Vermont All-Payer ACO Model
Annual Health Outcomes and Quality of Care Report
Performance Year 1 (2018)

Submitted April 7, 2020

Green Mountain Care Board

1. Introduction

This report focuses on results produced based on the mutual understanding of the technical changes amendment in progress at the beginning of 2020.[1] As such, it codifies memorandums and other changes negotiated between the State of Vermont and the Center for Medicare and Medicaid Innovation throughout Performance Years 1 and 2 (2018 and 2019). In light of the COVID-19 pandemic requiring both a state and national response, the amendment has been paused as priorities have shifted to address more pressing needs. Given mutual understanding, and considering full transparency, the GMCB respectfully submits this report based on the aforementioned mutual agreement between APM signatories.

The Vermont All-Payer Accountable Care Organization Model ("All-Payer ACO Model" or "APM") Agreement was signed on October 26, 2016, by Vermont's Governor, Secretary of Human Services, Chair of the Green Mountain Care Board, and the Centers for Medicare & Medicaid Services (CMS). The All-Payer Model aims to reduce health care cost growth by moving away from fee-for-service reimbursement to risk-based arrangements for Accountable Care Organizations (ACOs); these arrangements are tied to quality and health outcomes.

Section 7e of the Vermont All-Payer ACO Model Agreement, Annual Health Outcomes and Quality of Care Report, requires GMCB to report on performance relative to the statewide health outcome and quality targets described in Appendix 1 of the Agreement: *"The GMCB, in collaboration with AHS, shall submit to CMS for its approval, on or before September 30th following each Performance Year 1 through 5, an annual report on the State's efforts to achieve the Statewide Health Outcomes and Quality of Care Targets ("Annual Health Outcomes and Quality of Care Report")[2,3]. At a minimum, the State shall describe the following in this annual report:*

i. Vermont's progress on achieving Statewide Health Outcomes and Quality of Care Targets set forth in Appendix 1;

ii. How Scale Target ACO Initiatives hold Vermont ACOs accountable for quality of care, the health of their aligned beneficiaries (section 6.b.iv), or both; and

iii. How the State holds Vermont ACOs accountable to allocate funding for and invest in community health services to achieve the Statewide Health Outcomes and Quality of Care Targets.

The quality framework discussed in this report represents 22 carefully selected, statewide or ACO-level, measures that aim to support improvement on identified population health goals, building on measurement and long-term health care initiatives underway in Vermont at the time the Agreement was signed. While selecting measures and developing targets, Vermont consistently advocated for measures that addressed key priority areas in the State, alignment with existing measure sets,

[1] February 26, 2020 Board Meeting Materials: Memo to Board Members, draft Appendix 1, presentation slides.
[2] Per a memo to CMMI dated August 21,2019, the deadline for the Statewide Health Outcomes and Quality of Care Report was changed from September 30 to December 31 of the year following each measured performance year.
[3] Per an email to CMMI on January 27,2020, this 2018 Statewide Health Outcomes and Quality of Care Report experienced a one-time delay due to data availability, changing the submission deadline to February 21, 2020.

consideration of collection burden, and targets that are ambitious but realistically achievable over the five-year period. The framework encourages health, public health, and community service providers to work together to improve quality and integration of care. This collaboration includes the ACO and its community partners – while the ACO is not responsible for these outcomes alone, the GMCB will continue to assess their approach to quality improvement through our regulatory levers.

Performance Year 1 (2018)

With the conclusion of the first performance year of five, this initial report demonstrates that Vermont is currently meeting three of the six population-level health outcomes targets, seven of the nine healthcare delivery system quality targets, and is making progress toward six of the seven process milestones.

While there is still much work to do, there are some encouraging signs of delivery system reform: hospitals are increasing their investments in primary prevention and the social determinants of health; traditionally siloed providers are finding new ways to coordinate care and reduce duplication of services across the care continuum, and advances in data analytics are helping to identify high risk patients who would benefit most from early intervention and complex care coordination. Delivery system reform is by no means complete. Major transformation requires patience and time, and these preliminary changes and reallocation of resources towards population health are signs of progress towards reform.

This report outlines baselines, targets, and progress made for each of the twenty-two[4] quality metrics as required in Appendix 1 of the All-Payer Accountable Care Organization Agreement. Appendix 1 also sets goals are set in place for population-level health outcomes, healthcare delivery system targets, and process milestone targets. It is important to note that these are five-year targets, intended to be achieved by the end of Performance Year 5 (2022). For Performance Years 1 and 2 (2018 and 2019), the Agreement sets an expectation that the results will improve over baseline.[5] The state and CMMI have a preliminary agreement that the base years should be updated to reflect data that is relevant to the model's performance years. At the time the agreement was signed, the base year reflected the most recent data available. Using a base year prior to the 2017, however, would not reflect any impact of the ACO program on the quality data. Furthermore, the baseline for each measure using an ACO-attributed population was updated to 2018 – so the baseline and PY1 performance are one in the same. For those measures that are Statewide, baselines have been updated to the most recent available year as noted in Table 2.2 – for these measures, we can assess growth towards 2022 targets.

[4] Due to disaggregation of a composite measure by Medicare nationally, the total number or measures increased to reflect this change. Described in detail in section 2.4.
[5] For Performance Years 3-5 (2020-2022), the Agreements establishes quantitative milestones toward reaching the targets.

2. Progress on Achieving Statewide Health Outcomes and Quality of Care Targets

2.1. Domains and Measures Included in Statewide Health Outcomes and Quality of Care Targets Monitoring Report

Measures that are tracked in Vermont's Annual Statewide Health Outcomes and Quality of Care Targets Monitoring Report correspond to three overarching goals: (1) reducing deaths related to suicide and drug overdose, (2) reducing the prevalence and morbidity of chronic disease, and (3) increasing access to primary care. **Tables 2.2 -2.4** outline measures included in each domain, including associated goals, baseline performance, performance targets, and the performance for 2018 (PY1) when applicable and available. This report does not comprehensively comment on performance across all 22 quality measures but provides greater insight into those measures where Vermont has achieved success as well as those measures around which the state has the greatest opportunity to improve.

2.2. Summary Results

Table 2.2: Summary Results for Population-Level Health Outcomes Targets

Goal	Measure	Baseline	2022 Target	Current	2018 (PY1)	2019 (PY2)	2020 (PY3)	2021 (PY4)	2022 (PY5)
Population-Level Health Outcomes Targets				*2018*	*Num/Denom*	*Num/Denom*	*Num/Denom*	*Num/Denom*	*Num/Denom*
Reduce Deaths Related to Suicide and Drug Overdose	Deaths Related to drug Overdose (Statewide)[6]	123 (2017)	Reduce by 10% (111)	117[7]	-				
Reduce Deaths Related to Suicide and Drug Overdose	Deaths Related to Suicide (Statewide)[8]	17.2/100,000 (2016)	16 per 100k VT residents or 20th highest rate in US	18.3/100k[9] 19th in US[10] (2017)	-				
Reduce Chronic Disease	COPD Prevalence (Statewide)	6% (2017)	Increase ≤1%	6%	-				
Reduce Chronic Disease	Diabetes Prevalence (Statewide)	8% (2017)	Increase ≤1%	9%	-				
Reduce Chronic Disease	Hypertension Prevalence (Statewide)	26% (2017)	Increase ≤1%	25%	-				
Increase Access to Primary Care	Percentage of Adults with Personal Doctor or Care Provider (Statewide)	87% (2017)	89%	86%	-				

[6] Vermonters who die in Vermont (i.e. excludes out-of-state residents' deaths and Vermonters who die in other states).
[7] Preliminary 2018 data; January – October.
[8] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2019_Suicide_Morbidity_Mortality.pdf.
[9] Death rate is age-adjusted per 100,000 population.
[10] https://www.cdc.gov/nchs/pressroom/states/vermont/vermont.htm.

