NORC at the University of Chicago

TECHNICAL APPENDICES

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Second Evaluation Report

Evaluation of the Vermont All-Payer Accountable Care Organization Model

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Appendix A. Glossary of Acronyms

Appendix Exhibit A.1. Glossary of Acronyms

Acronym	Definition
ACH	Accountable Communities for Health
ACO	Accountable Care Organization
AHS	Vermont Agency for Human Services
AIPBP	All-Inclusive Population-Based Payment
BCBSVT	Blue Cross and Blue Shield of Vermont
BY	Baseline Year
CAH	Critical Access Hospital
CHT	Community Health Team
CMMI	Center for Medicare & Medicaid Innovation
CMS	Centers for Medicare & Medicaid Services
COVID-19	2019 Novel Coronavirus
DID	Difference-In-Differences
DSR	Delivery System Reform
DVHA	Department of Vermont Health Access
EB	Entropy Balancing
ED	Emergency Department
her	Electronic Health Record
ERISA	Employee Retirement Income Security Act
FFS	Fee-for-Service
FPP	Fixed Prospective Payment
FQHC	Federally Qualified Health Center
GMCB	Green Mountain Care Board
HSA	Health Service Area
MA	Medicare Advantage
MAPCP	Multi-Payer Advanced Primary Care Program
MAT	Medication-Assisted Treatment
MIPS	Merit-Based Incentive Payment System
NGACO	Next Generation Accountable Care Organization
NPPES	National Plan and Provider Enumeration System

Acronym	Definition
NPR	Net Patient Revenue
PAC	Post-Acute Care
PBPY	Per Beneficiary Per Year
PCMH	Patient-Centered Medical Homes
PECOS	Provider Enrollment, Chain, and Ownership System
PHE	Public Health Emergency
PMPM	Per Member Per Month
PMPY	Per Member Per Year
PSM	Propensity Score Matching
PY	Performance Year
QEM	Qualified Evaluation and Management Visit
QHP	Qualified Health Plan
RQ	Research Question
RUCC	Rural-Urban Continuum Code
SASH	Support and Services at Home
SIM	State Innovation Model
SNF	Skilled Nursing Facility
SSP	Shared Savings Program
TCOC	Total Cost of Care
TIN	Tax Identification Number
T-MSIS	Transformed Medicaid Statistical Information System
UVM	University of Vermont
VBIP	Value-Based Incentive Payment
VBP	Value-Based Payment
VCP	Vermont Collaborative Physicians
VEHI	Vermont Education Health Initiative
VHCIP	Vermont Health Care Innovation Project
VTAPM	Vermont All-Payer Accountable Care Organization Model
ZCTA	Zip Code Tabulation Area

Appendix B. List of Evaluation Research Questions

The evaluation uses a mixed-methods approach involving both primary and secondary (structured and unstructured) data sources to assess how stakeholders have implemented the Model, as well as the extent to which and the reasons why the Model achieved its intended outcomes. Appendix Exhibit B.1 crosswalks the research questions for the evaluation with the conceptual model domains and lists data sources and analytic methods we will use to address them. In addition, we highlight the questions we begin to address in the current memo.

Appendix Exhibit B.1. Core Research Questions, Data Sources, and Analytic Methods

Research Questions	Data Sources: Primary: Provider Survey	Data Sources: Primary: Interviews	Data Sources: Secondary: Commercial Claims	Data Sources: Secondary: T-MSIS	Data Sources: Secondary: Medicare FFS	Data Sources: Secondary: CAHPS	Data Sources: Secondary: Community and Publicly Available Data [a]	Data Sources: Secondary: Model Programmatic Data [b]	Analytic Approach	Addressed in Report
Program design features										
1. How do ACO program design features compare across payers and to other out-of-state federal and non-federal ACO programs?		•						•	Descriptive analysis; Thematic analysis; Triangulation of qualitative and programmatic data	Chapter 1
Model participants and implementation partners										
2. How did characteristics of commercial, Medicaid, and Medicare beneficiaries aligned with the ACO change as the statewide ACO scale increased?		•	•	•	•		•		Descriptive trend analysis; Thematic analysis to inform interpretation of findings	Chapter 2
Implementation										
3. How did state, ACO, and payers work together to reach the statewide ACO scale targets? What barriers did they encounter?		•							Thematic analysis	Chapter 2 & 3

Research Questions	Data Sources								Analytic Approach	Addressed in Report
	Primary		Secondary							
	Provider Survey	Interviews	Commercial Claims	T-MSIS	Medicare FFS	CAHPS	Community and Publicly Available Data [a]	Model Programmatic Data [b]		
4. How did health-care delivery and public health systems collaborate to reach the population-level health goals?		•							Thematic analysis	Chapter 3
5. What were key issues for the GMCB when setting the trend factor for the benchmark of the modified NGACO/Vermont Medicare ACO Initiative?		•							Thematic analysis	Chapter 1
6. How did the GMCB use its regulatory authority to influence ACO care management programs and organizational structure?		•						•	Thematic analysis; Triangulation of qualitative and programmatic data	Chapter 1 & 3
7. What challenges did participating providers encounter? How do the Model's key design features influence participating providers' care delivery transformations?		•							Thematic analysis	Chapter 2 & 3
8. How did program design features impact implementation at the community level?		•							Thematic analysis	Chapter 3
Outcomes: Implementation effectiveness										
9. How did ACO provider network for each payer evolve as the statewide ACO scale increased?	•	•					•		Descriptive analysis; Network analysis; Thematic analysis; Triangulation of quantitative and qualitative data	Chapter 2 & 3
10. What are participating and non-participating providers' impressions of the Model?	•	•							Survey analysis; Thematic analysis; Triangulation of survey and qualitative data	Chapter 3
11. Why did providers refuse or cease to contract with the ACO?	•	•							Survey analysis; Thematic analysis; Triangulation of survey and qualitative data	Chapter 2 & 3

Research Questions	Data Sources: Primary: Provider Survey	Data Sources: Primary: Interviews	Data Sources: Secondary: Commercial Claims	Data Sources: Secondary: T-MSIS	Data Sources: Secondary: Medicare FFS	Data Sources: Secondary: CAHPS	Data Sources: Secondary: Community and Publicly Available Data [a]	Data Sources: Secondary: Model Programmatic Data [b]	Analytic Approach	Addressed in Report
12. What impact did the Model have on the Model-specific health-care delivery system and monitoring measures?[1]		•	•			•	•		Descriptive analysis; Pre-post analysis	Chapter 3 & 4
Outcomes: Program effectiveness—population health										
13. How did the Model impact specific population health measures?		•					•		Synthetic Control Methods; Thematic analysis to inform interpretation of quantitative findings	Chapter 4
Outcomes: Program effectiveness—spending, utilization, cost of care										
14. What impact did the Model have on statewide Medicare and Medicaid, all-payer, and commercial insurance spending?		•	•	•	•				Descriptive analysis; DID with group-specific trends; Thematic analysis to inform interpretation of quantitative findings	Chapter 4
15. What impact did the Model have on spending, utilization, and quality of care outcomes for Medicaid, Medicare, and commercial insurance all-payer ACO populations?		•		•	•		•	•	Descriptive analysis; DID with group-specific trends; Synthetic Control Methods; Thematic analysis to inform interpretation of quantitative findings	Chapter 4

a) American Community Survey; Medicare Geographic Variation; CMS Public Use File; Behavioral Risk Factor Surveillance System; Area Resource Health File; County Health Ranking Data; National Vital Statistics System.

b) ACO application; Vermont annual reports; Section 1115 waiver.

[1] See Section 7, "Statewide Health Outcomes and Quality of Care Targets" of the Vermont All-Payer Accountable Care Organization Model Agreement for the list of population-level health goals, health-care delivery system measures and targets, and process milestones.

Appendix C. Qualitative Methods and Analysis

Appendix C.1: Key Domains

Qualitative data collection was grounded in the evaluation research questions and the conceptual framework. Appendix Exhibit C.1 lists these domains and related subdomains, along with the associated research questions. This list guides the document review, interview guides, and coding of all qualitative data collected throughout the course of the evaluation.

Appendix Exhibit C.1. Qualitative Domains, Subdomains, and Associated Research Questions

Conceptual Framework	Domain	Subdomain	Definition
Context	Context	History of payment/delivery System reform	State or local initiatives that preceded the All-Payer Model (SIM, prior ACO models); includes discussion of negotiation around the All-Payer Model
		Concurrent initiatives	Current statewide or local initiatives (e.g., Medicaid mental health reform, Burlington opioid task force)
		State policy context	Vermont political context (e.g., change in governor)
		Health-care market	Discussion of the health-care market (e.g., includes consolidation, specialty distribution, proportion of population in self-funded/ERISA plans, hospital characteristics)
		Population characteristics	Variation in population sociodemographic and cultural characteristics across HSAs (e.g., care-seeking behavior, health behavior)
		Health-care workforce	Description of the health care workforce in Vermont (e.g., shortages, culture, composition)
		HSA specific	Description of HSA-specific characteristics and initiatives
Program Design and Features	ACO Stakeholders [cross-coded]	Federal – CMS/Medicare	Discussion of CMS, other CMMI models, Medicare
		State – GMCB	Discussion of GMCB's role, oversight, levers
		State – AHS/Medicaid	Any discussion of the Vermont AHS, DVHA, and their role; any discussion of Medicaid (may include discussion specific to the All-Payer Model, as well as other initiatives)
		State – Blueprint	Discussion of Blueprint at the state level (local discussion of Blueprint should be captured under Community Health Teams and Community Collaboratives)
		Commercial/self-insured payers	Discussion of commercial insurer and self-insured plan participation and considerations
		ACO – OneCare governance/leadership	Discussion of their role/oversight (for oversight, cross-code with provider, hospital, etc.)
		Hospitals	Discussion of hospital network, participation, programs
		Consultants and vendors	Discussion of ACO consultants and vendors
		Physicians/FQHCs	Discussion of physician and FQHC network, recruitment, and engagement
		Beneficiaries	Discussion of beneficiary characteristics

Conceptual Framework	Domain	Subdomain	Definition
		Other providers	SNFs, home health agencies, hospice, other community providers (does not include designated agencies, which are captured under Substance Use and Mental Health under care settings)
	Program Design	Payment	Anything related to AIPBP, financial risk, and payment options; flow of funds (e.g., CMS to state, ACO to providers)
		Quality measures	Conversations around aligning quality metrics, data collection, etc.
		Benefit enhancements	SNF 3-day rule waiver, post-discharge home visit waiver, telehealth
		Benchmark	Discussions that capture the setting of the state benchmark and financial targets
		Scale	Discussion of number of providers/aligned beneficiaries
Implementation Effectiveness	Implementation Effectiveness	Aligning incentives	Perceptions of alignment of incentives, payers, policies
		Changes	Changes specific to the model; captures organizational changes at the ACO, system, and provider levels, including changes in care delivery
		Unintended consequences	Unintended or unexpected implications or outcomes that came up during implementation of the model
		Stakeholder collaboration	Integration at the state and community levels among OneCare, the state, Blueprint, and existing infrastructure; among health care, public health, behavioral health providers; includes improvements in care coordination across entities and any collaboration across stakeholders
		Connecting patients to providers (access)	References to efforts to connect patients to providers, increase access to care
		Provider experience	Provider experience as a participant in the model; may be secondhand
		Beneficiary experience	Beneficiary experiences as part of the model referenced in discussion; may be secondhand
Implementation	Population Health	Care Navigator	Discussion of OneCare's Care Navigator application
		Complex care coordination	OneCare program providing direct financial support to primary care and continuum of care to support OneCare's community-based care coordination model
		Value-based Incentive Fund	OneCare financial incentive for quality measure performance
		Comprehensive Payment Reform (CPR) pilot	OneCare payment and system delivery reform program for independent primary care practices to facilitate transition to a value-based payment model
		Specialist payment reform (SPR)	OneCare initiative supporting specialists to increase access and decrease lower acuity visits with alternative access models
		Primary prevention/ Preventive care	Includes programs supporting quadrant 1 of OneCare's model (RiseVT and Matching Funds), annual wellness visits, and other preventive care programs and initiatives
		Regional clinical representatives	OneCare financial support to 13 local providers and one (1) statewide pediatrician to facilitate peer-to-peer engagement in ACO activities
		Innovation fund	One Care direct funding to test new innovative pilot programs
		PCMH	Discussion of PCMH practices, payments, and investments
		Community health teams	Blueprint Community Health Teams
		SASH	SASH program, including payment mechanisms

Conceptual Framework	Domain	Subdomain	Definition
		Community Collaboratives/ Accountable Communities for Health	Community Collaboratives/Accountable Communities for Health
	Data Analytics/ Health IT	Risk stratification	Approach to risk stratification for population health management
		Performance monitoring	Use of data to monitor performance
		EHR	Use of electronic health record (EHR) data for population health analytics, use of EHR for care coordination
		Interoperability/Data exchange	Discussion of admission, discharge, and transfer (ADT) feeds, sharing of patient information across care
Providers and Patients	Care Settings	Primary care	Initiatives specific to primary care
		Long-term services and supports	Discussion of long-term services and supports in the context of the All-Payer Model
		Substance use and behavioral health	Includes discussion of designated agencies, data exchange, care coordination related to substance abuse treatment, and behavioral health care
Impacts and Outcomes	Impacts and Outcomes	Quality	Discussion of quality of care as it relates to the Model
		Cost	Discussion of cost as it relates to the Model
		Health	Discussion of health as it relates to the Model
		Utilization	Discussion of utilization as it relates to the Model
Other	Cross Cutting	Facilitators	A factor that helps facilitate the implementation or some aspect of the Model
		Challenges/Barriers	Challenges/Barriers encountered
		Good quotes	Good quotes
		Off-the-record	Explicitly stated as off-the-record

Appendix C.2: Data Sources and Collection

This report draws on two qualitative data sources related to the VTAPM.

- Program documents, including budgets, slide decks, contracts, and websites
- Site visit interviews

Model Documents. We conducted a standardized review of the Model documentation (e.g., Model agreement, OneCare budgets, contracts, GMCB, and OneCare presentations). We developed a standardized instrument in Excel to catalog the information collected.

Site Visit Interviews. The purpose of the site visits was to obtain firsthand information about the All-Payer Model, as well as to understand OneCare Vermont's implementation, care management offerings, and data analytics capacity. Interviews also provided additional detail to the questions included in the provider survey. The document review, in addition to input from CMMI, GMCB, and OneCare Vermont, contributed to the creation of a list of initial key informants that the qualitative team would interview during the site visit. Once interviews were scheduled, tailored protocols were developed. A two- to four-person team conducted each interview. A senior member of the team led each discussion; the second person took high-level notes and confirmed that all key points were covered; and a third staff member took detailed transcript-like notes.

The interview guides for the site visit were based on master protocols that were then tailored for the organization and stakeholder. The exhibit below includes interview guide templates for the seven groups that were interviewed across Vermont. In 2019, 21 interviews were conducted over the four-day in-person site visit. In 2020, 28 interviews were conducted virtually over a three-month period.

- Green Mountain Care Board
- State Leadership (e.g., Department of Health, Medicaid)
- Blueprint
- One Care Vermont
- Provider
- Hospital
- Community/Designated Agency

Exhibit C.2 provides an overview of topics covered with individuals across all key stakeholders.

Appendix Exhibit C.2. Overview of Protocol Objectives and Topics

Level	Stakeholder Groups	Topics Addressed
OneCare Vermont ACO **State**	• Executive Leaders • Contract Managers • **Green Mountain Care Board (GMCB):** independent regulatory board that oversees the Vermont All-Payer ACO model (including reporting to CMS), regulates the ACO, and reviews hospital budgets, payer rates, and certificates of need • **Department of Vermont Health Access (DVHA):** Medicaid agency that has contracted with OneCare as a component of the All-Payer Model Agreement • **Blueprint for Health:** supports population health programs across the state, including the community health teams • **Commercial Payers**	• How stakeholders work together to reach statewide ACO targets, and the barriers they encounter • How stakeholders use data on targets to make decisions • How health care delivery and public health systems collaborate to reach population health goals, and barriers they encounter • Perceptions of changes to aligned beneficiaries after the rollout of the statewide ACO • Evolution of the provider network for each payer • Variation in program design features across payers, and comparison to other Medicare, Medicaid, and commercial ACO programs • Considerations for the GMCB in setting the trend factor for the benchmark • How the GMCB used its regulatory authority to influence care management programs and organizational structure, and impact of the GMCB decisions on implementation • Perceptions of impact of All-Payer ACO on health care delivery system and population-level health goals • Implementation successes and challenges
HSA-Level Community Providers	• **Community Health Teams**: may be co-located with the practices (“embedded”) or centralized at a convenient location • **Community Collaboratives**: governance structure for multi-sector population health planning in Vermont communities • **Health and Social Service Agencies, Inc., VNA; Area Agencies on Aging; Mental Health Agencies; Home Health Agencies; Housing Authorities (includes care coordinators)**: Partner with ACO • **Hubs**: regional specialty addictions treatment centers regulated as Opioid Treatment Programs operated by community behavioral health agencies • **Spoke Providers**: health care professionals led by physicians who prescribe buprenorphine in practices regulated as Office-Based Opioid Treatment Programs • **SASH Providers**: connect local health and long-term care systems for Medicare beneficiaries in subsidized housing and residences in the community at large	• How health care delivery and public health systems collaborate to reach population health goals, and barriers they encounter • Impact of various design features on care delivery over time • Perceptions of impact of All-Payer ACO on health care delivery system and population-level health goals • Ability to reach target populations • Implementation successes and challenges

Level	Stakeholder Groups	Topics Addressed
HSA-Level Providers and Provider Organizations	• University of Vermont Medical Center and Dartmouth-Hitchcock: founding partners of OneCare • Hospitals • FQHCs • PCMH Practice Providers and Staff • PCMH Practice Facilitators: help Vermont's primary care practices achieve and maintain recognition as PCMHs • Other Primary Care Clinic Providers and Staff • Rural Health Clinics: participating practitioners of care under OneCare Vermont, providing care to rural areas. These clinics serve as part of Community Collaboratives. • Skilled Nursing Facilities: covered under services provided by OneCare Vermont as a participating practitioner	• How health care delivery and public health systems collaborate to reach population health goals and barriers they encounter • Opinions on the Model • Impact of various design features on care delivery transformation at the provider level, over time • Reasons providers choose not to participate or cease participation

Appendix C.3: Analytic Methods

Analysis of qualitative data uses a thematic approach. We coded data into categories based on the key evaluation domains—the features of OneCare Vermont and their providers, the impacts of the model, variations in model impacts, and motivation and challenges in implementation. Our coding and analysis focused on identifying existing and emergent themes. Existing themes are topics derived from the study's research questions and categories. Emergent themes arise out of discussions with key stakeholders within Vermont, including state leadership, GMCB, OneCare Vermont, hospitals, designated agencies, and providers. For example, under a code for program design features, we may create emergent subcodes to capture concepts or discussions surrounding payment, quality measures, benchmark, or scale.

Coding Approach and Analysis. Our evaluation team started with systematic review of OneCare Vermont's applications and budget documents. These documents informed key informant outreach and protocol development. Once primary data were collected and transcribed, the qualitative team reviewed all transcripts for quality. This review process allowed us to extract themes and develop categories and their corresponding definitions to guide coding of data from interviews. These themes were used to create a code book based on an iterative review of the data that was further informed by several rounds of pilot coding. We used NVivo software (QSR International Pty Ltd., Melbourne, Australia) to code the interviews. Our approach to coding was both inductive and deductive from the outset, including the following steps:

- Develop and define analytic categories, based on our research question and the salient analytic dimensions (e.g., OneCare Vermont-funded infrastructure and personnel)
- Operationalize the research question and Model-based analytic dimensions in the codebook, which provide clear and concise guidelines for categorizing all qualitative data collected
- Qualitative team refinements to the initial version of the codebook, including routine review and revision at the outset of coding newly collected data, to take into account the complexity of the data and changes to the VTAPM and implementation experience

This synthesis identified emerging themes and allowed us to interpret qualitative data findings in a systematically iterative manner by exploring said themes across stakeholders. Analysis involved reviewing findings across codes to qualitatively describe the interrelationship among organizational characteristics, history, implementation, and performance. To systematically glean themes from in-person interviews conducted for PY1, PY2, and PY3, we also developed comprehensive summary documents that captured themes of interest based on an analysis of coded primary data (including fields for emergent themes). These summaries covered the following domains: collaboration among stakeholders, impact and performance measurement, model participation, payment funding and flow, population health, state oversight, and substance use and behavioral health. Senior scientists iteratively reviewed the coded data and thematic summaries generated from the site visit notes and transcripts to ensure accuracy of interpretation; this enabled them to accurately contextualize data points. They reviewed data under appropriate codes and synthesized data into succinct points reporting.

Appendix D. Quantitative Methods and Analysis

In this section, we present the following additional information on the impact analysis approach: data sources; definitions of the ACO- and state-level treatment and comparison groups; sampling methods used to construct the comparison pool; claims-based attribution algorithms employed to implement the treatment and comparison groups; definition and operationalization of the claims-based outcome measures; and the analytic approach employed to estimate impacts.

Appendix D.1: Data Sources

Appendix Exhibit D.1.1. Data Sources for Quantitative Analyses

Data	Years	Rationale	Source(s)
Medicare beneficiary and enrollment database and claims files	2011–2020	Identify health, cost, utilization, and quality outcomes for Medicare beneficiaries	CMS Virtual Research Data Center (VRDC)
CCW Master Data Management Database	2013–2020	Identify beneficiary enrollment in Medicare ACOs and other CMS initiatives	CMS VRDC
Medicare Geographic Variation Public Use File	2017–2019	Identify Medicare utilization, spending, and provider characteristics at the county and state level	CMS
NGACO and SSP ACO provider lists	2013–2020	Identify participating and preferred practitioners to attribute beneficiaries; past experience in Medicare ACO of VTAPM providers	CMS VRDC
National Plan and Provider Enumeration System (NPPES)	2020	Identify provider specialty	CMS
OneCare provider lists	2018–2020	Identify VTAPM participating and preferred practitioners	CMS
OneCare quality performance metrics	2018–2020	Measure OneCare and payer-specific performance on Model quality measures	OneCare, GMCB
Medicare shared savings reports	2013–2020	Identify financial and quality results by PY for the Pioneer, Next Generation ACO, and Shared Savings Program Models.	CMS
American Community Survey (ACS) One- and Five-Year Estimates	2014–2019	Measure demographics, health status, health care resources, and utilization at the county and state level	U.S. Census Bureau
Rural-Urban Commuting Area Codes, Federal Office of Rural Health Policy (FORHP) Data Files	2013, 2020	Measure rurality	U.S. Dept. of Agriculture, Economic Research Service (ERS) HRSA
Area Health Resource Files (AHRF)	2015–2019	Identify number of active doctors, Medicare FFS beneficiaries, and hospital beds	HRSA

Appendix D.2: Treatment and Comparison Group Construction

The structure of our quantitative analysis reflects the VTAPM's multiple layers of accountability, with incentives focused both on the ACO's attributed population as well as Vermont's statewide population. For this reason, as we did in the First Evaluation Report, we estimate the Model's impact at two levels:

- **ACO level**: Is the VTAPM Medicare ACO initiative achieving spending, utilization, and quality of care goals for its attributed Medicare beneficiaries?
- **State level**: Is Vermont achieving spending, utilization, and quality of care goals for the Medicare population statewide?

The treatment and comparison groups for the ACO- and State-level populations, as well as their rationales, are described below, with additional detail on the four stages of our approach to construct the groups in the following subsections.

ACO-Level Treatment Group. The treatment group consists of Medicare FFS beneficiaries residing in Vermont and receiving the plurality of their primary care services from Model practitioners during the baseline years and PY3.

- **Rationale**: VTAPM uses a prospective attribution methodology to identify its Medicare beneficiary population in a given PY, based on a beneficiary's care-seeking patterns in the prior 2 years. To define the treatment group, our evaluation uses concurrent attribution—a method that attributes beneficiaries to VTAPM's practitioners based on their care-seeking patterns during the PY. We used a concurrent attribution approach because we hypothesize that the Model's ACO initiatives will impact all Medicare beneficiaries—attributed and non-attributed—who receive a meaningful level of primary care services from the Model practitioners.

State-Level Treatment Group. The treatment group consists of all eligible Vermont Medicare FFS beneficiaries who received the majority of their primary care services within the state during the baseline and PY3.

- **Rationale**: We assess outcomes for all eligible Vermont Medicare beneficiaries because the Model's population health initiatives and delivery system reform will impact all Vermonters, including those not attributed to Model practitioners.

ACO-Level Comparison Group. The comparison group is a representative, weighted sample of Medicare FFS beneficiaries who resided in the 26 comparison states, where those beneficiaries receive the plurality of their primary care services from (i.e., are concurrently attributed to) practitioners participating in Medicare SSP Track 1 and Basic A/B/C ACOs during the baseline and PYs.

- **Rationale**: Because OneCare was a Medicare SSP Track 1 ACO during the baseline period, we hypothesize that the ACO would have remained in the Medicare SSP absent the VTAPM.

State-Level Comparison Group. The comparison group is a representative, weighted sample of Medicare FFS beneficiaries residing in the 26 comparison states, where those beneficiaries receive the

majority of their primary care services within the same comparison state during the baseline and performance years

- **Rationale**: Because the Model is expected to have statewide reach, beneficiaries in other states were used for the comparison group.

Stage 1: Identification of Comparison States

Because the VTAPM aims to improve outcomes statewide by redesigning the care delivery system through an all-payer design implemented across the entire state, a within-state comparison group was infeasible. Therefore, we drew the comparison group from 26 states with similar histories of health reform initiatives relevant to the evolution of the VTAPM, specifically primary care medical home (PCMH) initiatives formally recognized by the National Committee for Quality Assurance and multi-payer CMS reform initiatives (e.g., State Innovation Models, Multi-Payer Advanced Primary Care Practice). We included similar health care reform history as a criterion for selecting comparison group states because we hypothesized that Vermont's focus on improving population health and health care reform during the baseline period was an important factor in the Model's development, and that states with similar reform efforts as Vermont's may be more comparable in baseline period trends. These initiatives may also have longer-term effects that extend into the VTAPM performance period; we aim to account for this by choosing comparison states that also have similar trailing effects of previous health reform efforts. To avoid contamination of Model impacts, we excluded any states that share a boundary with Vermont. Additionally, we excluded Maryland and Pennsylvania because these states are also currently implementing CMMI-funded all-payer reform initiatives. **Appendix Exhibit D.2.1** lists the 26 states selected for inclusion in the comparison group.

Appendix Exhibit D.2.1. Comparison Group States

Arkansas	Iowa	Oregon
California	Louisiana	Pennsylvania
Colorado	Maine	Rhode Island
Connecticut	Michigan	South Carolina
Delaware	Minnesota	Tennessee
Florida	Missouri	Texas
Georgia	New Mexico	Washington
Hawaii	North Carolina	Wyoming
Idaho	Ohio	

After selecting comparison states based on similar history of health reform initiatives as described above, we observed meaningful differences in sociodemographic and market characteristics between Vermont and comparison states (**Appendix Exhibit D.2.2**). Notably, Vermont's rates of Medicare Advantage and Medicare Shared Savings Program (both upside and downside risk) penetration are distinct from the rates in comparison states. This aligns with our finding that Vermont has a broader history of health care reform initiatives than most states, including those in our comparison group.

Appendix Exhibit D.2.2. Vermont's Sociodemographic and Market Characteristics Differ Distinctly from Comparison States'

SOURCE: 2018 5-year estimates from American Community Survey.

Stage 2: Comparison Pool Sampling Methodology

We considered all eligible beneficiaries residing within each of the comparison states for inclusion in the comparison pool. To minimize computational burden involved in using a sizable comparison pool, we used a stratified, random sample of beneficiaries. Over 19 million eligible beneficiaries (95 million beneficiary-years) resided in the comparison states during the analytic period. Conducting impact analyses on a sample exceeding 10 million beneficiaries per year is computationally challenging and would call for analytical resources exceeding those allocated for this evaluation. Therefore, as shown in **Appendix Exhibit D.2.2**, we implemented the following steps to draw a stratified, random sample of beneficiaries from the comparison states to create the comparison pool.

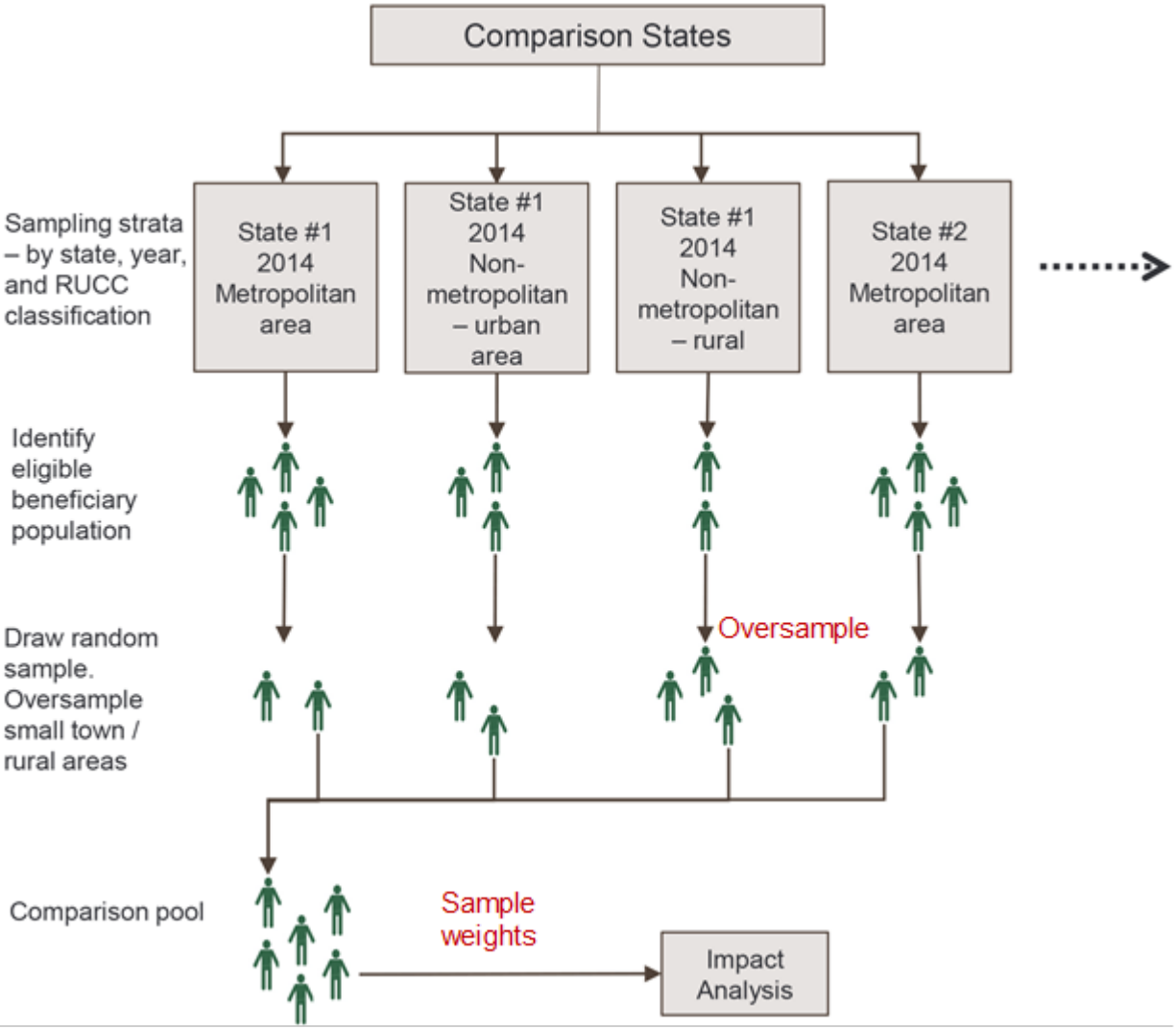
Step 1: Stratify all Medicare beneficiaries residing in the comparison states by state of residence, year, and rurality (based on Rural-Urban Continuum Code classification [RUCC]: metropolitan; non-metropolitan – urban; and non-metropolitan – rural).

Step 2: Select beneficiaries who meet the insurance coverage (continuous FFS coverage and no MA coverage) attribution criteria.

Step 3: Oversample beneficiaries who reside in rural areas by including all beneficiaries who reside in counties with a small town/rural RUCC designation. Draw a random sample of eligible beneficiaries from counties with a metropolitan or non-metropolitan RUCC designation. The sample size allocation for each stratum is set to match Vermont's population breakdown by RUCC.

Step 4: Generate sample weights to ensure that the comparison pool sample is representative of the eligible population residing in the comparison states. Incorporate sampling weights in the estimation of the Model's impacts.

Appendix Exhibit D.2.3. Comparison Pool Sampling Design



As shown in **Appendix Exhibit D.2.4**, this approach yielded a comparison pool sample that was representative of comparison states with a computationally manageable sample size of 19 million beneficiary-years.

Appendix Exhibit D.2.4. Comparison Pool Sample

Year	RUCC Designation	Beneficiaries in VT Counties		Beneficiaries in Comparison Pool Counties		Stratified, Random Sample of Comparison Pool Beneficiaries	
		N	%	N	%	N	%
2014	Metropolitan	25,016	23.62%		78.94%		27.40%
2014	Non-metropolitan – urban	66,750	63.04%	18,840,032	19.06%	3,248,236	60.94%
2014	Non-metropolitan – rural	14,124	13.34%		2.01%		11.65%
2015	Metropolitan	25,283	23.27%		78.97%		27.15%
2015	Non-metropolitan – urban	68,479	63.03%	18,856,517	19.03%	3,232,787	61.19%
2015	Non-metropolitan – rural	14,876	13.69%		2.00%		11.66%
2016	Metropolitan	25,808	23.19%		79.08%		27.19%
2016	Non-metropolitan – urban	69,840	62.75%	19,170,616	18.95%	3,269,451	61.24%
2016	Non-metropolitan – rural	15,643	14.06%		1.97%		11.57%
2017	Metropolitan	26,202	23.32%		79.10%		27.35%
2017	Non-metropolitan – urban	70,374	62.64%	19,194,282	18.93%	3,273,491	61.10%
2017	Non-metropolitan – rural	15,766	14.03%		1.97%		11.55%
2018	Metropolitan	27,055	23.77%		79.17%		27.78%
2018	Non-metropolitan – urban	71,042	62.42%	18,920,027	18.86%	3,237,396	60.71%
2018	Non-metropolitan – rural	15,717	13.81%		1.97%		11.50%
2019	Metropolitan	27,521	24.10%		79.25%		28.05%
2019	Non-metropolitan – urban	71,035	62.21%	18,835,196	18.77%	3,237,040	60.45%
2019	Non-metropolitan – rural	15,629	13.69%		1.98%		11.50%
2020	Metropolitan	27,833	24.36%		79.46%		28.34%
2020	Non-metropolitan – urban	70,966	62.12%	18,403,430	18.58%	3,163,727	60.21%
2020	Non-metropolitan – rural	15,450	13.52%		1.97%		11.44%

NOTE**:** The breakdown by RUCC designation for the comparison pool sample does not exactly match Vermont's proportions in this table because we applied the stratification within each of the 29 comparison states.

Lack of covariate balance on area-level characteristics. As noted above, Vermont had significantly greater upside-risk Medicare SSP ACO penetration rate and lower MA penetration rate than comparison states during the baseline period (**Exhibit D.2.2**). The MA penetration rate in Vermont was significantly lower than comparison states (9 percent versus 26 percent), and the ACO penetration rate was significantly higher than comparison states (48 percent versus 22 percent). Given that magnitude of difference, we were unable to achieve balance on these characteristics using the EB weights. Because providers in Vermont were more likely to have experience with upside-risk Medicare ACO contracts, certain differences in outcomes between treatment and comparison groups could be attributed to varied experiences with these contracts, in addition to impacts attributed to the VTAPM. For the ACO-level analysis, providers' differing levels of experience with these contracts are mitigated to some extent because the comparison group was limited to Medicare beneficiaries attributed to Track 1 or Basic A/B/C Medicare SSP ACO providers.

- **Influence of outlier weights.** Achieving balance on most market- and beneficiary-level covariates meant that a small proportion of beneficiaries with large EB weights comprised a large proportion of the weighted comparison group. A small proportion of beneficiaries in comparison states were similar to Vermonters on observed beneficiary-level characteristics and resided in areas with market-level characteristics similar to Vermont. For example, in the ACO-level analysis, 1 percent of beneficiaries of SSP providers in comparison states accounted for 37 percent of the weighted comparison group. Few regions outside Vermont have identical market-level demand and supply characteristics.[2]

Magnitude of the stated impacts was sensitive to how we defined the baseline period. Because PY0 (2017) is considered a "ramp-up" period during which the Model design was being finalized, we defined the baseline period from 2014–2016. Using our flexible DID framework, we adjusted for incremental differences between Vermont and the comparison group's annual Medicare spending trends in the baseline period. Because our estimate of the baseline period includes only three time points (2014–2016), there may be uncertainty associated with our estimate of the group-specific baseline trends. To assess the robustness of the impact estimates to our assumptions about the group-specific, baseline trends, we included PY0 (2017) as the fourth baseline year. Inclusion of PY0 (2017) in the baseline period *lowered* Vermont's incremental annual Medicare spending trend in the baseline period relative to the comparison group's, while its exclusion *increased* Vermont's incremental annual Medicare spending trend in the baseline period over the comparison group. In our main analyses, Vermont's incremental annual spending trend in the baseline period was influenced by a spike in the state's Medicare spending in CY2015. Including PY0 (2017) in the baseline period in sensitivity checks mitigated the CY2015 spending spike's influence on the stated impacts (see **Exhibits D.10.1** and **D.10.2**). However, given that PY0 (2017) saw the ramp-up of the Medicare ACO initiative in the state, we excluded it from the baseline period for our main findings. Overall, across the different baseline approaches, results for PY3 consistently showed reductions in Medicare spending, although the magnitude of the reduction varied. In the sections below, we present findings from this sensitivity assessment alongside the main findings to convey the uncertainty associated with the magnitudes of the stated impacts.

Potential of delayed impacts of other Vermont health reform efforts. As described in detail in Chapter 2, the VTAPM builds on a history of health reform efforts in Vermont spanning the last two decades. Many of the initiatives overlapped, spanned multiple payers, and had goals similar to those of the VTAPM around improving the health of Vermonters through delivery system reform and financial incentives. Because of this, findings may also reflect delayed impacts from other health reform initiatives in Vermont. To partially mitigate this potential source of bias, we selected comparison states with similar histories of health reform, specifically PCMH and multi-payer reform initiatives.

[2] We observed the same issue of high outlier weights in each iteration of our comparison group, further reinforcing the fact that Vermont's market- and beneficiary-level characteristics are unique among states and that it is likely that no comparison group would be able to entirely mitigate those differences.

Stage 3: Claims-Based Attribution to Treatment and Comparison Groups

Below, we describe the claims analysis steps for attributing Medicare beneficiaries to the state- and ACO-level treatment and comparison groups.

State-Level Attribution. In this section, we describe the claims-based attribution logic employed to construct the state-level treatment and comparison groups. **Appendix Exhibit D.2.5** presents the "step-down" counts associated with the state-level attribution criteria.

Step 1. We used the 2014–2020 Medicare Beneficiary Summary File (MBSF) Base segments to identify beneficiaries with the following enrollment and geography inclusion criteria:

- Covered by Medicare Parts A and B throughout performance period or until death
- No months of MA or other Medicare managed care plan (Part C)
- No months of coverage where Medicare is the secondary payer
- Reside in Vermont or an identified comparison county
- Have at least one paid QEM claim during the alignment period

Step 2. For the eligible beneficiaries identified in Step 1, we extracted 2014–2020 Outpatient header and service line final paid claims submitted by Federally Qualified Health Centers (FQHCs), Rural Health Clinics (RHCs), or Critical Access Hospitals (CAHs)[3] with a claims processing date on or before March 31 of the following year. We retained the claims rendered by an attending physician who billed using the eligible provider specialty codes.[4]

Step 3. We identified Outpatient service line claims associated with the Outpatient header claims selected in Step 2 and retained the claims that had a Healthcare Common Procedure Coding System (HCPCS) code that qualified as an eligible QEM[5] and had an allowed charge greater than 0. For CAHs, the revenue center code must also be eligible.

Step 4. For the eligible beneficiaries identified in Step 1, we extracted 2014–2020 Carrier service line final paid claims with a claims processing date on or before March 31 of the following year and a HCPCS code that qualitied as a QEM. We retained claims that included an eligible provider specialty code.

Step 5. We retained the provider ID (i.e., TIN, NPI, and CCN) and allowable charge fields in the Outpatient and Carrier claims and merged both claims files to create an analytic dataset. Next, we calculated the total allowed charges for each beneficiary in each BY (2014–2016) and PY (2017–2020). Finally, we identified claims with a provider specialty code associated with primary care practice specialty and calculated the total allowed charges for each beneficiary in each BY (2014–2016) and PY

[3] FQHCs, RHCs, and CAHs were identified based on the billing codes 77, 71, and 85, respectively, on outpatient claims.

[4] Primary care practitioners included those with specialty codes 01, 08, 11, 37, 38, 50, 89, 97. Specialists included those with specialty codes 06, 12, 13, 16, 23, 25, 26, 27, 29, 39, 46, 70, 79, 82, 83, 84, 86, 90, 98.

[5] Qualified QEM codes are the following: 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99339, 99340, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350, 99495, 99496, 99490, G0402, G0438, G0439.

(2017–2020). If the proportion of total allowed charges billed by practitioners with a primary care specialty code exceeded 10 percent of total allowed charges during a given BY or PY, the beneficiary was attributed to the state-level treatment and comparison groups through their primary care practitioner in Step 6. All other beneficiaries were attributed to the state-level treatment and comparison groups through their specialists in the next step. Primary care specialists are given preference, and ties are broken by the date of the claim.

Step 6. If the proportion of total allowed charges for QEM services billed by primary care practitioners exceeded 10 percent, we retained QEM service claims billed by primary care practitioners and excluded QEM service claims billed by other practitioners. Next, we identified QEM service claims rendered within the state in which the beneficiary resided during the calendar year. For the treatment group, we also identified QEM service claims rendered by VTAPM participants. If the proportion of total QEM service claims rendered within the state of residence (or by VTAPM participants, in the case of the treatment group) exceeded 50 percent, the beneficiary was attributed to the state-level treatment or comparison group. If the total allowed charges for QEM services billed by primary care practitioners did not exceed 10 percent, we retained QEM service claims billed by eligible specialists and applied the same attribution logic described above to attribute beneficiaries to the state-level treatment and comparison groups.

