VERMONT Blueprint for Health

Smart choices. Powerful tools.

BLUEPRINT FOR HEALTH IN 2017

ANNUAL REPORT

State of Vermont
Department of Vermont Health Access
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Vermont Blueprint for Health in 2017

Contents

1 INTRODUCTION

The Vermont Blueprint for Health is a state-led, nationally-recognized initiative transforming health care delivery. At its foundation is the local Transformation Network – a network of Project Managers, Practice Facilitators, and Community Health Team Leaders – who work with Patient-Centered Medical Homes (PCMHs), Community Health Teams (CHTs), and local health and human services leaders. This local network allows for rapid response to Vermont's health priorities through statewide implementation of new initiatives.

Blueprint programs are continuously informed by comprehensive evaluations of health care quality and outcomes at the practice, community, and state levels. As the care delivery system and payment model evolve, the Blueprint's aim is to connect Vermonters with whole-person health care that is evidence-based, patient and family-centered, and cost-effective.

The Blueprint is part of the Department of Vermont Health Access and the state-level team benefits from close collaboration with the Department's payment reform, quality, and clinical units. The Blueprint participates in the Agency of Human Service's leadership group, positioning the program to contribute to both health reform and community services. In its current home, and in its previous positions in the State, the Blueprint has consistently benefited from strong, bi-partisan support from the Vermont Legislature and the Governor.

2 2017 IN BRIEF

In 2017, the Vermont Blueprint for Health broadened and strengthened its partnerships with health and human services providers across the spectrum of care – from high acuity clinical care providers to grassroots community prevention coalitions. The Blueprint, through its local Project Managers, Community Health Team Leaders, and Practice Facilitators, supported the maturation of local care networks. Community collaboratives prepared the foundation of Vermont's movement towards healthy communities and a model of care that invests in wellness and attends to the social determinants of health, such as nutrition, housing, social connections, and more. In alignment with the quality and cost objectives under Vermont's All-Payer Model, the Blueprint worked in partnership with OneCare Vermont, the Vermont Department of Health, The Green Mountain Care Board, Bi-State, and many other partners to refine and implement this comprehensive model of care. The Blueprint's direction today is shared with all these partners, and brings along its proven assets to serve Vermont's vision of high-quality health care that its citizens can afford, and of a vibrant, healthy population. Of the many highlights of the Blueprint's work in 2017, the following stand out:

- Reducing Overall Health Care Costs: The Blueprint evaluation continues to demonstrate lower average risk-adjusted expenditures for patients served by Blueprint Patient-Centered Medical Homes and Community Health Teams relative to the comparison group. A Difference-in-Difference analysis shows that, for patients of more mature Patient-Centered Medical Homes (certified under NCQA standards 5 years ago or more), with access to Community Health Teams, growth in health care expenditures slowed by an average of $332 per Blueprint participant.
- Lower Pharmacy Spending for Blueprint Participants: Patients of practices in their fifth year post- Blueprint implementation incurred $173 less per person in pharmacy expenditures than patients in a comparison group.
- Increasing Spending in The Right Areas – Meeting Wellness and Social Needs to Prevent Higher-Cost Care: Blueprint participants did cost the state Medicaid program more in one area, and this may be good news. Vermont Medicaid beneficiaries served by Blueprint Patient-Centered Medical Homes and Community Health Teams had significantly greater risk-adjusted Special Medicaid expenditures relative to people in a comparison group. Special Medicaid Services are services uniquely funded by Medicaid and targeted at meeting social, economic, and rehabilitative needs (e.g. transportation, home- and community-based services, case management, dental, residential treatment, day treatment, mental health facilities, and school-based services). Greater uptake of these services may help prevent or delay more costly acute and specialty health care. The averted costs may already be appearing in the Blueprint's overall cost savings, and may make a difference in health care spending into the future.
- Engaging Almost all Primary Care Practices in Vermont: In previous years, the Blueprint had reported it was approaching a saturation point, where the program had recruited most of the available primary care practices. The team was surprised by a new influx of practices in 2017,

representing most of the remaining primary care practices with more than one provider that are known to the Blueprint. The net gain in recognized Patient-Centered Medical Homes in Vermont was seven practices in 2017.

- Redesigning the National Patient-Centered Medical Home Recognition Process for More Engagement, Less Burden: Achieving recognition as Patient-Centered Medical Homes has always been hard work for primary care practices. Beginning in 2015, the Blueprint partnered with the National Committee on Quality Assurance (NCQA) to advise on redesign of a new recognition process, including piloting and providing feedback on early versions of that process. Blueprint Leadership, Practice Facilitators, and Providers encouraged NCQA to develop a less burdensome and more continuously engaging process. NCQA's final version of the new process dropped the 3-year recognition cycle in favor of annual reporting on performance and ongoing quality improvement. It became the only available method of NCQA Patient-Centered Medical Home recognition beginning October 1, 2017.
- SASH Participants Experience Measurable Difference in End-of-Life Planning and Chronic Disease Management: 2017 Support and Services at Home (SASH) staff worked with program participants to develop advance directives, increasing the percentage of participants with a documented end-of-life plan in place from 59% to 66%, well above the national average of 26% of adults with advance directives. SASH staff helped increase the rate of participants with diagnosed hypertension and documented blood pressure readings classified as "in control" by the National Quality Forum (NQF) from 77% in 2016 to 87% in 2017.
- Helping Vermonters Help Themselves: In 2017, 1,263 Vermonters completed a Blueprint sponsored Self-Management workshop, on one of the following topics: Smoking Cessation, Diabetes Management, Diabetes Prevention, Chronic Condition Management, Chronic Pain, and Emotional Wellness. These workshops are offered in all parts of the state.
- Getting More Vermonters with Opioid Use Disorder into Lifesaving Treatment Sooner: In 2017 the Hub and Spoke program was recognized by the White House's Director of National Drug Control Policy" as "unique" and an "incredible valuable national model." State leadership and the people who work in Hubs and Spokes will not stop there – they are continuously working to expand access. The enrollment in Hubs and Spokes continued to increase throughout 2017 to just over 6,000. In the same time, the number of providers actively offering Medication Assisted Treatment in Spoke settings increased from 187 to 213. Local Blueprint Leaders and Staff participated in triage teams, helping people who ask for help with opioid use disorder get to the right level of treatment as soon as possible, whether in the regional Hub or a local Spoke.
- New Women's Health Initiative Expanded Psychosocial Screening and Treatment, and Comprehensive Family Planning Services for Healthier Women and Families: The Women's Health Initiative launched in January 2017, and already engages more than half of Vermont's Women's Health Provider practices in addition to 15 Patient-Centered Medical Homes in:
    - Expanding screenings for a range of psychosocial risk factors

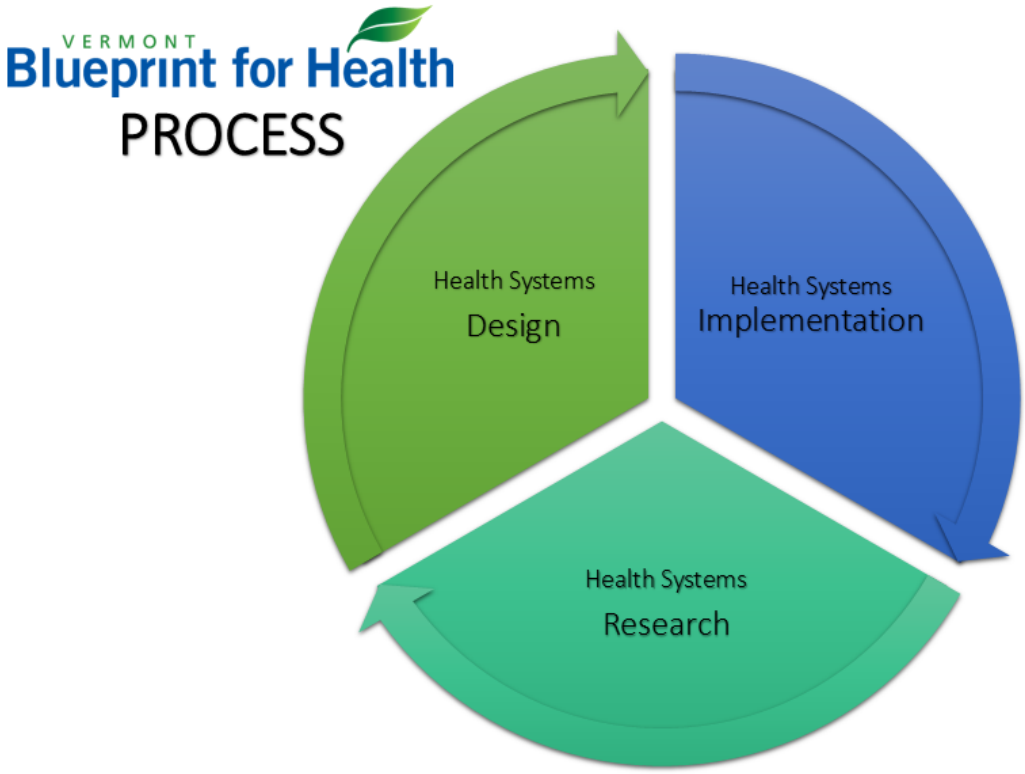
    - Connecting women who screen positive with brief intervention and referral to treatment,
    - Offering same-day access to Long Acting Reversible Contraception (LARC) for women who choose that highly-effective form of birth control, and
    - Formally linking community organizations and practices with referral protocols that get women the comprehensive family planning counseling they want, as soon as they want it.
- Piloting Payment for Multi-Disciplinary Team Based Care: In 2017, the Blueprint worked with OneCare Vermont to pilot new care management software and a complex-care management payment model in five Health Service Areas. The payment model rewards multi-disciplinary care for people with especially complex needs. A lead care manager is identified based on the best fit for the patient and is paid for their time, whether they come from a traditional health care organization or a social, economic, or community-service provider. The lead care manager maintains the care plan and facilitates communication across participating organizations and agencies, making sure care is always directed towards the patient's goals and is safe, effective, and non-duplicative.
- More Clinical Data, for More Powerful Analytics: Through data quality and information systems linked with Patient-Centered Medical Homes, the Blueprint significantly increased the number of Vermonters whose health care data is captured in the Vermont Clinical Registry, enabling more comprehensive and accurate reporting on Vermonters' health status and health care outcomes.