Table 2.3: Summary Results for Health Care Delivery System Quality Targets

Goal	Measure	Baseline	2022 Target	Current	2018 (PY1)	2019 (PY2)	2020 (PY3)	2021 (PY4)	2022 (PY5)
Health Care Delivery System Quality Targets				*2018*	*Num/Denom*	*Num/Denom*	*Num/Denom*	*Num/Denom*	*Num/Denom*
Reduce Deaths Related to Suicide and Drug Overdose	Initiation of Alcohol and Other Drug Dependence Treatment (Multi-Payer ACO)	38.9% (2018)	40.8%	38.9%	*807* / *2,073*				
Reduce Deaths Related to Suicide and Drug Overdose	Engagement of Alcohol and Other Drug Dependence Treatment (Multi-Payer ACO)	13.3% (2018)	14.6%	13.3%	*276* / *2,073*				
Reduce Deaths Related to Suicide and Drug Overdose	30-Day Follow-Up After Discharge from ED for Mental Health (Multi-Payer ACO)	84.4% (2018)	60%	84.4%	*910* / *1,078*				
Reduce Deaths Related to Suicide and Drug Overdose	30-Day Follow-Up After Discharge for Alcohol or Other Drug Dependence (Multi-Payer ACO)	28.2% (2018)	40%	28.2%	*149* / *528*				
Reduce Deaths Related to Suicide and Drug Overdose	Growth Rate of Mental Health and Substance Abuse-Related ED Visits (Statewide)[11,12]	5.3% (2016 - 2017)	5%[13]	6.9% (2017-2018)	*14,433* / *13,506*				
Reduce Chronic Disease	Diabetes HbA1c Poor Control (Medicare ACO)[14]	58.02% (2018)	70th-80th percentile (national Medicare benchmark)	58.02% (Medicare 80th percentile)	*152* / *262*				
	Controlling High Blood Pressure (Medicare ACO)	68.12% (2018)	70th-80th percentile (national Medicare benchmark)	68.12% (Medicare 60th Percentile)	*250* / *367*				
	All-Cause Unplanned Admissions for Patients with Multiple Chronic Conditions (Medicare ACO)[15]	63.84% (2018)	70th-80th percentile (national Medicare benchmark)	63.84% (Medicare 30th percentile)	-				
Increase Access to Primary Care	ACO CAHPS Composite: Getting Timely Care, Appointments and Information (Medicare ACO)	84.62% (2018)	70th-80th percentile (national Medicare benchmark)	84.62% (Medicare 80th Percentile)	- / *269*				

[11] Shown as a percent change from previous year.
[12] Vermont residents only.
[13] This measure uses a phased approach. The goal is to reduce the growth rate of mental health and substance abuse-related ED visits to 5% in PY 1-2, 4% in PY 3-4 and 3% by PY5.
[14] The result shown is a Medicare composite of ACO #27 (A1c poor control) and ACO #41 (diabetes eye exam) per Medicare Next Generation reporting standards.
[15] A lower rate is indicative of better performance on this measure.

Table 2.4: Summary Results for Process Milestones

Goal	Measure	Baseline	2022 Target	Current	2018 (PY1)	2019 (PY2)	2020 (PY3)	2021 (PY4)	2022 (PY5)
Process Milestones				*2018*	*Num/Denom*	*Num/Denom*	*Num/Denom*	*Num/Denom*	*Num/Denom*
Reduce Deaths Related to Suicide and Drug Overdose	Percentage of Vermont Providers Checking Prescription Drug Monitoring Program Before Prescribing Opioids (Statewide)	2.19 (2017)	1.80	3.10	*225,041* *72,494*				
Reduce Deaths Related to Suicide and Drug Overdose	Adults Receiving Medication Assisted Treatment (MAT) (Statewide, Ages 18-64)	257 per 10,000 Vermonters (2018)	150 per 10,000 Vermonters (or up to rate of demand)	257 per 10,000 Vermonters	-				
Reduce Deaths Related to Suicide and Drug Overdose	Screening for Clinical Depression and Follow-Up Plan (Multi-Payer ACO)	50.23%[16] (2018)	70th-80th percentile (national Medicare benchmark)	50.23% (Medicare 50th percentile)	*493* *983*				
Reduce Chronic Disease	Tobacco Use Assessment and Cessation Intervention (Multi-Payer ACO)	70.56%[17] (2018)	70th-80th percentile (national Medicare benchmark)	70.56% [18]	*241* *389*				
Reduce Chronic Disease	Percentage of Vermont Residents Receiving Appropriate Asthma Medication Management – 50% compliance (Statewide)	75.3% (2017)	65%	75.5%	*3,175* *4,200*				
Increase Access to Primary Care	Percentage of Medicaid Adolescents with Well-Care Visits (Statewide Medicaid)	47.8% (2017)	53%	49.9%	*12,483* *24,998*				
Increase Access to Primary Care	Percentage of Medicaid Enrollees Aligned with ACO (Statewide Medicaid)	16.9% (Jan 2017)	≤15 percentage points below alignment rate for Vermont Medicare beneficiaries	25.2% (Jan 2018)	*42,343* *167,789*				

[16] Weighted result based on ACO Medicare, Medicaid and Commercial QHP performance in CY 2018.
[17] Weighted result based on ACO Medicare and Medicaid performance in CY 2018.
[18] No national Medicare benchmark is available for CY 2018.

2.3. Discussion: Population-Level Health Outcomes Targets

The state and CMMI have a preliminary agreement that the base years should be updated to reflect data that is relevant to the model's performance years. At the time the agreement was signed, the base year reflected the most recent data available. In an effort to more accurately measure performance across the population, the data has been updated to utilize 2017 as a base where applicable. For Performance Years 1 and 2 (2018 and 2019), the Agreement sets and expectation that the results will improve over baselines, final performance results for the first year of the model show Vermont currently meeting three of the six population-level health outcomes targets. Selected measures and contributing factors are discussed in detail below.

Deaths Related to Suicide (Statewide)

The APM sets a statewide goal of 16 deaths due to suicide per 100,000 Vermont residents by the end of the Model. The rate of deaths increased slightly from the 2016 baseline year (17.2) to the current reported year of 2017 (18.3). When viewing progress related to State rankings, Vermont is currently 19th in the US, bringing the state closer to our 20th in the US target – an alternative metric for assessing progress on this measure. Vermont's small population makes this measure quite volatile – one or two additional deaths can result in an increase in the rate, though no statistically significant change has occurred over the past 10 years.[19] Due to the nature of medical records review for Vermont deaths, data for this particular measure are quite lagged. The State has focused several initiatives on suicide prevention in an effort to increase awareness and outreach, and hopefully reduce deaths. For example, Vermont has implemented a national model, Zero Suicide, an initiative of the National Action Alliance for Suicide Prevention. The GMCB will continue to monitor these programs as the Model progresses.

Hypertension Prevalence (Statewide)

The APM sets a statewide goal of holding the growth rate of hypertension to 1% or less over the course of the model as measured through the Behavioral Risk Factor Surveillance System (BRFSS) survey. Vermont adults reporting that they have ever been told they have hypertension decreased one percentage point from the 2017 baseline year (26%) to the 2018 performance year (25%). While this is not a statistically significant decrease in the reported rate, it is consistent with the goal. In 2018, each of the ACO's payer programs in 2018 collected and reported on hypertension. Quality scores for those programs show that 63.9% of Medicaid members, 61.1% of Commercial members, and 68.1% of Medicare beneficiaries had their hypertension in control (< 140/90 mm Hg). While this is not the measure required by the Agreement, the ACO reporting allows the ACO and its providers to better deploy initiatives and programs to improve hypertension control in patients and is therefore valuable information about the health outcomes of these patients.