Appendix Exhibit D.2.5. PY3 State-Level Attribution Step-Down Table

Attribution Criteria	Description	Number of Beneficiaries						
		BY3 (2014)	BY2 (2015)	BY1 (2016)	PY0 (2017)	PY1 (2018)	PY2 (2019)	PY3 (2020)
TREATMENT GROUP								
Geographic & Coverage Criteria	Reside in VT (based on MBSF) and continuously covered under both Parts A & B throughout the CY or until death and zero months of MA coverage and zero months of Medicare as a secondary payer coverage	104,253	107,070	109,699	110,740	112,274	112,622	112,894
Claims Attribution Criteria	Receive any QEM from eligible practitioners	90,909	91,182	94,690	95,511	96,079	96,551	98,047
	Receive majority of QEMs within VT or from OneCare participants	**80,193**	**79,728**	**83,039**	**83,523**	**83,770**	**83,956**	**86,590**
	Receive at least 10% of allowed charges for QEMs from eligible PCPs	78,128	77,122	80,698	81,097	81,088	81,180	84,690
	Receive less than 10% of allowed charges for QEMs from eligible PCPs (i.e., specialist-aligned)	2,065	2,606	2,341	2,426	2,682	2,776	1,900
COMPARISON GROUP								
Geographic & Coverage Criteria	Reside in comparison state (based on MBSF) and continuously covered under both Parts A & B throughout the CY or until death and zero months of MA coverage and zero months of Medicare as a secondary payer coverage	3,162,065	3,148,536	3,184,710	3,189,025	3,153,829	3,154,449	3,088,144
Claims Attribution Criteria	Receive any QEM from eligible practitioners	2,682,961	2,650,917	2,752,797	2,762,872	2,725,441	2,732,217	2,672,963
	Receive majority of QEMs within comparison state	**2,555,061**	**2,519,432**	**2,625,565**	**2,635,829**	**2,598,579**	**2,603,589**	**2,551,806**
	Receive at least 10% of allowed charges for QEMs from eligible PCPs	2,407,335	2,373,789	2,519,271	2,537,848	2,504,999	2,515,324	2,475,408
	Receive less than 10% of allowed charges for QEMs from eligible PCPs (i.e., specialist-aligned)	147,726	145,643	106,294	97,981	93,580	88,265	76,398

ACO-Level Attribution. In this section, we describe the claims-based attribution logic employed to construct the ACO and comparison groups. The Model's participant list for PY1 was used to identify practices participating in the VTAPM. **Appendix Exhibit D.2.6** summarizes the contents of the participation lists. The CY2020 Medicare SSP Track 1 and Basic Track Levels A/B/C ACO participant list was used to identify the comparison group practices. We limited comparison group participants to those who provided services within the comparison states. The TIN and CMS Certification Number (CCN) was used to identify bills submitted by the identified practices.[6] The claims-based attribution logic used paid QEM service claims submitted by practitioners within the participating practices using the eligible specialty codes.[7] Attribution for the comparison group in each cohort mirrored the approach used for the treatment group. We used the same HCPCS and specialty codes[8] that the Model used to attribute beneficiaries to the VTAPM, which included eight additional telehealth-specific codes added to the previous year's list, to align with the updated Medicare coverage for telehealth visits implemented in March 2020.[9]

Appendix Exhibit D.2.6. VTAPM Treatment and Comparison Group Participants

		PY1		PY2		PY3	
		CCNs	TINs	CCNs	TINs	CCNs	TINs
Treatment Group	VTAPM Participants	11	22	18	36	12	37
Comparison Group	MSSP Track 1 and Basic Track Level A/B/C ACO Participants Providing Services in the Comparison States	789	1,631	1,383	4,812	1,833	4,856

NOTE: CCN is CMS Certification Number; TIN is Taxpayer Identification Number.

Below, we describe the claims analysis steps for attributing beneficiaries to the ACO-level treatment and comparison groups. **Appendix Exhibit D.2.7** presents the "step-down" counts associated with the state-level attribution criteria.

Steps 1 through 5. The first five steps of the ACO-level claims-based attribution logic are the same as for the state-level analysis described in the previous section.

[6] FQHCs, RHCs, and CAHs were identified based on billing codes 77, 71, and 85, respectively, on outpatient claims. Practitioners billing through CAHs included those who receive payment from Medicare through the Optional Payment Method, where the CAH bills for facility and professional outpatient services to Medicare when physicians or practitioners reassign billing rights to them.

[7] Primary care practitioners included those with specialty codes 01, 08, 11, 37, 38, 50, 89, 97. Specialists included those with specialty codes 06, 12, 13, 16, 23, 25, 26, 27, 29, 39, 46, 70, 79, 82, 83, 84, 86, 90, 98.

[8] These eight Healthcare Common Procedure Coding System (HCPCS) codes are: 99421-99423 (online digital E&M visit for an established patient, varying times); 99441-99443 (phone E&M visit with a physician or other qualified health professional, varying times); G2010 (remote evaluation of recorded video and/or images); G2012 (5-10 minute communication using a technology-based service)

[9] Centers for Medicare & Medicaid Services. (2020). *COVID-19 Emergency Declaration Blanket Waivers for Health Care Providers*. https://www.cms.gov/files/document/summary-covid-19-emergency-declaration-waivers.pdf

Step 6. If the proportion of total allowed charges for QEM services billed by primary care practitioners exceeded 10 percent, we retained QEM service claims billed by primary care practitioners and excluded QEM service claims billed by other practitioners. Next, we identified the practice that was responsible for providing the plurality of QEM service claims rendered by eligible primary care specialists during each BY and PY. For the treatment pool beneficiaries, if the identified practice was a VTAPM participant, we attributed the beneficiary to the treatment group. For the comparison pool beneficiaries, if the practice was a Medicare SSP Track 1 participant in a PY, we attributed the beneficiary to the comparison group for that respective PY. If the total allowed charges for QEM services billed by primary care practitioners did not exceed 10 percent, we retained QEM service claims billed by eligible specialists and applied the same attribution logic described above to attribute beneficiaries to the ACO-level treatment and comparison groups.

Appendix Exhibit D.2.7. PY3 ACO-Level Attribution Step-Down Table

Attribution Criteria	Description	Number of Beneficiaries						
		BY3 (2014)	BY2 (2015)	BY1 (2016)	PY0 (2017)	PY1 (2018)	PY2 (2019)	PY3 (2020)
TREATMENT GROUP								
Geographic & Coverage Criteria	Reside in VT (based on MBSF) and continuously covered under both Parts A & B throughout the CY or until death and zero months of MA coverage and zero months of Medicare as a secondary payer coverage	104,253	107,070	109,699	110,740	112,274	112,622	112,894
Claims Attribution Criteria	Receive any QEM from eligible practitioners	91,389	84,093	98,109	99,370	100,489	101,219	98,888
	Receive plurality of QEMs from OneCare participants	**42,157**	**44,431**	**48,111**	**49,236**	**50,557**	**51,554**	**49,807**
	Receive at least 10% of allowed charges for QEMs from eligible PCPs	41,376	43,734	47,539	48,736	50,056	51,081	49,127
	Receive <10% of allowed charges for QEMs from eligible PCPs (i.e., specialist-aligned)	781	697	572	500	501	473	680
COMPARISON GROUP								
Geographic & Coverage Criteria	Reside in comparison state (based on MBSF) and continuously covered under both Parts A & B throughout the CY or until death and zero months of MA coverage and zero months of Medicare as a secondary payer coverage	3,162,065	3,148,536	3,184,710	3,189,025	3,153,829	3,154,449	3,088,144
Claims Attribution Criteria	Receive any QEM from eligible providers	2,693,987	2,682,670	2,800,399	2,815,094	2,782,505	2,792,606	2,685,627
	Receive plurality of QEMs from CY2020 Track 1 or Basic A/B/C MSSP participants	**574,218**	**593,521**	**659,413**	**695,985**	**717,025**	**737,832**	**702,866**
	Receive at least 10% of allowed charges for QEMs from eligible PCPs	548,023	567,969	642,953	680,528	702,306	723,843	687,878
	Receive <10% of allowed charges for QEMs from eligible PCPs (i.e., specialist-aligned)	26,195	25,552	16,460	15,457	14,719	13,989	14,988

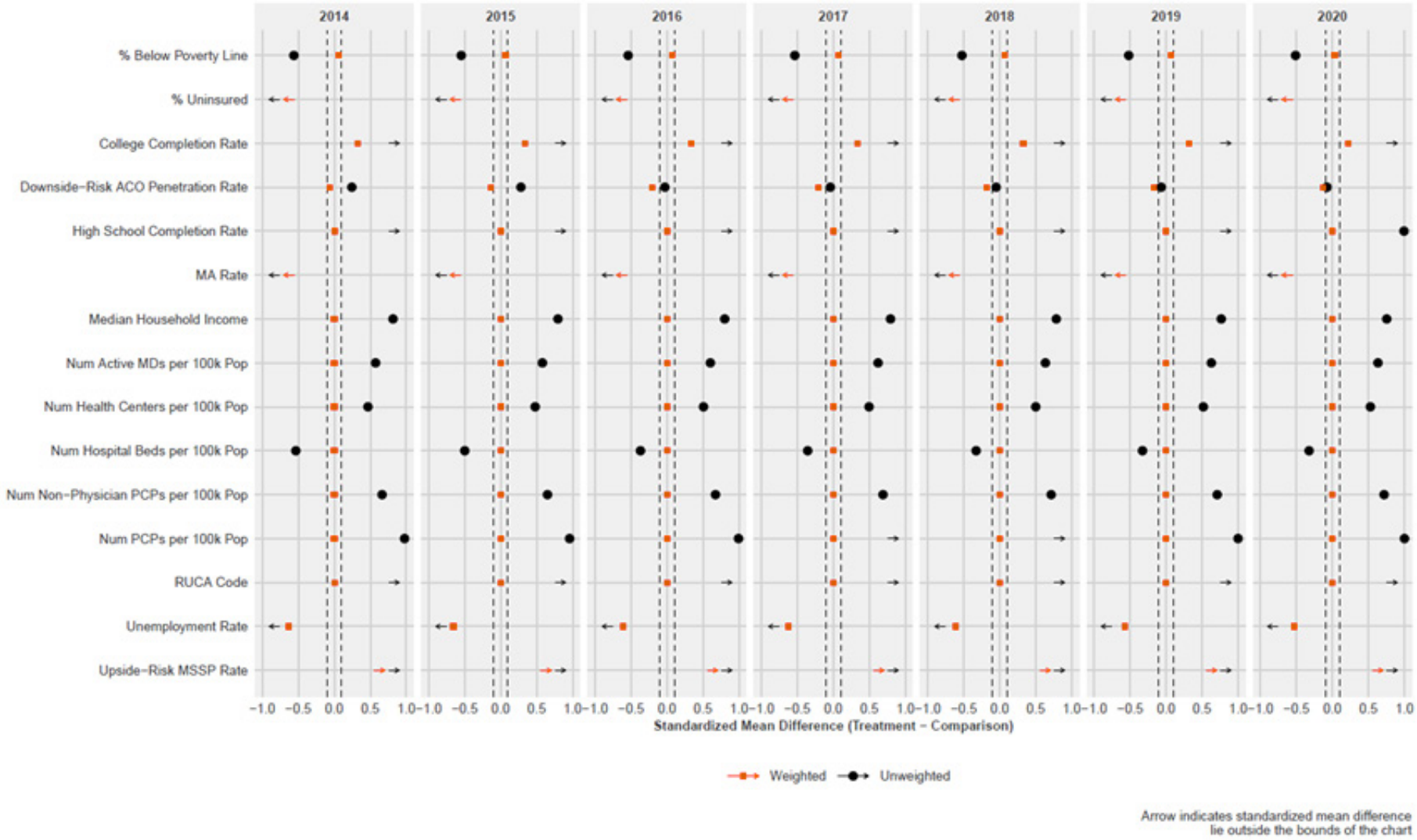
Stage 4: Weighting Comparison Beneficiaries Using Entropy Balancing

After selecting the treatment and comparison beneficiaries (Step 3), we used the Stata package *ebalance*[10] to weight comparison beneficiaries with entropy balancing (EB) methods. The EB approach ensured that the comparison group beneficiaries, on average, resided in regions similar to Vermont and were similar to those Vermonters on observed characteristics.[11] Beneficiaries were balanced using individual-level (sociodemographic and health) and area-level (sociodemographic and health care market) characteristics. The EB approach balanced the means and distributions of observed characteristics across treatment and comparison groups; see **Appendix Exhibits D.2.8-D.2.12** and **Appendix Exhibits D.2.13-D.2.17** for balancing statistics before and after EB weights were applied for the ACO- and state-level analyses, respectively.

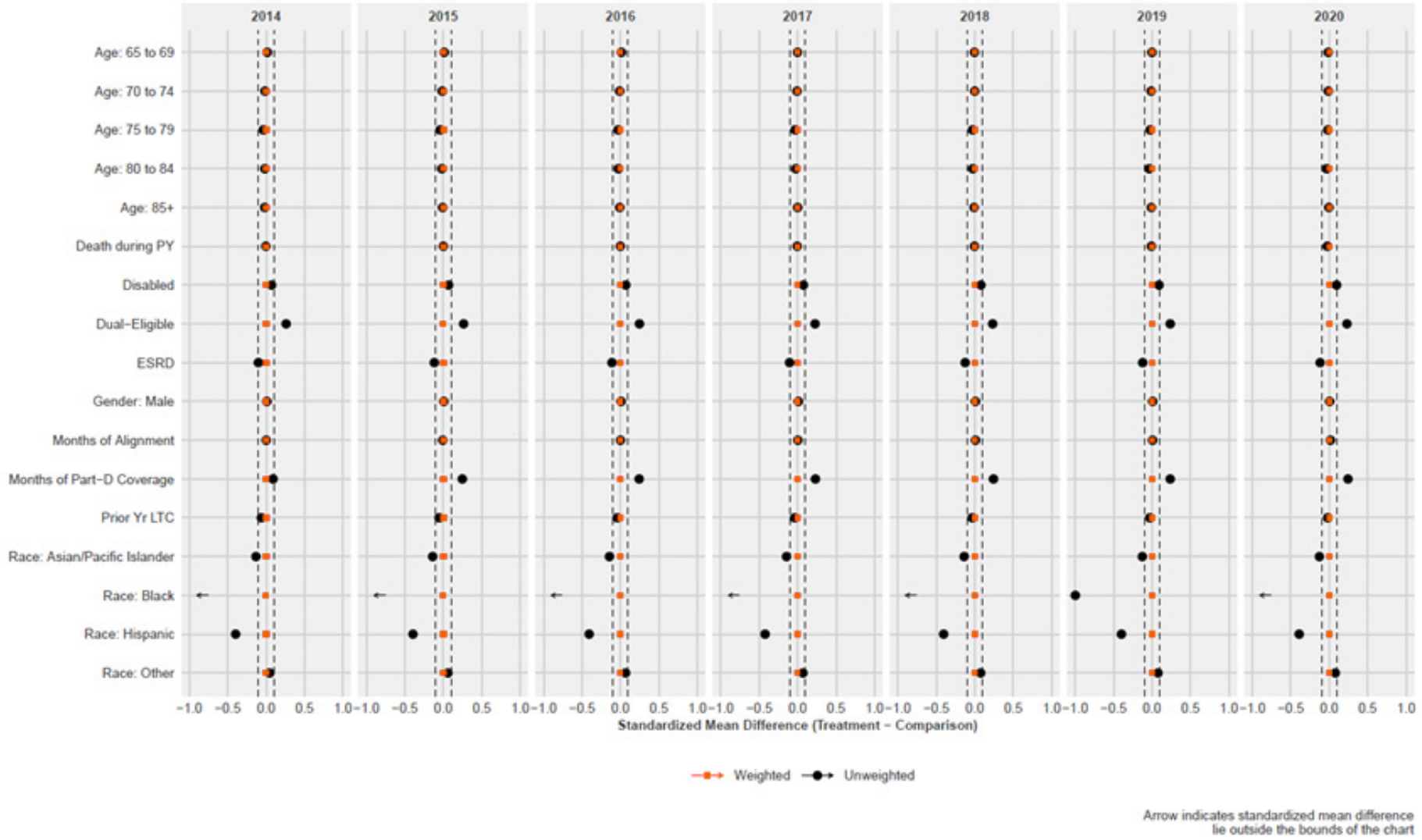
[10] Hainmueller J, Xu Y. Ebalance: A Stata Package for Entropy Balancing. J Stat Software. 2013;54(7). Available at SSRN: https://ssrn.com/abstract=1943090 or http://dx.doi.org/10.2139/ssrn.1943090

[11] Hainmueller J. Entropy Balancing for Causal Effects: A Multivariate Reweighting Method to Produce Balanced Samples in Observational Studies. Political Analysis. 2012;20(1):25-46. doi:10.1093/pan/mpr025

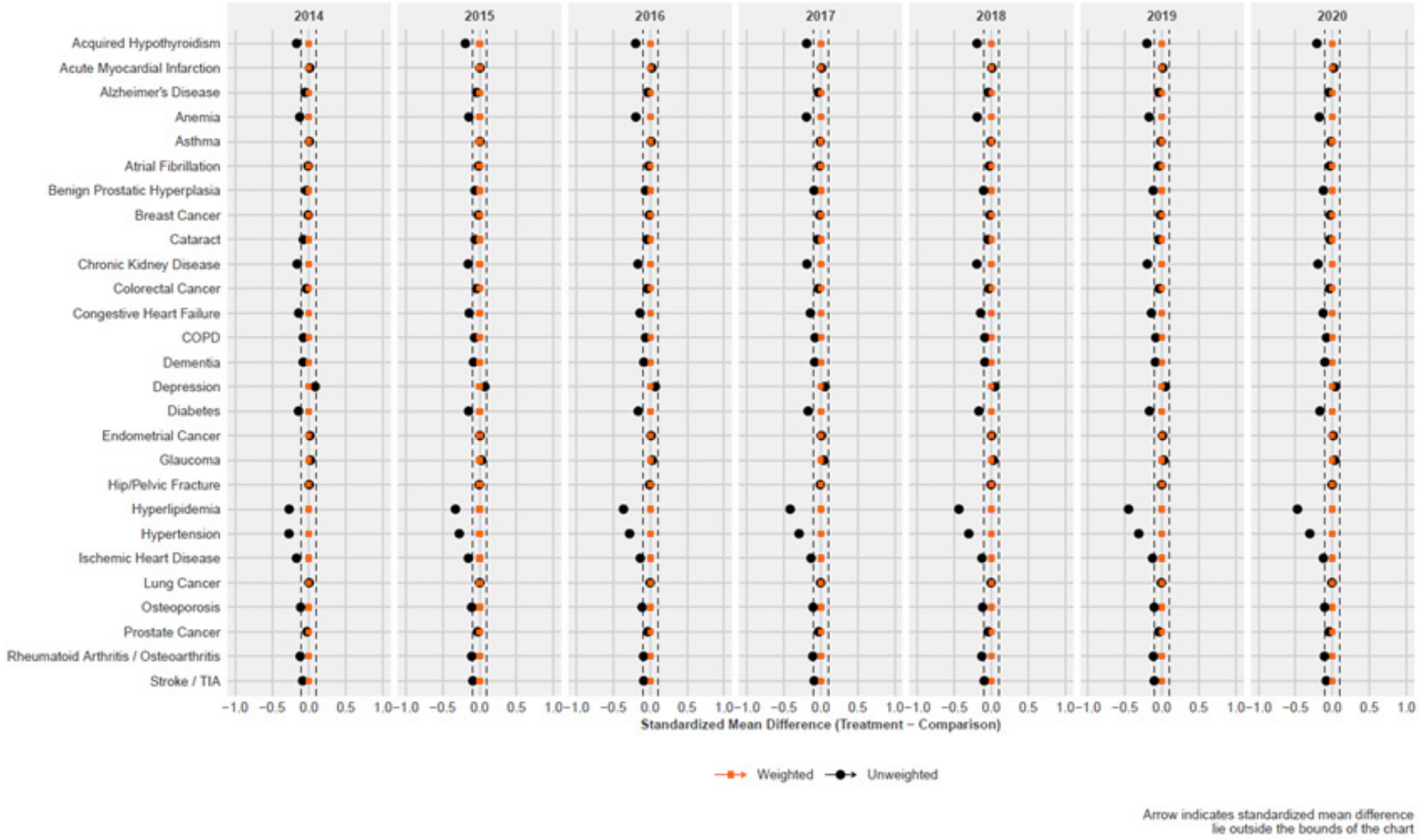
Appendix Exhibit D.2.8. ACO-Level Covariate Balance: Area-Level Sociodemographic and Market Characteristics



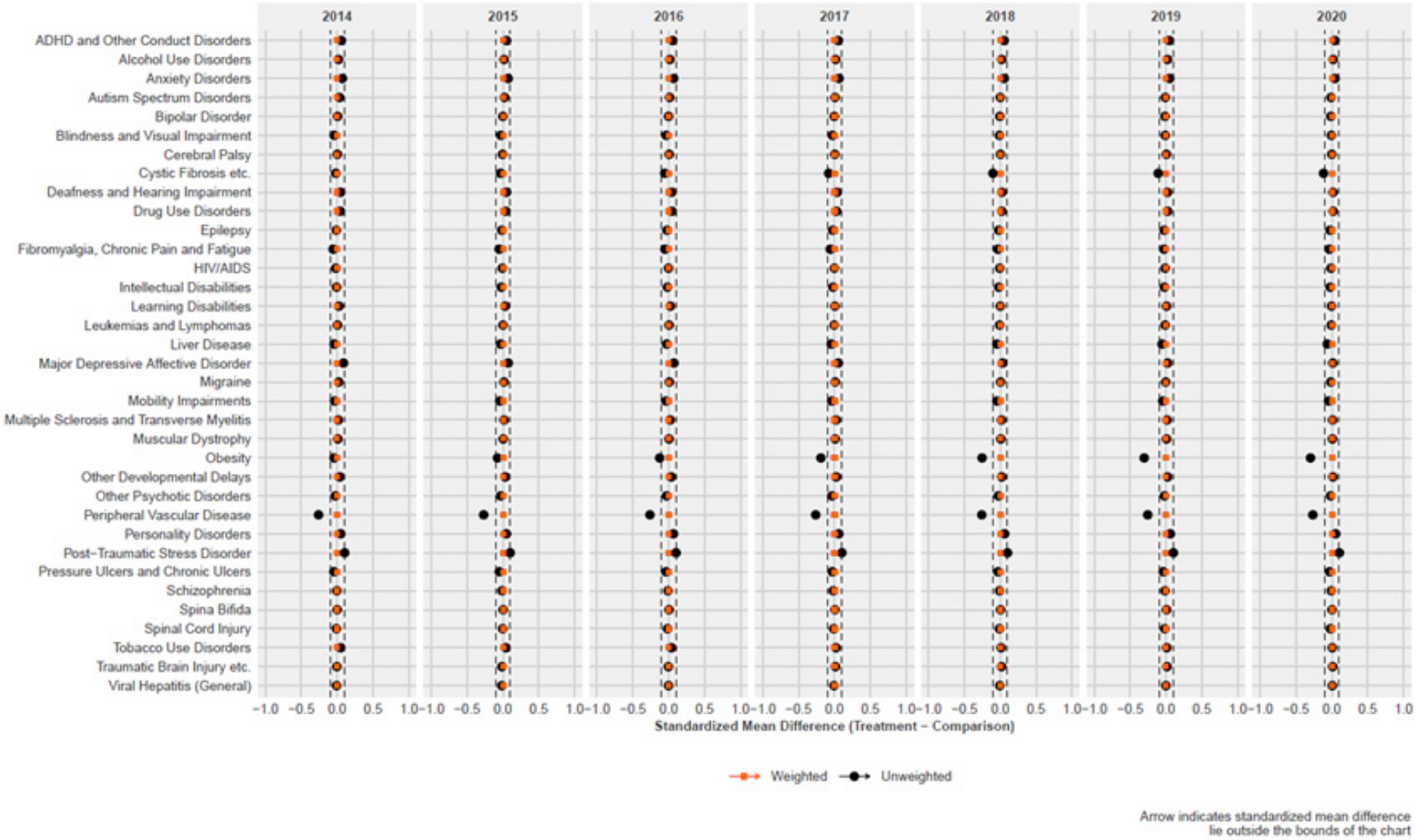
Appendix Exhibit D.2.9. ACO-Level Covariate Balance: Beneficiary-Level Sociodemographic and Eligibility Characteristics



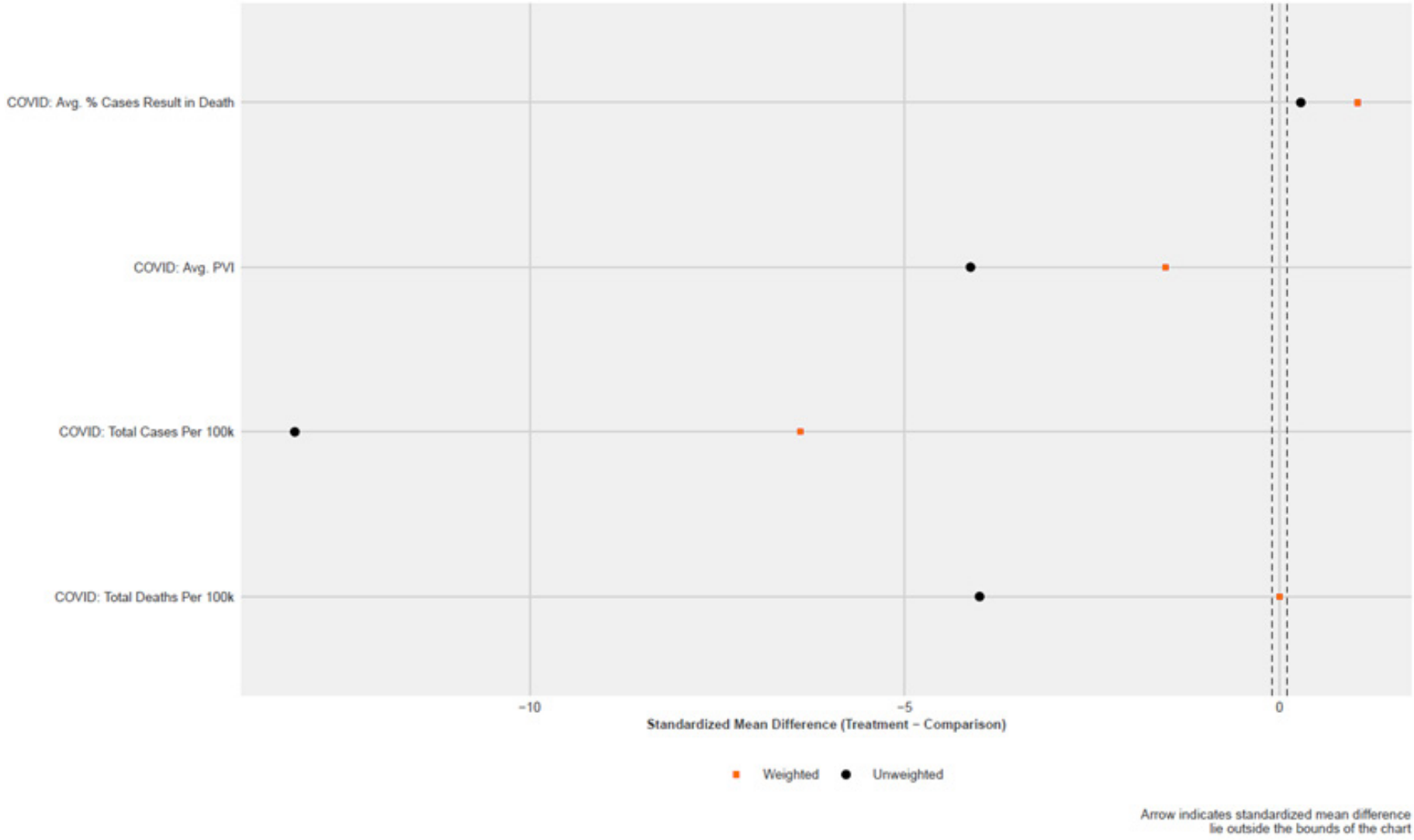
Appendix Exhibit D.2.10. ACO-Level Covariate Balance: Beneficiary-Level Chronic Conditions



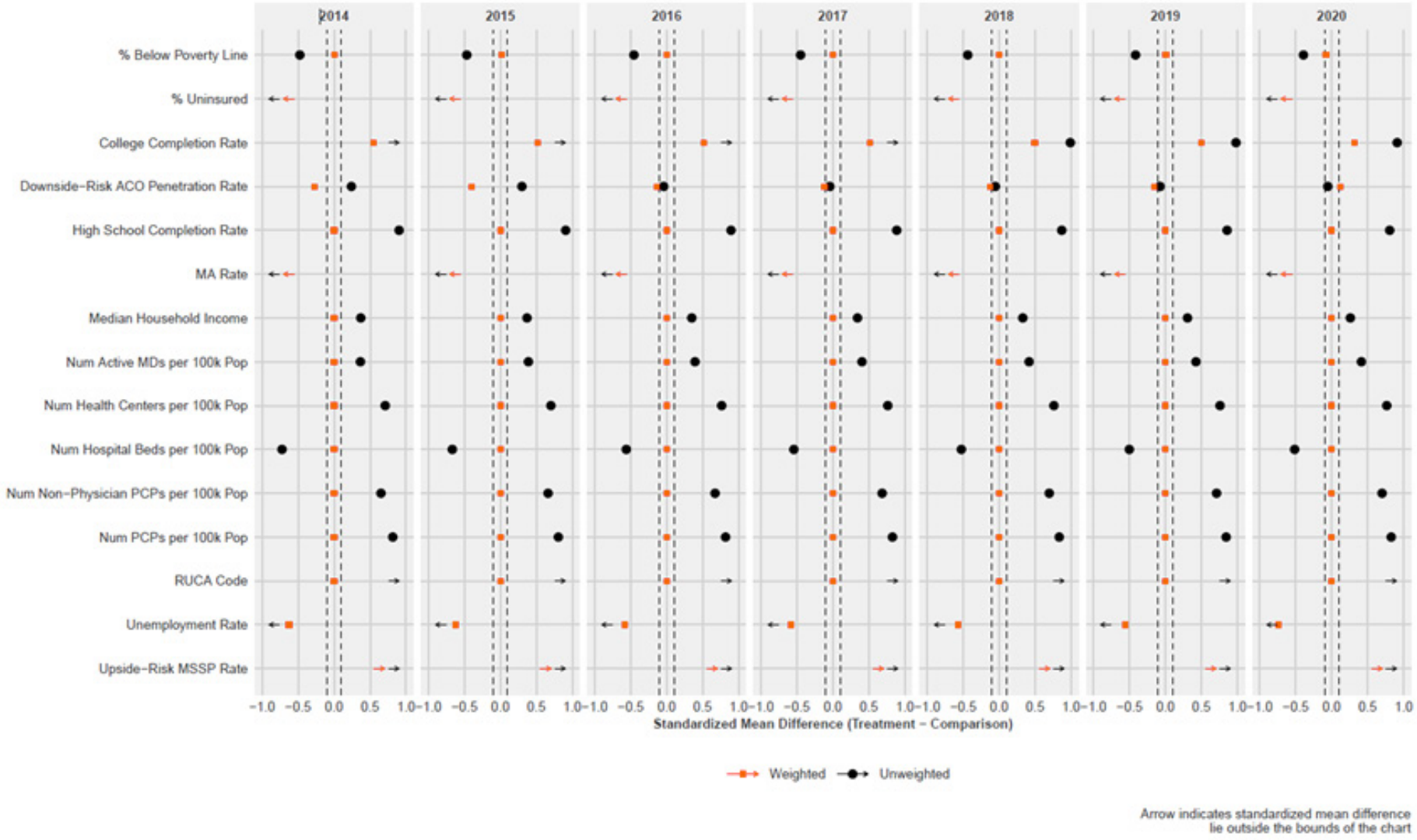
Appendix Exhibit D.2.11. ACO-Level Covariate Balance: Beneficiary-Level Other Chronic and Potentially Disabling Conditions



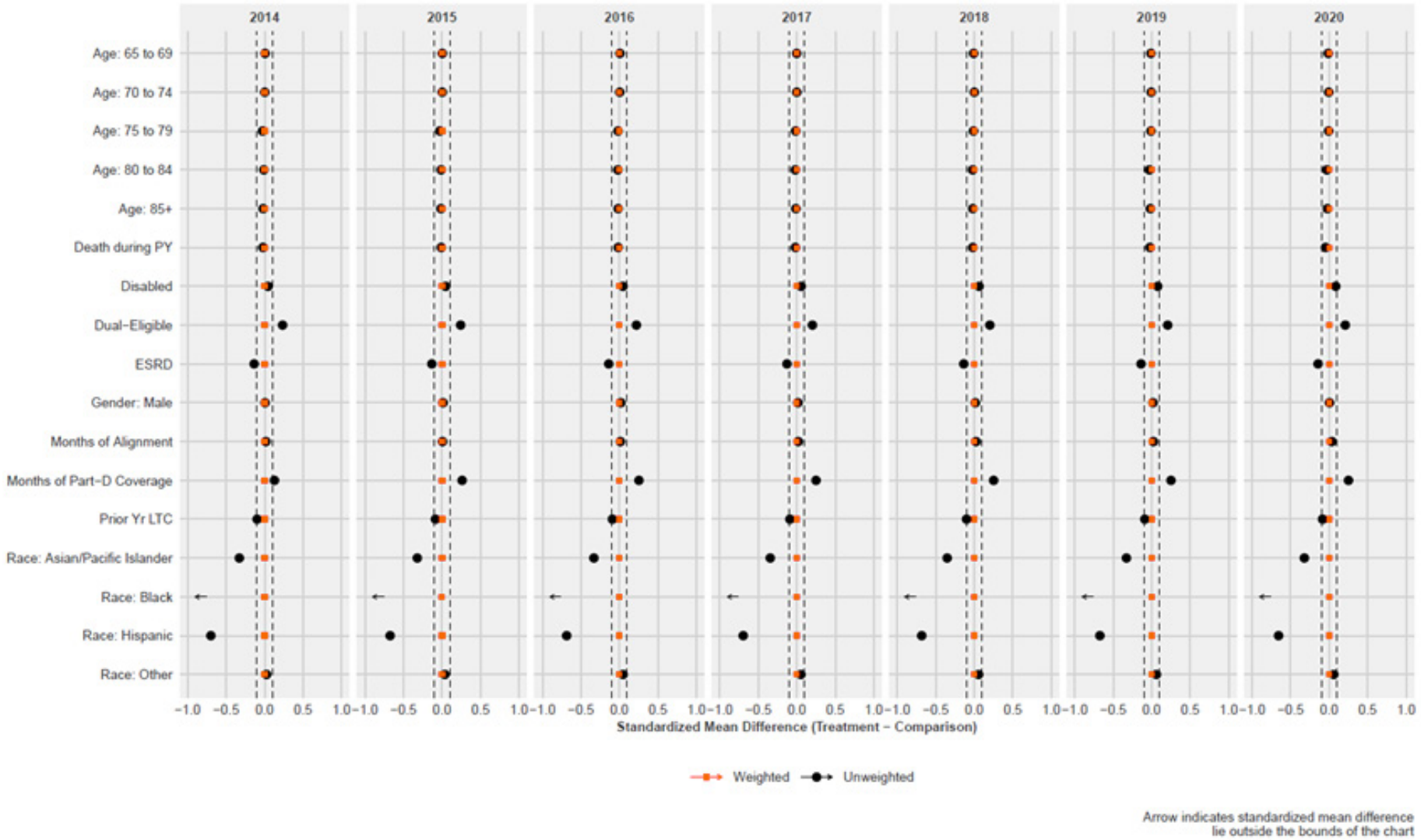
Appendix Exhibit D.2.12. ACO-Level Covariate Balance: County-Level COVID-19 PHE Characteristics



Appendix Exhibit D.2.13. State-Level Covariate Balance: Area-Level Sociodemographic and Market Characteristics

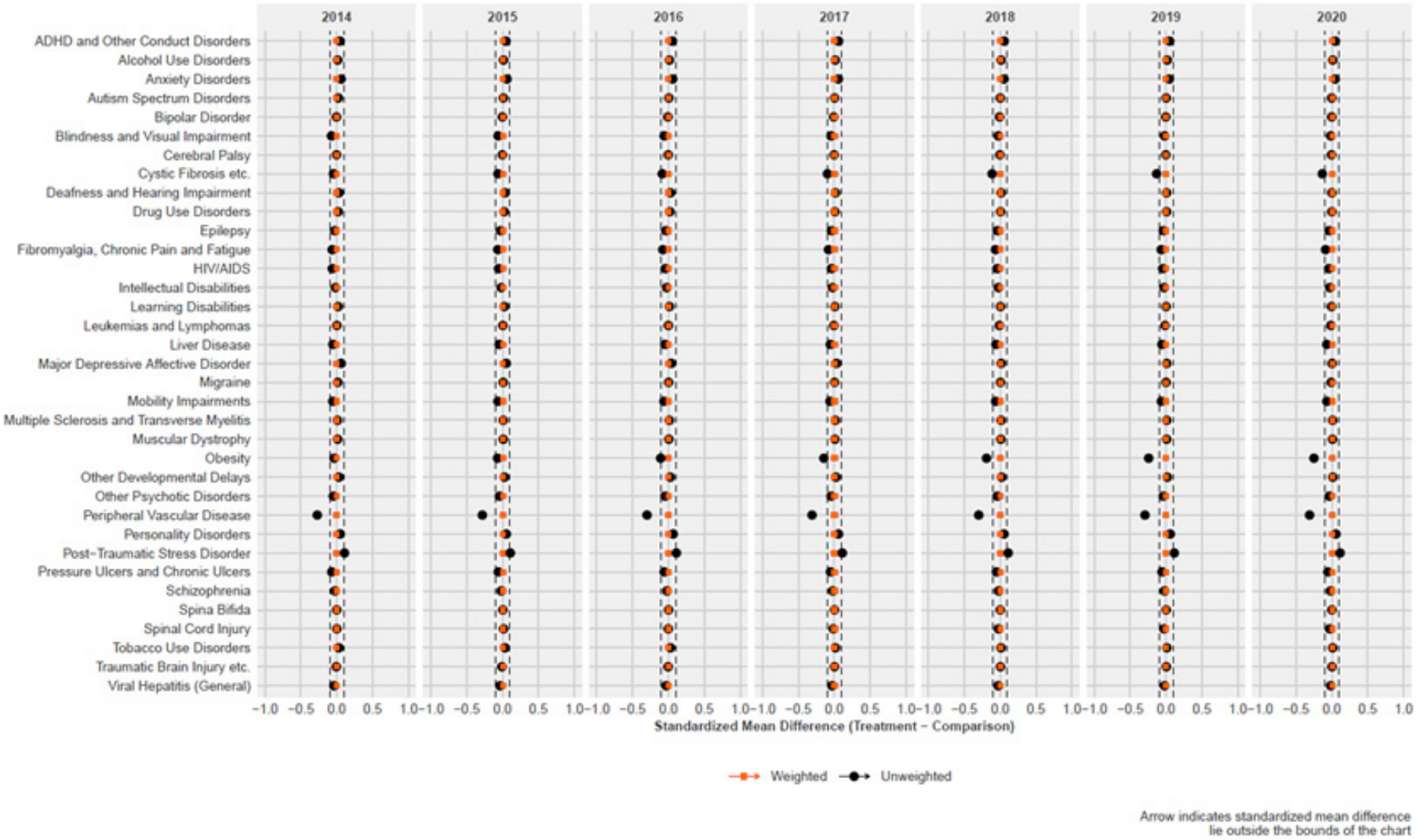


Appendix Exhibit D.2.14. State-Level Covariate Balance: Beneficiary-Level Sociodemographic and Eligibility Characteristics

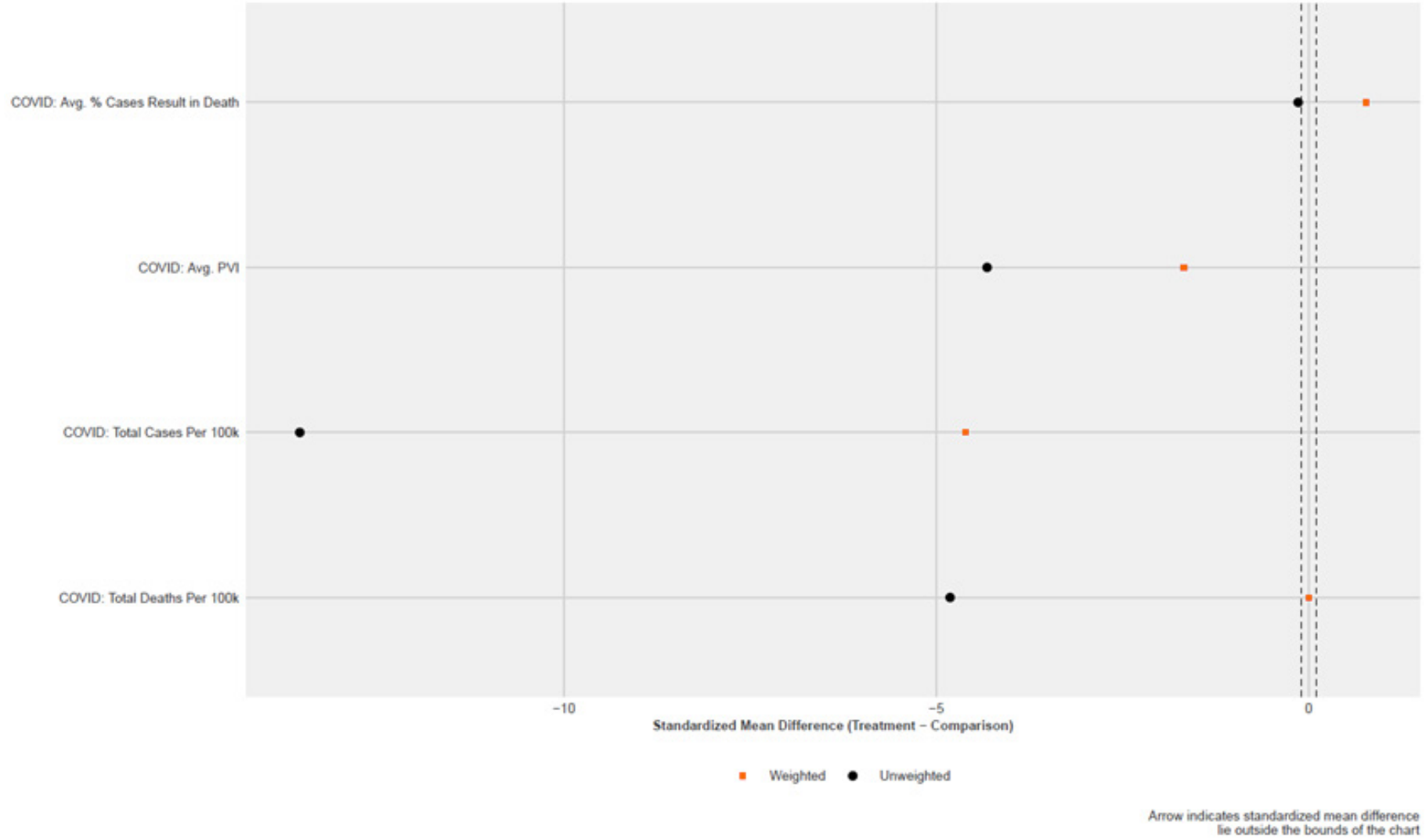


Appendix Exhibit D.2.15. State-Level Covariate Balance: Beneficiary-Level Chronic Conditions

Appendix Exhibit D.2.16. State-Level Covariate Balance: Beneficiary-Level Other Chronic and Potentially Disabling Conditions



Appendix Exhibit D.2.17. State-Level Covariate Balance: County-Level COVID-19 PHE Characteristics



Appendix D.3: Attribution Using Telehealth-Specific Codes in PY3

The Model updated its prospective attribution algorithm to include eight telehealth-specific procedure codes as QEMs for prospective attribution in PY4; because the evaluation uses a concurrent attribution approach, we implemented this change for PY3.[12] These eight telehealth-specific codes can be used for virtual check-ins and e-visits and align with the additional procedure codes approved for Medicare beneficiaries in CMS's updated guidance for telehealth billing, released on March 17, 2020.[13] To test the sensitivity of the attribution algorithm to these changes, we compared the beneficiaries attributed in PY3 using these eight telehealth codes to the beneficiaries attributed to the list of QEMs *without* the eight telehealth codes, for the ACO- and state-level treatment and comparison groups (**Appendix Exhibits D.3.1 and D.3.2**).