3 THE BLUEPRINT APPROACH: DESIGN-IMPLEMENT-RESEARCH

The Blueprint provides a tested model for driving change: a combination of developing new ideas through a collaborative design process, rapid implementation across practices and communities, and research and evaluation that informs new initiatives and iterative improvements. Each of these elements – design, implementation, and research – is critical to the success of the interventions the Blueprint supports.

The Blueprint's unique combination of design and implementation expertise, the local Transformation Network that rapidly implements new approaches to care, and whole-population evaluation and analytic capabilities, is useful for developing reforms that improve care outcomes and reduce expenditures. These strengths are evident in the Blueprint's process, shown below, of health systems design, implementation, and research. Each step feeds the next.

Figure 1: The Blueprint Process



3.1 HEALTH SYSTEMS DESIGN

As a state-led program located in the Department of Vermont Health Access, the Blueprint is positioned to respond to priorities identified by the Administration, the Legislature, and by extension the people of Vermont. The most recent example of the Blueprint's collaborative design process is the new Women's Health Initiative (described in more detail at the Program Highlights section). The Women's Health Initiative launched on January 1, 2017, and provides women with enhanced health and psychosocial screening along with comprehensive family planning counseling and timely access to long-acting reversible contraception (LARC). Its design shows the Blueprint working more quickly and with broader participation than ever before to design evidence-based statewide interventions. At the start, the Blueprint partnered with the Vermont Department of Health (VDH), together convening small groups of experts in women's health, practice change, community integration, payment, measurement and more. In a series of collaborative design sessions with each of these groups, the Blueprint brought forward the Initiative's challenges and goals and offered information about approaches from other communities in the United States and worldwide. The Blueprint research about these approaches began with published literature, then went deeper, engaging people who have led change in service of women's health and reducing unintended pregnancy, to learn about both their successes and mistakes (including those that never make it into the formal literature). The Blueprint brought the best available information to its advisory groups and facilitated idea generation. In between design sessions, Blueprint staff researched answers to participants' questions, investigated new ideas, and modeled costs and impact. After only six months, the Blueprint reached stakeholder consensus on a pilot program and launched the Women's Health Initiative in eight of Vermont's 14 Health Service Areas on January 1, 2017. The design process did not stop at launch – the Blueprint's process is built for continuous feedback and ongoing improvement. As an example, updated screening tools incorporate early feedback from providers and new clinical guidelines.

As demonstrated with the design of Blueprint's Patient-Centered Medical Home program, SASH, the Hub & Spoke, and now the Women's Health Initiative, the Blueprint can convene and support partners in program design and implementation, across a broad spectrum of health and human service specialties. Continued success in new model design depends upon the Blueprint being a trusted partner and continuing to maintain a team well-versed in program design, curious about the latest health systems innovations around the world, and with access to accurate, actionable data about population health and program outcomes.

3.2 HEALTH SYSTEMS IMPLEMENTATION

New care delivery designs need an implementation arm, a route from idea to provider and patient. The local Blueprint Transformation Network provides that route, by funding local health systems leaders – Project Managers, CHT Leaders, and Practice Facilitators – to build trusting relationships with a wide range of health care providers and community organizations, to convene partners for planning coordinated action, to engage and act in response to community needs, regardless of organization

affiliation or funder, and to monitor and measure implementation progress. While Patient-Centered Medical Home and Community Health Team payments are supported by all payers, Transformation Network Staff are funded exclusively by the state of Vermont. This support and funding is invaluable to existing care models and the implementation of new initiatives.

In national evaluations of the effectiveness of Patient-Centered Medical Home initiatives, the Blueprint was shown to reduce the cost of medical care for patients of Blueprint practices. Not every medical home initiative was able to demonstrate that same success. The most notable difference in the Blueprint's approach was the funding of the Transformation Network.

Successful implementation of programs across the health system is also dependent on the engagement of the leadership from the state's health care organizations, including the Accountable Care Organizations (ACOs) and all the hospital systems, Federally Qualified Health Centers (FQHCs), and independent practices they represent. Daily collaboration between public, private, and non-profit sectors and between health and human services is essential. The Blueprint leadership and core team works as a neutral partner at the state level (mirroring the local work of the Transformation Network) by bringing these groups together to implement new initiatives.

3.3 Health Systems Research

Health Systems Research is how the Blueprint evaluates its initiatives. Blueprint research and evaluation results inform the design of new initiatives and iterative improvements of existing initiatives. The Blueprint is committed to supporting the local and national Learning Health System and continuous improvement activities through this work, which includes data collection, data quality assurance, data merging, measurement, analysis, performance reporting, and self and system-evaluation work.

The primary utilities behind the Blueprint's health systems research are Vermont's all-payer claims database (VCHURES) and the Vermont Clinical Registry (formerly Docsite). Using these two datasets, the program has demonstrated the effectiveness of merging clinical data with all-payer claims data by producing comprehensive and meaningful reports for practices and communities. Communities use these reports to guide continuous quality improvement activities within health care organizations and across medical and social services.

Additionally, as a neutral, state-based service, the Blueprint has unique access to data from a wide variety of sources in addition to claims and clinical data. Working with other state programs, the Blueprint is seeking to add complementary datasets to its evaluation to help the health system better understand and serve specific high-needs populations. For example, the Blueprint's analytic team is currently working with Vermont Department of Corrections (DOC) data with the goal of assessing whether medication-assisted treatment (MAT) for opioid disorders affects rates of incarceration.

The Blueprint shares its research with other states, provinces, countries, and academic and professional organizations through presentations and one-on-one consultations. The program participates in large-scale studies, like the Multi-Payer Advanced Primary Care Practice (MAPCP) demonstration (which ended December 31, 2016) and the Milbank Memorial Fund Multi-State Collaborative. The team also

publishes findings in national peer-reviewed journals. These activities feed the larger Learning Health System from which the Blueprint draws inspiration and evidence for future innovations in service to the health and well-being of Vermonters.

At the local level, the Blueprint's health systems research and evaluation activities help guide provider and community goal-setting and monitoring. Blueprint Facilitators support providers and community collaboratives in developing data literacy, interpreting Blueprint reports, and using Blueprint data products in combination with a wide range of state, ACO, and locally-generated data to guide practice quality improvement projects and community-wide population health improvement work. The data itself is endlessly interesting, and developing actionable measures can take significant time and energy for already busy teams. The Blueprint Facilitators help keep everyone moving efficiently with an eye to the true end goal of the research: helping providers care for Vermonters, and Vermonters care for themselves and their families.

4 How the Blueprint Works

4.1 The Blueprint is a statewide initiative with local leadership

The Blueprint combines state-level strategic direction with local organization and ownership of care delivery. Vermont's 14 Health Service Areas each have an Administrative Entity, such as a hospital or Federally Qualified Health Center, which leads the Blueprint locally. Their work includes local program leadership, financial management, and staffing of Community Health Teams. The Blueprint's Transformation Network includes Project Managers, hired by the Administrative Entities, who lead implementation and engage community partners at the local level. Each Administrative Entity contributes their own financial and human resources, beyond the scope of their Blueprint grants, demonstrating their commitment to the Blueprint's sustainability and success.