According to the Vermont Department of Health's 2018 BRFSS report, hypertension prevalence significantly increases with age. Given Vermont's aging population, it is critically important to continue monitoring hypertension through various measures – while BRFSS prevalence results are informative, the ACO hypertension control reporting allows Vermont to deploy initiatives and programs based on clinical data results as well as the BRFSS phone-survey responses.

[19] Vermont Department of Health, *Intentional Self-Harm and Death by Suicide*.

2.4. Discussion: Healthcare Delivery System Quality Targets

For these quality targets, data were also updated to utilize 2017 as a base where applicable. Data were updated to utilize 2017 as a base where applicable. For those measures that are ACO-specific, 2018 (PY1) will serve as the base year. As noted above, this updated baseline allows for a more accurate comparison through the remaining years of the APM agreement, especially within the ACO population as 2018 was the first year of the Next Generation multi-payer ACO initiative. Final 2018 data show Vermont moving toward achievement on seven of the nine healthcare delivery system quality targets. This change in the total measures differs from the agreement due to the disaggregation of a Medicare ACO composite into three individual measures (diabetes HbA1c poor control; controlling high blood pressure; all-cause unplanned admissions for patients with multiple chronic conditions). To align with federal reporting, the State also reports each measure individually in this report.

Growth Rate of Mental Health and Substance Abuse Related ED Visits

The Agreement sets forth a measurement of mental health and substance abuse-related emergency department visits; specifically, the rate of growth from one year to the next. The State is not currently meeting the target on this measure, with 2017-2018 growth reaching 6.9%. This measure utilizes Vermont Hospital Uniform Discharge Data Set (VHUDDS) to identify those with a primary diagnosis of mental health or substance abuse.[20]

Additional information shows that a greater proportion of people presenting to the ED with a primary diagnosis of mental health or substance abuse condition are being admitted than for all ED visits, as shown in the table below. This suggests that many Vermonters are seeking appropriate treatment and are in fact admitted for inpatient treatment when they seek care in the ED.

Measure	2018
Percent of total ED visits resulting in an admission	11%
Percent of mental health and substance use-related ED visits resulting in an admission	17%

In addition, Vermont hospitals have begun to initiate several ED-based programs for mental health and substance use disorder treatment. Examples include designated staff embedded in the ED to connect patients with primary care should they not have an existing primary care provider, medication assisted treatment (MAT) initiation in the ED, specialized ED staffing and training to assist patients presenting with mental health and/or substance use conditions, and transitioning existing ED spaces into safe and private areas for patients awaiting admission or transfer for mental health and substance use-related conditions. The GMCB will continue to monitor substance use disorder and mental health-related ED visits by hospital and seek feedback and input on new or existing programs from those facilities through the hospital non-financial reporting process alongside the Zero Suicide initiative mentioned earlier.

Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (Multi-Payer ACO)

The Agreement sets forth a goal of increasing initiation and engagement rates by at least five percent (40.8%) and ten percent (14.6%), respectively. While the State's performance on both the initiation and

[20] Utilizing Clinical Classifications Software – High-level diagnosis group 5. Full list of diagnosis categories can be found in Appendix A.

engagement components of this measure are in line with national trends, the absolute percentage of people counting as "engaged" in treatment is very low, with only 276 (13.3%) ACO-aligned beneficiaries engaged in treatment. The State's Medicaid Agency, DVHA, has explored and developed modifications to the measure to more accurately capture treatment activities underway in Vermont, including residential and MAT services. When DVHA reports the IET measures, two modifications are applied to better capture the services received by beneficiaries:

1) VT pays for residential treatment as a (non-facility billed) professional service. Thus, residential care is not included in HEDIS calculations for initiation or engagement events due to VT specific billing for sub-acute inpatient. The modified measure includes residential substance abuse treatment (professional claim for procedure code H0018) as initiation or engagement events where appropriate, following the HEDIS specifications for sub-acute inpatient. When the residential substance abuse treatment event is the index, both index and initiation dates are set as the last day of residential substance abuse treatment.
2) Vermont Hub services (procedure code H0020) do count as index event services in the HEDIS specifications. Vermont pays for these Hub services as a monthly unit of bundled opioid abuse treatment services. The modified measure examines the start and end date of service to determine if initiation and/or treatment engagement occurs. The first month of Hub (H0020) services are counted as initiation and if there is no gap in Hub services, the next month is counted as engagement.

This adjusted method ultimately increases the engagement rates of the Medicaid population; it is a more accurate count of the care provided to this population. Applying these two modifications results in an engagement rate of 23.9% for Medicaid in 2018.[21] The GMCB will work with CMMI to decide if these additional modifications can be applied to the statewide all-payer ACO rate included in this report.

2.5. Discussion: Process Milestones

As noted above, data were updated to utilize 2017 as a base where applicable. For those measures that are ACO-specific, 2018 (PY1) will serve as the base year. This updated baseline allows for a more accurate comparison through the remaining years of the APM agreement, especially within the ACO population as 2018 was the first year of the Next Generation multi-payer ACO initiative. 2018 results show Vermont making progress toward six of the seven process milestones. Selected measures and contributing factors are discussed in detail below.

Percentage of Vermont Providers Checking Prescription Drug Monitoring Program Before Prescribing Opioids (Statewide)

The rate of queries by prescribers who have written at least one opioid analgesic prescription relative to the number of unique recipients of at least one opioid analgesic prescription has increased significantly from the 2017 baseline year (2.19) to Performance Year 1 (3.10). Most notably, the reduction in unique recipients declined 16% from 2017 (86,259) to 2018 (72,494), with the number of prescribers or delegates checking the VPMS increasing by 19%. This steady increase in the usage of the Prescription Drug Monitoring Program, paired with the decreasing number of opioid recipients, has led to a very dramatic change in the reported ratio. Drivers of this change can be tied back to the Vermont

[21] https://embed.resultsscorecard.com/PerfMeasure/Embed/412787.

Prescription Monitoring System (VPMS) Rule which implemented the VPMS, effective July 1, 2017.[22] "The intent [of the rule] is to promote public health through enhanced opportunities to prevent, detect, and treat misuse of controlled substances, without interfering with the legitimate medical use of those substances."[23] In addition to the VPMS rule, the Vermont Department of Health's Alcohol and Drug Abuse Programs have been working to deploy systems enhancements such as Prescriber Insight Reports and Clinical Alerts, increase educational and training opportunities for prescribers, and provide education to the general public about the harm of opioid misuse.

Percentage of Medicaid Enrollees Aligned with ACO

The APM sets a goal for the proportion of Medicaid beneficiaries aligned with the ACO – this percentage should not be more than 15% below the proportion of Medicare beneficiaries aligned to the ACO. In 2018 the percent of ACO-aligned Medicaid beneficiaries was 25.2% (as of January 1 enrollment) – for Medicare, 35% of beneficiaries were enrolled, marking an approximate 10% difference in the results. The APM Agreement anticipates that ACO scale will increase over the life of the agreement, with a more significant trajectory after PY1; a gradual ramp up from PY1 is expected and is an intentional design of the ACO scale targets.

3. Vermont ACOs' Role in the All-Payer ACO Model Agreement

The All Payer Model Agreement uses the accountable care organization model as the innovation for furthering the statewide cost and quality targets. It allows the GMCB to adapt the Medicare Next Generation ACO program to promote alignment across payer programs and to set the Medicare ACO benchmark.