Appendix Exhibit D.3.1. ACO-Level PY3 Attribution Step-Down Tables, Telehealth-Specific Codes Sensitivity Test

Attribution Criteria	Description	Number of Beneficiaries Attributed, PY3 (2020)	
		Standard Attribution Approach	Telehealth-Specific Codes Excluded
TREATMENT GROUP			
Geographic & Coverage Criteria	Reside in VT (based on MBSF) and continuously covered under both Parts A & B throughout the CY or until death and zero months of MA coverage and zero months of Medicare as a secondary payer coverage	112,894	112,894
Claims Attribution Criteria	Receive any QEM from eligible practitioners	98,888	96,834
	Receive plurality of QEMs from OneCare participants	**49,807**	**48,160**
	Receive at least 10% of allowed charges for QEMs from eligible PCPs	49,127	47,360
	Receive <10% of allowed charges for QEMs from eligible PCPs (i.e., specialist-aligned)	680	781
COMPARISON GROUP			
Geographic & Coverage Criteria	Reside in comparison state (based on MBSF) and continuously covered under both Parts A & B throughout the CY or until death and zero months of MA coverage and zero months of Medicare as a secondary payer coverage	3,088,144	3,088,144
Claims Attribution Criteria	Receive any QEM from eligible providers	2,685,627	2,663,115
	Receive plurality of QEMs from CY2020 Track 1 or Basic A/B/C MSSP participants	**702,866**	**696,216**
	Receive at least 10% of allowed charges for QEMs from eligible PCPs	687,878	680,244
	Receive <10% of allowed charges for QEMs from eligible PCPs (i.e., specialist-aligned)	14,988	15,972

[12] These eight Healthcare Common Procedure Coding System (HCPCS) codes are: 99421-99423 (online digital E&M visit for an established patient, varying times); 99441-99443 (phone E&M visit with a physician or other qualified health professional, varying times); G2010 (remote evaluation of recorded video and/or images); G2012 (5-10 minute communication using a technology-based service).

[13] Centers for Medicare & Medicaid Services. (2020). *Medicare Telemedicine Health Care Provider Fact Sheet*. https://www.cms.gov/newsroom/fact-sheets/medicare-telemedicine-health-care-provider-fact-sheet

Appendix Exhibit D.3.2. State-Level PY3 Attribution Step-Down Tables, Telehealth-Specific Codes Sensitivity Test

	Description	Number of Beneficiaries Attributed, PY3 (2020)	
		Standard Attribution Approach	Telehealth-Specific Codes Excluded
TREATMENT GROUP			
Geographic & Coverage Criteria	Reside in VT (based on MBSF) and continuously covered under both Parts A & B throughout the CY or until death and zero months of MA coverage and zero months of Medicare as a secondary payer coverage	112,894	112,894
Claims Attribution Criteria	Receive any QEM from eligible practitioners	98,047	95,741
	Receive majority of QEMs within VT or from OneCare participants	**86,590**	**84,268**
	Receive at least 10% of allowed charges for QEMs from eligible PCPs	95,484	92,779
	Receive less than 10% of allowed charges for QEMs from eligible PCPs (i.e., specialist-aligned)	2,563	2,962
	Receive majority of QEMs (allowed charges) within VT	86,590	84,268
COMPARISON GROUP			
Geographic & Coverage Criteria	Reside in comparison state (based on MBSF) and continuously covered under both Parts A & B throughout the CY or until death and zero months of MA coverage and zero months of Medicare as a secondary payer coverage	3,088,144	3,088,144
Claims Attribution Criteria	Receive any QEM from eligible practitioners	2,672,963	2,647,499
	Receive majority of QEMs within comparison state	**2,551,806**	**2,526,706**
	Receive at least 10% of allowed charges for QEMs from eligible PCPs	2,591,086	2,560,893
	Receive less than 10% of allowed charges for QEMs from eligible PCPs (i.e., specialist-aligned)	81,877	86,606

We found almost complete overlap between these two groups; 96 percent of ACO-attributed Medicare beneficiaries and 98 percent of Vermont Medicare beneficiaries were attributed using both methods (**Appendix Exhibit D.3.3**). Overall, less than 8 percent of QEMs for ACO-attributed Medicare beneficiaries were billed using these eight telehealth-specific codes. This, along with our finding that a quarter of QEMs in PY3 (2020) were provided via telehealth, indicates that practitioners are billing telehealth services but not with these additional eight codes.[14] We will continue to track use of telehealth services in future reports as the COVID-19 public health emergency (PHE) continues and CMS guidance shifts in response.

[14] Approximately 60 percent of QEM visits for ACO-attributed Medicare beneficiaries used HCPCS codes 99213-99214 (established patient office visit, varying times); these can also be billed as telehealth visits with the inclusion of a modifier code (code 95 for Medicare beneficiaries).

Appendix Exhibit D.3.3. Overlap in PY3 Attribution Approaches, Telehealth-Specific Codes Sensitivity Test

	Total attributed using **either** method	Attributed using **both** methods	With telehealth codes **only**	Without telehealth codes **only**
ACO				
Treatment	49,933	47,974 (96.0%)	1,833 (3.7%)	186 (0.4%)
Comparison	706,671	692,411 (98.0%)	10,455 (1.5%)	3,805 (0.5%)
State				
Treatment	98,047	95,741 (97.6%)	2,306 (2.4%)	N/A
Comparison	2,672,963	2,647,499 (99.0%)	25,464 (1.0%)	N/A

Appendix D.4: Specifications for the Claims-Based Evaluation Measures

Appendix Exhibit D.4 details definitions for the claims-based outcome measures for which we assess the Model's impacts. The outcome measures are total Medicare spending, 8 categories of Medicare spending by care setting and service, 13 utilization measures, and 2 quality of care measures.

Appendix Exhibit D.4. Definitions for Claims-Based Outcome Measures

Measure	Definition
Medicare Spending*	
Total Medicare Parts A & B spending PBPY	Total Medicare Parts A & B spending (2019 USD) PBPY aligned with the VTAPM or comparison group. Spending includes Medicare paid amount on Parts A & B claims from the start of the year until the end of the year or until the end date for when the beneficiary remained aligned (i.e., until s/he was excluded due to alignment exclusion criteria), for the treatment or comparison group.
Utilization	
Acute care hospital *stays* per 1,000 beneficiaries per year (BPY)	Number of acute care hospital stays per 1,000 BPY aligned with the VTAPM or comparison group. Stays that included transfers between facilities were counted as one stay. Stays that commenced after the start of the year until the end of the year, or until the date the beneficiary remained aligned with the treatment or comparison group, are counted toward the measure.
Acute care hospital *days* per 1,000 BPY	Number of acute care hospital days per 1,000 BPY aligned with the VTAPM or comparison group. Inpatient days after the start of the year until the end of the year, or until the date the beneficiary remained aligned with the treatment or comparison group, are counted toward the measure.
Emergency department (ED) visits (including observation stays) per 1,000 BPY	Number of ED visits including observational stay per 1,000 BPY aligned with the VTAPM or comparison group. Visits that included transfers between ED facilities were counted as one visit. Visits from the start of the year until the end of the year, or until the date the beneficiary remained aligned with the treatment or comparison group, are counted toward the measure.
Primary E&M visits per 1,000 BPY	Number of E&M visits with primary care providers per 1,000 BPY aligned with the VTAPM or comparison group. Primary care providers include 01 (general practice); 08 (family practice); 11 (internal medicine); 12 (osteopaths); 16 (obstetrics/gynecology); 35 (chiropractors); 38 (geriatric medicine); 48 (podiatrists); 50 (nurse practitioner); 80 (licensed clinical social worker); 84 (preventive medicine); and 97 (physician assistant). Annual wellness visits are excluded from this measure.
Specialty E&M visits per 1,000 BPY	Number of E&M visits with specialist providers (excluding hospital and ED visits) per 1,000 BPY during the year through alignment end date, divided by months of alignment eligibility. Specialist providers are defined as all those who are not primary care providers, noted above.
SNF *stays* per 1,000 BPY	Number of SNF stays per 1,000 BPY aligned with the VTAPM or comparison group. SNF stays that commenced after the start of the year until the end of the year, or until the date the beneficiary remained aligned with the treatment or comparison group, are counted toward the measure.
SNF *days* per 1,000 BPY	Number of SNF days per 1,000 BPY aligned with the VTAPM or comparison group. SNF days after the start of the year until the end of the year, or until the date the beneficiary remained aligned with the treatment or comparison group, are counted toward the measure.
Home health visits per 1,000 BPY	Number of home health (HH) visits per 1,000 BPY aligned with the VTAPM or comparison group. The numbers of HH visits were identified based on lines with revenue center codes 420-449 and 550-599. Visits from the start of the year until the end of the year, or until the date the beneficiary remained aligned with the treatment or comparison group, are counted toward the measure.
Home health episodes per 1,000 BPY	Number of episodes of HH for 1,000 BPY during the period aligned with the VTAPM or comparison group. Episodes include sum of 60-day HH episodes, as well as HH episodes with low-utilization payment adjustments (LUPA) and partial episode payment (PEP) adjustments.

Measure	Definition
Hospice days per 1,000 BPY	Number of days of hospice service use per 1,000 BPY aligned with the VTAPM or comparison group. Days of hospice use counted using the claim from and through dates on hospice claims. Hospice days after the start of the year until the end of the year, or until the date the beneficiary remained aligned with the treatment or comparison group, are counted toward the measure.
Imaging, procedures, and tests per 1,000 BPY	Counts of imaging, procedures, and tests per 1,000 BPY aligned with the VTAPM or comparison group. These were computed using the BETOS codes on the carrier claims and were specified as the number of claims for a beneficiary with codes "PXX," "TXX," and "IXX" incurred between the beneficiary's alignment start and end dates in each year.
Access to and Quality of Care	
Beneficiaries with *Annual Wellness Visit* (AWV) per 1,000 per year	Number of beneficiaries with an AWV in the year, per 1,000 beneficiaries aligned to the VTAPM or comparison group. This measure reflects the likelihood of beneficiaries receiving an AWV visit in the year. AWV codes on Medicare claims include G0438 (for the initial visit) and G0439 (for subsequent visits).
Beneficiaries with acute care hospitalizations for *ambulatory care-sensitive (ACS)* conditions per 1,000 per year	Number of beneficiaries with one or more ACSC acute care hospitalizations in the year, per 1,000 beneficiaries aligned with the VTAPM or comparison group. This measure reflects the likelihood of beneficiaries being hospitalized for ACSCs during the year. ACS hospitalizations include diabetes short-term complications, diabetes long-term complications, chronic obstructive pulmonary disease, or asthma in older adults, hypertension, heart failure, dehydration, bacterial pneumonia, urinary tract infection, uncontrolled diabetes, asthma in younger adults, and lower-extremity amputation among patients with diabetes. [15,16]
Beneficiaries with *unplanned readmissions within 30 days after hospital discharge* per 1,000 per year	Number of beneficiaries with one or more occurrences of unplanned hospital readmissions within 30 days of discharge in the year, per 1,000 beneficiaries aligned with the VTAPM or comparison group. This measure reflects the likelihood of beneficiaries having unplanned readmissions in the year. We used CMS's risk-standardized all-condition readmission measure for ACOs (ACO #8) to identify eligible hospitalizations and unplanned readmissions.[17]

NOTE: For providers in ACOs who opted for population-based payments (PBP) or all-inclusive-population-based-payments (AIPBP), we used the actual amount Medicare would have paid for services absent the population-based payments.

[15] Agency for Healthcare Research and Quality. *Prevention Quality Overall Composite Technical Specifications, Prevention Quality Indicator 90*, Version 6.0. 2016; http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V60-ICD09/TechSpecs/PQI_90_Prevention_Quality_Overall_Composite.pdf.

[16] For claims prior to October 1, 2015, with ICD-9 codes, we used Version 5.0 of PQI 90. For claims after October 1, 2015, with ICD-10 codes, we used Version 6.0 of PQI 90.

[17] Centers for Medicare & Medicaid Services. *A Blueprint for the CMS Measures Management System, ACO #8 Risk Standardized All Condition Readmission,* Version 1.0. 2012; https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/Measure-ACO-8-Readmission.pdf.

Appendix D.5: Analytic Approach to Estimating Impact

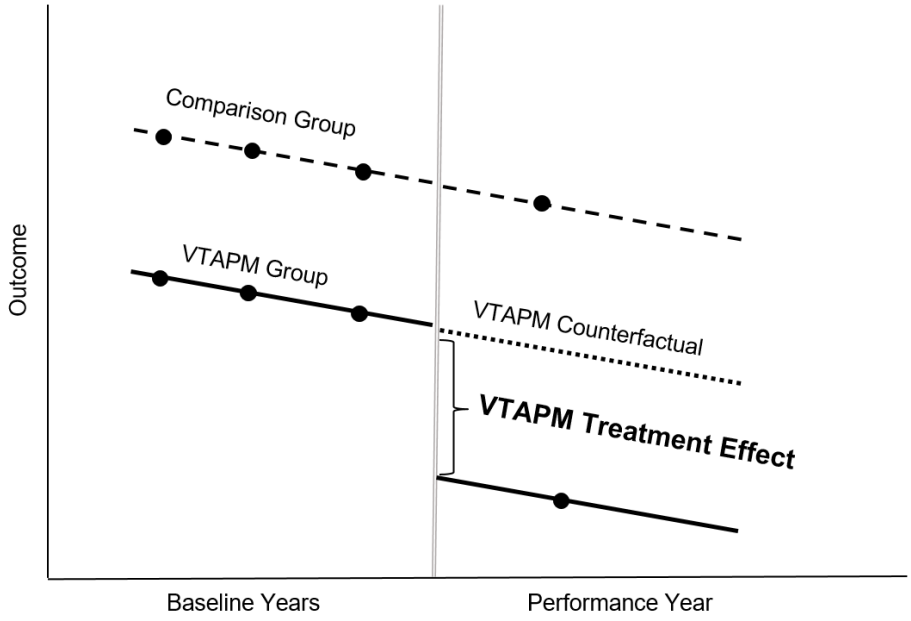
In this section, we describe the specification of our difference-in-differences (DID) regression models to assess the impact of the VTAPM on claims-based outcomes and provide the rationale and tests we used to guide various analytic decisions.

Difference-in-Differences Estimation

Using the DID design, we assessed the impact of VTAPM in PY3 and cumulatively over the first three performance years (total Medicare spending only) for both the ACO-level and state-level analyses. The design compares differences in outcomes for the VTAPM and EB-weighted comparison beneficiaries in PY3, against differences in outcomes for the treatment and comparison groups in three baseline years (BY3, BY2, and BY1). The comparison group is used to obtain an appropriate counterfactual of what would have happened to the VTAPM beneficiaries in PY3 in the absence of the model. The DID models net out time-invariant unobservable factors that influence the VTAPM and comparison groups. Together with EB weights, this approach mitigates biases from unobserved differences between the VTAPM and comparison group.

As shown in **Appendix Exhibit D.5.1**, DID compares differences in outcomes for the VTAPM and propensity score-weighted comparison beneficiaries in a given PY to differences in outcomes for the treatment and comparison groups in BY3, BY2, and BY1.

Appendix Exhibit D.5.1. Difference-in-Differences Estimation of the VTAPM Treatment Effect



Estimating impacts in PY3. We estimated impacts using DID regression models for each of the state- and ACO-level analyses separately. We report impact estimates in PY3 as relative increases or relative decreases, in relation to the VTAPM counterfactual absent the Model. Impacts for PY3 are estimated in separate models due to the differences in Model practitioners for the ACO-level analysis, and for both the ACO- and state-level analyses, a single cumulative estimate is produced as a weighted average of the two PY-specific impact estimates. While all impact estimates are at the beneficiary level, we describe impacts as relative increases or decreases PBPY for spending outcomes and per 1,000 BPY for utilization and quality of care outcomes. Estimates are reported at the p<0.1, p<0.05, and p<0.01 levels of statistical significance.

Equations D.1 and D.2 show the general specification of the DID model that we used to estimate ACO- and state-level impacts of the VTAPM in a given PY, respectively.

Equation D.1. DID model for estimating ACO-level impact in a given PY, with fixed effects for years, controlling for beneficiary, community, and practice characteristics

$$E(Y_{ijkt}) = \alpha_0 + \beta_1 VTAPM + \gamma_1 BY2 + \gamma_2 BY1 + \gamma_3 PY + \delta_1 VTAPM * PY + \sigma_1 VTAPM * YEAR + \theta_1 BENE_{ijkt} + \varphi_2 CNTY_j + \omega_2 PRAC_k + \varepsilon_{ijkt}$$

- $\alpha 0$ is the intercept, the mean outcome for the beneficiaries in the comparison group during the baseline period;
- ***VTAPM*** is the binary indicator for belonging to the treatment group. The coefficient $\beta 1$ captures the difference between the treatment and comparison group in the baseline period;
- ***BY2***, ***BY1***, and ***PY*** represent fixed effects for each BY and PY. The coefficients $\gamma 1$, $\gamma 2$, and $\gamma 3$ capture change in outcome relative to the reference period ***BY3***;
- The interaction term ***VTAPM * PY*** is the binary indicator for treatment group beneficiaries in ***PY***. The coefficient δ_1 is the DID estimate and represents the impact of VTAPM's initiatives in ***PY***;
- ***σ1 VTAPM * YEAR*** is the linear group-specific interaction term (treatment effect interacted with linear year), included to address the common trends assumption (see **Appendix D.6**);
- ***BENE*** and ***CTNY*** are a vector of beneficiary-level characteristics and the characteristics of their county of residence. The vectors $\theta 1$ and $\varphi 2$ are the coefficients associated with these characteristics;
- $PRAC_k$ is a fixed effect for each VTAPM and MSSP practice. The coefficient ω_2 captures the practice-specific time-invariant differences; and
- $\varepsilon ijkt$ is the random error term.

Equation D.2. DID model for estimating state-level impact in a given PY, with fixed effects for years, controlling for beneficiary and community characteristics

$$E(Y_{ijkt}) = \alpha_0 + \beta_1 VT + \gamma_1 BY2 + \gamma_2 BY1 + \gamma_3 PY + \delta_1 VT * PY + \sigma_1 VT * YEAR + \theta_1 BENE_{ijkt} + \varphi_2 CNTY_j + \varepsilon_{ijkt}$$

- Where $E(Y_{ijkt})$ is the outcome for the ***ith*** beneficiary in the treatment or comparison group (i.e., residing in Vermont or a comparison county and receiving the majority of their care from within their state of residence) in year ***t***;
- α_0 is the intercept, the mean outcome for the beneficiaries in the comparison group during the baseline period;
- ***VT*** is the binary indicator for belonging to the treatment group. The coefficient β_1 captures the difference between the treatment and comparison group in the baseline period;
- ***BY2***, ***BY1***, and ***PY*** represent fixed effects for each BY and PY. The coefficients γ_1, γ_2, and γ_3 capture change in outcome relative to the reference period ***BY3***;
- The interaction term $VT * PY$ is the binary indicator for treatment group beneficiaries in PY. The coefficient $\delta 1$ is the DID estimate and represents the impact of Vermont's statewide initiatives in PY;
- $\sigma 1\ VTAPM * YEAR$ is the linear group-specific interaction term (treatment group interacted with linear year), included to address the common trends assumption (see **Appendix D.6**);
- ***BENE*** and ***CNTY*** are vectors of beneficiary-level characteristics and the characteristics of county of residence. The vectors θ_1 and φ_2 are the coefficients associated these characteristics; and
- ε_{ijkt} is the random error term.

We include the following covariates in both the ACO- and state-level regression model:

- **Beneficiary-level covariates** include age; gender, race/ethnicity; disability; ESRD status; dual eligibility; Part D coverage; number of months of alignment in the year; death in the year; and disease burden at the end of the preceding year (using indicators for 62 chronic conditions); flag for utilization of long-term care; and an indicator for whether a beneficiary was aligned using primary or specialty care visits.
- **ZCTA-level covariates** include number of alignment-eligible providers within 10 miles per 1,000 population, percent of population with a high school degree, percent with a bachelor's degree, percent below the federal poverty level, rurality, rural-urban continuum code, percent of population unemployed, percent of population uninsured, percent of population receiving Supplemental Security Income, and median household income.
- **County-level covariates** include total population; number of hospital beds per 1,000 population; number of active MDs per 1,000 population; number of RHCs per 1,000 population; number of FQHCs per 1,000 population; number of physician assistants per 1,000 population; number of nurse practitioners per 1,000 population; number of certified nursing specialists per 1,000 population; number of hospital-based primary care physicians per 1,000 population; number of office-based primary care physicians per 1,000 population; U.S. Department of Agriculture Economic Research Service economic typology code; HRSA health professional shortage area (HPSA) code; mental health HPSA code; and rate of participation of ACOs with downside risk.
- **Year-level covariates** include binary indicators for year.

The ACO-level model also included a fixed effect for practice, grouping all practices who saw fewer than 500 attributed BPY. Both ACO- and state-level models include the previously described EB weights for the comparison group; all VTAPM group beneficiaries receive a weight of one (1). We provide details of the estimation of the models based on Equations D.1 and D.2. All models were estimated using Stata 17.0.[18]

Modelling Outcomes of Spending, Utilization, and Quality of Care

Appendix Exhibit D.5.2 summarizes the models used for the 15 claims-based outcome measures for the state- and ACO-level analyses for PY3. Outcome measures for spending and utilization were modelled as continuous variables, using generalized linear models (GLM). For outcomes where more than 15 percent of the sample had zero values, we used two-part models (TPMs), with a probit model to assess the likelihood of a non-zero outcome and GLM to assess levels of the outcome for those with non-zero outcomes. We determined the appropriate distributional form using a modified Park test.[19] The modified Park test examines the heteroscedasticity of the error term to ascertain the appropriate distribution; we ran the test using all observations for outcomes with GLMs and using only non-zero observations for outcomes with TPMs. The two quality of care measures were modelled as binary measures.[20] All models used standard errors clustered at the state-level and included a log link.

Appendix Exhibit D.5.2. Model Specifications for Outcome Measures, PY3 (2020)

Outcome	ACO	State
Total Medicare spending	Poisson	Gaussian
Acute care stays	TPM Inverse Gaussian	TPM Inverse Gaussian
Acute care days	TPM Inverse Gaussian	TPM Inverse Gaussian
ED visits	TPM Inverse Gaussian	TPM Inverse Gaussian
Primary E&M visits	Poisson	Gaussian
Specialist E&M visits	Gamma	Gamma
SNF stays	TPM Inverse Gaussian	TPM Inverse Gaussian
SNF days	TPM Poisson	TPM Gamma
HH visits	TPM Inverse Gaussian	TPM Inverse Gaussian
HH episodes	TPM Inverse Gaussian	TPM Inverse Gaussian
Hospice days	TPM Gamma	TPM Poisson
Imaging, procedures, tests	Poisson	Poisson
AWVs	Logit	Logit
ACS hospitalizations	Logit	Logit
Unplanned 30-day readmissions	Logit	Logit

NOTE: TPM = Two-part model.

[18] StataCorp. *Stata Statistical Software: Release 17*. 2021; College Station, TX: StataCorp LP.

[19] Manning W, Mullahy J. Estimating Log Models: To Transform or Not to Transform? J Health Econ. 2001;20:461-494.

[20] A Medicare beneficiary is eligible for a single wellness visit annually. For ACSC hospitalizations, unplanned 30-day hospital readmissions, and unplanned hospitalizations 30-day post SNF readmissions, few beneficiaries had events (4.9 percent for ACS hospitalizations, 16.6 percent for 30-day readmissions, and 18.9 percent for 30-day post-SNF readmissions), and fewer had more than one event. We chose to model these as binary measures, whether or not the beneficiary had the event during the year. We tested that our conclusions were robust to modelling the latter three measures as counts.

Post-estimation calculations. We performed the following four post-estimation calculations:

- Because we used nonlinear models for the outcome variables, we employed the approach suggested by Puhani (2012) to express the DID δ_1 coefficient in Equation D.1 and D.2 as the estimated outcome for the treated VTAPM group relative to its expected outcome absent the treatment.[21] We calculated these results using post-estimation predictions, computing the marginal effect for all treated beneficiaries and subtracting the marginal effect for these beneficiaries with the DID interaction term set to zero.[22] We computed confidence intervals using the delta method.[23]
- We expressed the estimated impact as a percent of the expected outcome for the VTAPM group in a given PY absent the model. We computed the percentage change from the DID coefficient for outcomes estimated with log-linear models.[24] For outcomes estimated with two-part models, we computed the predicted level of outcomes for VTAPM beneficiaries in the PY absent VTAPM incentives by summing the adjusted mean for the comparison group in the PY and the adjusted difference between the VTAPM and the comparison group in the BYs.[25] We obtained the latter from the average predicted and adjusted outcomes for the VTAPM and comparison group in the BYs, which we calculated post-estimation.
- We used post-estimation marginal effects to predict the average adjusted outcomes (e.g., the conditional means) for the VTAPM and comparison group in the baseline period (all BYs) and PY. We report these for the VTAPM and comparison group in **Appendix F**, alongside the impact estimates to understand if the latter were driven by improved performance for the VTAPM group or deteriorating performance for the comparison group, or both.
- Finally, we expressed impact estimates for measures of spending and utilization from our annual models as per beneficiary per year (PBPY) and per 1,000 BPY, respectively.

[21] Puhani P. The Treatment Effect, the Cross Difference, and the Interaction Term in Nonlinear 'Difference-in-Differences' Models. Econ Lett. 2012;115()1:85-87.

[22] Karaca-Mandic P, Norton EC, Dowd B. Interaction Terms in Nonlinear Models. Health Serv Res. 2012;47(1pt1):255-274.

[23] Dowd BE, Greene WH, Norton EC *Computation of Standard Errors*. Health Serv Res. 2014;49(2):731-750.

[24] For a log-linear model with a dummy variable D: $ln[E(Y)] = a + bX + cD + \varepsilon$; if D switches from 0 to 1, then the percentage impact of D on Y is $100[exp(c) - 1]$, where c is the coefficient on the dummy variable.

[25] McWilliams J, Michael LA, Hatfield ME, Chernew ME, Landon BE, Schwartz AL. Early Performance of Accountable Care Organizations in Medicare. NEJM. 2016;374(24):2357-2366.

Appendix D.6: Assessment of Common Baseline Trends

A key assumption of the DID design is that the VTAPM and the comparison group had similar trends in outcomes during the baseline years before the start of VTAPM. This assumption of common trends allows the comparison group to establish a reliable representation of the VTAPM group in a given PY in the absence of the VTAPM model. We tested this assumption using two methods (see **Appendix Exhibits F.11** and **F.12** for results from these two methods):

- Equation D.3 shows the specification of a model to estimate the average marginal effect for VTAPM in BY1 relative to BY3. We assessed whether the coefficient θ_{-2} for the leading interaction term in BY1 was significantly different from zero ($p<0.05$). If this was significantly different, the assumption of common trends did not hold.

Equation D.3. Test of common trends via estimation of VTAPM's average marginal effect in BY1 over BY3

$$E(Y_{ijkt}) = \alpha_0 + \beta_1 VTAPM + \gamma_1 BY2 + \gamma_1 BY1 + \gamma_1 PY + \theta_{-2} VTAPM_j * BY1_t + \theta_1 VTAPM_j * PY_t + \theta_1 BENE_{ijkt} + \varphi_2 CNTY_j + \varepsilon_{ijkt}$$

- To mitigate the effect of non-common trends between the VTAPM and comparison groups, we included a term $\sigma 1\ VTAPM * YEAR$ (linear year*treatment interaction term) in our DID models (see Equations D.1 and D.2). As an additional check for common trends, we assessed whether the coefficient σ_1 for the interaction term was significantly different from zero ($p<0.05$).

Appendix D.7: Net Impact Estimation

In addition to estimating the gross impact of the VTAPM model on total Medicare Parts A and B spending, we also calculate the net spending impact of the VTAPM by accounting for incentive payments from CMS for shared savings or losses for VTAPM and comparison practitioners in the baseline and performance years. Incentive payments estimated for the treatment and comparison group populations include the following:

- **Treatment providers, PY**: MAPCP incentives received during the PY + shared savings/losses for treatment practitioners in the PY.
- **Treatment providers, BYs**: MAPCP incentives received during the BYs + shared savings/losses for treatment practitioners who participated in the SSP, Pioneer, or NGACO Models in the BYs.
- **Comparison providers, PY**: Shared savings/losses paid to comparison practitioners who participated in the SSP, Pioneer, or NGACO in the PY.
- **Comparison providers, BYs**: Shared savings/losses paid to comparison practitioners who participated in the SSP, Pioneer, or NGACO Models in the BYs.

The $9.5 million in Medicare start-up funding provided by CMS in the 2017 cooperative payment agreement is not included in the net spending estimation. **Appendix Exhibit D.7** shows the total PBPY dollar amount of CMS incentive payment amounts that are included in the net impact estimation for the ACO- and state-level analyses in PY3.

Appendix Exhibit D.7: Estimated CMS Incentive Payments for VTAPM and Comparison Practitioners, PBPY

		PY1		PY2		PY3	
		BYs	PY	BYs	PY	BYs	PY
ACO	**VTAPM**	$102.06	$240.05	$102.06	$160.99	$107.19	$263.28
	Comparison	$40.35	$52.71	$32.74	$48.44	$24.92	$100.59
State	**VTAPM**	$102.49	$168.59	$102.49	$140.05	$107.10	$194.27
	Comparison	$16.64	$30.04	$16.75	$44.32	$17.01	$44.60

NOTE: All estimates are $PBPY in 2019 USD. Net incentive payments for VTAPM in each PY are the VTAPM group's incentive payments (PY-BYs) minus the comparison group's incentive payments (PY-BYs).

To estimate PBPY incentives for VTAPM providers in the baseline and comparison providers in the baseline and performance years, we used the following methods:

- For the ACO-level analysis, we identified beneficiaries attributed by the ACO-level concurrent alignment receiving a meaningful level of care during a year from providers participating in SSP, Pioneer, or NGACO Models based on the CMS MDM, then applied the PBPY incentive costs associated for those ACOs using publicly available data on annual shared savings/losses incurred by providers in CMS models.

- For the state-level analysis, we identified beneficiaries attributed by the state-level concurrent alignment who were also attributed to SSP, Pioneer, or NGACO Models based on the CMS MDM file, then linked the data to publicly available data on annual shared savings/losses for those ACOs at the beneficiary level.

We weighted PBPY estimates for both the ACO- and state-level analyses using the analytic EB weights. To calculate the net incentive amount, we subtracted the PY-BY difference in the comparison group from the PY-BY difference in the treatment group. The net incentive amount is subtracted from the gross Medicare spending estimate to calculate the net Medicare spending estimate presented in the report.

Appendix D.8: Sensitivity Analyses

We conducted the following sensitivity tests to assess the robustness of our estimates to different assumptions in PY3:

- **Include CY 2017 as baseline** – The scale and intensity of Vermont's delivery system reform initiatives in the baseline period may have contributed to a permanent structural change in the long-term Medicare spending trajectory. The impact of these initiatives may have persisted into the Model's "ramp-up" year (2017) and performance periods. Inclusion of 2017 as a baseline year allows us to account for some of the delayed impacts of the baseline period initiatives. Additionally, the Medicare ACO initiative was not implemented until 2018, so, although 2017 was a Model performance year, no Medicare ACO initiative activities were in place. For this sensitivity analysis, we include CY 2017 and consider it in the model as a fourth year in the baseline period.
- **No COVID-19 PHE variable in EB weight** – In estimation of the EB weights, we excluded the COVID-19 PHE covariate (number of cumulative deaths per 100,000 population in PY3) from the balancing model.
- **Cap spending at 99th percentile** – We capped the Medicare spending outcome at the 99th percentile to assess the robustness of the impact estimates to the possibility of random variation in the highest spenders between the VTAPM and comparison group.
- **Alternative model distribution** – Instead of using the distribution recommended by the Park test, we used the second-best distribution, which was Poisson for both the ACO- and state-level analyses. This tests the robustness of our results to different distributional assumptions.
- **No linear interaction term** – We removed the linear interaction term from the DID model statement, which accounts for differences in the linear trend in the baseline period between the treatment and comparison groups.
- **Include upside ACO rate covariate** – We added a covariate to the DID model statement representing the percent of beneficiaries in a county who participated in an ACO with upside risk.
- **Include MA rate covariate** – We added a covariate to the DID model statement representing the percent of beneficiaries in a county who had one or more months of MA coverage.

Appendix Exhibits D.8.1 and D.8.2 present the findings from each of these analyses for PY3. While we observe a moderate amount of variation from the results of the main DID model presented in this report, findings were overall similar to the main findings and showed no significant impact of VTAPM on total Medicare spending.

Appendix Exhibit D.8.1. ACO-Level PY3: Sensitivity Analyses for Total Medicare Spending

	Baseline (2014–2016)		PY3 (2020)							
					Difference-in-Differences					
	VTAPM	Comp.	VTAPM	Comp.	DID Estimate	VTAPM Change	Comp. Change	90% CI	% Impact	p
Main spending model										
Full Year	$10,455	$10,050	$9,057	$9,385	-$732.92	-$1,398	-$665	-$1,531.16, $65.33	-7.25	0.131
Through Q3	$7,889	$7,300	$7,119	$6,697	-$166.73	-$769.52	-$603	-$877.85, $544.39	-2.34	0.700
Include CY 2017 as baseline										
Full Year	$10,343	$10,088	$8,505	$9,448	-$1,199.00***	-$1,838	-$640	-$1,628.95, -$768.07	-11.3	0.000
Through Q3	$7,817	$7,345	$6,702	$6,744	-$514.26*	-$1,115	-$601	-$952.53, -$75.99	-1.40	0.054
No COVID-19 PHE variable in EB weight										
Full Year	$10,508	$10,005	$8,889	$9,296	-$910.29*	-$1,619	-$709	-$1,674.40, -$146.19	-8.83	0.050
Through Q3	$7,895	$7,295	$6,936	$6,653	-$316.26	-$958	-$642	-$967.21, $334.70	-4.35	0.424
Cap spending at 99th percentile										
Full Year	$10,236	$9,553	$8,721	$8,796	-$757.29	-$1,514	-$757	-$1,540.38, $25.80	-7.68	0.112
Through Q3	$7,700	$6,886	$6,881	$6,215	-$147.97	-$820	-$672	-$820.70, $524.76	-2.16	0.718
Alternative model distribution										
Full Year	$10,940	$11,560	$9,146	$10,807	-$1,040.46**	-$1,793	-$753	-$1,801.64, -$279.28	-9.69	0.025
Through Q3	$8,273	$8,710	$7,208	$8,041	-$395.90	-$1,065	-$669	-$976.77, $184.97	-5.23	0.262
No linear interaction term										
Full Year	$10,612	$9,918	$9,886	$9,265	-$72.11	-$726	-$654	-$573.02, $428.81	-0.76	0.813
Through Q3	$7,953	$7,249	$7,443	$6,651	$87.97	-$510	-$598	-$302.81, $478.74	1.28	0.711
Include upside ACO rate covariate										
Full Year	$10,443	$10,060	$9,030	$9,394	-$748.04	-$1,414	-$666	-$1,719.09, $223.00	-7.39	0.205
Through Q3	$7,838	$7,341	$7,000	$6,734	-$231.25	-$838	-$607	-$1,064.00, $601.51	-3.23	0.648
Include MA rate covariate										
Full Year	$10,274	$10,211	$9,023	$9,532	-$572.28	-$1,251	-$679	-$1,379.15, $234.60	-5.87	0.243
Through Q3	$7,768	$7,399	$7,078	$6,787	-$77.59	-$690	-$612	-$788.77, $633.59	-1.12	0.858

NOTE: Impacts are PBPY, in 2020 USD. Asterisks denote significance at *p<0.10, **p<0.05, ***p<0.01. VTAPM Change and Comp. Change columns indicate the change in average adjusted outcome for the VTAPM or comparison group, respectively, between PY3 and the baseline; cells highlighted in blue indicate a decrease between PY3 (2020) and the baseline for the VTAPM or comparison group.

Appendix Exhibit D.8.2. State-Level PY3: Sensitivity Analyses for Total Medicare Spending

	Baseline (2014–2016)		PY3 (2020)							
					Difference-in-Differences					
	VTAPM	Comp.	VTAPM	Comp.	DID Estimate	VTAPM Change	Comp. Change	90% CI	% Impact	p
Main spending model										
Full Year	$10,666	$11,173	$8,724	$10,879	-$1,648.72*	-$1,943	-$294	-$3,242.89, -$54.55	-14.0	0.089
Through Q3	$8,078	$8,291	$6,647	$8,024	-$1,164.65	-$1,432	-$267	-$3,155.75, $826.45	-13.5	0.336
Include CY 2017 as baseline										
Full Year	$10,810	$11,089	$9,587	$10,768	-$901.37**	-$1,223	-$321	-$1,600.80, -$201.94	-8.2	0.034
Through Q3	$8,148	$8,235	$7,118	$7,965	-$759.60	-$1,030	-$270	-$2,024.03, $504.84	-13.4	0.323
No COVID PHE variable in EB weight										
Full Year	$10,689	$11,212	$8,852	$10,753	-$1,377.99**	-$1,837	-$459	-$2,394.47, -$361.50	-12	0.026
Through Q3	$8,116	$8,349	$6,857	$7,859	-$769.03	-$1,259	-$490	-$1,784.73, $246.67	-9.3	0.213
Cap spending at 99th percentile										
Full Year	$10,357	$10,782	$8,591	$10,114	-$1,098.12***	-$1,766	-$668	-$1,685.60, -$510.63	-10.2	0.002
Through Q3	$7,763	$8,023	$6,529	$7,379	-$589.60**	-$1,234	-$644	-$1,081.70, -$97.50	-7.7	0.049
Alternative model distribution										
Full Year	$10,211	$10,702	$8,372	$10,030	-$1,167.38***	-$1,840	-$672	-$1,694.63, -$640.12	-11.1	0.000
Through Q3	$7,663	$7,951	$6,450	$7,292	-$553.47**	-$1,213	-$659	-$990.96, -$115.98	-7.5	0.037
No linear interaction term										
Full Year	$10,882	$10,950	$10,059	$10,668	-$541.35	-$824	-$282	-$1,715.09, $632.38	-5.1	0.448
Through Q3	$8,182	$8,186	$7,282	$7,927	-$641.32	-$901	-$259	-$2,318.92, $1,036.28	-7.9	0.529
Include upside ACO rate covariate										
Full Year	$11,156	$10,685	$10,040	$10,420	-$850.31	-$1,116	-$265	-$2,393.28, $692.66	-7.6	0.365
Through Q3	$8,459	$7,928	$7,652	$7,690	-$568.61	-$806	-$238	-$2,488.30, $1,351.08	-7.0	0.626
Include MA rate covariate										
Full Year	$10,720	$11,116	$8,715	$10,825	-$1,713.98*	-$2,005	-$291	-$3,392.03, -$35.93	-14.4	0.093
Through Q3	$8,126	$8,241	$6,641	$7,978	-$1,221.14	-$1,484	-$263	-$3,275.56, $833.28	-14.0	0.328

NOTE: Impacts are PBPY, in 2020 USD. Asterisks denote significance at *p<0.10, **p<0.05, ***p<0.01. VTAPM Change and Comp. Change columns indicate the change in average adjusted outcome for the VTAPM or comparison group between PY3 and the baseline; cells highlighted in blue indicate a decrease between PY3 (2020) and the baseline for the VTAPM or comparison group.

We also conducted sensitivity analyses to test the impact of the inclusion of COVID-19 PHE-specific variables in PY3 (2020) as covariates in our main DID model. We tested four variations as part of our sensitivity testing, including individual-level covariates, area-level covariates, and a combination of both. All variables were coded as non-zero values in the PY3 (2020) data and zeroes for all prior years. We tested the inclusion of the following covariates in the DID model:

- **Flag for COVID-19 diagnosis** – An individual-level flag indicating that a beneficiary had a diagnosis of COVID-19 in their Medicare claims.
- **Average Pandemic Vulnerability Index (PVI) score[26] –** A county-level flag that creates a risk profile (indicated by the PVI score) to estimate a community's vulnerability to the COVID-19 PHE. We use the average PVI score across 2020 for each beneficiary based on their county of residence. The PVI score integrates area-level variables in four domains: infection rate, population concentration, intervention measures, and health and environment.
- **Cumulative number of deaths per 100,000 population** – A county-level flag that indicates the cumulative number of deaths per 100,000 population that occurred in a specific county through the entirety of PY3 (2020).
- **Flag for COVID-19 diagnosis *and* number of cumulative deaths per 100,000 population** – The final sensitivity test includes both the covariate for individual-level flag for COVID-19 diagnosis and the covariate for county-level cumulative number of deaths per 1,000 in the same DID model.