4.2 Community Collaboratives identify local health priorities, plan responses

The Administrative Entities in each HSA work to include local partners in guiding Blueprint implementation. In 2015, local Blueprint work groups (originally known as Integrated Health Services advisory groups) merged with Accountable Care Organization (ACO) work groups (known as Regional Clinical Performance Committees). These combined groups are now known as Community Collaboratives.

Staffed by the Blueprint Project Manager with support from Vermont Department of Health and the ACOs, the Community Collaborative leadership teams include representatives from ACO participants in that community, local primary care leaders (including a pediatric provider), the hospital, home health or the Visiting Nurse Association, Area Agency on Aging, Designated (mental health) Agency, Designated Regional Housing Organization, and others. They meet to identify local priorities, goals, and strategies, including the design and staffing of the area's Blueprint Community Health Team.

The long-term goal of these Community Collaboratives is to prepare each HSA to function as an Accountable Community for Health (ACH), responsible for the wellness of the whole population and potentially its health care budget. This model supports the complete integration of high-quality medical care, mental health and substance abuse services, social services, and prevention.

4.3 Patient-Centered Medical Homes provide top-quality primary care

The Blueprint supports Vermont's primary care practices in the process of achieving and maintaining recognition as Patient-Centered Medical Homes (PCMHs) under the National Committee for Quality Assurance (NCQA) standards. These standards promote excellence these areas:

- Team-based primary care
- Improved patient and panel health outcomes

- Integrated behavioral health care
- Coordinated care

All Vermont payers (Medicaid, Medicare, and major commercial insurers) incent practices to do this work through per-member-per-month (PMPM) payments to NCQA-recognized Patient-Centered Medical Homes. Performance-based payments introduced in 2016 are promoting improvement in rates of preventive care and management of chronic conditions. The Blueprint's Transformation Network supports practices with Practice Facilitators, professionals trained in quality improvement and change management. Each practice has access to a Facilitator, who provides technical expertise in the NCQA-PCMH standards and ongoing quality improvement coaching.

4.4 COMMUNITY HEALTH TEAMS EXTEND AVAILABLE SERVICES

Good medical care happens in a doctor's office, but good health happens in a community. The Blueprint Community Health Teams supplement services available in Patient-Centered Medical Homes and link patients with the social and economic services that make healthy living possible for all Vermonters. Community Health Teams are active in each of the state's 14 Health Service Areas, providing services that include:

- Population specific (panel) management and outreach
- Health coaching
- Individual care coordination
- Brief counseling and referral to more intensive mental health care as needed
- Substance abuse treatment support
- Condition-specific wellness education

The services may be embedded within the primary care practices or centralized in the Health Service Area. Actual service configuration, staffing, and location are determined by local leaders based on community demographics and health needs, identified gaps in available services, and the strengths of local partners. Funded by Medicaid, Medicare, and major commercial insurers in Vermont, the Community Health Team services are offered barrier-free to patients and practices (meaning no co-payments, no prior authorizations, and no billing). This shared utility, supported by all payers, is uniquely flexible and responsive to local needs and conditions.

Community Health Teams offer services that do not fit in the time allotted for a typical provider visit. Offerings like brief mental health interventions are critical follow-ups to positive screens for depression, anxiety, and other mental health conditions. Condition education and nutrition counseling can be critical for helping people newly-diagnosed with Diabetes, Hypertension, and certain other chronic diseases to manage those conditions effectively from the start. Community Health Teams also serve as an essential link between traditional clinical services and community services. When a primary care provider recognizes that a patient needs something other than (or in addition to) a medical intervention to

support good health, they need a way to connect that patient with the right resources. Community Health Teams have expertise in the services available in their community, from mental health and substance use disorder treatment to housing and economic supports. They take referrals from primary care providers, help patients explore what they need to be healthy and then help them access those services.

For patients with the most complex needs, the Community Health Teams help create interdisciplinary care teams that include all necessary services. These teams must bridge different professional cultures, separate tracking platforms, busy schedules, and limited resources to deliver integrated care. Blueprint Community Health Teams provide peer leadership for integrated care teams, helping disseminate best practices and tools for team-based care, continuing the work of the Integrated Communities Care Management Learning Collaborative. In 2017, Community Health Teams in five health service areas also worked with OneCare Vermont to pilot new software for care management and a new payment model that compensates the agencies that step-up to lead care teams. In addition to providing direct services to patients, Community Health Teams support communities in addressing the root causes of poor health and of gaps in care. Community Health Team leaders participate in their local Community Collaboratives, representing the needs of the patients they interact with every day.

4.5 Community Health Teams support women's health (Women's Health Initiative)

The Community Health Teams are designed to support expansion over time, to include new service models that respond to current statewide population health priorities. Since launch, Community Health Teams have added staff to support the Hub & Spoke system of Medication Assisted Treatment for opioid use disorder treatment, staff for the Support and Services at Home (SASH) program that supports healthy aging-in-place, and now Women's Health Initiative staff.

The new Community Health Team staff hired through the Women's Health Initiative are mental health clinicians. They work onsite at Women's Health practices, helping the practices build enhanced psychosocial screenings into routine visits using an expanded version of the Screening, Brief Intervention, and Referral to Treatment (SBIRT) model. Women identified as at-risk in the areas of mental health, substance use disorder, partner violence, or access to food and housing are immediately connected to their practice's new social worker for brief intervention and counseling and referral to more intensive treatment as needed. As members of the larger local Community Health Teams, the social workers are knowledgeable about treatment options and social and economic supports – and ready to create seamless connections for patients.

4.6 Community Health Teams support recovery (Hub & Spoke Program)

The Hub & Spoke program expands the availability of medication assisted treatment (MAT) for opioid use disorder treatment. Hubs are regional opioid treatment programs offering daily support for patients with complex addictions. Spokes are office-based opioid treatment settings that include mostly primary

care or family medicine practices in addition to obstetrics and gynecology practices, specialty outpatient addictions programs, and practices specializing in chronic pain.

In partnership with the Vermont Department of Health, the Blueprint has helped to expand statewide access to MAT by encouraging more Patient-Centered Medical Homes to become Spokes. The most important incentive, for most practices, is access to Community Health Team staff. Each Spoke gains a nurse and Master's-prepared, licensed mental health or addictions clinician. These Community Health Team members provide the additional clinical support and care coordination that MAT patients require.

4.7 Community Health Teams support healthy aging-in-place (SASH)

The Blueprint works with Cathedral Square, a Designated Regional Housing Organization, and SASH partner agencies, to offer Support and Services at Home (SASH). The SASH partnership connects local health and long-term care systems for Medicare beneficiaries to support aging at home through partnerships with Housing Organizations, Home Health, Area Agencies on Aging, and Designated Mental Health Agencies.

The Department of Aging and Independent Living supports Cathedral Square to act as the statewide administrator for SASH, responsible for training and model fidelity. SASH is administered locally by six Designated Regional Housing Organizations (DRHOs) and serves participants both in subsidized housing and in residences in the community at large.

This unique population health approach is organized around "panels" of 100 participants, each served by a SASH coordinator and Wellness Nurse who are considered part of their area's extended Community Health Teams. Together, they focus on three areas of intervention shown to be effective in reducing Medicare expenditures:

1. Transition support after a hospital or rehabilitation facility stay
2. Self-management education and coaching for chronic conditions and health maintenance
3. Care coordination

In each local implementation, the partnering agencies (Home Health, Area Agency on Aging, and Designated Agencies) have developed memorandums of understanding to guide program implementation, define roles, avoid duplication, and exchange clinical information to support care.

SASH is primarily funded by Medicare – previously as part of the Centers for Medicare and Medicaid Services (CMS) MAPCP demonstration and now through the All-Payer ACO Model agreement.

4.8 Performance payments fuel high-quality, high-value care

Medicare, Medicaid, and Vermont's major commercial insurers fund Patient-Centered Medical Homes and Community Health Teams. While participation in the Blueprint program is optional for providers,

Medicaid and major commercial insurers are required to participate in these payments. The exception is self-insured employers, though many have opted to participate. Medicare's participation began through the MAPCP demonstration in 2011 and continues under the All-Payer ACO Model Agreement.

After the Vermont Legislature approved an increase in program payments in 2015 – the first since the program's inception – the Blueprint led a consensus-based process to update the payment model. The current payment model provides a per member per month payment to support the additional work of operating as a Patient-Centered Medical Home, plus performance payments rewarding high-quality, high-value care.