The GMCB also has state regulatory levels over the ACO. In 2016, the legislature enacted Act 113, which granted authority to the Green Mountain Care Board to regulate accountable care organizations (ACOs).[24] The GMCB is an independent, five-member board that conducts regular, weekly meetings open to the public. Both oversight of the ACO and the GMCB's role in tracking progress on quality and cost outcomes aligned well with the already existing regulatory duties of the GMCB, particularly regulatory enforcement of Vermont hospital budgets, insurance rate review, certificate of need, and collecting and managing data an all-payer claims database.[25,26]

The GMCB ACO regulatory process includes a certification, yearly projected budget and program review and monitoring of the budget order throughout the year. In order to receive payments from Medicaid or commercial insurers, Vermont ACOs must obtain and maintain, on a yearly basis, certification from the GMCB. OneCare Vermont, the only ACO operating in Vermont, received their initial certification in 2018, with an extensive compliance review of the GMCB Rule 5.000 certification elements. These span a

[22] Title 18, Chapter 84A.
[23] Vermont Prescription Monitoring System Rule, *Vt. Dept. of Health Rules & Reg.*, Ch. 8 (Alcohol and Drug Abuse), Subch. 7 (July 1, 2017).
[24] See also GMCB Rule 5.000 *Oversight of Accountable Care Organizations.*
[25] 18 V.S.A. § 9382 Oversight of accountable care organizations.
[26]The GMCB was formed in 2011 and charged with reducing the rate of health care cost growth in Vermont while ensuring the State maintains a high quality, accessible health care system. https://gmcboard.vermont.gov/.

breadth of over 100 requirements for an ACO to be operational, including leadership and board of manager composition, financial stability, provider network, population health management and care coordination, performance evaluation and improvement, patient protections, provider payment structures, and health information technology. Each calendar year an ACO with over 10,000 lives must submit a budget for the coming year that includes a description of their projected network, payer negotiations, operational and medical expense budget, and population health programs. An ACO is required to present their budget and programs in a public hearing before the GMCB. In addition, Vermont's Health Care Advocate is a party to the budget process. GMCB analyzes their budget request, votes at an open meeting, and issues a budget order that an ACO (or any regulated entity) is held accountable to for the next year.[27]

4. ACO Accountability for Aligned Beneficiary Health Outcomes and Quality of Care

In 2018, OneCare had 110,000 of approximately 620,000 Vermonters (18%) in their attributed network. The first year of the model was foundational, offering the ACO, providers, and payers the opportunity to determine ways to achieve and affect delivery system transformation with accountability. Of the 20 APM measures in year one, there were 12 that were reported by the ACO in one or more payer contracts. The remaining APM measures were largely prevalence measures which one would not expect an ACO to impact initially. The goal of prevalence measures would be to encourage the ACO to collaborate on prevention and upstream solutions to preventing chronic disease. As the scale of the model grows and more patients are impacted, Vermont will be tracking how the ACO and State are affecting health outcomes both separately and together.[28,29]

In 2018, there were several ways that the ACO was accountable for aligned beneficiary's health outcomes and quality of care:

- As described above, the ACO is required to comply with GMCB certification and budget oversight processes.
- Through the payer contracts, the ACO's financial incentives are tied to their quality and financial performance.
- In their contracts with health and social service providers, the ACO includes measures holding providers accountable for the provision of services which are intended to improve quality, reduce provider burden, and bring down the total cost of care by providing care at the right time and place. In return, there is a distribution to providers based on quality performance. Each of these are described below.

4.1. Continuous Quality Improvement

Under Rule 5.000, and in accordance with 18 V.S.A. § 9382, the ACO is required to maintain a quality evaluation and improvement program that is actively supervised by a clinical director and evaluated

[27] GMCB ACO Certification and Budget Review webpage.
[28] The GMCB 2018 ACO Oversight Process https://gmcboard.vermont.gov/content/2018-aco-oversight.
[29] Vermont Department of Health. State Health Improvement Plan. https://www.healthvermont.gov/about-us/how-are-we-doing/state-health-improvement-plan.

against defined measures. Additionally, OneCare also has continuous quality improvement requirements in their payer agreements. OneCare examines their ACO quality measure performance in the first quarter of each year following the close of that year, prioritizes data, and sets clinical priorities to achieve going forward that will meet quality and cost outcomes. This is built into their quality improvement program.

Under the ACO certification process and for continued eligibility, ACOs must submit both a completed and planned quality improvement plan annually. Under the ACO budget oversight process, the ACO is required to also demonstrate progress being made in their quality improvement program. The GMCB reviewed and discussed with OneCare the process for selecting their 2018 Clinical Priorities, which are goals selected after reviewing their year-end clinical and financial performance, The clinical priorities are in addition to the ACO quality measures that they are required to meet in their payer contracts. The priorities are set by the Quality Improvement Committee for the network.

OneCare's 2018 clinical priorities were to: 1) Increase care coordination for high-risk patients to reduce emergency room utilization and admissions by 5%, 2) Reduce Skilled Nursing Facility (SNF) RUG score-adjusted length of stay (LOS) by 5% 3) Increase, within 30 days, follow-up for patients who were discharged from the emergency room for mental health and substance use disorder diagnoses (also a multi-payer ACO measure), 4) Reduce ambulatory sensitive readmissions for COPD and congestive heart failure by 5%, and 5) Increase network utilization of the Medicare well visit, and 6) Implement a network wide food insecurity screening. In October 2018, in OneCare's 2019 Budget Submission, due to claims lag they had four months of 2018 data but showed progress (or limitations) toward meeting each target, described why they picked the measures, and quality improvement activities with payer partners and providers to support achieving the targets.[30]

4.2. Payments Tied to Performance and Continuous Quality Improvement

One of the premises of the APM is to test whether aligned, risk-based contracts that are tied to the ACO's performance on quality and cost will improve the health of Vermonters and will slow the rate of health care spending. To help support this effort, there is a requirement in the APM for the ACO, in their Medicare-ACO Agreement, to withhold a portion of the cost of care, that can then be used to reward providers who meet the payer's quality targets. If the ACO did not perform, the ACO and payer may agree that the ACO can use the funding for a continuous clinical quality improvement process. In 2018, the Medicaid and BCBS QHP ACO contracts each also had a similar withhold from the total spend which is to be distributed to providers based on their quality performance, reinvested in payer program quality improvement initiatives, or a combination of the two. OneCare calls this program their 'Value-Based Incentive Fund' and is detailed in the next section. Once the performance settlements are complete, funds are calculated for each participating payer program individually and the ACO then makes payments separately to each eligible provider participant based on both attribution and performance on quality measures.[31]

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[30] From OneCare Vermont's 2019 Budget Submission, Section 5, pp. 44-48. https://gmcboard.vermont.gov/sites/gmcb/files/documents/GMCB%20ACO%20Budget%20Submission%202019%20Final%20%28Supplemental%20Attachment%29.pdf

[31] OneCare Vermont's Value-Based Quality Incentive Fund Policy. https://gmcboard.vermont.gov/sites/gmcb/files/documents/C.%20OneCare%20Vermont%20Value%20Based%20Quality%20Incentive%20Fund%20Policy.pdf.

4.3. Provider Contracts

OneCare contracted with a wide network of providers in 2018, growing from 4 communities to 9 of Vermont's 14 hospitals and their local community or hospital-affiliated primary care and social service providers. OneCare held their first risk-based contract in 2017 with Vermont's Department of Health Access, and in 2018 held 4 risk-based contracts (3 which also included a downside risk component) where they held hospitals accountable for the total cost of care in their local community. Per conversations with CMMI, OneCare was one of two Next Generation ACOs in the country to select the option of an all-inclusive population based payment (AIPBP), instead of only fee-for-service revenue from Medicare, which OneCare distributed on a monthly, prospective basis to each hospital based on the hospital's estimated total cost of care. Vermont's Medicaid Next Generation Program contract with OneCare was designed similarly, with a fixed payment for hospitals and their associated primary care. However, the payment is different from Medicare because it is not reconciled at the end of the calendar year. Unlike Medicaid, the entirety of the Medicare spend is reconciled at the end of the year, which may make it more challenging for practices to make changes that support payment reform (i.e. making changes to practice patterns that earn savings during the year that they can use to reinvest in different types of staff needed to support care transformation). BCBSVT stayed with a fee-for-service revenue reimbursement model only (due to moving to a new IT system).

