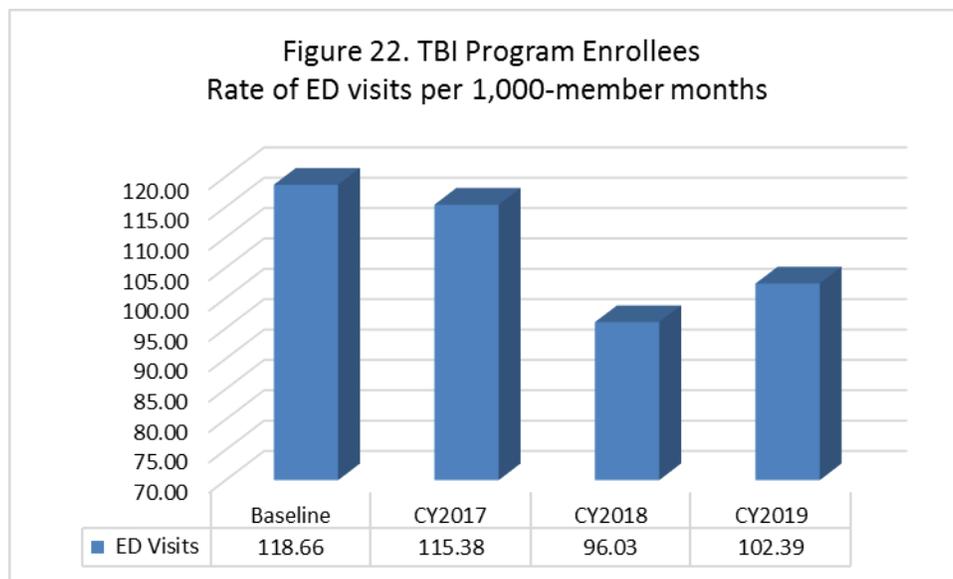
**Population:** Medicaid TBI program enrollees, including dual eligible members.

**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using paid claims, modified to include only TBI program enrollees. TBI program enrollees may also be dual eligible members. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Lower scores are preferred when measuring ED visits. Rates per 1,000 member months were 118.66 at baseline, 115.38 in CY2017, 96.03 in CY2018 and 102.39 in CY2019. Vermont results show a decline in ED use year over year. CY2017 showed a 2.76% decline over baseline; CY2018 showed a 19.07% decline and CY2019 showed a 13.71% decline. Change over baseline was not statistically significant for any year of the demonstration.



### Measure 1.4.7: Rate of ED Visits Per 1,000-Member Months for Children’s Mental Health Program Enrollees

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 4. The demonstration will reduce the percent of potentially preventable events.

**Measure Description:** Rate of ED visits per 1,000-member months for persons who are enrolled in treatment services through Vermont’s Designated Agency, Children’s Mental Health program.

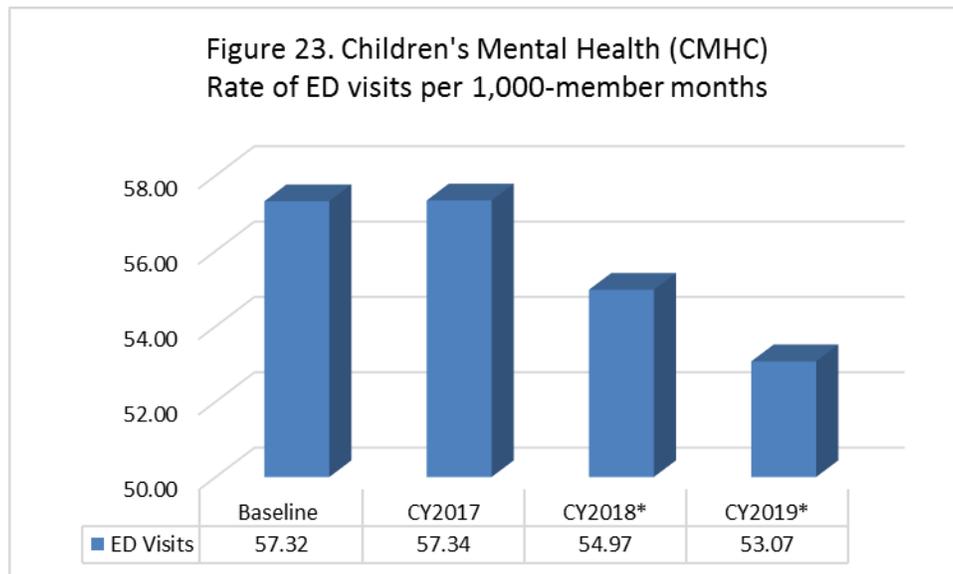
**Population:** Medicaid Children’s Mental Health program enrollees.

**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims, modified to include only children’s mental health program enrollees. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Lower scores are preferred when measuring ED visits. Rates per 1,000 member months were 57.32 at baseline, 57.34 in CY2017, 54.97 in CY2018 and 53.07 in CY2019. Vermont results show a decline in ED use year over year. CY2017 showed a .03% decline over baseline, CY2018 showed a 4.10% decline, while CY2019 showed a 7.41% decline. Changes over baseline were statistically significant in CY2018 and CY2019.



*\*VT results show a statistically significant change over baseline performance*

### Measure 1.4.8: Rate of ED Visits Per 1,000-Member Months for Community Rehabilitation and Treatment (CRT) Program Enrollees

Goal: Access to Care

Research Question: 1. Will the demonstration result in improved access to care?

Hypothesis: 4. The demonstration will reduce the percent of potentially preventable events.

**Measure Description:** Rate of ED visits per 1,000-member months for persons who are enrolled in treatment services through the CRT program.

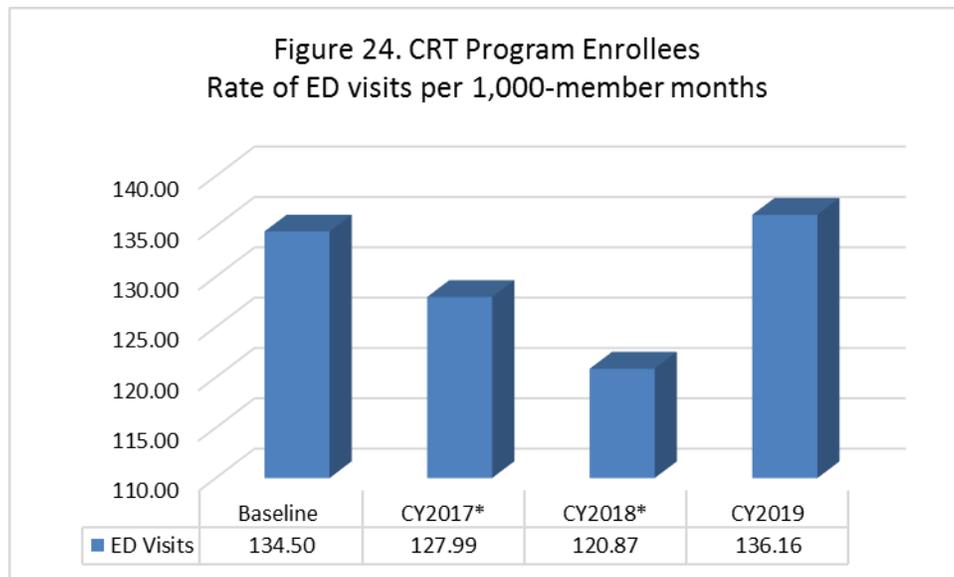
**Population:** CRT program enrollees, including dual eligible members.

**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims, modified to include only CRT program enrollees. Results are for CY2016 (baseline) – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Lower scores are preferred when measuring ED visits. Rates per 1,000 member months were 134.50 at baseline, 127.99 in CY2017, 120.87 in CY2018 and 136.16 in CY2019. Vermont results show a decline in ED use over baseline in CY2017 (4.84%) and CY2018 (10.13%) with a slight increase in use for CY2019 (1.23%). Changes over baseline were statistically significant in CY2017 and CY2018.



*\*VT results show a statistically significant change over baseline performance*

Table F-4 provides an overview of the results for Research Question #1, Hypothesis #4

Table F-4: Results for Research Question #1, Hypothesis #4

Access to Care					
Research Question 1: Will the demonstration result in improved access to care?					
Hypothesis 4: The demonstration will reduce the percent of potentially preventable events (PPEs)					
Measure	Study Group	CY2019 Change*	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of Potentially Avoidable ED Utilization	Medicaid	+	✓	N/A	Logistic Regression
Percent of all cause unplanned admissions for patients with multiple chronic conditions	ACO	+	-	N/A	Logistic Regression
Rate of ED visits per 1,000-member months	Medicaid	-	✓	✓	Logistic Regression
Rate of ED visits per 1,000-member months for CFC enrollees	CFC	-	-	N/A	Logistic Regression
Rate of ED visits per 1,000-member months for DDS enrollees	DDS	-	✓	N/A	Logistic Regression
Rate of ED visits per 1,000-member months for TBI program enrollees	TBI	+	-	N/A	Logistic Regression
Rate of ED visits per 1,000-member months for CMH program enrollees	CMH	+	✓	N/A	Logistic Regression
Rate of ED visits per 1,000-member months for CRT program enrollees	CRT	-	-	N/A	Logistic Regression

\* Positive change denotes lower scores (e.g., improved performance)

Research Question 1: Will the demonstration result in improved access to care?

Hypothesis 5: The demonstration will reduce ED use for SUD per 1,000 enrollees

Measure(s)

1.5.1 Rate of ED use for SUD per 1,000 enrollees

**Measure 1.5.1: Rate of ED Use for Substance Use Disorder (SUD) per 1,000 SUD Demonstration Enrollees**

Goal: Access to Care

Research Question: 1. Will the demonstration result in improved access to care?

Hypothesis: 5. The demonstration will reduce ED use for SUD per 1,000 enrollees.

**Measure Description:** The total number and rate of ED visits for SUD per 1,000 demonstration beneficiaries in the measurement period.

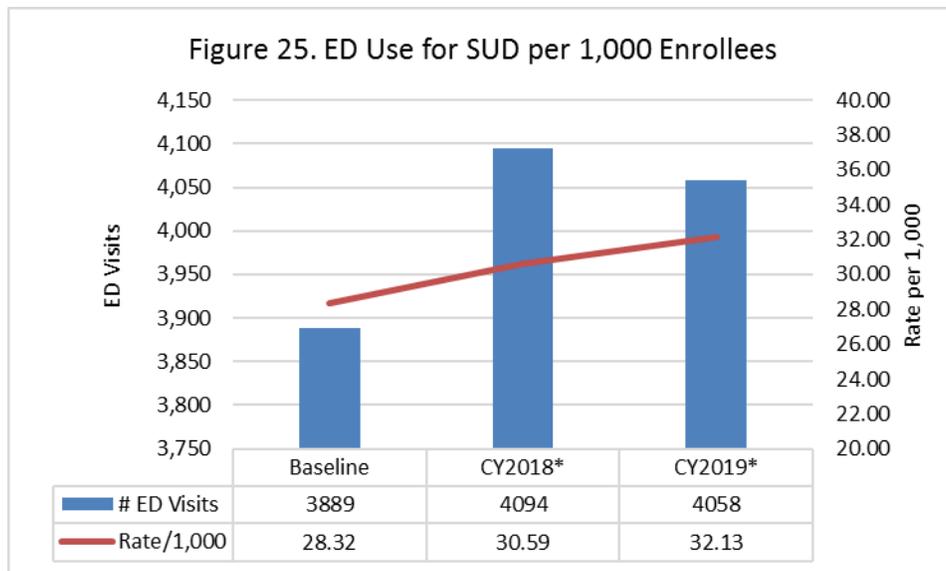
**Population:** Medicaid members.

**Data Source and Time Period:** The results were calculated in accordance with CMS guidelines for SUD Medicaid demonstrations, Technical Specification Manual version 2, using MMIS paid claims for CY2017-CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Lower scores are preferable when measuring ED visits. The number of ED visits for SUD rose slightly over baseline in each year of the demonstration. Visits for SUD ranged from a low of 3,889 at baseline to a high of 4,094 in CY2018, with 4,058 visits in CY2019. The rate per 1,000 increase over baseline was 7.99% in CY2018 and 13.43% in CY2019. Increases over baseline were statistically significant in CY2018 and CY2019.



*\*VT results show a statistically significant change over baseline performance*

Research Question 1: Will the demonstration result in improved access to care?

Hypothesis 6: Premium requirements for eligible families above 195% FPL will not impede access to enrollment.

Measure(s)

1.6.1 Percent of children found eligible for Dr. Dynasaur with premium whose families paid the premium necessary to effectuate coverage

**Measure 1.6.1: Percent of Children Found Eligible for Dr. Dynasaur with A Premium Whose Coverage Was Effectuated**

Goal: Access to Care

Research Question: 1. Will the demonstration result in improved access to care?

Hypothesis: 6. Premium requirements for eligible families above 195% FPL will not impede access to enrollment.

**Measure Description:** Percent of children found eligible for and enrolled in Dr. Dynasaur with premium plans whose families either paid the premium necessary to effectuate coverage or whose plan was automatically effectuated (per automatic renewal authorization, which do not require payment of the initial premium for that coverage year).

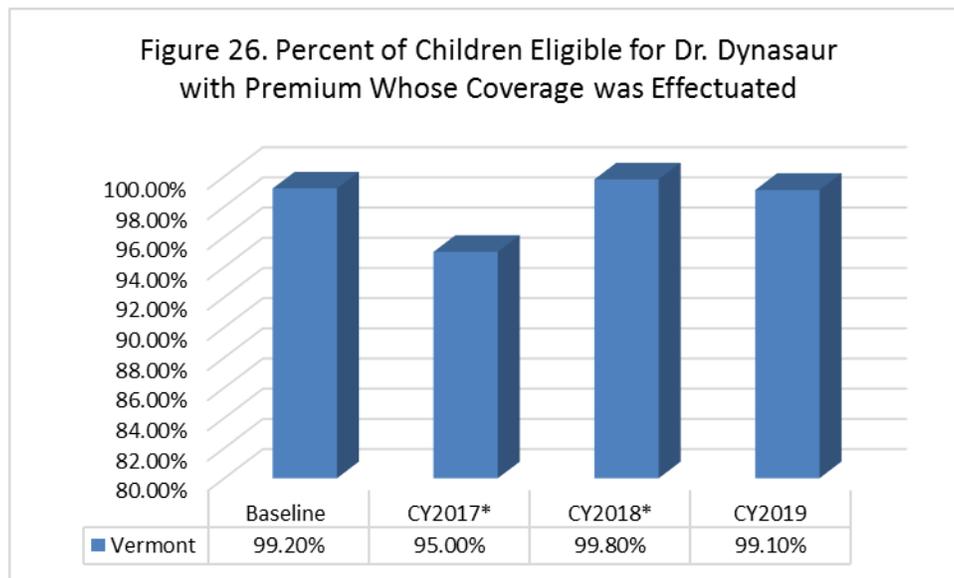
**Population:** Medicaid members.

**Data Source and Time Period:** Vermont Health Connect, Medicaid eligibility files for CY2016-2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Over 95% of families with premiums had coverage during each of the demonstration years. Baseline performance was 99.20%. Scores declined slightly in CY2017 to 95% before increasing to 99.80% in CY2018 and 99.10% in CY2019. Relative to baseline, Vermont CY2017 showed a slight decrease in coverage (4%), before increasing to baseline levels in the remaining years of the demonstration. Change over baseline was significant in CY2017 and CY2018.



*\*VT results show a statistically significant change over baseline performance*

Research Question 1: Will the demonstration result in improved access to care?

Hypothesis 7: The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage.

**Measure(s)**

- 1.7.1 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
- 1.7.2 Percent of uninsured Vermonters

**Measure 1.7.1: Percent of Members with Vermont Premium Assistance (VPA) Who Had Coverage from the Month They Signed Up Through the End of the Year, Without Any Gaps in Coverage Or VPA**

Goal: Access to Care

Research Question: 1. Will the demonstration result in improved access to care?

Hypothesis: 7. The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage.

**Measure Description:** The percent of individuals selecting a Qualified Health Plan on the Vermont Health Connect Marketplace with VPA who had coverage from the month they signed up through the end of the year, without any gaps in coverage or VPA.

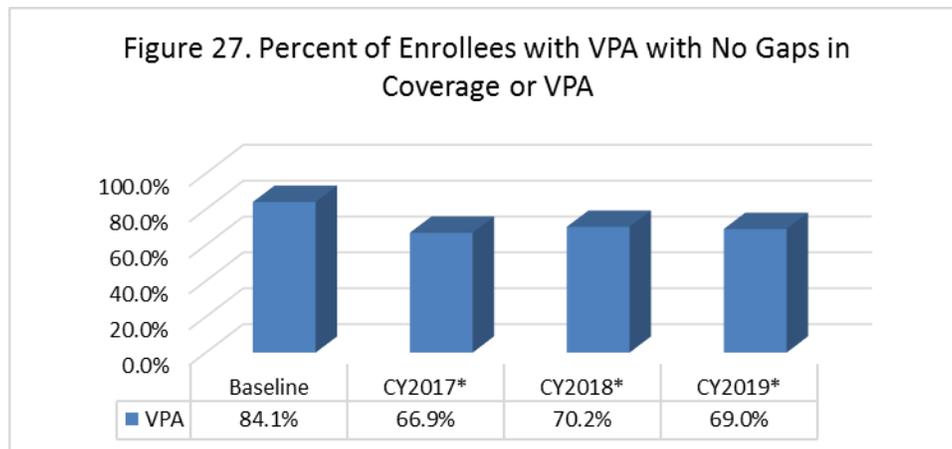
**Population:** VPA members.

**Data Source and Time Period:** Vermont Health Connect, VPA eligibility files for CY2016 – 2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** The percent of individuals who had VPA with no gaps in coverage or VPA has declined from a baseline in 2016 of 84.1% in each year of the demonstration. The percent of individuals with no gaps in coverage or VPA was 66.9% for CY2017, 70.2% in CY2018, and 69% in CY2019. The decline from the baseline level was 20.45% in CY2017, 16.53% in CY2018 and 17.95% in CY2019. Decline over baseline was statistically significant in each year of the demonstration.



*\*VT results show a statistically significant change over baseline performance*

**Measure 1.7.2: Percent of Uninsured Vermonters**

- Goal: Access to Care
- Research Question: 1. Will the demonstration result in improved access to care?
- Hypothesis: 7. The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage.

**Measure Description:** The percent of uninsured Vermonters is measured every three to five years, per legislative direction, through the Vermont Household Insurance Survey.

**Population:** Representative sample of Vermont Households.

**Data Source and Time Period:** Surveys conducted by the Vermont Department and Health and reported to the Vermont Legislature in 2014 and 2018.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive Statistics.

**Findings:** Vermont’s uninsured rate was 3.7% in 2014 and continued to drop, yielding a rate of 3.2% in 2018. Vermont Department of Health reports that the decline of 13% over the baseline period was not statistically significant.

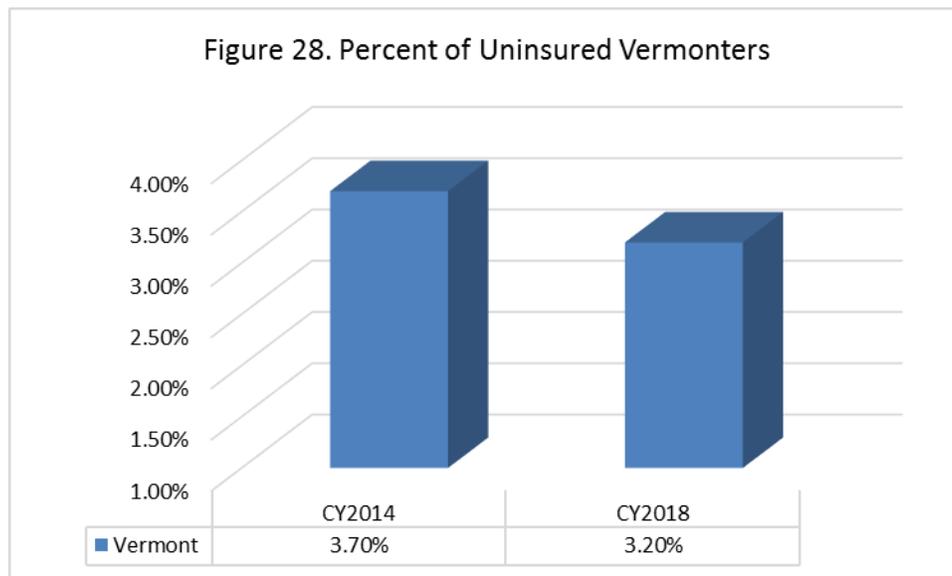


Table F-5 provides an overview of results for Research Question #1, Hypothesis #7

*Table F-5: Results for Research Question #1, Hypothesis #7*

Access to Care					
Research Question 1: Will the demonstration result in improved access to care?					
Hypothesis 7: The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
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	VPA	-	✓	N/A	Logistic Regression
Percent of uninsured Vermonters	Vermont	+	-	N/A	Descriptive

Research Question 2: Will value based payment models increase access to care?

Hypothesis 1: The Medicaid ACO will improve access to mental health and substance use disorder treatment.

Measure(s)

- 2.1.1 Percent of Enrollees Who Received 30-Day Follow-Up After Discharge from ED for Mental Health
- 2.1.2 Percent of Enrollees Who Received 30-Day Follow-Up After Discharge from ED for Alcohol or Other Drug Dependence
- 2.1.3 Percent of Enrollees Discharged Who Had Follow-Up At 7-Days After Hospitalization for Mental Illness
- 2.1.4 Percent of Enrollees Discharged Who Had Follow-Up At 30 Days After Hospitalization for Mental Illness

### Measure 2.1.1: Percent of Enrollees Who Received 30-Day Follow-Up After Discharge from ED for Mental Health

- Goal: Access to Care
- Research Question: 2. Will value-based payment models increase access to care?
- Hypothesis: 1. The Medicaid ACO will improve access to mental health and substance use disorder treatment.

**Measure Description:** The percentage of emergency department (ED) visits for members 6 years of age and older with a principal diagnosis of mental illness or intentional self-harm, for which the member received follow-up within 30 days of the ED visit (HEDIS® FUM).

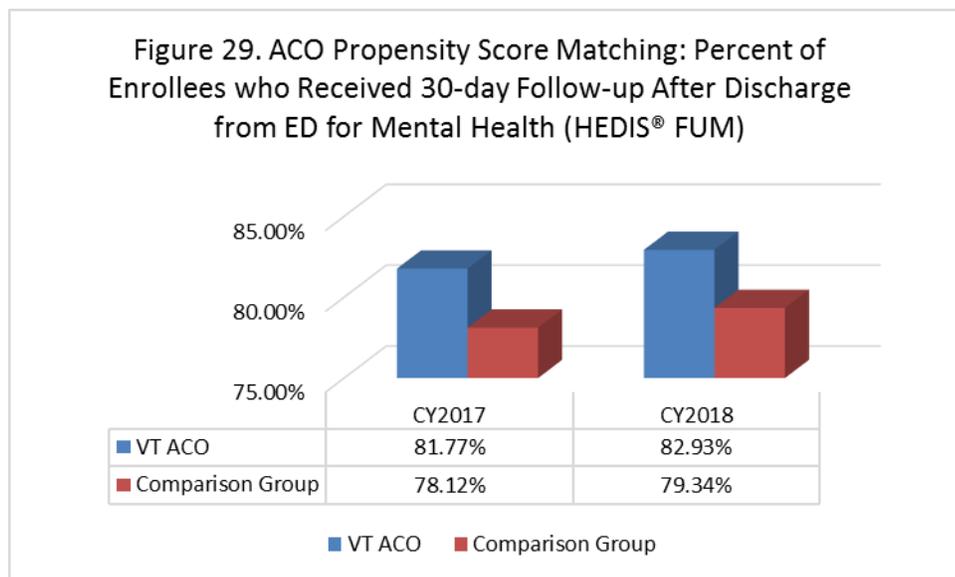
**Population:** Medicaid members eligible for ACO attribution.

**Data Source and Time Period:** The results were calculated following HEDIS® Medicaid guidelines, using MMIS paid claims. Results are for CY2017– CY2018.

**National Benchmark:** N/A

**Analytical Approach:** Propensity Score Matching with T-test.

**Findings:** Using Propensity Score Matching, a sample of ACO-attributed members were matched with members who were eligible for the ACO but not attributed to the ACO. In each of the two years studied, ACO performance was higher than the comparison group. ACO scores were 81.77% and 82.93% with comparison group yielding scores of 78.12% and 79.34% for CY2017-2018, respectively. Differences between groups were not statistically significant in any year.



**Measure 2.1.2: Percent of Enrollees Who Received 30-Day Follow-Up After Discharge from ED for Alcohol or Other Drug Dependence**

- Goal: Access to Care
- Research Question: 2. Will value-based payment models increase access to care?
- Hypothesis: 1. The Medicaid ACO will improve access to mental health and substance use disorder treatment.

**Measure Description:** The percentage of emergency department (ED) visits for members 13 years of age and older with a principal diagnosis of alcohol or other drug (AOD) abuse or dependence, who had a follow up visit for AOD within 30 days of the ED visit. (HEDIS® FUA).

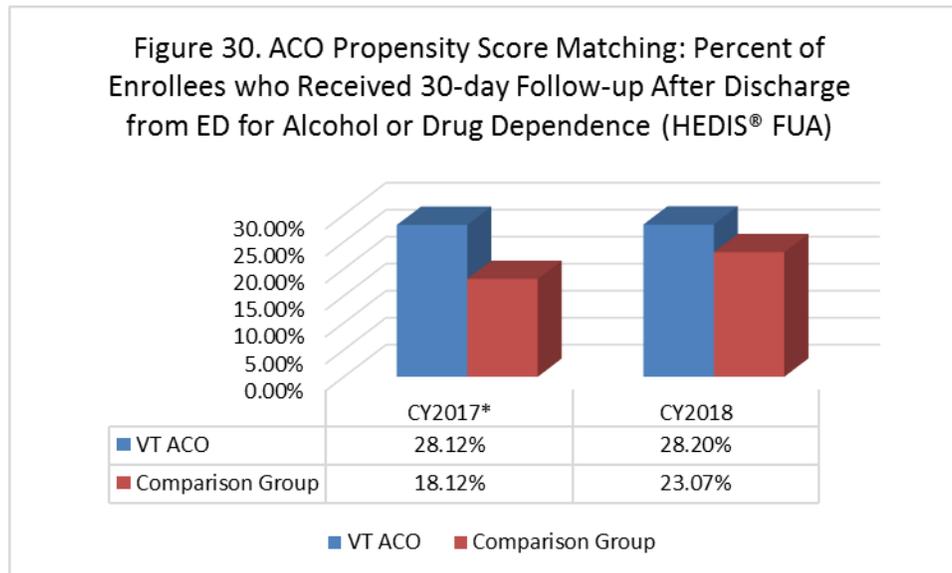
**Population:** Medicaid members eligible for ACO attribution.

**Data Source and Time Period:** The results were calculated following HEDIS® Medicaid guidelines, using paid claims. Results are for CY2017– CY2018.

**National Benchmark:** N/A

**Analytical Approach:** Propensity Score Matching with T-test.

**Findings:** Using Propensity Score Matching, a sample of ACO attributed members were matched with members who were eligible for the ACO but not attributed to the ACO. In CY2017 and CY2018, ACO performance was higher than the comparison group. ACO scores were 28.12% and 28.20%; the comparison group yielded scores of 18.12% and 23.07%. Differences between groups were statistically significant in CY2017.



\*Propensity Score Matching yields a statistically significant difference between VT-ACO aligned members and comparison group

**Measure 2.1.3: Percent of Enrollees Discharged Who Had Follow-Up at 7 Days After Hospitalization for Mental Illness**

- Goal: Access to Care
- Research Question: 2. Will value-based payment models increase access to care?
- Hypothesis: 1. The Medicaid ACO will improve access to mental health and substance use disorder treatment.

**Measure Description:** The percentage of discharges for members 6 years of age and older who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health practitioner within 7 days after discharge (HEDIS® FUH).

**Population:** Medicaid ACO enrollees.

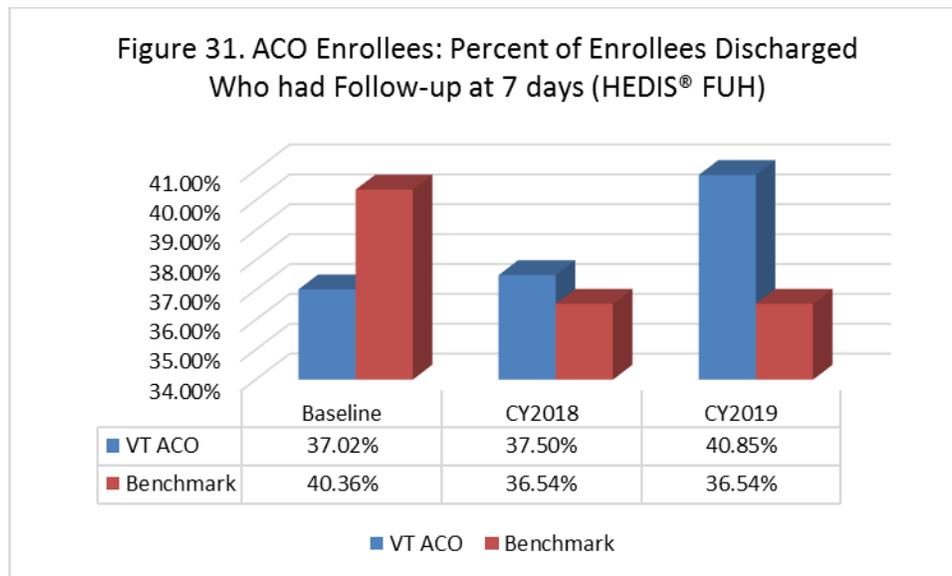
**Data Source and Time Period:** The results were calculated following HEDIS® Medicaid guidelines, using paid claims. Results are for CY2017(baseline) – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Over 37% of members received follow-up after hospitalization for mental illness in each year of the demonstration. Baseline results were 37.02%; performance was stable in CY2018 at 37.50% before increasing to 40.85% in CY2019. Vermont ACO results show an improvement over baseline in CY2019 of 10.32%. Change over baseline was statistically significant in CY2018.

ACO performance was above the national benchmark in each year of the demonstration, except for the baseline period. In CY2019 the ACO scored 11.80% higher than the national benchmark.



**Measure 2.1.4: Percent of Enrollees Discharged Who Had Follow-Up at 30 Days After Hospitalization for Mental Illness**

- Goal: Access to Care
- Research Question: 2. Will value-based payment models increase access to care?
- Hypothesis: 1. The Medicaid ACO will improve access to mental health and substance use disorder treatment.

**Measure Description:** The percentage of discharges for members 6 years of age and older who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health practitioner within 30 days after discharge (HEDIS® FUH).

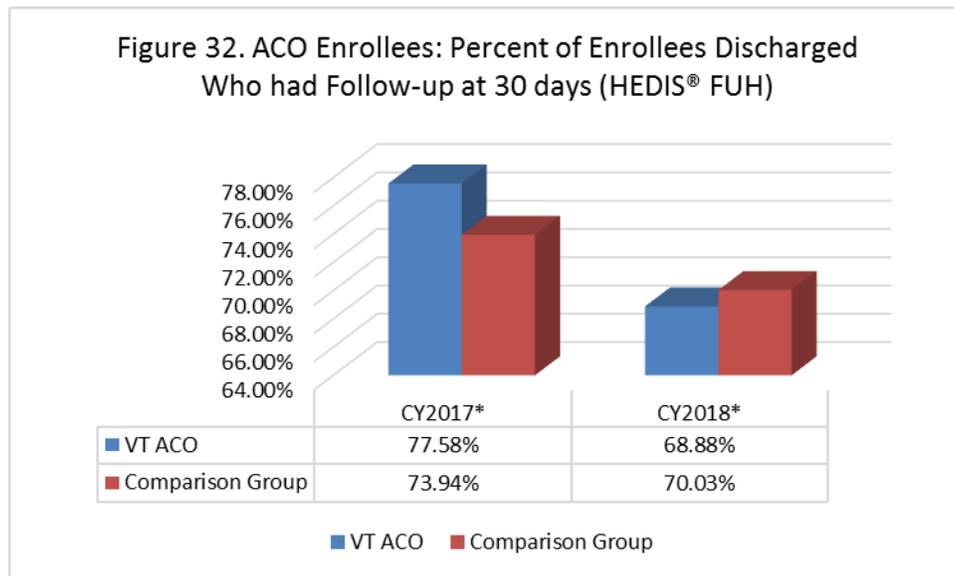
**Population:** Medicaid ACO enrollees.

**Data Source and Time Period:** The results were calculated following HEDIS® Medicaid guidelines, using paid claims. Results are for CY2017(baseline) – CY2018.

**National Benchmark:** N/A

**Analytical Approach:** Propensity Score Matching with T-test.

**Findings:** Using Propensity Score Matching, a sample of ACO attributed members were matched with members who were eligible for the ACO but not attributed to the ACO. In CY2017 ACO performance was higher than the comparison group at 77.58%. In 2018 the ACO scored lower than the comparison group at 68.88. The comparison group yielded scores of 73.94% and 70.03% for CY2017 and CY2018 respectively. Differences between groups were statistically significant in both years.



*\*Propensity Score Matching yields a statistically significant difference between VT-ACO aligned members and comparison group*

Table F-6 provides an overview of results for Research Question #2, Hypothesis #1

Table F-6: Results for Research Question #2, Hypothesis #1

Research Question 2: Will value based payment models increase access to care?				
Hypothesis 1: The Medicaid ACO will improve access to mental health and substance use disorder treatment				
Measure	Year	ACO	Statistically Significant	Analytic Method
Percent of enrollees who received 30-day follow-up after discharge from ED for mental health HEDIS® FUM	2017	+	-	PSM w/T-test
	2018	+	-	PSM w/T-test
Percent of enrollees who received 30-day follow-up after discharge from ED for alcohol or other drug dependence HEDIS® FUA	2017	+	✓	PSM w/T-test
	2018	+	-	PSM w/T-test
Percent of enrollees discharged who had follow-up at 30 days after hospitalization for mental illness HEDIS® FUH	2017	+	✓	PSM w/T-test
	2018	-	✓	PSM w/T-test
	CY2019 Change Over Baseline	Improved and Statistically Significant	At or Above Benchmark	Analytic Method
Percent of enrollees discharged who had follow-up at 7 days after hospitalization for mental illness HEDIS® FUH	+	-	✓	Logistic Regression

Research Question 2: Will value-based payment models increase access to care?