4.9 Measurement and analytics support a Learning Health System

The data that Patient-Centered Medical Homes produce in their work with clients and patients are used by the Blueprint's measurement and evaluation program to evaluate the status of health care delivery in Vermont and the progress in quality, utilization, and medical expenditures. These evaluations, in turn, support and inform improvement throughout the system.

The data the Blueprint uses include claims from the all-payers claims database, also known as the Vermont Health Care Uniform Reporting and Evaluation System (VHCURES), and clinical data from the Vermont Clinical Registry, formerly known as DocSite. Claims data provides important insights into utilization of services and the cost of care. For example, the Blueprint can identify the rates at which Vermonters go to the emergency department, changes in rates of visits to primary care providers, and how long patients are staying in the hospital. Data in the Blueprint Clinical Registry comes from clinical documentation entered into practice electronic medical records (EMRs). EMRs record the care delivered to patients and clinical measurements like height, weight, blood pressure, blood tests results, and more. Linked claims and clinical data are more powerful than either dataset alone. The linked data can, for instance, provide the number of persons diagnosed with hypertension who have their blood pressure under control or the number of individuals with diabetes who are obese or who do not have their hemoglobin (Hb)A1c in control.

The Blueprint includes these and many more clinically-relevant measures in practice and community-level profiles. For many practices and communities, this is a rare source of whole population data, not segregated by payer or ACO affiliation. Feedback indicates that full-population data is more aligned with how providers think about their patients and clients, and how community leaders think about citizens – making the Blueprint profiles especially useful in guiding or informing their improvement projects.

The aggregation of clinical data from local practice electronic health records is a critical foundation of the Blueprint Learning Health System. This process allows the collection of clinical information from source systems without requiring any additional administrative burden on health care providers. The program relies on a well-functioning health information exchange that can accept data feeds from primary care practices, specialists, labs, and hospitals.

The Blueprint also routinely evaluates its own performance and reports on program impact and return-on-investment (ROI) through its annual reports to the Vermont Legislature and through peer-reviewed journal articles.

5 LOOKING AHEAD: THE BLUEPRINT IN 2018

Looking ahead to 2018, The Blueprint plans to devote attention to program improvement in several areas. Improvement in these areas will require the work of the Blueprint team and the support of state health reform leaders, legislators, and the Blueprint's partners at OneCare Vermont, the other provider networks, the Vermont Department of Health, local Blueprint administrative entities and other local partners working across health and human services.

Improving Access to Primary Care: The Blueprint evaluation shows declining primary care visits for both Patient-Centered Medical Home patients and comparison group practices. This is bad news for a system that aims to shift attention and resources to prevention. Why are Vermonters visiting their primary care providers less often than they used to? With more Vermonters insured and insurance making primary care visits inexpensive to patients, the problem is probably not out-of-pocket costs. It is more likely that access to care is the issue. The Patient Experience Survey conducted by the Blueprint shows generally positive results for a composite of questions about access to care, but still substantial room for improvement. Furthermore, this survey does not reach people who have no established primary care provider. Addressing this challenge will require the participation of many partners to improve the decline in primary care visits. Helping practices improve access and to conduct outreach to their patient population is work the Blueprint's Practice Facilitators can devote increased attention to in the year and years ahead. Their efforts will help, but they must also be accompanied by broader investigation into the causes of this trend and investment in solutions by all partners. For instance, the available workforce may be a limiting factor. Primary care workforce development is already a focus for many Blueprint partners and will require ongoing investments. Other possible drivers of this trend should be investigated.

Payment Reform: The Blueprint payments for Patient-Centered Medical Homes and Community Health Teams have been transformative for the system of care. However, they are too small to accomplish the fundamental changes needed to truly shift the primary care business model from one of volume to one of accountability for the health of a population. Continued payment reforms for primary care are needed. In addition, we need to support the continued development of provider networks that include specialists, community partners like Designated Agencies, and hospitals who can collectively manage health and begin to assume some accountability for the total cost of care. The Blueprint looks forward to helping realize the potential of the All-Payer ACO Model Agreement in which some spending can be shifted from "sick care" to prevention and investment in continuum services such as mental health and housing.

Learning Health Systems: As Vermont's health system shifts attention and resources to keeping people healthy through primary prevention and community-based interventions addressing the social determinants of health, its data collection, analytics and reporting must follow. One expansion focus for the Blueprint's data and analytics capabilities in the year ahead is capturing data about social determinants of health. For instance, the Women's Health Initiative is implementing new screenings in practices, screenings for psychosocial risk factors like substance use, mental health, partner violence, housing and food insecurity, and is working with participating practices, the practices' and the Blueprint's health IT specialists develop systems for documenting and measuring these screenings. The Blueprint is also working in communities, through its Community Collaboratives, to develop shared data dashboards which will benefit from concerted efforts to measure not only the care that happens within organizations, but also care and referrals across organizations. Recently, the Blueprint has worked with the state Department of Corrections to combine datasets, so that the impact of MAT on incarceration and recidivism may be investigated. These are all examples of how sharing data can create more powerful pictures of individual health and the health of populations, which can be used to fine tune local systems of care or design major health systems innovations. The Blueprint will continue to seek new opportunities for documenting and working with data on the social determinants of health in 2018, and will seek support from the state and from systems partners in this work.

One challenge in the Blueprint's data and analytics program has been the Supreme Court's Gobeille vs. Liberty Mutual Insurance Company decision. The Supreme Court determined that self-insured companies did not have to submit their health care claims data to the State of Vermont and its all-payer claims database (VCHURES). While some self-insured companies have continued to provide claims data (and the Blueprint would like to recognize BlueCross BlueShield of Vermont for encouraging its self-insured clients to continue to send claims data) many companies have chosen to stop. This means many Vermonters are now not represented in the state's all-payer claims database (VHCURES). This data is most powerful when it represents all Vermonters, and any loss of records reduces its powers. While the participation of self-insured companies is not currently mandatory, their voluntary participation must be encouraged.

All-Payer Participation: From its beginnings, the Blueprint has maintained that All-Payer Model participation is necessary to make health reforms meaningful at the practice level. Providers, practice staff, and communities may design improvements and interventions to serve people with particular conditions or needs, but are less inclined to segment populations and target interventions based on insurer or ACO affiliation. The Blueprint Patient-Centered Medical Homes and Community Health Teams are supported by all public and all major commercial insurers, and this decision has contributed to the model's success. Newer Blueprint interventions, including Hub and Spoke and the Women's Health Initiative are not currently all-payer. In 2018, the Blueprint will seek the participation of more payers to make these initiatives complete and sustainable.

Blueprint will maintain independence as a state-level neutral convener focusing on the whole population and service delivery supports to serve all Vermonters. We will work closely with our partners at OneCare Vermont to assist implementing the All-Payer ACO Model Agreement even as we support extension of aligned care models to the whole population, including those not attributed to an Accountable Care Organization. The program's analytics capabilities will be further developed to assist state evaluation of the impact of ACO arrangements on population health and outcomes. Blueprint's local leadership network will continue to staff the developing Community Collaboratives to build to integrated and accountable care.

6 BLUEPRINT OUTCOMES FOR 2017

6.1 PATIENT-CENTERED MEDICAL HOME INITIATIVE EVALUATION DESIGN, 2008-2016

The Blueprint program combines both Patient-Centered Medical Homes and Community Health Teams in an approach aimed at improving primary and preventative care for Vermonters while moderating growth in health care costs. Patient-Centered Medical Homes are active all over the country, and many Community Health Teams exist outside of Vermont, but it is uncommon to see the two combined in a planned model of care. The Centers for Medicare and Medicaid Services' (CMS Multi-Payer Advanced Primary Care (MAPCP) demonstration ran from 2011 until the end of 2016. Vermont participated along with programs in seven other states. Vermont's approach showed a substantially larger reduction in health care expenditures than any of the other demonstrations. Its unique feature was this planned combination and coordination of Patient-Centered Medical Homes and Community Health Teams. The CMS evaluation was an important indication of the power of the Blueprint approach, but such findings must be demonstrated repeatedly over time to warrant continued investment. The Blueprint conducts rigorous yearly evaluations of its own work, estimating its impact on health care utilization and costs, and investigating the impact of continued maturation of Patient-Centered Medical Homes.

The evaluation presented here uses the same methods as previous years' evaluations. The results of these earlier iterations can be found in previous Blueprint Annual Reports and published in peer-reviewed literature.[1]

6.2 METHODOLOGY: CONSTRUCTING TEST GROUPS AND COMPARISON GROUPS

The Blueprint Evaluation uses data from Vermont's all payer claims database, Vermont Health Care Uniform Reporting and Evaluation System (VHCURES), for calendar year 2008 through calendar year 2016. The evaluation compares results for people who received the plurality of their care at a Patient-Centered Medical Home (this is the test group) with results for people who received the plurality of their care at a non-Patient-Centered Medical Home (this is the comparison group).