OneCare's provider agreements also had levels of accountability. Hospitals were held to a total cost of care for their attributed population, while primary care providers had the opportunity to earn monthly PMPM payments for being a patient centered medical home (which were a historical payment from the Blueprint for Health program) and for providing enhanced care coordination. Community providers, such as mental health agencies and home health agencies, were also eligible for enhanced care coordination payments. Finally, OneCare offered independent primary care providers a pilot program to test whether capitated primary care payments would allow practices predictability. These programs were both to incentivize the right care at the right time and are described in the next section.[32]

5. ACO Funding for and Investment in Community Health Services to Achieve Statewide Health Outcomes and Quality of Care Targets

The GMCB's ACO Oversight authority outlined in Act 113 and Rule 5.000 requires the ACO to invest and strengthen key areas to support population health and access to comprehensive primary care, including strengthening and reducing burden in primary care, integrating community-based providers in its care model to promote seamless coordination of care across the care continuum, investing in the social determinants of health to improve population health outcomes, and working to prevent and address the impacts of adverse childhood experiences and other traumas. In addition to this authority, per the All-Payer ACO Model Agreement Section 8b, the GMCB may direct a Vermont Next Generation ACO to

[32] Figure 2. OneCare Care Coordination Payment Model. https://gmcboard.vermont.gov/sites/gmcb/files/files/payment-reform/GMCB%20ACO%20Budget%20Submission%20Round%202%20FINAL.pdf.

make specific infrastructure and care delivery investments. The ACO is held accountable to these investments through the GMCB's budget approval, budget order and quarterly monitoring.

In 2018, the first year GMCB approved a budget with conditions for OneCare, the following population health investments were included:

- Primary care attributed life per member per month (PMPM) payments,
- Capitated payment reform program for independent primary care,
- Withhold for quality improvement initiatives,
- Complex care coordination program payments for primary and social service providers,
- Primary prevention program aimed at addressing obesity at the community level, and
- Medicare funding to continue the Blueprint for Health funding for the Supports and Services at Home (SASH) Community Health Teams, and patient centered medical home PMPM payments.[33]

The GMCB's review and monitoring of OCV's 2018 budget and contractual agreements led to the following observations. The ACO's population health investments were derived from two sources: payer agreements and individual participation fees from hospitals. The GMCB had a list of conditions, with several related to investments in population health. The ACO Budget Order required the ACO to maintain the investment for population health at a certain percentage of their revenue. In addition, the GMCB Budget Order required the ACO to distribute the Medicare funding to the Blueprint for Health, being received through its 2018 Vermont Modified Next Generation ACO Agreement.[34,35]

Table 5.a, below, outlines the ACO's 2018 community health services investments, with Table 5.b outlining the distribution by provider type. Each of these investments works toward achieving the goals of the ACO payer contracts and the APM statewide health outcomes and quality of care targets.

Table 5.a: ACO Investments in Community Health Services

Population Health Management and Payment Reform Programs	2018 Investment Amount
Value-Based Incentive Fund (quality withhold)	$4,243,973
OneCare Per Member Per Month (PMPM)	$3,990,100
Complex Care Coordination Program	$5,633,580
Primary Care Comprehensive Payment Reform Program	$715,806
RiseVT (primary prevention program)	$897,801
SASH (Blueprint for Health Medicare funding)	$3,704,400
Community Health Team (Blueprint for Health Medicare funding)	$2,245,852
PCMH Payments (Blueprint for Health Medicare funding)	$1,830,264
Total	**$23.2M**

[33] *See* D. *Population Health Grid* at: https://gmcboard.vermont.gov/content/2018-aco-oversight.
[34] https://gmcboard.vermont.gov/sites/gmcb/files/VAPAM%202018%20Participation%20Agreement%20and%20Appedices.pdf.
[35] https://gmcboard.vermont.gov/sites/gmcb/files/FY18%20ACO%20Budget%20Order%20OneCare%20Vermont.pdf.

Table 5.b: ACO Distribution by Provider Type

2018 Distribution of Investments by Provider Type	2018 Investment Amount
Area Agencies on Aging	$572,180
Designated Agencies	$1,355,499
Home Health	$1,029,575
Community Health Teams	$2,245,853
SASH	$3,704,400
Primary Care Providers	~$13,000,00
Total	**$23.2M**

5.1. Population Health Investment Program Introduction

Within the Board's regulatory authority in Act 113 and Rule 5.000, the Board must examine how an ACO's investments strengthen primary care, community-based providers, and address social determinants of health and trauma. Over 50% of OneCare's investments were made to primary care entities, which is the first of the three APM population health goals. In the Board's justification to sign the APM, they stated that increasing Vermonters' access to primary care was imperative to the success of the Model, because there is strong consensus that improved access to primary care with an enhanced focus on preventive services, can improve health care quality, improve the health of population.[36] The remaining payments went to social service providers providing care for high risk patients, a community-based obesity prevention program, a community-based program to coordinate community teams for quality improvement, and a program to provide care for Medicare patients in congregate housing. See detailed descriptions below.

5.2. Detailed Descriptions of OneCare's 2018 Population Health Programs

Payments to Primary Care and Social Service Providers

Primary care attributed life per member per month (PMPM)

This is a payment per attributed life, by payer, that each payer includes in their contracts with OneCare when the practice attests to having achieved a set of criteria to facilitate primary care transformation. The payment is distributed to participating primary care providers on a per member per month (PMPM) basis. OneCare's criteria include population health monitoring activities, utilization of data to identify strengths and opportunities, and the implementation of quality improvement initiatives to strengthen person-centered care and outcomes. Of note, these payments started under the Centers for Medicare and Medicaid Studies Multi-Payer Advanced Primary Care Demo (MAPCP) and the Blueprint for Health. Although this demo has ended with Medicare, OneCare, through their 2018 Vermont Medicare Modified Next Generation ACO Agreement, has been able to continue receipt and distribution of this funding for the state's primary care providers.

Capitated payment reform program for independent primary care providers

Three independent physician practices collaborated with OneCare to implement payment reform for a simpler and more predictable revenue stream, enhanced financial resources, and a reimbursement model that allows for clinical flexibility and innovation. Stories from two of the three practices for how

[36] https://gmcboard.vermont.gov/sites/gmcb/files/documents/APM-FINAL-Justification.pdf.

they used their financial resources and flexibility to provide additional services included: 1) hiring a psychiatric nurse practitioner two days a week, to provide care for those lacking health insurance, increasing access to mental health services by 80% and hiring care coordination staff; and 2) initiating a diabetes group that is run one afternoon a month for a group of patients, to allow for enhanced contact between clinicians and patients. The patients have received extra support, education, and have seen significant improvements in their hemoglobin A1c.[37]

Withhold for quality improvement initiatives (Value-based Incentive Fund)

As described in the Section 3., in the Medicaid, BCBS QHP, and Medicare payer contracts, a percentage for quality was withheld and a portion, based on performance was redistributed to providers in their network in a 70%/30% allocation after payer settlement. The total VBIF funds are divided into two pools: primary care (70%), and general distribution (30%). Totals calculated for 2018 were $3,673,636.[38] The VBIF distribution by payer and provider type is provided in Table 5.c, below.

Table 5.c: VBIF distribution by payer and provider type

Payer	Primary Care Distribution (70%)	Other Provider Distribution (30%)
Medicare	$1,220,898	$523,243
Medicaid	$1,046,452	$448,479
Blue Cross and Blue Shield of Vermont (QHP program only)	$302,795	$129,769

If quality targets were not met, the remaining portion is divided in half, with 50% returned to the payer and 50% reinvested in the ACO's quality improvement initiatives. For the 2017 performance year, Medicaid and OneCare agreed that the four hospitals (and their associated communities) who participated in that contract year conduct quality improvement projects that focused on one ACO measure from the mental health, diabetes, or substance use disorder treatment category. For the 2018 performance year, OneCare and the payers agreed to use the remaining funds to focus on the 5 ACO measures where OneCare was at 50th or below the national percentile. Using their data, OneCare then drilled down further to determine which health service areas were outliers and proposed to Medicaid different opportunities to support and incentivize practice changes. The network selected 3 measures to focus on: controlling diabetes (hemoglobin A1c levels), controlling high blood pressure, and adolescent well visits. All measures are in the APM quality framework. This quality improvement initiative will be conducted in 2020.