Appendix Exhibits D.8.3 and D.8.4 present the findings from each of these COVID-19 PHE-related sensitivity analyses for PY3 for the ACO- and State-level impact analyses. While we observe a moderate amount of variation from the results of the main DID model presented in this report, sensitivity findings were overall similar to the main findings (i.e., in the same direction and of a relatively similar magnitude) and do not change our overall interpretation of the main findings.

[26] For additional details on the PVI score and its estimation models, please see https://www.niehs.nih.gov/research/programs/coronavirus/covid19pvi/details/index.cfm.

Appendix Exhibit D.8.3. ACO-Level PY3: Sensitivity Tests of COVID-19 PHE Covariates for Total Medicare Spending

	Baseline (2014–2016)		PY3 (2020)							
					Difference-in-Differences					
	VTAPM	Comp.	VTAPM	Comp.	DID Estimate	VTAPM Change	Comp. Change	90% CI	% Impact	p
Main spending model										
Full Year	$10,455	$10,050	$9,057	$9,385	-$732.92	-$1,398	-$665	-$1,531.16, $65.33	-7.25	0.131
Through Q3	$7,889	$7,300	$7,119	$6,697	-$166.73	-$7670	-$603	-$877.85, $544.39	-2.34	0.700
+ COVID-19 Diagnosis Covariate										
Full Year	$10,483	$10,025	$9,219	$9,363	-$601.23	-$1264	-$663	-$1369.56, $167.09	-6.08	0.198
Through Q3	$7,904	$7,288	$7,190	$6,686	-$112.04	-$714	-$602	-$802.06, $577.97	-1.59	0.789
+ PVI Score Covariate										
Full Year	$10,476	$10,032	$9,436	$9,368	-$376.5	-$1040	-$663	-$1096.65, $343.65	-4.5	0.390
Through Q3	$7,909	$7,283	$7,385	$6,682	$76.45	-$525	-$601	-$480.10, $633.00	1.36	0.821
+ Cumulative Deaths Covariate										
Full Year	$10,475	$10,033	$9,115	$9,369	-$696.1	-$1360	-$664	-$1452.19, $59.98	-7.05	0.130
Through Q3	$7,907	$7,285	$7,160	$6,684	-$145.75	-$747	-$601	-$810.58, $519.07	-2.1	0.718
+ COVID-19 Diagnosis *and* Cumulative Deaths Covariates										
Full Year	$10,498	$10,013	$9,259	$9,351	-$577.39	-$1239	-$662	-$1320.06, $165.28	-5.94	0.201
Through Q3	$7,919	$7,276	$7,222	$6,675	-$96.29	-$697	-$601	-$748.29, $555.70	-1.4	0.808

SOURCE: NORC analysis of Medicare claims.

NOTE: Impacts are PBPY, in 2020 USD. Asterisks denote significance at *p<0.10, **p<0.05, ***p<0.01. PVI=Pandemic Vulnerability Index. Cumulative deaths covariate is the cumulative number of deaths per 100,000 population. VTAPM Change and Comp. Change columns indicate the change in average adjusted outcome for the VTAPM or comparison group between PY3 and the baseline; cells highlighted in blue indicate a decrease between PY3 (2020) and the baseline for the VTAPM or comparison group.

Appendix Exhibit D.8.4. State-Level PY3: Sensitivity Tests of COVID-19 PHE Covariates for Total Medicare Spending

	Baseline (2014–2016)		PY3 (2020)							
					Difference-in-Differences					
	VTAPM	Comp.	VTAPM	Comp.	DID Estimate	VTAPM Change	Comp. Change	90% CI	% Impact	p
Main spending model										
Full Year	$10,666	$11,173	$8,724	$10,879	-$1,648.72*	-$1,943	-$294	-$3,242.89, -$54.55	-14.0	0.089
Through Q3	$8,078	$8,291	$6,647	$8,024	-$1,164.65	-$1,432	-$267	-$3,155.75, $826.45	-13.5	0.336
+ COVID-19 Diagnosis Covariate										
Full Year	$10,693	$11,199	$8,636	$10,777	-$1,636.36*	-$2,058	-$421	-$3,112.53, -$160.18	-14.1	0.068
Through Q3	$8,089	$8,302	$6,610	$7,984	-$1,160.16	-$1,478	-$318	-$3,096.59, $776.26	-13.6	0.324
+ PVI Score Covariate										
Full Year	$10,664	$11,182	$9,304	$10,865	-$1,042.36	-$1,360	-$317	-$2,222.55, $137.83	-10.9	0.146
Through Q3	$8,075	$8,298	$7,131	$8,010	-$655.88	-$944	-$288	-$1,877.08, $565.32	-9.75	0.377
+ Cumulative Deaths Covariate										
Full Year	$10,664	$11,178	$8,758	$10,872	-$1,600.72*	-$1,907	-$306	-$3,076.67, -$124.76	-13.8	0.074
Through Q3	$8,075	$8,295	$6,685	$8,013	-$1,108.97	-$1,391	-$282	-$2,877.85, $659.91	-13.2	0.302
+ COVID-19 Diagnosis *and* Cumulative Deaths Covariates										
Full Year	$10,694	$11,198	$8,632	$10,778	-$1,641.38*	-$2,062	-$420	-$3,055.11, -$227.64	-14.2	0.056
Through Q3	$8,086	$8,305	$6,637	$7,979	-$1,123.85	-$1,450	-$326	-$2,863.83, $616.14	-13.4	0.288

SOURCE: NORC analysis of Medicare claims.

NOTE: Impacts are PBPY, in 2020 USD. Asterisks denote significance at *p<0.10, **p<0.05, ***p<0.01. PVI=Pandemic Vulnerability Index. Cumulative deaths covariate is the cumulative number of deaths per 100,000 population. VTAPM Change and Comp. Change columns indicate the change in average adjusted outcome for the VTAPM or comparison group between PY3 and the baseline; cells highlighted in blue indicate a decrease between PY3 (2020) and the baseline for the VTAPM or comparison group.

Appendix E. Supporting Documentation for Chapter 2

Appendix Exhibit E.1. Payer ACO Initiatives by Health Service Area in PY3 (2020)

Health Service Area	Home Hospital	Payer ACO Initiatives				
		Medicare	Medicaid	BCBSVT QHP	BCBSVT Primary	MVP QHP
Brattleboro	Brattleboro Memorial Hospital	✓	✓	✓	✓	✓
Bennington	Southwestern Vermont Medical Center	✓	✓	✓	✓	✓
Berlin	Central Vermont Medical Center	✓	✓	✓	✓	✓
Burlington	University of Vermont Medical Center	✓	✓	✓	✓	✓
Lebanon	Dartmouth-Hitchcock Medical Center		✓	✓	✓	✓
Middlebury	Porter Medical Center	✓	✓	✓	✓	✓
Morrisville	Copley Hospital		✓			✓
Newport	North Country Hospital		✓	✓	✓	✓
Randolph	Gifford Medical Center		✓			✓
Rutland	Rutland Regional Medical Center		✓		✓	✓
Springfield	Springfield Hospital		✓	✓	✓	✓
St. Albans	Northwestern Medical Center	✓	✓	✓	✓	✓
St. Johnsbury	Northeastern Regional Hospital		✓		✓	✓
Townsend	Grace Cottage					
Windsor	Mt. Ascutney Hospital	✓	✓	✓	✓	

SOURCE: OneCare Vermont's FY 2022 Budget Submission (October 1, 2021).

Appendix Exhibit E.2. Participation by Provider Type, PY3 (2020)

Provider Type	Added to Model's Provider Network in PY3 (2020)	Total in Model's Provider Network as of PY3 (2020)
Hospital	1	13
FQHCs	3	9
Primary Care Practices	8	421
Independent Specialists	3	25
Home Health and Hospice	0	9
SNFs	4	27
Designated mental health agencies & specialized service agencies	1	10
Other	5	6

SOURCE: OneCare Vermont's 2020 Revised Budget, GMCB Staff Analysis. July 29, 2020, available at https://gmcboard.vermont.gov/sites/gmcb/files/Board-Meetings/FY%202020%20ACO%20Revised%20Budget%20Presentation%20-%20updated%208.12.2020.pdf.

Appendix Exhibit E.3. Practitioner Participation by VTAPM ACO Initiative and County

	Medicare		Medicaid		Commercial	
	Participants	Eligible Non-Participants	Participants	Eligible Non-Participants	Participant	Eligible Non-Participants
Addison	176	56	177	274	173	278
Bennington	215	129	198	462	184	476
Caledonia	4	238	154	374	7	518
Chittenden	1,674	524	1,568	2,732	1,565	2,735
Essex	-	8	5	15	-	20
Franklin	203	51	182	290	182	290
Grand Isle	3	5	2	17	2	17
Lamoille	3	126	156	220	6	349
Orange	3	135	135	211	20	314
Orleans	-	134	71	231	56	244
Rutland	11	318	268	535	13	783
Washington	455	148	449	668	428	685
Windham	225	177	211	667	209	669
Windsor	82	204	182	733	166	749
Non-Vermont	40	-	1,090	-	1,089	-

SOURCE: NORC analysis of VTAPM ACO Provider Lists, Medicare Professional FFS claims, and CMS Public Use File (PECOS & NPPES).

NOTE: We used the VTAPM Provider Files to identify the VTAPM ACO participants. We identified the eligible, non-participants based on their specialty designation; non-participants needed to have one or more of the specialty designations held by the participants. For the Medicare ACO participants and eligible non-participants, we used Medicare claims to measure the volume of services provided in each county by the practitioners and attributed the practitioners to the county in which they provided the plurality of the services. We used specialty codes in NPPES to identify non-participating practitioners who were eligible to participate in the Medicaid and BCBS ACO initiatives; NORC did not have access to usable Medicaid and BCBS claims data to validate the eligibility criteria. We used a combination of PECOS and NPPES data to attribute Medicaid and BCBS ACO participants and eligible, non-participants to a specific Vermont county.

Appendix Exhibit E.4. Practice Participation by Practice Type and Practitioner Participation by Specialty Designation

	Performance Year 3						
		VTAPM Participants					
			VTAPM Participants Participating in…				
	Total	All VTAPM Participants	All-Payer Initiatives	Medicare ACO	Medicaid ACO	Commercial ACO	Non-Participants
Practices and Health Centers							
Practices (TIN)	939	105	64	71	99	82	834
Critical Access Hospitals	8	7	2	2	7	4	1
Federally Qualified Health Centers	50	44	13	9	44	21	6
Rural Health Centers	9	8	0	0	8	4	1
Practitioners (NPI)							
All Practitioners Affiliated with Eligible Practices	6,904	5,156	2,786	3,094	4,848	4,100	1,748
Primary Care Specialty	2,283	1,966	1,049	1,171	1,844	1,549	317
Non-Physician Primary Care Specialists	1,205	1,021	440	600	941	777	184
Eligible Specialists	707	617	307	347	577	505	90
Other*	3,914	2,573	1,430	1,576	2,427	2,046	1,341

SOURCE: Analysis of Medicare provider and claims data by NORC.

NOTE: *Other represents attribution-ineligible practitioners. VTAPM participants include all practices and practitioners listed in the VTAPM ACO Provider Files. Eligible non-participants are practitioners with one or more eligible specialty designations who billed Medicare for services rendered within Vermont in the PY.

Appendix Exhibit E.5. Practice Participation in the VTAPM Medicare ACO Initiative

	Performance Year 3			
	Medicare Attribution-Eligible Practices			
	Total (Excludes Preferred Practices) (N)	Participants (N)	Non-Participants (N)	Preferred Practices (N)
Practices and Health Centers				
Practices (TIN)	207	30	177	31
CAHs	8	2	6	-
FQHCs	41	9	32	-
RHCs	8	0	8	-
Practice Size: 1-6 Practitioners	178	14	164	14
Practice Size: 6-30 Practitioners	60	16	44	3
Practice Size: 31+ Practitioners	25	11	14	1
Prior Medicare SSP Experience	93	31	62	14

SOURCE: Analysis of Medicare provider and claims data by NORC.

NOTE: We used the VTAPM Provider Files to identify the VTAPM ACO participants. We identified the eligible non-participants based on their specialty designation; non-participants needed to have one or more of the specialty designations held by the participants. For the Medicare ACO participants and eligible non-participants, we used Medicare claims to measure the volume of services provided in each county by the practitioners and attributed the practitioners to the county in which they provided the plurality of the services. Preferred practitioners are selected by the VTAPM ACO for their ability to contribute to the VTAPM ACO's success, but their patient panels do not qualify for attribution to the Medicare ACO initiative, and they are not required to participate in quality reporting. Definition from: https://www.jonesday.com/en/insights/2015/04/hhs-announces-next-generation-aco-model-of-payment-and-care-delivery.

Appendix Exhibit E.6. Vermont, VTAPM, and Scale Target Populations by Payer, PY3

Payer	2020 Vermont Population	Scale Target Denominator	Population Participating in Scale Target ACO Initiatives
Medicare	123,173	115,496	53,842 (46.6%)
Medicaid	129,272	124,069	114,335 (92.2%)
Commercial: Self-Funded	165,431	165,431	25,834 (15.6%)
Commercial: Fully Insured	149,695	90,613	36,754 (40.6%)
Total	643,077	515,533	230,765 (44.8%)

Appendix F. Supporting Documentation for Chapter 4

Appendix Exhibit F.1. ACO-Level Analysis: Relative Change in Outcomes, 2019–2020

	VTAPM				Comparison			
	2019	2020	Difference	Relative Change	2019	2020	Difference	Relative Change
Spending ($ PBPY)								
Total Medicare Spending (Parts A and B)	$9,985	$9,023	-$962	-9.6%	$11,638	$11,116	-$522	-4.5%
Utilization (per 1,000 BPY)								
Acute care stays	229	198	-31	-13.5%	287	241	-46	-16.2%
Acute care days	1,106	1,062	-44	-4.0%	1,406	1,264	-142	-10.1%
ED visits and observation stays	555	469	-86	-15.5%	634	514	-120	-19.0%
E&M visits	22,473	19,130	-3,343	-14.9%	12,927	11,047	-1,880	-14.5%
Primary care E&M visits	15,002	12,235	-2,766	-7.7%	6,372	6,035	-336	-5.3%
Specialty care E&M visits	7,471	6,895	-576	-28.9%	6,555	5,012	-1,543	-23.5%
SNF stays	54	41	-13	-24.3%	58	47	-11	-19.2%
SNF days	1242	991	-251	-20.2%	1,390	1,127	-263	-18.9%
Home health visits	2371	2122	-249	-10.5%	3,320	2,918	-402	-12.1%
Home health episodes	119	166	46	38.8%	118	151	33	27.6%
Hospice days	1386	1454	68	4.9%	1,824	2,059	235	12.9%
Imaging, procedures, and tests	31817	26317	-5500	-17.3%	40,933	36,238	-4,695	-11.5%
Quality of Care (per 1,000 BPY)								
Annual wellness visit	361	328	-32	-9.0%	397	388	-9	-2.2%
ACS hospitalizations	29	24	-5	-16.3%	35	29	-6	-17.9%
Unplanned 30-day readmissions	83	74	-9	-11.2%	85	76	-9	-10.4%

NOTE: PBPY=per beneficiary per year; BPY=beneficiary per year. Relative change is measured using 2019 as the reference year. Darker shading indicates a greater decrease in 2020 relative to 2019.

Appendix Exhibit F.2. State-Level Analysis: Relative Change in Outcomes, 2019–2020

	Vermont				Comparison			
	2019	2020	Difference	Relative Change	2019	2020	Difference	Relative Change
Spending ($ PBPY)								
Total Medicare Spending (Parts A and B)	$11,480	$10,234	-$1,246	-10.9%	$12,600	$12,628	$28	0.2%
Utilization (per 1,000 BPY)								
Acute care stays	245	203	-42	-17.0%	296	246	-50	-16.8%
Acute care days	1,195	1,054	-141	-11.8%	1,427	1,341	-86	-6.0%
ED visits and observation stays	584	481	-103	-17.7%	623	528	-95	-15.2%
E&M visits	14,665	12,073	-2,592	-17.7%	13,474	11,758	-1,716	-12.7%
Primary care E&M visits	7,006	6,632	-374	-5.3%	6,809	6,570	-240	-3.5%
Specialty care E&M visits	7,659	5,441	-2,218	-29.0%	6,665	5,188	-1477	-22.2%
SNF stays	61	46	-16	-25.8	68	57	-12	-17.1%
SNF days	1,452	1,101	-351	-24.2	1,718	1,454	-264	-15.4%
Home health visits	2,499	2,180	-318	-12.7%	3,164	2,490	-675	-21.3%
Home health episodes	122	170	48	39.0%	115	139	23	20.3%
Hospice days	1,495	1,489	-6	-0.4%	1,722	1,842	121	7.0%
Imaging, procedures, and tests	31,855	26,517	-5,337	-16.8%	42,052	36,329	-5,724	-13.6%
Quality of Care (per 1,000 BPY)								
Annual wellness visit	310	288	-22	-7.2%	311	275	-37	-11.8%
ACS hospitalizations	32	25	-7	-21.7%	39	29	-10	-26.0%
Unplanned 30-day readmissions	86	78	-9	-10.1%	93	84	-9	-9.8%

NOTE: PBPY=per beneficiary per year; BPY=beneficiary per year. Relative change is measured using 2019 as the reference year. Darker shading indicates a greater decrease in 2020 relative to 2019.

Appendix Exhibit F.3. PY3 ACO-Level: Descriptive Characteristics of VTAPM and Weighted Comparison Beneficiaries

	Baseline Period						Performance Period	
	BY3		BY2		BY1		PY3	
	VTAPM	Comparison	VTAPM	Comparison	VTAPM	Comparison	VTAPM	Comparison
Number of Beneficiaries	41,634	41,634	43,916	43,916	47,565	47,565	49337	49,337
Total Person-Months	491,394	491,394	517,608	517,609	561,358	561,358	582,717	582,717
Mean Months of Alignment ± SD	11.8 ± 1.2	11.8 ± 1.2	11.8 ± 1.3	11.8 ± 1.3	11.8 ± 1.2	11.8 ± 1.2	11.8 ± 1.2	11.8 ± 1.2
Mean Age ± SD	71.6 ± 12.9	71.6 ± 13.0	71.8 ± 12.7	71.7 ± 12.7	71.9 ± 12.5	71.8 ± 12.6	72.5 ± 11.7	72.5 ± 11.9
Gender (%)								
Male	42.8	42.8	42.9	42.9	42.9	42.9	43.6	43.6
Race/Ethnicity (%)								
White	96.1	96.0	95.6	95.6	95.1	95.1	93.7	93.7
Black	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Hispanic	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7
Asian	0.6	0.6	0.6	0.6	0.6	0.6	0.8	0.8
Other	2.1	2.1	2.6	2.6	3.0	3.0	4.3	4.3
Disability/ESRD (%)								
Disability	17.7	17.7	17.3	17.3	16.7	16.7	13.9	13.9
ESRD	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Coverage (%)								
Any Dual Eligibility	32.2	32.0	31.3	31.5	30.5	29.7	24.9	24.6
Any Part D Coverage	74.6	74.7	82.1	82.1	83.0	82.8	83.9	83.8
Chronic Conditions								
Mean No. of Chronic Conditions ± SD	4.2 ± 3.3	4.2 ± 3.3	4.1 ± 3.2	4.1 ± 3.3	4.2 ± 3.3	4.2 ± 3.4	4.5 ± 3.5	4.5 ± 3.5
Alzheimer's/Dementia (%)	6.6	6.6	6.4	6.4	6.3	6.3	6.2	6.2
Chronic Kidney Disease (%)	10.9	10.9	11.4	11.4	12.6	12.6	17.8	17.8
COPD (%)	9.1	9.1	9.2	9.2	9.4	9.4	8.9	8.9
Congestive Heart Failure (%)	8.9	8.9	8.6	8.6	8.5	8.5	9.3	9.3
Diabetes (%)	22.2	22.2	21.8	21.8	21.2	21.2	20.6	20.6
Ischemic Heart Disease (%)	22.0	22.0	21.8	21.8	21.9	21.9	22.5	22.5
Depression (%)	20.1	20.1	20.0	20.0	20.5	20.5	21.1	21.1
RA/OA (%)	26.5	26.5	27.3	27.3	28.7	28.7	31.8	31.8
Stroke/TIA (%)	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4

	Baseline Period						Performance Period	
	BY3		BY2		BY1		PY3	
	VTAPM	Comparison	VTAPM	Comparison	VTAPM	Comparison	VTAPM	Comparison
Cancer (%)	7.8	7.7	7.7	7.7	7.7	7.6	8.1	8.1
Mortality (%)								
Death in Reference Period	3.6	3.6	3.7	3.7	3.6	3.6	3.5	3.5
Community Characteristics								
Median Income ($ ± SD)	60,784 ± 14,248	64,221 ± 21,069	60,793 ± 14,244	64,430 ± 21,739	61,020 ± 14,339	64,136 ± 21,078	61,652 ± 14,566	63,580 ± 19,207
Below Poverty Line (% ± SD)	11.0 ± 6.4	10.7 ± 5.6	11.0 ± 6.4	10.7 ± 5.6	11.0 ± 6.4	10.7 ± 5.6	10.8 ± 6.4	10.9 ± 5.6
Bachelor's Degree or Higher (% ± SD)	39.4 ± 13.8	36.6 ± 16.0	39.4 ± 13.7	36.9 ± 16.3	39.4 ± 13.8	36.4 ± 16.0	39.6 ± 14.0	36.8 ± 14.9
Unemployment (% ± SD)	4.8 ± 2.2	5.9 ± 3.2	4.8 ± 2.2	5.9 ± 3.3	4.8 ± 2.2	5.8 ± 3.3	4.7 ± 2.1	5.7 ± 3.0
Uninsured (% ± SD)	4.8 ± 1.9	9.2 ± 4.8	4.8 ± 1.9	9.2 ± 4.9	4.7 ± 1.9	9.2 ± 4.9	4.7 ± 1.9	9.8 ± 4.9
SSI (% ± SD)	5.7 ± 2.5	4.0 ± 2.7	5.7 ± 2.5	3.9 ± 2.7	5.6 ± 2.5	3.9 ± 2.6	5.6 ± 2.6	4.0 ± 2.8
Rurality (%)	63.2	57.2	63.1	57.9	62.2	57.2	60.6	57.7
Alignment-Eligible Providers (per 1,000)	2.8 ± 1.6	1.7 ± 1.5	2.8 ± 1.7	1.8 ± 1.5	2.8 ± 1.7	1.9 ± 1.5	3.3 ± 1.8	2.2 ± 1.7
Participation in Medicare ACOs and Other CMMI Initiatives (%)								
Pioneer/MSSP	89.9	23.5	77.8	31.3	70.2	42.2	0.3	81.1
FAI	0.0	0.6	0.0	1.1	0.0	1.1	0.0	0.5
IAH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CPC	0.0	1.3	0.0	1.6	0.1	1.3	0.1	10.3
BPCI	0.0	0.2	0.0	0.9	0.1	1.3	0.0	1.0
CJR	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
OCM	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.5

NOTE: SD=standard deviation; ESRD=end-stage renal disease; COPD=chronic obstructive pulmonary disease; RA=rheumatoid arthritis; OA=osteoarthritis; TIA=transient ischemic attack; SSI=supplemental security income; MSSP=Medicare Shared Savings Program; FAI=Financial Alignment Initiative; IAH=Independence at Home; CPC=Comprehensive Primary Care (including CPC Plus); BPCI=Bundled Payments for Care Improvement; CJR=Comprehensive Care for Joint Replacement; OCM=Oncology Care Model.

Appendix Exhibit F.4. PY3 State-Level: Descriptive Characteristics of VTAPM and Weighted Comparison Beneficiaries

	Baseline Period						Performance Period	
	BY3		BY2		BY1		PY3	
	VTAPM	Comparison	VTAPM	Comparison	VTAPM	Comparison	VTAPM	Comparison
Number of Beneficiaries	79,404	79,404	78,952	78,952	82,212	82,212	85,792	85,792
Total Person-Months	935,923	935,923	929,208	929,208	968,944	968,944	1,012,306	1,012,306
Mean Months of Alignment ± SD	11.8 ± 1.2	11.8 ± 1.2	11.8 ± 1.3	11.8 ± 1.3	11.8 ± 1.3	11.8 ± 1.2	11.8 ± 1.2	11.8 ± 1.2
Mean Age ± SD	71.8 ± 13.0	71.7 ± 13.0	71.9 ± 12.8	71.8 ± 12.8	71.9 ± 12.5	71.9 ± 12.5	72.3 ± 11.9	72.3 ± 11.8
Gender (%)								
Male	42.9	42.9	43.5	43.5	43.7	43.7	43.8	43.8
Race/Ethnicity (%)								
White	96.4	96.4	95.9	95.9	95.5	95.5	94.2	94.1
Black	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Hispanic	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Asian	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6
Other	2.1	2.1	2.5	2.5	3.0	3.0	4.2	4.2
Disability/ESRD (%)								
Disability	17.9	17.9	17.5	17.5	17.0	17.0	14.8	14.8
ESRD	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Coverage (%)								
Any Dual Eligibility	34.3	33.9	33.3	33.2	32.4	31.7	27.9	27.4
Any Part D Coverage	76.3	76.2	82.5	82.2	83.4	83.1	84.4	84.3
Chronic Conditions								
Mean No. of Chronic Conditions ± SD	4.2 ± 3.3	4.2 ± 3.3	4.1 ± 3.3	4.1 ± 3.3	4.2 ± 3.4	4.2 ± 3.4	4.5 ± 3.5	4.5 ± 3.5
Alzheimer's/Dementia (%)	6.8	6.8	6.6	6.6	6.5	6.5	6.7	6.7
Chronic Kidney Disease (%)	10.9	10.9	11.4	11.4	12.5	12.5	17.2	17.2
COPD (%)	9.8	9.8	9.7	9.7	10.0	10.0	9.6	9.6
Congestive Heart Failure (%)	8.8	8.8	8.6	8.6	8.6	8.6	9.0	9.0
Diabetes (%)	22.5	22.5	22.2	22.2	21.6	21.6	21.1	21.1
Ischemic Heart Disease (%)	21.5	21.5	21.4	21.4	21.3	21.3	21.4	21.4
Depression (%)	19.5	19.5	19.6	19.6	20.2	20.2	21.1	21.1

	Baseline Period						Performance Period	
	BY3		BY2		BY1		PY3	
	VTAPM	Comparison	VTAPM	Comparison	VTAPM	Comparison	VTAPM	Comparison
RA/OA (%)	26.1	26.1	27.0	27.0	28.2	28.2	30.6	30.6
Stroke/TIA (%)	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4
Cancer (%)	7.5	7.4	7.4	7.4	7.4	7.3	7.7	7.6
Mortality (%)								
Death in Reference Period	3.9	3.9	4.0	4.0	3.8	3.8	3.7	3.7
Community Characteristics								
Median Income ($ ± SD)	56,783 ± 14,136	60,380 ± 22,453	57,094 ± 14,224	60,788 ± 23,085	57,020 ± 14,249	59,954 ± 22,169	57,214 ± 14,454	58,811 ± 19,717
Below Poverty Line (% ± SD)	11.7 ± 6.0	11.9 ± 6.1	11.6 ± 6.0	11.8 ± 6.1	11.6 ± 6.0	11.9 ± 6.1	11.5 ± 5.9	12.4 ± 5.9
Bachelor's Degree or Higher (% ± SD)	35.8 ± 13.5	33.2 ± 16.6	36.1 ± 13.5	33.8 ± 16.7	36.0 ± 13.4	33.4 ± 16.3	36.0 ± 13.5	34.9 ± 15.7
Unemployment (% ± SD)	5.0 ± 2.2	6.2 ± 3.7	5.0 ± 2.2	6.2 ± 3.7	5.0 ± 2.2	6.2 ± 3.6	5.0 ± 2.2	6.5 ± 3.3
Uninsured (% ± SD)	5.3 ± 2.3	9.7 ± 5.2	5.2 ± 2.3	9.7 ± 5.2	5.2 ± 2.3	9.8 ± 5.2	5.2 ± 2.3	10.4 ± 4.7
SSI (% ± SD)	6.1 ± 2.9	4.5 ± 2.9	6.1 ± 2.8	4.3 ± 2.8	6.1 ± 2.8	4.3 ± 2.8	6.1 ± 2.9	4.6 ± 2.9
Rurality (%)	75.5	67.9	75.0	68.0	75.1	68.5	75.0	70.4
Alignment-Eligible Providers (per 1,000)	2.7 ± 1.5	1.8 ± 1.5	2.6 ± 1.5	1.8 ± 1.5	2.6 ± 1.6	1.9 ± 1.5	3.1 ± 1.7	2.2 ± 1.7
Participation in Medicare ACOs and Other CMMI Initiatives (%)								
Pioneer/MSSP	73.1	20.3	65.5	24.9	59.6	26.4	0.4	26.1
FAI	0.0	0.7	0.0	1.1	0.0	1.1	0.0	1.5
IAH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CPC	0.0	2.6	0.0	3.2	0.0	3.2	0.2	8.4
BPCI	0.1	0.1	0.1	0.9	0.2	1.3	0.0	1.2
CJR	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1
OCM	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2

NOTE: SD=standard deviation; ESRD=end-stage renal disease; COPD=chronic obstructive pulmonary disease; RA=rheumatoid arthritis; OA=osteoarthritis; TIA=transient ischemic attack; SSI=supplemental security income; MSSP=Medicare Shared Savings Program; FAI=Financial Alignment Initiative; IAH=Independence at Home; CPC=Comprehensive Primary Care (including CPC Plus); BPCI=Bundled Payments for Care Improvement; CJR=Comprehensive Care for Joint Replacement; OCM=Oncology Care Model.

Appendix Exhibit F.5. PY3 ACO-Level: Unadjusted Total Medicare Spending for VTAPM and Weighted Comparison Beneficiaries

	BY3 (2014)		BY2 (2015)		BY1 (2016)		PY0 (2017)		PY1 (2018)		PY2 (2019)		PY3 (2020)	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Total Medicare Spending (Parts A and B)														
VTAPM	$9,720	$19,913	$10,038	$20,711	$9,860	$20,208	$10,018	$21,092	$10,092	$21,555	$9,985	$21,502	$9,023	$20,684
Comparison	$10,594	$22,122	$10,696	$22,133	$10,537	$21,922	$10,235	$21,845	$10,689	$22,612	$10,512	$23,863	$10,096	$23,933

NOTE: Mean and standard error (SE) estimates are presented in 2020 USD ($) per beneficiary per year (PBPY).

Appendix Exhibit F.6. PY3 ACO-Level: Unadjusted Utilization for VTAPM and Weighted Comparison Beneficiaries

	BY3 (2014)		BY2 (2015)		BY1 (2016)		PY0 (2017)		PY1 (2018)		PY2 (2019)		PY3 (2020)	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Acute care stays														
VTAPM	229	662	236	674	234	663	236	674	233	666	233	685	199	620
Comparison	269	719	268	752	252	676	247	694	254	715	236	683	191	581
Acute care days														
VTAPM	1116	4667	1154	4873	1112	4639	1107	4589	1148	4907	1147	5061	1044	4920
Comparison	1229	4351	1245	4630	1177	4527	1168	4766	1136	4340	1049	4121	912	4106
ED visits and observation stays														
VTAPM	581	1525	574	1453	570	1467	563	1387	570	1517	567	1562	464	1362
Comparison	576	1523	551	1417	574	1438	563	1434	544	1480	533	1312	437	1164
E&M visits														
VTAPM	14729	13235	15144	13743	15362	13771	15228	13492	15302	13546	15002	13331	12235	11943
Comparison	12913	11990	12962	11685	13258	11953	13061	11880	13047	11826	12877	11962	11125	10831
Primary E&M visits														
VTAPM	8362	8055	7938	7844	7873	7889	7803	7878	7641	7897	7471	7707	6895	7694
Comparison	6613	7366	6375	7010	6527	7296	6484	7013	6541	7113	6523	6983	6172	7225
Specialty E&M visits														
VTAPM	6367	8098	7206	8717	7489	8670	7425	8381	7660	8441	7531	8306	5340	6873
Comparison	6300	7435	6586	7380	6732	7388	6577	7579	6507	7425	6354	7742	4954	6092
SNF stays														
VTAPM	58	301	58	296	57	296	62	318	58	310	56	306	42	256
Comparison	66	327	69	345	63	309	55	291	57	295	48	277	38	243
SNF days														
VTAPM	1520	9264	1446	8674	1418	8640	1509	9120	1424	8812	1281	7961	1021	7328
Comparison	1516	8835	1551	9155	1395	8143	1176	7364	1183	7346	1048	7209	852	6437
Home health visits														
VTAPM	2602	14207	2657	13994	2645	14588	2729	14673	2653	14416	2428	13351	2140	11795
Comparison	2043	10848	2050	10778	1825	9962	1874	10085	1869	10051	1669	9301	1345	7667
Home health episodes														
VTAPM	122	397	122	395	122	397	122	394	123	397	120	397	176	674
Comparison	99	358	99	363	92	348	91	348	91	347	84	332	112	512
Hospice days														
VTAPM	906	12079	1071	13093	1112	13101	1327	14817	1416	15595	1445	16289	1429	15771
Comparison	1424	15474	1588	16479	1662	17955	1454	15801	1680	17672	1471	16724	1708	17820
Imaging, procedures, and tests														
VTAPM	31983	37498	31408	36396	30891	34662	30792	34684	31352	35724	31817	36327	26317	32433
Comparison	35629	39113	35308	39157	35504	38153	35256	39876	35232	38677	36186	39774	31802	37976

NOTE: Mean and standard error (SE) estimates are presented per 1,000 BPY.

Appendix Exhibit F.7. PY3 ACO-Level: Unadjusted Telehealth Utilization for VTAPM and Weighted Comparison Beneficiaries

	BY3 (2014)		BY2 (2015)		BY1 (2016)		PY0 (2017)		PY1 (2018)		PY2 (2019)		PY3 (2020)	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Telehealth visits														
VTAPM	2	129	1	129	2	284	10	481	8	338	7	299	2,463	5,009
Comparison	10	249	12	247	18	354	23	436	21	580	18	357	1,665	3,694
E&M telehealth visits														
VTAPM	2	115	1	129	2	282	10	473	5	298	7	294	2,026	4,479
Comparison	10	239	10	226	16	342	22	430	20	575	16	352	1,452	3,405
Primary E&M telehealth visits														
VTAPM	1	36	0	8	0	9	6	321	1	44	1	92	1,288	3,183
Comparison	2	77	3	105	3	123	7	255	7	427	7	192	930	2,678
Specialist E&M telehealth visits														
VTAPM	1	109	1	129	2	282	3	318	4	294	6	267	738	2,741
Comparison	8	223	7	190	13	291	15	319	13	350	10	289	521	1,701

NOTE: Mean and standard error (SE) estimates are presented per 1,000 BPY.

Appendix Exhibit F.8. PY3 ACO-Level: Unadjusted Quality of Care Measures for VTAPM and Weighted Comparison Beneficiaries

		BY3 (2014)		BY2 (2015)		BY1 (2016)		PY0 (2017)		PY1 (2018)		PY2 (2019)		PY3 (2020)	
		Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Annual wellness visit															
Full Year	**VTAPM**	270	444	294	456	312	463	331	470	345	475	361	480	328	470
	Comparison	191	393	209	406	236	424	300	458	335	472	387	487	342	474
ACS hospitalizations															
Full Year	**VTAPM**	36	187	31	174	30	169	31	172	29	167	29	168	24	154
	Comparison	37	189	36	185	31	173	29	167	32	175	28	164	21	143
Unplanned 30-day readmissions															
Full Year	**VTAPM**	108	311	111	314	117	321	115	319	115	319	118	322	110	313
	Comparison	118	322	129	336	110	313	113	316	114	318	110	313	105	306

NOTE: Mean and standard error (SE) estimates are presented per 1,000 BPY.

Appendix Exhibit F.9. PY3 State-Level: Unadjusted Total Medicare Spending for VTAPM and Weighted Comparison Beneficiaries

		BY3 (2014)		BY2 (2015)		BY1 (2016)		PY0 (2017)		PY1 (2018)		PY2 (2019)		PY3 (2020)	
		Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Total Medicare Spending (Parts A and B)															
Full Year	Vermont	$10,032	$21,021	$10,605	$21,699	$10,400	$21,418	$10,452	$21,708	$10,704	$22,857	$10,608	$22,441	$9,501	$21,792
	Comparison	$10,438	$21,955	$10,777	$22,248	$10,471	$23,503	$10,575	$22,962	$10,761	$22,707	$10,851	$23,166	$10,102	$24,211

NOTE: Mean and standard error (SE) estimates are presented in 2020 USD ($) per beneficiary per year (PBPY).

Appendix Exhibit F.10. PY3 State-Level: Unadjusted Utilization for VTAPM and Weighted Comparison Beneficiaries

		BY3 (2014)		BY2 (2015)		BY1 (2016)		PY0 (2017)		PY1 (2018)		PY2 (2019)		PY3 (2020)	
		Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Acute care stays															
Full Year	**Vermont**	238	671	256	709	252	693	253	699	254	699	249	705	204	629
	Comparison	260	706	266	712	254	685	255	706	248	687	239	679	186	585
Acute care days															
Full Year	**Vermont**	1162	4694	1238	4873	1209	4913	1179	4776	1236	5082	1231	5194	1046	4777
	Comparison	1194	4378	1218	4438	1143	4287	1150	4386	1121	4239	1073	4202	923	4277
ED visits and observation stays															
Full Year	**Vermont**	601	1564	616	1617	601	1537	586	1394	595	1488	590	1538	473	1311
	Comparison	576	1506	580	1480	577	1450	573	1439	557	1409	556	1421	451	1226
E&M visits															
Full Year	**Vermont**	13921	12877	14519	13371	14629	13301	14633	13159	14706	13166	14537	13124	11888	11842
	Comparison	12707	11898	12953	11692	13097	11861	12985	11811	13045	11833	12910	11795	11048	11052
Primary E&M visits															
Full Year	**Vermont**	7614	7651	7250	7502	7133	7392	7155	7431	7056	7436	6979	7419	6487	7548
	Comparison	6768	7444	6673	7250	6768	7363	6756	7335	6751	7361	6803	7380	6318	7511
Specialty E&M visits															
Full Year	**Vermont**	6307	8073	7269	8779	7496	8781	7478	8579	7650	8570	7558	8514	5400	6986
	Comparison	5939	7391	6280	7258	6329	7290	6229	7257	6293	7250	6107	7205	4730	6100
SNF stays															
Full Year	**Vermont**	65	322	70	329	64	316	67	332	66	329	63	322	46	266
	Comparison	69	329	68	332	65	322	63	316	61	313	55	297	42	261
SNF days															
Full Year	**Vermont**	1709	9901	1733	9653	1562	9100	1587	9232	1582	9298	1464	8741	1121	7669
	Comparison	1696	9735	1678	9611	1524	9006	1448	8675	1434	8690	1274	8130	1042	7541
Home health visits															
Full Year	**Vermont**	2558	14121	2744	14335	2637	14151	2733	14552	2764	14683	2571	13673	2218	12103
	Comparison	1912	10419	1904	10181	1856	10107	1866	10109	1871	10071	1757	9715	1268	7554

		BY3 (2014)		BY2 (2015)		BY1 (2016)		PY0 (2017)		PY1 (2018)		PY2 (2019)		PY3 (2020)	
		Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Home health episodes															
Full Year	**Vermont**	118	392	124	400	125	401	124	398	126	401	122	398	179	688
	Comparison	91	347	93	348	90	344	89	344	88	341	85	335	104	491
Hospice days															
Full Year	**Vermont**	955	12314	1146	13907	1253	14404	1478	16014	1576	17031	1637	17846	1596	17390
	Comparison	1497	16545	1560	16665	1551	16878	1602	17156	1525	16456	1625	17384	1575	16894
Imaging, procedures, and tests															
Full Year	**Vermont**	31654	36936	31626	36682	31126	35210	31070	34993	31480	35688	31855	36122	26517	32403
	Comparison	35157	38598	35627	39081	34866	37641	34975	38561	35248	38659	36084	39957	30576	36503

NOTE: Mean and standard error (SE) estimates are presented per 1,000 BPY.

Appendix Exhibit F.11. PY3 State-Level: Unadjusted Telehealth Utilization for VTAPM and Weighted Comparison Beneficiaries

	BY3 (2014)		BY2 (2015)		BY1 (2016)		PY0 (2017)		PY1 (2018)		PY2 (2019)		PY3 (2020)	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Telehealth visits														
VTAPM	7	219	7	295	6	304	31	750	9	305	30	838	2,264	4,970
Comparison	13	288	18	340	24	389	33	490	28	454	25	401	1,581	3,654
E&M telehealth visits														
VTAPM	5	181	6	283	4	239	30	740	5	241	30	837	1,800	4,405
Comparison	12	271	16	327	23	380	31	473	25	433	23	392	1,364	3,345
Primary E&M telehealth visits														
VTAPM	3	143	1	39	1	52	25	639	1	50	4	281	1,069	3,019
Comparison	3	97	5	140	8	185	13	300	10	309	10	262	851	2,580
Specialist E&M telehealth visits														
VTAPM	2	99	6	276	3	232	5	260	4	234	25	783	731	2,789
Comparison	10	249	12	270	15	312	19	334	15	282	12	284	513	1,754

NOTE: Mean and standard error (SE) estimates are presented per 1,000 BPY.

Appendix Exhibit F.12. PY3 State-Level: Unadjusted Quality of Care Measures for VTAPM and Weighted Comparison Beneficiaries

		BY3 (2014)		BY2 (2015)		BY1 (2016)		PY0 (2017)		PY1 (2018)		PY2 (2019)		PY3 (2020)	
		Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Annual wellness visit															
Full Year	**Vermont**	210	407	237	425	249	433	265	442	290	454	310	463	288	453
	Comparison	192	394	220	415	243	429	284	451	316	465	349	477	300	458
ACS hospitalizations															
Full Year	**Vermont**	38	192	35	184	32	177	34	182	33	178	32	175	25	155
	Comparison	37	189	37	190	31	173	31	173	30	171	28	165	20	139
Unplanned 30-day readmissions															
Full Year	**Vermont**	114	318	116	321	119	323	114	318	116	320	119	324	111	314
	Comparison	113	316	114	318	108	310	111	315	110	313	110	313	103	304

NOTE: Mean and standard error (SE) estimates are presented per 1,000 BPY.