People who receive care in Patient-Centered Medical Homes also have access to Community Health Team services, so while the evaluation calls the test group "PCMH patients," it should be kept in mind that they benefit from the larger Blueprint approach to coordinated primary and preventative care.

The Blueprint has grown to include 139 Patient-Centered Medical Homes over the nine years it has been in operation. The evaluation design accounts for the different dates when participating practices became recognized Patient-Centered Medical Homes by assigning a "program stage" to each practice. The programmatic stages are:

[1] Jones, Finison, McGraves-Lloyd, Tremblay, Mohlman, Tanzman, Hazard, Maier, and Samuelson (2016)

- **Pre-year**: the year prior to starting work with the program
- **Implementation year**: the year the practice started to prepare for NCQA scoring as a PCMH and received CHT staffing
- **NCQA Scoring Year**: the year the practice was independently scored against NCQA Standards
- **Post-Years 1 through 5**: the years the practice operated as a recognized PCMH

Non-Patient-Centered Medical Home primary care practices do not have comparable stages, so the evaluation randomly assigns patients attributed to non-PCMH practices to programmatic years. Comparison group patients are randomized to programmatic stage in a manner that mirrors the distribution of Patient-Centered Medical Home patients by programmatic stage and calendar year.[2]

6.3 Methodology: Risk-Adjustment

Having constructed the test and comparison groups, the evaluation uses a regression-based risk-adjustment procedure to control for observed differences in health status between members of the Patient-Centered Medical Home group and the comparison group. Risk-adjustments are made for the following factors:

- demographics (e.g. age and gender groups)
- health status (3M™ Clinical Risk Groups (CRG))
- select chronic conditions identified by the Blueprint program (i.e., asthma, attention deficit disorder, chronic obstructive pulmonary disorder, congestive heart failure, coronary heart disease, depression, diabetes, and hypertension)
- maternity
- Medicaid and Medicare coverage
- length of enrollment
- Medicare-specific adjustors including disability and end-stage renal disease (ESRD).

Adjusted expenditures and utilization rates were calculated for all individuals in the evaluation (in both test and comparison groups) for every year. These adjusted rates serve as the basis for the outcome measures discussed here.[3,4]

[2] For more information on the analytic methods, please see http://blueprintforhealth.vermont.gov/evaluation-methodology

[3] Risk adjustment is performed in a manner similar to that developed in Finison, Mohlman, Jones, Pinette, Jorgenson, Kinner, Tremblay, Gottlieb (2017). A more robust discussion of the risk adjustment procedure can be found at http://blueprintforhealth.vermont.gov/evaluation-methodology

[4] Expenditures are inflation adjusted to 2016 USD.

6.4 Methodology: Analysis Methods

To describe how Patient-Centered Medical Home participants differed from the comparison group, adjusted rates are shown graphically, and statistical tests are used to identify the mean difference in the adjusted outcome measures by programmatic year. These approaches are useful, but additional investigation is required to document the impact of Patient-Centered Medical Home maturation over time.

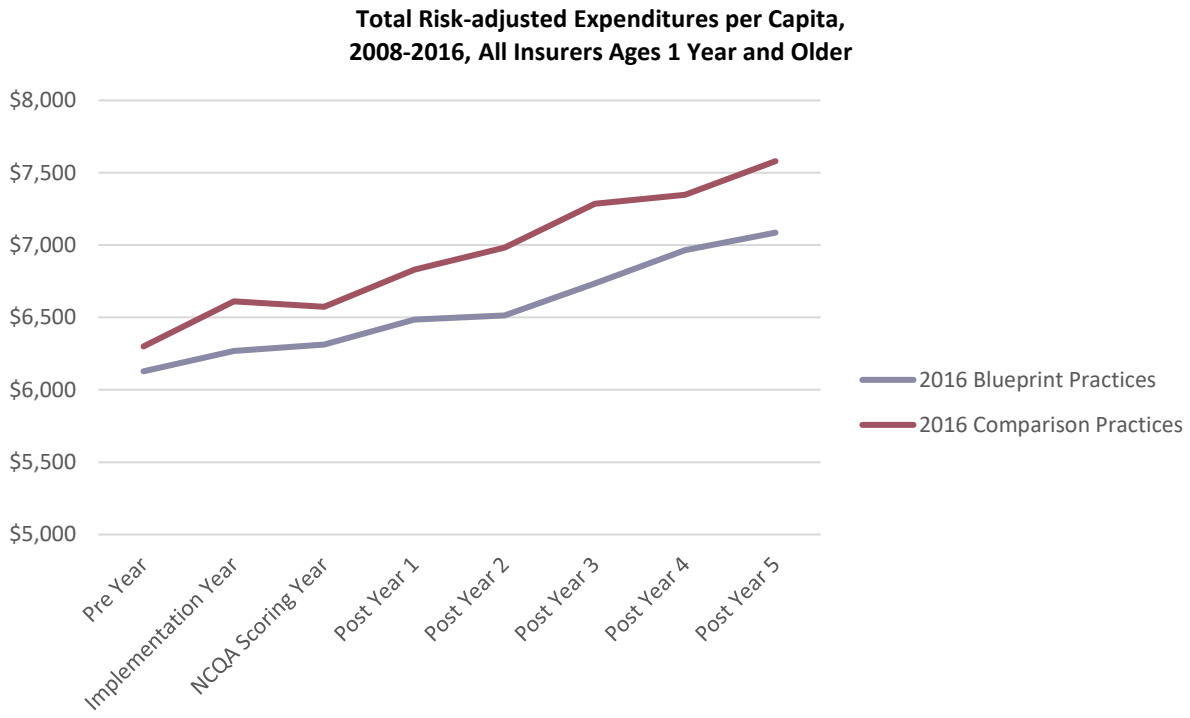
The evaluation uses a difference-in-difference model, a common statistical technique used in observational studies, to better understand the impact of Patient-Centered Medical Home maturation. Difference-in-difference uses a regression-based framework to estimate the averted expenditures and averted health care utilization associated with Blueprint participation in each programmatic year. The difference-in-difference model compares the change in an outcome from the pre-period and the post-period for the test group vs. the comparison group. It then calculates the probability that the observed change could be due to chance.

As discussed above, the Blueprint is an ongoing program in a dynamic environment. Individuals transition across practices, providers join and leave practices, Vermonters leave the state and new Vermonters arrive, new practices transform into Patient-Centered Medical Homes, and practices advance through the programmatic stages. This means that the mix of patients and practices in each programmatic year is changing in every iteration of the evaluation. Thus, while results from previous years are an important benchmark, it is almost assured that the findings here will differ slightly from those presented in prior periods.

6.5 Results: All Payer Expenditures

One of the most consistent findings of the Blueprint's Patient-Centered Medical Home evaluations has been lower average risk-adjusted expenditures for patients of Blueprint Patient-Centered Medical Homes relative to the comparison group. The total risk-adjusted expenditures include Medicare, Medicaid, and Commercial insurers. Figure 2 shows that total risk-adjusted expenditures were significantly and meaningfully lower for people attributed to a Blueprint Patient-Centered Medical Home. In post-year 5, individuals attributed to a Blueprint Patient-Centered Medical Home had mean risk-adjusted total expenditures of $7,086, which was $494 lower than the mean for individuals in the comparison group ($p<0.0001$). Difference-in-difference results indicate that the rate of growth in risk-adjusted total expenditures across the eight-year window was $322 lower for a typical patient attributed to a Blueprint Patient-Centered Medical Home ($p<0.0001$) than the typical patient in the comparison group.