Hypothesis 2: The Medicaid ACO will improve access to adolescent well-care.

Measure(s)

2.2.1 Percent of adolescents ages 12 to 21 who receive one or more well-care visits with PCP

### Measure 2.2.1: Percent of Adolescents Ages 12 to 21 Who Receive One or More Well-Care Visits

- Goal: Access to Care  
Research Question: 2. Will value-based payment models increase access to care?  
Hypothesis: 2. The Medicaid ACO will improve access to adolescent well-care.

**Measure Description:** Percentage of adolescents ages 12 to 21 that had at least one comprehensive well-care visit with a PCP or an obstetrical/gynecological practitioner during the measurement year (HEDIS® AWC – Total Score).

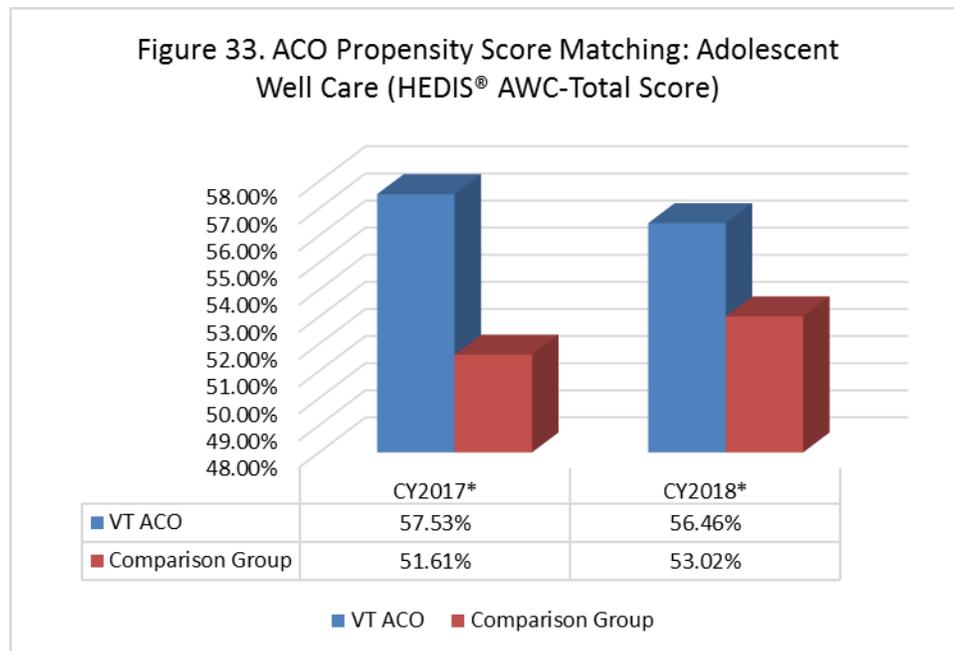
**Population:** Medicaid members eligible for ACO attribution.

**Data Source and Time Period:** The results were calculated following HEDIS® Medicaid guidelines, using MMIS paid claims CY2017– CY2018.

**National Benchmark:** N/A

**Analytical Approach:** Propensity Score Matching with T-test.

**Findings:** Using Propensity Score Matching, a sample of ACO attributed members were matched with members who were eligible for the ACO but not attributed to the ACO. In each of the two years studied, ACO performance was higher than the comparison group. ACO scores were 57.53% and 56.46%, with comparison group yielding scores of 51.61% and 53.04% for CY2017-2018, respectively. Differences between groups were statistically significant in each year of the demonstration.



*\*Propensity Score Matching yields a statistically significant difference between VT-ACO aligned members and comparison group*

Research Question 2: Will value-based payment models increase access to care?

Hypothesis 3: The Medicaid ACO will increase engagement with eligible enrollees

**Measure(s)**

2.3.1 Percent Total Medicaid Enrollees aligned with ACO

2.3.2 Percent ACO Eligible Enrollees aligned with ACO

### Measure 2.3.1: Percent of Total Medicaid Enrollees Who are Aligned with the ACO

- Goal: Access to Care  
Research Question: 2. Will value-based payment models increase access to care?  
Hypothesis: 3. The Medicaid ACO will increase engagement with eligible enrollees.

**Measure Description:** The percentage of all Medicaid members, regardless of ACO eligibility, who are attributed to the ACO.

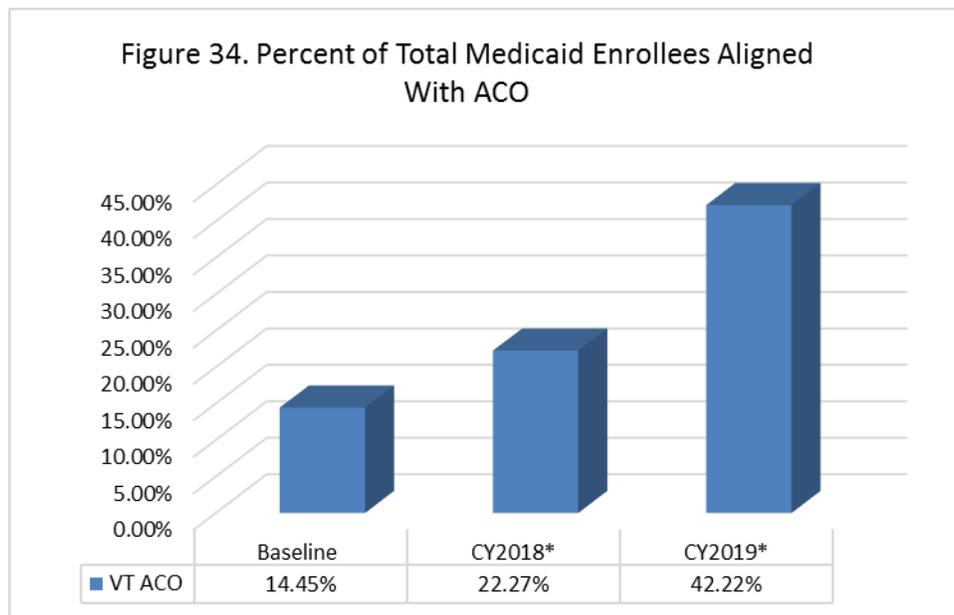
**Population:** Medicaid members.

**Data Source and Time Period:** MMIS paid claims CY2017 – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Vermont results show that ACO enrollment as a percent of total Medicaid beneficiaries is increasing year over year. ACO attributed members rose from the baseline level of 28,593 to 42,342 members in CY2018. In CY2019, ACO alignment rose to 70,004 members, representing a 176% increase over baseline. Results showed a statistically significant change over baseline in each year.



*\*VT-ACO results show a statistically significant change over baseline performance*

**Measure 2.3.2: Percent of ACO Eligible Enrollees who are Aligned with the ACO**

- Goal: Access to Care
- Research Question: 2. Will value-based payment models increase access to care?
- Hypothesis: 3. The Medicaid ACO will increase engagement with eligible enrollees.

**Measure Description:** The percentage of Medicaid members who are eligible for participation in the ACO, who are attributed to the ACO.

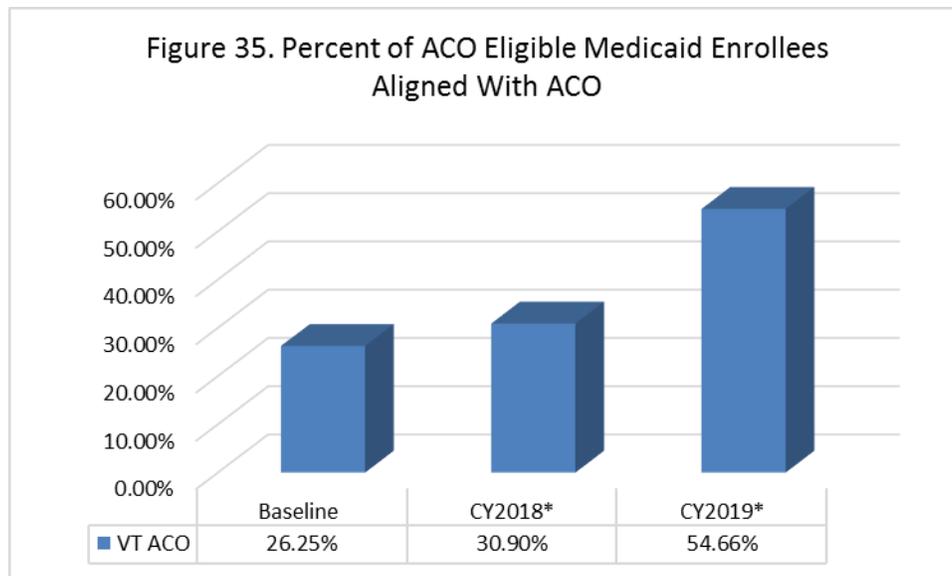
**Population:** Medicaid, full benefit eligible enrollees, excluding dual eligible and LTSS members.

**Data Source and Time Period:** Medicaid eligibility files, MMIS, paid claims CY2017 – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Vermont results show that ACO enrollment as a percent of ACO eligible Medicaid members is increasing year over year. ACO attributed members rose from the baseline level of 28,593 to 42,342 members in CY2018. In CY2019, ACO alignment rose to 70,004 members, representing 54.66% of these members eligible for the ACO. Results show a statistically significant change over baseline in each year.



*\*VT-ACO results show a statistically significant change over baseline performance*

## Quality of Care

In assessing the demonstration’s performance in Quality of Care, two research questions and eight hypotheses were examined. A summary of these questions and corresponding hypotheses are presented in Table F-7 below. Findings are presented by research question and hypothesis for Quality of Care on the following pages.

*Table F-7. Quality of Care Research Questions and Hypotheses*

Research Question	Hypothesis
<b>3. Will the demonstration result in improved quality of care?</b>	1. The demonstration will improve quality of care
	2. ACO enrollees will show improved diabetes and hypertension control
	3. The demonstration will increase preventive health screenings for female enrollees
	4. The demonstration will improve Mental health follow-up after psychiatric hospitalization
	5. The demonstration will improve Initiation and engagement in SUD treatment.
	6. The demonstration will improve enrollee experience of care and rating of the health plan
	7. The demonstration will improve self-report of health status for enrollees with LTSS needs
<b>4. Will improved access to primary care result in improved health outcomes?</b>	1. The Blueprint for Health will improve diabetes control for Medicaid members age 18-75

Research Question 3: Will the demonstration result in improved quality of care?

Hypothesis 1. The demonstration will improve quality of care.

**Measure(s)**

- 3.1.1 Percent of enrollees receiving appropriate asthma medication management 50% compliance
- 3.1.2 Percent of enrollees receiving appropriate asthma medication management 75% compliance
- 3.1.3 Percent of ACO enrollees screened for clinical depression and who have a follow-up plan
- 3.1.4 Percent of ACO enrollees who received developmental screening in the first 3 years of life

**Measure 3.1.1: Percent of Enrollees Receiving Appropriate Asthma Medication Management 50% Compliance**

Goal: Quality of Care  
 Research Question: 3. Will the demonstration result in improved quality of care?  
 Hypothesis: 1. The demonstration will result in improved quality of care.

**Measure Description:** Percent of enrollees receiving appropriate asthma medication management 50% Compliance (HEDIS® MMA-Total Score).

**Population:** Medicaid members.

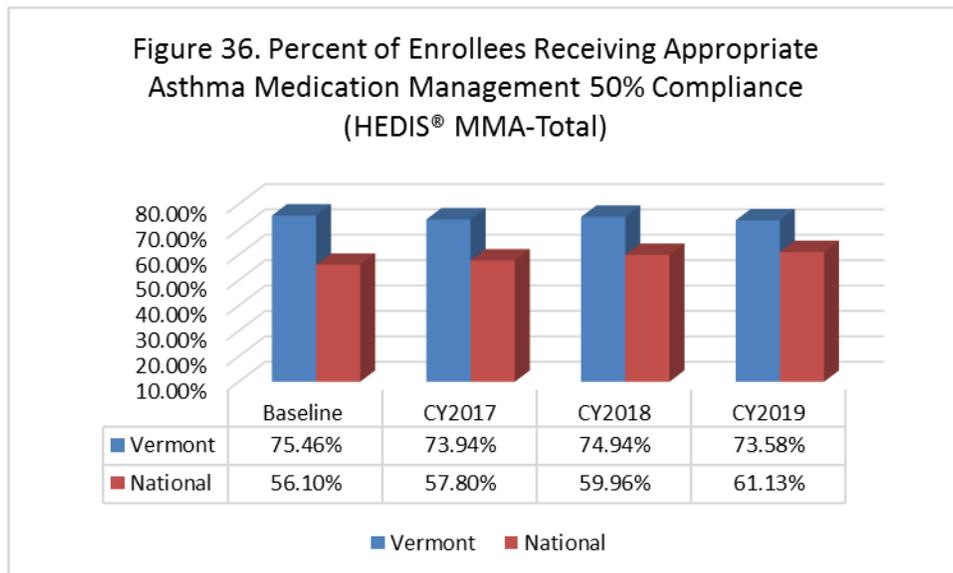
**Data Source and Time Period:** The results were calculated following HEDIS® Medicaid guidelines, using MMIS paid claims CY2016 – CY2019.

**National Benchmark:** HEDIS® 50<sup>th</sup> Percentile for Medicaid programs.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 73% of eligible members received appropriate asthma medication (50% compliance) in each of the demonstration years. Results fluctuated slightly year to year with 75.46% at baseline, 73.94% in CY2017, 74.94% in CY2018 and 73.58% in CY2019. Change over baseline performance was not statistically significant in any year of the demonstration.

Vermont results outperformed Medicaid programs at the 50<sup>th</sup> percentile nationally in each demonstration year, including the baseline year. In CY2019 Vermont performed 20.37% higher than the national benchmark.



**Measure 3.1.2: Percent of Enrollees Receiving Appropriate Asthma Medication Management 75% Compliance**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 1. The demonstration will result in improved quality of care.

**Measure Description:** Percent of enrollees receiving appropriate asthma medication management 75% compliance (HEDIS® MMA-Total Score).

**Population:** Medicaid members.

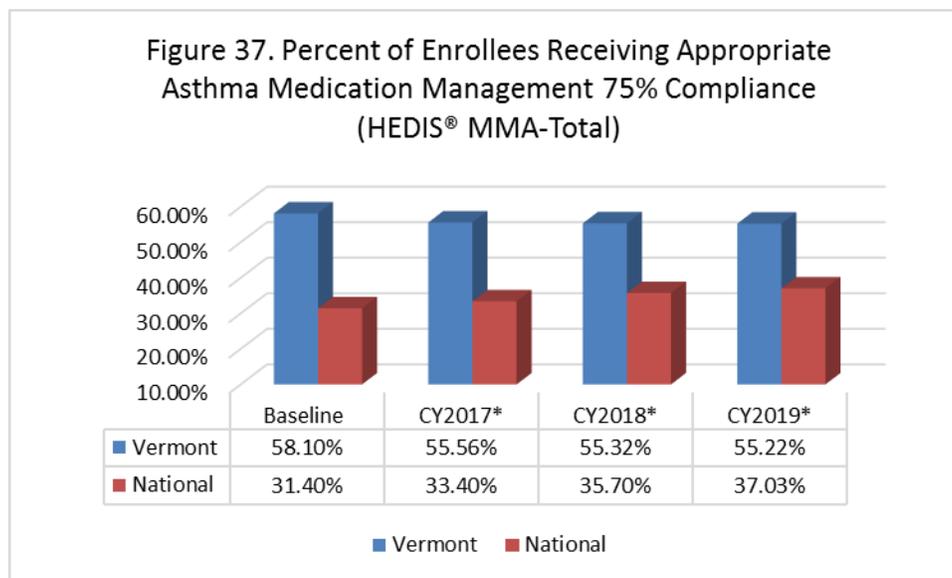
**Data Source and Time Period:** The results were calculated following HEDIS® Medicaid guidelines, using MMIS paid claims CY2016 – CY2019.

**National Benchmark:** HEDIS® 50<sup>th</sup> Percentile for Medicaid programs.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 55% of eligible members received appropriate asthma medication (75% compliance) in each of the demonstration years. Results were stable after a decrease from 58.10% at baseline to 55.56% in CY2017, 55.32% in CY2018 and 55.22% in CY2019. Compared to baseline results, the demonstration declined slightly, performing 4.37% lower in CY2017, 4.78% lower in CY2018 and 4.96% lower in CY2019. Changes over baseline were statistically significant in each year of the demonstration.

Vermont results outperformed Medicaid programs at the 50<sup>th</sup> percentile nationally in each demonstration year, including the baseline year. In CY2019 Vermont performed 49.12% higher than the national benchmark.



*\*VT results show a statistically significant change over baseline performance*

### Measure 3.1.3: Percent of ACO Enrollees Screened for Clinical Depression and Who Have A Follow-Up Plan

Goal: Quality of Care  
Research Question: 3. Will the demonstration result in improved quality of care?  
Hypothesis: 1. The demonstration will result in improved quality of care.

**Measure Description:** Percent of ACO enrollees screened for clinical depression and who have a follow-up plan (HEDIS® DSF).

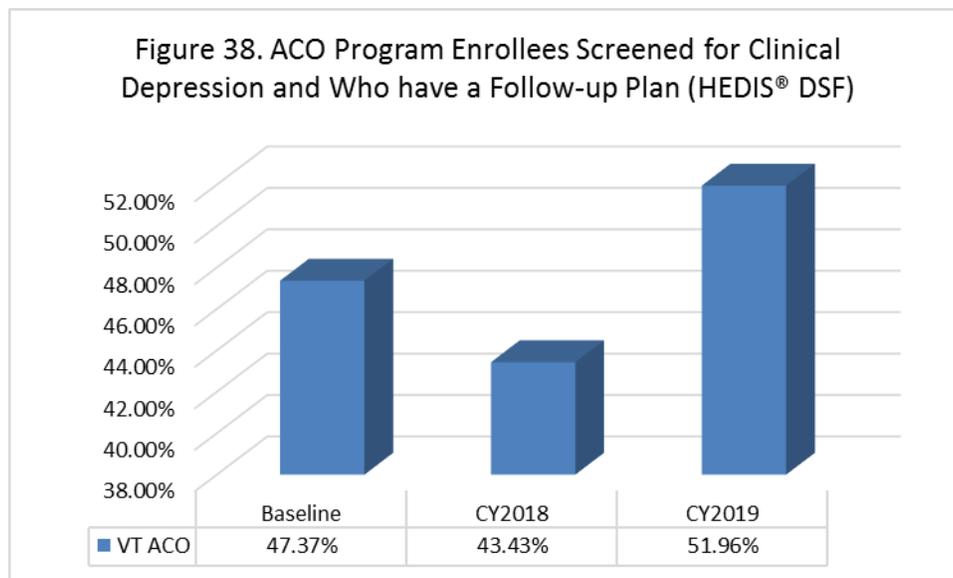
**Population:** Medicaid ACO members.

**Data Source and Time Period:** Results were calculated using HEDIS® Medicaid hybrid specification using Medical records and MMIS paid claims CY2017 – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Vermont results show that ACO performance declined over baseline from 47.37% in CY2017 (baseline) to 43.43% in CY2018, before increasing to 51.96% in CY2019. Change over baseline represented an 8.32% decline in CY2018 and a 9.69% increase in CY2019. Changes over baseline were not statistically significant in any year of the demonstration.



**Measure 3.1.4: Percent of ACO Enrollees Who Received Developmental Screening in the First 3 Years of Life**

Goal: Quality of Care  
 Research Question: 3. Will the demonstration result in improved quality of care?  
 Hypothesis: 1. The demonstration will result in improved quality of care.

**Measure Description:** Percent of ACO enrollees who received Developmental Screening in the first 3 years of life (NQF #1448).

**Population:** Medicaid ACO members.

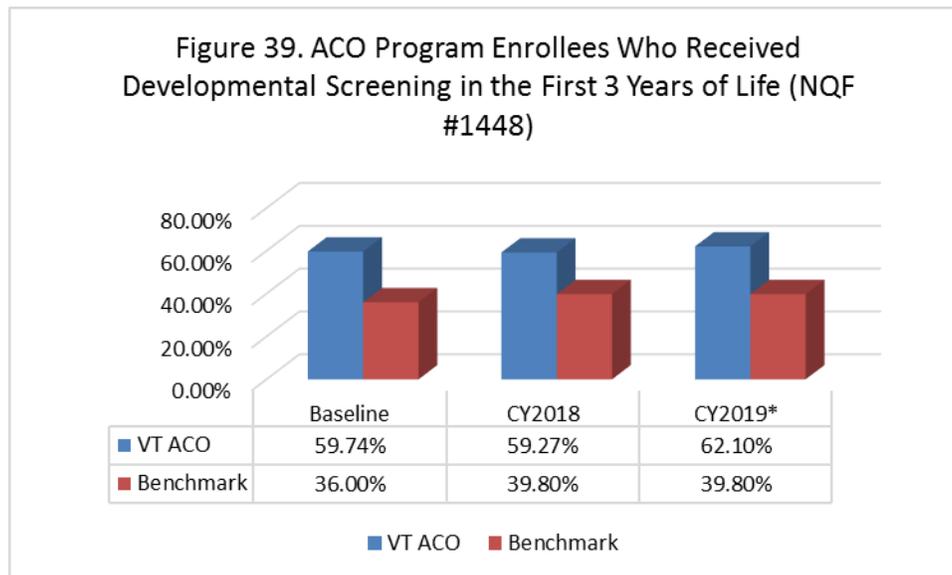
**Data Source and Time Period:** Results were calculated using HEDIS® Medicaid hybrid specification using MMIS paid claims CY2017 – CY2019.

**National Benchmark:** Medicaid, All Lines of Business, 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Results were stable, with 59.74% at baseline and 59.27% in CY2017 before increasing to 62.10% in CY2019. CY2019 results show an increase of 3.95%. Change over baseline was statistically significant for CY2019.

Vermont results show that the ACO outperformed Medicaid plans nationally in each year of the demonstration, including baseline. In CY2019 the ACO performed 56.03% above the national benchmark.



*\*VT results show a statistically significant change over baseline performance*

Table F-8 provides an overview of results for Research Question #3, Hypothesis #1

Table F-8: Results for Research Question #3, Hypothesis #1

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 1: The demonstration will improve quality of care					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of enrollees receiving appropriate asthma medication management 50% Compliance HEDIS® MMA (Total Score)	Medicaid	-	-	✓	Logistic Regression
Percent of enrollees receiving appropriate asthma medication management 75% Compliance HEDIS® MMA (Total Score)	Medicaid	-	✓	✓	Logistic Regression
Percent of enrollees screened for clinical depression and who have a follow-up plan HEDIS® DSF	ACO	+	-	N/A	Logistic Regression
Percent of enrollees who received Developmental Screening in the first 3 years of life NQF-1448	ACO	+	✓	✓	Logistic Regression

Research Question 3: Will the demonstration result in improved quality of care?

Hypothesis 2. ACO enrollees will show improved diabetes and hypertension control.

Measure(s)

- 3.2.1 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
- 3.2.2 Percent of adults 18–85 years of age with a diagnosis of hypertension and whose blood pressure was adequately controlled

**Measure 3.2.1: Percent of Patients 18-75 Years of Age with Diabetes (Type 1 And Type 2) Whose Hba1c Was Poorly Controlled**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 2. ACO enrollees will show improved diabetes and hypertension control.

**Measure Description:** 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.

**Population:** Representative sample of Medicaid ACO members.

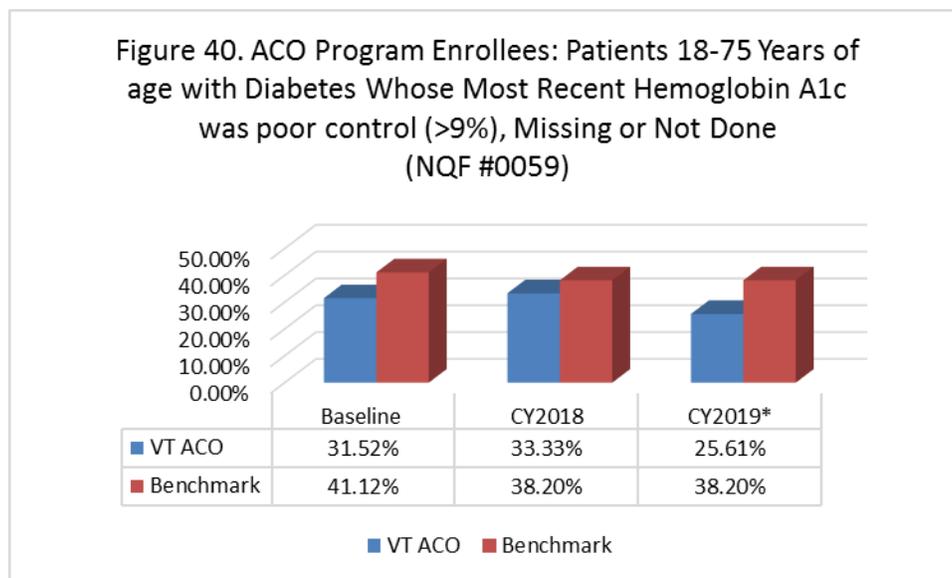
**Data Source and Time Period:** Results were calculated in adherence to NQF guidelines using Medical records and MMIS paid claims CY2017 – CY2019.

**National Benchmark:** Medicaid, All Lines of Business, 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Lower scores are preferred when measuring diabetes in poor control. Diabetes in poor control was 31.52% at baseline, 33.33% in CY2018 and 25.61% in CY2019. Performance declined relative to baseline, showing a 5.74% increase in poor control in CY2018 before improving again in CY2019 showing an 18.75% decrease over baseline. Change over baseline was statistically significant for CY2019.

Vermont results show that the ACO outperformed its benchmark in each demonstration year. In CY2019 the ACO performed 32.96% better than the national benchmark.



*\*VT results show a statistically significant change over baseline performance*

**Measure 3.2.2: Percent of Adults 18–85 Years of Age with A Diagnosis of Hypertension and Whose Blood Pressure Was Adequately Controlled**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 2. ACO enrollees will show improved diabetes and hypertension control.

**Measure Description:** Percent of adult ACO enrollees, age 18-85 years of age with a diagnosis of hypertension and whose blood pressure was adequately controlled (HEDIS® CBP).

**Population:** Representative sample of Medicaid ACO members.

**Data Source and Time Period:** Results were calculated in adherence to HEDIS® Medicaid hybrid guidelines using Medical records and MMIS paid claims CY2017 – CY2019.

**National Benchmark:** Medicaid, All Lines of Business, 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Compared to baseline performance, the percent of members with adequately controlled blood pressure declined from 64.61% to 63.90% in CY2018 (a 1.10% decrease) and to 62.63% in CY2019 (a 3.06% decrease). Changes over baseline were not statistically significant.

Vermont results show that the ACO outperformed its benchmark in each year of the demonstration, including baseline. In CY2019, the ACO performed 6.73% above the national benchmark.

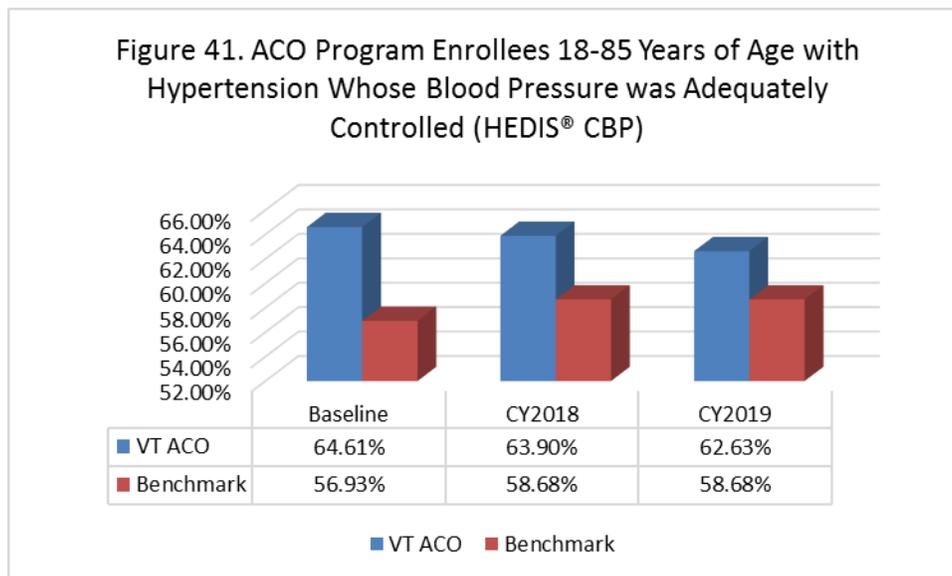


Table F-9 provides an overview of results for Research Question #3, Hypothesis #2

Table F-9: Results for Research Question #3, Hypothesis #2

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 2: ACO enrollees will show improved diabetes and hypertension control					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
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 NQF-0059	ACO	+	✓	✓	Logistic Regression
Percent of adults 18–85 years of age with a diagnosis of hypertension and whose blood pressure was adequately controlled HEDIS® CBP	ACO	-	-	✓	Logistic Regression

Research Question 3: Will the demonstration result in improved quality of care?

Hypothesis 3. The demonstration will increase preventive health screenings for female enrollees.

Measure(s)

3.3.1 Percent of female enrollees age 50 to 74 who receive breast cancer screening

3.3.2 Percent of female enrollees screened for chlamydia

**Measure 3.3.1: Percent of Female Enrollees Age 50 to 74 Who Receive Breast Cancer Screening**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 3. The demonstration will increase preventive health screenings for female enrollees.

**Measure Description:** The percent of female enrollees age 50 to 74 who receive breast cancer screening at appropriate intervals (HEDIS® BCS).

**Population:** Medicaid members.

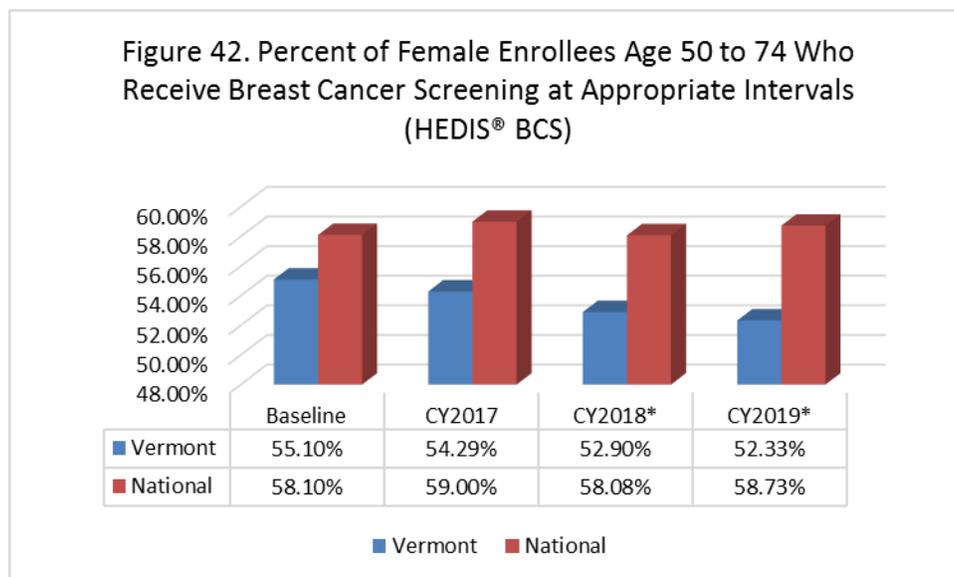
**Data Source and Time Period:** The results were calculated following HEDIS® Medicaid guidelines, using MMIS paid claims CY2016 – CY2019.

**National Benchmark:** HEDIS® 50<sup>th</sup> Percentile for Medicaid programs.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 52% of female enrollees received breast cancer screenings at appropriate intervals during each of the demonstration years. Vermont results have declined from the baseline of 55.10% to 54.29% in CY2017, 52.90% in CY2018 and 52.33% in CY2019. Decreases over baseline for each year CY2017 – CY2019 were 1.47%, 3.99% and 5.03% respectively. Change over baseline was statistically significant in CY2018 and CY2019.

Vermont results were also lower than those for Medicaid plan nationally in each demonstration year, including baseline. In CY2019 Vermont performed 10.9% below Medicaid programs nationally.



*\*VT results show a statistically significant change over baseline performance*

### Measure 3.3.2: Percent of Female Enrollees Screened for Chlamydia

Goal: Quality of Care  
Research Question: 3. Will the demonstration result in improved quality of care?  
Hypothesis: 3. The demonstration will increase preventive health screenings for female enrollees.

**Measure Description:** Percent of female enrollees screened for Chlamydia (HEDIS® CHL).

**Population:** Medicaid members.

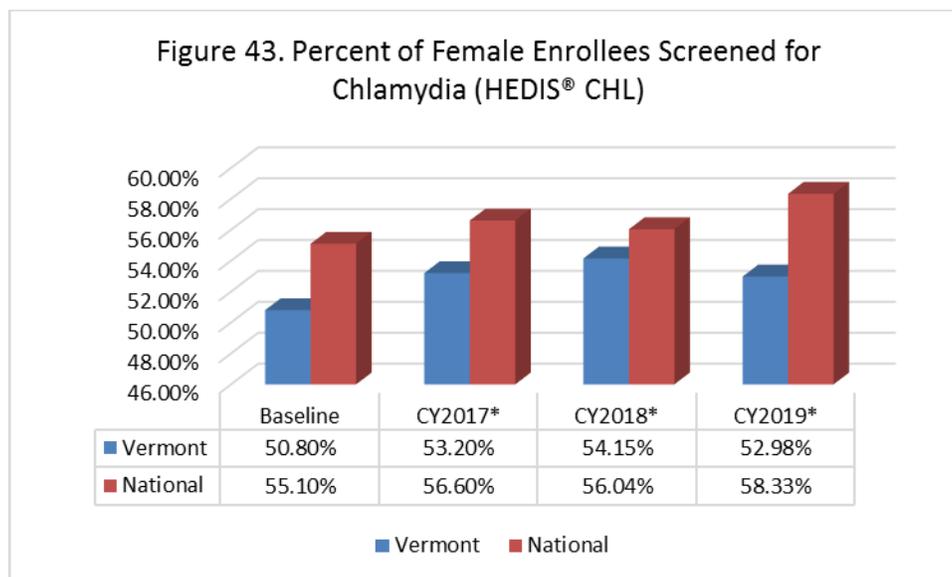
**Data Source and Time Period:** The results were calculated following HEDIS® Medicaid guidelines, using MMIS paid claims CY2016 – CY2019.