Appendix Exhibit F.13. ACO-Level PY3 (Full Year): Common Baseline Trend Metrics for VTAPM and Weighted Comparison Beneficiaries

	BY3 vs. BY2			BY3 vs. BY1			Linear Interaction Term		
	Effect	Std. Error	p	Effect	Std. Error	p	Effect	Std. Error	p
Spending ($ PBPY)									
Total Medicare spending (Parts A and B)	374.65	184.98	0.04	291.12	149.05	0.05	138.93	78.12	0.08
Utilization (per 1,000 BPY)									
Acute care stays	12.90	8.27	0.12	25.58	4.99	0.00	12.17	2.36	0.00
Acute care days	25.41	53.13	0.63	76.85	51.30	0.13	37.73	24.75	0.13
ED visits and observation stays	4.04	12.42	0.74	-12.86	14.27	0.37	-5.58	7.05	0.43
Primary E&M visits	-222.04	148.95	0.14	-423.01	109.79	0.00	-151.44	57.12	0.01
Specialty E&M visits	576.73	92.34	0.00	715.93	105.97	0.00	283.63	52.83	0.00
SNF stays	-74.52	80.46	0.35	72.71	87.95	0.41	11.12	35.92	0.76
SNF days	-2.50	2.40	0.30	2.20	2.19	0.31	1.62	0.94	0.09
Home health visits	160.35	191.48	0.40	320.38	198.37	0.11	142.60	96.55	0.14
Home health episodes	1.32	4.21	0.75	9.11	4.51	0.04	4.34	2.34	0.06
Hospice days	832.58	222.17	0.00	1269.50	288.55	0.00	161.10	117.51	0.17
Imaging, procedures, and tests	-100.45	367.76	0.78	-829.87	525.46	0.11	-434.02	255.16	0.09
Quality of Care (per 1,000 BPY)									
Annual wellness visit	7.52	8.44	0.37	-5.64	13.62	0.68	-5.41	7.81	0.49
ACS hospitalizations	-3.04	1.81	0.09	0.80	3.17	0.80	0.05	1.27	0.97
Unplanned 30-day readmissions	-7.57	9.74	0.44	18.04	9.33	0.05	9.50	4.14	0.02

SOURCE: NORC analysis of Medicare claims.

NOTE: PBPY=per beneficiary per year; BPY=beneficiary per year. Asterisks denote significance at *p<0.10, **p<0.05, ***p<0.01.

Appendix Exhibit F.14. State-Level PY3 (Full Year): Common Baseline Trend Metrics for VTAPM and Weighted Comparison Beneficiaries

	BY3 vs. BY2			BY3 vs. BY1			Linear Interaction Term		
	Effect	Std. Error	p	Effect	Std. Error	p	Effect	Std. Error	p
Spending ($ PBPY)									
Total Medicare spending (Parts A and B)	427.95	141.27	0.00	433.09	143.39	0.00	218.69	73.30	0.00
Utilization (per 1,000 BPY)									
Acute care stays	14.70	2.84	0.00	22.14	3.39	0.00	11.03	1.63	0.00
Acute care days	62.15	19.74	0.00	110.15	21.51	0.00	52.50	10.42	0.00
ED visits and observation stays	10.59	6.51	0.10	1.16	7.29	0.87	0.48	3.59	0.89
Primary E&M visits	-114.55	163.91	0.48	-320.26	121.20	0.01	-150.43	58.91	0.01
Specialty E&M visits	540.34	87.37	0.00	694.19	85.92	0.00	309.47	41.97	0.00
SNF stays	62.66	43.74	0.15	70.89	50.24	0.16	32.26	23.16	0.16
SNF days	5.84	1.53	0.00	4.35	1.78	0.01	2.10	0.84	0.01
Home health visits	332.27	69.88	0.00	94.05	63.40	0.14	38.95	29.67	0.19
Home health episodes	6.53	1.47	0.00	8.85	1.73	0.00	3.72	0.93	0.00
Hospice days	187.85	84.12	0.03	241.10	68.00	0.00	175.53	34.08	0.00
Imaging, procedures, and tests	-603.35	255.29	0.02	-328.42	266.51	0.22	-177.61	125.63	0.16
Quality of Care (per 1,000 BPY)									
Annual wellness visit	-0.23	7.69	0.98	-8.70	7.73	0.26	-5.56	3.69	0.13
ACS hospitalizations	-3.24	0.77	0.00	0.09	1.01	0.93	0.01	0.48	0.98
Unplanned 30-day readmissions	2.80	1.87	0.14	10.77	2.36	0.00	5.50	1.20	0.00

SOURCE: NORC analysis of Medicare claims.

NOTE: PBPY=per beneficiary per year; BPY=beneficiary per year. Asterisks denote significance at *p<0.10, **p<0.05, ***p<0.01.

Appendix Exhibit F.15. ACO-Level PY3 (Full Year): Impact of VTAPM on Spending, Utilization, and Quality of Care

	Baseline (2014–2016)		PY3 (2020)							
					Difference-in-Differences					
	VTAPM	Comp.	VTAPM	Comp.	DID Estimate	VTAPM Change	Comp. Change	90% CI	% Impact	p
Spending ($ PBPY)										
Total Medicare spending (Parts A and B)	$10,455	$10,050	$9,057	$9,385	-$732.92	-$1,398	-$665	-$1,531.16, 65.33	-7.3	0.131
Utilization (per 1,000 BPY)										
Acute care stays	286	298	208	239	-17.93	-78	-60	-37.71, 1.86	-7.9	0.136
Acute care days	1,200	1,517	1,038	1,269	85.45	-162	-248	-80.30, 251.20	8.97	0.396
ED visits and observation stays	652	618	603	508	61.33**	-49	-110	15.71, 106.94	11.3	0.027
Total E&M visits	16,191	12,222	13,240	10,181	-909.60***	-2,951	-2,042	-1,445.33, -373.88	-6.6	0.005
Primary E&M visits	9,054	5,853	8,633	5,314	116.87	-421	-538	-370.00, 603.74	1.60	0.693
Specialty E&M visits	7,205	6,549	4,665	5,009	-999.64***	-2,540	-1,540	-1,630.24, -369.04	-15.3	0.009
SNF stays	32	75	9	50	2.23	-600	-668	-1.23, 5.68	32.8	0.289
SNF days	722	1,895	122	1,228	67.15	-23	-25	-34.34, 168.64	122.8	0.276
Home health visits	4,533	3,340	3,629	2,826	-388.68	-903	-515	-1,490.26, 712.90	-9.7	0.562
Home health episodes	186	120	220	148	7.34	35	27	-26.96, 41.64	3.4	0.725
Hospice days	4,528	1817	3,799	1,958	-869.44	-729	141	-5,447.51, 3,708.64	-18.6	0.755
Imaging, procedures, and tests	32,709	34,116	28,324	29,626	105.48	-4,385	-4,491	-1,519.80, 1,730.76	0.41	0.915
Quality of Care (per 1,000 BPY)										
Annual wellness visit	275	227	234	308	-121.53***	-41	81	-195.20, -47.85	-34.1	0.007
ACS hospitalizations	31	36	24	25	4.29	-7	-11	-2.77, 11.34	21.8	0.318
Unplanned 30-day readmissions	89	153	50	146	-31.89	-39	-7	-66.84, 3.07	-38.9	0.133

SOURCE: NORC analysis of Medicare claims.

NOTE: PBPY=per beneficiary per year; BPY=beneficiary per year. Asterisks denote significance at *p<0.10, **p<0.05, ***p<0.01. VTAPM Change and Comp. Change columns indicate the change in average adjusted outcome for the VTAPM or comparison group between PY3 and the baseline; minor deviations are due to rounding. Cells highlighted in blue indicate a decrease between PY3 (2020) and the baseline for the VTAPM or comparison group.

Appendix Exhibit F.16. ACO-Level PY3 (Through Q3): Impact of VTAPM on Spending, Utilization, and Quality of Care

	Baseline (2014–2016)		PY3 (2020)							
					Difference-in-Differences					
	VTAPM	Comp.	VTAPM	Comp.	DID Estimate	VTAPM Change	Comp. Change	90% CI	% Impact	p
Spending ($ PBPY)										
Total Medicare spending (Parts A and B)	$7,889	$7,300	$7,119	$6,697	-$166.73	-$770	-$603	-$877.85, $544.39	-2.3	0.700
Utilization (per 1,000 BPY)										
Acute care stays	228	221	178	177	-6.42	-50	-44	-23.26, 10.41	-3.5	0.530
Acute care days	1,036	1,117	941	895	126.74	-95	-221	-9.09, 262.56	15.6	0.125
ED visits and observation stays	510	467	486	380	63.30***	-24	-87	26.34, 100.26	15.0	0.005
Total E&M visits	12,258	9,131	10,094	7,531	-563.73**	-2,164	-1,600	-1,012.99, -114.47	-5.5	0.039
Primary E&M visits	6,986	4,314	6,678	3,837	170.46	-307	-478	-165.63, 506.55	3.14	0.404
Specialty E&M visits	5,388	4,956	3,484	3,812	-760.16**	-1,904	-1,144	-1304.05, -216.28	-15.3	0.022
SNF stays	665	1,369	246	867	82.32	-420	-502	-9.95, 174.59	50.4	0.142
SNF days	30	56	15	37	4.18**	-15	-19	0.83, 7.53	38.2	0.040
Home health visits	3,697	2,478	3,032	1,987	-173.12	-664	-491	-984.06, 637.82	-5.4	0.725
Home health episodes	140	92	164	113	3.91	24	20	-22.61, 30.43	2.4	0.808
Hospice days	3,743	1,276	3,355	1,392	-503.28	-387	116	-4,416.47, 3,409.90	-13.0	0.832
Imaging, procedures, and tests	24,500	25,907	21,739	22,151	994.79	-2,761	-3,756	-355.87, 2,345.45	5.4	0.226
Quality of Care (per 1,000 BPY)										
Annual wellness visit	200	159	182	207	-67.05*	-19	48	-129.26, -4.84	-26.9	0.076
ACS hospitalizations	23	30	16	21	2.16	-7	-9	-4.61, 8.94	15.9	0.599
Unplanned 30-day readmissions	118	139	82	134	-30.9	-36	-5	-76.47, 14.66	-27.2	0.265

SOURCE: NORC analysis of Medicare claims.

NOTE: PBPY=per beneficiary per year; BPY=beneficiary per year. Asterisks denote significance at *p<0.10, **p<0.05, ***p<0.01. VTAPM Change and Comp. Change columns indicate the change in average adjusted outcome for the VTAPM or comparison group between PY3 and the baseline; minor deviations are due to rounding. Cells highlighted in blue indicate a decrease between PY3 (2020) and the baseline for the VTAPM or comparison group.

Appendix Exhibit F.17. State-Level PY3 (Full Year): Impact of VTAPM on Spending, Utilization, and Quality of Care

	Baseline (2014–2016)		PY3 (2020)							
					Difference-in-Differences					
	VTAPM	Comp.	VTAPM	Comp.	DID Estimate	VTAPM Change	Comp. Change	90% CI	% Impact	p
Spending ($ PBPY)										
Total Medicare spending (Parts A and B)	$10,666	$11,173	$8,724	$10,879	-$1,648.72*	-$1,943	-$294	-$3,242.89, -$54.55	-14.0	0.089
Utilization (per 1,000 BPY)										
Acute care stays	273	308	190	246	-20.79***	-83	-62	-33.26, -8.32	-9.8	0.006
Acute care days	1,442	1,527	1,083	1,334	-166.20**	-359	-193	-273.48, -58.93	-13.3	0.011
ED visits and observation stays	644	628	534	526	-8.93	-110	-101	-36.40, 18.53	-1.6	0.593
Total E&M visits	14,001	13,260	10,725	11,154	-1169.53***	-3276	-2107	-1674.96, -664.10	-9.3	0.000
Primary care E&M visits	7,412	6,755	7,223	6,246	319.76	-2,819	-1,533	-78.74, 718.26	5.3	0.187
Specialty care E&M visits	6,677	6,654	3,858	5,121	-1286.28***	-686	-627	-1722.01, -850.56	-19.7	0.000
SNF stays	69	78	43	57	-4.67	-26	-21	-10.63, 1.29	-9.8	0.197
SNF days	1,989	2,071	1,303	1,445	-59.82	-324	-751	-218.35, 98.70	-4.4	0.535
Home health visits	4,150	3,212	3,826	2,461	427.07**	37	20	83.75, 770.40	12.6	0.041
Home health episodes	147	119	184	138	17.20	-222	238	-1.30, 35.71	10.3	0.126
Hospice days	996	1,625	774	1,863	-459.66**	-5,140	-4,990	-769.99, -149.33	-37.2	0.015
Imaging, procedures, and tests	32,023	34,608	26,883	29,617	-149.05	-83	-62	-1118.21, 820.11	-0.6	0.800
Quality of Care (per 1,000 BPY)										
Annual wellness visit	235	216	296	283	-6.50	61	67	-57.49, 44.50	-2.1	0.834
ACS hospitalizations	35	35	26	22	4.42***	-9	-13	1.64, 7.19	20.2	0.009
Unplanned 30-day readmissions	127	137	100	132	-21.65***	-27	-6	-34.18, -9.11	-17.7	0.004

SOURCE: NORC analysis of Medicare claims.

NOTE: PBPY=per beneficiary per year; BPY=beneficiary per year. Asterisks denote significance at *p<0.10, **p<0.05, ***p<0.01. VTAPM Change and Comp. Change columns indicate the change in average adjusted outcome for the VTAPM or comparison group between PY3 and the baseline; minor deviations are due to rounding. Cells highlighted in blue indicate a decrease between PY3 (2020) and the baseline for the VTAPM or comparison group.

Appendix Exhibit F.18. State-Level PY3 (Through Q3): Impact of VTAPM on Spending, Utilization, and Quality of Care

	Baseline (2014–2016)		PY3 (2020)							
					Difference-in-Differences					
	VTAPM	Comp.	VTAPM	Comp.	DID Estimate	VTAPM Change	Comp. Change	90% CI	% Impact	p
Spending ($ PBPY)										
Total Medicare spending (Parts A and B)	$8,078	$8,291	$6,647	$8,024	-$1,164.65	-$1,432	-$267	-$3,155.75, $826.45	-13.5	0.336
Utilization (per 1,000 BPY)										
Acute care stays	209	232	155	184	-6.48	-54	-48	-15.43, 2.48	-4.0	0.234
Acute care days	1,069	1,141	806	971	-92.73*	-263	-171	-177.28, -8.18	-10.3	0.071
ED visits and observation stays	491	476	413	395	2.1	-79	-81	-21.26, 25.46	0.5	0.882
Total E&M visits	10,519	10,019	7,964	8,345	-881.61***	-2,556	-1,674	-1,267.27, -495.96	-9.4	0.000
Primary E&M visits	5,596	5,108	5,355	4,624	243.19	-241	-484	-53.05, 539.44	5.5	0.177
Specialty E&M visits	4,992	5,056	2,819	3,918	-1034.61***	-2,173	-1,138	-1,391.47, -677.75	-20.6	0.000
SNF stays	1,525	1,552	1,064	1,069	22.22	-461	-483	-102.10, 146.55	2.1	0.769
SNF days	53	59	37	42	0.6	-17	-17	-3.88, 5.08	1.7	0.826
Home health visits	3,068	2,381	2,786	1,803	296.04**	-282	-578	55.48, 536.61	11.9	0.043
Home health episodes	112	90	145	103	18.89**	32	13	5.83, 31.94	15.0	0.017
Hospice days	716	1,195	699	1,409	-231.05**	-17	214	-413.10, -49.00	-24.8	0.037
Imaging, procedures, and tests	24,260	26,117	20,481	21,983	355.6	-3,779	-4,135	-413.25, 1,124.45	1.9	0.447
Quality of Care										
Annual wellness visit	171	155	209	196	-3.07	38	41	-40.10, 33.97	-1.4	0.892
ACS hospitalizations	28	27	22	18	4.16***	-6	-10	1.97, 6.34	23.3	0.002
Unplanned 30-day readmissions	125	130	103	126	-17.47**	-22	-4	-30.16, -4.78	-14.4	0.024

SOURCE: NORC analysis of Medicare claims.

NOTE: PBPY=per beneficiary per year; BPY=beneficiary per year. Asterisks denote significance at *p<0.10, **p<0.05, ***p<0.01. VTAPM Change and Comp. Change columns indicate the change in average adjusted outcome for the VTAPM or comparison group between PY3 and the baseline; minor deviations are due to rounding. Cells highlighted in blue indicate a decrease between PY3 (2020) and the baseline for the VTAPM or comparison group.

Appendix Exhibit F.19. OneCare Quality Performance Measures, PY1–PY3 (2018–2020)

Measure	Level	PY1 (2018)	PY2 (2019)	PY3 (2020)
Population-Level Health Outcome Targets				
Deaths Related to Drug Overdose	Statewide	20.8 per 100,000	18.3 per 100,000	25.2 per 100,000
Deaths Related to Suicide	Statewide	18.8 per 100,000	15.3 per 100,000	18.1 per 100,000
COPD Prevalence	Statewide	6%	7%	6%
Diabetes Prevalence	Statewide	9%	9%	8%
Hypertension Prevalence	Statewide	25%	26%	25%
Percentage of Adults with Personal Doctor or Care Provider	Statewide	86%	86%	85%
Health Care Delivery System Quality Targets				
Initiation of Alcohol and Other Drug Abuse or Dependence Treatment	ACO	38.9%	40.1%	39.4%
Engagement of Alcohol and Other Drug Abuse or Dependence Treatment	ACO	13.3%	17.1%	18.6%
Follow-Up after Hospitalization for Mental Illness (30-Day Rate)	ACO	84.4%	89.8%	78.1%
Follow-Up after ED Visit for Alcohol and Other Drug Abuse or Dependence (30-Day Rate)	ACO	28.2%	27.6%	31.6%
Growth Rate of Mental Health and Substance Use-Related ED Visits	Statewide	6%	5%	-16%
Diabetes HbA1c Poor Control	Medicare ACO	--	13.49%	13.65%
Controlling High Blood Pressure	Medicare ACO	68.12%	71.46%	65.32%
All-Cause Unplanned Admissions for Patients with Multiple Chronic Conditions	Medicare ACO	63.84%	60.04%	30.11%
ACO CAHPS Composite: Getting Timely Care, Appointments, and Information	Medicare ACO	84.62%	82.48%	N/A
Process Milestones				
Percentage of Vermont Providers Checking PDMP Before Prescribing Opioids	Statewide	3.10%	4.33%	
Adults Receiving Medication Assisted Treatment	Statewide (ages 18-64)	257 per 10,000	218 per 10,000	235 per 10,000
Screening for Clinical Depression and Follow-Up Plan	ACO	50.23%	54.47%	48.62%
Tobacco Use Assessment and Cessation Intervention	ACO	70.56%	84.94%	78.95%
Percentage of VT Residents with an Asthma Medication Ratio of ≥0.50	ACO	N/A	N/A	49.3%
Percentage of Medicaid Adolescents with Well-Care Visits	Statewide (Medicaid)	N/A	N/A	51.2%
Percentage of Medicaid Enrollees Aligned with ACO	Statewide (Medicaid)	31%	58%	92%

SOURCE: Vermont All-Payer ACO Model Annual Health Outcomes and Quality of Care Report, Performance Year 3 (2020), GMCB.

NOTE: Methodology for asthma medication ratio and adolescent well-care visits were updated in 2020, so earlier years are not presented because they are not a relevant comparison. Deaths related to drug overdose shown are from the Vermont Department of Health and based on an updated methodology since Model quality targets were set.

Appendix Exhibit F.20. Quality Performance Reporting by Payer

Measure	Medicare ACO	Medicaid ACO	BCBSVT	MVP
Health Care Delivery System Quality Targets				
Initiation of Alcohol and Other Drug Abuse or Dependence Treatment	X	X	X	X
Engagement of Alcohol and Other Drug Abuse or Dependence Treatment	X	X	(reported as composite)	(reported as composite)
Follow-Up after Hospitalization for Mental Illness (30-Day Rate)	X	X	X	X
Follow-Up after Hospitalization for Mental Illness (7-Day Rate)	X	X	X	X
Follow-Up after ED Visit for Alcohol and Other Drug Abuse or Dependence (30-Day Rate)	X	X	X	X
Follow-Up after ED Visit for Alcohol and Other Drug Abuse or Dependence (7-Day Rate)	X	X	X	X
Diabetes HbA1c Poor Control	X	X	X	X
Controlling High Blood Pressure	X	X	X	X
Risk-standardized, all-condition readmissions	X			
ACO All-Cause Readmissions (HEDIS)			X	X
All-Cause Unplanned Admissions for Patients with Multiple Chronic Conditions	X	X		
Influenza immunization	X			
ACO CAHPS Composite: Getting Timely Care, Appointments, and Information	X	X	X	X
Process Milestones				
Screening for Clinical Depression and Follow-Up Plan	X	X	X	
Tobacco Use Assessment and Cessation Intervention	X	X		
Percentage of VT Residents with an Asthma Medication Ratio of ≥0.50				
Percentage of Adolescents with Well-Care Visits		X	X	X

SOURCE: Vermont All-Payer ACO Model Annual Health Outcomes and Quality of Care Report, Performance Year 3 (2020), GMCB.

Appendix Exhibit F.21. Medicare ACO Quality Performance Measures, PY1–PY3 (2018–2020)

Measure	PY1			PY2			PY3		
	Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%
Health Care Delivery System Quality Targets									
Initiation of Alcohol and Other Drug Abuse or Dependence Treatment	Not reported in PY1 (2018)			430	1,466	29.30	355	1065	33.33
Engagement of Alcohol and Other Drug Abuse or Dependence Treatment				74	1,466	5.10	54	1065	5.07
Follow-Up after ED Visit for Mental Illness (30-Day Rate)				133	248	53.60	82	160	51.25
Follow-Up after Hospitalization for Mental Illness (7-Day Rate)				82	248	33.06	47	160	29.38
Follow-Up after ED Visit for Alcohol and Other Drug Abuse or Dependence (30-Day Rate)				36	181	19.90	39	155	25.16
Follow-Up after Hospitalization for Alcohol and Other Drug Abuse or Dependence (7-Day Rate)				20	181	11.05	23	155	14.84
Hemoglobin A1c Poor Control	152	262	58.02	34	252	13.49	80	586	13.65
Controlling High Blood Pressure	250	367	68.12	338	473	71.46	162	248	65.32
All-Condition Readmissions	--	--	14.62	--	--	14.89	--	--	13.17
All-Cause Unplanned Admissions for Patients with Multiple Chronic Conditions	--	--	63.84	--	--	60.04	--	--	30.11
Influenza Immunization	172	245	70.20	173	239	72.38	193	241	80.08
Getting Timely Care, Appointments, and Information	--	269	84.62	--	257	82.48	Not collected in PY3 (2020) due to the PHE		
Process Milestones									
Screening for Clinical Depression and Follow-up Plan	141	245	57.55	156	260	60.00	142	252	56.35
Tobacco Use: Screening and Cessation Intervention	18	22	81.82	19	22	86.36	15	20	75.00

SOURCE: 2018, 2019, and 2020 Medicare Quality Measures Scorecard released by OneCare.

NOTE: Numerators and denominators are not reported for all-condition readmissions or unplanned admissions for patients with multiple chronic conditions. Numerators are not reported for CAHPS data.

Appendix Exhibit F.22. Medicaid ACO Quality Performance Measures, PY1–PY3 (2018–2020)

	PY1 (2018)			PY2 (2019)			PY3 (2020)		
	Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%
Health Care Delivery System Quality Targets									
Initiation of Alcohol and Other Drug Abuse or Dependence Treatment	494	1271	38.87	806	1977	40.77	1143	2682	42.62
Engagement of Alcohol and Other Drug Abuse or Dependence Treatment	206	1271	16.21	400	1977	20.23	549	2682	20.47
Follow-Up after ED Visit for Mental Illness (30-Day Rate)	282	345	81.74	532	622	85.53	588	754	77.98
Follow-Up after Hospitalization for Mental Illness (7-Day Rate)	159	424	37.50	306	749	40.85	407	839	48.51
Follow-Up after ED Visit for Alcohol and Other Drug Abuse or Dependence (30-Day Rate)	72	247	29.15	227	611	37.15	253	788	32.11
Hemoglobin A1c Poor Control	122	366	33.33	95	371	25.61	145	372	38.98
Controlling High Blood Pressure	223	349	63.90	233	372	62.63	211	371	56.87
All-Cause Unplanned Admissions for Patients with Multiple Chronic Conditions	11	1078	1.02	17	1940	0.88	28	2450	1.14
Process Milestones									
Screening for Clinical Depression and Follow-up Plan	142	327	43.43	159	306	51.96	115	251	45.82
Tobacco Use: Screening and Cessation Intervention	223	367	60.76	312	372	83.87	299	370	80.81
Percentage of Adolescents with Well-Child Visits	4903	8693	56.40	8789	15326	57.35	11151	23518	47.41
Developmental Screening in First Three Years of Life	1861	3140	59.27	3107	5003	62.10	3662	6592	55.55

SOURCE: 2018, 2019, and 2020 Medicaid Quality Measures Scorecard released by OneCare.

NOTE: PY3 (2020) measures include both the Medicaid traditional cohort and the expanded cohort.

Appendix Exhibit F.23. BCBSVT Quality Performance Measures, PY1–PY3 (2018–2020)

Measure	PY1			PY2			PY3		
	Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%
Health Care Delivery System Quality Targets									
Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (composite)	53	222	23.87	99	478	20.71	90	413	21.67
Follow-Up after ED Visit for Mental Illness (30-Day Rate)	35	42	83.33	21	32	65.63	67	77	87.01
Follow-Up after Hospitalization for Mental Illness (7-Day Rate)	18	26	69.23	18	29	62.07	46	69	66.67
Follow-Up after ED Visit for Alcohol and Other Drug Abuse or Dependence (30-Day Rate)	*	*	19.35	*	*	26.92	15	54	27.78
Hemoglobin A1c Poor Control	95	411	23.11	47	411	11.44	193	822	23.48
Controlling High Blood Pressure	251	411	23.87	276	411	67.15	489	822	54.49
ACO All-Cause Readmissions	43	455	0.85	31	44.72	0.69	40	65	0.61
CAHPS Patient Experience: Care Coordination Composite	--	--	89.39	--	--	85.56	--	--	89.6%
Process Milestones									
Screening for Clinical Depression and Follow-up Plan	210	411	51.09	185	383	48.30	337	783	43.04
Percentage of Adolescents with Well-Care Visits	1,238	1,977	62.62	1,146	1,878	61.02	6,474	9,433	68.63
Developmental Screening in First Three Years of Life	231	292	79.11	197	289	68.17	773	1,014	76.23

SOURCE: 2018, 2019, and 2020 BCBSVT Quality Measures Scorecards released by OneCare. Numbers represent members covered by BCBSVT's qualified health plan and their self-insured plans participating in the Model.

NOTE: * Suppressed due to small cell size. CAHPS numerators and denominators are not reported.

Appendix Exhibit F.24. MVP Performance Measures, PY3 (2020)

Measure	Numerator	Denominator	%
Health Care Delivery System Quality Targets			
Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (composite)	40	222	18.02
Follow-Up after ED Visit for Mental Illness (30-Day Rate)	§	§	66.67
Follow-Up after Hospitalization for Mental Illness (7-Day Rate)	§	§	66.67
Follow-Up after ED Visit for Alcohol and Other Drug Abuse or Dependence (30-Day Rate)	§	§	100.0
Hemoglobin A1c Poor Control	15	70	21.43
Controlling High Blood Pressure	209	408	51.23
ACO All-Cause Readmission	§	§	1.99
Process Milestones			
Percentage of Adolescents with Well-Care Visits	449	806	55.71

SOURCE: 2018, 2019, and 2020 MVP Quality Measures Scorecard released by OneCare.

NOTE: § Suppressed due to small cell size

Appendix G. Clinician Survey, Methods

Appendix G.1: Survey Overview

From March through July 2021, NORC fielded a statewide survey of Vermont clinicians ("clinician survey") to capture perspectives about the Model and health reform efforts in Vermont. We examined participating and non-participating clinicians' awareness and perspectives on the Model features, motivations for participation (or non-participation), and the Model's impact on practice and care delivery in Vermont. The survey included questions about practice characteristics, Model awareness and participation, implementation and engagement, and practice care delivery and transformation, among other topics (See **Appendix Exhibit G.5**). A total of 541 of Model-participating and non-participating clinicians completed the survey through the question on self-reported Model participation.

Appendix G.2: Target Population and Data Sources

The target population for the clinician survey included both practitioners participating in the model and eligible, non-participating practitioners. The participant population includes practitioners who participated in one or more OneCare ACO initiatives during PY1–PY3 (i.e., Medicare, Medicaid, or Commercial). The non-participant population includes all active practitioners with attribution-eligible specialists who had a practice based in Vermont or provided care to Vermonters during PY1–PY3.

We identified participating practitioners using the PY1–PY3 (2018–2020) Medicare, Medicaid, and commercial payer Model participant lists.[27] Because there is no single authoritative data source with information on active practitioners in Vermont, we collated information on practitioners' specialty, license status, and practice base from the following data sources to identify the final eligible, non-participant population: NPPES; Medicare fee-for-service claims data; Medicare Data on Provider Practice and Specialty (MD-PPAS); state licensure data; Provider Enrollment, Chain, and Ownership System (PECOS) data; and IQVIA OneKey Health Care Reference Dataset. Additionally, we used a public link to the survey, which solicited responses from eligible practitioners who were not listed in the secondary data sources. The questionnaire included screener questions to verify if the open-link respondents met the model eligibility criteria. **Exhibit G.2** presents the final population frame that was used to field the survey.

[27] We did not use any additional secondary data sources or screener questions to determine the eligibility of the model participants because OneCare and CMS validated the model participant lists and used the information to set the financial benchmarks.

Appendix Exhibit G.2. Target Population

	Participants	Eligible, Non-Participants
OneCare ACO participant lists	4,838	N/A
Secondary data sources§	N/A	1,836
Open-link respondents screened as eligible	N/A	32
Total	4,838	1,868

NOTES: §NPPES; Medicare fee-for-service claims data; Medicare Data on Provider Practice and Specialty (MD-PPAS); state licensure data; PECOS data; and IQVIA OneKey Health Care Reference Dataset.

Appendix G.3: Sampling Design and Survey Sample

Because the target population is relatively small, we administered the survey to all PY3 (2020) participating practitioners and eligible non-practitioners with valid contact information. As shown in **Exhibit G.3**, valid contact (i.e., email did not bounce back) information was available for 72.7 percent of the participating practitioners and all eligible, non-participating practitioners in the population frame. Because we used IQVIA's OneKey dataset to both verify the eligibility criteria of the eligible non-participants and locate their contact information, our population frame does not include any eligible, non-participating practitioners with missing contact information. Because none of the secondary data sources have comprehensive and up-to-date information on active practitioners, it is likely that the population frame does not capture some eligible non-participants who recently began practicing in Vermont or had only a small number of patients in the state. The overall count of eligible practitioners in the state aligns with established benchmarks, such as the state's health care workforce census report.[28] Of the 5,385 practitioners who were invited to participate in the survey, 541 provided valid responses to the survey during the fielding period. Of the 541 survey respondents, 427 responded to questions across all seven domains (we classified these cases as "completes"), and 114 responded to questions in one or more but not all domains (we classified these cases as "partials"). **Exhibit G.3** provides information on the number of responses by domain.

[28] Vermont Department of Health. *Health Care Workforce Data*. 2021; https://www.healthvermont.gov/health-statistics-vital-records/health-care-systems-reporting/health-care-workforce

Appendix Exhibit G.3. Response Sample and Response Rate

	Participants	Eligible, Non-Participants	All
Target Population	4,838	1,868	6,706
With Valid Contact Information, N (%)	3,517 (72.7%)	1,868 (100.0%§)	5,385 (80.3%)
Survey Respondents, N (Response rate)	386 (11.0%)	155 (8.3%)	541 (10.0%)
Complete	309 (8.8%)	118 (6.3%)	427 (7.9%)
Partial	77 (2.2%)	37 (2.0%)	114 (2.1%)
Domain 1: Provider information	386 (11.0%)	155 (8.3%)	541 (10.0%)
Domain 2: Vermont Context	385 (10.9%)	154 (8.2%)	539 (10.0%)
Domain 3: Practice Characteristics	386 (11.0%)	155 (8.3%)	541 (10.0%)
Domain 4: Model Awareness and Participation	386 (11.0%)	155 (8.3%)	541 (10.0%)
Domain 5: Implementation and Engagement	364 (10.3%)	145 (7.8%)	509 (9.5%)
Domain 6: Practice and Care Delivery Transformation	346 (9.8%)	135 (7.2%)	481 (8.9%)
Domain 7: COVID-19 PHE	352 (10.0%)	151 (8.1%)	503 (9.3%)

NOTES: §Contact information was available for all eligible non-practitioners because the dataset used to verify the practice base of the practitioners—IQVIA's OneKey dataset—was also used to identify the contact information.

Appendix G.4: Fielding Methods

NORC fielded the survey from late March through early July 2021. We fielded the initial survey invitation to clinicians in Vermont who were eligible to participate in the Model in PY3. The invitation email included the survey aims and a survey link with a unique identifier for each invited participant along with a letter of support from GMCB, the Vermont Agency of Human Services, and NORC. The NORC team followed the initial invitation with up to five follow-up emails to encourage participation among nonrespondents. NORC's survey frame data included additional emails, so if emails did not work, NORC followed up with alternate email addresses, if available. In addition to this outreach, Vermont professional groups and associations distributed a general link to the survey; clinicians responding to the general link were asked to submit their NPI to ensure that they were eligible and to reduce the potential for duplicate responses.

Over the course of the fielding period, NORC's survey team closely monitored responses, tailored follow-up email language, updated respondent contact information, and answered clinicians' questions about the survey via an email "help desk." We performed quality assurance checks to ensure that invitations reached the intended sampling frame throughout the fielding period.

Appendix G.5: Instrument Design and Survey Domains

The survey instrument consisted of 39 questions across seven survey domains, with an estimated length of 20-30 minutes. We reviewed existing clinician surveys to inform the items and design of the instrument, such as the Vermont Clinician Landscape Study Report.[29] We also developed new survey questions specific to the Model, features of the VTAPM, our evaluation research questions, and clinical practice in Vermont.

Exhibit G.5 provides an overview of each domain of the survey and the corresponding research questions. Appendix H includes select survey cross tabulations and results.

Appendix Exhibit G.5. Survey Domains, Constructs, and Mapping to the Research Questions

Domains	Items/Constructs	Research Questions
Provider information	• Participation status (current/prior/never) • Role within practice, clinical training, number of years practicing in Vermont • Compensation methods	N/A
Vermont Context	• Prior participation in ACOs	RQs 6, 9
Practice Characteristics	• Practice arrangement and organizational structure • Practice mergers or acquisitions within the last three years • Health system affiliation • Patients' insurance status • Types of staff • EHR experience	RQs 4, 6
Model Awareness and Participation	• Awareness of the Model • Voluntary vs. involuntary participation • Factors and Model features motivating participation • Non-participating practitioners' reasons for not participating	RQs 7, 9-11
Implementation and Engagement	• Awareness and use of Model features • Awareness and recoupment of Model-specific payments	RQs 4, 6, 7, 9, 10
Practice and Care Delivery Transformation	• Use of Health IT components for ACO-related activities • What the VTAPM has changed at practices, at the state-level	RQs 6, 7, 10, 11
COVID-19 PHE	• Changes in care delivery experience due to the COVID-19 PHE • Provider's perception of utilization (volume, telehealth) • Financial support, staff availability, and other disruptions	RQ 7

[29] Green Mountain Care Board. *Vermont Clinician Landscape Study Report*. 2017; https://gmcboard.vermont.gov/sites/gmcb/files/files/resources/reports/Vermont%20Clinician%20Landscape%20Study%20Report%20October_1_2017_FINAL.pdf

Appendix G.6: Data Cleaning, Processing, and Analytic File Construction

We constructed a comprehensive practitioner-level population frame dataset comprising information on program participation, practice characteristics, practitioner characteristics, and contact information for all practitioners in the population frame. We used the population frame dataset to preload the survey with practitioner-specific information and code the instrument. This dataset also served as the main data source for calibrating the response sample, adjusting for non-response, as well as construction of the final survey analytic file.

After the end of the fielding period, we ran quality assurance checks to validate the data in the response dataset and conducted extensive cleaning and recoding to prepare the data for analysis. During the quality assurance process, the team flagged and reviewed responses, ensured there were no duplicate responses, and documented missing responses due to web and survey logic skips. Next, we merged the response dataset with the population frame dataset to prepare the analytic file for calibration, adjusting for non-response, and conducting survey analysis. We created a detailed codebook for the variables in the merged analytic file. The codebook served as a key reference to ensure that variables and associated response options were defined appropriately, and we cleaned the raw data collected to align with standard variable naming and coding conventions.

Appendix G.7: Non-Response Adjustment and Calibration

Because the survey was administered to all practitioners in the population frame, we did not have to contend with producing initial sample weights to account for a complex sample design. To ensure that final response sample is representative of the population, we constructed survey analysis weights by implementing the following steps:

1. **Adjustment to account for missing contact information.** Some practitioners in the population frame did not receive an invitation to participate in the survey because of missing contact information. To adjust for bias associated with the missing contact information, we used a logistic regression model to predict propensity for having contact information. **Exhibit G.7.1** lists the factors from secondary data sources that were included in the logistic regression model. The predicted probabilities for each case were used to form weighting cells for the weighting adjustment. For each weighting cell, the sum of weights (number of cases) of all cases in the cell was divided by the number of cases with contact information. This formed the adjustment factors that were applied to the cases with contact information. This adjustment helps to control for bias associated with propensity to have contact information in the frame.
2. **Adjustment for survey non-response.** Next, an adjustment for response propensity was performed. A logistic regression model was used to predict propensity to complete the survey. As shown in **Exhibit G.3**, we used the same set of factors used the in the earlier step in the regression model for the adjustment of non-response. Partial completes were considered completes in this step. The predicted probabilities for each case were used to form weighting cells for the weighting

adjustment. For each weighting cell, the sum of the contact-information-adjusted weights (number of cases) of all cases in the cell that had contact information was divided by the sum of the contact-information-adjusted weights for cases that completed the survey. This formed the adjustment factors that were applied to the cases that completed the survey. This adjustment helps to control for bias associated with propensity to respond.

3. **Raking procedure to ensure representativeness.** To further control for bias and ensure the representativeness of the sample on key provider characteristics, the weights that were produced in the earlier steps were then raked to benchmark totals derived from the population frame. **Exhibit G.3** lists the benchmarks that were used in the raking procedure. We had to limit the number of stratification factors to a subset of those listed in the table below because of small cell sizes of the resulting strata.

We merged the final survey analysis weights with the population frame file and subset the dataset to include only the survey respondents to produce the final survey analytic file.

Appendix Exhibit G.7.1. Non-Response Adjustment and Calibration

Stratification Factors Included in the Analytic Procedures	Adjustment for Missing Contact Information	Adjustment for Non-Response	Raking Procedure to Ensure Representativeness
Model participant (y/n)	✓	✓	✓
Participated in all-payer ACO models (y/n)	✓	✓	
Practitioner's specialty is primary care (y/n)	✓	✓	✓
Practitioner's specialty meets alignment eligibility criteria (y/n)	✓	✓	
Health system affiliated practitioner (y/n)	✓	✓	✓
Rurality of practice location (Metropolitan; Micropolitan; Rural)	✓	✓	✓
Practice size (1-15; 16-50; 50+ practitioners)	✓	✓	✓
Past experience with ACO programs	✓	✓	✓

Exhibit G.7.2 presents the characteristics of the target population as well as the unweighted and weighted response sample. The biggest differences between the weighted and unweighted samples were among small practices (smaller percentage in weighted data), metropolitan (smaller percentage in weighted data), and those who are primary care clinicians (smaller percentage in weighted data). Our outreach strategy focused on reaching small practices and primary care clinicians, which may be why these practice/practitioner characteristics may have been disproportionately larger in the unweighted sample before we applied the weights.

Appendix Exhibit G.7.2. Non-Response Adjustment and Calibration

Characteristics	Population	Response Sample (Unweighted)	Response Sample (Weighted)
N	6,706	541	6,706
Model participation			
Proportion participating in the Vermont All-Payer ACO model	72.1%	71.3%	71.9%
Proportion participating in all-payer ACO models	41.5%	47.3%	41.4%
Practice characteristics			
Practice size (# of practitioners)			
Small (1-15)	16.9%	28.2%	16.9%
Medium (15-50)	13.5%	10.2%	13.5%
Large (50+)	69.6%	61.6%	69.6%
System affiliation	30.5%	32.5%	30.4%
Practice location (RUCA)			
Metropolitan	30.7%	38.1%	30.7%
Micropolitan	38.5%	26.3%	38.3%
Rural	30.8%	35.6%	30.9%
Practitioner characteristics			
Primary care	46.4%	59.0%	46.4%
Alignment-eligible	50.7%	64.7%	50.7%
Past experience with ACO models	68.3%	70.4%	68.3%

Descriptive and bivariate analysis. We conducted descriptive analyses to examine Model participation, awareness, motivations for participation, perceptions of Model impact, and COVID-19 PHE impact. For relevant analyses, we stratified by Model participation status, clinician specialty, health system affiliation, and practice size. These calculations included the mean and 95% confidence intervals. We also ran t-tests and chi-squared tests for key measures to examine whether there were any significant differences between Model participants and non-participants.

Appendix G.8: Methodological Considerations/Limitations

This study relied on administrative data to generate the sampling frame and weights for the clinician survey analysis. Because of the ambiguity in the eligibility criteria for the Model, it was challenging to define and identify the eligible non-participating clinicians. We relied on the Medicare and Medicaid lists for participants and publicly available data for developing a sampling frame of licensed Vermont clinicians who are non-participating but eligible to participate in the Model. There is no authoritative data source that contains both eligibility and contact information. Therefore, we may have excluded some eligible non-participants from the sampling frame. Weighted results represent the universe of clinicians in Vermont, as defined in the sampling frame.

The adjusted response rate for this study is consistent with trends of declining response rates for clinician surveys, and we did not have a survey incentive for this study. Additionally, the COVID-19 PHE may have negatively impacted response rates because clinicians in Vermont were focused on responding to the COVID-19 PHE. Applying survey weights (as specified in **Exhibit G.7.1**) also adjusted for differential response by key practice and clinician characteristics—e.g., if more clinicians responded in urban versus rural areas.

Self-reported responses could not be independently verified and may be subject to social desirability bias. To decrease potential bias, we informed participants that their responses would be confidential and reported only in aggregate; we also used a self-administered instrument.[30] Additionally, lack of Model awareness or recall bias may have inhibited the interpretation or response to some of the survey questions.

