



TO: Sara Barry, Chief Operating Officer and Tom Borys, Chief Financial Officer, OneCare  
FROM: Natalie Graves, Director of Research and Implementation and Jennifer Ricards, Executive Vice President, Cynosure Health  
DATE: November 14, 2023  
SUBJECT: Return on Investment Analysis for OneCare Vermont

## Executive Summary

In May 2023, OneCare contracted with Cynosure Health and its subcontractor, Westat Insight, to conduct a mixed methods evaluation of the Community Complex Care Coordination (CCCC) Program, Value-Based Incentive Fund (VBIF), and Comprehensive Payment Reform (CPR) Program, as well as a return on investment (ROI) analysis of OneCare's involvement in the Vermont All-Payer Accountable Care Organization (ACO) Model (VAPM). This memo focuses on the ROI component of the OneCare evaluation.

The Fiscal Year 2023 Green Mountain Care Board ACO Reporting Manual includes a requirement for OneCare to complete an ACO Return on Investment analysis. The reporting manual describes the purpose of the report, stating: "OneCare's administrative expenses must be less than the health care savings, including an estimate of cost avoidance and the value of improved health, projected to be generated through the Model."<sup>1</sup>

In partnership with OneCare, the Cynosure Health and Westat Insight evaluation team operationalized the ROI analysis to include:

- 1) **Environmental scan** to determine how others have assessed the ROI of ACOs and similar entities, such as integrated health systems.
- 2) **Proposed methods** for calculating ROI or a similar metric that meets regulatory expectations.
- 3) **Limitations** to clearly articulate barriers to the proposed approach.
- 4) **Recommendations** to include future paths of inquiry or methodology to understand OneCare's performance.

Our review of existing literature revealed that no clear or consistent definition currently exists for how to calculate the ROI of a complex, multi-payer health reform intervention. Existing analyses of ACOs or other multistakeholder reform efforts most often evaluate the impacts on cost, quality, or utilization outcomes in separate analyses. These evaluations do not compare those findings to administrative expenses or investments to calculate an ROI metric.

Though we did not identify a widely accepted methodology to calculate the ROI of an ACO, in this memo we describe multiple analytical approaches to explore this objective. For example, we considered how to use results from analyses of OneCare programs program to inform calculations of cost savings or improvements in quality. Our evaluation team completed program evaluations of OneCare's CCCC, VBIF

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<sup>1</sup> Green Mountain Care Board. ACO Reporting Manual for FY 2023. Available at:  
[https://gmcboard.vermont.gov/sites/gmcb/files/documents/OCVT\\_FY23\\_GMGB\\_ACO\\_Reporting\\_Manual.v.23.3.2\\_FINAL.pdf](https://gmcboard.vermont.gov/sites/gmcb/files/documents/OCVT_FY23_GMGB_ACO_Reporting_Manual.v.23.3.2_FINAL.pdf)

and CPR programs in summer 2023. These analyses may have informed an ROI calculation if they demonstrated changes in population health that could be quantified, either as positive or negative ROI.

Given the programmatic and data limitations under the current evaluation contract, however, we cannot calculate a comprehensive ROI from the standpoint of the state of Vermont as the investor. The barriers to an exhaustive evaluation of these programs precluded the calculation of population-wide benefits. That is, our evaluations do not show causal impacts on cost, quality, or utilization. As a result, we were not able to evaluate a comprehensive set of outcomes to serve as inputs for an ROI calculation.

Programmatic and data limitations include:

- ◆ **COVID-19 pandemic.** The timeframes of the CCCC, VBIF, and CPR program evaluations overlapped with the COVID-19 pandemic, a time of significant stress on the health care system. We were not able to disentangle the impacts of the programs from the impacts of the COVID-19 pandemic because they affected the same outcomes. The pandemic also likely obscured potential program impacts on health care utilization outcomes.
- ◆ **Data availability.** Our evaluation team had access to limited relevant medical claims and programmatic data to evaluate these programs. Notably, we did not have access to any Blue Cross Blue Shield data given their exit from the model. We also had limited baseline data with little or no data prior to program implementation.
- ◆ **Lack of comparisons group.** All OneCare providers participate in the CCCC and VBIF programs, which means no comparison groups are available for these programs. For the CPR program, we explored comparing providers that joined in different years to each other but found that these cohorts were different and therefore could not be used as comparison groups. This limitation precludes causal modeling, especially when combined with the COVID-19 pandemic as a large confounder.

Despite these limitations, we describe in this memo analytic approaches to explore OneCare's impact on cost, quality, and utilization. While each of these approaches includes limitations, collectively they help to look at the question of ROI from different angles. Additionally, given our now detailed understanding of current evaluations, existing data, and OneCare's operations, we propose future paths of inquiry for ROI-like calculations, including cost savings projections based on observed improvements in areas such as care utilization, quality metrics, and/or disease prevalence (for example, based on findings related to the Population Health Model).

We appreciate the opportunity to explore the complexities of such an analysis and look forward to continuing to partner with OneCare to understand and describe their role and value in advancing health reform in Vermont.