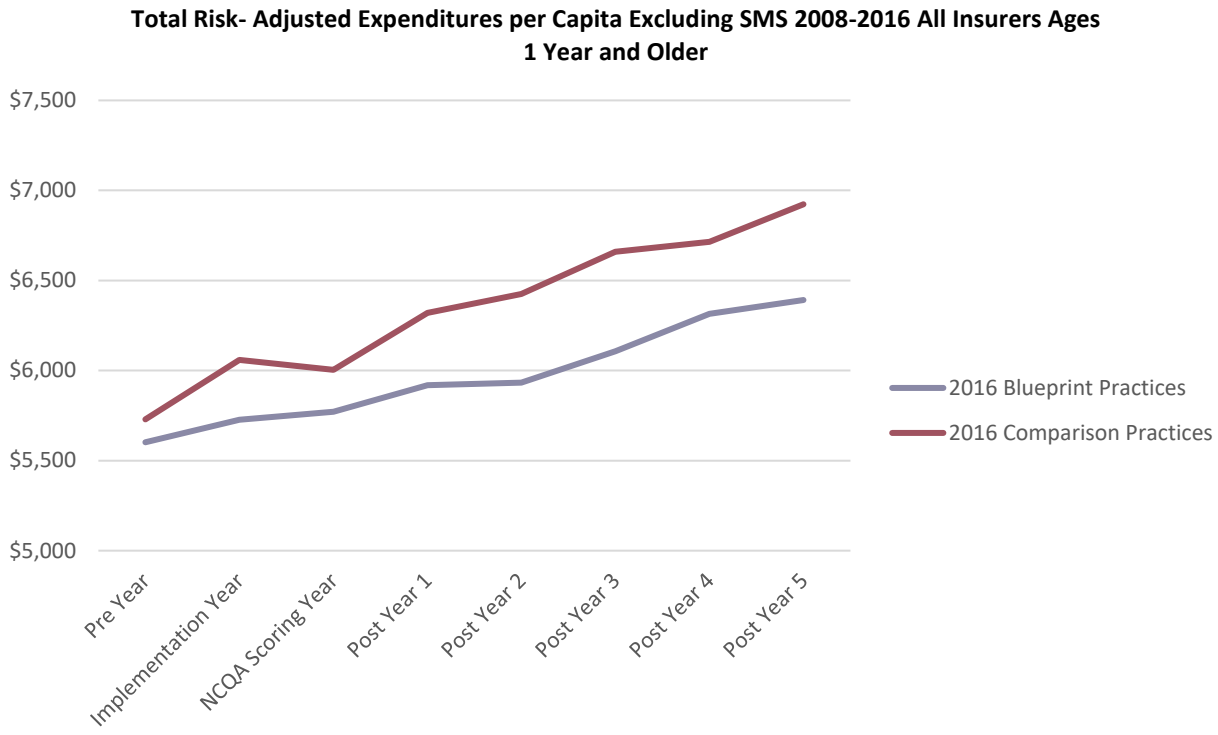
Figure 2: Comparing Total Risk-Adjusted Expenditures for Blueprint Patient Centered Medical Patients and Comparison Group



6.6 Results: Health Care Expenditures Only

To provide a more focused comparison of just health care expenditures (without non-medical support services) the Blueprint evaluates expenditures excluding Special Medicaid Services. Figure 3 shows total risk-adjusted expenditures, excluding Special Medicaid Services, by programmatic year. As with total risk-adjusted expenditures, patients attributed to a Blueprint Patient-Centered Medical Home had uniformly lower risk-adjusted total expenditures. In the pre-year, the typical Patient-Centered Medical Home patient had risk-adjusted total expenditures excluding Special Medicaid Services that were $127 lower ($P<0.0001$) than the typical individual in the comparison group. By post-year five, the typical Blueprint Patient-Centered Medical Home-attributed patient had total risk-adjusted expenditures that were $532 lower than the typical patient in the comparison group ($p<0.0001$). The Difference-in-difference estimate finds that PCMH-attributed patients save an average of $404 in averted, risk-adjusted total expenditures excluding Special Medicaid Services by post-year five. This even larger savings reinforces the idea that the Blueprint reduces health care spending, and that it does so in part by connecting people with other resources that support wellness.

Figure 3: Comparing Total Risk-Adjusted Expenditures Excluding Special Medicaid Services



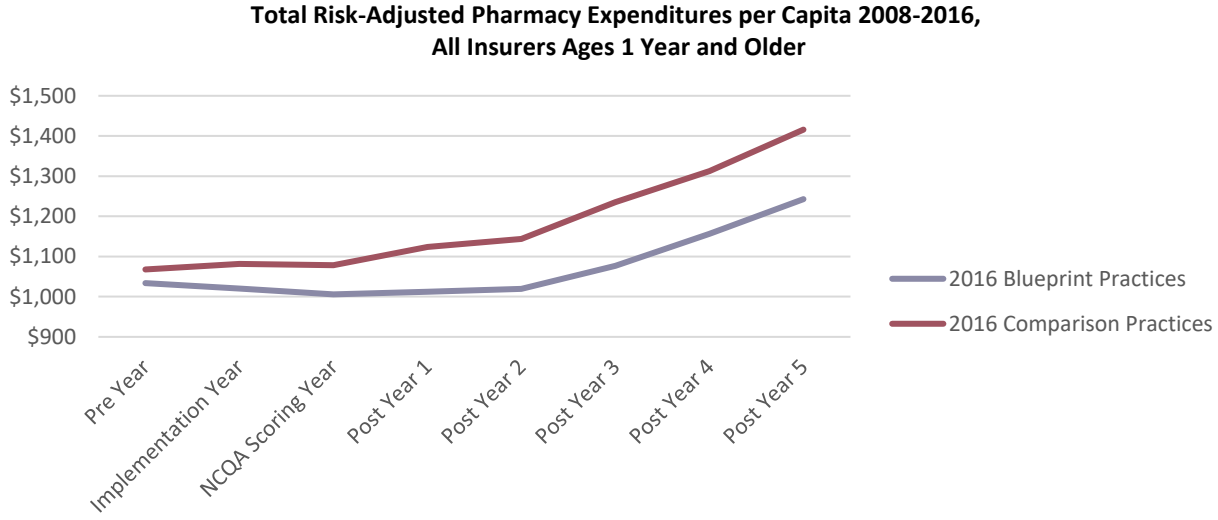
6.7 Results: Drivers of Slower Expenditure Growth

One important driver of the slower growth in expenditures observed for Blueprint test group patients was materially lower risk-adjusted pharmacy expenditures, as shown in Figure 4. At every programmatic year, the average risk-adjusted pharmacy spend for Blueprint Patient-Centered Medical Home patients was significantly lower than the average risk-adjusted pharmacy expenditure for those in the comparison group. By post-year five, the typical Blueprint Patient-Centered Medical Home patient has an annual risk-adjusted pharmacy expenditure $173 lower than the typical individual in the comparison group. Based on point estimates in post-year five, 35% of the difference in total risk-adjusted expenditures can be explained by differences in pharmacy expenditures.

Not only was there a level difference in adjusted pharmacy expenditures, but the Difference-in-Difference estimate indicates that the growth in pharmacy expenditures was significantly lower for Blueprint Patient-Centered Medical Home patients ($p<0.0001$). This finding of significant averted costs

through reduced pharmacy expenditure has been found in previous iterations of this analysis and has been found in the academic literature.[5]

Figure 4: Comparison of Total Risk-Adjusted Pharmacy Expenditures



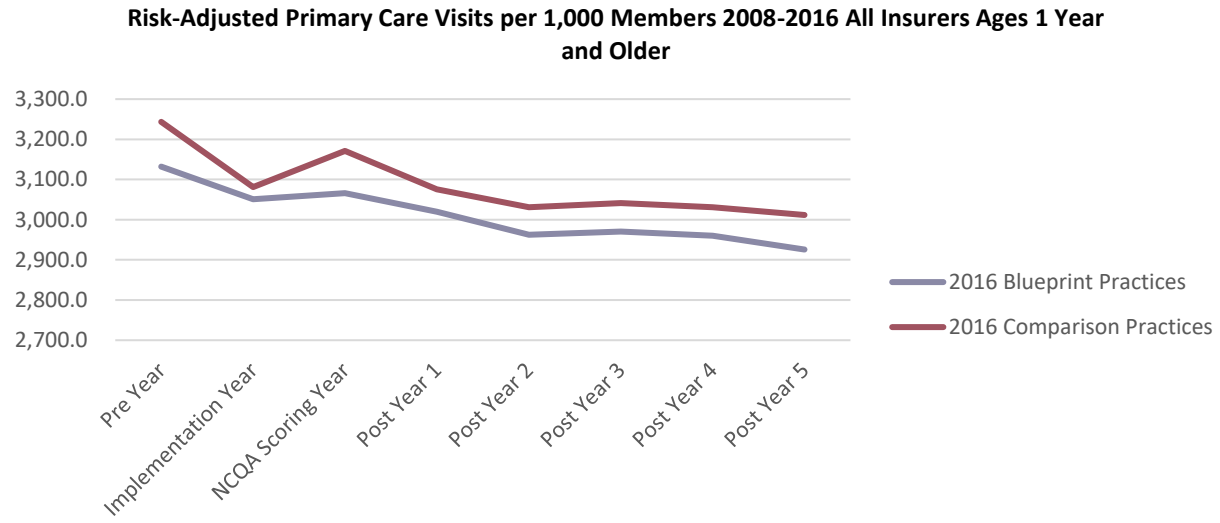
Although not shown graphically, Blueprint PCMH participation was also associated with moderately slower growth in risk-adjusted outpatient emergency department expenditures. Difference-in-Difference estimates indicate that by post year 5, receiving care in a Blueprint Patient-Centered Medical Home was associated with a $14 reduction in the growth of risk-adjusted outpatient emergency department expenditures ($p<0.0001$). Difference-in-difference estimates find no statistically significant averted risk-adjusted inpatient expenditures associated with receiving primary care in a Blueprint Patient-Centered Medical Home.