[30] Tourangeau R, Rips LJ, Rasinski K. (Eds.).*The psychology of survey response.* 2000; Cambridge University Press. https://doi.org/10.1017/CBO9780511819322

Appendix H. Clinician Survey, Results

Appendix Exhibit H.1. Provider Characteristics | Role

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Department/division director	59	12.5	14.7 (4.1)	6.9 (4.7)	15.3 (5.4)	10.4 (4)	10.6 (3.9)	14.2 (5.4)	6.4 (3.9)	7.2 (4.6)	23.2 (7.7)
CEO or president	43	7.5	4.5 (2.4)	15.3 (6.6)	0.9 (1.4)	12.7 (4.3)	4.8 (2.7)	9.9 (4.6)	17.2 (6)	6.1 (4.3)	0 (0)
Chief medical/clinical officer	46	7.6	7.9 (3.2)	6.7 (4.6)	6.2 (3.7)	8.6 (3.7)	9.1 (3.7)	6.3 (3.7)	13.9 (5.5)	5.8 (4.2)	2.8 (3)
Practice manager/administrator	31	5.3	3.9 (2.3)	9 (5.3)	1.9 (2)	8 (3.5)	6.8 (3.2)	4.1 (3.1)	10.6 (4.9)	5.5 (4.1)	0.6 (1.4)
Provider	501	90.0	90.3 (3.5)	89.1 (5.7)	94 (3.6)	86.9 (4.4)	94.7 (2.9)	85.9 (5.4)	94 (3.8)	86.7 (6.1)	88.9 (5.7)
Other	47	9.0	7.5 (3.1)	12.9 (6.2)	7.1 (3.9)	10.5 (4)	9.2 (3.7)	8.9 (4.4)	8.7 (4.5)	8.9 (5.1)	10 (5.5)

Notes: Select all that apply question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 1 were excluded from these counts.

Survey Question: What is your role within [primary practice name]?

Appendix Exhibit H.2. Provider Characteristics | 2019 and 2020 Compensation

			Participation Status		System Affiliation		Provider Type		Practice Size		
Response	N	Overall	Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
2019											
Salary only	247	47.3	50.5 (5.8)	39 (9)	47.8 (7.6)	46.9 (6.5)	51.9 (6.4)	43.3 (7.6)	34.5 (7.5)	47 (8.9)	59.5 (9)
Productivity incentives only	25	4.0	3.1 (2)	6.3 (4.5)	4 (3)	3.9 (2.5)	3.1 (2.2)	4.7 (3.3)	6.4 (3.9)	3 (3)	2.7 (3)
Salary with productivity incentives	73	13.7	14.5 (4.1)	11.5 (5.9)	15.7 (5.5)	12.1 (4.2)	9.2 (3.7)	17.6 (5.9)	19.4 (6.3)	11.2 (5.6)	11 (5.7)
Salary with quality incentives/targets	25	5.6	4.7 (2.5)	7.8 (5)	5.1 (3.3)	5.9 (3.1)	4 (2.5)	7 (3.9)	2.2 (2.3)	4.4 (3.7)	8.3 (5)
Salary with both quality and productivity incentives/targets	79	13.5	15.8 (4.3)	7.5 (4.9)	21.1 (6.2)	7.6 (3.5)	16.3 (4.7)	11.1 (4.8)	10.3 (4.8)	16.1 (6.5)	15.2 (6.6)
Other	88	15.6	10.9 (3.6)	27.6 (8.2)	5.8 (3.5)	23.1 (5.5)	14.6 (4.5)	16.4 (5.7)	27.2 (7)	17.6 (6.8)	2.7 (3)
Don't know	3	0.3	0.4 (0.8)	0 (0)	0.4 (0.9)	0.3 (0.7)	0.7 (1)	0 (0)	0 (0)	0.4 (1.1)	0.5 (1.3)
Invalid skip	1	0.1	0 (0)	0.3 (1)	0 (0)	0.2 (0.5)	0.2 (0.6)	0 (0)	0 (0)	0.3 (1)	0 (0)
2020											
Salary only	278	52.8	57.8 (5.8)	40.2 (9)	57.4 (7.5)	49.3 (6.5)	57.3 (6.3)	49 (7.7)	36.8 (7.6)	52.5 (8.9)	66.9 (8.6)
Productivity incentives only	22	3.5	3.1 (2)	4.7 (3.9)	3.6 (2.8)	3.5 (2.4)	2.6 (2)	4.3 (3.1)	6.1 (3.8)	2.1 (2.6)	2.4 (2.8)
Salary with productivity incentives	74	13.8	13.7 (4)	14.1 (6.4)	15.8 (5.5)	12.3 (4.3)	12.5 (4.2)	14.9 (5.5)	19.5 (6.3)	11.7 (5.7)	10 (5.5)
Salary with quality incentives/targets	20	4.6	4 (2.3)	6.1 (4.4)	2.9 (2.5)	5.9 (3.1)	4 (2.5)	5.1 (3.4)	3 (2.7)	4.5 (3.7)	6.4 (4.5)
Salary with both quality and productivity incentives/targets	49	8.5	9.3 (3.4)	6.5 (4.5)	14 (5.2)	4.2 (2.6)	8.1 (3.5)	8.8 (4.4)	7.4 (4.1)	8.9 (5.1)	9.6 (5.4)
Other, please specify:	94	16.3	11.5 (3.7)	28.5 (8.3)	5.7 (3.5)	24.4 (5.6)	14.4 (4.5)	17.9 (5.9)	27.2 (7)	18.6 (6.9)	4.6 (3.8)
Don't know	3	0.4	0.6 (0.9)	0 (0)	0.4 (1)	0.4 (0.8)	0.9 (1.2)	0 (0)	0 (0)	1.3 (2)	0.1 (0.6)
Invalid skip	1	0.1	0.2 (0.5)	0 (0)	0.3 (0.8)	0 (0)	0.3 (0.7)	0 (0)	0 (0)	0.4 (1.2)	0 (0)

Notes: n, unweighted = 541. Single-choice question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 1 were excluded from these counts.

Survey Question: Which response best reflects how you were compensated for the work that you performed at [primary practice name]?

Appendix Exhibit H.3. Practice Characteristics | Specialty

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
	#	%	% (SE)								
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
Primary care practice	177	23.6	23.5 (4.9)	24.1 (7.9)	16.5 (5.6)	29.2 (5.9)	46 (6.4)	4.3 (3.1)	28.8 (7.2)	46.4 (8.9)	2.2 (2.7)
Single-specialty practice (not primary care)	185	35.2	31.3 (5.4)	45 (9.2)	35.1 (7.2)	35.2 (6.2)	23.4 (5.4)	45.4 (7.7)	68.1 (7.4)	36 (8.6)	4.1 (3.6)
Multi-specialty practice	169	38.8	42.3 (5.8)	29.7 (8.4)	44.7 (7.5)	34.2 (6.2)	28.1 (5.8)	48 (7.7)	2.8 (2.6)	14.9 (6.3)	92 (5)
Don't know	9	2.2	2.5 (1.8)	1.2 (2)	3.7 (2.8)	1 (1.3)	2.4 (2)	1.9 (2.1)	0.3 (0.9)	2.7 (2.9)	1.6 (2.3)
Invalid skip	1	0.2	0.3 (0.7)	0 (0)	0 (0)	0.4 (0.8)	0 (0)	0.4 (1)	0 (0)	0 (0)	0 (0)

Notes: n, unweighted = 541. Single-choice question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 3 were excluded from these counts.

Survey Question: How would you describe [primary practice name]'s specialty?

Appendix Exhibit H.4. Practice Characteristics | Ownership

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
	#	%	% (SE)								
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
Academic medical center (e.g., faculty practice, residency, medical school, teaching clinic)	164	32.4	37.6 (5.6)	19 (7.2)	51.4 (7.6)	17.7 (5)	31.6 (6)	33 (7.2)	8.9 (4.5)	29.3 (8.1)	57.4 (9)
Community health center or rural health center (e.g., federally qualified community health center)	51	8.9	10.1 (3.5)	5.8 (4.3)	6.2 (3.6)	11 (4.1)	11.5 (4.1)	6.7 (3.8)	5.8 (3.7)	12.3 (5.9)	9.7 (5.4)
Community hospital	123	26.0	30.5 (5.4)	14.6 (6.5)	34 (7.2)	20 (5.2)	24 (5.5)	27.9 (6.9)	29.7 (7.2)	30.4 (8.2)	19.2 (7.2)
Independent or physician-owned practice	159	23.1	14.3 (4.1)	45.5 (9.2)	4 (3)	37.7 (6.3)	23.5 (5.4)	22.7 (6.5)	47 (7.9)	22.2 (7.4)	2.5 (2.9)
Other	39	8.3	5.8 (2.7)	14.6 (6.5)	3.3 (2.7)	12 (4.2)	8.8 (3.6)	7.8 (4.1)	7.1 (4.1)	5.8 (4.1)	9.7 (5.4)
Don't know	5	1.3	1.7 (1.5)	0.4 (1.2)	1.1 (1.6)	1.5 (1.6)	0.6 (1)	2 (2.1)	1.5 (1.9)	0 (0)	1.4 (2.2)

Notes: n, unweighted = 541. Single-choice question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 3 were excluded from these counts.

Survey Question: How would you describe [primary practice name]'s ownership?

Appendix Exhibit H.5. Practice Characteristics | Affiliation

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
	#	%	% (SE)								
Yes	257	47.9	53.8 (5.8)	32.9 (8.7)	67.2 (7.1)	33.1 (6.1)	50.9 (6.4)	45.4 (7.7)	39.6 (7.7)	50.1 (8.9)	54.8 (9.1)
No	231	40.4	33.4 (5.5)	58.6 (9.1)	19.6 (6)	56.5 (6.4)	37 (6.2)	43.4 (7.6)	55.1 (7.9)	39.8 (8.7)	26.9 (8.1)
Don't know	51	11.2	12.3 (3.8)	8.5 (5.2)	13.2 (5.1)	9.7 (3.8)	11.2 (4)	11.3 (4.9)	5.3 (3.5)	8.7 (5)	18.3 (7.1)
Invalid skip	2	0.4	0.5 (0.9)	0 (0)	0 (0)	0.7 (1.1)	0.9 (1.2)	0 (0)	0 (0)	1.4 (2.1)	0 (0)

Notes: n, unweighted = 541. Single-choice question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 3 were excluded from these counts.

Survey Question: Is [primary practice name] affiliated with a health system/group?

Appendix Exhibit H.6. Practice Characteristics | Mergers and Acquisitions

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
	#	%	% (SE)								
Yes	67	12.2	14.2 (4.1)	7.3 (4.8)	20 (6)	6.3 (3.2)	14.8 (4.6)	10 (4.6)	7.9 (4.3)	10.2 (5.4)	18.6 (7.1)
No	408	73.5	70.8 (5.3)	80.5 (7.3)	59 (7.4)	84.6 (4.7)	72.8 (5.7)	74.1 (6.7)	88.1 (5.1)	80.3 (7.1)	56.3 (9.1)
Don't know	65	14.1	14.9 (4.2)	12.1 (6)	20.7 (6.1)	9.1 (3.7)	12.4 (4.2)	15.6 (5.6)	4 (3.1)	9.4 (5.2)	24.7 (7.9)
Invalid skip	1	0.1	0.2 (0.5)	0 (0)	0.3 (0.8)	0 (0)	0 (0)	0.3 (0.8)	0 (0)	0 (0)	0.4 (1.1)

Notes: n, unweighted = 541. Single-choice question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 3 were excluded from these counts.

Survey Question: Did [primary practice name] participate in a merger or acquisition within the last three years?

Appendix Exhibit H.7. Practice Characteristics | Electronic Health Record

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
	#	%	% (SE)								
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
Epic	183	35.5	43.3 (5.8)	15.5 (6.7)	57.8 (7.5)	18.4 (5)	36.6 (6.2)	34.6 (7.3)	14 (5.5)	33.9 (8.4)	56.9 (9)
Cerner	50	11.1	11.9 (3.8)	8.8 (5.2)	19.8 (6)	4.3 (2.6)	10.5 (3.9)	11.5 (4.9)	10.7 (4.9)	10.9 (5.6)	11.3 (5.8)
eClinicalWorks	41	6.4	6.8 (2.9)	5.3 (4.1)	3.8 (2.9)	8.4 (3.6)	7.2 (3.3)	5.6 (3.5)	8.7 (4.5)	9.2 (5.2)	2.3 (2.8)
Meditech	35	6.3	7.7 (3.1)	2.8 (3)	6.4 (3.7)	6.3 (3.2)	5.3 (2.9)	7.2 (4)	6.9 (4)	7.7 (4.7)	5.1 (4)
Medent	30	3.8	4.8 (2.5)	1.2 (2)	0 (0)	6.7 (3.2)	7.7 (3.4)	0.4 (0.9)	3.5 (2.9)	8.7 (5)	0.4 (1.2)
Netsmart	7	1.8	2.1 (1.7)	0.7 (1.6)	0.3 (0.9)	2.8 (2.2)	0.3 (0.7)	3 (2.6)	1.1 (1.6)	1 (1.8)	3 (3.1)
I/we do not currently use an EHR	38	6.1	2.8 (1.9)	14.5 (6.5)	0.6 (1.2)	10.3 (3.9)	6 (3.1)	6.1 (3.7)	16.2 (5.8)	2.1 (2.6)	0 (0)
Other	154	28.6	20.5 (4.7)	49.3 (9.2)	10.6 (4.7)	42.5 (6.4)	25.8 (5.6)	31 (7.1)	38.4 (7.7)	26.4 (7.9)	21 (7.4)
Don't know	3	0.5	0 (0)	1.9 (2.5)	0.8 (1.3)	0.3 (0.8)	0.4 (0.8)	0.6 (1.2)	0.6 (1.2)	0 (0)	0 (0)

Notes: n, unweighted = 541. Single-choice question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 3 were excluded from these counts.

Survey Question: Does [primary practice name] currently use an electronic health record (EHR)? Please select the EHR that your practice members use most frequently.

Appendix Exhibit H.8. Awareness of the VTAPM

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
	#	%	% (SE)								
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
Yes	402	72.4	80.3 (4.6)	52.2 (9.2)	69.1 (7)	74.9 (5.6)	75.2 (5.5)	69.9 (7.1)	77.2 (6.6)	76.1 (7.6)	66.9 (8.6)
No	100	19.2	13.1 (3.9)	34.7 (8.8)	20.5 (6.1)	18.2 (5)	18.4 (5)	19.9 (6.1)	18.9 (6.2)	16 (6.5)	22.3 (7.6)
Don't know	39	8.4	6.6 (2.9)	13 (6.2)	10.4 (4.6)	6.9 (3.3)	6.4 (3.1)	10.2 (4.7)	3.9 (3)	7.9 (4.8)	10.8 (5.7)

Notes: n, unweighted = 541. Single-choice question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 4 were excluded from these counts.

Survey Question: Are you aware of the Vermont (VT) All-Payer Accountable Care Organization (ACO) Model?

Appendix Exhibit H.9. Self-Reported Participation in the VTAPM

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
	#	%	% (SE)								
Yes	218	39.4	50.7 (5.8)	10.3 (5.6)	48.4 (7.6)	32.4 (6.1)	44.1 (6.4)	35.3 (7.4)	34.2 (7.5)	50.2 (8.9)	37.4 (8.8)
No	123	19.8	7.2 (3)	52.1 (9.2)	4.5 (3.1)	31.5 (6)	20.4 (5.2)	19.2 (6.1)	38.2 (7.7)	11.9 (5.8)	9.1 (5.2)
Don't know	200	40.8	42.1 (5.8)	37.6 (8.9)	47.1 (7.6)	36 (6.2)	35.4 (6.1)	45.5 (7.7)	27.6 (7.1)	37.9 (8.6)	53.6 (9.1)

Notes: n, unweighted = 541. Single-choice question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 4 were excluded from these counts.

Survey Question: Did you participate in the VT All-Payer ACO Model in 2020?

Appendix Exhibit H.10. Provider Role in VTAPM Participation

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
	#	%	% (SE)								
Yes	53	21.2	22.3 (7.1)	7.1 (16)	10.1 (6.7)	33.9 (11.5)	22.7 (8.4)	19.5 (11.4)	26.8 (12.8)	25.2 (11.6)	12.3 (10)
No	162	77.7	76.8 (7.2)	89.2 (19.4)	88.2 (7.2)	65.6 (11.5)	75.6 (8.6)	79.9 (11.6)	69.2 (13.3)	74.8 (11.6)	87.7 (10)
Don't know	3	1.2	1 (1.7)	3.7 (11.8)	1.7 (2.9)	0.6 (1.9)	1.7 (2.6)	0.6 (2.2)	4 (5.6)	0 (0)	0 (0)

Notes: n, unweighted = 218. Single-choice question. This question was only asked of those who answered “Yes” to “Did you participate in the VT All-Payer ACO Model in 2020?” The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 4 were excluded from these counts.

Survey Question: Were you involved in the decision to participate in the VT All-Payer ACO Model?

Appendix Exhibit H.11. Reasons for Not Participating in the VTAPM

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Concern that model will discontinue prematurely											
Very/Somewhat Important	33	24.9	28.5 (17.2)	23.6 (9.9)	28.3 (32.9)	24.5 (8.9)	20.2 (10.9)	29.2 (13.3)	28 (10.6)	15 (17.1)	24.9 (27.4)
Not at all important	17	13.3	11.4 (12.1)	13.9 (8.1)	35.3 (34.9)	10.8 (6.4)	8.2 (7.5)	17.9 (11.2)	12.7 (7.9)	25.6 (20.9)	3.9 (12.2)
Not applicable	30	25.1	20.6 (15.4)	26.6 (10.3)	15.5 (26.5)	26.1 (9.1)	34 (12.9)	16.8 (11)	19.6 (9.4)	42 (23.6)	31.3 (29.4)
Don't know	36	30.7	26.7 (16.9)	32.1 (10.9)	20.8 (29.7)	31.8 (9.6)	33.9 (12.9)	27.8 (13.1)	31 (10.9)	15.6 (17.3)	39.9 (31)
Invalid skip	7	6.1	12.8 (12.7)	3.7 (4.4)	0 (0)	6.7 (5.2)	3.7 (5.1)	8.2 (8.1)	8.8 (6.7)	1.9 (6.6)	0 (0)
Concerns about financial risk or losses											
Very/Somewhat Important	59	45.6	46.1 (19)	45.4 (11.6)	57.5 (36.1)	44.3 (10.3)	36.6 (13.1)	53.8 (14.6)	49.6 (11.8)	38.6 (23.3)	40.3 (31)
Not at all important	5	3.7	2.3 (5.8)	4.2 (4.7)	11.7 (23.5)	2.8 (3.4)	3.1 (4.7)	4.3 (6)	4.7 (5)	3.6 (8.9)	0 (0)
Not applicable	25	22.5	20 (15.3)	23.4 (9.9)	15.5 (26.5)	23.3 (8.8)	29.5 (12.4)	16.1 (10.8)	17.1 (8.9)	36.2 (23)	31.3 (29.4)
Don't know	28	23.4	18.8 (14.9)	25 (10.1)	15.3 (26.3)	24.3 (8.9)	27.1 (12.1)	19.9 (11.7)	21.7 (9.7)	19.7 (19)	28.4 (28.6)
Invalid skip	6	4.8	12.8 (12.7)	2 (3.3)	0 (0)	5.3 (4.7)	3.7 (5.1)	5.9 (6.9)	6.9 (6)	1.9 (6.6)	0 (0)
Creates additional work											
Very/Somewhat Important	65	48.4	52.1 (19.1)	47.1 (11.7)	57.5 (36.1)	47.5 (10.3)	34.4 (12.9)	61.4 (14.3)	57.7 (11.7)	35.3 (22.9)	28.8 (28.7)
Not at all important	3	2.1	0 (0)	2.9 (3.9)	0 (0)	2.4 (3.1)	3.3 (4.9)	1 (3)	3.3 (4.2)	0 (0)	0 (0)
Not applicable	26	24.2	20.6 (15.4)	25.5 (10.2)	15.5 (26.5)	25.2 (9)	33.2 (12.8)	15.9 (10.7)	17 (8.9)	46.8 (23.9)	31.3 (29.4)
Don't know	23	21.0	16.8 (14.3)	22.5 (9.8)	27 (32.5)	20.3 (8.3)	22.7 (11.4)	19.4 (11.6)	18 (9.1)	16 (17.5)	32 (29.5)
Invalid skip	6	4.2	10.5 (11.7)	2 (3.3)	0 (0)	4.7 (4.4)	6.4 (6.7)	2.2 (4.3)	4 (4.6)	1.9 (6.6)	8 (17.2)
Does not align with my professional goals											
Very/Somewhat Important	46	36.1	28.1 (17.2)	38.9 (11.4)	42.9 (36.2)	35.4 (9.9)	22.1 (11.3)	49 (14.6)	44.8 (11.8)	28.4 (21.6)	12.2 (20.7)
Not at all important	12	8.4	16.4 (14.1)	5.5 (5.3)	6.2 (17.6)	8.6 (5.8)	8.9 (7.8)	7.8 (7.9)	5.8 (5.5)	12.2 (15.7)	7.8 (17)
Not applicable	29	24.3	21 (15.5)	25.5 (10.2)	15.5 (26.5)	25.3 (9)	33.5 (12.8)	15.9 (10.7)	19.8 (9.4)	36.7 (23.1)	31.3 (29.4)
Don't know	30	27.8	29 (17.3)	27.4 (10.4)	35.4 (35)	27 (9.2)	31.8 (12.7)	24.1 (12.5)	24.9 (10.2)	20.8 (19.4)	48.7 (31.6)
Invalid skip	6	3.4	5.5 (8.7)	2.6 (3.7)	0 (0)	3.8 (3.9)	3.7 (5.1)	3.1 (5.1)	4.7 (5)	1.9 (6.6)	0 (0)
Financial incentives do not make it worthwhile (e.g., compensation, bonuses)											
Very/Somewhat Important	49	38.2	27.8 (17.1)	41.9 (11.5)	57.5 (36.1)	36.1 (10)	22.7 (11.4)	52.5 (14.6)	45 (11.8)	27.6 (21.4)	24.9 (27.4)
Not at all important	3	2.7	2.4 (5.9)	2.8 (3.9)	0 (0)	3 (3.5)	3.1 (4.7)	2.3 (4.4)	3.2 (4.1)	0 (0)	3.9 (12.2)
Not applicable	31	25.3	24.5 (16.4)	25.6 (10.2)	15.5 (26.5)	26.4 (9.1)	38.9 (13.3)	12.8 (9.8)	18.1 (9.1)	49.2 (23.9)	31.3 (29.4)
Don't know	32	27.3	32.5 (17.9)	25.4 (10.2)	27 (32.5)	27.3 (9.2)	31.6 (12.6)	23.3 (12.4)	24.3 (10.1)	21.2 (19.6)	39.9 (31)
Invalid skip	8	6.5	12.8 (12.7)	4.3 (4.7)	0 (0)	7.2 (5.4)	3.7 (5.1)	9.1 (8.4)	9.5 (6.9)	1.9 (6.6)	0 (0)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Inadequate alignment of financial incentives across payers											
Very/Somewhat Important	47	33.8	33.9 (18.1)	33.8 (11.1)	57.5 (36.1)	31.2 (9.6)	24.3 (11.7)	42.6 (14.5)	34.5 (11.2)	38.6 (23.3)	28.8 (28.7)
Not at all important	3	3.2	0 (0)	4.3 (4.7)	0 (0)	3.5 (3.8)	4.1 (5.4)	2.3 (4.4)	4.8 (5.1)	0 (0)	0 (0)
Not applicable	27	24.0	18.2 (14.7)	26 (10.3)	15.5 (26.5)	24.9 (9)	32.3 (12.7)	16.4 (10.8)	19.4 (9.4)	36.2 (23)	31.3 (29.4)
Don't know	39	33.0	35.1 (18.2)	32.2 (10.9)	27 (32.5)	33.6 (9.8)	35.6 (13)	30.5 (13.5)	32.5 (11.1)	23.3 (20.2)	39.9 (31)
Invalid skip	7	6.1	12.8 (12.7)	3.7 (4.4)	0 (0)	6.7 (5.2)	3.7 (5.1)	8.2 (8.1)	8.8 (6.7)	1.9 (6.6)	0 (0)
Lack of trust in OneCare											
Very/Somewhat Important	57	39.8	30.5 (17.6)	43.1 (11.6)	29.1 (33.2)	41 (10.2)	28.2 (12.2)	50.4 (14.7)	49.4 (11.8)	24.9 (20.7)	20 (25.3)
Not at all important	4	3.4	2.3 (5.8)	3.8 (4.5)	6.2 (17.6)	3.1 (3.6)	3.1 (4.7)	3.8 (5.6)	4.3 (4.8)	3.6 (8.9)	0 (0)
Not applicable	28	25.6	24.2 (16.4)	26 (10.3)	29.3 (33.3)	25.2 (9)	34.1 (12.9)	17.7 (11.2)	16.4 (8.8)	57.2 (23.7)	31.3 (29.4)
Don't know	28	26.4	30.2 (17.5)	25 (10.1)	35.4 (35)	25.4 (9)	30.9 (12.6)	22.2 (12.2)	23 (10)	12.3 (15.7)	48.7 (31.6)
Invalid skip	6	4.8	12.8 (12.7)	2 (3.3)	0 (0)	5.3 (4.7)	3.7 (5.1)	5.9 (6.9)	6.9 (6)	1.9 (6.6)	0 (0)
Lack of trust in VT All-Payer Model											
Very/Somewhat Important	58	44.8	46.8 (19)	44.1 (11.6)	43.7 (36.3)	44.9 (10.3)	34.5 (12.9)	54.2 (14.6)	48.6 (11.8)	29.6 (21.9)	48.4 (31.6)
Not at all important	8	5.8	4 (7.5)	6.4 (5.7)	20 (29.2)	4.2 (4.2)	5.5 (6.2)	6 (7)	5.8 (5.5)	11.7 (15.4)	0 (0)
Not applicable	24	21.9	15.6 (13.8)	24.2 (10)	15.5 (26.5)	22.7 (8.7)	28.9 (12.3)	15.5 (10.6)	16.7 (8.8)	34.6 (22.8)	31.3 (29.4)
Don't know	27	22.7	20.9 (15.5)	23.3 (9.9)	20.8 (29.7)	22.9 (8.7)	27.3 (12.1)	18.4 (11.4)	22 (9.8)	22.1 (19.9)	20.3 (25.4)
Invalid skip	6	4.8	12.8 (12.7)	2 (3.3)	0 (0)	5.3 (4.7)	3.7 (5.1)	5.9 (6.9)	6.9 (6)	1.9 (6.6)	0 (0)
Model adds administrative or reporting burden											
Very/Somewhat Important	64	47.1	43.2 (18.9)	48.5 (11.7)	49.2 (36.5)	46.9 (10.3)	34.8 (13)	58.5 (14.4)	56.8 (11.7)	31.2 (22.2)	28.8 (28.7)
Not at all important	4	3.3	0 (0)	4.4 (4.8)	13.8 (25.2)	2.1 (3)	1.8 (3.6)	4.6 (6.2)	2.1 (3.4)	11 (15)	0 (0)
Not applicable	23	20.4	12.7 (12.7)	23.1 (9.9)	15.5 (26.5)	20.9 (8.4)	28.9 (12.3)	12.5 (9.7)	14.3 (8.3)	34.6 (22.8)	31.3 (29.4)
Don't know	25	23.9	31.3 (17.7)	21.3 (9.6)	21.5 (30)	24.2 (8.9)	30.9 (12.6)	17.6 (11.2)	19.2 (9.3)	21.2 (19.6)	39.9 (31)
Invalid skip	7	5.3	12.8 (12.7)	2.6 (3.7)	0 (0)	5.9 (4.9)	3.7 (5.1)	6.7 (7.4)	7.6 (6.3)	1.9 (6.6)	0 (0)
Model does not prioritize provision of cost-effective patient care											
Very/Somewhat Important	44	32.4	40.1 (18.7)	29.6 (10.7)	28.3 (32.9)	32.8 (9.7)	31.2 (12.6)	33.5 (13.8)	35 (11.3)	17 (18)	40.3 (31)
Not at all important	7	6.7	0 (0)	9.1 (6.7)	13.8 (25.2)	6 (4.9)	1.8 (3.6)	11.3 (9.3)	7.5 (6.2)	11 (15)	0 (0)
Not applicable	29	24.1	18.1 (14.7)	26.3 (10.3)	15.5 (26.5)	25.1 (9)	32 (12.7)	16.8 (11)	19.5 (9.4)	36.7 (23.1)	31.3 (29.4)
Don't know	36	31.5	29 (17.3)	32.3 (10.9)	42.4 (36.1)	30.3 (9.5)	31.3 (12.6)	31.6 (13.6)	30.5 (10.9)	33.4 (22.6)	28.4 (28.6)
Invalid skip	7	5.3	12.8 (12.7)	2.6 (3.7)	0 (0)	5.9 (4.9)	3.7 (5.1)	6.7 (7.4)	7.6 (6.3)	1.9 (6.6)	0 (0)
Model does not prioritize provision of high-quality care											
Very/Somewhat Important	46	34.3	36.5 (18.4)	33.5 (11)	57.5 (36.1)	31.7 (9.6)	26.4 (12)	41.5 (14.4)	38.1 (11.5)	27.2 (21.3)	28.8 (28.7)
Not at all important	11	7.7	4 (7.5)	8.9 (6.7)	6.2 (17.6)	7.8 (5.6)	7.2 (7)	8.1 (8)	10 (7.1)	6.5 (11.8)	0 (0)
Not applicable	25	22.0	17.1 (14.4)	23.7 (9.9)	15.5 (26.5)	22.7 (8.7)	32.6 (12.8)	12.2 (9.6)	15 (8.4)	41.5 (23.6)	31.3 (29.4)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Don't know	34	30.0	29.6 (17.4)	30.2 (10.7)	20.8 (29.7)	31 (9.6)	30 (12.5)	30 (13.4)	28.1 (10.6)	22.9 (20.1)	39.9 (31)
Invalid skip	7	6.1	12.8 (12.7)	3.7 (4.4)	0 (0)	6.7 (5.2)	3.7 (5.1)	8.2 (8.1)	8.8 (6.7)	1.9 (6.6)	0 (0)
My local hospital is not participating											
Very/Somewhat Important	10	9.2	1.3 (4.2)	12.1 (7.6)	26.7 (32.3)	7.3 (5.4)	8.1 (7.4)	10.3 (8.9)	4.7 (5)	12.4 (15.8)	24.6 (27.3)
Not at all important	13	8.1	3.2 (6.7)	9.8 (6.9)	0 (0)	9 (5.9)	5.9 (6.4)	10.1 (8.8)	11.1 (7.4)	5 (10.4)	0 (0)
Not applicable	54	42.9	47.8 (19.1)	41.2 (11.5)	43.4 (36.2)	42.9 (10.3)	46.7 (13.6)	39.5 (14.3)	41.2 (11.6)	60.7 (23.4)	34.8 (30.2)
Don't know	39	33.7	35 (18.2)	33.2 (11)	29.9 (33.5)	34.1 (9.8)	35.6 (13)	31.9 (13.7)	34.3 (11.2)	20.1 (19.2)	40.6 (31.1)
Invalid skip	7	6.1	12.8 (12.7)	3.7 (4.4)	0 (0)	6.7 (5.2)	3.7 (5.1)	8.2 (8.1)	8.8 (6.7)	1.9 (6.6)	0 (0)
Negative experience with prior ACO models											
Very/Somewhat Important	29	20.8	34.2 (18.1)	16.1 (8.6)	29.9 (33.5)	19.8 (8.3)	17.1 (10.2)	24.2 (12.6)	18.4 (9.2)	20.3 (19.2)	32.4 (29.6)
Not at all important	6	6.8	4.9 (8.3)	7.5 (6.2)	27.5 (32.7)	4.5 (4.3)	1.8 (3.6)	11.5 (9.3)	6.4 (5.8)	8 (13)	7.8 (17)
Not applicable	51	40.8	25.8 (16.7)	46.1 (11.7)	27.2 (32.5)	42.3 (10.2)	48.2 (13.6)	33.9 (13.9)	40.4 (11.6)	54.2 (23.8)	31.3 (29.4)
Don't know	28	25.1	19.4 (15.1)	27.1 (10.4)	15.3 (26.3)	26.2 (9.1)	28.3 (12.3)	22.2 (12.2)	25.4 (10.3)	15.6 (17.3)	28.4 (28.6)
Invalid skip	9	6.5	15.6 (13.9)	3.2 (4.1)	0 (0)	7.2 (5.4)	4.6 (5.7)	8.2 (8)	9.4 (6.9)	1.9 (6.6)	0 (0)
Not enough IT resources to support care management and decision-making											
Very/Somewhat Important	38	27.6	24.2 (16.3)	28.8 (10.6)	29.1 (33.2)	27.4 (9.2)	19.1 (10.7)	35.4 (14)	33.5 (11.2)	14.2 (16.7)	20 (25.3)
Not at all important	12	8.7	7.2 (9.9)	9.2 (6.8)	14.6 (25.8)	8 (5.6)	7.5 (7.2)	9.8 (8.7)	9.7 (7)	5.4 (10.8)	8.8 (17.9)
Not applicable	31	28.0	26.2 (16.8)	28.7 (10.6)	29.3 (33.3)	27.9 (9.3)	38.2 (13.2)	18.7 (11.4)	19.3 (9.3)	60.5 (23.4)	31.3 (29.4)
Don’t know	36	30.9	29.6 (17.4)	31.3 (10.8)	27 (32.5)	31.3 (9.6)	31.6 (12.6)	30.3 (13.5)	30.7 (10.9)	18 (18.4)	39.9 (31)
Invalid skip	6	4.8	12.8 (12.7)	2 (3.3)	0 (0)	5.3 (4.7)	3.7 (5.1)	5.9 (6.9)	6.9 (6)	1.9 (6.6)	0 (0)
Not enough staff resources to support care management and decision-making											
Very/Somewhat Important	45	32.3	36.8 (18.4)	30.7 (10.8)	49.2 (36.5)	30.4 (9.5)	27.5 (12.1)	36.7 (14.1)	36.4 (11.4)	22.3 (19.9)	28.8 (28.7)
Not at all important	9	5.9	0.8 (3.5)	7.7 (6.2)	0 (0)	6.6 (5.1)	3 (4.6)	8.6 (8.2)	7.7 (6.3)	5 (10.4)	0 (0)
Not applicable	27	24.2	16.1 (14)	27 (10.4)	29.3 (33.3)	23.6 (8.8)	32.6 (12.7)	16.5 (10.9)	16.7 (8.8)	48 (23.9)	31.3 (29.4)
Don't know	34	30.4	29 (17.3)	30.9 (10.8)	21.5 (30)	31.4 (9.6)	30.9 (12.6)	30 (13.4)	30.5 (10.9)	16 (17.5)	39.9 (31)
Invalid skip	8	7.2	17.2 (14.4)	3.7 (4.4)	0 (0)	8 (5.6)	6.1 (6.5)	8.2 (8.1)	8.8 (6.7)	8.8 (13.5)	0 (0)
Requires me to give up control over my own work											
Very/Somewhat Important	56	43.0	42.6 (18.9)	43.2 (11.6)	42.1 (36.1)	43.1 (10.3)	29.3 (12.4)	55.6 (14.6)	53.6 (11.8)	15.8 (17.4)	32.4 (29.6)
Not at all important	5	3.7	7.3 (9.9)	2.4 (3.6)	6.2 (17.6)	3.4 (3.8)	4 (5.3)	3.4 (5.3)	2 (3.3)	6.5 (11.8)	7.8 (17)
Not applicable	27	23.4	22 (15.8)	23.9 (10)	15.5 (26.5)	24.2 (8.9)	34.5 (12.9)	13.2 (9.9)	16.6 (8.8)	43.5 (23.7)	31.3 (29.4)
Don't know	29	26.1	22.6 (16)	27.4 (10.4)	27.4 (32.6)	26 (9.1)	26.7 (12)	25.6 (12.8)	22.6 (9.9)	32.3 (22.4)	28.4 (28.6)
Invalid skip	6	3.8	5.5 (8.7)	3.2 (4.1)	8.8 (20.7)	3.2 (3.7)	5.5 (6.2)	2.2 (4.3)	5.3 (5.3)	1.9 (6.6)	0 (0)
The model is too complex											
Very/Somewhat Important	54	39.7	36.3 (18.4)	41 (11.5)	57.5 (36.1)	37.8 (10)	30.9 (12.6)	47.9 (14.6)	44.4 (11.7)	35.2 (22.9)	29.1 (28.8)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Not at all important	10	7.7	7.3 (9.9)	7.9 (6.3)	11.7 (23.5)	7.3 (5.4)	5.5 (6.2)	9.8 (8.7)	7.6 (6.3)	8.6 (13.4)	7.8 (17)
Not applicable	24	21.2	16.1 (14)	23 (9.8)	15.5 (26.5)	21.9 (8.6)	31.5 (12.6)	11.7 (9.4)	13.7 (8.1)	42 (23.6)	31.3 (29.4)
Don't know	28	25.7	24.7 (16.5)	26.1 (10.3)	15.3 (26.3)	26.9 (9.2)	28.4 (12.3)	23.3 (12.4)	26.3 (10.4)	12.3 (15.7)	31.8 (29.5)
Invalid skip	7	5.6	15.6 (13.9)	2 (3.3)	0 (0)	6.2 (5)	3.7 (5.1)	7.3 (7.6)	8 (6.4)	1.9 (6.6)	0 (0)
Too much involvement from my local hospital system											
Very/Somewhat Important	43	31.4	24.6 (16.4)	33.8 (11.1)	27.5 (32.7)	31.8 (9.7)	21.3 (11.1)	40.7 (14.4)	36.8 (11.4)	20.6 (19.3)	23.7 (26.9)
Not at all important	7	5.4	5.8 (8.9)	5.3 (5.2)	0 (0)	6 (4.9)	4.5 (5.6)	6.2 (7.1)	5.5 (5.4)	2.9 (8.1)	7.8 (17)
Not applicable	34	27.5	23.6 (16.2)	28.9 (10.6)	21.7 (30.1)	28.1 (9.3)	35.8 (13)	19.9 (11.7)	22.3 (9.8)	45.9 (23.8)	31.3 (29.4)
Don’t know	32	29.6	33.3 (18)	28.3 (10.5)	50.8 (36.5)	27.3 (9.2)	34.7 (12.9)	24.9 (12.7)	26.7 (10.5)	28.6 (21.6)	37.2 (30.6)
Invalid skip	7	6.1	12.8 (12.7)	3.7 (4.4)	0 (0)	6.7 (5.2)	3.7 (5.1)	8.2 (8.1)	8.8 (6.7)	1.9 (6.6)	0 (0)

Notes: n, unweighted = 123. Matrix-style Likert question. This question was only asked of those who answered “No” to “Did you participate in the VT All-Payer ACO Model in 2020?” The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 4 were excluded from these counts.

Survey Question: How important were each of the following factors or perspectives in [primary practice name]’s decision to not participate in the VT All-Payer ACO Model?