## Background

The Green Mountain Care Board's ACO Reporting Manual provides context for the ROI analysis, stating that "OneCare's administrative expenses must be less than the health care savings, including an estimate of cost avoidance and the value of improved health, projected to be generated through the Model."<sup>2</sup> In partnership with OneCare's Evaluation Advisory Group, the Cynosure Health and Westat Insight evaluation team operationalized the ROI analysis to include:

- 1) **Environmental scan** to determine how others have assessed the ROI of ACOs and similar entities, such as integrated health systems.
- 2) **Proposed methods** for calculating ROI or a similar metric that meets regulatory expectations.
- 3) **Limitations** to clearly articulate barriers to the proposed approach.
- 4) **Recommendations** to include future paths of inquiry or methodology to understand OneCare's performance.

## Environmental Scan

Currently, no universal or consistent definition exists for how to calculate the ROI of a multi-payer health reform intervention such as the OneCare ACO and the VAPM. Our evaluation team conducted an environmental scan to explore how other researchers have approached this question, to ensure that our proposed methodology builds on and reflects the existing body of knowledge. Our team explored the use of ROI in: (a) individual provider organizations (such as hospitals or primary care), (b) ACOs and similar entities (such as integrated health systems), and (c) the Vermont All-Payer Model and OneCare.

**Analyses that use the term "ROI" vary in their definitions of the methodology.** The term ROI can encompass different approaches that vary in scope and focus. A traditional ROI analysis focuses primarily on the investor's perspective, with a calculation of the financial investment relative to the resulting financial gain. In contrast, an ROI with underlying methods reflective of a cost-effectiveness analysis or cost-benefit analysis (CBA) would consider a range of benefits from a broader perspective, including societal impact and non-financial gains.<sup>3</sup> The CBA methodology, as compared to the traditional ROI focus on direct monetary benefits, considers important intangible program benefits and may be more appropriate to understand the value of OneCare's efforts. However, a CBA calculation must address the challenge of quantifying the dollar value of non-financial benefits, such as improved provider coordination, reduced administrative burden, or improved care experience. Previous CBA calculations and published research can provide a basis to estimate the non-financial benefits, including an estimate of ranges of uncertainty.

**Existing ROI analyses of health care interventions primarily focus on narrowly-defined programs or settings.** When applying ROI methods to health system reform, research focuses on specific settings and/or interventions, such as a medication safety program to reduce hospital readmissions. A systematic

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<sup>2</sup> Green Mountain Care Board. ACO Reporting Manual for FY 2023. Available at: [https://gmcboard.vermont.gov/sites/gmcb/files/documents/OCVT\\_FY23\\_GMGB\\_ACO\\_Reporting\\_Manual.v23.3.2\\_FINAL.pdf](https://gmcboard.vermont.gov/sites/gmcb/files/documents/OCVT_FY23_GMGB_ACO_Reporting_Manual.v23.3.2_FINAL.pdf)

<sup>3</sup> Thusini, S. T., Milenova, M., Nahabedian, N., Grey, B., Soukup, T., Chua, K. C., & Henderson, C. (2022). The development of the concept of return-on-investment from large-scale quality improvement programmes in healthcare: an integrative systematic literature review. *BMC Health Services Research*, 22(1), 1492.

review on the impact of evidence-based practices on health care system ROI defined the term ROI as “a performance measure used to evaluate the efficiency of an investment. [ROI] is calculated using a ratio that divides the net profit (or loss) related to the investment cost.”<sup>4</sup> In most cases, the financial component of the ROI analysis referenced was focused on health care delivery costs (e.g., reimbursement). In the medication safety example noted above, an ROI analysis would consider the reduction in health care costs associated with reduced readmissions that may have resulted from the investment of implementing a medication safety program.

**When analyzing complex and multi-system interventions, such as ACOs, analyses most commonly assess the impact on overall health care spending, utilization, or select quality metrics.** Researchers most often analyze these financial, utilization, and quality metrics separately. We reviewed ACO evaluations of Medicare, Medicaid, and commercial ACOs, as well as the Maryland Total Cost of Care Model which has similarities with the Vermont All Payer Model. Table 1 provides examples of financial impact analyses and Table 2 provide examples of assessments of utilization and quality. None of these analyses combine these metrics of health savings and/or improved health outcomes into an ROI-type metric that accounts for investment costs.

**Table 1.** Example Findings from ACO Evaluations - Financial

Study Group	Example Finding
<b>Medicare</b>	
Medicare - Pioneer ACOs	<ul style="list-style-type: none"> <li>“Seventeen of 23 ACOs had positive or neutral financial performance, with 11 earning shared savings above their minimum savings rate, 6 generating savings but not exceeding their minimum savings rate, and 6 generating any losses.”<sup>5</sup></li> </ul>
Next Generation ACO (NGACO) Model – Fifth Evaluation Report	<ul style="list-style-type: none"> <li>“In its fifth performance year, the NGACO Model was associated with \$1.05 billion in gross savings, representing a 1.5 percent reduction relative to similar fee for service beneficiaries in the comparison group.”</li> <li>“Despite these gross spending reductions, the NGACO Model increased cumulative net Medicare spending by \$386.5 million.”<sup>6</sup></li> </ul>
Medicare Shared Savings Program (MSSP)	<ul style="list-style-type: none"> <li>“Our analyses show that estimates of Medicare savings from MSSP are of modest magnitude and sensitive to how switchers are distributed to treatment or comparison groups.”<sup>7</sup></li> <li>“In this economic evaluation of 15,763 Medicare Advantage and MSSP beneficiaries between 2014 and 2018, spending was</li> </ul>

<sup>4</sup> Connor, L., Dean, J., McNett, M., Tydings, D. M., Shrout, A., Gorsuch, P. F., ... & Gallagher-Ford, L. (2023). Evidence-based practice improves patient outcomes and healthcare system return on investment: Findings from a scoping review. *Worldviews on Evidence-Based Nursing*, 20(1), 6-15.