There is clear evidence of level differences in risk-adjusted expenditures between people who receive their primary care in a Blueprint Patient-Centered Medical Home versus the comparison group. There is also clear evidence, based on Difference-in-Difference estimates, that receiving primary care at a Blueprint Patient-Centered Medical Home is associated with slower growth in risk-adjusted expenditures over time. However, the evidence for an effect of the Patient-Centered Medical Home initiative on utilization is considerably weaker. Difference-in-difference estimates indicate no significant change in the growth/reduction of risk-adjusted inpatient discharges, risk-adjusted outpatient emergency department visits, risk-adjusted medical specialist visits, or risk-adjusted surgical specialist visits.

[5] For example, Cuellar, Helmchen, Gimm, Want, Burla, Kells, Kicinger, and Nichols (2016)

Figure 5 shows the one utilization measure considered in this evaluation for which there is marginal statistical evidence of an effect of the Patient-Centered Medical Home initiative. That measure is primary care visits, and the trend is towards fewer visits per capita. In every year from the pre-intervention year through the fifth year after NCQA scoring, patients attributed to a Blueprint Patient-Centered Medical Home have significantly lower risk-adjusted rates of primary care visits (p-values<0.0001 for every programmatic year). Difference-in-Difference estimates indicate marginal statistical evidence (p=0.063) that the risk-adjusted rate of primary care visits declined less for Patient-Centered Medical Home-attributed patients than for the comparison group between the pre-intervention year and post-year 5. In the context of the focus on primary and preventative care, a general decline in primary care visits was unanticipated.

Figure 5: Comparison of Risk-Adjusted Primary Care Visits per Capita



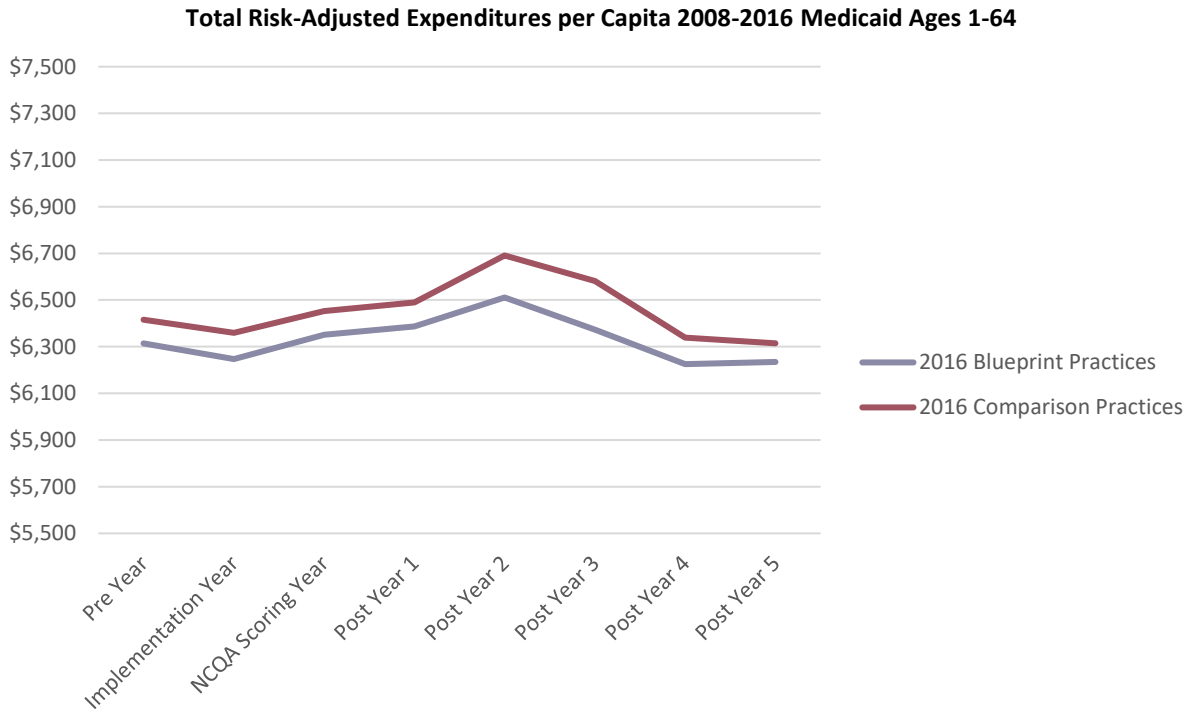
6.8 Medicaid Expenditures

Bending the cost curve for all patients of Blueprint Patient-Centered Medical Homes, regardless of payer, is the key finding of this evaluation. However, there is one specific population of patients that are likely of special interest to state-level policymakers – those whose healthcare is financed by the state-federal partnership Medicaid program. The following analysis subsets the Medicaid population and examines the impact of the Blueprint Patient-Centered Medical Home initiative on the healthcare utilization and expenditure for this specific payor.[6]

[6] Importantly, in this portion of the analysis, both the Blueprint PCMH and comparison groups are composed only of Medicaid beneficiaries, age 1 to 64. For more information, see http://blueprintforhealth.vermont.gov/evaluation-methodology

Shown in Figure 6, when considering only the Medicaid population, results indicate little difference in total per capita risk-adjusted expenditures between those attributed to a Blueprint Patient-Centered Medical Home and those in the comparison group. Only in two programmatic years (post year 2 and post year 3) is there a statistically significant difference in mean risk-adjusted total expenditures between the two groups (p-value=0.0074 and 0.0012, respectively). Not surprisingly, Difference-in-Difference analysis finds no significant difference between Blueprint Patient-Centered Medical Home patients and the comparison group in the rate of change in risk-adjusted total per capita expenditures.

Figure 6: Total Risk-Adjusted Medicaid Expenditures per Capita



However, when Special Medicaid Services are removed, receiving care in a Blueprint Patient-Centered Medical Home is associated with significant reductions in total per capita expenditures for Medicaid beneficiaries. Figure 7 shows that Medicaid beneficiaries attributed to a Blueprint Patient-Centered Medical Home had significantly lower total risk-adjusted per capita expenditures, excluding Special Medical Services, in every programmatic year. Not only was there clear evidence of a level reduction, but Difference-in-Difference estimates indicate that total risk-adjusted expenditures between the pre-year and post-year five, excluding Special Medicaid Services, grew more slowly for those attributed to a Blueprint Patient-Centered Medical Home than for those in the comparison group by $134 (p=0.014).

Also of note is the magnitude of the risk-adjusted per capita Special Medicaid Services expenditures. In post-year five, the typical Medicaid patient attributed to a Blueprint Patient-Centered Medical Home would incur $2,244 in risk-adjusted Special Medicaid Services expenditures. For context, this is over a third (36%) of expected total risk-adjusted expenditures for Medicaid Blueprint Patient-Centered Medical Home patients.

As Vermont considers how to shift investments from high-acuity, high-cost health care to wellness, prevention, and chronic care management, it is worth examining the example of the Vermont Medicaid program and its provision of Special Medicaid Services.

6.9 Spending on Special Medicaid Services

Services funded exclusively by Medicaid – called Special Medicaid Services (SMS) – include transportation, home and community-based services, case management, dental, residential treatment, day treatment, mental health facilities, and school-based services. Special Medicaid Services may be thought of as services that help Medicaid recipients meet their social, economic, and rehabilitation needs and potentially avoid more costly or institutional care. For instance, transportation to primary care visits helps patients get the care they need to manage their chronic conditions, which may prevent costly hospitalization. Likewise, rehabilitation services can help prevent hospital re-admission following an inpatient stay. While Special Medicaid Services contribute to the overall cost of care, the higher spending in the Blueprint group for SMS may indicate that Patient-Centered Medical Homes and Community Health Teams are more successful in connecting Medicaid beneficiaries to community-based supports than primary care as usual. Higher spending on Special Medicaid Services may also delay or prevent larger expenditures for higher acuity care.

One consistent finding of this evaluation over time is a higher level of risk-adjusted Special Medicaid expenditures for those Medicaid patients attributed to a Blueprint Patient-Centered Medical Home. Consistent with this, in every programmatic year after the pre-year, Medicaid patients attributed to a Blueprint Patient-Centered Medical Home had significantly greater risk-adjusted Special Medicaid Services expenditures (p-values<=0.031 for level differences in all years). Trends in adjusted Special Medicaid Services expenditures across programmatic years are shown in Figure 8.