**National Benchmark:** HEDIS® 50<sup>th</sup> Percentile for Medicaid programs.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 52% of female enrollees were screened for chlamydia in each of the demonstration years. Vermont results increased from a baseline of 50.80% to 53.20% in CY2017, 54.15% in CY2018 and 52.98% in CY2019. Increases over baseline for CY2017 – CY2019 were 4.72%, 6.59% and 4.29% respectively. Change over baseline was statistically significant in each demonstration year.

Vermont performance was lower than Medicaid plans nationally in each demonstration year, including baseline. In CY2019 Vermont performed 9% below Medicaid programs nationally.



*\*VT results show a statistically significant change over baseline performance*

Table F-10 provides an overview of results for Research Question #3, Hypothesis #3

Table F-10: Results for Research Question #3, Hypothesis #3

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 3: The demonstration will increase preventive health screenings for female enrollees					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of female enrollees age 50 to 74 who receive breast cancer screening appropriate intervals HEDIS® BCS	Medicaid	-	✓	-	Logistic Regression
Percent of female enrollees screened for Chlamydia HEDIS® CHL (Total Score)	Medicaid	+	✓	-	Logistic Regression

Research Question 3: Will the demonstration result in improved quality of care?

Hypothesis 4. The demonstration will improve mental health follow-up after psychiatric hospitalization.

**Measure(s)**

- 3.4.1 Percent of enrollees discharged who had follow-up at 7 days after hospitalization for mental illness
- 3.4.2 Percent of enrollees discharged who had follow-up at 30 days after hospitalization for mental illness

**Measure 3.4.1: Percent of Enrollees Discharged Who Had Follow-Up At 7 Days After Hospitalization for Mental Illness**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 4. The demonstration will improve mental health follow-up after psychiatric hospitalization.

**Measure Description:** Percent of enrollees discharged who had follow-up at 7 days (HEDIS® FUH).

**Population:** Medicaid members.

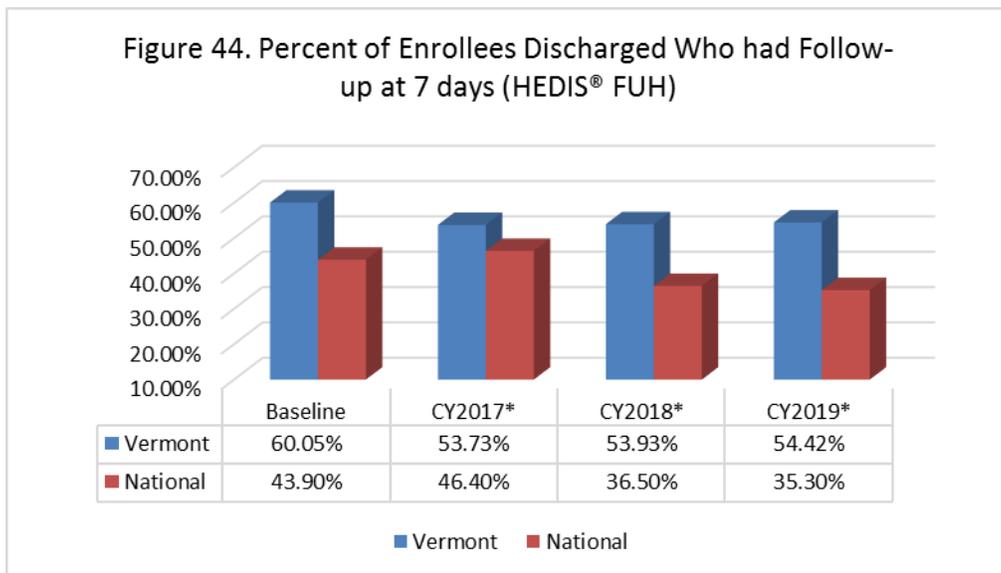
**Data Source and Time Period:** Results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims CY2016 – CY2019. HEDIS® specifications were modified to incorporate encounter data from Designated Agencies (specialized community mental health services).

**National Benchmark:** HEDIS® 50<sup>th</sup> Percentile for Medicaid programs.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 53% of members received follow-up after hospitalization for mental illness within seven days of discharge in each year of the demonstration. Performance has declined over the baseline of 60.05%, with 53.73% in CY2017, 53.93% in CY2018 and 54.42% in CY2019. Decreases over baseline were 10.52%, 10.19% and 9.38% respectively CY2017-2019. Changes over baseline were statistically significant in each demonstration year.

Vermont outperformed Medicaid plans nationally in each year of the demonstration, including baseline. In CY2019 Vermont performed 54.16% above the national benchmark.



*\*VT results show a statistically significant change over baseline performance*

**Measure 3.4.2: Percent of Enrollees Discharged Who Had Follow-Up At 30 Days After Hospitalization for Mental Illness**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 4. The demonstration will improve Mental health follow-up after psychiatric hospitalization.

**Measure Description:** Percent of enrollees discharged who had follow-up at 30 days after hospitalization for mental illness (HEDIS® FUH).

**Population:** Medicaid members.

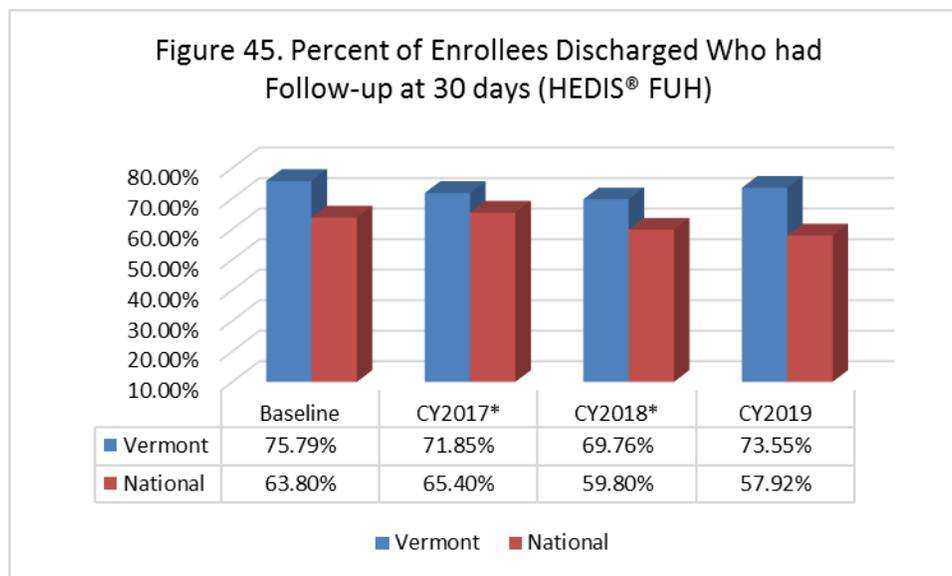
**Data Source and Time Period:** Results were calculated following HEDIS® Medicaid guidelines, using MMIS paid claims CY2016 – CY2019. HEDIS® specifications were modified to incorporate encounter data from Designated Agencies (specialized community mental health services).

**National Benchmark:** HEDIS® 50<sup>th</sup> Percentile for Medicaid programs.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 69% of members received follow-up after hospitalization for mental illness within seven days of discharge in each year of the demonstration. Results have declined over baseline moving from 75.79% to 71.85% in CY2017, 69.76% in CY2018 and 73.55% in CY2019. Decreases over baseline for CY2017 – CY2019 were 5.20%, 7.96% and 2.96% respectively. Changes over baseline were statistically significant in CY2017 and CY2018.

Vermont outperformed Medicaid plans nationally in each year of the demonstration, including baseline. In CY2019 Vermont performed 26.99% above Medicaid programs nationally.



*\*VT results show a statistically significant change over baseline performance*

Table F-11 provides an overview of results for Research Question #3, Hypothesis #4

Table F-11: Results for Research Question #3, Hypothesis #4

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 4: The demonstration will improve mental health follow-up after psychiatric hospitalization					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of enrollees discharged who had follow-up at 7 days after hospitalization for mental illness HEDIS® FUH	Medicaid	-	✓	✓	Logistic Regression
Percent of enrollees discharged who had follow-up at 30 days after hospitalization for mental illness HEDIS® FUH	Medicaid	-	-	✓	Logistic Regression

Research Question 3: Will the demonstration result in improved quality of care?

Hypothesis 5. The demonstration will improve initiation and engagement in SUD treatment.

Measure(s)

- 3.5.1 Percent of enrollees who initiate in treatment for alcohol or other drug dependence
- 3.5.2 Percent of enrollees who engage in treatment for alcohol or other drug dependence
- 3.5.3 Percent of SUD IMD service recipients who initiate in treatment for alcohol or other drug dependence
- 3.5.4 Percent of SUD IMD service recipients who engage in treatment for alcohol or other drug dependence
- 3.5.5 Percent of ACO enrollees who initiate in treatment for alcohol or other drug dependence
- 3.5.6 Percent of ACO enrollees who engage in treatment for alcohol or other drug dependence

**Measure 3.5.1: Percent of Enrollees Who Initiate in Treatment for Alcohol or Other Drug Dependence**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 5. The demonstration will improve initiation and engagement in SUD treatment.

**Measure Description:** Percent of enrollees who initiate treatment through an inpatient alcohol or other drug related admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth or medication treatment within 14 days of the diagnosis.

**Population:** Medicaid members.

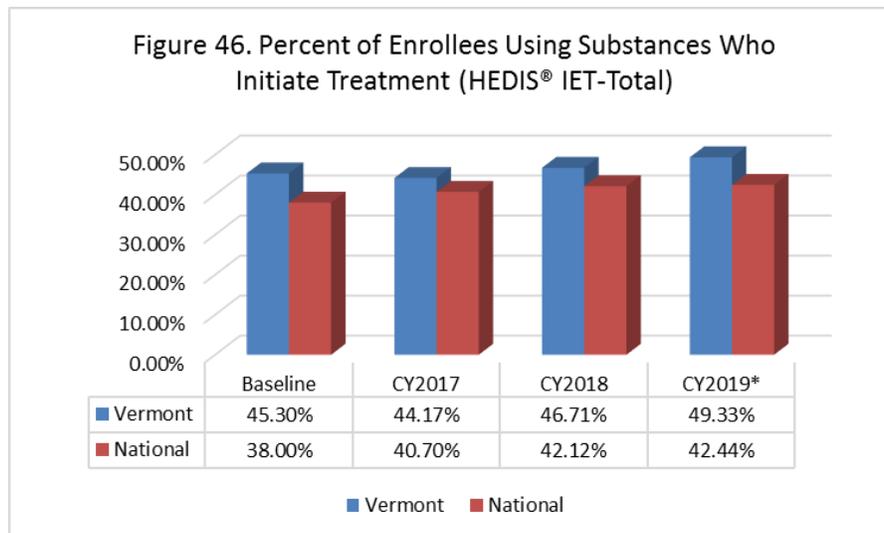
**Data Source and Time Period:** The results were calculated following HEDIS® Medicaid guidelines, using MMIS paid claims CY2016 – CY2019. HEDIS® specifications were modified to include Vermont program codes for specialized SUD treatment programs and payment models. Vermont Hub providers (center-based MAT treatment for OUD) bill HCPCS code H0020 as a monthly unit. Each monthly unit is changed to 30 daily units of MAT to calculate Vermont measures. HCPCS code H0018 is included as non-acute inpatient and can count as initiation and/or an engagement event.

**National Benchmark:** HEDIS® 50<sup>th</sup> Percentile for Medicaid programs.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 44% of members initiated in SUD treatment in each year of the demonstration. Vermont results declined slightly from baseline in CY2017 to 44.17% before increasing over baseline in CY2018 and CY2019 at 46.71% and 49.33% respectively. Increase over baseline was 3.11% in CY2018 and 8.90% in CY2019. Change over baseline was statistically significant in CY2019.

Vermont outperformed Medicaid plans nationally in each year of the demonstration, including baseline. In 2019 Vermont performed 16.23% above Medicaid programs nationally.



*\*VT results show a statistically significant change over baseline performance*

**Measure 3.5.2: Percent of Enrollees Who Engage in Treatment for Alcohol or Other Drug Dependence**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 5. The demonstration will improve initiation and engagement in SUD treatment.

**Measure Description:** Percent of enrollees who initiated treatment and who had two or more additional SUD services or medication treatment within 34 days of the initiation visit.

**Population:** Medicaid members.

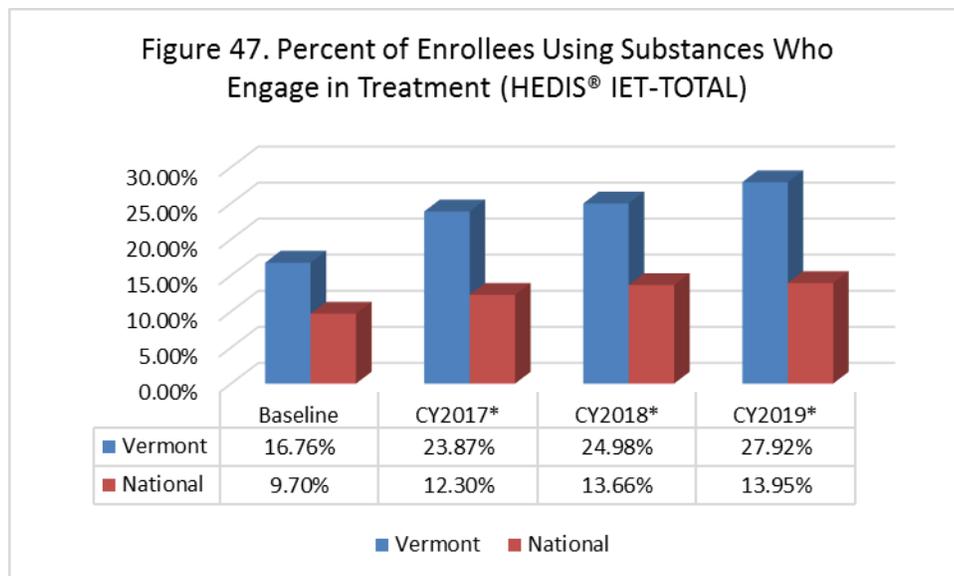
**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims CY2016 – CY2019. HEDIS® specifications are modified. Vermont Hub providers (center-based MAT treatment for OUD) bill HCPCS code H0020 as a monthly unit. Each monthly unit is changed to 30 daily units of MAT to calculate Vermont measures. HCPCS code H0018 is included as non-acute inpatient and can count as initiation and/or an engagement event.

**National Benchmark:** HEDIS® 50<sup>th</sup> Percentile for Medicaid programs.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 23% of enrollees engaged in SUD treatment in each demonstration year. Vermont results improved over baseline in each year of the demonstration moving from 16.76% at baseline to 23.87% in CY2017, 24.98% in CY2018 and 27.92% in CY2019, respectively. Increases over baseline were 42.42% in CY2017, 49.05% in CY2018 and 66.59% in CY2019. Changes over baseline were statistically significant in each year of the demonstration.

Vermont outperformed Medicaid plans nationally in each year of the demonstration, including baseline. In CY2019 Vermont performed 100.14% above Medicaid programs nationally.



\*VT results show a statistically significant change over baseline performance

### Measure 3.5.3: Percent of SUD IMD Service Recipients Who Initiate in Treatment for Alcohol or Other Drug Dependence

Goal: Quality of Care  
Research Question: 3. Will the demonstration result in improved quality of care?  
Hypothesis: 5. The demonstration will improve initiation and engagement in SUD treatment.

**Measure Description:** Percent of SUD-IMD service recipients who initiate treatment through an inpatient alcohol or other drug related admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth or medication treatment within 14 days of the diagnosis.

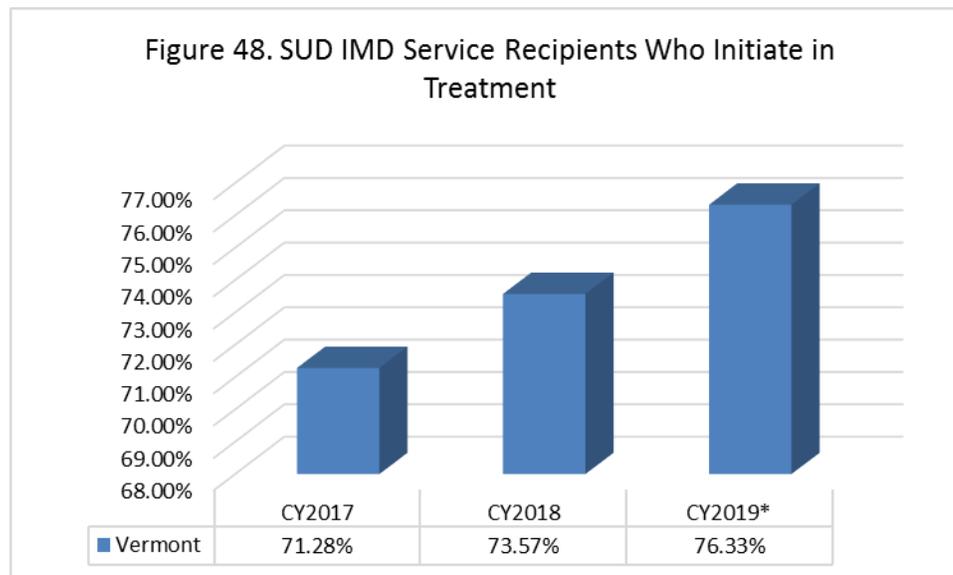
**Population:** Medicaid SUD IMD service recipients.

**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims CY2016 – CY2019. HEDIS® specifications were modified to include Vermont program codes for specialized SUD treatment programs and payment models as described in measure 3.5.1.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Vermont SUD IMD service recipients show high rates of initiation in treatment with results improving over baseline in each year of the demonstration. Baseline results of 71.28% in CY2017 increased to 73.57% in CY2018 and 76.33% in CY2019. Increase over baseline was statistically significant in 2019.



*\*VT results show a statistically significant change over baseline performance*

**Measure 3.5.4: Percent of SUD IMD Service Recipients Who Engage in Treatment for Alcohol or Other Drug Dependence**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 5. The demonstration will improve initiation and engagement in SUD treatment.

**Measure Description:** Percent of SUD-IMD service recipients who initiated treatment and who had two or more additional SUD services or medication treatment within 34 days of the initiation visit.

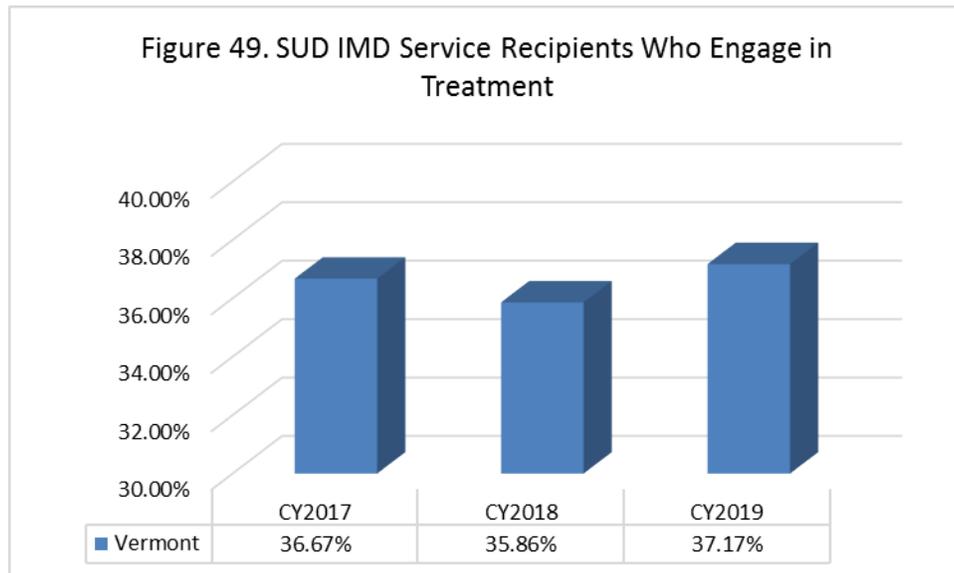
**Population:** Medicaid SUD IMD service recipients.

**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims CY2017 – CY2019. HEDIS® specifications were modified to include Vermont program codes for specialized SUD treatment programs and payment models as described in measure 3.5.2.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Vermont SUD IMD service recipients show higher rates of engagement in treatment than the general Medicaid population. Rates of engagement improved slightly over baseline in CY2019, however, results were not statistically significant. Baseline results of 36.67% in CY2017 declined to 35.86% in CY2018 before increasing to 37.17% in CY2019.



**Measure 3.5.5: Percent of ACO Enrollees Who Initiate in Treatment for Alcohol or Other Drug Dependence**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 5. The demonstration will improve initiation and engagement in SUD treatment.

**Measure Description:** Percent of ACO enrollees who initiate treatment through an inpatient alcohol or other drug related admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth or medication treatment within 14 days of the diagnosis.

**Population:** Medicaid ACO members.

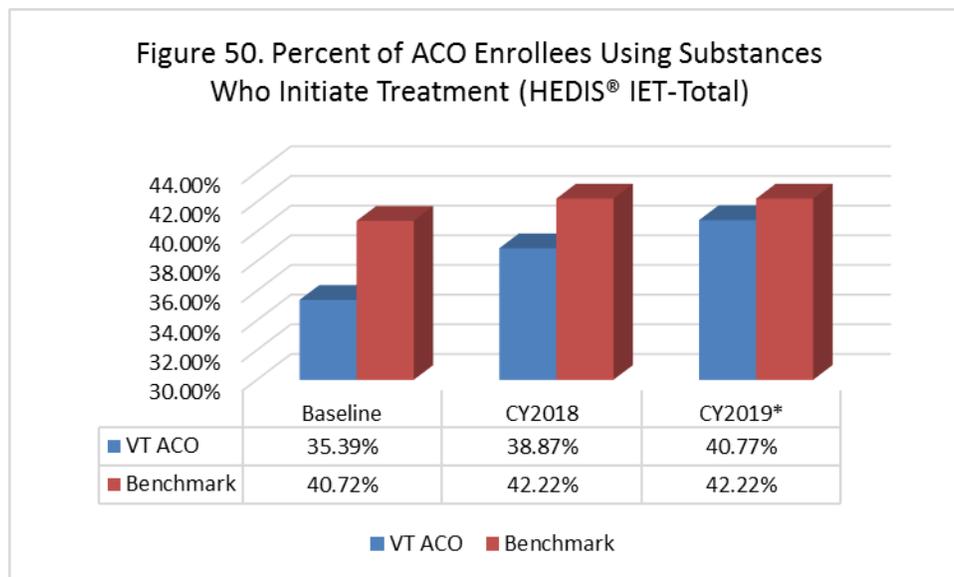
**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims CY2017 – CY2019. (No modifications were made for ACO measures).

**National Benchmark:** Medicaid, All Lines of Business, 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 35% of ACO members initiated SUD treatment in each demonstration year. Vermont results improved over baseline in each year of the demonstration moving from 35.39% at baseline to 38.87% in CY2018 and 40.77% in CY2019. Increases over baseline were 9.83% in CY2018 and 15.20% in CY2019. Change over baseline was statistically significant in CY2019.

The ACO outperformed Medicaid plans nationally during baseline and CY2018. In 2019 the ACO performed 3.4% below Medicaid programs nationally.



*\*VT results show a statistically significant change over baseline performance*

**Measure 3.5.6: Percent of ACO Enrollees Who Engage in Treatment for Alcohol or Other Drug Dependence**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 5. The demonstration will improve initiation and engagement in SUD treatment.

**Measure Description:** Percent of ACO enrollees who initiated treatment and who had two or more additional SUD services or medication treatment within 34 days of the initiation visit.

**Population:** Medicaid ACO members.

**Data Source and Time Period:** The results were calculated in accordance with HEDIS® Medicaid guidelines, using MMIS paid claims CY2017 – CY2019.

**National Benchmark:** Medicaid, All Lines of Business, 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 16% of members engaged in SUD treatment in each demonstration year. Vermont results declined from baseline in CY2018, moving from 17.63% at baseline to 16.21% before increasing over baseline to 20.23% in CY2019. Change over baseline was not statistically significant in any year of the demonstration.

The ACO outperformed Medicaid plans nationally in each year of the demonstration, including baseline. In 2019 the ACO performed 47.77% above Medicaid programs nationally.

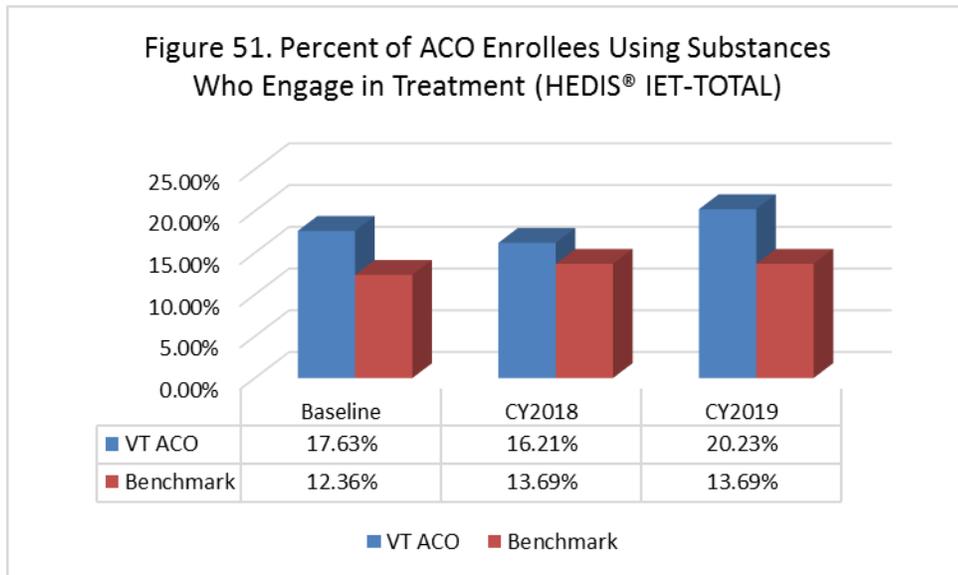


Table F-12 provides an overview of results for Research Question #3, Hypothesis #5

Table F-12: Results for Research Question #3, Hypothesis #5

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 5: The demonstration will improve Initiation and engagement in SUD treatment					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of enrollees who initiate in treatment for Alcohol or Other Drug Dependence HEDIS® IET	Medicaid	+	✓	✓	Logistic Regression
Percent of enrollees who engage in treatment for Alcohol or Other Drug Dependence HEDIS® IET	Medicaid	+	✓	✓	Logistic Regression
Percent of enrollees who initiate in treatment for Alcohol or Other Drug Dependence HEDIS® IET	SUD IMD	+	✓	N/A	Logistic Regression
Percent of enrollees who engage in treatment for Alcohol or Other Drug Dependence HEDIS® IET	SUD IMD	+	-	N/A	Logistic Regression
Percent of enrollees who initiate in treatment for Alcohol or Other Drug Dependence HEDIS® IET	ACO	+	✓	✓	Logistic Regression
Percent of enrollees who engage in treatment for Alcohol or Other Drug Dependence HEDIS® IET	ACO	+	-	✓	Logistic Regression

Research Question 3: Will the demonstration result in improved quality of care?

Hypothesis 6. The demonstration will improve enrollee experience of care and rating of the health plan.

Measure(s)

- 3.6.1 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 (Child Survey)
- 3.6.2 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 (Adult Survey)
- 3.6.3 Percent of respondents who rate their ability to get care quickly as usually or always (Child Survey)
- 3.6.4 Percent of respondents who rate their ability to get care quickly as usually or always (Adult Survey)
- 3.6.5 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 (Child Survey)
- 3.6.6 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 (Adult Survey)
- 3.6.7 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 (Child Survey)
- 3.6.8 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 (Adult Survey)
- 3.6.9 Proportion of participants needing assistance who always get enough assistance with everyday activities when needed (CFC program enrollees and TBI program enrollees)

**Measure 3.6.1: 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 (Child Survey)**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 6. The demonstration will improve enrollee experience of care and rating of the health plan.

**Measure Description:** Percent of CAHPS Child Survey 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 (CAHPS Question 36).

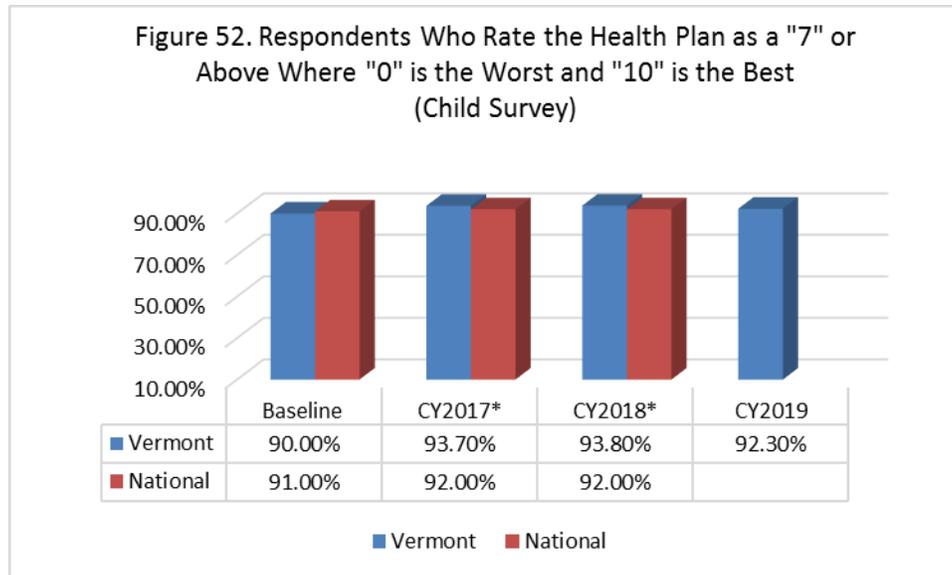
**Population:** Representative sample of families whose child is a Medicaid beneficiary.

**Data Source and Time Period:** CAHPS Child Survey results for CY2016-CY2019.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 92% of respondents rated the plan as a seven or above in each of the demonstration years. Vermont results were above Medicaid programs nationally in CY2017 with a score of 93.70% and in CY2018 with 93.80%. National benchmarks for 2019 were not available at the time of production, however Vermont scores remained high at 92.30%. Compared to baseline performance Vermont showed a 4.11% improvement in CY2017, a 4.22% improvement in CY2018 and a 2.56% improvement in CY2019. Change over baseline was statistically significant in CY2017 and CY2018.



*\*VT results show a statistically significant change over baseline performance*

**Measure 3.6.2: 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 (Adult Survey)**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 6. The demonstration will improve enrollee experience of care and rating of the health plan.

**Measure Description:** Percent of adult CAHPS survey 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 (CAHPS Question 35).

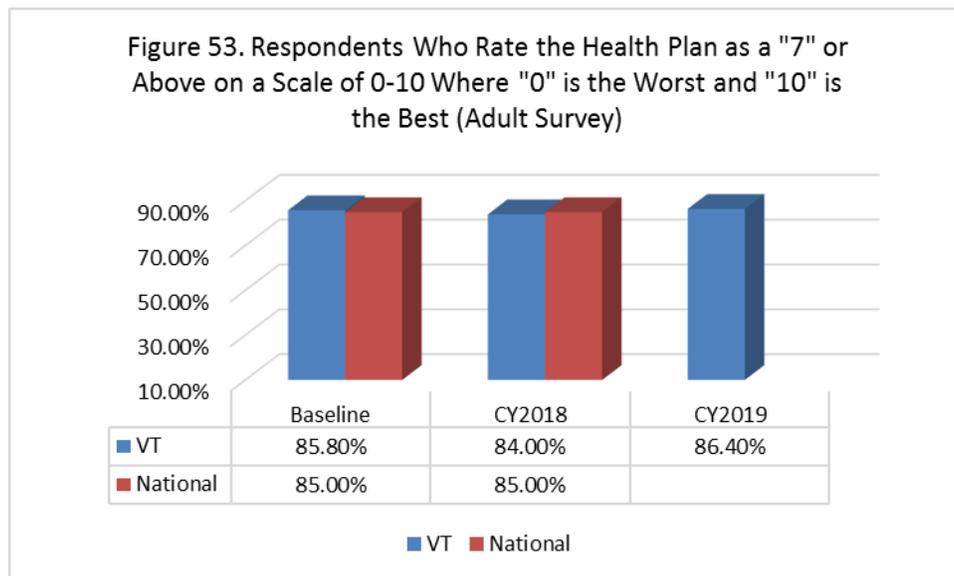
**Population:** Representative sample of adult Medicaid beneficiaries.

**Data Source and Time Period:** CAHPS Adult Survey results for CY2017-CY2019. Beginning in CY2017, the Adult CAHPS Survey moved from data collection every two years to an annual survey in Vermont.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 84% of respondents rated the plan as a seven or above in each of the demonstration years. Vermont results (85.80%) aligned with Medicaid programs nationally (85%) during baseline and were slightly lower in CY2018 (84% in Vermont v 85% nationally). National benchmarks for 2019 were not available at the time of production. Compared to baseline performance Vermont showed a 2.10% decline in CY2018 before a .70% increase in CY2019. Changes from baseline were not statistically significant in any year.



**Measure 3.6.3: Percent of Respondents Who Rate Their Ability to Get Care Quickly as “Usually” Or “Always” (Child Survey)**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 6. The demonstration will improve enrollee experience of care and rating of the health plan.

**Measure Description:** Percent of CAHPS Child Survey respondents who rate their ability to get care quickly as usually or always (composite score).