Complex care coordination program payments for primary and social service providers

OneCare's complex care coordination program is designed to engage providers through incentives and tools to increase communication and integration and decrease duplication of services. In the program, rising risk and high-risk patients choose a lead care coordinator from local primary care, social, and home health providers, who are incentivized through an enhanced PMPM to take extra time to coordinate care through regular contact with patients, care conferences with the patient and the care team, and shared documentation in OneCare's online care coordination program. As referenced in

[37] *See* p.50: https://gmcboard.vermont.gov/sites/gmcb/files/files/payment-reform/GMCB%20ACO%20Budget%20Submission%202020%20Final.pdf.
[38] *See* p. 33: https://gmcboard.vermont.gov/sites/gmcb/files/files/payment-reform/GMCB%20ACO%20Budget%20Submission%202020%20Final.pdf.

Section 4.1, the ACO set several clinical priorities for increasing engagement of this population to reduce acute admissions and emergency department utilization. Data from 2018 for this population showed reductions in in-patient rehab by 14.2%, a 4.7% reduction for in-patient average length of stay (in days), and a 2.8% reduction in emergency room visits.[39]

Community-based Initiatives

Primary prevention program (RiseVT)

RiseVT is a community-based model, to address rising obesity rates with the intention of reducing morbidity of chronic disease (the third population health goal of the APM), that OneCare adopted as its prevention program based on initial implementation in one Vermont region, Franklin and Grand Isle Counties, where the local hospital and community came together to address rising obesity rates through implementation of wellness programs in places such as schools, employers, and recreational sites. OneCare hired program managers in six additional hospital service areas and in 2018, provided $25,000 in 'amplify' funding to contribute to wellness initiatives identified by the community. The evaluation, being conducted by the University of Vermont, framework can be found on RiseVT's website.[40]

Supports and Services at Home (SASH) and Community Health Teams

The Vermont Modified Next Generation ACO Medicare Agreement allows OneCare to receive funding from CMMI to continue paying for the Supports and Services at Home (SASH) program that was started under the Blueprint for Health. This funding provides health and social services for Medicare patients in congregate housing. CMMI, through the APM, also provided continued funding for an initiative started by the Blueprint for Health called 'Community Health Teams', which goes to each health service area in the state to bring providers together to work on quality improvement initiatives, with OneCare and the Blueprint co-facilitate using data from OneCare's information technology platform.

Highlight on a 2018 SASH-OneCare Vermont Pilot

In 2018, OneCare Vermont piloted a mental health project with a SASH site and a designated mental health center in Chittenden County and SASH $77,000 in funding to improve access and utilization of mental health and substance abuse services by Medicare residents in low-income housing. It embedded a full-time mental health clinician through the designated agency to support residents at two Burlington congregate housing locations where SASH has programs (e.g. hosting groups, meeting the residents one-on-one, and joining staff meetings and team discussions on SASH participants).[41]

Preliminary outcomes include:

- Greater and faster access to mental health supports – 78% of pilot participants had their first encounter with the clinician within 0-1 days of a referral- with the majority seen the same day.
- Increased self-management of mental health conditions – 80% of surveyed participants reported being "more able to cope with daily life" due to pilot services.

[39] 2018 Complex Care Coordination Results, *See* page 59: https://gmcboard.vermont.gov/sites/gmcb/files/documents/GMCB%20ACO%20Budget%20Submission%202019%20Final%20%28Supplemental%20Attachment%29.pdf.
[40] RiseVT: https://risevt.org/Sweet-Enough/.
[41] From "Memorandum: 2019 Certification Eligibility Verification for OneCare Vermont," Green Mountain Care Board, 2019, *State of Vermont.* Available at: https://gmcboard.vermont.gov/sites/gmcb/files/Updated%20Memo%20re%202019%20Certification%20Eligibility%20for%20OneCare%20Vermont.pdf.

- Reduced stigma to seeking mental health supports – 30% of referrals to clinician were self-referrals and almost 80% of surveyed participants felt there was less stigma associated with seeking support for emotional issues due to the pilot.[42]

6. Conclusion

The state of Vermont is pleased to submit this first Annual Statewide Health Outcomes and Quality of Care Report to CMMI. This initial report demonstrates that Vermont is currently meeting three of the six population-level health outcomes targets, seven of the nine healthcare delivery system quality targets, and is making progress toward six of the seven process milestones.

In this first year, while there is still ample opportunity for the state to improve the quality of care and health outcomes for Vermonters, there are promising signs that delivery system reform is gaining momentum. As reported by OneCare in its 2019 planned budget submission in the investment section, its "population health and quality investments are well aligned with the APM population health goals and that quality measures and activities in 2019 and beyond will target these process and outcome measures demonstrating incremental improvement within the ACO Network. The activities demonstrate significant investments in primary care, coordination of care across the continuum, community-focused primary prevention, new investments to facilitate appropriate access to specialists, and continued support for the Blueprint for Health. In addition in 2019, OneCare plans to invest in an innovation fund to test delivery system reform efforts with potential to scale across the ACO Network."

The GMCB will continue to monitor the ACO's quality programs to ensure that they remain in alignment and will review quality measures of any new payer programs as they are developed. It should be noted that the State will not have the authority to require self-insured employers to accept quality measures in alignment with the APM. The GMCB has the regulatory authority, when reviewing the ACO's quality measure performance to evaluate where the ACO is underperforming, and along with payers, to work with OneCare to determine what quality improvement initiatives should be underway to support continuous quality improvement and success in the APM. The GMCB looks forward to working with the state reporting and providing more comparative analysis on the 2019 results in the Performance Year 2 Annual Health Outcomes and Quality of Care Report.

[42] From "Annual Report on the Vermont Blueprint for Health," by B. Tanzman, 2019, *Vermont Agency of Human Services, State of Vermont.* Available at: https://blueprintforhealth.vermont.gov/sites/bfh/files/2018_Blueprint_for_Health_Annual_Report_final.pdf.

Appendix A: Detailed Measure Information

Table A.1: Population-Level Health Outcome Targets – Measure Summaries and Methodologies

<table>
<tr><th>Measure</th><th>Methodology</th></tr>
<tr><td>Deaths Related to Drug Overdose (Statewide)</td><td>Calculation: State's performance, measured as a count of Vermont residents who die in Vermont – includes accidents, suicide, and undetermined drug-related fatalities. Vermont performance differs from that reported by the CDC in two ways, 1) VDH considers all causes of death, contributing conditions, and injury descriptions as opposed to underlying cause of death only. 2) VDH examines a broader list of ICD-10 Codes than those used by CDC:

<table>
<tr><th colspan="4">ICD Codes Used in Drug-Related Fatalities Analysis
(beyond those used by CDC)</th></tr>
<tr><td>X45</td><td>F10.0</td><td>F14.0</td><td>F17.0</td></tr>
<tr><td>X65</td><td>F10.1</td><td>F14.1</td><td>F17.1</td></tr>
<tr><td>Y15</td><td>F11.0</td><td>F15.0</td><td>F18.0</td></tr>
<tr><td>T36-T50</td><td>F11.1</td><td>F15.1</td><td>F18.1</td></tr>
<tr><td>T51.0</td><td>F13.0</td><td>F16.0</td><td>F19.0</td></tr>
<tr><td></td><td>F13.1</td><td>F16.1</td><td>F19.1</td></tr>
</table>

Source: Vermont Department of Health, Alcohol and Drug Abuse Programs.</td></tr>
<tr><td>Deaths Related to Suicide (Statewide)</td><td>Calculation: Cause of death is coded by ICD-10 Intentional Self-Harm (Suicide).
Source: Vermont Department of Health, Vital Statistics; Vital Statistics Bulletin (2017).</td></tr>
<tr><td>COPD Prevalence (Statewide)</td><td>Calculation: Percent of Vermont resident respondents who answer "yes" to the following question: "Has a doctor, nurse, or other health professional ever told you that you have chronic obstructive pulmonary disease, COPD, emphysema or chronic bronchitis?"