<sup>5</sup> Pham, H. H., Cohen, M., & Conway, P. H. (2014). The Pioneer Accountable Care Organization Model: Improving quality and lowering costs. *JAMA*, 312(16), 1635-1636.

<sup>6</sup> <https://www.cms.gov/priorities/innovation/data-and-reports/2022/nextgenaco-fifthevalrpt>

<sup>7</sup> [https://www.medpac.gov/wp-content/uploads/import\\_data/scrape\\_files/docs/default-source/reports/jun19\\_ch6\\_medpac\\_reporttocongress\\_sec.pdf](https://www.medpac.gov/wp-content/uploads/import_data/scrape_files/docs/default-source/reports/jun19_ch6_medpac_reporttocongress_sec.pdf)

Study Group	Example Finding
	22 to 26% higher for MSSP beneficiaries than for MA beneficiaries, even after controlling for detailed clinical risk factors.” <sup>8</sup>
<b>Medicaid</b>	
Colorado Accountable Care Collaborative: Medicare-Medicaid Program	<ul style="list-style-type: none"> <li>“...the demonstration was not associated with statistically significant savings or additional costs to the Medicare programs.”<sup>9</sup></li> </ul>
Minnesota Integrated Health Partnerships	<ul style="list-style-type: none"> <li>“In 2014 ... all nine providers received a shared savings settlement, ranging from approximately \$388,000 to \$4.7 million and totaling \$23 million.”</li> <li>“Reported savings to the state have increased as more providers have joined the demonstration, from \$14.8 million in 2013 to \$76.6 million in 2015, for a total three-year savings of \$157 million.”<sup>10</sup></li> </ul>
<b>Commercial</b>	
Leavitt Partners ACO Database <sup>11</sup>	<ul style="list-style-type: none"> <li>Although there are hundreds of ACOs with commercial contracts, researchers reported that few report financial results. One study found that, of the 12 ACOs that did report results, 11 reported savings and “very few of these have reported a dollar figure for savings, but costs were reported to have decreased by between 2 and 12 percent.”</li> <li>Among commercial ACOs, “Successes include one New England ACO that reported a medical cost trend 1.2 percentage points better than its market overall, as well as a large Northeast ACO which shared approximately \$2 million in their contract with United Healthcare. Savings aside, the cost of ACO investment was made clear by one Northwestern ACO that reports spending about \$1 million on infrastructure and only earning \$125,000 in savings in the first year.”</li> </ul>
<b>Total Cost of Care/All Payer Models</b>	
Maryland Total Cost of Care Model – Quantitative Only Report for the Model’s First Three Years	“...substantially reduced rates of all-cause acute care hospital admissions (by 16.1 percent, moderately reduced total Medicare fee-for-service spending by 2.5 percent increased non-hospital spending (by 2.7 percent) but reduced hospital spending by more (6.6 percent), leading to a \$781 million reduction in total spending.”

<sup>8</sup> Parikh RB, Emanuel EJ, Brensinger CM, et al. Evaluation of Spending Differences Between Beneficiaries in Medicare Advantage and the Medicare Shared Savings Program. *JAMA Netw Open*. 2022;5(8):e2228529. doi:10.1001/jamanetworkopen.2022.28529

<sup>9</sup> <https://www.cms.gov/priorities/innovation/data-and-reports/2021/fai-co-acc-mmp-eval-report>

<sup>10</sup> Blewett, L. A., Spencer, D., & Huckfeldt, P. (2017). Minnesota integrated health partnership demonstration: implementation of a Medicaid ACO model. *Journal of Health Politics, Policy and Law*, 42(6), 1127-1142.

<sup>11</sup> Petersen, M., & Muhlestein, D. (2014). ACO results: What we know so far. *Health Affairs Forefront*.

Study Group	Example Finding
Vermont All-Payer ACO Model	“Cumulatively...we observed a reduction in total Medicare spending of \$655.89 (6.0 percent), or \$93.8 million overall, before considering CMS’s shared savings and other pass-through payouts.”