**Population:** Representative sample of families whose child is a Medicaid beneficiary.

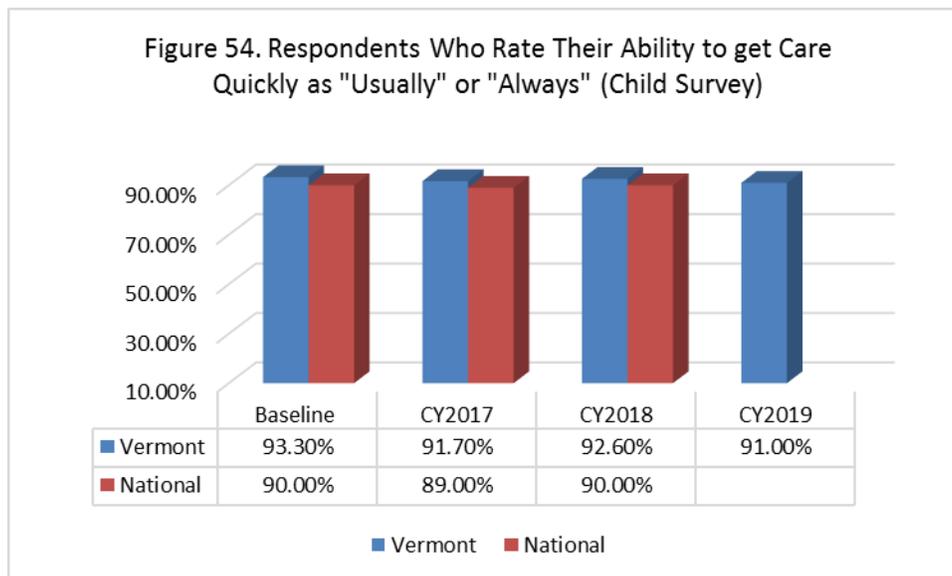
**Data Source and Time Period:** CAHPS Child Survey results for CY2016-CY2019.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Descriptive statistics.

**Findings:** Over 91% of respondents reported their ability to get care quickly as “usually” or “always” in each of the demonstration years. Vermont performed at 93.30% at baseline, 91.70% in CY2017, 92.60% in CY2018 and 91.00% in CY2019. Compared to baseline performance Vermont showed a 1.71% decline in CY2017, a 0.75% decline in CY2018 and a 2.47% decline in CY2019.

Vermont performed above Medicaid programs nationally in all years of the demonstration, including baseline. National benchmarks for 2019 were not available at the time of production.



**Measure 3.6.4: Percent of Respondents Who Rate Their Ability to Get Care Quickly as “Usually” or “Always” (Adult Survey)**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 6. The demonstration will improve enrollee experience of care and rating of the health plan.

**Measure Description:** Percent of adult CAHPS survey respondents who rate their ability to get care quickly as usually or always (composite score).

**Population:** Representative sample of adult Medicaid beneficiaries.

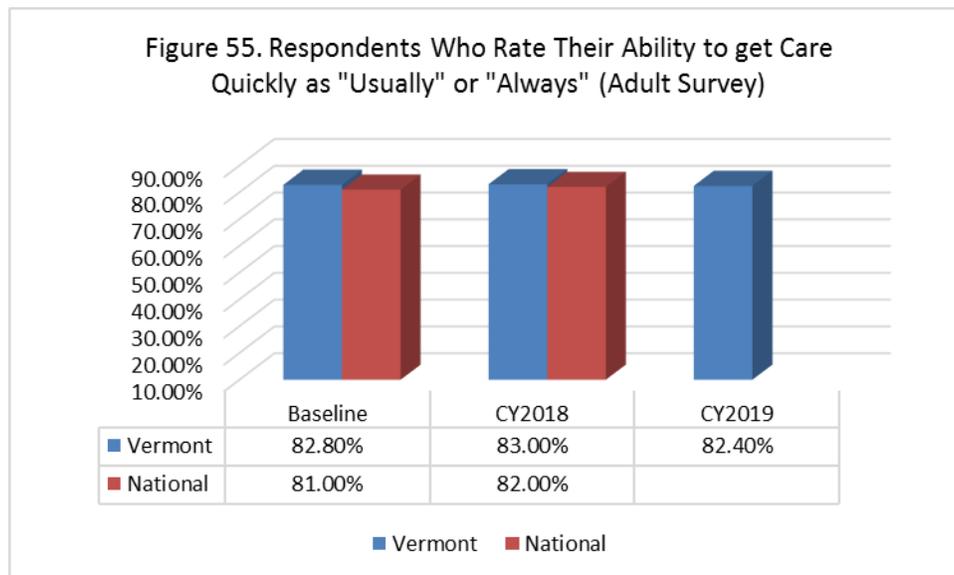
**Data Source and Time Period:** CAHPS Adult Survey results for CY2017-CY2019. Beginning in CY2017, the Adult CAHPS Survey moved from data collection every two years to an annual survey in Vermont.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Descriptive statistics.

**Findings:** Over 82% of respondents reported their ability to get care quickly as “usually” or “always” in each of the demonstration years. Vermont results were 82.80% at baseline, 83.00% in CY2018, 82.40% in CY2019. Compared to baseline performance Vermont’s rates stayed relatively stable with a .24% increase in CY2018 before a .48% decrease in CY2019.

Vermont outperformed Medicaid programs nationally during baseline and in CY2018, national benchmarks for 2019 were not available at the time of production.



**Measure 3.6.5: 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 (Child Survey)**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 6. The demonstration will improve enrollee experience of care and rating of the health plan.

**Measure Description:** Percent of CAHPS Child Survey respondents who rate the care they receive as a 7, 8, 9 or 10 on a scale of 0-10 where 0 is the worst and 10 is the best (CAHPS Question 13).

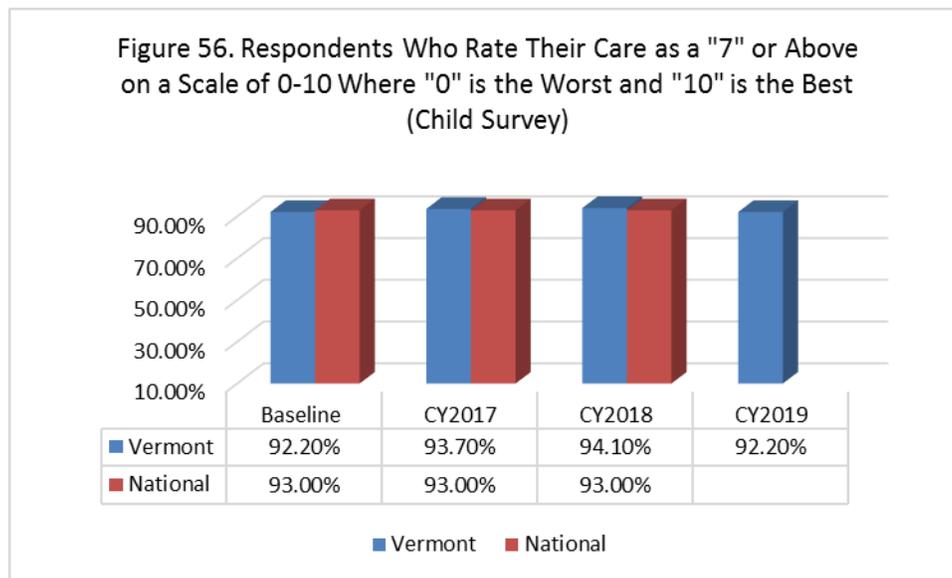
**Population:** Representative sample of families whose child is a Medicaid beneficiary.

**Data Source and Time Period:** CAHPS Child Survey results for CY2016-CY2019.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 92% of respondents rated the care they received as a seven or above in each of the demonstration years. Vermont performed slightly above Medicaid programs nationally in CY2017 with a score of 93.70% and in CY2018 with 94.10%. National benchmarks for 2019 were not available at the time of production, however Vermont scores remained high at 92.20%. Compared to baseline performance Vermont performance improved slightly with a 1.63% improvement in CY2017, a 2.06% improvement in CY2018 and no change over baseline in CY2019. Change over baseline was not statistically significant in any year.



**Measure 3.6.6: 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 (Adult Survey)**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 6. The demonstration will improve enrollee experience of care and rating of the health plan.

**Measure Description:** Percent of adult CAHPS survey respondents who rate the care they receive as a 7, 8, 9 or 10 on a scale of 0-10 where 0 is the worst and 10 is the best (CAHPS Question 13).

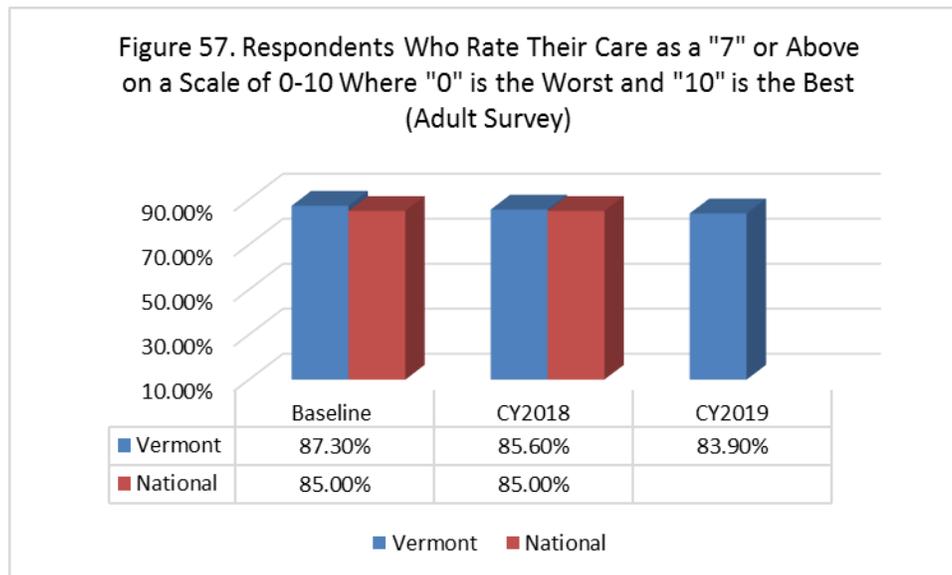
**Population:** Representative sample of adult Medicaid beneficiaries.

**Data Source and Time Period:** CAHPS Adult Survey results for CY2017-CY2019. Beginning in CY2017, the Adult CAHPS Survey moved from data collection every two years to an annual survey in Vermont.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Logistic Regression.

**Findings:** Over 83% of respondents rated the care they received as a seven or above in each of the demonstration years. Vermont results were at or above Medicaid programs nationally, during baseline with 87.30% (versus 85% nationally); and in CY2018 with 85.60% (versus 85% nationally). National benchmarks for CY2019 were not available at the time of production. Compared to baseline performance, Vermont’s rates declined in each year with a 1.95% decrease in CY2018 and a 3.89% decrease in CY2019. Changes over baseline were not statistically significant in any year.



**Measure 3.6.7: 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 (Child Survey)**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 6. The demonstration will improve enrollee experience of care and rating of the health plan.

**Measure Description:** Percent of CAHPS Child Survey 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 (composite).

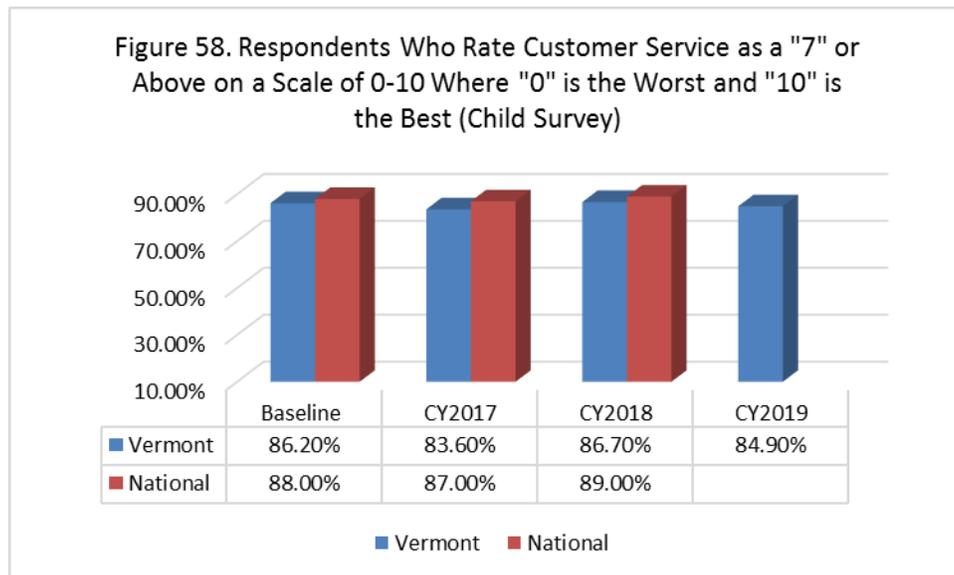
**Population:** Representative sample of families whose child is a Medicaid beneficiary.

**Data Source and Time Period:** CAHPS Child Survey results for CY2016-CY2019.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Descriptive statistics.

**Findings:** Over 83% of respondents rated customer service a seven or above in each of the demonstration years. Results yielded 83.60% in CY2017, 86.70% in CY2018 and 84.90% in CY2019. Compared to baseline performance, results were variable with a 3.02% decline in CY2017, a .058% improvement in CY2018 and a 1.51% decline in CY2019. Vermont performed below Medicaid programs nationally. National benchmarks for 2019 were not available at the time of production.



**Measure 3.6.8: 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 (Adult Survey)**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 6. The demonstration will improve enrollee experience of care and rating of the health plan.

**Measure Description:** Percent of adult CAHPS survey 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 (composite).

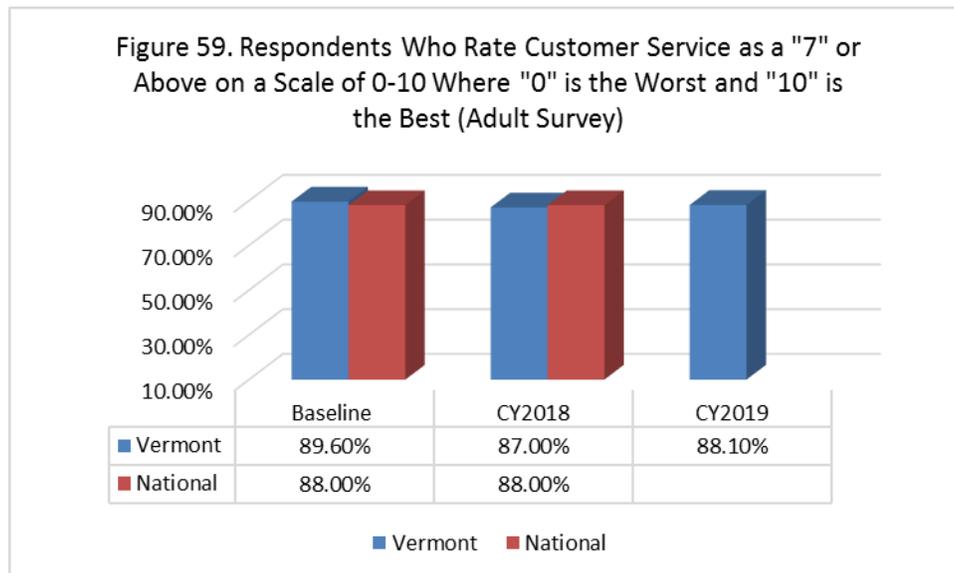
**Population:** Representative sample of adult Medicaid beneficiaries.

**Data Source and Time Period:** CAHPS Adult Survey results for CY2017-CY2019. Beginning in CY2017, the Adult CAHPS Survey moved from data collection every two years to an annual survey in Vermont.

**National Benchmark:** CAHPS Medicaid Programs 50<sup>th</sup> percentile.

**Analytical Approach:** Descriptive statistics.

**Findings:** Over 87% of respondents rated customer service a seven or above in each of the demonstration years. Vermont results were aligned with Medicaid programs nationally. The program performed slightly higher at baseline with 89.60% compared to 88% nationally and 87% in CY2018 compared to 88% nationally. Vermont scored 88.10% in CY2019 and national benchmarks for 2019 were not available at the time of production. Compared to baseline performance, Vermont’s rates declined in each year with a 2.90% decrease in CY2018 and a 1.67% decrease in CY2019.



**Measure 3.6.9: Proportion of Participants Needing Assistance Who Always Get Enough Assistance with Everyday Activities (CFC Program Enrollees and TBI Program Enrollees)**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 6. The demonstration will improve enrollee experience of care and rating of the health plan.

**Measure Description:** Percent of survey respondents who responded “yes, always” when asked if they get enough assistance with everyday activities when needed.

**Population:** Representative sample of CFC and TBI program enrollees living in community-based settings.

**Data Source and Time Period:** Unweighted, uncollapsed scores for NCI-AD Survey respondents for CY2018 (baseline).

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Vermont results show that 84.83% of CFC program respondents and 78% of TBI program respondents reported getting the assistance they need with everyday activities when needed. CY2018 represents the first year Vermont participated in the national NCI-AD Survey and serves as baseline for the remaining years of the demonstration.

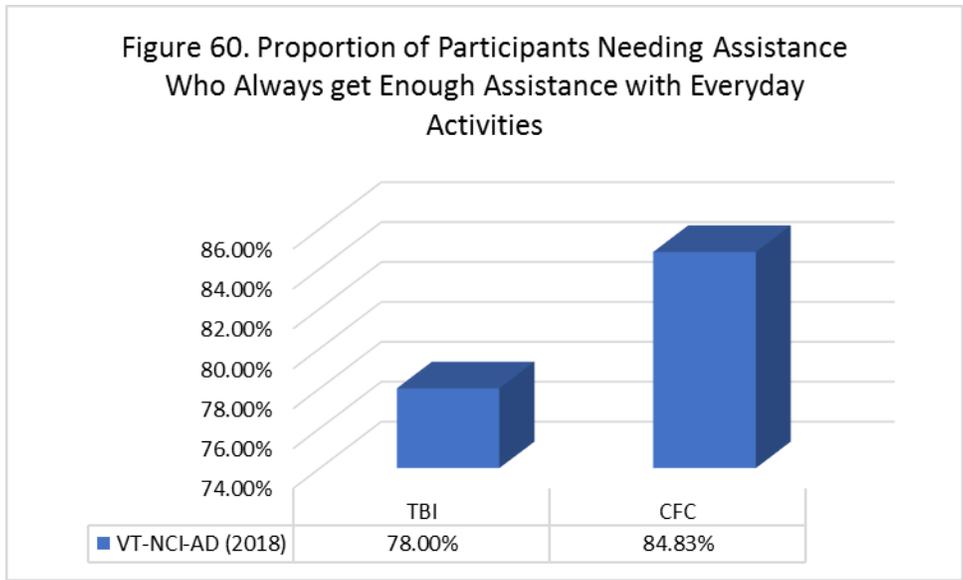


Table F-13 provides an overview of results for Research Question #3, Hypothesis #6

Table F-13: Results for Research Question #3, Hypothesis #6

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 6: The demonstration will improve enrollee experience of care and rating of the health plan.					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
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 CAHPS	Medicaid (Children)	+	-	✓	Logistic Regression
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 CAHPS	Medicaid (Adults)	+	-	-	Logistic Regression
Percent of respondents who rate their ability to get care quickly as usually or always CAHPS	Medicaid (Children)	-	N/A	✓	Descriptive
Percent of respondents who rate their ability to get care quickly as usually or always CAHPS	Medicaid (Adults)	=	N/A	✓	Descriptive
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 CAHPS	Medicaid (Children)	=	-	✓	Logistic Regression
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 CAHPS	Medicaid (Adults)	-	-	✓	Logistic Regression
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 CAHPS	Medicaid (Children)	-	N/A	-	Descriptive
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 CAHPS	Medicaid (Adults)	-	N/A	-	Descriptive
Proportion of participants needing assistance who always get enough assistance with everyday activities when needed NCI-AD	CFC	N/A	N/A	N/A	N/A
Proportion of participants needing assistance who always get enough assistance with everyday activities when needed NCI-AD	TBI	N/A	N/A	N/A	N/A

Research Question 3: Will the demonstration result in improved quality of care?

Hypothesis 7. The demonstration will improve self-report of health status for enrollees with LTSS needs.

#### Measures

- 3.7.1 The proportion of people who describe their overall health as poor (CFC and TBI program enrollees)
- 3.7.2 The proportion of people who were reported to be in poor health (DDS program enrollees)

**Measure 3.7.1: The Proportion of People Who Describe Their Overall Health as Poor (CFC and TBI Program Enrollees)**

- Goal: Quality of Care
- Research Question: 3. Will the demonstration result in improved quality of care?
- Hypothesis: 7. The demonstration will improve self-report of health status for enrollees with LTSS needs.

**Measure Description:** Percent of survey respondents who responded “poor” when asked if their health was poor, fair, good, very good, or excellent.

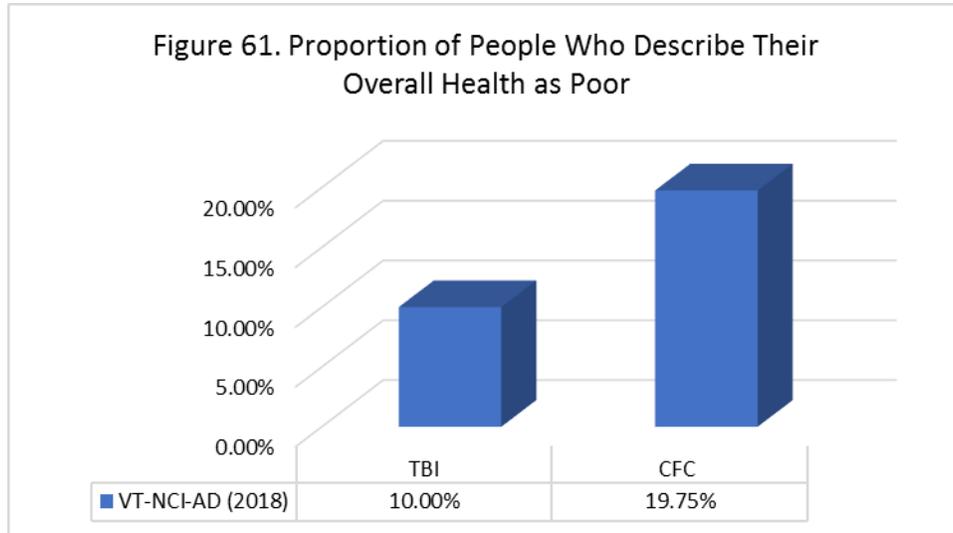
**Population:** Representative sample of CFC and TBI program enrollees living in community-based settings.

**Data Source and Time Period:** Unweighted, uncollapsed scores for NCI-AD Survey respondents for CY2018 (baseline).

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Vermont results show that 19.75% of CFC and 10.00% of TBI program respondents in the sample reported their health as “poor.” CY2018 represents the first year Vermont participated in the national NCI-AD Survey and serves as baseline for the remaining years of the demonstration.



**Measure 3.7.2: The Proportion of People Who Were Reported to be in Poor Health (DDS Program Enrollees)**

Goal: Quality of Care  
Research Question: 3. Will the demonstration result in improved quality of care?  
Hypothesis: 7. The demonstration will improve self-report of health status for enrollees with LTSS needs.

**Measure Description:** Percent of survey respondents who rated their health as “poor.”

**Population:** Representative sample of DDS program enrollees.

**Data Source and Time Period:** NCI-DD Survey CY2016-CY2018.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Vermont results show that 5% or fewer respondents rate their health as poor. Results rose slightly over baseline moving from 4% in CY2016 to 5% in CY2017, before dropping to 3% in CY2018. Results for CY2019 were not available at time of production. Change over baseline was not statistically significant in any year.

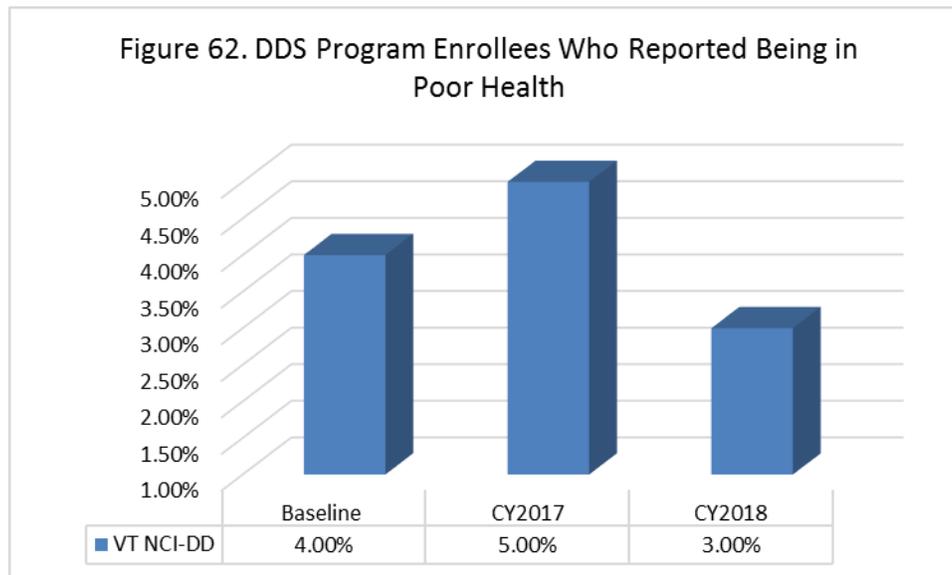


Table F-14 provides an overview of results for Research Question #3, Hypothesis #7

Table F-14: Results for Research Question #3, Hypothesis #7

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 7: The demonstration will improve self-reported health status for enrollees with LTSS needs					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
The proportion of people who describe their overall health as poor	CFC	N/A	N/A	N/A	N/A
The proportion of people who describe their overall health as poor	TBI	N/A	N/A	N/A	N/A
The proportion of people who were reported to be in poor health	DDS	+	-	N/A	Logistic Regression

Research Question 4: Will improved access to primary care result in improved health outcomes?

Hypothesis 1. The Blueprint for Health will improve diabetes control for Medicaid members age 18-75.

Measure(s)

- 4.1.1 Number of continuously enrolled Medicaid members, ages 18-75 whose Diabetes HbA1c was in control compared to those with poor control (HbA1c <9%) (Blueprint Medicaid enrollees)
- 4.1.2 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 (Blueprint Medicaid enrollees)

**Measure 4.1.1: Number of Continuously Enrolled Medicaid Members, Ages 18-75 Whose Diabetes Hba1c Was in Control Compared to Those with Poor Control (HbA1c <9%) (Blueprint Medicaid enrollees)**

Goal: Quality of Care  
 Research Question: 4. Will improved access to primary care result in improved health outcomes?  
 Hypothesis: 1. The Blueprint for Health will improve diabetes control for Medicaid members age 18-75.

**Measure Description:** Members ages 18-75 with diabetes linked to the Blueprint Clinical Registry database with at least one valid HbA1c lab during the measurement period. HbA1c greater than 9% is considered “in poor control.”

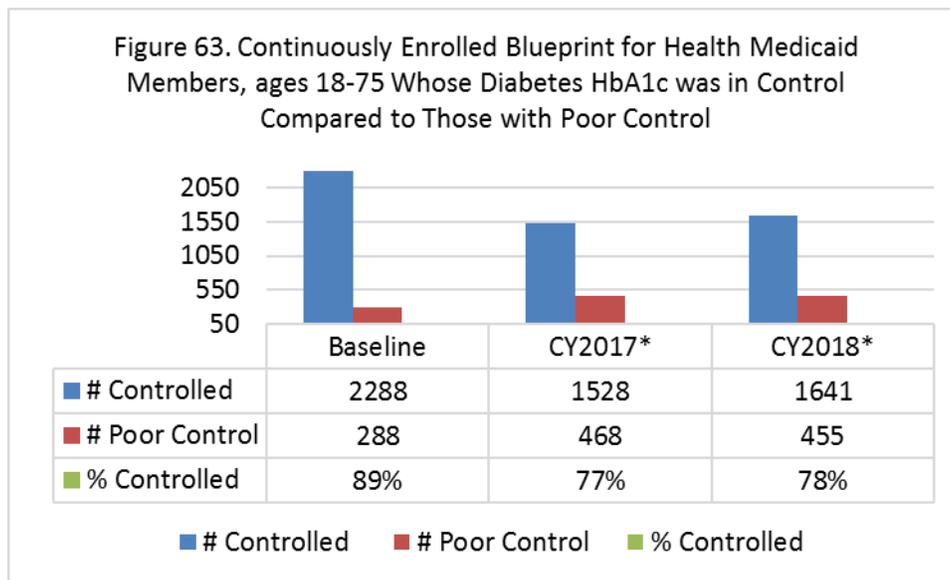
**Population:** Blueprint for Health, Medicaid enrollees.

**Data Source and Time Period:** MMIS paid claims and Blueprint Clinical Registry for CY2016 – CY2018.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Over 77% of Medicaid members with diabetes show good control through HbA1c results. Vermont results indicate that 77% of continuously enrolled Medicaid members in CY2017 and 78% in CY2018 show good control of their diabetes based on HbA1c lab results. Compared to baseline, performance declined by 33.22% in CY2017 and 28.28% in CY2018. CY2019 results were not available at time of production. Changes over baseline were statistically significant in each year.



*\*VT results show a statistically significant change over baseline performance*

**Measure 4.1.2: 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 (Blueprint Medicaid Enrollees)**

Goal: Quality of Care  
 Research Question: 4. Will improved access to primary care result in improved health outcomes?  
 Hypothesis: 1. The Blueprint for Health will improve diabetes control for Medicaid members age 18-75.

**Measure Description:** Inpatient hospitalization rate per 1,000 members for members ages 18-75 with diabetes linked to the Blueprint Clinical Registry database with at least one valid HbA1c lab during the measurement period. HbA1c greater than 9% is considered “in poor control.”

**Population:** Blueprint for Health Medicaid enrollees.

**Data Source and Time Period:** MMIS paid claims and Blueprint Clinical Registry for CY2016 – CY2018.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** In each year of the demonstration, Blueprint members whose diabetes was controlled had fewer inpatient hospitalizations. Inpatient hospitalizations were 206 per 1,000 Medicaid members as compared to 333 for those with poor control. This trend continues in each year with CY2018 resulting in 302 inpatient hospitalizations per 1,000 members for those with good control versus 375 for those in poor control. However, over time the number of inpatient hospitalizations has increased for both groups.

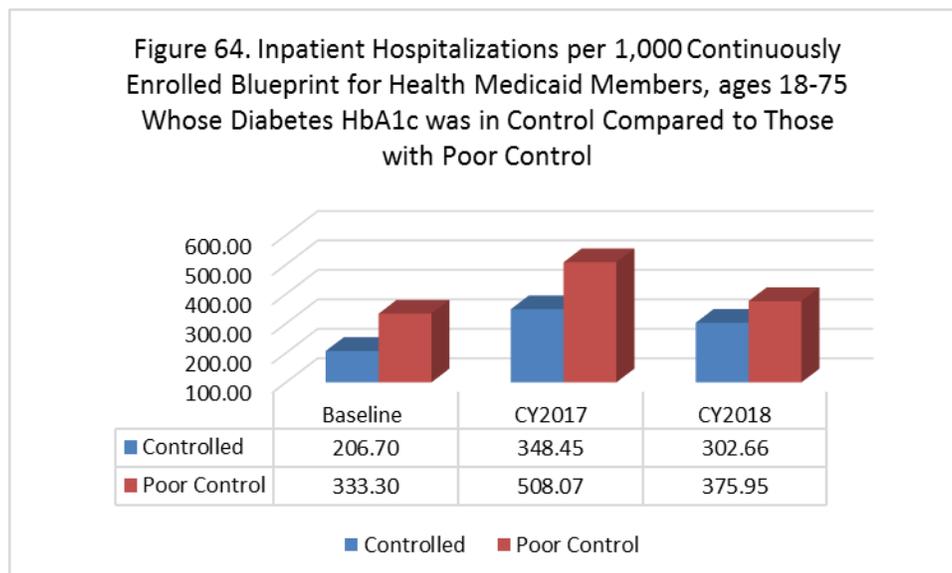


Table F-15 provides an overview of results for Research Question #4, Hypothesis #1

Table F-15: Results for Research Question #4, Hypothesis #1

Quality of Care					
Research Question 4: Will improved access to primary care result in improved health outcomes?					
Hypothesis 1: The Blueprint for Health will improve diabetes control for members age 18-75.					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Number of continuously enrolled Medicaid members, ages 18-75 whose Diabetes HbA1c was in control compared to those with poor control (HbA1c <9%)	Blueprint Medicaid	-	✓	N/A	Logistic Regression
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	Blueprint Medicaid	+	N/A	N/A	N/A

## Community Integration

In assessing the demonstration’s performance in Community Integration, one research question and six hypotheses were examined. A summary of these questions and corresponding hypotheses are presented in Table F-16 below. Findings are presented by research question and hypothesis for Community Integration on the following pages.

*Table F-16: Community Integration Research Questions and Hypotheses*

Research Question	Hypotheses
<p><b>5. Will the demonstration result in increased community integration?</b></p>	1. The demonstration will increase community living for Choices for Care program enrollees
	2. The demonstration will increase community integration for persons needing LTSS
	3. The demonstration will increase choice and autonomy for persons needing LTSS.
	4. The demonstration will increase integrated employment options for persons needing LTSS
	5. The demonstration will increase integrated employment options for persons with psychiatric needs
	6. SUD IMD service recipients maintain community living as evidenced by low rates of IMD readmission

Research Question 5: Will the demonstration result in increased community integration?

Hypothesis 1. The demonstration will increase community living for Choices for Care program enrollees.

Measure(s)

5.1.1 Average number of CFC enrollees served per month in each setting (home and community or nursing facility)

**Measure 5.1.1: Percent and Average Number of CFC Enrollees Served per Month in Each Setting (Home and Community or Nursing Facility)**

- Goal: Quality of Care
- Research Question: 5. Will the demonstration result in increased community integration?
- Hypothesis: 1. The demonstration will increase community living for Choices for Care program enrollees.

**Measure Description:** Percent and average number of CFC program enrollees, excluding the Moderate Needs Group (MNG), served per month by setting: nursing facility, home, enhanced residential care (HCBS - licensed).