Appendix Exhibit H.12. Reasons for Participating in the VTAPM

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Ability to offer additional benefits (e.g., telehealth, home visits, Skilled Nursing Facility (SNF) waiver, annual wellness visit)											
Very/Somewhat Important	63	25.5	24.8 (7.4)	33.9 (29.5)	24.3 (9.6)	26.8 (10.7)	28.1 (9)	22.7 (12.1)	23.2 (12.2)	24.3 (11.5)	29.1 (13.8)
Not at all important	22	8.7	9.4 (5)	0 (0)	10.9 (6.9)	6.2 (5.9)	8.2 (5.5)	9.3 (8.4)	9.3 (8.4)	6.6 (6.7)	10.6 (9.3)
Not applicable	24	13.7	14.4 (6)	4.3 (12.7)	5.1 (4.9)	23.5 (10.3)	11.7 (6.4)	15.8 (10.5)	22.2 (12)	16.1 (9.8)	4 (6)
Don't know	60	30.4	29.1 (7.7)	46.3 (31.1)	38.2 (10.8)	21.4 (9.9)	28.5 (9)	32.5 (13.5)	26.4 (12.7)	27.9 (12)	35.6 (14.5)
Invalid skip	49	21.7	22.2 (7.1)	15.5 (22.5)	21.5 (9.2)	22 (10)	23.6 (8.5)	19.7 (11.5)	19 (11.3)	25.1 (11.6)	20.8 (12.3)
Being able to have a positive impact on patients											
Very/Somewhat Important	83	34.9	34 (8.1)	46.2 (31)	32.3 (10.4)	37.9 (11.8)	38.5 (9.7)	31 (13.3)	36.3 (13.9)	38.4 (13)	30.4 (14)
Not at all important	16	6.5	7 (4.3)	0 (0)	5.6 (5.1)	7.6 (6.4)	6.7 (5)	6.3 (7)	1.4 (3.4)	9 (7.7)	8.3 (8.4)
Not applicable	15	8.3	8.6 (4.8)	4.3 (12.7)	5.1 (4.9)	11.9 (7.9)	6.7 (5)	9.9 (8.6)	16.8 (10.8)	5.4 (6.1)	4 (6)
Don't know	54	28.3	27.8 (7.6)	34 (29.5)	35 (10.6)	20.6 (9.8)	23.9 (8.5)	33.1 (13.6)	26.5 (12.7)	21.2 (11)	36.5 (14.6)
Invalid skip	50	22.0	22.6 (7.1)	15.5 (22.5)	22.1 (9.2)	22 (10)	24.2 (8.5)	19.7 (11.5)	19 (11.3)	26 (11.8)	20.8 (12.3)
Financial incentives (e.g., compensation, bonuses, shared risk)											
Very/Somewhat Important	89	34.4	33.8 (8)	43.1 (30.8)	32.4 (10.4)	36.8 (11.7)	41.3 (9.8)	27.1 (12.8)	40.3 (14.1)	31.1 (12.4)	33.3 (14.3)
Not at all important	15	6.7	7.2 (4.4)	0 (0)	6.6 (5.5)	6.8 (6.1)	7.2 (5.2)	6.1 (6.9)	1.9 (3.9)	8.5 (7.5)	8.9 (8.7)
Not applicable	10	7.5	7.8 (4.6)	4.3 (12.7)	3.4 (4.1)	12.2 (7.9)	4.9 (4.3)	10.4 (8.8)	13.1 (9.7)	10.2 (8.1)	0 (0)
Don't know	56	30.2	29.6 (7.8)	37.1 (30.1)	37.1 (10.8)	22.2 (10.1)	24.1 (8.5)	36.7 (13.9)	27.5 (12.9)	25.1 (11.6)	37 (14.7)
Invalid skip	48	21.2	21.6 (7)	15.5 (22.5)	20.4 (9)	22 (10)	22.5 (8.3)	19.7 (11.5)	17.1 (10.9)	25.1 (11.6)	20.8 (12.3)
Improving work/life balance											
Very/Somewhat Important	48	18.1	17.8 (6.5)	22.9 (26.2)	19.6 (8.8)	16.5 (9)	22.2 (8.3)	13.8 (9.9)	19.8 (11.5)	17.7 (10.2)	17.4 (11.5)
Not at all important	38	15.6	16.8 (6.4)	0 (0)	15.9 (8.2)	15.2 (8.7)	17.1 (7.5)	13.9 (10)	11.8 (9.3)	15.6 (9.7)	19 (11.9)
Not applicable	22	13.6	14.3 (6)	4.3 (12.7)	6.5 (5.5)	21.6 (10)	10.2 (6)	17.2 (10.9)	19.6 (11.5)	17 (10.1)	4.9 (6.6)
Don't know	59	30.6	28.6 (7.7)	55.4 (31)	35.9 (10.7)	24.4 (10.4)	26.1 (8.8)	35.4 (13.8)	29.4 (13.1)	23.8 (11.4)	37.9 (14.7)
Invalid skip	51	22.2	22.6 (7.1)	17.3 (23.6)	22.1 (9.2)	22.3 (10.1)	24.4 (8.6)	19.7 (11.5)	19.4 (11.4)	26 (11.8)	20.8 (12.3)
IT resources to support care management											
Very/Somewhat Important	53	21.4	21.1 (6.9)	24.7 (26.9)	21.1 (9.1)	21.7 (10)	24.4 (8.6)	18.1 (11.1)	20.2 (11.6)	19.3 (10.6)	24.9 (13.1)
Not at all important	32	12.9	14 (5.9)	0 (0)	13.5 (7.6)	12.3 (8)	15.3 (7.2)	10.3 (8.8)	15.8 (10.5)	9.3 (7.8)	14.4 (10.7)
Not applicable	22	12.1	12.7 (5.7)	4.3 (12.7)	6.6 (5.5)	18.3 (9.4)	9.9 (6)	14.3 (10.1)	18.2 (11.1)	18.7 (10.4)	0 (0)
Don't know	61	31.8	29.9 (7.8)	55.4 (31)	37.8 (10.8)	24.8 (10.5)	26.5 (8.8)	37.5 (14)	28.8 (13.1)	26.8 (11.9)	38.8 (14.8)
Invalid skip	50	21.8	22.3 (7.1)	15.5 (22.5)	21 (9.1)	22.8 (10.2)	23.8 (8.5)	19.7 (11.5)	17.1 (10.9)	26 (11.8)	21.8 (12.6)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Marketplace trends toward value-based payments											
Very/Somewhat Important	97	41.8	41.7 (8.4)	43.1 (30.8)	38.4 (10.8)	45.7 (12.1)	42.4 (9.9)	41.1 (14.2)	42.3 (14.2)	43.1 (13.3)	40.5 (14.9)
Not at all important	15	5.9	6.3 (4.1)	0 (0)	4 (4.4)	8 (6.6)	8.7 (5.6)	2.8 (4.7)	2.6 (4.6)	8.5 (7.5)	5.9 (7.1)
Not applicable	6	3.7	3.6 (3.2)	4.3 (12.7)	5.1 (4.9)	2 (3.4)	3.4 (3.6)	4 (5.6)	12.5 (9.5)	0 (0)	0 (0)
Don't know	52	27.5	26.7 (7.5)	37.1 (30.1)	32.1 (10.4)	22.2 (10.1)	23 (8.4)	32.4 (13.5)	25.5 (12.6)	23.3 (11.3)	32.8 (14.3)
Invalid skip	48	21.2	21.6 (7)	15.5 (22.5)	20.4 (9)	22 (10)	22.5 (8.3)	19.7 (11.5)	17.1 (10.9)	25.1 (11.6)	20.8 (12.3)
My local hospital is participating											
Very/Somewhat Important	98	43.4	44.9 (8.5)	24.7 (26.9)	42.7 (11)	44.2 (12)	44.2 (9.9)	42.5 (14.3)	44.9 (14.3)	46.7 (13.4)	39.2 (14.8)
Not at all important	16	5.3	5 (3.7)	9.2 (18)	1.1 (2.3)	10.2 (7.3)	8.3 (5.5)	2.2 (4.2)	7.2 (7.5)	8.9 (7.6)	0 (0)
Not applicable	9	4.5	4.5 (3.5)	4.3 (12.7)	5.6 (5.1)	3.2 (4.2)	4.6 (4.2)	4.4 (5.9)	9.1 (8.3)	0.9 (2.5)	4.3 (6.2)
Don't know	45	24.4	22.6 (7.1)	46.2 (31.1)	27.8 (10)	20.4 (9.8)	18.1 (7.7)	31.2 (13.4)	19.8 (11.5)	18.4 (10.4)	33.7 (14.4)
Invalid skip	50	22.4	22.9 (7.2)	15.5 (22.5)	22.7 (9.3)	22 (10)	24.9 (8.6)	19.7 (11.5)	19 (11.3)	25.1 (11.6)	22.8 (12.7)
Opportunity to participate in an Advanced Alternative Payment Model (APM+) under Medicare's Quality Payment Program (QPP)											
Very/Somewhat Important	61	25.9	24.6 (7.3)	43.1 (30.8)	26.8 (9.9)	25 (10.5)	27.8 (8.9)	24 (12.3)	20.6 (11.6)	24.5 (11.5)	32.4 (14.2)
Not at all important	22	9.7	10.4 (5.2)	0 (0)	8.7 (6.3)	10.8 (7.5)	10.1 (6)	9.2 (8.3)	10.6 (8.9)	8.9 (7.6)	9.7 (9)
Not applicable	18	10.1	10.6 (5.2)	4.3 (12.7)	5.1 (4.9)	15.9 (8.9)	8.8 (5.7)	11.6 (9.2)	18.6 (11.2)	11.1 (8.4)	2 (4.3)
Don't know	67	32.2	31.8 (7.9)	37.1 (30.1)	37.4 (10.8)	26.3 (10.7)	29.1 (9.1)	35.5 (13.8)	31.2 (13.4)	29.5 (12.2)	35.1 (14.5)
Invalid skip	50	22.0	22.6 (7.1)	15.5 (22.5)	22.1 (9.2)	22 (10)	24.2 (8.5)	19.7 (11.5)	19 (11.3)	26 (11.8)	20.8 (12.3)
Opportunity to promote physicians' participation in the model and assist with implementation											
Very/Somewhat Important	58	26.3	27 (7.6)	17.6 (23.7)	22.6 (9.3)	30.5 (11.2)	24.5 (8.6)	28.2 (13)	21.9 (11.9)	33 (12.6)	23.3 (12.8)
Not at all important	35	14.3	14.2 (5.9)	16.3 (23)	14.1 (7.8)	14.6 (8.6)	17.9 (7.6)	10.5 (8.9)	11 (9)	14.6 (9.5)	17.1 (11.4)
Not applicable	16	6.9	7.1 (4.4)	4.3 (12.7)	6 (5.3)	7.9 (6.6)	8.9 (5.7)	4.8 (6.1)	19.6 (11.5)	3.1 (4.7)	0 (0)
Don't know	59	30.4	29.2 (7.7)	46.2 (31.1)	35.2 (10.6)	25 (10.5)	24.6 (8.6)	36.7 (13.9)	28.5 (13)	23.2 (11.3)	38.8 (14.8)
Invalid skip	50	22.0	22.6 (7.1)	15.5 (22.5)	22.1 (9.2)	22 (10)	24.2 (8.5)	19.7 (11.5)	19 (11.3)	26 (11.8)	20.8 (12.3)
Promise of reduced administrative burden											
Very/Somewhat Important	69	26.9	26.3 (7.5)	33.9 (29.5)	23.2 (9.4)	31.1 (11.2)	31.5 (9.3)	21.9 (11.9)	27.8 (12.9)	24.6 (11.5)	28.8 (13.8)
Not at all important	26	10.4	11.2 (5.4)	0 (0)	13.3 (7.6)	7.1 (6.2)	11.3 (6.3)	9.3 (8.4)	11.2 (9.1)	6.9 (6.8)	13.5 (10.4)
Not applicable	19	11.9	12.5 (5.6)	4.3 (12.7)	8 (6.1)	16.3 (9)	9.4 (5.8)	14.5 (10.2)	17.1 (10.9)	17.8 (10.2)	1.3 (3.5)
Don't know	54	28.5	27.1 (7.6)	46.3 (31.1)	32.9 (10.5)	23.5 (10.3)	24.2 (8.6)	33.2 (13.6)	25 (12.5)	23.9 (11.4)	35.6 (14.6)
Invalid skip	50	22.4	22.9 (7.1)	15.5 (22.5)	22.6 (9.3)	22 (10)	23.6 (8.5)	21 (11.7)	19 (11.3)	26.8 (11.9)	20.8 (12.3)
Resources to support behavioral health (mental health and substance use)											
Very/Somewhat Important	76	33.7	33.5 (8)	36.9 (30.1)	26.1 (9.8)	42.4 (12)	35.5 (9.6)	31.8 (13.4)	30.9 (13.3)	39 (13.1)	31 (14.1)
Not at all important	20	8.3	9 (4.9)	0 (0)	9.3 (6.5)	7.2 (6.3)	8.4 (5.6)	8.2 (7.9)	5.6 (6.6)	7.7 (7.1)	11.4 (9.6)
Not applicable	17	7.2	7.4 (4.5)	4.3 (12.7)	7.1 (5.7)	7.3 (6.3)	7.4 (5.2)	7 (7.3)	20.6 (11.7)	3.2 (4.7)	0 (0)
Don't know	57	29.6	28.5 (7.7)	43.2 (30.9)	37 (10.8)	21.1 (9.9)	26.1 (8.8)	33.4 (13.6)	25.8 (12.6)	25 (11.6)	36.8 (14.7)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Invalid skip	48	21.2	21.6 (7)	15.5 (22.5)	20.4 (9)	22 (10)	22.5 (8.3)	19.7 (11.5)	17.1 (10.9)	25.1 (11.6)	20.8 (12.3)
Staff resources to support care management											
Very/Somewhat Important	74	29.2	29.5 (7.8)	24.7 (26.9)	27.7 (10)	30.9 (11.2)	36.7 (9.6)	21.1 (11.8)	27.8 (12.9)	28.2 (12.1)	31.8 (14.2)
Not at all important	21	8.1	8.8 (4.8)	0 (0)	8.7 (6.3)	7.5 (6.4)	8.5 (5.6)	7.8 (7.7)	6.8 (7.3)	7.2 (6.9)	10.4 (9.3)
Not applicable	18	11.2	11.7 (5.5)	4.3 (12.7)	7.4 (5.9)	15.4 (8.8)	6.7 (5)	15.9 (10.6)	18.5 (11.2)	15.8 (9.8)	0 (0)
Don't know	54	28.4	26.3 (7.5)	55.4 (31)	34.7 (10.6)	21.2 (9.9)	23.4 (8.5)	33.8 (13.6)	25.3 (12.5)	23.7 (11.4)	35.2 (14.5)
Invalid skip	51	23.1	23.7 (7.2)	15.5 (22.5)	21.5 (9.2)	24.9 (10.5)	24.7 (8.6)	21.3 (11.8)	21.6 (11.9)	25.1 (11.6)	22.5 (12.7)
State promotion of the Model											
Very/Somewhat Important	79	34.0	34.6 (8.1)	25.6 (27.2)	31.9 (10.4)	36.4 (11.7)	35.3 (9.5)	32.6 (13.5)	29.8 (13.2)	37.4 (13)	34.3 (14.4)
Not at all important	24	10.3	10.5 (5.2)	8.3 (17.2)	7.8 (6)	13.2 (8.2)	11.4 (6.4)	9.2 (8.3)	9.3 (8.4)	13.3 (9.1)	8.3 (8.4)
Not applicable	9	4.3	4.3 (3.4)	4.3 (12.7)	3.9 (4.3)	4.8 (5.2)	3.9 (3.8)	4.8 (6.1)	14.6 (10.2)	0 (0)	0 (0)
Don't know	55	28.7	27.3 (7.6)	46.2 (31.1)	33.2 (10.5)	23.5 (10.3)	24 (8.5)	33.8 (13.6)	25.1 (12.5)	24.2 (11.5)	35.7 (14.6)
Invalid skip	51	22.7	23.3 (7.2)	15.5 (22.5)	23.3 (9.4)	22 (10)	25.5 (8.7)	19.7 (11.5)	21.2 (11.8)	25.1 (11.6)	21.7 (12.5)
Team-based care/collaboration											
Very/Somewhat Important	83	36.2	36.3 (8.2)	34 (29.5)	32.6 (10.5)	40.3 (11.9)	39.9 (9.8)	32.1 (13.5)	30.9 (13.3)	43.1 (13.3)	33.8 (14.4)
Not at all important	18	7.8	7.7 (4.5)	9.1 (18)	6.6 (5.6)	9.2 (7)	8.2 (5.5)	7.4 (7.6)	9 (8.2)	4.6 (5.6)	10.3 (9.3)
Not applicable	14	6.4	6.6 (4.2)	4.3 (12.7)	6.5 (5.5)	6.3 (5.9)	6.1 (4.8)	6.7 (7.2)	17.5 (11)	3.5 (4.9)	0 (0)
Don't know	53	26.7	25.9 (7.5)	37.1 (30.1)	31.5 (10.4)	21.3 (9.9)	23.3 (8.4)	30.5 (13.3)	25.5 (12.6)	20.3 (10.8)	33.7 (14.4)
Invalid skip	50	22.9	23.5 (7.2)	15.5 (22.5)	22.8 (9.4)	23 (10.2)	22.5 (8.3)	23.3 (12.2)	17.1 (10.9)	28.6 (12.1)	22.1 (12.6)
The availability of performance data											
Very/Somewhat Important	77	31.4	30.5 (7.8)	43.1 (30.8)	28.5 (10.1)	34.8 (11.5)	36.8 (9.6)	25.6 (12.6)	28.7 (13)	33.2 (12.6)	32.2 (14.2)
Not at all important	24	8.8	9.5 (5)	0 (0)	9.6 (6.6)	7.8 (6.5)	10.2 (6)	7.3 (7.5)	10.2 (8.7)	7.4 (7)	9.2 (8.8)
Not applicable	13	9.0	9.4 (5)	4.3 (12.7)	5.1 (4.9)	13.6 (8.3)	6.3 (4.8)	12 (9.4)	17.8 (11)	10.6 (8.2)	0 (0)
Don't know	53	27.9	27.2 (7.6)	37.1 (30.1)	34.7 (10.6)	20.1 (9.7)	22.5 (8.3)	33.8 (13.6)	21.7 (11.9)	22.8 (11.3)	37.7 (14.7)
Invalid skip	51	22.8	23.4 (7.2)	15.5 (22.5)	22.1 (9.2)	23.7 (10.3)	24.2 (8.5)	21.3 (11.8)	21.6 (11.9)	26 (11.8)	20.8 (12.3)
Training and educational activities (e.g., webinars, newsletters, emails, in-person meetings) around clinical care improvements and operations											
Very/Somewhat Important	45	17.3	16.6 (6.3)	25.6 (27.2)	18.4 (8.6)	16 (8.9)	20.8 (8.1)	13.5 (9.9)	20.7 (11.7)	12.7 (8.9)	19.4 (12)
Not at all important	52	22.1	23.2 (7.2)	8.3 (17.2)	19.7 (8.9)	24.9 (10.5)	24.6 (8.6)	19.4 (11.4)	20.6 (11.7)	24.6 (11.5)	21.1 (12.4)
Not applicable	14	9.0	9.3 (4.9)	4.3 (12.7)	5.7 (5.2)	12.7 (8.1)	6.9 (5.1)	11.2 (9.1)	16 (10.6)	11.9 (8.7)	0 (0)
Don't know	58	30.0	28.7 (7.7)	46.3 (31.1)	34.9 (10.6)	24.2 (10.4)	24.3 (8.6)	36.1 (13.8)	25.6 (12.6)	24.4 (11.5)	38.7 (14.8)
Invalid skip	49	21.6	22.1 (7.1)	15.5 (22.5)	21.3 (9.1)	22 (10)	23.4 (8.5)	19.7 (11.5)	17.1 (10.9)	26.4 (11.8)	20.8 (12.3)

Notes: n, unweighted = 218. Matrix-style Likert question. This question was only asked of those who answered "Yes" to "Did you participate in the VT All-Payer ACO Model in 2020?" The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 4 were excluded from these counts.

Survey Question: How important were each of the following factors in motivating [PrctNm] to participate in the VT All-Payer ACO Model

Appendix Exhibit H.13. Awareness of Model Incentive Payments

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
OneCare Vermont data reports focused on quality	249	47.1	50.2 (6)	38.9 (9.3)	39.8 (7.6)	52.7 (6.7)	49.3 (6.7)	45.2 (7.9)	50.9 (8.2)	50.8 (9.2)	42.2 (9.3)
OneCare Vermont data reports focused on cost/productivity	225	42.5	45.7 (6)	34.1 (9.1)	37.9 (7.5)	46.2 (6.7)	43.5 (6.6)	41.7 (7.8)	50.9 (8.2)	37.8 (8.9)	40.6 (9.3)
Complex Care Coordination Payments	169	26.5	27.4 (5.4)	24.2 (8.2)	19.5 (6.2)	32 (6.3)	37.3 (6.4)	17.4 (6)	31.2 (7.6)	33.5 (8.7)	17.9 (7.2)
Value-Based Incentive Fund	168	28.2	29.6 (5.5)	24.4 (8.2)	19.2 (6.1)	35.2 (6.4)	32.9 (6.3)	24.2 (6.8)	31.7 (7.6)	33.1 (8.6)	22.4 (7.9)
Medicare Telehealth Waiver	156	28.3	31.6 (5.6)	19.6 (7.6)	31.2 (7.2)	26.1 (5.9)	33.5 (6.3)	24 (6.7)	28.7 (7.4)	24.6 (7.9)	32.3 (8.8)
PCMH Payments	154	24.1	24.9 (5.2)	21.9 (7.9)	15.6 (5.6)	30.7 (6.2)	33.3 (6.3)	16.3 (5.8)	26.8 (7.3)	31.2 (8.5)	17 (7.1)
Care Navigator	148	24.8	26 (5.3)	21.7 (7.9)	17.8 (6)	30.2 (6.2)	30.6 (6.1)	19.9 (6.3)	28.5 (7.4)	23 (7.7)	23.3 (8)
Medicaid Next Generation Agreement Prior Authorization Waiver	135	23.0	24 (5.1)	20.5 (7.7)	19.7 (6.2)	25.6 (5.9)	27.3 (5.9)	19.4 (6.2)	25.8 (7.2)	21.6 (7.6)	22.7 (7.9)
Medicare 3-Day SNF Rule Waiver	130	23.9	26.9 (5.3)	16 (7)	26 (6.8)	22.3 (5.6)	28.5 (6)	20 (6.3)	25.1 (7.1)	27.3 (8.2)	21.4 (7.7)
Medicare Post-Discharge Home Visit Waiver	84	14.2	15.1 (4.3)	11.7 (6.1)	14.4 (5.5)	14 (4.7)	16.5 (5)	12.2 (5.2)	13.6 (5.6)	13.2 (6.2)	16.2 (7)

Notes: Select all that apply question. The percentages above are representative of those who answered "Yes" to this question and are weighted to represent the target population. Respondents who skipped survey Domain 5 were excluded from these counts.

Survey Question: Are you aware of the following/following payments offered under the VT All-Payer ACO Model?

Appendix Exhibit H.14. Use of Model Incentive Payments

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Medicare Telehealth Waiver	90	58.4	64.2 (9.4)	34.5 (18.6)	71.7 (11.7)	46.1 (11.9)	60.3 (10.8)	56.2 (14.5)	59.9 (14.4)	50.3 (15.8)	62.6 (15)
Care Navigator	67	39.0	47.1 (10.1)	9.7 (11.7)	39.6 (15.7)	38.7 (10.6)	46.3 (10.8)	30.1 (14.7)	22.6 (11.8)	45.2 (15.5)	54.2 (18.1)
PCMH Payments	68	36.0	44.9 (9.7)	7.7 (10.1)	33.2 (15)	37.3 (10)	43.9 (10.1)	22.5 (13.9)	28 (12.2)	48 (14.1)	30.5 (17.4)
Medicare 3-Day SNF Rule Waiver	48	33.2	36.1 (10.3)	21.1 (18)	41.5 (14)	25.6 (11.4)	35.4 (11.2)	30.7 (15.5)	20.2 (12.6)	47 (15.9)	32.9 (18)
Complex Care Coordination Payments	61	32.7	41.5 (9.2)	5 (7.9)	31.6 (13.3)	33.3 (9.6)	37.5 (9.4)	24.1 (13.6)	21.8 (10.5)	39.2 (13.3)	39.4 (17.9)
Medicaid Next Generation Agreement Prior Authorization Waiver	49	31.6	34.8 (10.1)	22 (16)	30.1 (14.5)	32.5 (10.8)	38.1 (11.3)	23.9 (13.3)	25.1 (12.9)	33.4 (15.9)	37 (16.7)
OneCare Vermont data reports focused on quality	71	26.1	28.9 (7.4)	16.7 (11)	28.4 (10.5)	24.7 (7.7)	30.1 (8.5)	22.4 (9.4)	15.9 (8.3)	28.4 (11.2)	35.8 (13.1)
OneCare Vermont data reports focused on cost/productivity	53	21.4	23.4 (7.2)	14.3 (10.8)	21.3 (9.8)	21.5 (7.8)	25.9 (8.6)	17.5 (8.7)	14.3 (8)	23.1 (12.1)	28.3 (12.3)
Medicare Post-Discharge Home Visit Waiver	20	21.0	23.3 (11.6)	13.6 (15.8)	21.7 (14.9)	20.4 (12.4)	26.4 (13.1)	15.3 (13.8)	13.1 (13.2)	26.7 (18.8)	23 (17.5)
Value-Based Incentive Fund	40	18.5	21.7 (7.9)	7.8 (9.8)	22.4 (12.7)	16.7 (7.7)	25.6 (9.1)	10.2 (8.9)	18.9 (10.5)	21 (11.8)	15.6 (12.3)

Notes: Respondents received the above response options if they selected “Yes” to the options in the prior question: “Are you aware of the following payments offered under the VT All-Payer ACO Model?” The percentages above are representative of those who answered “Yes” to this question and are weighted to represent the target population. Respondents who skipped survey Domain 5 were excluded from these counts.

Survey Question: Have you/[primary practice name] used the following/received the following payments as part of the VT All-Payer ACO Model?

Appendix Exhibit H.15. Health IT Infrastructure for Care Delivery Reform

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Print information for patients (e.g., education materials, discharge summaries)											
Supported by my practice	411	84.0	85.5 (4.4)	79.7 (8)	83.3 (6)	84.4 (5)	87.4 (4.5)	81 (6.4)	76.5 (7.2)	91.1 (5.4)	88.8 (6.1)
Supported by OneCare/Blueprint	3	0.4	0.4 (0.7)	0.4 (1.3)	0.6 (1.3)	0.2 (0.6)	0.6 (1)	0.2 (0.7)	0.3 (1)	0.5 (1.3)	0.4 (1.2)
No	36	6.9	4.5 (2.6)	13.4 (6.8)	2.9 (2.7)	10 (4.2)	6.4 (3.3)	7.4 (4.3)	16.8 (6.3)	2 (2.7)	1.4 (2.3)
Don't know	28	7.9	9 (3.5)	4.9 (4.3)	12.1 (5.2)	4.6 (2.9)	5.7 (3.2)	9.7 (4.9)	5 (3.7)	6 (4.5)	8.4 (5.4)
Use telemedicine (video-based) to provide care to patients											
Supported by my practice	394	79.5	83.9 (4.6)	67.8 (9.3)	82.6 (6.1)	77.2 (5.8)	86 (4.7)	74 (7.2)	68.4 (7.8)	86.2 (6.5)	87 (6.6)
Supported by OneCare/Blueprint	5	0.7	0.8 (1.1)	0.4 (1.3)	1.1 (1.7)	0.3 (0.8)	0.7 (1.2)	0.6 (1.3)	0.5 (1.2)	0.5 (1.3)	1 (1.9)
No	57	11.6	6.7 (3.1)	24.5 (8.5)	5.8 (3.7)	16.1 (5.1)	7.6 (3.6)	15 (5.9)	24.4 (7.2)	9.2 (5.5)	1.7 (2.5)
Don't know	26	7.8	8.6 (3.5)	5.6 (4.6)	10.9 (5)	5.4 (3.1)	5.7 (3.2)	9.5 (4.8)	6.3 (4.1)	4.6 (4)	9.1 (5.6)
Communicate with other colleagues in my practice/health system											
Supported by my practice	389	78.6	83.1 (4.6)	66.6 (9.4)	83.8 (5.9)	74.5 (6.1)	83.4 (5.1)	74.6 (7.2)	68.1 (7.9)	88.6 (6)	83.9 (7.2)
Supported by OneCare/Blueprint	5	1.0	1.2 (1.3)	0.4 (1.3)	0.6 (1.3)	1.3 (1.6)	1.2 (1.5)	0.8 (1.5)	1.2 (1.8)	0.5 (1.3)	1.2 (2.2)
No	51	9.7	5 (2.7)	22.4 (8.3)	2.1 (2.3)	15.7 (5.1)	8.1 (3.7)	11.2 (5.2)	21.6 (6.9)	5.2 (4.2)	2.3 (3)
Don't know	35	10.2	11.2 (3.9)	7.5 (5.2)	13 (5.4)	8 (3.8)	7.7 (3.7)	12.3 (5.4)	8.4 (4.7)	5.7 (4.4)	11.9 (6.3)
Document services rendered in EHR											
Supported by my practice	380	78.1	81.4 (4.8)	69.1 (9.2)	79.4 (6.5)	77 (5.9)	80.6 (5.4)	75.9 (7)	70.5 (7.7)	82 (7.3)	84.3 (7.1)
Supported by OneCare/Blueprint	4	0.5	0.5 (0.9)	0.4 (1.3)	0.9 (1.5)	0.2 (0.6)	0.8 (1.2)	0.2 (0.7)	0.3 (1)	0.9 (1.7)	0.4 (1.2)
No	42	8.2	3.5 (2.3)	20.8 (8.1)	0.3 (0.9)	14.3 (4.9)	7.6 (3.6)	8.7 (4.6)	20.4 (6.8)	4.1 (3.8)	0 (0)
Don't know	51	12.0	13.7 (4.3)	7.6 (5.3)	17.4 (6.1)	7.9 (3.7)	10.3 (4.2)	13.5 (5.6)	8.1 (4.6)	11.5 (6)	13.8 (6.7)
e-prescribe											
Supported by my practice	396	77.5	82 (4.8)	65.6 (9.4)	86.3 (5.5)	70.7 (6.3)	86.8 (4.6)	69.6 (7.6)	70.8 (7.7)	82.5 (7.2)	81.7 (7.6)
Supported by OneCare/Blueprint	3	0.4	0.4 (0.7)	0.4 (1.3)	0.6 (1.3)	0.2 (0.6)	0.6 (1)	0.2 (0.7)	0.3 (1)	0.5 (1.3)	0.4 (1.2)
No	50	12.4	6.9 (3.1)	27 (8.8)	2.4 (2.5)	20.1 (5.6)	8.6 (3.8)	15.5 (6)	24.8 (7.3)	11.5 (6)	2.2 (2.8)
Don't know	31	9.4	11.2 (3.9)	4.5 (4.1)	10.5 (4.9)	8.5 (3.9)	4.4 (2.8)	13.6 (5.6)	4.1 (3.3)	5.8 (4.4)	14.6 (6.9)
Use computerized order entry											
Supported by my practice	384	76.7	79.6 (5)	69 (9.2)	85.9 (5.6)	69.5 (6.4)	82.7 (5.2)	71.6 (7.4)	67.2 (7.9)	77.7 (7.9)	86.9 (6.6)
Supported by OneCare/Blueprint	2	0.2	0.2 (0.5)	0.4 (1.3)	0.3 (0.9)	0.2 (0.6)	0.3 (0.7)	0.2 (0.7)	0.3 (1)	0 (0)	0.4 (1.2)
No	55	12.2	7.6 (3.3)	24.6 (8.6)	1 (1.6)	20.9 (5.7)	9.3 (4)	14.7 (5.8)	24.1 (7.2)	12.4 (6.2)	1.2 (2.1)
Don't know	34	9.3	11.4 (3.9)	3.8 (3.8)	10.3 (4.9)	8.6 (3.9)	6.5 (3.4)	11.8 (5.3)	6.7 (4.2)	8.3 (5.2)	10.2 (5.9)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Use of a patient portal											
Supported by my practice	376	73.9	77.6 (5.2)	63.8 (9.6)	83.8 (5.9)	66.1 (6.6)	80.2 (5.5)	68.5 (7.6)	61.6 (8.2)	75.9 (8.1)	85.8 (6.8)
Supported by OneCare/Blueprint	4	0.5	0.6 (0.9)	0.4 (1.3)	0.9 (1.5)	0.2 (0.6)	0.9 (1.3)	0.2 (0.7)	0.3 (1)	1 (1.9)	0.4 (1.2)
No	67	15.9	11.2 (3.9)	28.4 (9)	4.5 (3.3)	24.7 (6)	12.6 (4.5)	18.7 (6.4)	30.5 (7.8)	15.1 (6.8)	3.3 (3.5)
Don't know	33	9.3	10.9 (3.9)	5 (4.3)	10.5 (4.9)	8.4 (3.8)	7 (3.5)	11.2 (5.2)	6.9 (4.3)	8.9 (5.4)	9.4 (5.7)
Use clinical decision support features (e.g., medication guides/alerts, preventive services alerts)											
Supported by my practice	330	66.6	67.6 (5.8)	64.1 (9.5)	69.2 (7.4)	64.6 (6.6)	74.3 (6)	60.1 (8.1)	56 (8.4)	69.6 (8.7)	75.4 (8.4)
Supported by OneCare/Blueprint	7	1.1	1.3 (1.4)	0.4 (1.3)	2.1 (2.3)	0.3 (0.8)	2.1 (2)	0.2 (0.7)	0.5 (1.2)	1 (1.9)	1.7 (2.5)
No	74	14.0	10.2 (3.7)	24.3 (8.5)	8.9 (4.6)	18.1 (5.3)	12.7 (4.6)	15.2 (5.9)	28.8 (7.6)	11.6 (6.1)	3 (3.4)
Don't know	71	18.1	21.6 (5.1)	9 (5.7)	20.1 (6.4)	16.6 (5.2)	11.3 (4.3)	23.9 (7)	13.9 (5.8)	18.3 (7.3)	19.8 (7.8)
Coordinate patient care across members of the care team											
Supported by my practice	323	65.6	68.3 (5.8)	58.3 (9.8)	68.1 (7.5)	63.6 (6.7)	70.4 (6.2)	61.5 (8)	53.7 (8.4)	70.1 (8.7)	75.8 (8.4)
Supported by OneCare/Blueprint	18	3.2	4.2 (2.5)	0.7 (1.6)	3.4 (2.9)	3.1 (2.4)	4.3 (2.8)	2.4 (2.5)	2.1 (2.4)	5.9 (4.5)	2.3 (2.9)
No	70	14.4	9.3 (3.6)	28.2 (8.9)	6 (3.8)	21.1 (5.7)	13.1 (4.6)	15.6 (6)	32.8 (7.9)	6.3 (4.6)	4.1 (3.9)
Don't know	73	17.2	19.9 (4.9)	10 (6)	23.4 (6.8)	12.3 (4.6)	14.3 (4.8)	19.6 (6.5)	12.1 (5.5)	18.6 (7.4)	17.6 (7.4)
Conduct pre-visit planning using EHR											
Supported by my practice	303	59.0	61.2 (6)	53.2 (9.9)	65.6 (7.6)	53.8 (6.9)	66 (6.5)	53 (8.2)	53.5 (8.4)	64.9 (9)	62 (9.5)
Supported by OneCare/Blueprint	4	0.8	0.9 (1.2)	0.4 (1.3)	0.6 (1.3)	0.9 (1.3)	0.6 (1)	0.9 (1.6)	0.3 (1)	0.5 (1.3)	1.5 (2.3)
No	93	20.5	15.6 (4.5)	33.6 (9.4)	10.4 (4.9)	28.4 (6.3)	19.5 (5.4)	21.4 (6.7)	34.1 (8)	18.3 (7.3)	10.2 (5.9)
Don't know	78	19.0	22.3 (5.2)	10.2 (6)	22.6 (6.7)	16.2 (5.1)	13.8 (4.7)	23.5 (7)	11 (5.3)	16.3 (7)	25.4 (8.5)
Transfer/receive information electronically (not fax) through a health information exchange (HIE), Vermont Information Technology Leaders (VITL), or EHR with other practices											
Supported by my practice	282	54.8	58 (6.1)	46.4 (9.9)	59.2 (7.9)	51.4 (6.9)	57.7 (6.8)	52.4 (8.2)	47 (8.4)	54 (9.4)	65 (9.3)
Supported by OneCare/Blueprint	11	1.5	1.8 (1.6)	0.8 (1.7)	2.2 (2.4)	0.9 (1.3)	2.3 (2)	0.8 (1.5)	1.2 (1.8)	2.2 (2.8)	1.3 (2.2)
No	86	18.5	13.3 (4.2)	32.4 (9.3)	10.6 (5)	24.7 (6)	15.9 (5)	20.7 (6.7)	31.6 (7.8)	16.6 (7)	8.4 (5.4)
Don't know	102	24.8	27.5 (5.5)	17.7 (7.6)	27.6 (7.2)	22.6 (5.8)	24.2 (5.9)	25.4 (7.2)	19.4 (6.7)	28.4 (8.5)	24.3 (8.4)
Generate quality measure data for INTERNAL clinical quality improvement											
Supported by my practice	261	52.6	53 (6.2)	51.2 (9.9)	49.4 (8)	55 (6.9)	58.8 (6.7)	47.3 (8.2)	45.4 (8.4)	59.6 (9.3)	56 (9.7)
Supported by OneCare/Blueprint	12	1.7	2.3 (1.9)	0 (0)	2.6 (2.5)	1 (1.4)	3.6 (2.6)	0 (0)	1.2 (1.8)	2.8 (3.1)	1.3 (2.2)
No	56	10.7	7 (3.2)	20.3 (8)	5.9 (3.8)	14.4 (4.9)	9.9 (4.1)	11.3 (5.2)	24.9 (7.3)	3.5 (3.5)	3.2 (3.4)
Don't know	156	35.8	39.2 (6)	26.7 (8.8)	43.3 (8)	29.9 (6.4)	29.9 (6.3)	40.8 (8.1)	28.8 (7.6)	35.7 (9.1)	39.9 (9.6)
Conduct patient outreach (e.g., flu shot reminder)											
Supported by my practice	244	48.3	51.1 (6.2)	40.6 (9.8)	44.8 (8)	51 (7)	57.2 (6.8)	40.7 (8.1)	37.4 (8.2)	54.1 (9.4)	55.8 (9.7)
Supported by OneCare/Blueprint	13	1.7	2.3 (1.9)	0.2 (0.9)	2.7 (2.6)	1 (1.4)	3.8 (2.6)	0 (0)	1.9 (2.3)	2.2 (2.8)	1.3 (2.2)
No	102	20.5	15.8 (4.5)	32.9 (9.3)	16.9 (6)	23.2 (5.9)	19 (5.4)	21.7 (6.8)	43.9 (8.4)	13.5 (6.5)	4.8 (4.2)
Don't know	127	30.3	32.3 (5.8)	24.8 (8.6)	36.9 (7.8)	25.1 (6)	22.3 (5.7)	37 (7.9)	18.1 (6.5)	31.2 (8.8)	38.2 (9.5)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Monitor population health for a limited number of conditions and high-risk patients											
Supported by my practice	196	39.3	41.8 (6.1)	32.7 (9.3)	41.1 (7.9)	37.9 (6.7)	50.1 (6.8)	30.1 (7.5)	25.2 (7.3)	45.1 (9.4)	49.4 (9.8)
Supported by OneCare/Blueprint	27	4.8	6.4 (3)	0.5 (1.4)	5.9 (3.8)	3.9 (2.7)	7.4 (3.6)	2.5 (2.6)	2.2 (2.5)	9.8 (5.6)	3.4 (3.6)
No	122	24.2	16.7 (4.6)	44.1 (9.9)	16.3 (5.9)	30.3 (6.4)	20.3 (5.5)	27.5 (7.3)	51.2 (8.4)	17 (7.1)	5.5 (4.4)
Don't know	144	32.8	37.1 (6)	21.4 (8.2)	38 (7.8)	28.8 (6.3)	25.3 (6)	39.2 (8)	21.4 (6.9)	30.7 (8.7)	42.6 (9.7)
Generate quality measure data for EXTERNAL program/payer											
Supported by my practice	153	29.5	28.1 (5.6)	33.2 (9.4)	25.1 (7)	32.9 (6.5)	33.7 (6.5)	26 (7.2)	27.4 (7.5)	29.5 (8.6)	32.7 (9.2)
Supported by OneCare/Blueprint	23	3.6	4.9 (2.7)	0 (0)	4.1 (3.2)	3.1 (2.4)	6.5 (3.4)	1.1 (1.7)	4 (3.3)	3.6 (3.5)	3.3 (3.5)
No	77	16.7	11.8 (4)	29.8 (9.1)	9 (4.6)	22.6 (5.8)	12.5 (4.5)	20.2 (6.6)	31.3 (7.8)	12.5 (6.3)	6.7 (4.9)
Don't know	233	51.1	57.2 (6.1)	35.1 (9.5)	62.7 (7.8)	42.1 (6.9)	49.6 (6.8)	52.5 (8.2)	37.7 (8.2)	56.3 (9.4)	57.8 (9.6)

Notes: Matrix-style question. Respondents could select “Supported by my practice” and “Supported by OneCare/Blueprint”, but “No” and “Don’t know” were exclusive options. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 6 were excluded from these counts.

Survey Question: Does your practice team at [primary practice name] use health information technology (IT) to conduct any of the following activities?