PY = Performance Year

**Table 2.** Example Findings from ACO Evaluations – Quality and Utilization

Study Group	Example Finding
<b>Medicare</b>	
Medicare - Pioneer ACOs	<ul style="list-style-type: none"> <li>“Pioneer ACOs had a mean overall quality score of 84.0% in 2023 compared with 70.8% in 2012. The mean performance score of all Pioneer ACOs improved in 28 of 33 quality measures.”</li> </ul>
Next Generation ACO (NGACO) Model – Fifth Evaluation Report	<ul style="list-style-type: none"> <li>“Cumulatively, the largest percentage reductions in utilization were skilled nursing facility days (6.4 percent in PY5, about 2.5 times the impact seen in PY4). Consistent with reductions in hospital spending, there was a 1.5 percent reduction in acute care hospital stays, nearly twice the size of the impact in the previous PY.”</li> </ul>
Medicare Shared Savings Program	<ul style="list-style-type: none"> <li>“MSSP ACOs improved quality despite their sicker, older population...continued ACO infrastructure development funding, better relationships with PAC facilities and opportunities for diverse ACOs to share their learnings would maximize quality improvement.”<sup>12</sup></li> </ul>
<b>Medicaid</b>	
Minnesota Integrated Health Partnerships	<ul style="list-style-type: none"> <li>University of Minnesota researchers reported that financial gains for participating providers were linked to quality metrics. Specifically, “performance targets for thirty-two measures of health care processes, health care outcomes, and patient experience.”<sup>13</sup></li> </ul>
<b>Commercial</b>	
Leavitt Partners ACO Database	<ul style="list-style-type: none"> <li>“As with financial reporting among commercial ACOs, peer-reviewed data on quality and/or utilization are limited. Petersen and Muhlestein reported the following quality and/or utilization metrics for Aetna, Cigna, and United ACOs, including measures such as primary care access, diabetes care</li> </ul>

<sup>12</sup> Bleser, W.K., Saunders, R.S., et al. (2018). ACO Quality Over Time: The MSSP Experience and Opportunities for System-Wide Improvement. The American Journal of Accountable Care, 6(1):e1-e5. <https://www.ajmc.com/view/aco-quality-over-time-the-mssp-experience-and-opportunities-for-systemwide-improvement>

<sup>13</sup> Blewett, L. A., Spencer, D., & Huckfeldt, P. (2017). Minnesota integrated health partnership demonstration: implementation of a Medicaid ACO model. *Journal of Health Politics, Policy and Law*, 42(6), 1127-1142.

Study Group	Example Finding
	management, hospital readmissions, emergency department visits, and preventive care (e.g., screenings). <sup>14</sup>
<b>Total Cost of Care/All Payer Models</b>	
Maryland Total Cost of Care Model – Quantitative Only Report for the Model’s First Three Years	<ul style="list-style-type: none"> <li>“(The Maryland Model) substantially reduced rates of all-cause acute care hospital admissions (16.1 percent); improved several quality-of-care measures, including reducing potentially preventable admissions (by 16.1 percent), reducing the likelihood of an unplanned readmission to the hospital (9.5 percent), and increasing timely follow-up after hospital discharge (2.5 percent).”<sup>15</sup></li> </ul>

PY = Performance Year

Our team also reviewed the CMS-funded evaluation reports focused on the VAPM and/or OneCare so that we could layer onto, and not duplicate, existing work. These evaluations, conducted by NORC at the University of Chicago, include results that could be used as inputs for an ROI calculation (for example, cost savings estimates). However, these evaluations are not inclusive of all payers; most only include Medicare data given that CMS procured NORC’s services specifically to analyze the Medicare ACO.

**Table 3.** CMS-funded Evaluations of the VAPM, Conducted by NORC

Report	Key Findings
First Evaluation Report	<ul style="list-style-type: none"> <li>“Both statewide and for the Medicare ACO, hospital-based utilization (acute care stays and days) decreased in PY2 (2019). We observed decreases of 17.9 percent and 14.7 percent for acute care stays and acute care days, respectively, for the Medicare ACO initiative.”</li> <li>“Specialty E&amp;M visits significantly declined in PY2, both for the statewide population and for the Medicare ACO, with decreases of 10.2 percent and 7.7 percent, respectively.”</li> </ul>
Second Evaluation Report	<ul style="list-style-type: none"> <li>“Over the first three PYs, the VAPM Medicare ACO initiative achieved statistically significant reductions in cumulative gross spending, totaling \$655 per beneficiary per year (PBPY) or 6 percent. After considering shared savings and incentive payments from Medicare, the VAPM Medicare ACO saw a statistically insignificant reduction of \$577.13 PBPY.”</li> <li>“Due to influences of the COVID-19 PHE, Medicare utilization saw a steep decline in both the VAPM and comparison groups in PY3. Despite shifts in utilization in care-seeking patterns in PY3, many of the trends observed in PY2 persisted in PY3, including</li> </ul>

<sup>14</sup> Petersen, M., & Muhlestein, D. (2014). ACO results: What we know so far. *Health Affairs Forefront*.