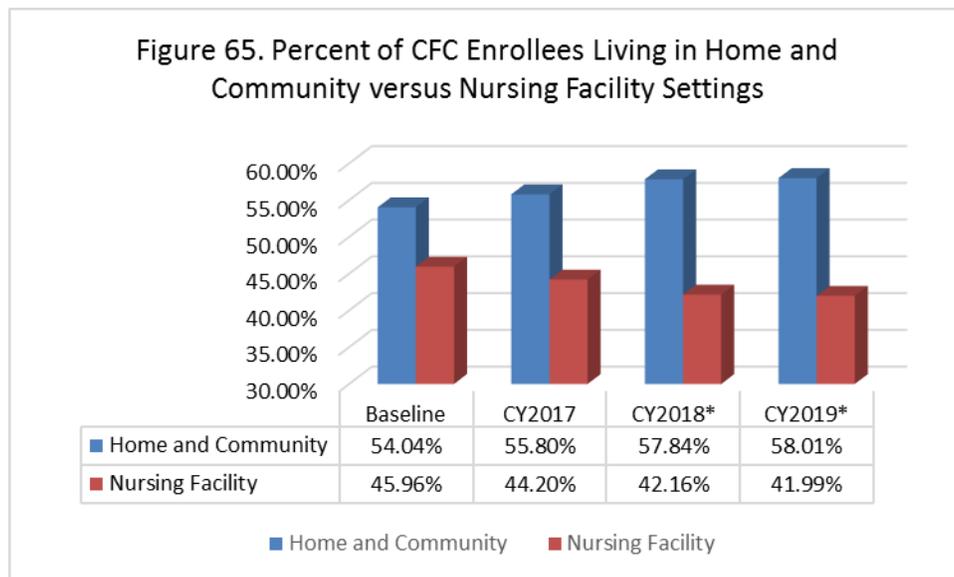
**Population:** CFC program enrollees, excluding MNG.

**Data Source and Time Period:** MMIS paid claims CY2016 – CY2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

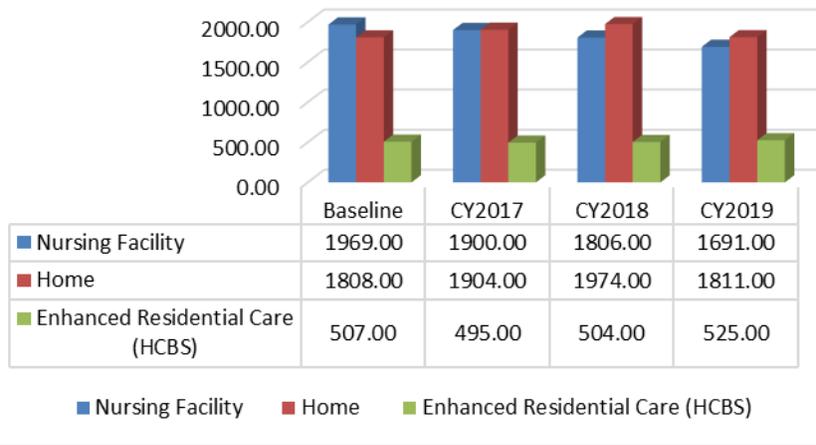
**Findings:** Vermont results show that more CFC enrollees are served in home and community settings than in nursing facility settings. Compared to baseline performance (54.04%), the percent of enrollees served in the home and community has increased in each year of the demonstration. In CY2017, 55.80% of enrollees were in home and community settings, with 57.84% in CY2018 and 58.01% in CY2019 in home and community settings. In CY2019, the use of home and community-based settings increased by 7.35% over baseline. Change over baseline was statistically significant in CY2018 and CY2019.



*\*VT results show a statistically significant change over baseline performance*

Figure 65a on the following page provides an overview of the average monthly enrollment for each setting type.

Figure 65a. Average Number of CFC Enrollees Served Monthly by Setting



Research Question 5: Will the demonstration result in increased community integration?

Hypothesis 2. The demonstration will increase community integration for persons needing LTSS.

#### Measures

- 5.2.1 Proportion of people who do things they enjoy outside of their home when and with whom they want to (CFC and TBI program enrollees)
- 5.2.2 Proportion of people who regularly participate in integrated activities in their communities (DDS program enrollees)

### Measure 5.2.1: Proportion of People Who Do Things They Enjoy Outside of Their Home When and With Whom They Want (CFC and TBI Program Enrollees)

Goal: Quality of Care  
Research Question: 5. Will the demonstration result in increased community integration?  
Hypothesis: 2. The demonstration will increase community integration for persons needing LTSS.

**Measure Description:** Results for two NCI-AD Survey questions are examined 1) Proportion of people who get to do the things they enjoy outside of their home as much as they want (Figure 66); and 2) Proportion of people who are as active in the community as they would like (Figure 66a).

**Population:** Representative sample of CFC and TBI program enrollees living in community-based settings.

**Data Source and Time Period:** Unweighted, uncollapsed scores for NCI-AD Survey respondents for CY2018 (baseline).

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Vermont results show that 62% of survey respondents in the TBI program report doing things outside of their homes, as much as they would like and 58% are as active in the community as they would like. Survey respondents in the CFC program indicated that 52.15% do things outside of their homes as much as they would like and 39.81% are as active in the community as they would like. CY2018 represents the first year Vermont participated in the national NCI-AD Survey and serves as baseline for the remaining years of the demonstration.

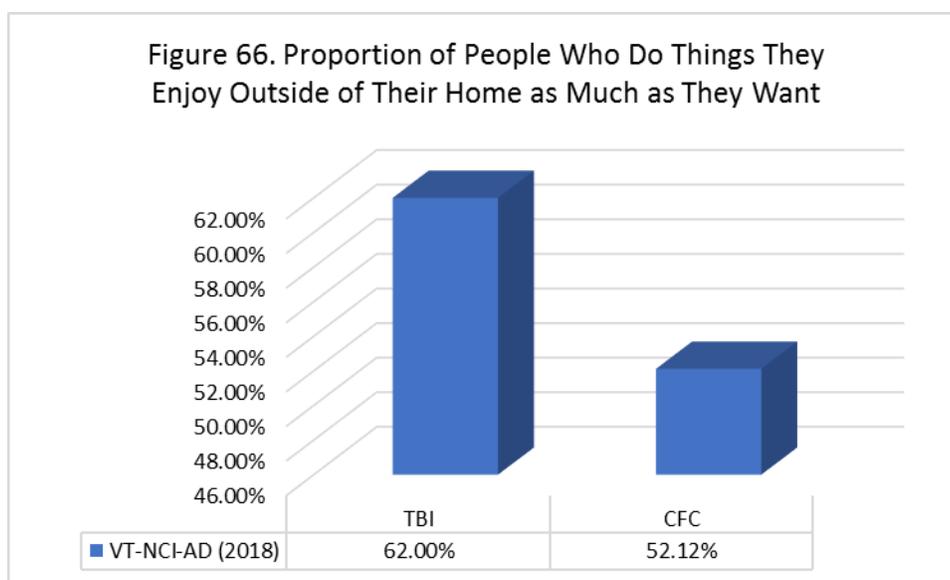
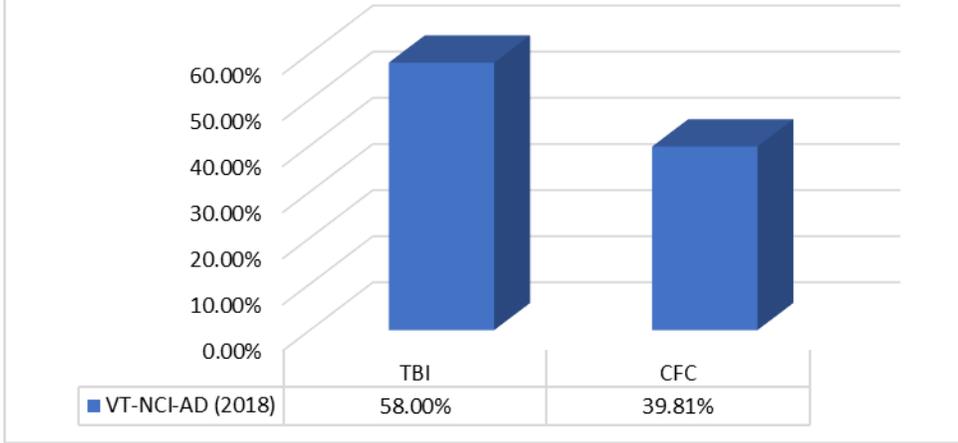


Figure 66a. Proportion of People Who are as Active in the Community as Much as They Would Like



**Measure 5.2.2: Proportion of People Who Regularly Participate in Integrated Activities in Their Communities**

- Goal: Quality of Care
- Research Question: 5. Will the demonstration result in increased community integration?
- Hypothesis: 2. The demonstration will increase community integration for persons needing LTSS.

**Measure Description:** Proportion of people who regularly participate in integrated activities in their communities, NCI-DD composite score.

**Population:** Representative sample of DDS program enrollees.

**Data Source and Time Period:** NCI-DD Survey CY2016-18.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Vermont results show that DDS program enrollees report regular participation in integrated community activities. CY2016 baseline performance was 84% in CY2016 and again in CY2017. Performance improved in CY2018 to 87%, a 3.57% increase over baseline. Results for CY2019 were not available at time of production.

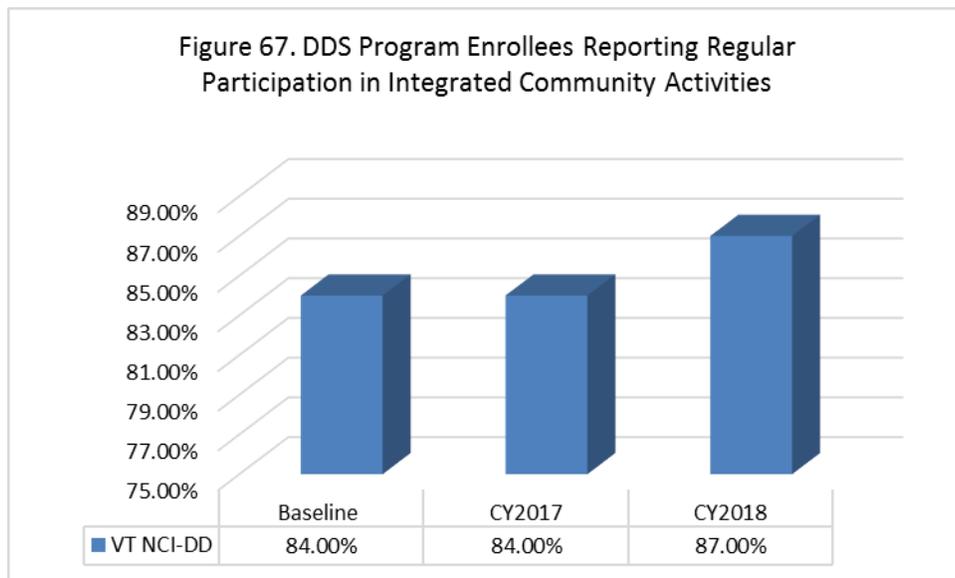


Table F-17 provides an overview of results for Research Question #5, Hypothesis #2

Table F-17: Results for Research Question #5, Hypothesis #2

Community Integration					
Research Question 5: Will the demonstration result in increased community integration?					
Hypothesis 2: The demonstration will increase community integration for persons needing LTSS					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Proportion of people who do things they enjoy outside of their home when and with whom they want to	CFC	N/A	N/A	N/A	N/A
Proportion of people who do things they enjoy outside of their home when and with whom they want to	TBI	N/A	N/A	N/A	N/A
Proportion of people who regularly participate in integrated activities in their communities	DDS	+	N/A	N/A	N/A

Research Question 5: Will the demonstration result in increased community integration?

Hypothesis 3. The demonstration will increase choice and autonomy for persons needing LTSS.

**Measure(s)**

- 5.3.1 Proportion of people who can choose or change what kind of services they get and determine how often and when they get them (CFC and TBI program enrollees)
- 5.3.2 The proportion of people who make choices about their everyday lives (DDS program enrollees)

### Measure 5.3.1: Proportion of People Who Can Choose or Change What Kind of Services They Get and Determine How Often and When They Get Them (CFC and TBI Program Enrollees)

Goal: Quality of Care  
Research Question: 5. Will the demonstration result in increased community integration?  
Hypothesis: 3. The demonstration will increase choice and autonomy for persons needing LTSS.

**Measure Description:** Results for two NCI-AD Survey questions are examined 1) Proportion of people who can choose or change what kind of services they get (Figure 68); and 2) Proportion of people who can choose or change how often and when they get services (Figure 68a).

**Population:** Representative sample of CFC and TBI program enrollees living in community-based settings.

**Data Source and Time Period:** Unweighted, uncollapsed scores for NCI-AD Survey respondents for CY2018 (baseline).

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Vermont results show that 86% of TBI program respondents report they can choose or change the services they get and 73% report they can change how often and when they receive services. In CY2018, 66.87% of CFC program respondents reported they can choose or change services and 65.22% reported they can change how often and when they receive services. CY2018 represents the first year Vermont participated in the national NCI-AD Survey and serves as baseline for the remaining years of the demonstration.

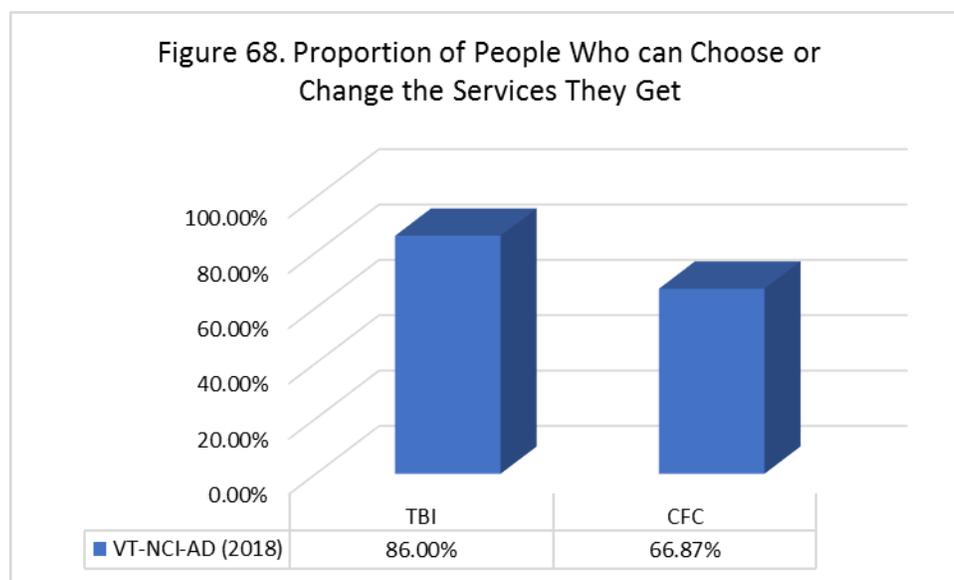
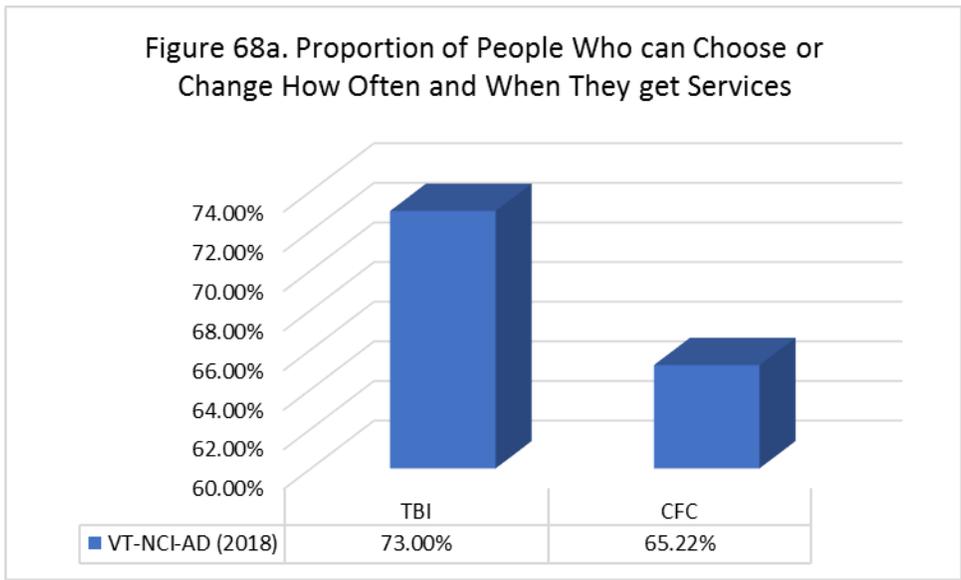


Figure 68a. Proportion of People Who can Choose or Change How Often and When They get Services



### Measure 5.3.2: The Proportion of People Who Make Choices About Their Everyday Lives

Goal: Quality of Care  
Research Question: 5. Will the demonstration result in increased community integration?  
Hypothesis: 3. The demonstration will increase choice and autonomy for persons needing LTSS.

**Measure Description:** Proportion of people who make choices about their everyday lives, NCI-DD composite score.

**Population:** Representative sample of DDS Program enrollees.

**Data Source and Time Period:** NCI-DD Survey CY2016-18.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Vermont results show 87% of DDS program respondents reporting that they make choices about their everyday lives at baseline, with 89% in CY2017 and 86% in CY2018. CY2018 performance represents a 1.15% decrease over baseline. Results for CY2019 were not available at time of production.

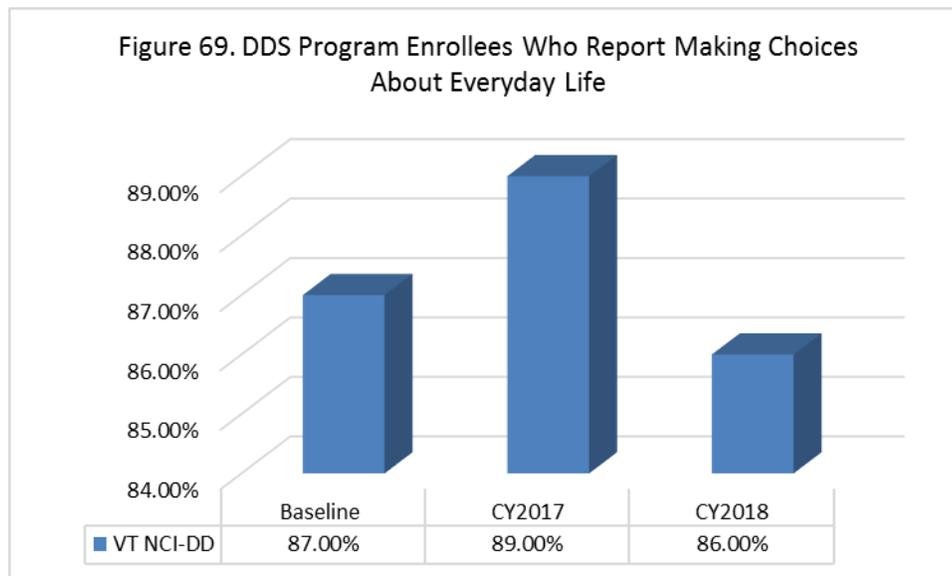


Table F-18 provides an overview of results for Research Question #5, Hypothesis #3

Table F-18: Results for Research Question #5, Hypothesis #3

Community Integration					
Research Question 5: Will the demonstration result in increased community integration?					
Hypothesis 3: The demonstration will increase choice and autonomy for persons needing LTSS					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Proportion of people who can choose or change what kind of services they get and determine how often and when they get them	CFC	N/A	N/A	N/A	N/A
Proportion of people who can choose or change what kind of services they get and determine how often and when they get them	TBI	N/A	N/A	N/A	N/A
The proportion of people who make choices about their everyday lives	DDS	-	N/A	N/A	N/A

Research Question 5: Will the demonstration result in increased community integration?

Hypothesis 4. The demonstration will increase integrated employment options for persons needing LTSS.

Measure(s)

- 5.4.1 Proportion of people who have a paying job in the community, either full-time or part-time (CFC and TBI program enrollees)
- 5.4.2 Proportion of people who would like a job (if not currently employed) (CFC and TBI program enrollees)
- 5.4.3 The proportion of people who do not have a job in the community but would like to have one (DDS program enrollees)
- 5.4.4 Employment rate of people of working age receiving DDS services (DDS program enrollees)
- 5.4.5 Employment rate of people of working age receiving TBI services (TBI program enrollees)

**Measure 5.4.1: Proportion of People Who Have a Paying Job in The Community, Either Full-Time or Part-Time (CFC and TBI Program Enrollees)**

- Goal: Quality of Care
- Research Question: 5. Will the demonstration result in increased community integration?
- Hypothesis: 4. The demonstration will increase integrated employment options for persons needing LTSS.

**Measure Description:** Proportion of respondents who have a paying job in the community, either full-time or part-time.

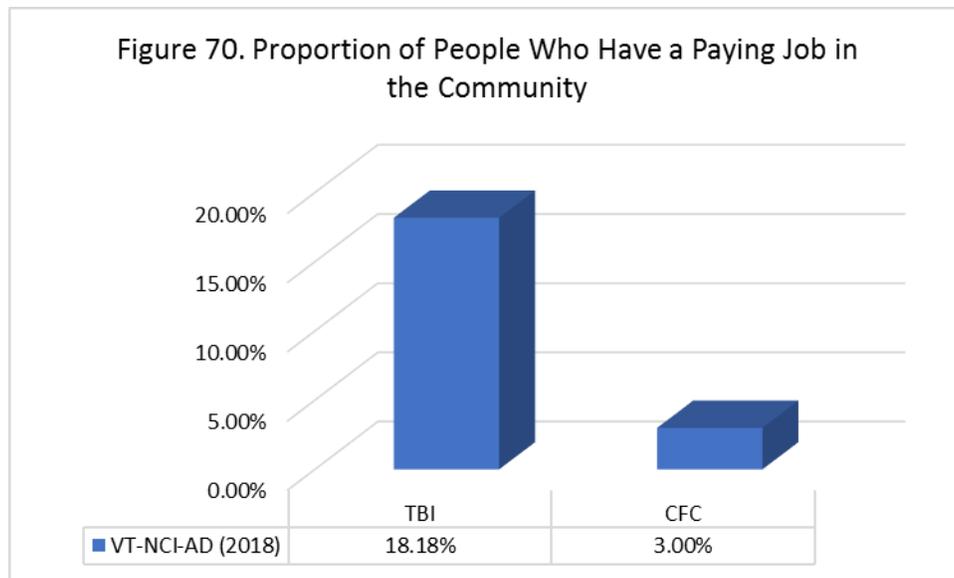
**Population:** Representative sample of CFC and TBI program enrollees living in community-based settings.

**Data Source and Time Period:** Unweighted, uncollapsed scores for NCI-AD Survey respondents for CY2018 (baseline).

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Vermont results show that 18.18% of TBI program respondents and 3% of CFC respondents report having a paying job in the community. CY2018 represents the first year Vermont participated in the national NCI-AD Survey and serves as baseline for the remaining years of the demonstration.



### Measure 5.4.2: Proportion of People Who Would Like a Job (If Not Currently Employed)

- Goal: Quality of Care
- Research Question: 5. Will the demonstration result in increased community integration?
- Hypothesis: 4. The demonstration will increase integrated employment options for persons needing LTSS.

**Measure Description:** Proportion of respondents, not currently employed, who reported wanting a job in the community, either full-time or part-time.

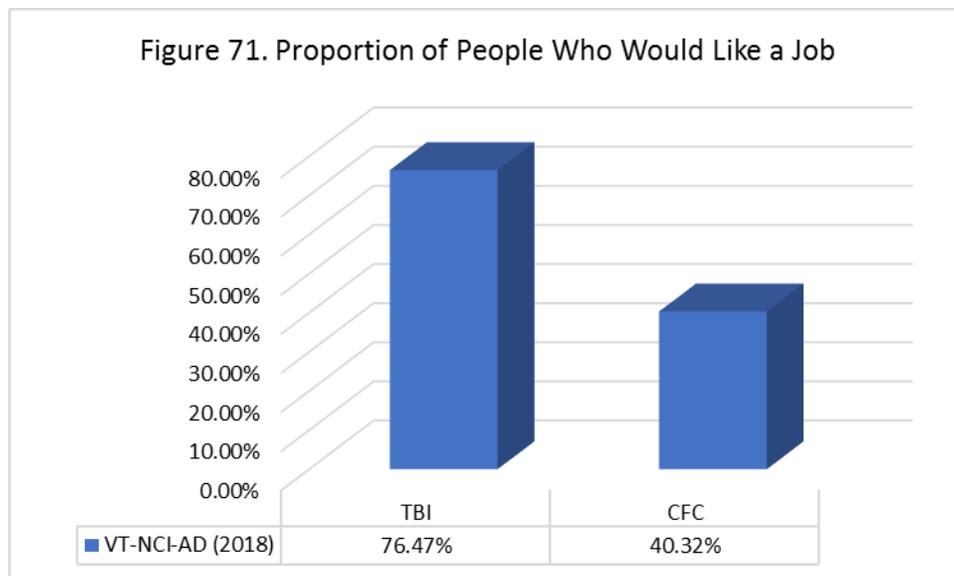
**Population:** Representative sample of CFC and TBI program enrollees living in community-based settings.

**Data Source and Time Period:** Unweighted, uncollapsed scores for NCI-AD Survey respondents for CY2018 (baseline).

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Vermont results show that 76.47% of TBI and 40.3% of CFC program respondents report wanting a paying job in the community. CY2018 represents the first year Vermont participated in the national NCI-AD Survey and serves as baseline for the remaining years of the demonstration.



**Measure 5.4.3: The Proportion of People Who Do Not Have a Job in The Community but Would Like to Have One**

Goal: Quality of Care  
Research Question: 5. Will the demonstration result in increased community integration?  
Hypothesis: 4. The demonstration will increase integrated employment options for persons needing LTSS.

**Measure Description:** Proportion of DDS respondents who do not have a job in the community but would like one.

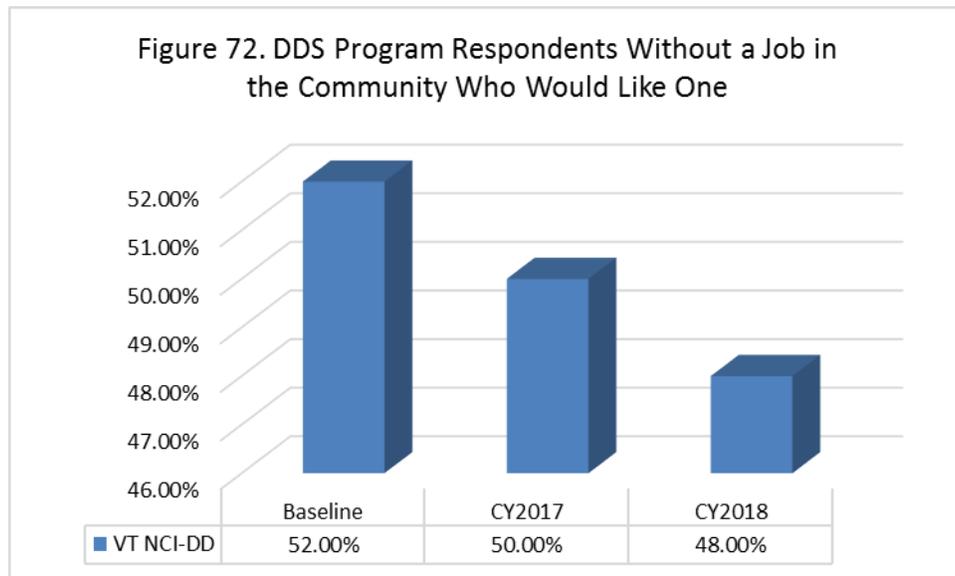
**Population:** Representative sample of DDS Program enrollees.

**Data Source and Time Period:** NCI-DD Survey CY2016-CY2018.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** Vermont results show that approximately half of DDS program respondents who do not have a job would like one. Vermont scores have declined slightly from 52% at baseline to 50% in 2017 and 48% in CY2018. Changes over baseline are not statistically significant in any year.



### Measure 5.4.4: Employment Rate of People of Working Age Receiving DDS Services

- Goal: Quality of Care  
Research Question: 5. Will the demonstration result in increased community integration?  
Hypothesis: 4. The demonstration will increase integrated employment options for persons needing LTSS.

**Measure Description:** Percent of individuals, 18 or older not pursuing secondary education, who have received DDS supported employment services and who have earnings documented in the VT Department of Labor database, Vocational Rehabilitation case files or agency data for employers not included in the DOL data (e.g., self-employment, out of state, federal, agricultural or contracted employment) where earnings are reported to the IRS or Social Security Administration.

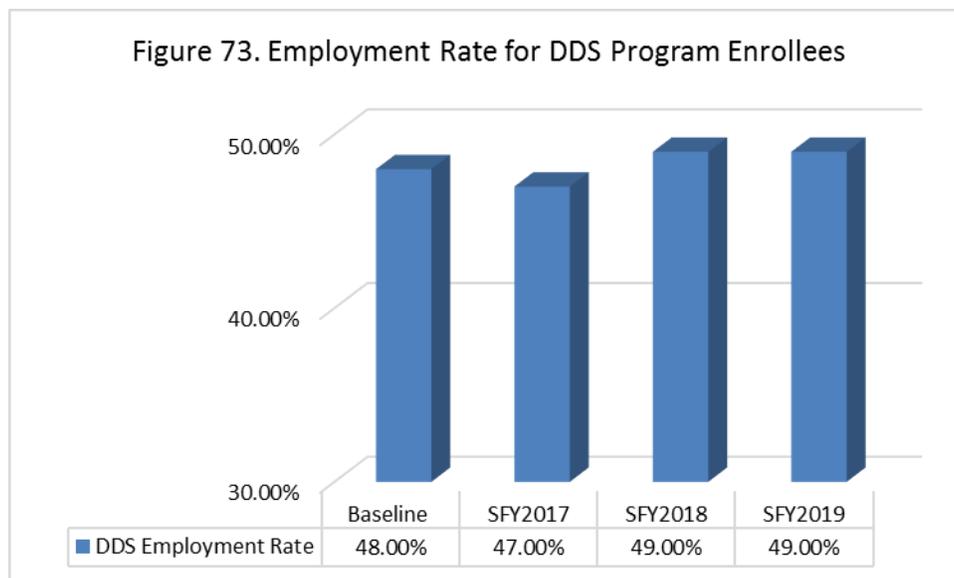
**Population:** DDS program enrollees.

**Data Source and Time Period:** Vermont DOL employment data, VR files and DDS program enrollment files State Fiscal Year (SFY) 2016-2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** The employment rate for the DDS program has remained stable over time. Baseline results were 48% and fell slightly to 47% in SFY017 before rising to 49% in SFY2018. Change over baseline was not statistically significant in any year.



### Measure 5.5.5: Employment Rate of People of Working Age Receiving TBI Services

- Goal: Quality of Care  
Research Question: 5. Will the demonstration result in increased community integration?  
Hypothesis: 4. The demonstration will increase integrated employment options for persons needing LTSS.

**Measure Description:** Percent of individuals 18 and older enrolled in the TBI program during the entire measurement period who are receiving TBI services and who have earnings documented in the VT Department of Labor database.

**Population:** TBI program enrollees.

**Data Source and Time Period:** Vermont DOL employment data and TBI program enrollment files, State Fiscal Year (SFY) 2016-2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** The employment rate for the TBI program is variable year-to-year. Baseline results were 25% and fell to 19.15% in SFY017 before rising to 27.66% in SFY2018. The rate for SFY2019 was 17.95%. Change over baseline was not statistically significant in any year.

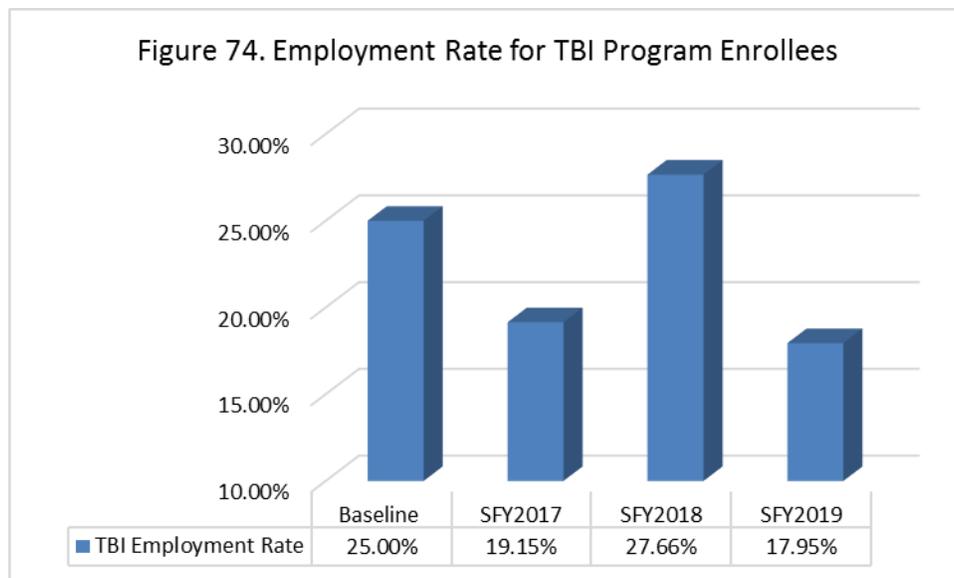


Table F-19 provides an overview of results for Research Question #5, Hypothesis #4

Table F-19: Results for Research Question #5, Hypothesis #4

Community Integration					
Research Question 5: Will the demonstration result in increased community integration?					
Hypothesis 4: The demonstration will increase integrated employment options for persons needing LTSS.					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Proportion of people who have a paying job in the community, either full-time or part-time	CFC	N/A	N/A	N/A	N/A
Proportion of people who have a paying job in the community, either full-time or part-time	TBI	N/A	N/A	N/A	N/A
Proportion of people who would like a job (if not currently employed)	CFC	N/A	N/A	N/A	N/A
Proportion of people who would like a job (if not currently employed)	TBI	N/A	N/A	N/A	N/A
The proportion of people who do not have a job in the community but would like to have one	DDS	+	-	N/A	Logistic Regression
Employment rate of people of working age receiving DDS services	DDS	+	-	N/A	Logistic Regression
Employment rate of people of working age receiving TBI services	TBI	-	-	N/A	Logistic Regression

Research Question 5: Will the demonstration result in increased community integration?