Notes: This information is collected annually by the state of Vermont and nationally by the CDC.

Source: Vermont Behavioral Risk Factor Surveillance System.</td></tr>
<tr><td>Diabetes Prevalence (Statewide)</td><td>Calculation: Percent of Vermont resident respondents who answer "yes" to the following question: "Has a doctor, nurse, or other health professional ever told you that you have diabetes?"</td></tr>
</table>

Measure	Methodology
	Notes: This information is collected annually by the state of Vermont and nationally by the CDC. **Source:** Vermont Behavioral Risk Factor Surveillance System.
Hypertension Prevalence (Statewide)	This information is collected annually by the state of Vermont and nationally by the CDC. **Calculation:** Percent of Vermont resident respondents who answer "yes" to the following question: "Has a doctor, nurse, or other health professional ever told you that you have high blood pressure?" **Notes:** This information is collected bi-annually by the CDC nationally. To meet the terms of the Agreement, the GMCB works with the Vermont Department of Health to ensure that the hypertension prevalence question is collected through the survey annually. This includes proposal preparation, staff presentation to the Vermont BRFSS committee and payment to add the measure to the data collection tool. **Source:** Vermont Behavioral Risk Factor Surveillance System.
Percentage of Adults with Personal Doctor or Care Provider (Statewide)	**Calculation:** Percent of Vermont resident respondents who answer "yes" to the following question: "Do you have one person you think of as your personal doctor or health care provider?" **Notes:** This information is collected annually by the state of Vermont and nationally by the CDC. **Source:** Vermont Behavioral Risk Factor Surveillance System.

Table A.2: Health Care Delivery System Targets – Measure Summaries and Methodologies

Measure	Methodology
Initiation of Alcohol and Other Drug Dependence Treatment (Multi-Payer ACO)	**Calculation:** Follows HEDIS specifications for Initiation and Engagement of Treatment (IET); the percentage of adolescent and adult members with a new episode of alcohol or other drug (AOD) abuse or dependence who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth or medication treatment within 14 days of the diagnosis. **Notes**: Denominator results presented exclude Part A only and Part B only Medicare beneficiaries. **Source:** VHCURES.

Measure	Methodology
Engagement of Alcohol and Other Drug Dependence Treatment (Multi-Payer ACO)	**Calculation:** Follows HEDIS specifications for Initiation and Engagement of Treatment (IET); the percentage of adolescent and adult members with a new episode of alcohol or other drug (AOD) abuse or dependence who initiated treatment and who were engaged in ongoing AOD treatment within 34 days of the initiation visit. **Notes**: Denominator results presented exclude Part A only and Part B only Medicare beneficiaries. **Source:** VHCURES.
30-Day Follow-Up After Discharge from ED for Mental Health (Multi-Payer ACO)	**Calculation:** Follows HEDIS specifications for Follow-up After Emergency Department Visit for Mental Illness (FUM). Shown as the percentage of ACO-aligned beneficiaries' emergency department (ED) visits for members 6 years of age and older with a principal diagnosis of mental illness or intentional self-harm, who had a follow-up visit for mental illness. Specifically, the percentage of ED visits for which the member received follow-up within 30 days of the ED visit (31 total days). **Notes**: Denominator results presented exclude Part A only and Part B only Medicare beneficiaries. **Source:** VHCURES.
30-Day Follow-Up After Discharge for Alcohol or Other Drug Dependence (Multi-Payer ACO)	**Calculation:** Follows HEDIS specifications for Follow-up After Emergency Department Visit for Alcohol and Other Drug Abuse or Dependence (FUA). Shown as the percentage of ACO-aligned beneficiaries' 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. Specifically, the percentage of ED visits for which the member received follow-up within 30 days of the ED visit (31 total days). **Notes**: Denominator results presented exclude Part A only and Part B only Medicare beneficiaries. **Source:** VHCURES.
Number of Mental Health and Substance Abuse-Related ED Visits (Statewide)	Shown as the percent change from previous calendar year. Results utilize CCS 5 groupings for ED visits. Diagnosis categories include: - Adjustment disorders - Anxiety disorders - Attention-deficit conduct and disruptive behavior disorders - Developmental disorders

Measure	Methodology
	- Disorders usually diagnosed in infancy, childhood, or adolescence - Impulse control disorders - Mood disorders - Personality disorders - Schizophrenia and other psychotic disorders - Alcohol-related disorders - Substance-related disorders - Suicide and intentional self-inflicted injury - Screening and history of mental health and substance abuse codes - Miscellaneous disorders **Source:** VUHDDS.
Diabetes HbA1c Poor Control (Medicare ACO)	**Calculation:** Percentage of patients 18 to 75 years of age with diabetes who had hemoglobin A1c > 9.0% during the measurement period. Only patients with a diagnosis of Type 1 or Type 2 diabetes should be included in the denominator of this measure; patients with a diagnosis of secondary diabetes due to another condition should not be included. **Source:** Centers for Medicare and Medicaid Services (2019 specification).
Controlling High Blood Pressure (Medicare ACO)	**Calculation:** The percentage of Medicare ACO beneficiaries aged 18-85 with a documented diagnosis of hypertension and a blood pressure reading of < 140/90 mm Hg at their most recent ambulatory office visit. **Notes:** Denominator excludes patients with evidence of end stage renal disease (ESRD), dialysis or renal transplant before or during the measurement period. Also excludes patients with a diagnosis of pregnancy during the measurement period OR Patients age 65 and older in Institutional Special Needs Plans (SNP) or Residing in Long-Term Care with a POS code 32, 33, 34, 54 or 56 any time during the measurement period. **Source:** Centers for Medicare and Medicaid Services (2019 specification).
All-Cause Unplanned Admissions for Patients with Multiple Chronic Conditions (Medicare ACO)	**Calculation:** Risk-adjusted outcome measure. Includes Medicare-fee-for-service beneficiaries 65 years or older who have two or more of the following nine chronic conditions: - AMI - Alzheimer's disease and related disorders or senile dementia - A Fib

Measure	Methodology
	- Chronic kidney disease - COPD or asthma - Depression - Diabetes - Heart failure - Stroke or TIA **Source:** Centers for Medicare and Medicaid Services (2019 specification).
ACO CAHPS Composite: Getting Timely Care, Appointments and Information (Medicare ACO)	**Calculation**: Survey asks patients how often they got appointments for care as soon as needed and timely answers to questions when they called the office. The survey also asks patients how often they saw the doctor within 15 minutes of their appointment time. **Source:** Centers for Medicare and Medicaid Services (2018 specification).

Table A.3: Process Milestones – Measure Summaries and Methodologies

Measure	Methodology
Percentage of Vermont Providers Checking Prescription Drug Monitoring Program Before Prescribing Opioids (Statewide)	**Calculation:** The number of Vermont Prescription Monitoring System queries by prescribers who have written at least one opioid analgesic prescription divided by the number of unique recipients who have received at least one opioid analgesic prescription. **Source:** Vermont Department of Health, Alcohol and Drug Abuse Programs.
Adults Receiving Medication Assisted Treatment (MAT) (Statewide, Ages 18-64)	**Calculation**: Count of Vermont Adults (18-64) receiving Medication Assisted Treatment in Vermont Hub and Spoke programs. **Source**: Vermont Department of Health, Alcohol and Drug Abuse Programs.
Screening and Follow-Up for Clinical Depression and Follow-Up Plan (Multi-Payer ACO)	**Calculation:** Percentage of patients aged 12 years and older screened for depression on the date of the encounter using an age appropriate standardized depression screening tool AND if positive, a follow-up plan is documented on the date of the positive screen. 2018 baseline and results are derived from Medicare, Medicaid and Commercial QHP performance and weighted based on attribution within each of those payer programs. Results are combined and given a total percentage score which is then compared to the Medicare performance benchmarks. **Source:** ACO-payer contract results.