<sup>15</sup> Rotter, J., Calkins, K., et al. (2022). Evaluation of the Maryland Total Cost of Care Model: Quantitative-Only Report for the Model’s First Three Years (2019-2021). Mathematica. <https://www.mathematica.org/publications/evaluation-of-the-maryland-total-cost-of-care-model-quantitative-only-report-for-the-models-first>



Report	Key Findings
	<p>decreases in acute care and specialist E&amp;M visits. The decline in specialist E&amp;M visits may be driven in part of specialist shortage in Vermont and long wait time for specialty care.”</p> <ul style="list-style-type: none"> <li>“In PY3 we observed continued progress toward 2022 performance targets for the majority of the Model’s population health and quality of care outcomes. The Model maintained statewide chronic disease prevalence (chronic obstructive pulmonary disease, diabetes, hypertension); increased the Model population’s initiation and engagement for treatment for alcohol and other drug dependence and timely follow-up after ED discharge; and <i>almost halved the percentage of Medicare beneficiaries with diabetes experiencing poor HBA1c control.</i>”</li> </ul>
Third Evaluation Report	<ul style="list-style-type: none"> <li>“The Medicare ACO reduced cumulative Medicare spending by \$686 PBPY over the first four years of performance among attributed beneficiaries (6.2% reduction).”</li> </ul>

PY = Performance Year

E&M = Evaluation & Management

Notably, OneCare also contracted with Milliman in 2021 to establish a benchmarking system to compare its performance to other ACOs, with respect to utilization, cost per capita, quality, patient engagement and satisfaction, and clinical appropriateness. Key findings from this report<sup>16</sup> include:

- The total allowed per member per month (PMPM) cost for OneCare’s 2021 attributed population is approximately 9 percent lower than the average of the National Peer ACO Cohort after accounting for differences in risk score and unit cost.
- OneCare’s 2021 attributed population is lower cost than the National Peer ACO Cohort, with mixed result when comparing rates for the following specific service categories. Compared to the National Peer ACO Cohort:
  - Inpatient Facility – Medical is approximately 9 percent lower cost. Admission rate is approximately 2 percent higher.
  - Inpatient Facility – Surgery is approximately 11 percent lower cost. Admission rate is approximately 6 percent lower.
  - Outpatient Facility – Surgery is approximately 22 percent lower cost. Visit rate is approximately 36 percent higher.
  - Part B Pharmacy is approximately 15 percent lower cost (across both Outpatient – Pharmacy and Professional – Office Administered Drugs)
  - Office Visits for Primary Care Providers are approximately 27 percent lower cost and Specialist costs are approximately 11 percent lower. The PCP visit rate is approximately 14 percent lower and the visit rate for specialists is approximately 6 percent lower.

<sup>16</sup> OneCare Medicare Benchmarking Report, October 2022. [https://gmcbboard.vermont.gov/sites/gmcb/files/documents/OCV\\_FY22-Benchmarking-Report\\_10-31-22.pdf](https://gmcbboard.vermont.gov/sites/gmcb/files/documents/OCV_FY22-Benchmarking-Report_10-31-22.pdf)



- OneCare’s population incurs higher costs relative to the National Peer ACO Cohort in a few service categories:
  - Emergency Department: Approximately 32 percent higher costs, driven by 37 percent higher utilization.
  - Post-Acute Care: Approximately 8 percent higher cost for the 2021 attributed population across the post-acute care service lines of Inpatient Facility – Rehabilitation, Skilled Nursing Facility, and Home Health.
- OneCare’s 2021 utilization and quality is in overall alignment with the National Peer ACO Cohort.

Finally, the evaluation team identified existing, publicly available reports and analyses from OneCare that describe their financial performance (i.e., shared savings) by year and for each payer (Table 4). Similar to the evaluations catalogued above, these analyses reflect components of what might be included in an overall ROI analysis. The Medicare ACO has achieved shared savings every year in the program, while performance in the commercial contracts has been variable. The Medicaid ACO achieved shared savings 3 out of 4 years.

**Table 4.** Combined Shared Savings and Losses by Performance Year and Payor, In Millions

	Medicare ACO	Medicaid ACO	BCBSVT	MVP
<b>2018</b>	\$13.35	\$6.12	-\$0.65	--
<b>2019</b>	\$11.06	\$-1.74	\$0.00	--
<b>2020</b>	\$16.31	\$55.56	\$0.13	\$1.06
<b>2021</b>	\$10.03	\$7.12	\$-0.11	\$0.00

Source: <https://www.onecarevt.org/aco-results/>

OneCare also internally tracks performance on a set of annual quality metrics that vary by payer and by year. As described in NORC’s most recent All-Payer Model Evaluation Report, “despite efforts to align quality improvement metrics across payers, only 7 of the 18 OneCare measures were common across all payers in 2021 and 2022.” OneCare reports their quality metric results annually through Quality Measure Scorecards available on their website<sup>17</sup>.

## Potential Approaches

Our environmental scan revealed no clear precedent for calculating the ROI of a complex, multi-payer health reform initiative but gave us a deep understanding of methodologies to draw on the data that are currently available to be used in any such calculation. We considered multiple approaches, such as:

- Calculating the benefit to providers from investing time and financial resources in implementing the OneCare programs and model (i.e., summing shared savings)
- Calculating a traditional ROI with a focus on investment from the standpoint of the state as the investor (i.e., quantifying improvements in population health outcomes such as primary care visits or improvements in quality metrics)

<sup>17</sup> Quality Measure Scorecards by Payer available here: <https://www.onecarevt.org/aco-results/>

- Calculating a cost-benefit analysis with a focus on specific outcomes of OneCare initiatives such as the CCCC, VBIF, and CPR program

We assessed the availability and completeness of data for each component of a ROI analysis, including data on administrative expenses, cost savings, and health improvements. Additional detail on the data available for this assessment can be found in the Program Evaluation Brief submitted to OneCare on September 15, 2023. The Cynosure Health and Westat Insight teams had access to:

- (1) Data made available for OneCare’s program evaluations (including Medicare, Medicaid, and MVP medical claims for select years)
- (2) Publicly available data (such as OneCare’s administrative expenses, evaluation reports, existing OneCare analyses)

To combine cost and quality metrics into an ROI calculation, we need data consistency across years, payers, and programs. For example, if OneCare’s administrative expenses (i.e., the investment portion of the equation) represent the organization’s effort across participating payers, the savings portion of the equation should also include all participating payers. We currently do not have access to consistent data by payer, by year to perform an inclusive and holistic analysis.