Hypothesis 5. The demonstration will increase integrated employment options for persons with psychiatric needs.

**Measure(s)**

5.6.1 Employment rate of people of working age receiving CRT services

### Measure 5.5.1: Employment Rate of People of Working Age Receiving CRT Services

- Goal: Quality of Care
- Research Question: 5. Will the demonstration result in increased community integration?
- Hypothesis: 5. The demonstration will increase integrated employment options for persons with psychiatric needs.

**Measure Description:** Employment rate of enrollees 18 years and older receiving CRT services.

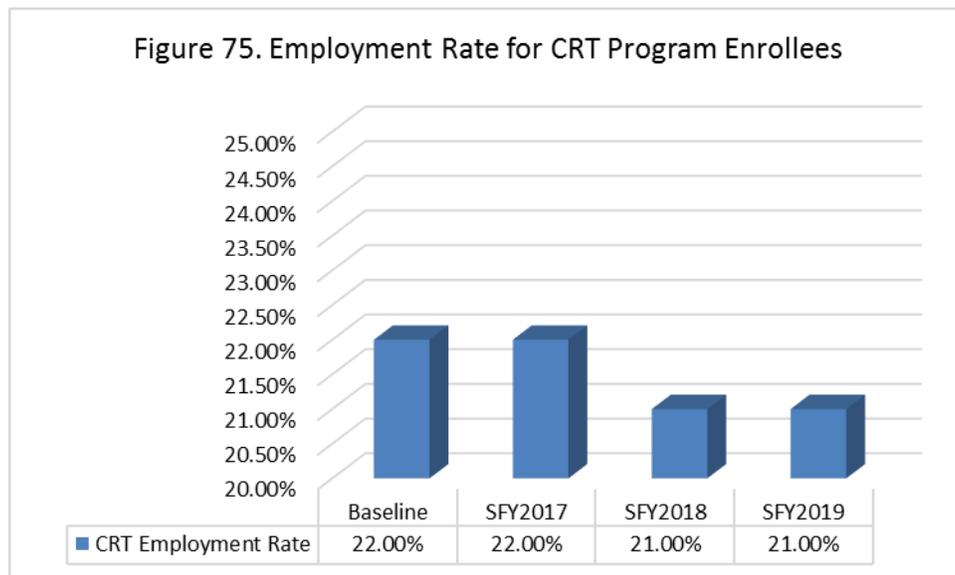
**Population:** CRT program enrollees.

**Data Source and Time Period:** Vermont DOL employment data and CRT program enrollment files, State Fiscal Year (SFY) 2016-2019.

**National Benchmark:** N/A

**Analytical Approach:** Logistic Regression.

**Findings:** The employment rate for the CRT program has remained stable year to year. Results were 22% for the baseline period and SFY2017, before declining slightly to 21% for SFY018 and SFY2019. Change over baseline was not statistically significant in any year.



Research Question 5: Will the demonstration result in increased community integration?

Hypothesis 6. SUD and SMI IMD service recipients maintain community living as evidenced by low rates of IMD readmission.

**Measure(s)**

5.6.2 The percent of SUD IMD stays during the measurement period followed by a SUD IMD readmission for SUD within 30 days

**Measure 5.6.1: The Percent of SUD IMD Stays During the Measurement Period Followed by a Readmission for SUD Within 30 Days**

- Goal: Quality of Care
- Research Question: 5. Will the demonstration result in increased community integration?
- Hypothesis: 6. SUD IMD service recipients will maintain community living as evidenced by low rates of IMD readmission.

**Measure Description:** The percent of SUD IMD stays during the measurement period followed by a SUD IMD readmission for SUD within 30 days.

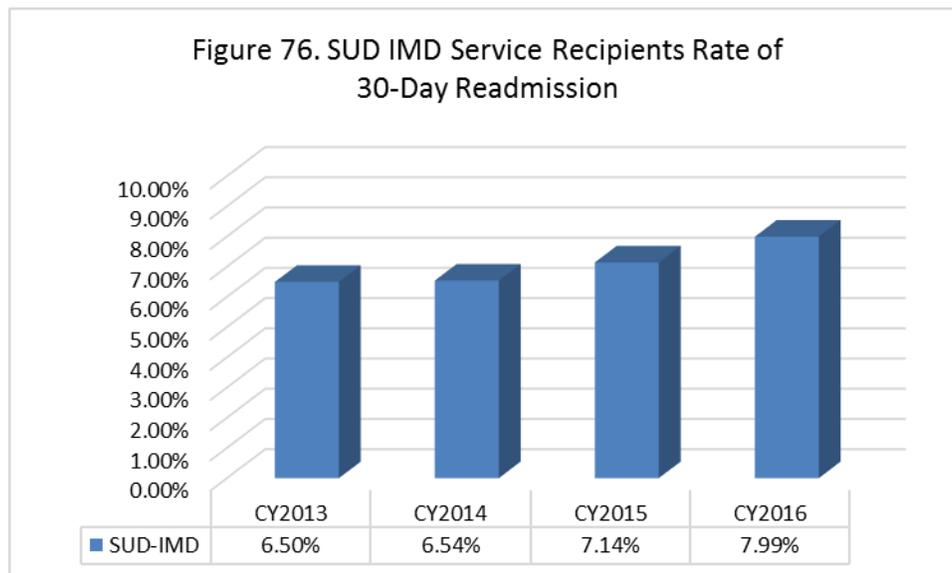
**Population:** SUD IMD service recipients.

**Data Source and Time Period:** MMIS, paid claims CY2013-2016.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Due to the response and priorities established under the COVID-19 Public Health Emergency, the State did not have the staff resources to update the data for the current demonstration period. SUD-IMD readmission rate for 2017-2021 will be included in the final summative evaluation report due in 2022. Readmission rates included in Interim Evaluation Report #1 (submitted to CMS April 1, 2018) are provided below for the study period 2013 – 2016. At that time rates of 30-day readmission to the same or higher level of care for SUD IMD service recipients were low in Vermont. Rates were trending upward and ranged between 6.50% and 7.99% annually.



## Cost Containment

In assessing the demonstration's performance in Cost Containment, two research questions and four hypotheses were examined. In addition, an exploratory analysis of SUD expenditures was conducted for SUD IMD service recipients. A summary of these questions and corresponding hypotheses are presented in Table F-20 below. Findings are presented by research question and hypothesis for Cost Containment on the following pages.

*Table F-20: Cost Containment Research Questions and Hypotheses*

Research Question	Hypotheses
<b>6. Will the demonstration maintain or reduce spending in comparison to what would have been spent absent the demonstration?</b>	1. The demonstration will contain or reduce overall Medicaid spending
	2. The demonstration will contain or reduce SUD and SMI IMD spending*
<b>7. Will improved access to preventive care result in lower overall costs for the healthcare delivery system?</b>	1. The Blueprint for Health initiative will contain or reduce per capita risk-adjusted expenditures for enrollees whose diabetes is in control
	2. The Blueprint for Health initiative will contain or reduce total per capita risk-adjusted expenditures for enrollees ages 1-64 years

Research Question 6: Will the demonstration maintain or reduce spending?

Hypothesis 1. The demonstration will contain or reduce overall Medicaid spending.

Measure(s)

6.1.1 Actual aggregate expenditures versus budget neutrality limit

**Measure 6.1.1 Actual aggregate expenditures versus budget neutrality limit**

- Goal: Cost Containment
- Research Question: 6. Will the demonstration maintain or reduce spending in comparison to what would have been spent absent the demonstration?
- Hypothesis: 1. The demonstration will contain or reduce overall Medicaid spending.

**Measure Description:** Total demonstration expenditures as compared to CMS approved without waiver expenditure limits (caseload x PMPM limits).

**Population:** Demonstration.

**Data Source and Time Period:** Medicaid payments including MMIS, paid claims CY2017-2019; AHS Budget Neutrality Workbook updated April 30, 2020 and received by PHPG on June 25, 2020.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** The State has achieved savings over expected without waiver expenditures in each year of the demonstration studied. Total expenditures under the demonstration were \$1,238,718,223 in CY2017, \$1,284,417,019 in CY2018, and \$1,272,312,741 in CY2019. Expenditures without the waivers approved under the demonstration was limited to \$1,386,795,376 in CY2017, \$1,405,356,354 in CY2018, and \$1,415,544,626 in CY2019. Cumulative savings at the end of CY2019 were \$110,465,951.

*Table F-21. Aggregate Savings Summary*

Eligibility Group	DY 12	DY 13	DY 14
	Jan - Dec 2017	Jan - Dec 2018	Jan - Dec 2019
Total Expenditures Without Waiver	\$1,386,795,376	\$1,405,356,354	\$1,415,544,626
Total Expenditures with Waiver	\$1,238,718,223	\$1,284,417,019	\$1,272,312,741
Annual Savings	\$148,077,153	\$120,939,335	\$143,231,886
CMS Allowed Savings Percentage	30%	25%	25%
Allowable Annual Savings	\$44,423,146	\$30,234,834	\$35,807,971
Total Savings	\$44,423,146	\$30,234,834	\$35,807,971
Cumulative Savings	\$44,423,146	\$74,657,980	\$110,465,951

Research Question 6. Will the demonstration maintain or reduce spending?

Hypothesis 2. The demonstration will contain or reduce SUD and SMI IMD budget neutrality expenditures.

Measure(s)

6.2.1 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 (SUD IMD Service Recipients)

**Measure 6.2.1:** 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 (SUD IMD Service Recipients)

- Goal: Cost Containment
- Research Question: 6. Will the demonstration maintain or reduce spending in comparison to what would have been spent absent the demonstration?
- Hypothesis: 2. The demonstration will contain or reduce SUD and SMI IMD budget neutrality expenditures.

**Measure Description:** The SUD IMD PMPM Rates for SUD IMD service recipients for each year of the demonstration.

**Population:** SUD IMD service recipients.

**Data Source and Time Period:** AHS Budget Neutrality Workbook April 30, 2020; Medicaid payments including MMIS, paid claims CY2017-2019.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** In CY2018 PMPM expenses exceeded established limits for the SUD IMD Non-ABD group and the SUD IMD New Adult group. CY2018 represented 6 months of operation for the SUD amendment. For CY2019, the first full year of the demonstration, the Supplemental Budget Neutrality Test for SUD Expenditures shows that SUD IMD expenses for all Medicaid eligibility groups have exceeded their approved limits.

Table F-22. SUD IMD PMPM Limits by MEG and Actual Expenditures

SUD MEG	Approved Trend	PMPM CY2018			PMPM CY2019		
		Limit	Actual	Variance	Limit	Actual	Variance
SUD IMD ABD	3.40%	\$3,436.40	\$3,202.83	\$233.57	\$3,553.24	\$4,338.52	(\$785.28)
SUD IMD ABD Duals	1.80%	\$2,749.94	\$2,554.16	\$195.78	\$2,799.44	\$3,454.66	(\$655.22)
SUD IMD Non-ABD	0.00%	\$2,852.36	\$2,892.20	(\$39.84)	\$2,852.36	\$3,620.55	(\$768.19)
SUD IMD New Adult	0.60%	\$2,988.12	\$3,122.78	(\$134.66)	\$3,006.05	\$3,643.18	(\$637.13)

Research Question 7: Will improved access to preventive care result in lower overall costs?

Hypothesis 1. The Blueprint for Health initiative will contain or reduce expenditures for enrollees whose diabetes is in control.

**Measure(s)**

7.1.1 Expenditures per capita for continuously enrolled Medicaid members, ages 18-75 whose Diabetes HbA1c was in control compared to those with poor control

**Measure 7.1.1: Expenditures Per Capita For Continuously Enrolled Medicaid Members, Ages 18-75 Whose Diabetes Hba1c Was in Control Compared to Those with Poor Control.**

- Goal: Cost Containment
- Research Question: 7. Will improved access to preventive care result in lower overall costs for the healthcare delivery system?
- Hypothesis: 1. The Blueprint for Health initiative will contain or reduce per capita risk-adjusted expenditures for enrollees whose diabetes is in control.

**Measure Description:** Total paid claims for each measurement year for continuously enrolled Medicaid members ages 18-75 with diabetes.

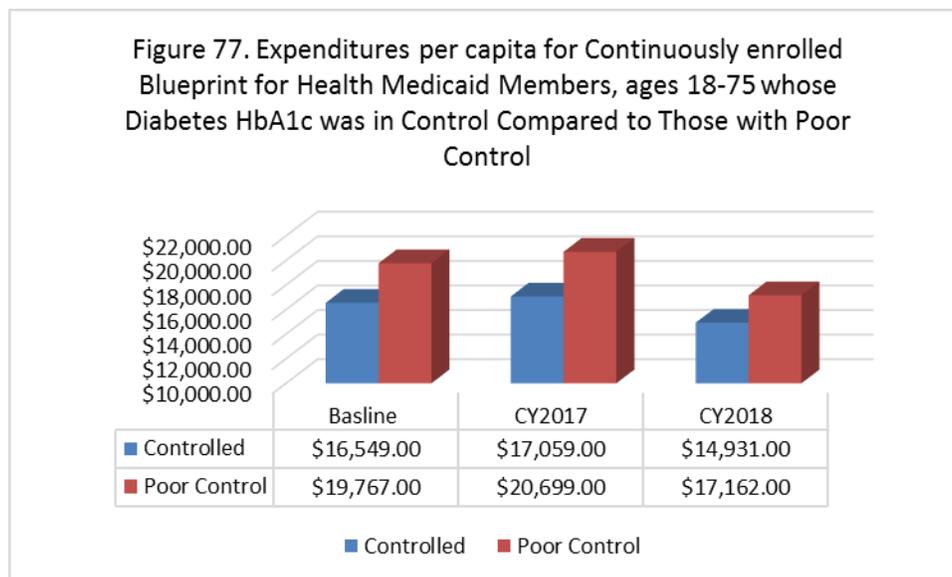
**Population:** Blueprint for Health Medicaid Members.

**Data Source and Time Period:** MMIS, paid claims CY2017-2019.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Medicaid expenditures for members whose diabetes was controlled rose slightly in CY2017 from a baseline of \$16,549 to \$17,059, before declining by 9.78% in CY2018 to \$14,931. Members whose diabetes showed poor control followed the same pattern, rising slightly from a baseline of \$19,767 to \$20,699 in CY2017, before decreasing by 13.18% to \$17,162.00 in CY2018.



Research Question 7. Will improved access to preventive care result in lower overall costs for the healthcare delivery system?

Hypothesis 2. The Blueprint for Health initiative will contain or reduce total per capita risk-adjusted expenditures for enrollees ages 1-64 years.

**Measure(s)**

- 7.2.1 Total risk adjusted expenditures per capita, excluding specialized program services, for Medicaid enrollees ages 1-64 years
- 7.2.2 Specialized program risk adjusted expenditures per capita, for Medicaid enrollees ages 1-64 years

**Measure 7.2.1: Total Risk Adjusted Expenditures Per Capita, Excluding Specialized Program Services, For Medicaid Enrollees Ages 1-64 Years; and**

**Measure 7.2.2 Specialized Program Risk Adjusted Expenditures Per Capita, For Medicaid Enrollees Ages 1-64 Years**

Goal: Cost Containment

Research Question: 7. Will improved access to preventive care result in lower overall costs for the healthcare delivery system?

Hypothesis: 2. The Blueprint for Health initiative will contain or reduce total per capita risk-adjusted expenditures for enrollees ages 1-64 years.

**Measure Description:** Total and specialized risk-adjusted expenditures per capita for Medicaid enrollees ages 1-64 years. Specialized services include dental, transportation, residential, school-based services, day treatment and case management. Total expenditures for each measurement year defined as allowed amount on claims, including claims payments and the member’s out-of-pocket payments (i.e., deductible, coinsurance, and copayments). Each expenditure category was capped separately at the 99th percentile of the statewide study population to reduce the distorting influence of extreme outlier cases. Expenditure rates were computed as an annualized adjusted rate using the risk-adjustment methods described in Attachment D.

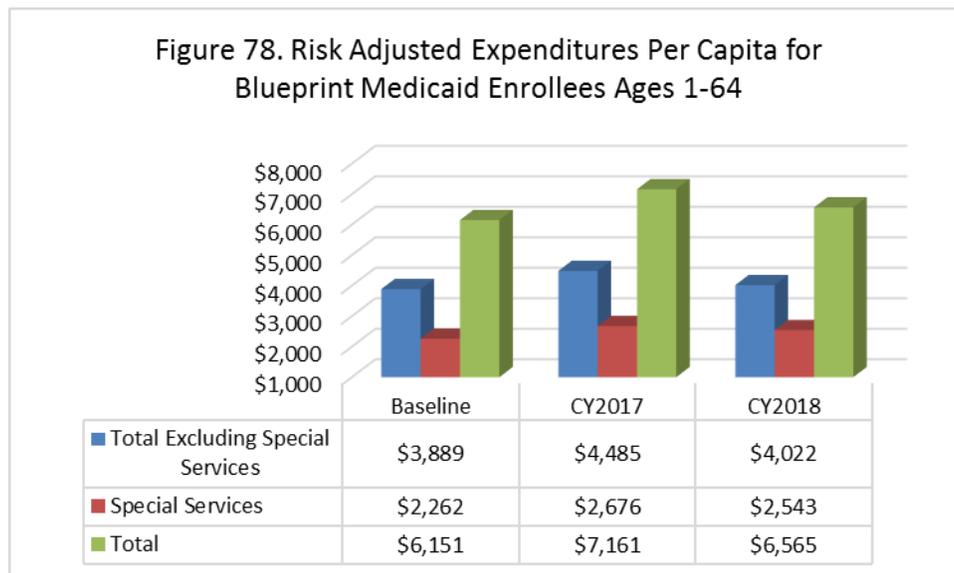
**Population:** Blueprint for Health Medicaid enrollees.

**Data Source and Time Period:** MMIS, paid claims CY2016-2018.

**National Benchmark:** N/A

**Analytical Approach:** Descriptive statistics.

**Findings:** Total risk-adjusted expenditures fluctuated slightly for Medicaid members Ages 1 to 64 years enrolled in the Blueprint for Health. Total costs, including special services such as dental, transportation and care management, were \$6,151 in 2016, expenditures rose to \$7,161 in 2017 before declining to \$6,565 in CY2018.



## Delivery System Related Investments

In December of 2017, two Delivery System Related Investments were approved by CMS. Both projects began in January 2018. AHS conducted quarterly and annual reviews of ACO performance, as pre-defined in each CMS approved investment application. Results for the process measures included in the evaluation are presented below for each project.

### Investment 1: OneCare Vermont ACO Advanced Community Care Coordination

This investment project was designed to support integrated care delivery system that is person-centered, efficient, and equitable through the implementation of a community-based care coordination model. Four expected outcomes were identified by AHS:

1. OneCare will support the development of a standardized team-based care model that integrates PCMHs with the continuum of care provider network.
2. OneCare's care coordination model for complex needs populations will expand to additional communities served in 2018 and 2019 with several core components in place, bringing stability, scalability, and consistency to the care model.
3. 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.
4. 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.

Seven process measures tracked by the State were included in the Global Commitment to Health demonstration evaluation. Four measures are administrative process measures and were examined annually. Three measures are clinical process measures and were examined quarterly. Results for each measure are presented below.

#### Measure 1: The percent of communities participating in community-based care coordination model, including regular participation in "Care Coordination Core Team"

The target for communities (defined as Health Service Areas) taking part in the community-based care coordination model is 100%. In the first year of the investment (2018) OneCare Vermont achieved a 67% participation rate for communities across the state. In 2019, participation rose to 87%. Performance improved nearly 30% over Year One of the investment.

#### Measure 2: The number of care team members/leaders trained in care coordination skills/core competencies, including in the Care Navigator IT platform

The target for the number of care team members trained in care coordination skills/core competencies, including in the Care Navigator IT platform, was 150. In the first year of the investment, OneCare Vermont trained over 692 care team members, exceeding its target by over 300%. In 2019, OneCare Vermont trained an additional 90 care team members.

**Measure 3: Total amount of advanced community care coordination payments made to eligible ACO participants**

The State did not establish a target for the total amount of advanced community care coordination payments made to eligible ACO participants. In the first year of the investment (2018), OneCare Vermont made \$2,728,849 in community care coordination payments. That amount rose to \$5,218,814 in 2019.

**Measure 4: The number of quality/health management measurement improvement activities implemented by OneCare**

The State did not establish a target for the number of quality/health management measurement improvement activities. Following the first year of the investment, OneCare Vermont developed 34 quality/health measurement improvement activities.

Results for each of the administrative measures by year are presented in Table F-23 below.

*Table F-23: Delivery System Related Investment #1 Results Administrative Process Measures*

ACO Investment Measure	Target	2018	2019
1. Percent of communities participating in community-based care coordination model, including regular participation in “Care Coordination Core Team”	100%	67%	87%
2. Number of care team members/leaders trained in care coordination skills/core competencies, including in the Care Navigator IT platform	150	692	90
3. Total amount of advanced community care coordination payments made to eligible ACO participants	N/A	\$2,728,849	\$5,218,814
4. Number of quality/health management measurement improvement activities implemented by OneCare	N/A	N/A	34

**Measure 5: Percent of patients in high or very high-risk levels who are engaged in care coordination**

An ACO target of 5% was established for the percent of patients in high or very high-risk levels who are engaged in care coordination. In each quarter of 2018 and 2019, the ACO met or exceeded its target. Differences above the target were measured using a 1-sided t-test and were significant for each quarter of the measurement period.

Table F-24, on the following page, offers an overview of ACO results.

Table F-24: Percent of patients in high or very high-risk levels who are engaged in care coordination

Quarter/Year	Result	Numerator	Denominator	Significant Relative to ACO Target at $p \leq .05$ (1-sided t-test)
Q1-2018	8.92%	604	6,768	Yes
Q2-2018	10.64%	720		Yes
Q3-2018	11.91%	806		Yes
Q4-2018	15.25%	1,032		Yes
Q1-2019	7.52%	949	12,627	Yes
Q2-2019	10.77%	1,360		Yes
Q3-2019	11.13%	1,406		Yes
Q4-2019	14.56%	1,838		Yes

**Measure 6: Percent of high risk and very high-risk level patients who are engaged in care coordination who have a shared care plan initiated**

An ACO target of 50% was established for the percent of patients in high or very high-risk levels who are engaged in care coordination and who have a shared care plan. ACO performance was significantly above its target in Quarters #2 -4 of 2019. In each quarter, the ACO met or exceeded its target. Differences above the target were measured using a 1-sided t-test and were significant for each quarter of the measurement period, apart from Quarter #3 2018. Table F-25 offers an overview of ACO results.

Table F-25: Percent of patients in high or very high-risk levels who are engaged in care coordination and who have a shared care plan

Quarter/Year	Result	Numerator	Denominator	Significant Relative to ACO Target at $p \leq .05$ (1-sided t-test)
Q1-2018	27.32%	165	604	Yes
Q2-2018	42.36%	305	720	Yes
Q3-2018	50.87%	410	806	No
Q4-2018	41.18%	425	1,032	Yes
Q1-2019	42.78%	406	949	Yes
Q2-2019	55.07%	749	1,360	Yes
Q3-2019	78.45%	1,103	1,406	Yes
Q4-2019	78.45%	1,442	1,838	Yes

**Measure 7: Percent of high and very high-risk level patients who have a shared care plan with completed tasks and goals**

An ACO target of 50% was established for the percent of patients in high or very high-risk levels who have a shared care plan with completed tasks and goals. Performance has been below the target in all quarters measured. Differences from the target are statistically significant in all but Quarters #1 and 4 in 2018.

Table F-26, on the following page, offers an overview of ACO results.

Table F-26: Percent of patients in high or very high-risk levels who have a shared care plan with completed tasks and goals by quarter

Quarter/Year	Result	Numerator	Denominator	Significant Relative to ACO Target at $p \leq .05$ (1-sided t-test)
Q1-2018	20.00%	33	165	No
Q2-2018	18.69%	57	305	Yes
Q3-2018	17.32%	71	410	Yes
Q4-2018	23.29%	99	425	No
Q1-2019	14.78%	60	406	Yes
Q2-2019	16.15%	121	749	Yes
Q3-2019	14.32%	158	1,103	Yes
Q4-2019	11.37%	164	1,442	Yes

### Investment 2: OneCare Vermont ACO Quality Health Management Measurement Improvement

This investment was 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. Three expected outcomes were established:

1. OneCare’s analytics platform will be enhanced to meet the needs of ACO partners and the State’s All Payer model.
2. Care Navigator functionality will be improved to support care coordinators in assisting patients with complex care coordination needs.
3. 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.

Table F-27 offers an overview of ACO results.

Table F-27: Delivery System Related Investment #2 Results

ACO Investment Measure	2018	2019
Percent of health service areas who received data literacy training and technical support	100%	100%

## G. Conclusions

The Global Commitment to Health is a long-standing demonstration that began in 2005. While new initiatives have been introduced, the demonstration continued many of the same policies and initiatives that were implemented prior to 2017. Therefore, these findings are longitudinal and should not be interpreted as causal evidence for the impacts of the demonstration.

Results, in general, suggest a high-performing and mature delivery system. For example, in measures where national Medicaid benchmarks were available and examined, the demonstration outperformed Medicaid programs nationally for most of those studied. Over 50% of the hypotheses for six of the seven research questions returned an interim finding of “True” and 43% of the hypotheses for Research Question #3 (Quality of Care) produced an interim finding of “True.”

For hypotheses where 50% or more of the measures tested show statistically significant improvement, the hypothesis was considered “True.” Hypotheses were considered “Not Proven” when any of the following occurred:

- For hypothesis testing with multiple measures, results returned a mix of statistically significant results with fewer than 50% of the measures showing improvement;
- There was a statistically significant decline in performance in the most recent measurement period;
- A change in measure specifications occurred after the baseline period; or
- The denominator was small.

An assessment of “Not Tested” was given when updated data was not available to assess progress during the demonstration period.

Conclusions for each major goal area of the demonstration are described throughout the remainder of this section.

### Access to Care

In assessing the demonstration’s performance in the area of Access to Care, two research questions and ten hypotheses were examined. Interim findings for Research Question #1 provide support that the demonstration is associated with overall improvement in Access to Care across a broad spectrum of services. Four of the seven hypotheses returned an interim assessment of “True.” Three hypotheses were “Not Proven.”

Interim findings for Research Question #2, provide support that the value-based payment models are associated with increased access. When compared to the control group, ACO performance is more often higher than the comparison group (i.e., in five of the six annual data points studied). Overall, two out of three hypotheses studied were deemed “True.”

Additionally, for all measures under the Access to Care goal, where a national benchmark was available and applied, the demonstration outperformed Medicaid programs nationally.

Rationales for these preliminary conclusions related to Access to Care are presented below by research question and hypothesis.

## Research Question 1: Will the demonstration result in improved Access to Care?

Hypothesis 1. The demonstration will result in improved access to community based medical care.

In eight of the ten measures examined, the State improved performance during the extension period. All four of the HEDIS® measures studied showed statistically significant improvement over baseline performance. Two qualitative measures fell below the baseline. The percent of respondents who reported they received necessary care declined by 1.67% for adults and 5.51% for children. However, for both these measures, the State exceeded the national benchmarks and performed at over 82% for both populations. The improvement over baseline was statistically significant for 100% of all quantitative measures tested. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “True.”

Hypothesis 2. The demonstration will result in improved access to Medication Assisted Treatment for Opioid Use Disorder (OUD)

One measure specifically tracked access to MAT using data from Vermont’s specialized health home project and prescription monitoring system. Access to MAT showed statistically significant increases in each year of the demonstration. For this reason, the study findings lead to an interim conclusion that the hypothesis is “True.”

Three additional metrics were included in the hypothesis testing, of particular interest to the State. These were: overdose deaths, measured for overall Vermont residents and the Medicaid population; and Continuity of Pharmacotherapy for OUD (NQF#3175). Vermont resident overdose deaths rose in 2018 and have started to decline. The number of Medicaid member overdose deaths also declined and fell below baseline in 2019. However, due to data lags and health department data staff supporting the pandemic response, data for 2019 is considered preliminary. In addition, health surveillance during the pandemic shows an increase in overdose deaths for the general population.

Continuity of Pharmacotherapy for OUD has shown a decline in performance since 2017. However, on closer examination, measure specifications may require modification to address bundled payments and variations in provider billing practices. Specifically, variation in monthly billing practices for patients receiving center-based MAT (Hub) services can create an artificial gap of more than 7-days and result in breaks in services that are not true gaps in care.

Hypothesis 3. The demonstration will result in improved access to dental care

One measure was examined for youth ages 2 to 20. The demonstration showed statistically significant improvement over baseline. In addition, the State outperformed Medicaid plans nationally by nearly 25%. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “True.”

Hypothesis 4. The demonstration will reduce the percent of potentially preventable events

Eight metrics were included under this hypothesis. Two measures targeted the total Medicaid population: potentially preventable ED use and the rate of ED use per 1,000 member months. One metric, the rate of ED use per 1,000 member months, was examined for five subpopulations (LTSS and Mental Health); and one metric examined ACO performance relative to all-cause unplanned admissions for persons with multiple chronic conditions.

Relative to the total Medicaid population, the potentially preventable ED visit rate showed statistically significant improvement over baseline. However, ED visits per 1,000 member months showed a statistically significant decline in performance over baseline, as did ED visits for the CFC program participants. Improvement in ED use was statistically significant for the children's mental health population.

Overall, four of eight of the measures showed improvement. Of the measures that improved, two were statistically significant. Of the measures that declined in performance, two showed statistically significant declines over baseline. For these reasons, the study findings lead to an interim conclusion that the hypothesis is "Not Proven."

Hypothesis 5. The demonstration will reduce ED use for SUD per 1,000 enrollees

One measure was examined for this hypothesis. The rate of ED use for SUD showed a statistically significant decline in performance (e.g., higher rates) over baseline. In 2018 Vermont initiated a pilot project to expand access to MAT, by using EDs as an access point to treatment initiation for patients in rural communities. The Rapid Access to Medication Assisted Treatment (RAM) began in one region and will be expanded over time. These services may contribute to the slight increase in ED use for SUD. For this reason, the study findings lead to an interim conclusion that the hypothesis is "Not Proven."

Hypothesis 6. Premium requirements for eligible families above 195% FPL will not impede access to enrollment

One measure was examined under this hypothesis. At baseline and in each year of the demonstration, the State has maintained a high rate of coverage for children found eligible for Dr. Dynasaur with a premium. In 2017, the population was more than twice as large as in 2016. This relates to the temporary suspension of Medicaid reviews during the first two years of the health insurance Marketplace. While Medicaid reviews restarted in early 2016, many of the mixed households (e.g., those with adults who had a Qualified Health Plan and Dr. D eligible children) were held until Open Enrollment in late fall. To the extent that these members responded to their renewal after the first of the year, they show up in 2017, not 2016. In 2017 the percent of effectuated coverage was 95% for families with premiums. With the resumption of the annual review cycle, the remaining years of the demonstration are performing at over 99%. For these reasons, the study findings lead to an interim conclusion that the hypothesis is "True."

Hypothesis 7. The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage

Two measures were examined under this hypothesis. The percent of individuals receiving Vermont Premium Assistance who maintained coverage with no gaps has declined in each year of the demonstration. However, significant information technology challenges during the first years of the insurance Marketplace may have influenced results. During this time, continued eligibility reviews were suspended. Following the 2016 baseline period two operational changes occurred:

- Income verifications were instituted and the VPA program no longer relied on self-attestation;
- Change of circumstance reporting and reviews began.

Related to the percent of uninsured individuals, the Vermont Department of Health surveys households every 3 years. The most recent survey conducted in 2018 shows that Vermont has maintained a low rate of uninsured, at 3.2% in 2018. The change from baseline was not statistically significant. However, Vermont has maintained a low rate under the demonstration extension.

For these reasons, the study findings lead to an interim conclusion that the hypothesis is “Not Proven.”

A summary of results for Research Question #1 by hypothesis is presented in Table G-1.

Table G-1: Research Question 1, Hypotheses Summary

Access to Care					
Research Question 1. Will the demonstration result in improved access to care?					
Hypothesis	Measurement Results				
	Total # Measures	Improved	Improved and Statistically Significant	At or Above Benchmark	Interim Conclusion
1. The demonstration will result in improved access to community based medical care	10	80%	100%	100%	True
2. The demonstration will result in improved access to Medication Assisted Treatment for Opioid Use Disorder (OUD)	4	50%	100%	N/A	True
3. The demonstration will result in improved access to dental care	1	100%	100%	100%	True
4. The demonstration will reduce the percent of potentially preventable events	8	50%	25%	100%	Not Proven
5. The demonstration will reduce ED use for SUD per 1,000 enrollees	1	0	0%	N/A	Not Proven
6. Premium requirements for eligible families above 195% FPL will not impede access to enrollment	1	No Change*	-	N/A	True
7. The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage	2	50%	0	N/A	Not Proven

\* Demonstration performance was at 99% at baseline and in CY2019.

#### Research Question 2: Will value based payment models increase Access to Care?

Hypothesis 1: The Medicaid ACO will improve access to mental health and substance use disorder treatment

To assess ACO performance relative to a comparison group, Propensity Score Matching with a T-test was employed for three measures of behavioral health access. As the number of members aligned with the ACO increased year over year, the ability to define a comparison group declined. In 2019, the number of members involved in the ACO exceeded that of the comparison group. In addition, demographic variables were not comparable between the two groups. Thus, 2019 results were not included in the analysis.

Results were examined at two points in time (2017 and 2018) for each of the following three measures:

- Percent of enrollees who received 30-day follow-up after discharge from ED for mental health (HEDIS® FUM);
- Percent of enrollees who received 30-day follow-up after discharge from ED for alcohol or other drug dependence (HEDIS® FUA); and
- Percent of enrollees discharged who had follow-up at 30 days after hospitalization for mental illness (HEDIS® FUH).

The ACO performed higher in five of six comparisons (83%). ACO performance was statistically significant for two of the six comparisons where performance was higher (33%).

Logistic regression was performed for one measure, the percent of enrollees discharged who had follow-up at 7 days after hospitalization for mental illness (HEDIS® FUH). The ACO showed statistically significant improvement in 2018. Results for 2019 improved over baseline, however, the change was not statistically significant. The ACO also performed higher than the national benchmark in two of three years.

For these reasons, the study findings lead to an interim conclusion that the hypothesis is “Not Proven.”