Measure	Methodology
Tobacco Use Assessment and Cessation Intervention (Multi-Payer ACO)	**Calculation:** Percentage of patients aged 18 years and older who were screened for tobacco use one or more times within 24 months AND who received tobacco cessation intervention if identified as a tobacco user. 2018 baseline and results are derived from Medicare and Medicaid performance and weighted based on attribution within each of those payer programs. Results are combined and given a total percentage score which is then compared to national Medicare performance benchmarks. **Source:** ACO-payer contract results.
Percentage of Vermont Residents Receiving Appropriate Asthma Medication Management (Statewide)	**Calculation:** Follows HEDIS specifications for Medication Management for People with Asthma (MMA). The percentage of Vermonters in VHCURES 5-64 years of age during the measurement year who were identified as having persistent asthma and were dispensed appropriate medications that they remained on for at least 50% of their treatment period. **Notes:** Denominator results presented exclude Part A only and Part B only Medicare beneficiaries. **Source:** VHCURES.
Percentage of Medicaid Adolescents with Well-Care Visits (Statewide Medicaid)	**Calculation:** Follows HEDIS specifications for Adolescents with Well-Care Visits (AWC). The percentage of all Vermont Medicaid enrolled members in VHCURES 12-21 years of age who had at least one comprehensive well-care visit with a PCP or an OB/GYN practitioner during the measurement year. **Source:** VHCURES.
Percentage of Medicaid Enrollees Aligned with ACO (Statewide Medicaid)	**Calculation:** Shown as percent of all Medicaid-enrolled Vermonters who are aligned to the ACO in Performance Year 1. Performance is compared to the Medicare-enrolled proportion of Vermonters as reported in the 2018 Annual Scale Targets and Alignment Report. **Source:** Department of Vermont Health Access (Medicaid).

Appendix B: Measure Crosswalk

Table B.1: Payer-Specific Measure Calculation Notes and Changes from Appendix 1

Measure	Vermont All-Payer ACO Model	2018 Vermont Medicaid Next Gen	2018 Medicare Next Gen	2018 BCBSVT Next Gen	2018 Statewide Health Outcomes and Quality of Care Report Notes
% of adults with a usual primary care provider	X				BRFSS Survey Results.
Statewide prevalence of Chronic Obstructive Pulmonary Disease	X				BRFSS Survey Results.
Statewide prevalence of Hypertension	X				BRFSS Survey Results.
Statewide prevalence of Diabetes	X				BRFSS Survey Results.
% of Medicaid adolescents with well-care visits	X	X		X	All Medicaid adolescents in VHCURES, excluding dual-eligible.
Initiation of alcohol and other drug dependence treatment	X	X		X*	BCBSVT Next Gen treats these measures as a single composite measure; All-Payer ACO Model and Vermont Medicaid Next Gen treat them as separate measures.
Engagement of alcohol and other drug dependence treatment	X	X			
30-day follow-up after discharge from emergency department for mental health	X	X		X	ACO-attributed beneficiaries in VHCURES, utilizing HEDIS specification for FUM.
30-day follow-up after discharge from emergency department for alcohol or other drug dependence	X	X		X	ACO-attributed beneficiaries in VHCURES, utilizing HEDIS specification for FUH.
% of Vermont residents receiving appropriate asthma medication management	X				All Vermonters in VHCURES, utilizing HEDIS specifications for MMA.
Screening for clinical depression and follow-up plan (ACO-18)	X	X	X	X	Reported in Statewide Health Outcomes and Quality of Care Report. Measure is a combination of claims and clinical data

Measure	Vermont All-Payer ACO Model	2018 Vermont Medicaid Next Gen	2018 Medicare Next Gen	2018 BCBSVT Next Gen	2018 Statewide Health Outcomes and Quality of Care Report Notes
Tobacco use assessment and cessation intervention (ACO-17)	X	X	X		(chart review). Annual reported scores are weighted based on participating program data received from the ACO and/or payer.
Deaths related to suicide	X				VDH results.
Deaths related to drug overdose	X				VDH ADAP results.
% of Medicaid enrollees aligned with ACO	X				DVHA results.
# per 10,000 population ages 18-64 receiving medication assisted treatment for opioid dependence	X				VDH ADAP results.
Rate of growth in mental health or substance abuse-related emergency department visits	X				VUHDDS results.
# of queries of Vermont Prescription Monitoring System by Vermont providers (or their delegates) divided by # of patients for whom a prescriber writes prescription for opioids	X				VDH ADAP results.
Hypertension: Controlling high blood pressure	X	X	X	X	As of CY 2018, Medicare no longer reports this as a composite measure; the All-Payer ACO Model Agreement Appendix 1 has been updated to reflect this change. Each measure will be reported separately in the Statewide Health Outcomes and Quality of Care Report.
Diabetes Mellitus: HbA1c poor control	X	X	X	X	
All-Cause unplanned admissions for patients with multiple chronic conditions	X	X	X		

Measure	Vermont All-Payer ACO Model	2018 Vermont Medicaid Next Gen	2018 Medicare Next Gen	2018 BCBSVT Next Gen	2018 Statewide Health Outcomes and Quality of Care Report Notes
Consumer Assessment of Healthcare Providers and Systems (CAHPS) patient experience surveys	X	X	X	X	Surveys vary by program. All-Payer ACO Model includes ACO CAHPS Survey composite of Timely Care, Appointments, and information for ACO-attributed Medicare beneficiaries. Vermont Medicaid Next Gen includes multiple CAHPS PCMH composites for ACO-attributed Medicaid beneficiaries. Medicare Next Gen includes multiple ACO CAHPS composites for ACO-attributed Medicare beneficiaries. BCBSVT Next Gen includes care coordination composite and tobacco cessation question from CAHPS PCMH for ACO-attributed BCBSVT members.
All-cause readmissions (HEDIS measure for commercial plans)				X	
Risk-standardized, all-condition readmission (ACO-8)			X		
Skilled nursing facility 30-day all-cause readmission (ACO-35)			X		
All-cause unplanned admissions for patients with Diabetes (ACO-36)			X		
All-cause unplanned admissions for patients with Heart Failure (ACO-37)			X		
Falls: Screening for future fall risk (ACO-13)			X		
Influenza immunization (ACO-14)			X		
Pneumonia vaccination status for older adults (ACO-15)			X		

Measure	Vermont All-Payer ACO Model	2018 Vermont Medicaid Next Gen	2018 Medicare Next Gen	2018 BCBSVT Next Gen	2018 Statewide Health Outcomes and Quality of Care Report Notes
Body mass index screening and follow-up (ACO-16)			X		
Colorectal cancer screening (ACO-19)			X		
Breast cancer screening (ACO-20)			X		
Statin therapy for prevention and treatment of Cardiovascular Disease (ACO-42)			X		
Depression remission at 12 months (ACO-40)			X		
Diabetes: Eye exam (ACO-41)			X		
Ischemic Vascular Disease: Use of aspirin or another antithrombotic (ACO-30)			X		
Developmental screening in the first 3 years of life		X		X	
Follow-up after hospitalization for mental Illness (7-Day Rate)		X		X	
Timeliness of prenatal care					
Acute ambulatory care-sensitive condition composite			X		
Medication reconciliation post-discharge (ACO-12)			X		
Use of imaging studies for low back pain (ACO-44)			X		