**Calculating “Investment.”** To assess the investment component of ROI we gathered information on OneCare’s administrative expenses from the GMCB’s ACO Budget Order.<sup>18</sup> As shown in Table 5, OneCare’s administrative expenses have remained relatively stable over time. The administrative expense category is also referred to as operating expenses and includes salaries and benefits, purchased services, software/informatics, occupancy, insurance, assessments, and other expenses (e.g., travel expenses).

**Table 5.** OneCare Administrative Expenses, 2019-2022

	2019	2020	2021	2022
<b>Administrative Expenses (\$)</b>	\$15,341,450	\$14,044,262	\$13,608,546	\$15,437,538
<b>Percent of Total</b>	2.3%	1.3%	1.3%	1.1%

**Calculating “Value.”** The GMCB specifies that administrative expenses must be less than the “value of health care savings, including an estimate of cost avoidance and the value of improved health.” The evaluation team considered several sources to calculate these components:

- OneCare performance metrics (quality scorecards)
- Quality and utilization metrics (claims data)
- Estimates of cost savings (peer-reviewed literature)

We considered approaches to calculate more specific areas of cost avoidance or value associated with improved health, beyond what the CMS Evaluation Contractor, NORC, has presented in its evaluation reports (described in Table 3). Assuming the relevant data are available to complete these analyses, they would allow for a more understanding of value generated across payers. Given data and program

<sup>18</sup> GMCB. ACO Oversight. Available at: <https://gmcboard.vermont.gov/aco-oversight>

limitations we cannot currently complete these analyses; however, with additional data we could complete similar analyses in the future.

**Cost Savings Example: Shared Savings.** One simplistic way to assess OneCare’s ROI is to sum the shared savings generated over the life of the model and compare those savings to OneCare’s administrative costs. This approach assumes the “investment” portion of ROI is equal to OneCare’s administrative expenses, as specified in legislation, and considers the benefit primarily from the perspective of providers (i.e., in the form of shared savings). Using shared savings as a metric of success draws on documented contractual obligations, as negotiated with each payer and provider organizations. It is, therefore, a predetermined and agreed upon metric of success.

Comparing shared savings to administrative expenses from 2019 through 2021 yields a net benefit to providers of \$54,128,630. As shown in Table 6, to arrive at this number, we summed shared savings and losses for all participating payers in each year and subtracted total administrative expenses for the same time period.

**Table 6.** ROI Calculation Using Shared Savings Compared with OneCare’s Administrative Expenses

	2019	2020	2021	Total
Shared Savings and Losses*	\$9,320,000	\$73,060,000	\$17,040,000	\$99,420,000
Administrative Expenses	\$15,341,450	\$14,044,262	\$15,905,659	\$45,291,370
Net Savings (Row 1-2)	(\$6,021,450)	\$59,015,738	\$1,134,342	\$54,128,630

\*Rounded to the nearest ten thousand

Considering ROI in this way does not quantify other benefits, such as the benefits of improved health outcomes or changes in utilization that may lead to cost savings, nor does it account for various external factors that may impact shared savings. Assessing shared savings as a metric of ACO success is the most common approach we identified in the literature; however, it is an incomplete and simplified assessment of the full impact of an ACO.

**Cost Savings Example: Primary Care Visits.** One approach to calculating the “value of health care savings” would be to quantify changes in health care utilization (such as primary care visits) and tie those improvements to “costs avoided.” For example, researchers have documented a relationship between increased primary care visits and decreased health care costs over time.<sup>19,20,21</sup> The cost savings associated with increased primary care visits were due largely to improved disease prevention and management, as well as avoided utilization such as emergency department visits and hospitalizations.

<sup>19</sup> Gao J., Moran E., Woolhandler S., Toporek A., Wilper A.P., & Himmelstein D.U. (2022). *Primary Care's Effects on Costs in the US Veterans Health Administration, 2016-2019: an Observational Cohort Study*. J Gen Intern Med. 37(13):3289-3294. doi: 10.1007/s11606-021-07140-6

<sup>20</sup> Yanagihara, D. & Hwang, A. (2022). *Investing in primary care: Why it matters for Californians with commercial coverage*. California Health Care Foundation. <https://www.chcf.org/wp-content/uploads/2022/04/InvestingPrimaryCareWhyItMattersCommercialCoverage.pdf>