Hypothesis 2: The Medicaid ACO will improve access to adolescent well-care

To assess ACO performance relative to a comparison group, Propensity Score Matching with a T-test was used for one measure. When compared to the control group ACO performance was higher than the comparison group with statistically significant results in each of the two years studied. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “True.”

Hypothesis 3: The Medicaid ACO will increase engagement with eligible enrollees

To assess ACO performance 2 measures were examined with statistically significant increases in members aligned with the ACO for each year studied. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “True.”

A summary of results for Research Question #2 by hypothesis is presented in Table G-2, on the following page.

Table G-2: Research Question 2, Hypotheses Summary

Access to Care					
Research Question 2. Will value-based payment models increase Access to Care?					
Hypothesis	Measurement Results				
	Total # Measures	Improved	Improved and Statistically Significant	At or Above Benchmark	Interim Conclusion
Hypothesis 1: The Medicaid ACO will improve access to mental health and substance use disorder treatment	7	6	33%	N/A	Not Proven
Hypothesis 2: The Medicaid ACO will improve access to adolescent well-care	1	1	100%	N/A	True
Hypothesis 3: The Medicaid ACO will increase engagement with eligible enrollees	2	2	100%	N/A	True

## Quality of Care

In assessing the performance of the demonstration in the area of Quality of Care, two research questions and eight hypotheses were examined. In over 76% of the measures studied under Quality of Care, where a benchmark was applied, the demonstration outperformed Medicaid programs nationally.

Relative to Research Question #3, interim findings provide show that the demonstration is associated with overall improvement in Quality of Care for some areas. Three out of seven hypotheses returned an interim assessment of “True.”

Relative to Research Question #4, interim findings provide support that the Blueprint for Health is associated with improved diabetes control for Medicaid members who are receiving services. Fewer than 23% of Medicaid members show poor control. For this reason, the hypothesis is assessed as “True.”

The rationales for these interim conclusions is presented below by research question and hypothesis.

### Research Question 3: Will the demonstration improve quality of care?

Hypothesis 1. The demonstration will improve quality of care

Four measures of quality were studied under this hypothesis. Two measures were targeted at the general Medicaid population and two measures were targeted at the ACO sub-group. Performance on all measures exceeded the national benchmark in CY2019.

Both measures of Medicaid performance related to asthma medication fluctuated year to year and declined slightly in CY2019. Changes over baseline were not statistically significant for medication management at 50% compliance. However, medication management at 75% compliance showed a statistically significant decline, averaging just under a 5% decline in each year.

Measures related to ACO performance included depression screening and planning and developmental screening. While both measures improved year over year from baseline, only the increase in developmental screening for CY2019 was statistically significant.

For these reasons, the study findings lead to an interim conclusion that the hypothesis is “Not Proven.”

Hypothesis 2. ACO enrollees will show improved diabetes and hypertension control

Two measures of quality were studied under this hypothesis. Enrollees with poor control of diabetes showed a statistically significant improvement in CY2019. Enrollees with controlled hypertension declined, however, the change from baseline was not statistically significant. The ACO outperformed national benchmarks for both measures in each demonstration year. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “True.”

Hypothesis 3. The demonstration will increase preventive health screenings for female enrollees

The two measures of quality studied under this hypothesis relate to breast cancer and chlamydia screening. Breast cancer screenings showed a statistically significant decline over baseline. Chlamydia screening showed a statistically significant increase over baseline. Vermont scored below the national benchmark on both measures. DVHA has implemented a quality improvement initiative under the Blueprint to Health. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “Not Proven.”

Hypothesis 4. The demonstration will improve mental health follow-up after psychiatric hospitalization

Follow-up after hospitalization was assessed at 7 days and 30 days. Vermont scored above the national benchmark on both measures. Follow-up at 7 days was 54% above national scores and follow-up at 30 days was 27% above the national benchmark. Compared to baseline, the results for both measures show a decline, with a statistically significant decline in 7-day follow-up for CY2019. However, the measure specification changed in 2017 to exclude counting services rendered on the day of discharge as a post-discharge contact. Vermont claims showed that FQHCs and other providers provided same-day service that was subsequently excluded from the calculation after the 2016 baseline period. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “Not Proven.”

Hypothesis 5. The demonstration will improve Initiation and engagement in SUD treatment.

Initiation and engagement in SUD treatment were assessed for the Medicaid population and ACO and SUD-IMD sub-groups. Vermont performed above the national benchmark for all measures tested. For Medicaid enrollees, both measures showed statistically significant improvement in CY2019. For the ACO population, both measures improved over baseline with statistically significant results for initiation in treatment. In addition, SUD IMD enrollees showed statistically significant improvement in the initiation of treatment and corresponding increases in engagement. Engagement in treatment was not statistically significant for SUD IMD enrollees. HEDIS® measure specifications were revised in 2018 to include medications dispensed as part of Medications Assisted Treatment. Extensive access to MAT in Vermont may have driven some of the increase in rates over time. Under this hypothesis, 67% of the measures showed statistically significant improvement. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “True.”

Hypothesis 6. The demonstration will improve enrollee experience of care and rating of the health plan

The CAHPS was used to assess enrollee experience of care under the demonstration. Eight measures were studied; four of the eight measures result in a domain or composite score, as per the Evaluation Design, changes in the composite score over time were not tested for significance. Of the measures tested there were no statistically significant changes for CY2019.

The demonstration improved in both the child and adult rating of the health plan and remained at baseline levels in two measures: adults who rate their ability to get quick care as usually or always and children who rate the care they receive as a 7 or above (on a scale of 1 to 10 where 10 is the best). Ratings for customer service declined for both the child and adult surveys and adults rated their ability to get care quickly lower in CY2019. However, the demonstration scored at or above the national benchmark in over 62% of the measures examined. In addition, baseline scores were high for all measures. In CY2019, three measures scored over 90%, and four measures scored over 82%.

For these reasons, the study findings lead to an interim conclusion that the hypothesis is “Not Proven.”

Hypothesis 7. The demonstration will improve self-report of health status for enrollees with LTSS needs

Three measures were studied under this hypothesis; however, two measures were collected as part of the recently implemented NCI-AD Survey and represented one point in time. Results relative to change over time will be included in the final summative report in 2022. The remaining measure showed that only 4% of the DDS program participants, who participated in the NCI-DD survey, reported their health as “poor” at baseline. That number declined to 3% in CY2018, the most recent data available. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “True.”

A summary of results for Research Question #3 by hypothesis is presented in Table G-3, on the following page.

Table G-3: Research Question 3, Hypotheses Summary

Quality of Care					
Research Question 3. Will the demonstration result in improved quality of care?					
Hypothesis	Measurement Results				
	Total # Measures	Improved	Improved and Statistically Significant	At or Above Benchmark	Interim Conclusion
1. The demonstration will improve quality of care	4	50%	25%	100%	Not Proven
2. ACO enrollees will show improved diabetes and hypertension control	2	50%	50%	100%	True
3. The demonstration will increase preventive health screenings for female enrollees	2	1	50%	0	Not Proven
4. The demonstration will improve Mental health follow-up after psychiatric hospitalization	2	0	0	100%	Not Proven
5. The demonstration will improve Initiation and engagement in SUD treatment.	6	6	67%	100%	True
6. The demonstration will improve enrollee experience of care and rating of the health plan	8*	2**	0	62%	Not Proven
7. The demonstration will improve self-report of health status for enrollees with LTSS needs	1*	100%	0**	N/A	True

\* Additional measures were collected for NCI-AD Survey, however, data for those measures represent one point in time and are not factored into this summary; NCI-AD results will be included in the summative report in 2022; \*\* Scores were often high at baseline and retained high performance

Research Question 4: Will improved access to primary care result in improved health outcomes?

Hypothesis 1. The Blueprint for Health will improve diabetes control for Medicaid members age 18-75

Two measures were examined for Medicaid members involved in the Blueprint for Health: members whose diabetes was in control and the rate of inpatient hospitalizations among members with diabetes. Fewer than 23% of continuously enrolled Medicaid members Ages 18 to 75 show poor control during the demonstration period. Inpatient hospitalizations remain lower for Blueprint members with controlled diabetes. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “True.”

However, over time the number of enrollees with poor control has increased from 11% at baseline to 22% in CY2018, the most recent data available. Inpatient hospitalizations, while remaining lower for those members with good control, is also increasing for the Blueprint Medicaid members studied.

With the migration of former demonstration populations to the Vermont Marketplace under the ACA; and the resumption of Medicaid eligibility reviews in 2016 and 2017, Blueprint to Health Medicaid members represent a population that is older with more chronic conditions than prior years. In addition, IT challenges and the use of multiple data extracts across the demonstration period also may be influencing results.

Blueprint for Health results for Medicaid members rely on extracting information from the State’s multi-payer claims database and matching it with information in the State’s clinical registry. Many providers, including FQHCs who serve Medicaid members, are building the technological infrastructure to submit data to the registry. Once connected, additional work is needed within the provider's IT structure to also submit lab results. These technological issues serve to limit the amount of information in the registry. Providers who are unable to submit information through the clinical registry are not included in the data set. In addition, extracts are produced from the data warehouse at different times for each year studied. Thus, Medicaid members in various Blueprint for Health measures are often undercounted and measures do not provide a complete assessment of program performance.

The State is making significant improvements to its Vermont Health Information Exchange (VHIE). This includes expanding the number of providers connected to the exchange and thus information available in its data warehouse. The Blueprint clinical registry has been retired. In the future, clinical information used for the Blueprint to Health measures will be obtained through the new VHIE data warehouse. Prior year results will be reproduced in the final summative report to minimize potential undercounts.

A summary of results for Research Question #4 by hypothesis is presented in Table G-4.

*Table G-4: Research Question 4, Hypotheses Summary*

<b>Quality of Care</b>					
<b>Research Question 4. Will improved access to primary care result in improved health outcomes?</b>					
<b>Hypothesis</b>	<b>Measurement Results</b>				
	<b>Total # Measures</b>	<b>Improved</b>	<b>Improved and Statistically Significant</b>	<b>At or Above Benchmark</b>	<b>Interim Conclusion</b>
The Blueprint for Health will improve diabetes control for Medicaid members age 18-75	2	1	N/A	N/A	True

## Community Integration

In assessing the performance of the demonstration in the area of Community Integration, one research question and six hypotheses were examined. Relative to Research Question #5, interim findings provide support that the demonstration is associated with improvement in Community Integration for persons with LTSS and those with behavioral health needs. Three out of six hypotheses returned an interim assessment of “True” while three were “Not Proven.”

Rationales for these preliminary conclusions are presented below by research question and hypothesis.

### Research Question 5: Will the demonstration result in increased community integration?

Hypothesis 1. The demonstration will increase community living for Choices for Care program enrollees

The percent of CFC enrollees served in the home and community showed statistically significant increases in each year of the demonstration. Results moved from a baseline of 54% to 58% in CY2019 as compared to those living in nursing facilities. For this reason, the study findings lead to an interim conclusion that the hypothesis is “True.”

Hypothesis 2. The demonstration will increase community integration for persons needing LTSS

Two of the three measures studied under this hypothesis rely on the NCI-AD Survey results. To date, one data point (2018) has been collected and is considered the baseline. The remaining measure examined NCI-DD survey responses. Per the Evaluation Design, significance testing was not applicable for this measure. Participants in the DDS program reported participation in integrated community activities at 84% during baseline, increasing to 87% in CY2018. For this reason, the study findings lead to an interim conclusion that the hypothesis is “True.”

Hypothesis 3. The demonstration will increase choice and autonomy for persons needing LTSS.

Two of the three measures studied under this hypothesis rely on the NCI-AD Survey results. To date, one data point (2018) has been collected and is considered the baseline. The remaining measure examined NCI-DD survey responses. Per the Evaluation Design, significance testing was not applicable for this measure. Participants in the DDS program reported choice and autonomy as 87% at baseline and slight declined to 86% in CY2018. For this reason, the study findings lead to an interim conclusion that the hypothesis is “Not Proven.”

Hypothesis 4. The demonstration will increase integrated employment options for persons needing LTSS

Four of the seven measures studied under this hypothesis rely on the NCI-AD Survey results. To date, one data point (2018) has been collected and is considered the baseline. Vermont employment data resulted in a baseline of 25%, rising to 28% in CY2018 before falling to 18% in CY2019. The total number of participants tracked for employment in the TBI program is fewer than 50 annually. Small fluctuations in program participation can result in large swings in measurement results.

The percent of NCI-DD respondents who did not have a job, but wanted one, dropped from 52% at baseline to 48% in CY2018. Vermont-specific employment data from the Department of Labor and other reporting agencies showed that 49% of DDS program participants of working age were employed in

CY2019, up from 48% at baseline. The program target set by the State was 45%. The DDS employment rate was above the target in each year of the demonstration. Of the three employment measures examined, 67% showed improvement over baseline. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “True.”

Hypothesis 5. The demonstration will increase integrated employment options for persons with psychiatric needs

One measure was studied under this hypothesis. Data from the Vermont Department of Labor and DMH showed that 21% of CRT program participants of working age were employed. This represents a slight decrease from the baseline of 22%. The National Alliance for Mental Illness reports that the rate of employment for adults involved in the public mental health system was 17.8% in 2012, the last year in which the study was updated.<sup>11</sup> In 2018, funding for a jointly operated DMH/ Vocational Rehabilitation supported employment program was terminated due to a change in federal funding priorities. Vermont is performing above the most recent national rate. However, there was no statistically significant change over baseline in any year of the demonstration. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “Not Proven.”

Hypothesis 6. SUD IMD service recipients maintain community living as evidenced by low rates of IMD readmission

One measure was studied under this hypothesis. Due to the response and priorities established under the COVID-19 Public Health Emergency, the State did not have the staff resources to update the data for the current demonstration period. SUD-IMD readmission rate for 2017-2021 will be included in the final summative evaluation report due in 2022. While data studied in Interim Report #1 (submitted to CMS April 1, 2018) show low rates of readmission to the same or higher level of care for SUD IMD service recipients, data for the most recent extension period was not available. For this reason, the study findings lead to an interim conclusion that the hypothesis is “Not Tested.”

A summary of results for Research Question #5 by hypothesis is presented in Table G-5, on the following page.

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<sup>11</sup> Road to Recovery: Employment and Mental Illness, 2014 the National Alliance on Mental Illness

Table G-5: Research Question 5, Hypotheses Summary

Community Integration					
Research Question 5. Will the demonstration result in increased community integration?					
Hypothesis	Measurement Results				
	Total # Measures	Improved	Improved and Statistically Significant	At or Above Benchmark	Interim Conclusion
1. The demonstration will increase community living for Choices for Care program enrollees	1	100%	100%	N/A	True
2. The demonstration will increase community integration for persons needing LTSS**	1	100%	N/A	N/A	True
3. The demonstration will increase choice and autonomy for persons needing LTSS**	1	No Change*	N/A	N/A	Not Tested (per Design)
4. The demonstration will increase integrated employment options for persons needing LTSS**	3	67%	-	N/A	True
5. The demonstration will increase integrated employment options for persons with psychiatric needs	1	No Change	-	100%	Not Proven
6. SUD IMD service recipients maintain community living as evidenced by low rates of IMD readmission	1	N/A	N/A	N/A	Not Tested

\* Scores were high at baseline and remained high; \*\* Additional measures were collected for NCI-AD Survey, however data for those measures represent one point in time and are not factored into this summary; NCI-AD results will be included in the summative report in 2022

## Cost Containment

In assessing the demonstration's performance in Cost Containment, two research questions and four hypotheses were examined. Relative to Research Question #6, interim findings provide support that the demonstration is associated with cost containment. One of two hypotheses returned an interim assessment of "True."

Relative to Research Question #7, interim findings provide support that the demonstration is associated with cost containment. Two of the two hypotheses returned an interim assessment of "True."

Rationales for these preliminary conclusions are presented below by research question and hypothesis.

Research Question 6: Will the demonstration maintain or reduce spending?

Hypothesis #1: The demonstration will contain or reduce overall Medicaid spending

The State has achieved savings over expected without waiver expenditures in each year of the demonstration studied. Total expenditures under the demonstration were \$1,238,718,223 in CY2017, \$1,284,417,019 in CY2018, and \$1,272,312,741 in CY2019. Expenditures without the waivers approved under the demonstration was limited to \$1,386,795,376 in CY2017, \$1,405,356,354 in CY2018, and \$1,415,544,626 in CY2019. Cumulative savings at the end of CY2019 were \$110,465,951. For these reasons, the study findings lead to an interim conclusion that the hypothesis is "True."

Hypothesis #2: The demonstration will contain or reduce SUD IMD budget neutrality expenditures

In CY2018 PMPM expenses were exceeded in the SUD IMD Non-ABD group and the SUD IMD New Adult group. CY2018 represented 6-months of operation for the SUD amendment. For CY2019, the first full year of the demonstration, the Supplemental Budget Neutrality Test for SUD Expenditures shows that SUD IMD expenses for all Medicaid eligibility groups exceeded the approved limits. Provider rate changes and adjustments associated with the implementation of episodic payments in 2019 may have driven some increases. SUD utilization and cost drivers associated with exploratory measures were not available and will be included in the summative evaluation. For these reasons, the study findings lead to an interim conclusion that the hypothesis is "Not Proven."

A summary of results for Research Question #6 by hypothesis is presented in Table G-6, on the following page.

Table G-6: Research Question 6, Hypotheses Summary

Cost Containment					
Research Question 6. Will the demonstration maintain or reduce spending in comparison to what would have been spent absent the demonstration?					
Hypothesis	Measurement Results				
	Total # Measures	Improved	Statistically Significant	At or Above Benchmark	Interim Conclusion
1. The demonstration will contain or reduce overall Medicaid spending	1	+	N/A	N/A	True
2. The demonstration will contain or reduce SUD IMD BN expenditures	1	-	N/A	N/A	Not Proven

Research Question 7: Will improved access to preventive care result in lower overall costs?

Hypothesis #1: The Blueprint for Health initiative will contain or reduce expenditures for enrollees whose diabetes is in control

Expenditures for members whose diabetes is in control have declined from \$16,459 to \$14,931 for Medicaid members age 1-64 years enrolled in the Blueprint for Health. For this reason, the study findings lead to an interim conclusion that the hypothesis is “True.”

Hypothesis #2: The Blueprint for Health initiative will contain or reduce total per capita risk-adjusted expenditures for enrollees ages 1-64 years

Total risk-adjusted expenditures have remained relatively stable for the Medicaid members age 1-64 years enrolled in the Blueprint for Health. For these reasons, the study findings lead to an interim conclusion that the hypothesis is “True.”

A summary of results for Research Question #7 by hypothesis is presented in Table G-7.

Table G-7: Research Question 7, Hypotheses Summary

Cost Containment					
Research Question 7. Will improved access to preventive care result in lower overall costs for the healthcare delivery system?					
Hypothesis	Measurement Results				
	Total # Measures	Contain/ Improved	Statistically Significant	At or Above Benchmark	Interim Conclusion
1. The Blueprint for Health initiative will contain or reduce expenditures for enrollees whose diabetes is in control	1	+	N/A	N/A	True
2. The Blueprint for Health initiative will contain or reduce total per capita risk-adjusted expenditures for enrollees ages 1-64 years	1	+	N/A	N/A	True

## Delivery System Related Investments

The study examined two delivery system investments. For Investment #1 (OneCare Vermont ACO Advanced Community Care Coordination) seven measures were examined. Four of the seven were administrative process measures and included community care managers' participation in training, teams, and other coordination initiatives. In 2019, participation in care coordination rose to 87% and performance is on track to meet the goal of 100% participation in upcoming years.

The three remaining measures are clinical process measures related to care planning for members who are designated as high or very high risk. Two of the three measures are performing above the State target:

- The percent of patients in high or very high-risk levels who are engaged in care coordination is at 14% with an ACO target set by the State of 5%
- The percent of high risk and very high-risk level patients who are engaged in care coordination who have a shared care plan initiated is at 78% with an ACO target set by the State of 50%

For Investment #2 (OneCare Vermont ACO Quality Health Management Measurement Improvement), results show 100% of Vermont's health service areas are receiving data literacy training and technical support. Performance in this investment is also meeting expectations.

A summary of progress to date for the delivery system related investments is presented in Table G-8.

*Table G-8: Process Measures and Results for Delivery System Related Investments*

ACO Investment Measure	Goal	Progress	Statistically Significant	Analysis
<b>Investment #1</b>				
Percent of communities participating in community-based care coordination model, including regular participation in "Care Coordination Core Team"	100%	87%	N/A	Descriptive
Number of care team members/leaders trained in care coordination skills/core competencies, including in the Care Navigator IT platform	150	782	N/A	Descriptive
Total amount of advanced community care coordination payments made to eligible ACO participants	N/A	\$5,218,814	N/A	Descriptive
Number of quality/health management measurement improvement activities implemented by OneCare	N/A	34	N/A	Descriptive
Percent of patients in high or very high-risk levels who are engaged in care coordination	5%	14%	Yes	One-sided T-test
Percent of high risk and very high-risk level patients who are engaged in care coordination who have a shared care plan initiated	50%	78%	Yes	One-sided T-test
Percent of high and very high-risk level patients who have a shared care plan with completed tasks and goals	25%	11%	Yes	One-sided T-test
<b>Investment #2</b>				
Percent of health service areas who received data literacy training and technical support	N/A	100%	N/A	Descriptive

## Overall Findings

Demonstration results suggest that Vermont's delivery system and program policies are associated with access to high-quality health care and support members with LTSS in maintaining community living and integration. Positive trends are seen across the general Medicaid population as well as demonstration participants enrolled in specialized programs. Of the seven research questions studied:

- Research Question #1 (Access to Care) returned an interim finding of "True" for 57% of the hypotheses examined. Two of the seven hypotheses studied were "Not Proven."
- Research Question #2 (Value-Based Payments and Access to Care) returned an interim finding of "True" for 67% of the hypotheses examined. One of the three hypotheses studied was "Not Proven."
- Research Question #3 (Quality of Care) returned an interim finding of "True" for 43% of the hypotheses examined. Four of the hypotheses studied were "Not Proven."
- Research Question #4 (Primary Care) returned an interim finding of "True" for 100% of the hypotheses examined.
- Research Question #5 (Community Integration) returned an interim finding of "True" for 50% of the hypotheses examined. Two of the six hypotheses studied were "Not Proven." One hypothesis was "Not Tested."
- Research Question #6 (Cost Containment) returned an interim finding of "True" for 50% of the hypotheses examined. One of the two hypotheses studied was "Not Proven."
- Research Question #7 (Preventive Care and Cost Containment) returned an interim finding of "True" for 100% of the hypotheses examined.

Table G-9 on the following page, provides an overall summary of interim findings for the demonstration by research question and hypothesis.

Table G-9 Summary of Findings by Research Question

Research Question	Hypothesis	Number of Measures			
		Showing Positive Results	Designed for Statistical Testing	Showing Statistically Significant Positive Results	Above the National Benchmark, Where Applicable
1. Will the demonstration result in improved access to care?	1. The demonstration will result in improved access to community based medical care	8 of 10	4	4	8 of 8
	2. The demonstration will result in improved access to Medication Assisted Treatment for Opioid Use Disorder (OUD)	2 of 4	2	1	N/A
	3. The demonstration will result in improved access to dental care	1 of 1	1	1	1 of 1
	4. The demonstration will reduce the percentage of potentially preventable events	4 of 8	8	2	1 of 1
	5. The demonstration will reduce ED use for SUD per 1,000 enrollees	0 of 1	1	0	N/A
	6. Premium requirements for eligible families above 195% FPL will not impede access to enrollment	0 of 1 <sup>12</sup>	1	0	N/A
	7. The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage	1 of 2	1	0	N/A
2. Will value-based payment models increase access to care?	1. The Medicaid ACO will improve access to mental health care and SUD treatment	6 of 7 <sup>13</sup>	7	2	1 of 1
	2. The Medicaid ACO will improve access to adolescent well-care	1 of 1	1	1	N/A
	3. The Medicaid ACO will increase engagement of eligible members over time	2 of 2	2	2	N/A
3. Will the demonstration result in improved quality of care?	1. The demonstration will improve quality of care	2 of 4	4	1	3 of 3
	2. ACO enrollees will show improved diabetes and hypertension control	1 of 2	2	1	2 of 2
	3. The demonstration will increase preventive health screenings for female enrollees	1 of 2	2	1	0 of 2
	4. The demonstration will improve Mental health follow-up after psychiatric hospitalization	0 of 2	2	0	2 of 2
	5. The demonstration will improve Initiation and engagement in SUD treatment.	6 of 6	6	4	4 of 4

<sup>12</sup> Baseline and CY2019 rates both showed over 99% of eligible families with premiums had coverage.

<sup>13</sup> Three measures represent six comparison points.

Research Question	Hypothesis	Number of Measures			
		Showing Positive Results	Designed for Statistical Testing	Showing Statistically Significant Positive Results	Above the National Benchmark, Where Applicable
	6. The demonstration will improve enrollee experience of care and rating of the health plan	2 of 10	4	0	5 of 8
	7. The demonstration will improve self-report of health status for enrollees with LTSS needs	1 of 1 <sup>14</sup>	1	0 <sup>15</sup>	N/A
4. Will improved access to primary care result in improved health outcomes?	1. The Blueprint for Health will improve diabetes control for Medicaid members age 18-75	2 of 2	1	0	N/A
5. Will the demonstration result in increased community integration?	1. The demonstration will increase community living for Choices for Care program enrollees	1 of 1	1	1	N/A
	2. The demonstration will increase community integration for persons needing LTSS	1 of 5 <sup>16</sup>	0	N/A	N/A
	3. The demonstration will increase choice and autonomy for persons needing LTSS.	0 of 1 <sup>17</sup>	0	N/A	N/A
	4. The demonstration will increase integrated employment options for persons needing LTSS	2 of 3 <sup>18</sup>	3	0	N/A
	5. The demonstration will increase integrated employment options for persons with psychiatric needs	0 of 1	1	0	1 of 1
	6. SUD IMD service recipients maintain community living as evidenced by low rates of IMD readmission	Not Tested <sup>19</sup>	1	Not Tested	N/A
6. Will the demonstration maintain or reduce spending in	1. The demonstration will contain or reduce overall Medicaid spending	1 of 1	0	N/A	N/A

<sup>14</sup> Two measures include only one baseline data point and will be evaluated in 2022.

<sup>15</sup> Measure was high performing at baseline and remained high in CY2019.

<sup>16</sup> Two measures include only one baseline data point and will be evaluated in 2022.

<sup>17</sup> Two measures include only one baseline data point and will be evaluated in 2022.

<sup>18</sup> Four measures include only one baseline data point and will be evaluated in 2022.

<sup>19</sup> Data for the measurement period was not available due to the State's response to the novel coronavirus public health emergency; results will be evaluated in 2022.

Research Question	Hypothesis	Number of Measures			
		Showing Positive Results	Designed for Statistical Testing	Showing Statistically Significant Positive Results	Above the National Benchmark, Where Applicable
comparison to what would have been spent absent the demonstration?	2. The demonstration will contain or reduce SUD IMD budget neutrality expenditures	0 of 1	0	N/A	N/A
7. Will improved access to preventive care result in lower overall costs for the healthcare delivery system?	1. The Blueprint for Health initiative will contain or reduce expenditures for enrollees whose diabetes is in control	1 of 1	0	N/A	N/A
	2. The Blueprint for Health initiative will contain or reduce total per capita risk-adjusted expenditures for enrollees ages 1-64 years	2 of 2	0	N/A	N/A

## Opportunities for Improvement

Overall, the State’s performance is positive. Over 50% of the hypotheses for six of the seven research questions returned an interim finding of “True” and 43% of the hypotheses for Research Question #3 (Quality of Care) produced an interim finding of “True.”

Opportunities for improvement include focused quality planning in underperforming areas; further examination and modification of the technical specifications and data used to calculate results; and potential revisions to the evaluation approach or analytics.

In addition, the impact of the pandemic will result in a considerable amount of uncertainty and variability in the CY2020 data and potentially CY2021, the last two years of the evaluation period. AHS staff and evaluators will consider how the pandemic may impact the evaluation methodology and findings for the demonstration and identify strategies to address these impacts.

Table G-10 offers an overview of the factors influencing the “Not Proven” findings for Research Question #1 and opportunities for improvement.

*Table G-10: Opportunities for Improvement Research Question #1*

Research Question #1. Will the demonstration result in improved access to care?		
Hypotheses Not Proven	Considerations	Potential Action Steps
4. The demonstration will reduce the percent of potentially preventable events (Not Proven)	Across the Medicaid population, potentially avoidable ED visits have significantly declined, while ED visits per 1,000 member months have significantly increased. Increases and decreases are seen across the specialized program populations, however, they are not consistently statistically significant. The specialized program population includes a larger percent of Dual Eligible members for which Medicaid visit data may be incomplete. For the ACO sub-group rates of unplanned admissions are low and continue to trend in a positive direction.	<ul style="list-style-type: none"> <li>Continued quality improvement focus on ED use especially with specialized populations (e.g., CFC, DDS, TBI, CRT)</li> <li>Access Medicare data for specialized populations or remove sub-group analysis from hypothesis testing</li> </ul>
5. The demonstration will reduce ED use for SUD per 1,000 enrollees (Not Proven)	Performance showed a statistically significant decline over baseline. The ED as an access point for MAT is being piloted in rural communities and may impact results.	<ul style="list-style-type: none"> <li>Continue monitoring</li> <li>Explore revisions to design and hypothesis to account for MAT initiation in the ED as a critical access point</li> </ul>
7. The VPA Qualified Health Plan subsidy program will result in continued access to health coverage (Not Proven)	Following the 2016 baseline period, income verifications and change of circumstance reviews started. After an initial decline over baseline, results have remained steady since the 2017 measurement period.	<ul style="list-style-type: none"> <li>Continue monitoring</li> </ul>

Table G-11 offers an overview of the factors influencing the “Not Proven” findings for Research Question #2 and opportunities for improvement.

Table G-11: Opportunities for Improvement Research Question #2

Research Question #2. Will value-based payment models increase access to care?		
Hypotheses Not Proven	Considerations	Potential Action Steps
1. The Medicaid ACO will improve access to mental health care and SUD treatment (Not Proven)	As the ACO increases the number of providers in its network and thus member alignment, the number of available beneficiaries in the comparison group has dropped. In addition, Propensity Score Matching did not yield a comparable group for examination.	<ul style="list-style-type: none"> <li>Reexamine design options, available data and analytics for hypothesis testing for the summative evaluation report</li> </ul>

Table G-12 offers an overview of the factors influencing the “Not Proven” findings for Research Question #3 and opportunities for improvement.

Table G-12: Opportunities for Improvement Research Question #3

Research Question #3. Will the demonstration result in improved quality of care?		
Hypotheses Not Proven	Considerations	Potential Action Steps
1. The demonstration will improve quality of care (Not Proven)	Two measures of asthma management have declined, with the percent of members with appropriate asthma medication at 75% compliance showing a statistically significant decline over baseline. However, Vermont's results are above national benchmarks. Two measures examining ACO performance have improved with one of two showing statistically significant improvement (Developmental Screening).	<ul style="list-style-type: none"> <li>Determine whether QI interventions are needed for asthma medication compliance</li> <li>Review hypothesis for revision such as to add “maintain” for measure performing above national standards</li> <li>Review hypothesis construction for sub-groups (e.g., separate ACO and general Medicaid measures)</li> </ul>
3. The demonstration will increase preventive health screenings for female enrollees (Not Proven)	Performance has historically been low in this area. QI projects are hampered due to a lack of resources and other priorities challenging the State. In April of 2019, a quality workgroup and learning collaborative was convened through the Blueprint’s Women’s Health Initiative (April-September 2019).	<ul style="list-style-type: none"> <li>Continue quality improvement focus through the Blueprint for Health Women’s Health Initiative</li> </ul>
4. The demonstration will improve Mental health follow-up after psychiatric hospitalization (Not Proven)	Measures specification changes in 2017 may have contributed to lower results in subsequent years for 7-day follow-up rates.	<ul style="list-style-type: none"> <li>Remove 7-day rate and focus evaluation efforts on the 30-day rate</li> </ul>

<b>Research Question #3. Will the demonstration result in improved quality of care?</b>		
<b>Hypotheses Not Proven</b>	<b>Considerations</b>	<b>Potential Action Steps</b>
6. The demonstration will improve enrollee experience of care and rating of the health plan (Not Proven)	In several cases baseline results were high, limiting the gains that made be made over time. In addition, the representative sample in Vermont is small (several hundred respondents). Small changes may cause results that are not indicative of the overall program performance.	<ul style="list-style-type: none"> <li>• Consider different analytic methods for measures already showing strong results at baseline</li> <li>• Consider different analytic methods for measures with low population counts causing significant swings in results from design</li> </ul>

Table G-13 offers an overview of the factors influencing the “Not Proven” findings for Research Question #4 and opportunities for improvement.

*Table G-13: Opportunities for Improvement Research Question #4*

<b>Research Question #4. Will the demonstration result in increased community integration?</b>		
<b>Hypotheses Not Proven</b>	<b>Considerations</b>	<b>Potential Action Steps</b>
3. The demonstration will increase choice and autonomy for persons needing LTSS. (Not Proven)	NCI-DD and NCI-AD Surveys form the results for these hypotheses. For the DDS program participants scored high (87% and 86%). Given the structure and type of data collected significance testing is not included in the Evaluation Design.	<ul style="list-style-type: none"> <li>• Consider different analytic methods for measures already showing strong results at baseline</li> <li>• Discuss trends for descriptive measures outside of hypothesis testing</li> </ul>
5. The demonstration will increase integrated employment options for persons with psychiatric needs (Not Proven)	Results have remained unchanged for many years. However, the program is performing above national standards.	<ul style="list-style-type: none"> <li>• Examine strategies to improve employment rates</li> <li>• Consider establishing a state-specific benchmark in the absence of up-to-date national measures</li> </ul>
6. SUD IMD service recipients maintain community living as evidenced by low rates of IMD readmission (Not Proven)	Staff resources were not available (due to the State’s public health emergency response) to generate results.	<ul style="list-style-type: none"> <li>• Include results in the summative evaluation report</li> </ul>

Table G-14 offers an overview of the factors influencing the “Not Proven” findings for Research Question #6 and opportunities for improvement.