Appendix Exhibit H.16. Impact of the VTAPM on Respondents' Practices

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
ADMINISTRATIVE/FINANCIAL											
Support to hire additional staff											
Much/Somewhat better	29	4.2	5.2 (2.8)	1.5 (2.4)	3.4 (2.9)	4.8 (3)	7.8 (3.7)	1.1 (1.7)	3.7 (3.2)	8.2 (5.2)	1.7 (2.6)
Stayed the same	108	21.2	24 (5.3)	13.8 (6.9)	19.6 (6.4)	22.5 (5.8)	21.9 (5.7)	20.7 (6.7)	24.3 (7.2)	24.7 (8.2)	16.7 (7.3)
Much/Somewhat worse	43	9.2	9.1 (3.6)	9.2 (5.8)	9.8 (4.8)	8.7 (3.9)	7.3 (3.6)	10.7 (5.1)	8.9 (4.8)	5.2 (4.2)	11.8 (6.3)
Don't know	254	54.3	51.7 (6.2)	61.4 (9.7)	53 (8)	55.3 (6.9)	52.1 (6.8)	56.2 (8.2)	50.5 (8.4)	54.7 (9.4)	57.3 (9.7)
Invalid skip	47	11.1	10 (3.7)	14 (6.9)	14.1 (5.6)	8.7 (3.9)	10.8 (4.2)	11.3 (5.2)	12.7 (5.6)	7.2 (4.9)	12.4 (6.4)
Patient out-of-pocket costs											
Much/Somewhat better	19	3.6	3.8 (2.4)	3 (3.4)	4.4 (3.3)	2.9 (2.3)	5.7 (3.2)	1.7 (2.1)	2.7 (2.8)	5.3 (4.2)	3.1 (3.4)
Stayed the same	85	14.5	15.3 (4.5)	12.6 (6.6)	12.3 (5.3)	16.3 (5.1)	16.3 (5.1)	13.1 (5.5)	19.7 (6.7)	14.3 (6.6)	10.6 (6)
Much/Somewhat worse	19	5.5	4.4 (2.6)	8.4 (5.5)	1.9 (2.2)	8.4 (3.9)	2.4 (2.1)	8.2 (4.5)	4 (3.3)	6.5 (4.7)	5.4 (4.4)
Don't know	311	65.6	67 (5.8)	61.9 (9.7)	68 (7.5)	63.8 (6.7)	65.5 (6.5)	65.8 (7.8)	60.9 (8.2)	68.5 (8.8)	68 (9.1)
Invalid skip	47	10.7	9.5 (3.6)	14 (6.9)	13.4 (5.5)	8.7 (3.9)	10.1 (4.1)	11.3 (5.2)	12.7 (5.6)	5.4 (4.3)	12.9 (6.5)
Overall reimbursement											
Much/Somewhat better	22	3.1	3.6 (2.3)	1.9 (2.7)	2 (2.3)	4 (2.7)	5.5 (3.1)	1.1 (1.7)	1.7 (2.2)	7.8 (5.1)	0.9 (1.9)
Stayed the same	83	15.7	17.5 (4.7)	11 (6.2)	14.4 (5.6)	16.7 (5.2)	16.4 (5.1)	15.1 (5.9)	19.3 (6.7)	16.3 (7)	12.6 (6.5)
Much/Somewhat worse	46	9.4	9.1 (3.6)	10.2 (6)	10.1 (4.8)	8.9 (3.9)	8.3 (3.8)	10.4 (5)	8.6 (4.7)	8.5 (5.3)	10.2 (5.9)
Don't know	280	60.4	59.7 (6.1)	62.4 (9.6)	59.3 (7.9)	61.3 (6.8)	58.7 (6.7)	61.9 (8)	57.3 (8.3)	59.7 (9.3)	63.8 (9.4)
Invalid skip	50	11.3	10.1 (3.7)	14.4 (7)	14.1 (5.6)	9.1 (4)	11.1 (4.3)	11.5 (5.2)	13.1 (5.7)	7.6 (5)	12.4 (6.4)
Financial rewards for high-quality care											
Much/Somewhat better	26	3.9	4.2 (2.5)	3.2 (3.5)	4.5 (3.3)	3.5 (2.5)	5.9 (3.2)	2.2 (2.4)	2.5 (2.6)	6.4 (4.6)	3.5 (3.6)
Stayed the same	104	20.2	22.5 (5.2)	14 (6.9)	18.4 (6.2)	21.5 (5.7)	21.8 (5.6)	18.8 (6.4)	20.9 (6.9)	24.3 (8.1)	17.2 (7.4)
Much/Somewhat worse	37	8.5	8.2 (3.4)	9.3 (5.8)	9.8 (4.8)	7.4 (3.6)	4.8 (2.9)	11.5 (5.3)	10.5 (5.2)	2.8 (3.1)	10.3 (5.9)
Don't know	268	56.8	55.2 (6.2)	60.9 (9.7)	53.9 (8)	59 (6.8)	56.7 (6.8)	56.8 (8.1)	53.5 (8.4)	59.3 (9.3)	57.6 (9.6)
Invalid skip	46	10.7	10 (3.7)	12.7 (6.6)	13.4 (5.5)	8.7 (3.9)	10.8 (4.2)	10.6 (5.1)	12.7 (5.6)	7.2 (4.9)	11.4 (6.2)
Administrative burden											
Much/Somewhat better	11	2.1	2 (1.7)	2.3 (3)	1.3 (1.8)	2.7 (2.3)	3 (2.3)	1.3 (1.9)	1.2 (1.9)	2.9 (3.2)	2.3 (2.9)
Stayed the same	81	15.5	16.9 (4.6)	11.8 (6.4)	16.7 (6)	14.6 (4.9)	16.7 (5.1)	14.5 (5.8)	22.8 (7.1)	10.7 (5.9)	13.2 (6.6)
Much/Somewhat worse	99	18.5	21.4 (5.1)	10.9 (6.2)	15.8 (5.9)	20.7 (5.6)	18.5 (5.3)	18.6 (6.4)	16.1 (6.2)	25.1 (8.2)	15.5 (7.1)
Don't know	242	52.5	49.4 (6.2)	61 (9.7)	52.1 (8)	52.9 (6.9)	51 (6.8)	53.8 (8.2)	47.2 (8.4)	53.1 (9.4)	56.7 (9.7)
Invalid skip	48	11.3	10.3 (3.8)	14 (6.9)	14.1 (5.6)	9.2 (4)	10.8 (4.2)	11.8 (5.3)	12.7 (5.6)	8.2 (5.2)	12.4 (6.4)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
CARE COORDINATION											
Coordination with Social Service Organizations											
Much/Somewhat better	30	5.1	5.8 (2.9)	3.2 (3.5)	7.6 (4.3)	3.1 (2.4)	6.4 (3.3)	3.9 (3.2)	3.8 (3.2)	4.3 (3.8)	7 (5)
Stayed the same	126	24.3	27 (5.5)	17 (7.5)	19.5 (6.4)	28 (6.2)	26.8 (6.1)	22.1 (6.8)	24.1 (7.2)	31.8 (8.8)	19.6 (7.7)
Much/Somewhat worse	17	3.8	3.3 (2.2)	5.3 (4.5)	3 (2.7)	4.4 (2.9)	2.7 (2.2)	4.8 (3.5)	6.4 (4.1)	0.5 (1.3)	4.1 (3.9)
Don't know	259	55.6	53.3 (6.2)	61.8 (9.7)	55.7 (8)	55.6 (6.9)	53 (6.8)	57.8 (8.1)	53 (8.4)	55.7 (9.4)	56.7 (9.7)
Invalid skip	49	11.2	10.6 (3.8)	12.7 (6.6)	14.2 (5.6)	8.9 (4)	11 (4.3)	11.4 (5.2)	12.7 (5.6)	7.6 (5)	12.5 (6.5)
Coordination of MH/SUD Providers											
Much/Somewhat better	34	6.4	7.5 (3.3)	3.3 (3.5)	6.4 (3.9)	6.4 (3.4)	7.4 (3.6)	5.5 (3.7)	4.4 (3.4)	8.6 (5.3)	6.8 (4.9)
Stayed the same	124	22.4	25.5 (5.4)	14.1 (6.9)	18.1 (6.2)	25.7 (6.1)	26.3 (6)	19.1 (6.5)	24.5 (7.3)	27.8 (8.5)	17.3 (7.4)
Much/Somewhat worse	20	5.1	4.1 (2.5)	7.7 (5.3)	3.9 (3.1)	6 (3.3)	3.1 (2.4)	6.8 (4.1)	5.5 (3.8)	4.4 (3.9)	5.5 (4.5)
Don't know	255	55.0	52.8 (6.2)	60.9 (9.7)	57.5 (7.9)	53.1 (6.9)	52.4 (6.8)	57.2 (8.1)	52.8 (8.4)	52.1 (9.5)	58 (9.6)
Invalid skip	48	11.1	10.1 (3.7)	14 (6.9)	14.1 (5.6)	8.8 (3.9)	10.8 (4.2)	11.4 (5.2)	12.9 (5.7)	7.2 (4.9)	12.4 (6.4)
Community Referrals											
Much/Somewhat better	29	4.9	4.7 (2.6)	5.4 (4.5)	6 (3.8)	4 (2.7)	7.1 (3.5)	3 (2.8)	5.7 (3.9)	4.3 (3.8)	4.8 (4.2)
Stayed the same	132	25.3	28.9 (5.6)	15.7 (7.2)	22.3 (6.7)	27.7 (6.2)	26.5 (6)	24.3 (7)	29 (7.7)	32 (8.8)	17.8 (7.5)
Much/Somewhat worse	15	3.1	1.2 (1.4)	8 (5.4)	2.1 (2.3)	3.8 (2.7)	2.3 (2)	3.7 (3.1)	4.1 (3.4)	0.5 (1.3)	3.1 (3.4)
Don't know	257	55.7	54.8 (6.2)	58.2 (9.8)	55.6 (8)	55.8 (6.9)	52.6 (6.8)	58.3 (8.1)	48.5 (8.4)	55.6 (9.4)	62.2 (9.5)
Invalid skip	48	11.1	10.4 (3.8)	12.7 (6.6)	14.1 (5.6)	8.7 (3.9)	11.5 (4.4)	10.6 (5.1)	12.7 (5.6)	7.7 (5)	12 (6.3)
CARE QUALITY/OUTCOMES											
Quality of Care											
Much/Somewhat better	35	6.5	6.4 (3)	6.6 (4.9)	6.3 (3.9)	6.6 (3.4)	8 (3.7)	5.1 (3.6)	5.4 (3.8)	6.8 (4.8)	7.5 (5.1)
Stayed the same	146	26.9	30.5 (5.7)	17.3 (7.5)	25.8 (7)	27.8 (6.2)	30.3 (6.3)	24 (7)	30.9 (7.8)	34.5 (9)	18.6 (7.6)
Much/Somewhat worse	18	4.1	2.5 (2)	8.1 (5.4)	3.2 (2.8)	4.8 (3)	1.6 (1.7)	6.1 (3.9)	5.4 (3.8)	0.2 (0.9)	4.9 (4.2)
Don't know	235	51.6	50.3 (6.2)	55.3 (9.9)	50.9 (8)	52.2 (6.9)	48.8 (6.8)	54.1 (8.2)	45.6 (8.4)	51.3 (9.5)	57 (9.7)
Invalid skip	47	10.9	10.2 (3.8)	12.7 (6.6)	13.8 (5.5)	8.7 (3.9)	11.2 (4.3)	10.6 (5.1)	12.7 (5.6)	7.2 (4.9)	12 (6.3)
Patient Experience											
Much/Somewhat better	25	4.6	4 (2.4)	6.2 (4.8)	5 (3.5)	4.3 (2.8)	6.1 (3.3)	3.3 (2.9)	4 (3.3)	4.6 (3.9)	5.3 (4.4)
Stayed the same	127	24.4	28.2 (5.6)	14.3 (7)	22.9 (6.7)	25.6 (6.1)	25.9 (6)	23.1 (6.9)	28.6 (7.6)	31.4 (8.8)	16.1 (7.2)
Much/Somewhat worse	25	5.1	3.6 (2.3)	9.1 (5.7)	2.7 (2.6)	7 (3.5)	3.2 (2.4)	6.7 (4.1)	6.4 (4.1)	1.8 (2.5)	5.6 (4.5)
Don’t know	257	55.2	54.1 (6.2)	58.1 (9.8)	56 (8)	54.5 (6.9)	54.3 (6.8)	55.9 (8.2)	48 (8.4)	55.6 (9.4)	61.2 (9.5)
Invalid skip	47	10.8	10.2 (3.8)	12.2 (6.5)	13.5 (5.5)	8.7 (3.9)	10.6 (4.2)	10.9 (5.1)	13 (5.7)	6.7 (4.7)	11.7 (6.3)
Overall Patient Care											
Much/Somewhat better	27	4.8	5 (2.7)	4.2 (4)	4.6 (3.4)	5 (3)	7.1 (3.5)	2.9 (2.7)	3.8 (3.2)	7.1 (4.9)	4.1 (3.9)
Stayed the same	153	28.3	32.2 (5.8)	18 (7.6)	26.4 (7.1)	29.8 (6.4)	31.5 (6.4)	25.7 (7.2)	32.4 (7.9)	34 (9)	21.4 (8)
Much/Somewhat worse	19	4.2	2.7 (2)	8.1 (5.4)	3.2 (2.8)	5 (3)	2 (1.9)	6.1 (3.9)	5.9 (4)	0.2 (0.9)	4.9 (4.2)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Don't know	233	51.0	49.2 (6.2)	55.6 (9.9)	50.2 (8)	51.6 (6.9)	48.3 (6.8)	53.2 (8.2)	45.2 (8.4)	49.9 (9.5)	56.6 (9.7)
Invalid skip	49	11.7	10.8 (3.9)	14 (6.9)	15.6 (5.8)	8.7 (3.9)	11.2 (4.3)	12.1 (5.4)	12.7 (5.6)	8.8 (5.4)	12.9 (6.5)
Availability of Data for Care Management											
Much/Somewhat better	42	6.9	8.8 (3.5)	1.9 (2.7)	7.7 (4.3)	6.3 (3.4)	9.8 (4.1)	4.5 (3.4)	5.8 (3.9)	10.7 (5.9)	5.3 (4.4)
Stayed the same	113	22.7	25.3 (5.4)	15.9 (7.3)	20.6 (6.5)	24.3 (6)	22.9 (5.8)	22.5 (6.9)	22.6 (7.1)	26.2 (8.3)	20.1 (7.8)
Much/Somewhat worse	19	3.9	3 (2.1)	6.5 (4.9)	2.2 (2.3)	5.3 (3.1)	2.8 (2.3)	4.9 (3.5)	5.4 (3.8)	2.3 (2.8)	4 (3.8)
Don't know	259	55.1	53 (6.2)	60.7 (9.7)	55.4 (8)	54.9 (6.9)	53.6 (6.8)	56.4 (8.2)	52.7 (8.4)	53.6 (9.4)	58.3 (9.6)
Invalid skip	48	11.3	10 (3.7)	15 (7.1)	14.1 (5.6)	9.1 (4)	10.8 (4.2)	11.8 (5.3)	13.5 (5.8)	7.2 (4.9)	12.4 (6.4)
PRACTICE TRANSFORMATION											
Support for Quality Measurement											
Much/Somewhat better	48	8.3	9.5 (3.6)	5.2 (4.4)	9.4 (4.7)	7.4 (3.6)	11.8 (4.4)	5.3 (3.7)	7.5 (4.4)	9.1 (5.4)	8.8 (5.5)
Stayed the same	106	21.2	23.5 (5.3)	15.2 (7.1)	19.8 (6.4)	22.4 (5.8)	20.1 (5.5)	22.2 (6.8)	22.4 (7)	19.7 (7.5)	22.2 (8.1)
Much/Somewhat worse	27	5.3	4.7 (2.6)	6.9 (5)	4.2 (3.2)	6.1 (3.3)	4.9 (3)	5.6 (3.8)	7.5 (4.4)	5.5 (4.3)	3.3 (3.5)
Don't know	255	54.8	52.8 (6.2)	60 (9.7)	53.9 (8)	55.5 (6.9)	53 (6.8)	56.3 (8.2)	50 (8.4)	58.5 (9.3)	55 (9.7)
Invalid skip	45	10.4	9.6 (3.6)	12.7 (6.6)	12.8 (5.4)	8.7 (3.9)	10.2 (4.1)	10.6 (5.1)	12.7 (5.6)	7.2 (4.9)	10.7 (6)
Support for Health IT											
Much/Somewhat better	14	2.3	2.8 (2.1)	1 (2)	3 (2.7)	1.8 (1.9)	2.6 (2.2)	2.1 (2.3)	1.2 (1.8)	3.3 (3.4)	2.7 (3.2)
Stayed the same	129	23.8	27.5 (5.5)	13.8 (6.8)	23.6 (6.8)	23.9 (5.9)	29.1 (6.2)	19.2 (6.5)	26.2 (7.4)	27.9 (8.5)	19.4 (7.7)
Much/Somewhat worse	25	4.7	3.1 (2.1)	8.9 (5.7)	4.6 (3.4)	4.7 (2.9)	3.3 (2.5)	5.8 (3.8)	6.7 (4.2)	1.8 (2.5)	4.2 (3.9)
Don’t know	267	58.3	56.7 (6.1)	62.8 (9.6)	55 (8)	61 (6.8)	54.4 (6.8)	61.7 (8)	53.3 (8.4)	60.3 (9.3)	61.4 (9.5)
Invalid skip	46	10.9	10 (3.7)	13.5 (6.8)	13.8 (5.5)	8.7 (3.9)	10.5 (4.2)	11.3 (5.2)	12.7 (5.6)	6.7 (4.7)	12.4 (6.4)
Provision of Team-Based Care											
Much/Somewhat better	37	6.4	7.4 (3.2)	3.7 (3.7)	7.6 (4.3)	5.4 (3.1)	7.5 (3.6)	5.5 (3.7)	2.6 (2.7)	9.3 (5.5)	7.9 (5.3)
Stayed the same	124	23.7	26.8 (5.5)	15.2 (7.1)	21.2 (6.6)	25.5 (6.1)	26.4 (6)	21.3 (6.7)	26.3 (7.4)	27.2 (8.4)	19.5 (7.7)
Much/Somewhat worse	22	5.1	3.7 (2.3)	8.8 (5.6)	4.7 (3.4)	5.4 (3.1)	4 (2.7)	6 (3.9)	7.3 (4.4)	2.7 (3)	4 (3.8)
Don't know	252	54.2	52 (6.2)	60 (9.7)	53 (8)	55.1 (6.9)	51.4 (6.8)	56.6 (8.1)	51.1 (8.4)	53.7 (9.4)	57.1 (9.7)
Invalid skip	46	10.7	10.1 (3.7)	12.2 (6.5)	13.3 (5.5)	8.7 (3.9)	10.8 (4.2)	10.6 (5.1)	12.7 (5.6)	7.2 (4.9)	11.4 (6.2)
Practice Workflow											
Much/Somewhat better	11	2.1	2 (1.7)	2.2 (2.9)	2 (2.2)	2.1 (2)	1.5 (1.7)	2.5 (2.6)	0.9 (1.6)	1.3 (2.1)	3.8 (3.7)
Stayed the same	137	26.7	31.1 (5.7)	14.9 (7.1)	27.6 (7.2)	26 (6.1)	29.6 (6.2)	24.2 (7)	30.2 (7.7)	32 (8.8)	20.5 (7.9)
Much/Somewhat worse	49	9.6	9.7 (3.7)	9.4 (5.8)	7.6 (4.3)	11.2 (4.4)	8.6 (3.8)	10.5 (5)	9.9 (5)	6.6 (4.7)	11.1 (6.1)
Don't know	239	51.1	47.3 (6.2)	61.2 (9.7)	49.8 (8)	52.1 (6.9)	49.8 (6.8)	52.1 (8.2)	46.3 (8.4)	53.4 (9.4)	53.2 (9.7)
Invalid skip	45	10.6	10 (3.7)	12.2 (6.5)	13 (5.4)	8.7 (3.9)	10.5 (4.2)	10.6 (5.1)	12.7 (5.6)	6.7 (4.7)	11.4 (6.2)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
SATISFACTION											
Job Satisfaction											
Much/Somewhat better	12	2.6	2.7 (2)	2.2 (2.9)	2 (2.2)	3 (2.4)	1.5 (1.6)	3.5 (3)	2 (2.4)	1.8 (2.5)	3.7 (3.7)
Stayed the same	131	24.8	28.4 (5.6)	15.4 (7.2)	26.8 (7.1)	23.3 (5.9)	27.6 (6.1)	22.5 (6.9)	26.6 (7.5)	29.7 (8.6)	20.5 (7.9)
Much/Somewhat worse	68	13.3	14.5 (4.4)	9.9 (5.9)	12.1 (5.2)	14.1 (4.8)	11.5 (4.4)	14.8 (5.8)	13.4 (5.7)	11.6 (6.1)	14 (6.8)
Don't know	222	48.2	44.5 (6.2)	58.1 (9.8)	44.7 (8)	50.9 (7)	48.3 (6.8)	48.1 (8.2)	44.9 (8.4)	48.6 (9.5)	50.3 (9.8)
Invalid skip	48	11.2	10 (3.7)	14.4 (7)	14.4 (5.6)	8.7 (3.9)	11.1 (4.3)	11.2 (5.2)	13.1 (5.7)	8.3 (5.2)	11.4 (6.2)

Notes: n, unweighted = 481. Matrix-style Likert question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 6 were excluded from these counts.

Survey Question: Please indicate how the VT All-Payer ACO Model has affected the following at [your primary practice]:

Appendix Exhibit H.17. Impact of the VTAPM on the State

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
ADMINISTRATIVE/FINANCIAL											
Support to hire additional staff											
Much/Somewhat better	32	5.1	5.4 (2.8)	4.1 (3.9)	2.9 (2.7)	6.8 (3.5)	8.7 (3.9)	2 (2.3)	6.6 (4.2)	8.4 (5.2)	1.3 (2.2)
Stayed the same	77	16.0	19.2 (4.9)	7.3 (5.2)	16 (5.9)	15.9 (5.1)	14.1 (4.8)	17.6 (6.3)	13.9 (5.8)	19.8 (7.5)	15.6 (7.1)
Much/Somewhat worse	29	6.3	5.1 (2.7)	9.4 (5.8)	5 (3.5)	7.3 (3.6)	4.6 (2.9)	7.8 (4.4)	6.6 (4.2)	3.4 (3.4)	7.6 (5.2)
Don't know	282	58.2	57 (6.1)	61.4 (9.7)	57.4 (7.9)	58.9 (6.8)	59.2 (6.7)	57.4 (8.1)	55.8 (8.4)	58.8 (9.3)	59.9 (9.6)
Invalid skip	61	14.4	13.2 (4.2)	17.8 (7.6)	18.8 (6.3)	11.1 (4.4)	13.4 (4.7)	15.3 (5.9)	17.1 (6.4)	9.7 (5.6)	15.7 (7.1)
Patient out-of-pocket costs											
Much/Somewhat better	17	2.9	2.7 (2)	3.4 (3.6)	2.6 (2.6)	3.2 (2.4)	5.1 (3)	1.1 (1.7)	2.9 (2.8)	4.7 (4)	1.7 (2.5)
Stayed the same	49	8.8	10.1 (3.7)	5.4 (4.5)	8.8 (4.6)	8.8 (3.9)	10.4 (4.2)	7.5 (4.3)	8.3 (4.6)	11 (5.9)	8.1 (5.3)
Much/Somewhat worse	25	6.1	5.1 (2.7)	8.9 (5.6)	1.7 (2.1)	9.6 (4.1)	4.7 (2.9)	7.3 (4.3)	5 (3.7)	7.5 (5)	5.4 (4.4)
Don't know	330	67.8	68.9 (5.7)	64.6 (9.5)	67.7 (7.5)	67.8 (6.5)	67 (6.4)	68.4 (7.6)	68.3 (7.9)	66.5 (8.9)	68.6 (9.1)
Invalid skip	60	14.3	13.1 (4.2)	17.8 (7.6)	19.2 (6.3)	10.6 (4.3)	12.8 (4.6)	15.7 (6)	15.5 (6.1)	10.3 (5.8)	16.3 (7.2)
Overall reimbursement											
Much/Somewhat better	19	2.9	2.7 (2)	3.4 (3.6)	2.2 (2.4)	3.4 (2.5)	5.4 (3.1)	0.8 (1.4)	1.6 (2.1)	7.4 (4.9)	0.8 (1.7)
Stayed the same	59	11.3	13.1 (4.2)	6.5 (4.9)	9.8 (4.8)	12.5 (4.6)	12.2 (4.5)	10.5 (5)	13.9 (5.8)	11 (5.9)	9.6 (5.8)
Much/Somewhat worse	43	9.4	8.5 (3.4)	12 (6.5)	7.3 (4.2)	11.1 (4.4)	5.2 (3)	13 (5.5)	10.3 (5.1)	7.8 (5.1)	9.2 (5.6)
Don't know	301	62.5	63.3 (6)	60.4 (9.7)	62.7 (7.8)	62.4 (6.7)	65.5 (6.5)	60 (8.1)	58.7 (8.3)	65.2 (9)	64.1 (9.4)
Invalid skip	59	13.8	12.4 (4.1)	17.8 (7.6)	18 (6.2)	10.6 (4.3)	11.7 (4.4)	15.7 (6)	15.5 (6.1)	8.5 (5.3)	16.3 (7.2)
Financial rewards for high-quality care											
Much/Somewhat better	28	4.3	5 (2.7)	2.7 (3.2)	3.4 (2.9)	5 (3)	6.9 (3.5)	2.1 (2.4)	4.7 (3.6)	6.4 (4.6)	2.6 (3.1)
Stayed the same	65	14.6	17.4 (4.7)	7 (5.1)	13.1 (5.4)	15.7 (5.1)	12.5 (4.5)	16.4 (6.1)	12.9 (5.6)	17.3 (7.1)	14.8 (6.9)
Much/Somewhat worse	29	5.6	4.1 (2.4)	9.9 (5.9)	3.7 (3)	7.2 (3.6)	4.6 (2.9)	6.6 (4.1)	9.1 (4.9)	2.5 (3)	4.1 (3.9)
Don't know	299	61.1	60.5 (6.1)	62.6 (9.6)	60.6 (7.9)	61.5 (6.8)	63.2 (6.6)	59.3 (8.1)	57.8 (8.3)	63.5 (9.1)	62.2 (9.5)
Invalid skip	60	14.3	13.1 (4.2)	17.8 (7.6)	19.2 (6.3)	10.6 (4.3)	12.8 (4.6)	15.7 (6)	15.5 (6.1)	10.3 (5.8)	16.3 (7.2)
Administrative burden											
Much/Somewhat better	12	2.0	2.3 (1.8)	1.4 (2.3)	2.1 (2.3)	1.9 (1.9)	2.9 (2.3)	1.3 (1.9)	2 (2.4)	2.8 (3.1)	1.6 (2.4)
Stayed the same	49	9.4	10.9 (3.9)	5.4 (4.5)	10.9 (5)	8.3 (3.8)	12 (4.4)	7.2 (4.3)	10.5 (5.2)	8.2 (5.2)	9.8 (5.8)
Much/Somewhat worse	100	20.7	21.7 (5.1)	18.2 (7.7)	13.8 (5.5)	26.2 (6.1)	16.9 (5.1)	24 (7)	22.1 (7)	22.2 (7.9)	17.7 (7.5)
Don't know	260	53.4	51.9 (6.2)	57.2 (9.8)	54.5 (8)	52.5 (6.9)	56 (6.8)	51.1 (8.2)	49.9 (8.4)	56.5 (9.4)	54.3 (9.7)
Invalid skip	60	14.5	13.2 (4.2)	17.8 (7.6)	18.7 (6.3)	11.2 (4.4)	12.3 (4.5)	16.3 (6.1)	15.5 (6.1)	10.3 (5.8)	16.6 (7.3)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
CARE COORDINATION											
Coordination with Social Service Organizations											
Much/Somewhat better	41	6.9	7.8 (3.3)	4.4 (4.1)	7.3 (4.2)	6.6 (3.4)	9.7 (4)	4.5 (3.4)	6.6 (4.2)	8.9 (5.4)	5.9 (4.6)
Stayed the same	82	17.6	20.8 (5)	8.9 (5.7)	13.4 (5.5)	20.9 (5.7)	15.6 (5)	19.3 (6.5)	14.2 (5.9)	21.9 (7.8)	18.1 (7.5)
Much/Somewhat worse	12	3.0	2.3 (1.9)	4.6 (4.2)	2.2 (2.4)	3.5 (2.6)	1.8 (1.8)	3.9 (3.2)	5.7 (3.9)	0 (0)	2.9 (3.3)
Don't know	285	57.9	55.6 (6.2)	64.3 (9.5)	57.9 (7.9)	57.9 (6.9)	60.2 (6.7)	56 (8.2)	58 (8.3)	58.8 (9.3)	56 (9.7)
Invalid skip	61	14.6	13.4 (4.2)	17.8 (7.6)	19.2 (6.3)	11.1 (4.4)	12.8 (4.6)	16.2 (6.1)	15.5 (6.1)	10.3 (5.8)	17.1 (7.3)
Coordination with MH/SU Providers											
Much/Somewhat better	36	6.3	8.1 (3.4)	1.8 (2.6)	5.6 (3.7)	6.9 (3.5)	8.1 (3.7)	4.8 (3.5)	4.6 (3.5)	8.7 (5.3)	6.3 (4.8)
Stayed the same	80	16.1	18.7 (4.8)	9.3 (5.8)	13.9 (5.6)	17.8 (5.3)	16.4 (5.1)	15.9 (6)	14 (5.8)	22.7 (7.9)	13.7 (6.7)
Much/Somewhat worse	21	5.2	4.1 (2.5)	8.2 (5.5)	3.2 (2.8)	6.8 (3.5)	3.2 (2.4)	7 (4.2)	5.8 (3.9)	0.5 (1.3)	8.1 (5.3)
Don't know	283	57.7	55.7 (6.2)	63 (9.6)	58.1 (7.9)	57.3 (6.9)	59.5 (6.7)	56.2 (8.2)	60.1 (8.3)	57.7 (9.3)	54.7 (9.7)
Invalid skip	61	14.6	13.4 (4.2)	17.8 (7.6)	19.2 (6.3)	11.1 (4.4)	12.8 (4.6)	16.2 (6.1)	15.5 (6.1)	10.3 (5.8)	17.1 (7.3)
Community Referrals											
Much/Somewhat better	27	4.7	4.7 (2.6)	4.7 (4.2)	3.9 (3.1)	5.3 (3.1)	6.7 (3.4)	3 (2.8)	4.6 (3.6)	5.6 (4.4)	4.3 (3.9)
Stayed the same	85	16.8	19.8 (4.9)	8.8 (5.6)	12.8 (5.4)	19.9 (5.5)	17.6 (5.2)	16 (6)	16.6 (6.3)	24.5 (8.1)	11.6 (6.3)
Much/Somewhat worse	17	3.7	1.8 (1.6)	8.8 (5.6)	1.7 (2.1)	5.2 (3.1)	3.5 (2.5)	3.9 (3.2)	4.8 (3.6)	0 (0)	4.2 (3.9)
Don't know	290	60.2	60.2 (6.1)	60 (9.7)	61.6 (7.8)	59 (6.8)	59.1 (6.7)	61.1 (8)	58.5 (8.3)	59 (9.3)	63.1 (9.4)
Invalid skip	62	14.7	13.5 (4.2)	17.8 (7.6)	19.9 (6.4)	10.6 (4.3)	13.1 (4.6)	16 (6)	15.5 (6.1)	10.8 (5.9)	16.8 (7.3)
CARE QUALITY/OUTCOMES											
Quality of Care											
Much/Somewhat better	28	4.7	5 (2.7)	4 (3.9)	3.9 (3.1)	5.3 (3.1)	5.8 (3.2)	3.8 (3.1)	3.4 (3.1)	5.9 (4.5)	5.2 (4.3)
Stayed the same	99	19.9	23 (5.2)	11.8 (6.4)	17.3 (6.1)	22 (5.8)	21.1 (5.6)	19 (6.4)	22.2 (7)	24.9 (8.2)	14.9 (7)
Much/Somewhat worse	23	4.9	3.4 (2.2)	8.8 (5.6)	2.2 (2.4)	6.9 (3.5)	3.1 (2.4)	6.3 (4)	5.7 (3.9)	1.7 (2.4)	5.3 (4.4)
Don't know	271	56.2	55.6 (6.2)	57.7 (9.8)	57.4 (7.9)	55.2 (6.9)	57.2 (6.8)	55.3 (8.2)	53.2 (8.4)	57.1 (9.4)	58.4 (9.6)
Invalid skip	60	14.3	13.1 (4.2)	17.8 (7.6)	19.2 (6.3)	10.6 (4.3)	12.8 (4.6)	15.7 (6)	15.5 (6.1)	10.3 (5.8)	16.3 (7.2)
Patient Experience											
Much/Somewhat better	25	4.4	4.8 (2.6)	3.4 (3.6)	4.2 (3.2)	4.6 (2.9)	6.3 (3.3)	2.8 (2.7)	5.4 (3.8)	5.5 (4.3)	2.8 (3.2)
Stayed the same	85	17.8	20.8 (5)	10 (6)	13.9 (5.6)	20.9 (5.7)	17.5 (5.2)	18.1 (6.3)	16.7 (6.3)	22.6 (7.9)	15.9 (7.1)
Much/Somewhat worse	22	4.2	2.5 (1.9)	8.8 (5.6)	2.2 (2.3)	5.8 (3.2)	3.1 (2.4)	5.1 (3.6)	6 (4)	1.2 (2.1)	4 (3.8)
Don’t know	291	59.7	59.3 (6.1)	60.6 (9.7)	61.5 (7.8)	58.2 (6.9)	61.2 (6.7)	58.3 (8.1)	56.4 (8.4)	60.8 (9.2)	61.7 (9.5)
Invalid skip	58	13.9	12.7 (4.1)	17.2 (7.5)	18.2 (6.2)	10.6 (4.3)	11.9 (4.4)	15.7 (6)	15.5 (6.1)	9.8 (5.6)	15.6 (7.1)
Overall Patient Care											
Much/Somewhat better	26	4.7	5.1 (2.7)	3.4 (3.6)	4.6 (3.4)	4.7 (2.9)	5.8 (3.2)	3.7 (3.1)	4.7 (3.6)	6.5 (4.7)	3.3 (3.5)
Stayed the same	101	20.0	23 (5.2)	12 (6.5)	16.1 (5.9)	23.1 (5.9)	21.2 (5.6)	19.1 (6.5)	20.8 (6.9)	25.4 (8.2)	16 (7.2)
Much/Somewhat worse	23	5.0	3.3 (2.2)	9.7 (5.9)	2.5 (2.5)	7 (3.5)	2.9 (2.3)	6.8 (4.1)	6.2 (4.1)	0.7 (1.5)	6 (4.6)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
Don't know	270	55.7	55.2 (6.2)	57.1 (9.8)	57.2 (8)	54.6 (6.9)	57.4 (6.8)	54.4 (8.2)	52.7 (8.4)	57.1 (9.4)	57.8 (9.6)
Invalid skip	61	14.5	13.3 (4.2)	17.8 (7.6)	19.6 (6.4)	10.6 (4.3)	12.8 (4.6)	16 (6)	15.5 (6.1)	10.3 (5.8)	16.8 (7.3)
Availability of Data for Care Management											
Much/Somewhat better	52	8.8	10.4 (3.8)	4.6 (4.2)	8.1 (4.4)	9.3 (4)	12 (4.4)	6.1 (3.9)	7.8 (4.5)	13.5 (6.5)	6.4 (4.8)
Stayed the same	72	15.7	18 (4.8)	9.6 (5.9)	15.5 (5.8)	15.8 (5.1)	13.9 (4.7)	17.3 (6.2)	11.9 (5.5)	20.3 (7.6)	15.3 (7)
Much/Somewhat worse	17	4.0	3.3 (2.2)	5.8 (4.6)	1.3 (1.8)	6 (3.3)	2.4 (2.1)	5.3 (3.7)	5.1 (3.7)	0.5 (1.3)	5.8 (4.6)
Don't know	279	57.1	55.1 (6.2)	62.3 (9.6)	55.9 (8)	58 (6.9)	58.7 (6.7)	55.7 (8.2)	59.7 (8.3)	54.8 (9.4)	56.3 (9.7)
Invalid skip	61	14.5	13.2 (4.2)	17.8 (7.6)	19.2 (6.3)	10.8 (4.3)	13 (4.6)	15.7 (6)	15.5 (6.1)	10.8 (5.9)	16.3 (7.2)
PRACTICE TRANSFORMATION											
Support for Quality Measurement											
Much/Somewhat better	49	8.7	10.2 (3.8)	4.5 (4.1)	8 (4.4)	9.2 (4)	9.6 (4)	7.9 (4.4)	11.1 (5.3)	10.2 (5.7)	5.6 (4.5)
Stayed the same	67	14.3	17.1 (4.7)	6.7 (5)	14.1 (5.6)	14.4 (4.9)	14.3 (4.8)	14.2 (5.7)	9 (4.8)	20.2 (7.6)	15.2 (7)
Much/Somewhat worse	23	4.9	3.5 (2.3)	8.6 (5.6)	3.2 (2.8)	6.3 (3.4)	4.8 (2.9)	5 (3.6)	9.1 (4.8)	1.6 (2.4)	2.9 (3.3)
Don't know	282	57.8	56 (6.2)	62.5 (9.6)	56.1 (8)	59 (6.8)	59.1 (6.7)	56.7 (8.1)	55.3 (8.4)	57.7 (9.3)	60 (9.6)
Invalid skip	60	14.4	13.1 (4.2)	17.8 (7.6)	18.6 (6.3)	11.1 (4.4)	12.2 (4.5)	16.2 (6.1)	15.5 (6.1)	10.3 (5.8)	16.4 (7.2)
Support for Health IT											
Much/Somewhat better	23	4.1	5 (2.7)	1.8 (2.6)	3.3 (2.9)	4.7 (2.9)	4.3 (2.8)	4 (3.2)	5.5 (3.9)	3.8 (3.6)	3.2 (3.4)
Stayed the same	86	17.4	21.3 (5.1)	6.9 (5.1)	16.2 (5.9)	18.3 (5.4)	18.4 (5.3)	16.5 (6.1)	14.9 (6)	24.1 (8.1)	15.1 (7)
Much/Somewhat worse	23	4.5	3.1 (2.2)	8.3 (5.5)	4.2 (3.2)	4.8 (3)	3.6 (2.6)	5.3 (3.7)	5.8 (3.9)	1.7 (2.5)	4.7 (4.2)
Don’t know	288	59.3	57.1 (6.1)	65.2 (9.5)	57.1 (8)	61 (6.8)	60.9 (6.7)	57.9 (8.1)	58.2 (8.3)	60 (9.3)	59.7 (9.6)
Invalid skip	61	14.7	13.5 (4.2)	17.8 (7.6)	19.2 (6.3)	11.2 (4.4)	12.8 (4.6)	16.3 (6.1)	15.5 (6.1)	10.3 (5.8)	17.2 (7.4)
Provision of Team-Based Care											
Much/Somewhat better	42	7.7	8.7 (3.5)	5.2 (4.4)	7.4 (4.2)	8 (3.8)	9.7 (4)	6.1 (3.9)	8.1 (4.6)	9.8 (5.6)	6.1 (4.7)
Stayed the same	85	17.8	21.4 (5.1)	8.2 (5.5)	14.8 (5.7)	20.1 (5.6)	16.1 (5)	19.1 (6.5)	15.1 (6)	22.4 (7.9)	17.4 (7.4)
Much/Somewhat worse	16	3.5	2.1 (1.8)	7 (5.1)	1.7 (2.1)	4.8 (3)	3.2 (2.4)	3.7 (3.1)	6.1 (4)	0 (0)	2.9 (3.3)
Don't know	279	57.0	55.1 (6.2)	62.1 (9.6)	57.7 (7.9)	56.4 (6.9)	58.9 (6.7)	55.4 (8.2)	55.1 (8.4)	57.9 (9.3)	57.9 (9.6)
Invalid skip	59	14.0	12.7 (4.1)	17.5 (7.5)	18.3 (6.2)	10.7 (4.3)	12.1 (4.5)	15.7 (6)	15.7 (6.1)	9.8 (5.6)	15.7 (7.1)
Practice Workflow											
Much/Somewhat better	13	2.3	2.8 (2.1)	1 (2)	2.1 (2.3)	2.5 (2.2)	2.5 (2.1)	2.2 (2.4)	3.5 (3.1)	2.5 (3)	1.2 (2.1)
Stayed the same	78	16.7	20.2 (5)	7.5 (5.3)	16.6 (6)	16.8 (5.2)	16.5 (5.1)	16.9 (6.2)	15.6 (6.1)	22.4 (7.9)	14.1 (6.8)
Much/Somewhat worse	47	9.1	8.7 (3.5)	10.1 (6)	6.3 (3.9)	11.3 (4.4)	7.1 (3.5)	10.8 (5.1)	9.1 (4.8)	4.2 (3.8)	12.3 (6.4)
Don't know	283	57.5	55.2 (6.2)	63.6 (9.6)	55.7 (8)	58.9 (6.8)	61.1 (6.7)	54.5 (8.2)	56.2 (8.4)	60.6 (9.2)	56.2 (9.7)
Invalid skip	60	14.3	13.1 (4.2)	17.8 (7.6)	19.2 (6.3)	10.6 (4.3)	12.8 (4.6)	15.7 (6)	15.5 (6.1)	10.3 (5.8)	16.3 (7.2)

Response	N	Overall	Participation Status		System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)								
SATISFACTION											
Job Satisfaction											
Much/Somewhat better	11	2.0	1.9 (1.7)	2.3 (3)	1.4 (1.9)	2.6 (2.2)	1.5 (1.7)	2.5 (2.6)	1 (1.7)	2.2 (2.8)	2.9 (3.3)
Stayed the same	72	15.3	19.1 (4.9)	5.3 (4.5)	16.1 (5.9)	14.7 (4.9)	14.5 (4.8)	16.1 (6)	15.5 (6.1)	17.5 (7.2)	14.2 (6.8)
Much/Somewhat worse	74	14.3	13.8 (4.3)	15.7 (7.2)	11.2 (5.1)	16.7 (5.2)	13.8 (4.7)	14.7 (5.8)	14.8 (6)	13.4 (6.5)	13.6 (6.7)
Don't know	265	54.2	52.4 (6.2)	59 (9.8)	52.7 (8)	55.4 (6.9)	57.4 (6.8)	51.5 (8.2)	53.2 (8.4)	57.2 (9.4)	53.1 (9.7)
Invalid skip	59	14.1	12.8 (4.1)	17.8 (7.6)	18.7 (6.3)	10.6 (4.3)	12.8 (4.6)	15.3 (5.9)	15.5 (6.1)	9.7 (5.6)	16.3 (7.2)

Notes: n, unweighted = 481. Matrix-style Likert question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 6 were excluded from these counts.

Survey Question: Please indicate how the VT All-Payer ACO Model has changed the following in Vermont:

Appendix Exhibit H.18. COVID-19 PHE-Related Disruptions to Clinical Practice

Response	N	Overall	Participation Status			System Affiliation		Provider Type		Practice Size		
			Participant	Non-participant	*	Affiliated	Non-affiliated	Primary Care	Specialty/ Other	Small	Medium	Large
	#	%	% (SE)									
Shifted staff to remote work	305	59.9	66.8 (5.8)	43.3 (9.3)	***	62.6 (7.7)	57.9 (6.6)	61.4 (6.5)	58.5 (7.9)	39.9 (8.1)	68.1 (8.6)	73.1 (8.5)
Reduction in practice revenue	304	56.4	59.3 (6)	49.7 (9.4)	*	56.4 (7.9)	56.5 (6.6)	56 (6.6)	56.8 (8)	58.9 (8.1)	63.9 (8.9)	50.9 (9.5)
Suspended elective procedures	270	54.3	59.4 (6)	42.1 (9.2)	***	66.5 (7.5)	45.2 (6.7)	46.9 (6.6)	60.8 (7.9)	45.2 (8.2)	44.1 (9.2)	71.6 (8.6)
Staff assigned to new roles (e.g., COVID-19 testing, critical care)	245	48.2	54.3 (6.1)	33.5 (8.8)	***	59.2 (7.8)	40 (6.6)	49.6 (6.6)	46.9 (8)	29.9 (7.5)	48.7 (9.2)	65.6 (9)
Reduced clinical staff hours	194	39.7	42.7 (6.1)	32.6 (8.8)		37.2 (7.7)	41.6 (6.6)	31.5 (6.2)	47.1 (8)	42.3 (8.1)	37.6 (9)	40.2 (9.3)
Staff shortages due to COVID-19 PHE (e.g., sickness, quarantine, childcare)	189	35.5	38.7 (6)	27.9 (8.4)		38.5 (7.7)	33.3 (6.3)	36 (6.4)	35.1 (7.7)	26.1 (7.2)	37.5 (8.9)	42.5 (9.4)
Shortages of Personal Protective Equipment (PPE)	189	34.2	36.1 (5.9)	29.5 (8.5)		30.7 (7.3)	36.7 (6.5)	35.7 (6.4)	32.8 (7.6)	33.4 (7.8)	34.3 (8.8)	35.2 (9.1)
Layoffs and/or furloughs of clinical staff	152	32.0	36.5 (5.9)	21 (7.6)	***	37.7 (7.7)	27.7 (6)	22.3 (5.5)	40.6 (7.9)	26.2 (7.2)	28.8 (8.4)	39.9 (9.3)
Layoffs and/or furloughs of administrative staff	149	29.6	34.3 (5.8)	18.4 (7.3)	***	35.1 (7.6)	25.5 (5.8)	22.6 (5.6)	35.9 (7.7)	24 (7)	30.6 (8.5)	34 (9)
Reduced administrative staff hours	130	27.0	30.9 (5.7)	17.8 (7.2)	***	29.1 (7.2)	25.5 (5.8)	20 (5.3)	33.4 (7.6)	22.5 (6.9)	23.6 (7.8)	34.7 (9.1)
Practice closed temporarily	106	21.2	20 (4.9)	24 (8)		24.4 (6.8)	18.8 (5.2)	16.4 (4.9)	25.5 (7)	22.1 (6.8)	11.7 (5.9)	27.3 (8.5)
Practice closed permanently	12	2.6	2.4 (1.9)	2.9 (3.1)		1.7 (2.1)	3.2 (2.4)	1.1 (1.4)	3.9 (3.1)	1.9 (2.2)	1.9 (2.5)	3.3 (3.4)
Other	26	4.7	4.1 (2.4)	6.1 (4.5)		5.6 (3.7)	4 (2.6)	5 (2.9)	4.4 (3.3)	6.3 (4)	3.2 (3.2)	3.5 (3.5)
None of the above	16	3.0	2 (1.7)	5.7 (4.3)	*	2.5 (2.5)	3.4 (2.4)	3.1 (2.3)	3 (2.7)	4.2 (3.3)	2.3 (2.8)	2.7 (3.1)

Notes: Select all that apply question. The percentages above are weighted to represent the target population. Respondents who skipped survey Domain 7 were excluded from these counts. Participation status results significant at *p<0.1, **p<0.05, ***p<0.01.

Survey Question: At any point since March 2020, did any of the following disruptions occur at [primary practice name] because of COVID-19?