<sup>21</sup> Kronman, A.C., Ash, A.S., Freund, K.M. et al. (2008). *Can Primary Care Visits Reduce Hospital Utilization Among Medicare Beneficiaries at the End of Life?* J GEN INTERN MED 23, 1330–1335. <https://doi.org/10.1007/s11606-008-0638-5>

Given this established relationship between increased primary care visits and decreased costs, if we observe changes in primary care visits among OneCare members, we could project population-wide cost savings. For illustrative purposes, we assume we would observe increases in primary care visits as a benefit of OneCare's programs. To project population-wide cost savings related to any increases in primary care visits, an evaluation team would:

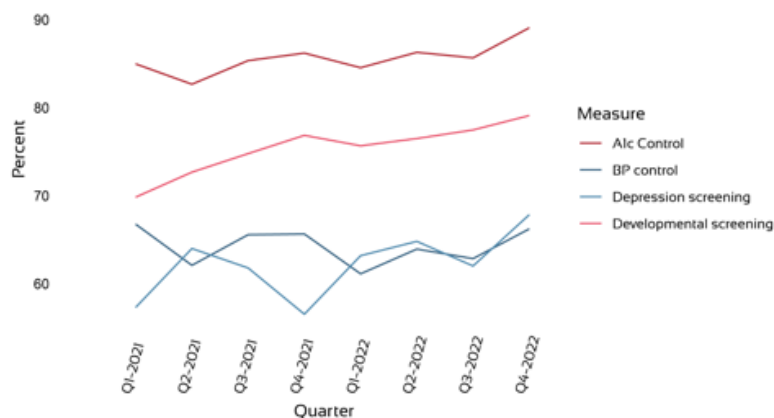
1. Estimate any increase in primary care visits over time among OneCare members.
2. Identify in the literature a range of potential downstream savings estimates associated with increased primary care visits.
3. Multiply savings estimates by the projected increase in primary care visits.

The estimated savings associated with increased primary care use could also be calculated under various scenarios. For example, the evaluation team could estimate what the total savings would be if all patients achieved the estimated mean increase in primary care visits, or if all health service areas achieved as high a primary care visit rate as the highest performing health service area. This would illustrate how achieving different levels of primary care utilization could impact financial gains.

**Cost Savings Example: Quality Metrics.** OneCare's Quality Scorecards include both claims-based and chart-abstracted measures that reflect various aspects of health care quality and changes in health outcomes associated with downstream cost savings. Similar to the primary care utilization example, we could apply a similar logic as the above primary care savings example for an observed changes in quality metrics: multiplying the projected increase in quality by an associated value of improvement documented in the literature.

However, there are several limitations that preclude current calculations using Quality Scorecard metrics. Quality metrics are not consistent across payers or years, so we cannot analyze improvements in the measures across the lifespan of OneCare's programs. At best, and depending on the availability of underlying data, we may be able to calculate changes in some metrics for some years, as we recently did for the VBIF program from 2021-2022. For example, Figure 1 shows findings from the recent program evaluation for VBIF metrics. We observed increases in 3 of 4 metrics from 2021-2022.

**Figure 1.** VBIF Measure Rates by Quarter, Q1 2021-Q4 2022



Importantly, use of select Quality Scorecard metrics would represent only specific sources potential savings, given that they represent an incomplete picture of OneCare’s program impacts and benefits. Individual quality metrics are not comprehensive, instead they pertain only to specific outcomes or populations (for example, patients with hypertension or pediatric patients). In the VBIF example, the adult metrics only represent savings for patients with hypertension or diabetes; the pediatric metrics only represent savings for pediatric patients. Thus, as with the cost savings example related to primary care use, this approach focused on select quality metrics would provide insight on focused areas of improvement and cost avoidance/savings rather than program-wide comprehensive benefits and savings.

***Value Example: Improvement in Chronic Disease Burden***

Another approach to estimating specific sources of savings would be to calculate changes in chronic disease incidence or prevalence across the OneCare attributed population over time. To determine potential savings, we would multiply estimates of the cost of care for managing these conditions from the literature by data from the OneCare population on the number of conditions averted and/or diagnosed and then controlled. These savings predominantly stem from decreases in medication use as well as a reduction in acute care utilization, representing the value of the prevention and improved management of these conditions. Examples may include increases in the proportion of patients with controlled diabetes or hypertension across the years for which relevant measures are available. Similar to the analyses above, with access to additional data and/or additional time to observe population health benefits that may accrue over the course of the model, we could test these calculations.

***Value Example: Qualitative Analysis***

Qualitative data collection and analysis of OneCare’s impact could supplement any quantitative calculation of the impact on health care savings or improved health outcomes. For example, we could interview providers about their feedback on programmatic impacts such as standardizing requirements across payers to streamline reporting, reducing administrative burden of contracting with multiple payers, or creating new learning networks that accelerate transformation.

Conversations with the diverse stakeholders in the OneCare network—from hospital administrators to primary care clinicians, to community-based organizations and state agencies—could help the evaluation team better understand the ways in which those stakeholders perceive the value of OneCare and its programs, in both the short and long term. For example, qualitative interviews in the summer of 2023 revealed that multiple primary care practices saw value in OneCare’s role as a convener of provider groups and stakeholders, reflecting “where else do you see independent primary care practicing sitting at the same table as senior leaders of the hospitals? It’s not often that opportunity happens and that’s been coordinated by the ACO.” Future interviews with hospital administrators, for example, would provide additional insight into OneCare’s impact.