*Table G-14: Opportunities for Improvement Research Question #6*

<b>Research Question #6. Will the demonstration maintain or reduce spending in comparison to what would have been spent absent the demonstration?</b>		
<b>Hypotheses Not Proven</b>	<b>Considerations</b>	<b>Potential Action Steps</b>
2. The demonstration will contain or reduce SUD IMD budget neutrality expenditures	The state has exceeded the established SUD IMD PMPM limits. However, STCs allow for an overage, if the overall budget neutrality limit is maintained.	<ul style="list-style-type: none"> <li>• Exploration of cost drivers for the overage, including the impact of an IMD provider rate increase</li> </ul>

## H. Interpretations, Policy Implications and Interactions with Other State Initiatives

Enrollment in Medicaid is synonymous with enrollment in the Global Commitment to Health demonstration. There are no other Medicaid demonstrations or waivers operating in the State. Calendar year 2016 represents the last year that the demonstration operated using a risk-based public managed care model as its foundation. Effective January 1, 2017, the CMS sought to align Vermont's model with that of a non-risk Prepaid Inpatient Health Plan (PIHP). As noted in Interim Evaluation Report #1 (issued in April of 2018), demonstration performance at baseline suggested a mature delivery system with strong provider participation. Evaluation designs were significantly different for the evaluation periods prior to 2017. However, the following five measures under the goal area Access to Care and one related to Community Integration were found in the State's 2015 report to CMS and the current design:

- Percent of adult enrollees who had an ambulatory or preventive care visit;
- Percent of enrollees with well-child visits first 15 months of life, 6 or more visits;
- Percent of enrollees with well-child visits 3rd, 4th, 5th, & 6th year of life;
- Percent of adolescents ages 12 to 21 who receive one or more well-care visits with a PCP during the year;
- Percent of children Age 2-20 years with at least one dental visit; and
- Persons served under the Choices for Care program in community settings.

In five of the six measures reported in 2015, performance has improved. One measure, adult access to ambulatory or preventive care, declined in performance. In 2019 DVHA convened a quality improvement workgroup to address ambulatory care visit rates. Lengthy wait times for appointments, while records are being transferred from one provider to another, was identified as an underlying issue. Data available from Medicaid's care coordination program showed that average wait times for non-acute appointments had increased from 0-29 days to 30-59 days.

A provider education campaign was launched in collaboration with the Blueprint to Health and the State's FQHC partners. Practices reported amending internal processes to schedule appointments while waiting for records versus scheduling only after records are received. In addition, education on how to use the Vermont Health Information Exchange to retrieve patient information was disseminated. The project concluded in July of 2019.

Significance testing could not be conducted to assess the changes from prior demonstration periods; however, the demonstration continues to show gains across the years.

Table H-1 on the following page offers an overview of results across the demonstration years.

Table H-1: Demonstration Results from Prior Periods

Measure	2014	2019
Percent of adult enrollees who had an ambulatory or preventive care visit	87.32%	83.30%
Percent of enrollees with well-child visits first 15 months of life, 6 or more visits	75.96%	76.58%
Percent of enrollees with well-child visits 3rd, 4th, 5th, & 6th year of life	71.49%	77.37%
Percent of adolescents ages 12 to 21 who receive one or more well-care visits with a PCP during the year	46.97%	54.05%
Percent of children Age 2-20 years with at least one dental visit	67.72%	72.37%
Percent of Choices for Care participants living in home and community settings	52.00%	58.01%

The evaluation design did not expect confounding interactions with other State initiatives. Over the past several years the State has sought to align its health care reforms across all populations and payers. The current Global Commitment to Health Medicaid Demonstration and the State’s All-Payer Model were designed to create a seamless system. For example, two multi-payer efforts, the Blueprint for Health and the Vermont Medicaid Next Generation ACO are working together to eliminate duplication, align quality measures and create a seamless delivery system across initiatives, settings, and payers.

As part of its health care reform efforts, Vermont is also developing enhanced IT infrastructure including unified care management systems across specialized Medicaid programs, comprehensive Health Information Exchange (HIE) networks and improved data warehouse capacities.

## I. Lessons Learned and Recommendations

Throughout the demonstration period, the State has implemented innovative programs and delivery systems reforms that have had an enduring impact. These include: The promotion of enhanced primary care practices under the Blueprint for Health including the Women’s Health Initiative and Specialized Health Homes for Opioid Addiction (Hub and Spoke); and Choices for Care (LTSS). In addition, one recent delivery system reform, the Vermont Medicaid Next Generation ACO, is showing promising results. A brief overview of each approach with key factors for success is provided in Table I-1 below.

Table I-1. Vermont Innovations and Lessons Learned

Initiative	Goal	Elements for Success
Blueprint for Health Multi-Payer Advanced Primary Care Practice Program	To achieve well-coordinated and seamless health services, with an emphasis on prevention and wellness	<ul style="list-style-type: none"> <li>• Quality incentives for providers meeting PCMH standards</li> <li>• Learning Collaboratives to support generalizability and innovation</li> <li>• Practice Facilitators to support the adoption of best practice</li> <li>• Community Health Teams (CHT) to support patient wellness and care coordination, regardless of payer</li> <li>• Designation of a lead administrative entity, by local teams, in each region to support CHT and quality planning</li> <li>• Data-driven decision making and priority setting</li> <li>• Promoting broad use of a Health Information Exchange</li> <li>• Collaboration at the state and community levels, including:               <ul style="list-style-type: none"> <li>○ An Executive Steering Committee and workgroups;</li> <li>○ Shared QI goals and objectives;</li> <li>○ Shared data tracking and reporting</li> </ul> </li> <li>• Public-private partnerships between ACO, Community social service agencies, and the Blueprint</li> </ul>
Blueprint for Health Woman’s Health Initiative	Improving the health of women and reducing the rate of unintended pregnancies	<ul style="list-style-type: none"> <li>• Upfront provider payments to assure an onsite stock of Long-Acting Reversible Contraceptives (LARC)</li> <li>• Quality incentives for providers meeting program standards</li> <li>• Learning Collaboratives to support innovation and QI workgroups</li> </ul>
Blueprint for Health Specialized Health Homes for OUD	To offer highly coordinated center and office-based medication-assisted treatment for individuals in recovery from	<ul style="list-style-type: none"> <li>• Bundled monthly payments to Hubs (center-based MAT providers) for MAT and care coordination</li> <li>• Learning Collaboratives to support best practices in MAT and effective transitions of care between Hubs and Spokes (office-based MAT providers)</li> <li>• Community Health Team care managers and nurses to support office-based practices and patients</li> <li>• Quality measurement and data tracking</li> </ul>

Initiative	Goal	Elements for Success
	opioid use disorder	<ul style="list-style-type: none"> <li>• Public-private partnerships</li> <li>• Interdepartmental collaboration and joint program management between the Medicaid and ADAP agencies in Vermont</li> </ul>
Choices for Care (LTSS)	To provide Vermonters with equal access to either nursing facility care or home and community-based services, consistent with their choice	<ul style="list-style-type: none"> <li>• Consumer choice in where and how to receive services</li> <li>• Clear standards for all levels of care that include person-centered planning, choice and autonomy, and community integration</li> <li>• Adoption of an Adult Family Care model for community living</li> <li>• Establishing a Moderate Needs Group and an abbreviated menu of services to keep at-risk members in their home and community</li> </ul>
Medicaid Next Generation ACO	To improve the quality and value of the care provided to Medicaid members	<ul style="list-style-type: none"> <li>• Provider led model of governance</li> <li>• Implementation of value-based payment models, including prospective provider payments</li> <li>• Establishing quality measures and quality monitoring process</li> <li>• State and local investments to support care coordination across community-based health and social service organizations</li> <li>• Data-driven decision making</li> </ul>

Attachments

## Attachment A: Summary of Measures and Most Recent Results

### Table Notes:

CY2019 Change: This column identifies the type of change over baseline performance seen in CY2019, or the most recent year available. Change is defined and noted in the column as improved “+”; declined “-”; or no change “=.” Measures still in the baseline period are denoted with “N/A.”

Statistically Significant: This column identifies whether the change from baseline was statistically significant. Significance is reported at the  $p \geq .05$  level. Significance is denoted as “✓” for results tested and found statistically significant with both tests; results tested and not found to be significant are denoted as “-”; measures not tested are denoted as “N/A.”

At or Above Benchmark: This column identifies whether the demonstration performance in CY2019 or the most recent year available, was at or above the national benchmark for Medicaid plans as defined by the State. For measures where a national benchmark was available and applied the results are noted as “✓” for those that are at or above “-” for those below the benchmark; and “N/A” for those where no benchmark was available or applied.

Access to Care					
Research Question 1: Will the demonstration result in improved access to care?					
Hypothesis 1: The demonstration will result in improved access to community based medical care					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of adult enrollees who had an ambulatory or preventive care visit (HEDIS® AAP Total Score)	Medicaid	+	✓	✓	Logistic Regression
Percent of enrollees with Well-child visits first 15 months of life, 6 or more visits (HEDIS® W15)	Medicaid	+	✓	✓	Logistic Regression
Percent of enrollees with Well-child visits 3rd, 4th, 5th, & 6th year of life (HEDIS® W34)	Medicaid	+	✓	✓	Logistic Regression
Percent of adolescents ages 12 to 21 who receive one or more well-care visits with a PCP during the year (HEDIS® AWC)	Medicaid	+	✓	✓	Logistic Regression
Percent of respondents indicating they received necessary care (CAHPS)	Medicaid (Children)	-	N/A	✓	Descriptive
Percent of respondents indicating they received necessary care (CAHPS)	Medicaid (Adults)	-	N/A	✓	Descriptive
Percent of respondents who rate their ability to get desired appointment or information as always (CAHPS-PCMH)	Blueprint All Payers	+	N/A	N/A	Descriptive
Percent of respondents who rate how well their physician explains things, listens to their concerns, shows respect, and spends enough time with them as always (CAHPS-PCMH)	Blueprint All Payers	+	N/A	N/A	Descriptive
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 (CAHPS)	Medicaid (Children)	+	N/A	✓	Descriptive
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 (CAHPS)	Medicaid (Adults)	+	N/A	✓	Descriptive

Access to Care					
Research Question 1: Will the demonstration result in improved access to care?					
Hypothesis 2: The demonstration will result in improved access to Medication Assisted Treatment (MAT) for OUD					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Number of people receiving MAT per 10,000 Vermonters age 18-64	Vermont Residents	+	✓	N/A	Logistic Regression
Percent of enrollees with continuity of pharmacotherapy for opioid use disorder*	Medicaid	-	✓	N/A	Logistic Regression
Number of Vermont resident deaths related to drug overdose	Vermont Residents	-	N/A	N/A	Descriptive
Number of Vermont Medicaid enrollee deaths related to drug overdose	Medicaid	+	N/A	N/A	Descriptive

\*Bundled payment billing processes are not in alignment with technical specifications and may result in undercount of continuity of care

Access to Care					
Research Question 1: Will the demonstration result in improved access to care?					
Hypothesis 3: The demonstration will result in improved access to dental care					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of children age 2-20 years with at least one dental visit	Medicaid	+	✓	✓	Logistic Regression

Access to Care					
Research Question 1: Will the demonstration result in improved access to care?					
Hypothesis 4: The demonstration will reduce the percent of potentially preventable events (PPEs)					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of Potentially Avoidable ED Utilization	Medicaid	+	✓	N/A	Logistic Regression
Percent of all cause unplanned admissions for patients with multiple chronic conditions	ACO	+	-	N/A	Logistic Regression
Rate of ED visits per 1,000-member months	Medicaid	-	✓	✓	Logistic Regression
Rate of ED visits per 1,000-member months for CFC enrollees	CFC	-	-	N/A	Logistic Regression
Rate of ED visits per 1,000-member months for DDS enrollees	DDS	-	✓	N/A	Logistic Regression
Rate of ED visits per 1,000-member months for TBI program enrollees	TBI	+	-	N/A	Logistic Regression
Rate of ED visits per 1,000-member months for CMH program enrollees	CMH	+	✓	N/A	Logistic Regression
Rate of ED visits per 1,000-member months for CRT program enrollees	CRT	-	-	N/A	Logistic Regression

Access to Care					
Research Question 1: Will the demonstration result in improved access to care?					
Hypothesis 5: The demonstration will reduce ED use for SUD per 1,000 SUD enrollees					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Rate of ED use for SUD per 1,000 enrollees	Medicaid	-	✓	N/A	Logistic Regression

Access to Care					
Research Question 1: Will the demonstration result in improved access to care?					
Hypothesis 6: Premium requirements for eligible families above 195% FPL will not impede access to enrollment					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of children found eligible for Dr. Dynasaur with premium whose families paid the premium necessary to effectuate coverage	Medicaid	=	-	N/A	Logistic Regression

\* Scores were 99% at baseline and in CY2019

Access to Care					
Research Question 1: Will the demonstration result in improved access to care?					
Hypothesis 7: The VPA Qualified Health Plan subsidy program will result in continued access to health care coverage					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
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	VPA	-	✓	N/A	Logistic Regression
Percent of uninsured Vermonters	Vermont	+	-	N/A	Descriptive

Research Question 2: Will value based payment models increase access to care?				
Hypothesis 1: The Medicaid ACO will improve access to mental health and substance use disorder treatment				
Measure	Year	ACO	Statistically Significant	Analytic Method
Percent of enrollees who received 30-day follow-up after discharge from ED for mental health HEDIS® FUM	2017	+	-	PSM w/T-test
	2018	+	-	PSM w/T-test
Percent of enrollees who received 30-day follow-up after discharge from ED for alcohol or other drug dependence HEDIS® FUA	2017	+	✓	PSM w/T-test
	2018	+	-	PSM w/T-test
Percent of enrollees discharged who had follow-up at 30 days after hospitalization for mental illness HEDIS® FUH	2017	+	✓	PSM w/T-test
	2018	-	✓	PSM w/T-test
	CY2019 Change Over Baseline	Improved and Statistically Significant	At or Above Benchmark	Analytic Method
Percent of enrollees discharged who had follow-up at 7 days after hospitalization for mental illness HEDIS® FUH	+	-	✓	Logistic Regression

Access to Care				
Research Question 2: Will value based payment models increase access to care?				
Hypothesis 2: The Medicaid ACO will improve access to adolescent well-care				
Measure	Year	ACO	Statistically Significant	Analytic Method
Percent of adolescents ages 12 to 21 who receive one or more well-care visits with PCP HEDIS® AWC	2017	+	✓	PSM w/T-test
	2018	+	✓	PSM w/T-test

Access to Care					
Research Question 2: Will value based payment models increase access to care?					
Hypothesis 3: The Medicaid ACO will increase engagement with eligible enrollees					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent Total Medicaid Enrollees aligned with ACO	Medicaid	+	✓	N/A	Logistic Regression
Percent ACO Eligible Enrollees aligned with ACO	ACO Eligible	+	✓	N/A	Logistic Regression

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 1: The demonstration will improve quality of care					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of enrollees receiving appropriate asthma medication management 50% Compliance HEDIS® MMA (Total Score)	Medicaid	-	-	✓	Logistic Regression
Percent of enrollees receiving appropriate asthma medication management 75% Compliance HEDIS® MMA (Total Score)	Medicaid	-	✓	✓	Logistic Regression
Percent of enrollees screened for clinical depression and who have a follow-up plan HEDIS® DSF	ACO	+	-	N/A	Logistic Regression
Percent of enrollees who received Developmental Screening in the first 3 years of life NQF-1448	ACO	+	✓	✓	Logistic Regression

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 2: ACO enrollees will show improved diabetes and hypertension control					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
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 NQF-0059	ACO	+	✓	✓	Logistic Regression
Percent of adults 18–85 years of age with a diagnosis of hypertension and whose blood pressure was adequately controlled HEDIS® CBP	ACO	-	-	✓	Logistic Regression

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 3: The demonstration will increase preventive health screenings for female enrollees					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of female enrollees age 50 to 74 who receive breast cancer screening appropriate intervals HEDIS® BCS	Medicaid	-	✓	-	Logistic Regression
Percent of female enrollees screened for Chlamydia HEDIS® CHL (Total Score)	Medicaid	-	✓	-	Logistic Regression

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 4: The demonstration will improve mental health follow-up after psychiatric hospitalization					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of enrollees discharged who had follow-up at 7 days after hospitalization for mental illness HEDIS® FUH	Medicaid	-	✓	✓	Logistic Regression
Percent of enrollees discharged who had follow-up at 30 days after hospitalization for mental illness HEDIS® FUH	Medicaid	-	-	✓	Logistic Regression

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 5: The demonstration will improve Initiation and engagement in SUD treatment					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of enrollees who initiate in treatment for Alcohol or Other Drug Dependence HEDIS® IET	Medicaid	+	✓	✓	Logistic Regression
Percent of enrollees who engage in treatment for Alcohol or Other Drug Dependence HEDIS® IET	Medicaid	+	✓	✓	Logistic Regression
Percent of enrollees who initiate in treatment for Alcohol or Other Drug Dependence HEDIS® IET	SUD IMD	+	✓	N/A	Logistic Regression
Percent of enrollees who engage in treatment for Alcohol or Other Drug Dependence HEDIS® IET	SUD IMD	+	-	N/A	Logistic Regression
Percent of enrollees who initiate in treatment for Alcohol or Other Drug Dependence HEDIS® IET	ACO	+	✓	✓	Logistic Regression
Percent of enrollees who engage in treatment for Alcohol or Other Drug Dependence HEDIS® IET	ACO	+	-	✓	Logistic Regression

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 6: The demonstration will improve enrollee experience of care and rating of the health plan.					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
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 CAHPS	Medicaid (Children)	+	-	✓	Logistic Regression
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 CAHPS	Medicaid (Adults)	+	-	-	Logistic Regression
Percent of respondents who rate their ability to get care quickly as usually or always CAHPS	Medicaid (Children)	-	N/A	✓	Descriptive
Percent of respondents who rate their ability to get care quickly as usually or always CAHPS	Medicaid (Adults)	=	N/A	✓	Descriptive
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 CAHPS	Medicaid (Children)	=	-	✓	Logistic Regression
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 CAHPS	Medicaid (Adults)	-	-	✓	Logistic Regression
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 CAHPS	Medicaid (Children)	-	N/A	-	Descriptive
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 CAHPS	Medicaid (Adults)	-	N/A	-	Descriptive
Proportion of participants needing assistance who always get enough assistance with everyday activities when needed NCI-AD	CFC	N/A	N/A	N/A	N/A
Proportion of participants needing assistance who always get enough assistance with everyday activities when needed NCI-AD	TBI	N/A	N/A	N/A	N/A

Quality of Care					
Research Question 3: Will the demonstration result in improved quality of care?					
Hypothesis 7: The demonstration will improve self-reported health status for enrollees with LTSS needs					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
The proportion of people who describe their overall health as poor	CFC	N/A	N/A	N/A	N/A
The proportion of people who describe their overall health as poor	TBI	N/A	N/A	N/A	N/A
The proportion of people who were reported to be in poor health	DDS	+	-	N/A	Logistic Regression

Quality of Care					
Research Question 4: Will improved access to primary care result in improved health outcomes?					
Hypothesis 1: The Blueprint for Health will improve diabetes control for members age 18-75.					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Number of continuously enrolled Medicaid members, ages 18-75 whose Diabetes HbA1c was in control compared to those with poor control (HbA1c <9%)	Blueprint Medicaid	-	✓	N/A	Logistic Regression
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	Blueprint Medicaid	+	N/A	N/A	N/A

Community Integration					
Research Question 5: Will the demonstration result in increased community integration?					
Hypothesis 1: The demonstration will increase community living for Choices for Care enrollees					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Percent of enrollees living in home and community versus nursing facility settings	CFC	+	✓	N/A	Logistic Regression

Community Integration					
Research Question 5: Will the demonstration result in increased community integration?					
Hypothesis 2: The demonstration will increase community integration for persons needing LTSS					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Proportion of people who do things they enjoy outside of their home when and with whom they want to	CFC	N/A	N/A	N/A	N/A
Proportion of people who do things they enjoy outside of their home when and with whom they want to	TBI	N/A	N/A	N/A	N/A
Proportion of people who regularly participate in integrated activities in their communities	DDS	+	N/A	N/A	N/A

Community Integration					
Research Question 5: Will the demonstration result in increased community integration?					
Hypothesis 3: The demonstration will increase choice and autonomy for persons needing LTSS					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Proportion of people who can choose or change what kind of services they get and determine how often and when they get them	CFC	N/A	N/A	N/A	N/A
Proportion of people who can choose or change what kind of services they get and determine how often and when they get them	TBI	N/A	N/A	N/A	N/A
The proportion of people who make choices about their everyday lives	DDS	-	N/A	N/A	N/A

Community Integration					
Research Question 5: Will the demonstration result in increased community integration?					
Hypothesis 4: The demonstration will increase integrated employment options for persons needing LTSS.					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Proportion of people who have a paying job in the community, either full-time or part-time	CFC	N/A	N/A	N/A	N/A
Proportion of people who have a paying job in the community, either full-time or part-time	TBI	N/A	N/A	N/A	N/A
Proportion of people who would like a job (if not currently employed)	CFC	N/A	N/A	N/A	N/A
Proportion of people who would like a job (if not currently employed)	TBI	N/A	N/A	N/A	N/A
The proportion of people who do not have a job in the community but would like to have one	DDS	+	-	N/A	Logistic Regression
Employment rate of people of working age receiving DDS services	DDS	+	-	N/A	Logistic Regression
Employment rate of people of working age receiving TBI services	TBI	-	-	N/A	Logistic Regression

Community Integration					
Research Question 5: Will the demonstration result in increased community integration?					
Hypothesis 5: The demonstration will increase integrated employment options for persons with psychiatric needs					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
Employment rate of people of working age receiving CRT services	CRT	-	-	100%	Logistic Regression

Community Integration					
Research Question 5: Will the demonstration result in increased community integration?					
Hypothesis 6: IMD service recipients maintain community living as evidenced by low rates of inpatient readmission					
Measure	Study Group	CY2019 Change	Statistically Significant	At or Above Benchmark	Analytic Method
The percent of SUD IMD stays during the measurement period followed by a SUD IMD readmission for SUD within 30 days	SUD IMD	N/A	N/A	N/A	N/A

Attachment B: Change Log

Measures Removed from Evaluation Design			
Goal Area	Measure	Population	Change
Quality	The rate at which people report they do not get the services they need (LTSS)	DDS	Item was dropped from the National Core Indicators Survey; data not available after CY2016.
Cost	Expected Cost of Care for Medicaid enrollees not aligned with ACO	ACO	Reported and assessed elsewhere; removed from study to minimize duplication of efforts
Access - Value Based Purchasing	Actual Cost of Care for Medicaid enrollees not aligned with ACO	ACO	Reported and assessed elsewhere; removed from study to minimize duplication of efforts
Access - Value Based Purchasing	Percent of enrollees who received 7-day follow-up after discharge from ED for mental health (HEDIS® FUM)	ACO	Current ACO contract does not require reporting of results; 30-day follow-up results are reported
Access - Value Based Purchasing	Percent of enrollees who received 7-day follow-up after discharge from ED for alcohol and other drug (HEDIS® FUA)	ACO	Current ACO contract does not require reporting of results; 30-day follow-up results are reported

## Attachment C: Propensity Score Matching Balance Tables

Adolescent Well-Care Matching Characteristics Comparison and Treatment Group									
Demographic Variables	2017 (Post Match N=11,650)			2018 (Post Match N=17,322)			2019 (Post Match N=11,734)		
	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p ≤ .05	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p ≤ .05	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p ≤ .05
Age	16	16	No	16	16	No	16	14	Yes
Gender	0.49	0.50	No	0.49	0.49	No	0.51	0.36	Yes
Geography	0.06	0.06	No	0.31	0.31	No	0.46	0.00	Yes
<b>ACO Rate Group</b>									
ABD	0.05	0.05	No	0.05	0.05	No	0.05	0.06	No
Non-ABD Adult	0.10	0.10	No	0.11	0.11	No	0.17	0.00	Yes
Non-ABD Child	0.84	0.84	No	0.84	0.84	No	0.79	0.94	Yes

Follow-up After ED Visit for Alcohol or Other Drug Dependence Matching Characteristics Comparison and Treatment Group									
Demographic Variables	2017 (Post Match N=783)			2018 (Post Match N=787)			2019 (Post Match N=919)		
	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p ≤ .05	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p ≤ .05	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p ≤ .05
Age	37	37	No	38	38	No	36	46	Yes
Gender	0.56	0.55	No	0.41	0.40	No	0.43	0.31	Yes
Geography	0.07	0.07	No	0.26	0.29	No	0.38	0.16	Yes
<b>ACO Rate Group</b>									
ABD	0.12	0.12	No	0.14	0.16	No	0.11	0.22	Yes
Non-ABD Adult	0.78	0.76	No	0.79	0.77	No	0.85	0.65	Yes
Non-ABD Child	0.10	0.12	No	0.07	0.07	No	0.04	0.13	Yes

Follow-up After ED Visit for Mental Illness Matching Characteristics Comparison and Treatment Group									
Demographic Variables	2017 (Post Match N=837)			2018 (Post Match N=952)			2019 (Post Match N=940)		
	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p $\leq .05$	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p $\leq .05$	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p $\leq .05$
Age	24	24	No	24	24	No	27	22	Yes
Gender	0.67	0.66	No	0.58	0.58	No	0.52	0.59	Yes
Geography	0.08	0.08	No	0.32	0.34	No	0.44	0.27	Yes
<b>ACO Rate Group</b>									
ABD	0.18	0.21	No	0.23	0.22	No	0.16	0.29	Yes
Non-ABD Adult	0.37	0.34	No	0.28	0.26	No	0.50	0.00	Yes
Non-ABD Child	0.45	0.45	No	0.49	0.52	No	0.34	0.71	Yes

Follow-up After Hospitalization Mental Illness Matching Characteristics Comparison and Treatment Group									
Demographic Variables	2017 (Post Match N=330)			2018 (Post Match N=694)			2019 (Post Match N=824)		
	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p $\leq .05$	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p $\leq .05$	ACO Comparison Group Mean	ACO Treatment Group Mean	Significant Difference p $\leq .05$
Age	31	31	No	30	30	No	31	28	Yes
Gender	0.52	0.56	No	0.51	0.50	No	0.60	0.46	Yes
Geography	0.10	0.10	No	0.50	0.50	No	0.59	0.37	Yes
<b>ACO Rate Group</b>									
ABD	0.27	0.28	No	0.20	0.20	No	0.18	0.34	Yes
Non-ABD Adult	0.53	0.53	No	0.51	0.51	No	0.65	0.22	Yes
Non-ABD Child	0.19	0.19	No	0.29	0.29	No	0.17	0.43	Yes

## Attachment D: Blueprint for Health Risk Adjustment Methodology

### Risk Adjustment

Risk adjustment for reporting was implemented in SAS (Version 9.3) using regression methods. For utilization measures, a Poisson distribution was assumed. Models included age/gender stratification groups, Blueprint-selected chronic conditions, CRG classification, maternity, and the additional Medicaid and Medicare adjustments described above. Adjusted rates were produced by summing the differences between each member's actual value and their predicted measurement from the model. Rates were weighted for partial lengths of enrollment.

To calculate the adjusted rate, adjusted values were computed for each member by adding model residuals ( $e$ ) to the population grand mean ( $\bar{y}$ ). The following equations represent the models for the adult and pediatric HSA Profiles.<sup>20</sup>

Outcome measures are capped at the 99<sup>th</sup> percentile within each major payer, year, and age group. The risk adjustment methodology is identical to the profiles with exception of a few minor differences in risk adjustment variables—since this analysis combines the entire population and does not separate pediatric members from adults.

### Combined Model

$$y = \alpha + (F\_AGE0104)\beta_1 + (M\_AGE0104)\beta_2 + (M\_AGE0511)\beta_3 + (F\_AGE0511)\beta_4 + (F\_AGE1217)\beta_5 + (M\_AGE1217)\beta_6 + (M\_AGE1834)\beta_7 + (F\_AGE3544)\beta_8 + (F\_AGE4554)\beta_9 + (F\_AGE5564)\beta_{10} + (F\_AGE6574)\beta_{11} + (F\_AGE7584)\beta_{12} + (F\_AGE85PLUS)\beta_{13} + (M\_AGE3544)\beta_{14} + (M\_AGE4554)\beta_{15} + (M\_AGE5564)\beta_{16} + (M\_AGE6574)\beta_{17} + (M\_AGE7584)\beta_{18} + (M\_AGE85PLUS)\beta_{19} + (MEDICAID)\beta_{20} + (MEDICARE)\beta_{21} + (DUAL\_ELIGIBILITY)\beta_{22} + (DISABLED)\beta_{23} + (ESRD)\beta_{24} + (CHRONIC)\beta_{25} + (CRG\_ACUTE\_MINOR)\beta_{26} + (CRG\_CHRONIC)\beta_{27} + (CRG\_SIGNIFICANT\_CHRONIC)\beta_{28} + (CRG\_CANCER\_CATASTROPHIC)\beta_{29} + (MATERNITY)\beta_{30} + (MATERNITY * MEDICAID)\beta_{31} + \varepsilon$$

$$\bar{y} = \left( \frac{\sum y_i}{MMA} \right)$$

$$y_{\text{adj}} = \bar{y} + e$$

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<sup>20</sup> For the adult model, males, ages 18–34 years, and “healthy” individuals (from the 3M CRG categories) served as the reference group and therefore do not appear in the model statement. For the pediatric model, males, ages 1–4 years, and “healthy” individuals (from the 3M CRG categories) served as the reference group and therefore do not appear in the model statement.

$$e = y - \hat{y}$$

$$\bar{y}_{\text{statewide}} = \left( \frac{\sum y_{adj_i}}{\sum MMA_i} \right) \text{ for all members (equals the grand mean)}$$

Where:

- $\alpha$  is the intercept
- $\varepsilon$  is the error term
- $\hat{y}$  is the predicted value from the regression model for each member
- $e$  is the residual
- $MMA$  is the average enrollment for each participant (i.e., the cumulative member months of enrollment during the year divided by 12)
- Subscript  $i$  indicates a value for an individual member

### Measurement of Expenditures

Expenditures were 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). For each member, total expenditures were determined for the measurement year. In addition, expenditures by major and selected service categories were determined. Each detailed expenditure category was capped separately at the 99<sup>th</sup> percentile of the statewide study population to reduce the distorting influence of extreme outlier cases.

Expenditure rates were computed as an annualized adjusted rate using the risk-adjustment methods described previously. Lower and upper confidence intervals of 95 percent also were included.

The major and detailed expenditure categories (see Table 1) were based on type of claim, primary diagnosis codes, revenue codes, site of service codes, provider taxonomy codes, and pharmacy therapeutic groupings based on assignment of National Drug Codes (NDCs) using Red Book<sup>®</sup>. The reporting was hierarchical and rolled up service-line claim payments to the header claim level. For example, if an outpatient hospital claim contained a primary diagnosis of mental health or substance abuse (i.e., ICD-9 codes 290–316 or ICD-10 codes F01–F99), then the entire claim, regardless of the specific services performed, was assigned to the category of outpatient hospital mental health / substance abuse.

**Table 1. Expenditure Reporting Category Definitions**

Description	Major Category	Detail Category
<b>Hospital Inpatient:</b> Claim type = 'Facility', type of setting = 'Inpatient', and place of setting = 'Acute inpatient or hospital' (whole claim is assigned hierarchically in order below based on finding the diagnosis or revenue code)		
Mental Health/Substance Abuse – Inpatient		1. Primary diagnosis code ICD-9 290–316, ICD-10 F01–F99
Maternity Related and Newborns		2. Primary diagnosis code ICD-9 630–677, 760–779, V22–V24, V27, V30–V39; ICD-10 O00–O9A, P00–P96, Z33, Z34, Z38, Z39
Surgical		3. Revenue code 0360–0369 (operating room service) within the claim
Medical		4. All others
<b>Hospital Outpatient:</b> Claim type = 'Facility', type of setting = 'Outpatient', and place of setting = 'Hospital' (whole claim is assigned hierarchically in order below based on finding the diagnosis or revenue code)		
Hospital Mental Health / Substance Abuse		1. Primary diagnosis code ICD-9 290–316, ICD-10 F01–F99
Observation Room		2. Revenue code 0762
Emergency Room		3. Revenue codes 0450–0459
Outpatient Surgery		4. Revenue codes 0360–0369 (operating room services)
Outpatient Radiology		5. Revenue codes 0320–0359, 0610–0619
Outpatient Lab		6. Revenue codes 0300–0319
Hospital-Dispensed Pharmacy		7. Revenue codes 0250–0259
Outpatient PT		8. Revenue Codes 0420–0429
Outpatient Other Therapy		9. Revenue Codes 0430–0439, 0440–0449
Other Outpatient Hospital		10. All Others
<b>Professional Total:</b> Claim type = 'Professional' and type of setting = 'Provider' or claim type = 'Outpatient' and type of setting = 'FQHC' or 'Rural Health Clinic'		
Physician Services	Primary diagnosis code not ICD-9 290–316 or ICD-10 F01–F99	Provider taxonomy coding indicates provider specialty is an allopathic or osteopathic physician (excluding psychiatrist)
Physician Inpatient Setting		With Place of Service code 21
Physician O/P Setting		With Place of Service codes 19, 22
Physician Office Setting		With Place of Service code 11
Professional Non-Physician		Provider taxonomy coding indicates nurse practitioner, physician assistant, physical therapist, chiropractor, podiatrist, speech therapist, occupational therapist, optometrist/optician, respiratory therapist
Professional Mental Health Provider	Primary diagnosis code ICD-9 290–316 or ICD-10 F01–F99	Provider taxonomy coding indicates psychiatrist, psychologist, MSW, LICSW, LCSW, or claims from other providers with a principal diagnosis of mental health or substance abuse

Description	Major Category	Detail Category
<b>Pharmacy:</b> From pharmacy claims and medical claims paid to pharmacies		
Pharmacy Mental Health		Red Book classification used to determine therapeutic CNS medications based on NDC codes
<b>Special Medicaid Services:</b> From Category of Service and Fund Source Coding identified in consultation with Vermont Medicaid staff. Examples include day treatment, residential care, school-based services, dental services, transportation, and case-management. Excludes specialized populations (DDS, CRT, CFC, TBI).		