**Limitations**

Our environmental scan and evaluation of OneCare’s programs helped to elucidate potential limitations based on program design and data availability, which inform our recommendations for more useful ROI-

like calculations in the future. These limitations currently preclude the accurate calculation of an ROI for OneCare’s efforts within the VAPM. However, with our now detailed understanding of the available data, we offer recommendations for analyses that help OneCare, the Green Mountain Care Board, and other stakeholders understand the value of OneCare and its efforts to drive health care reform.

In summer 2023 our evaluation team completed program evaluations of OneCare’s CCCC, VBIF and CPR programs, which may have informed an ROI calculation if they demonstrated changes in population health that could be quantified, either as positive or negative ROI. However, barriers to an exhaustive evaluation precluded the calculation of population-wide benefits. This included programmatic and data limitations, as well as the years of study overlapping with the COVID-19 pandemic which likely obscured potential program impacts on healthcare utilization outcomes. As a result, we were not able to evaluate a comprehensive set of outcomes to serve as inputs for an ROI calculation.

**Table 7.** Limitations for 2023 Program Evaluations and ROI Analysis

Limitation	Implications for Evaluation
Complexity of reform efforts	OneCare is not the only facilitator of transformation activities in the state. Other programs (such as the Blueprint for Health) and agencies (such as the Vermont Department of Mental Health) also influence changes in practice and outcomes.
Loss of BCBS from OneCare	BCBS left OneCare when some programmatic changes for CPR program were being implemented, making it difficult to disentangle the impact of such changes. Loss of this payer also resulted in loss of data during its years of program participation, representing a large number of OneCare members who could not be included in the evaluation.
Overlap of COVID-19 PHE with key years in development and growth of OneCare programs	All analyzed outcomes were severely affected by the COVID-19 PHE during the period of the evaluation of all three programs. Especially because of the lack of a comparison group (discussed below), it was not possible to disentangle the impacts of the programs from the impacts of the COVID-19 PHE because they affected the same outcomes. Therefore, a lack of statistically significant findings or findings contrary to the evaluation team’s expectations may be a result of the COVID-19 PHE and not causal impacts of the program.
Lack of a comparison group	<p>This limitation precluded causal modeling, especially when combined with a large confounder that affected the same outcomes in the same period—the COVID-19 PHE.</p> <p>One possible comparison group was not care-managed individuals who were attributed to providers that participated in the CCCC program but were never care managed or providers that never participated in the CPR program. Another type of comparison group is providers that joined the CPR program later than others. However, providers participating in the CPR program and individuals participating in the CCCC program are much different than those who never participated, and providers that joined the CPR program in a certain year (i.e., cohorts) are different than providers that joined the CPR program in any other year. This introduces</p>

Limitation	Implications for Evaluation
	<p>selection bias, which is a challenge for assessing the impacts of the programs on outcomes.</p> <p>Another possible comparison group was individuals or providers from States outside Vermont, but the evaluation team did not have data to facilitate that comparison.</p>
Program changes across time	Changes in design or operation of OneCare programs over time made it challenging to attribute changes in observed outcomes (or lack thereof) to specific program features. For example, the redesign of CCCC in 2020 precluded analysis of the program prior to 2020, so the evaluation team had very limited data over time to make comparisons of program effectiveness.
Limited baseline data	The evaluation team had little or no data prior to the beginning of programs (for CPR) or prior to large changes to programs (for CCCC and VBIF). The lack of baseline data presents a substantial challenge in assessing program impact.

### Considerations for Future Analyses to Assess ACO Performance

Specific cost savings estimates are one approach to calculating the tangible value of OneCare's programs. As previously described, this would entail projecting savings based on observed improvements in areas such as care utilization, quality metrics, or disease prevalence. With more data in the coming year, and a focused assessment of the Population Health Management program implementation, the evaluation team could calculate increases in primary care utilization and decreases in acute care utilization and chronic disease burden associated with OneCare participation. Using internal administrative data and/or estimates from the literature, we could then estimate the savings/costs avoided due to these population-wide improvements.

To provide greater context around potential savings, our evaluation team can calculate estimates of uncertainty and variation across different scenarios. Additionally, we can calculate focused estimates among priority populations (for example high risk, high cost members). This will aid OneCare in estimating the financial benefits associated with varying levels of preventive care and population health achievement. While savings/reduced spending estimates tied to specific care quality and health metrics do not represent a comprehensive picture of OneCare's impact on healthcare operations and the health of attributed members, they can serve as concrete illustrations of areas in which OneCare provides both clinical and monetary value to providers, members, and healthcare systems.

Future exploration might also entail additional conversations with stakeholders (including different provider types or state agencies) to develop a more nuanced understanding of the ways in which OneCare adds value. With new insight we might identify opportunities to describe and quantify that value in a way that could be considered as part of a reflection on the ROI of OneCare and the VAPM.

We appreciate the opportunity to explore the complexities of such an analysis and look forward to continuing to partner with OneCare to understand and describe their role and value in advancing health reform in Vermont.