Not only are risk-adjusted Special Medicaid Services expenditures for Medicaid patients in Blueprint Patient-Centered Medical Home higher in most programmatic years, but these expenditures for Blueprint Patient-Centered Medical Home-attributed patients declined at a slower rate across the programmatic period than those in the comparison year. Difference-in-Difference estimates indicate that risk-adjusted Special Medicaid Services expenditures declined more slowly across the programmatic window by $173 (p=0.014).

Figure 7: Risk-Adjusted Medicaid Expenditures per Capita excluding Special Medicaid Services

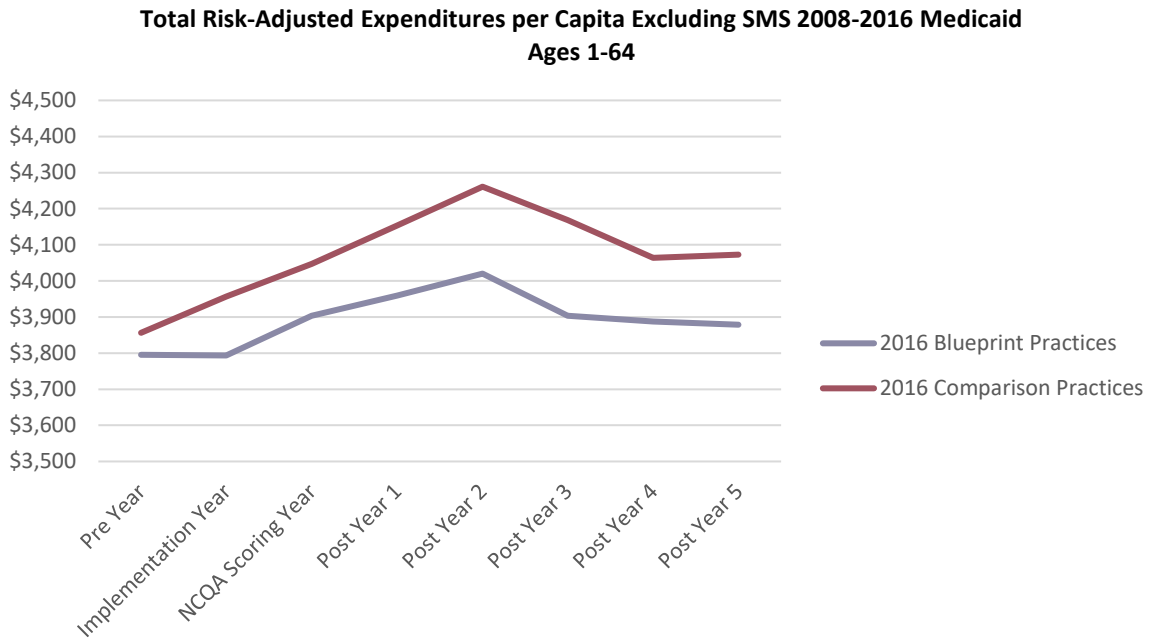
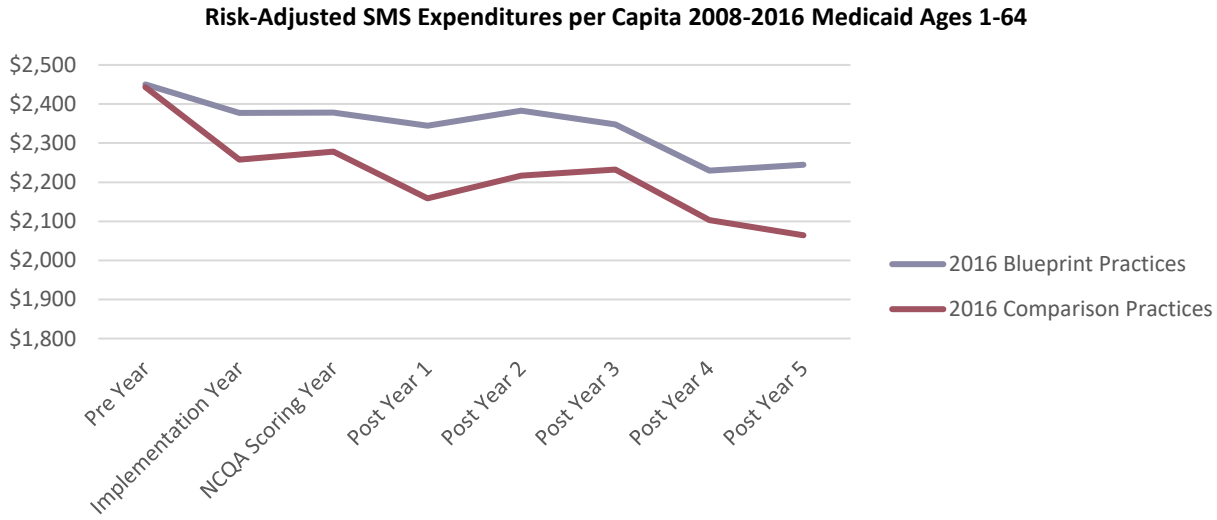


Figure 8: Risk-Adjusted Special Medicaid Services Expenditures per Capita



Higher rates of risk-adjusted Special Medicaid Services expenditures for Medicaid patients receiving care in Blueprint Patient-Centered Medical Homes have been found in this analysis since 2014. The reason for this difference is beyond the scope of this quantitative evaluation, but the Blueprint team and its partners have considered possible explanations for the phenomena. The strongest hypothesis is that Patient-Centered Medical Homes, working with Community Health Teams (which do not bill for their own services), may be better than non-Patient-Centered Medical Homes at engaging community partners to meet the needs of patients, including needs that have traditionally been considered beyond the purview of the health care system. Some of these community partners bill for Special Medicaid Services, resulting in an increase in Special Medicaid Services expenditures for patients of Patient-Centered Medical Homes. Insofar as it can be posited that a dollar spent on Special Medicaid Services averts more than a dollar in traditional healthcare spending, increased Special Medicaid Services expenditures may be socially beneficial and may ultimately reduce costs.

6.10 All-Payer Return on Investment

Blueprint funding is calculated on a calendar year basis, so it is also helpful to look at expenditures by calendar year. Comparison of estimated expenditures by calendar year is the basis of the Blueprint's return on investment calculation.

The estimated return on investment (i.e., the gain-cost ratio) is the ratio of the savings arising from the Patient-Centered Medical Home initiative in calendar year 2016, divided by the cost incurred to generate those savings. *Table 1* shows the calculation of the savings in medical expenditures in Calendar Year 2016, which is reached by first identifying the average number of patients attributed to Patient-Centered Medical Homes by each program stage (column 2) for the calendar year 2016. The relative difference in spending represents the difference-in-difference for each program stage with upper and lower confidence limits (LCL and UCL) based on 95% confidence interval (columns 3, 4, and 5). The patient count was multiplied by the estimated reduction in medical expenditures at each stage to find the total relative reduction in total health care expenditures (with iterations including and excluding Special Medicaid Services) at each stage in 2016 (columns 6, 7, and 8). These totals are then summed to estimate the total reduction in expenditures for 2016 across all PCMH stages (last row).[7]

The Blueprint estimates that in calendar year 2016, the work of the Patient-Centered Medical Homes and Community Health Teams was able to avert between $50.8 million and $102.1 million in total risk-adjusted medical expenditures.

[7] Please see http://blueprintforhealth.vermont.gov/evaluation-methodology for additional details on the calculation of ROI.

Table 1: Savings in Total Annual Risk-Adjusted Expenditures, Including Special Medicaid Services, Calendar Year 2016

Program Stage	PCMH-Attributed Patients	Relative DID in Total Annual Expenditures per Person			Subtotals for Relative Differences in Annual Expenditures		
		Estimate	LCL	UCL	Estimate	LCL	UCL
Pre Year							
Implementation Year							
NCQA Scoring Year	5,982	($90)	($175)	($5)	($537,513.14)	($1,044,429.72)	($30,598.96)
Post Year 1	7,554	($173)	($263)	($83)	($1,309,194.53)	($1,990,029.47)	($628,357.33)
Post Year 2	4,770	($298)	($390)	($207)	($1,422,351.99)	($1,859,317.38)	($985,386.60)
Post Year 3	36,097	($378)	($472)	($283)	($13,632,848.41)	($17,034,436.66)	($10,231,224.05)
Post year 4	50,254	($209)	($306)	($111)	($10,485,443.03)	($15,370,535.51)	($5,600,350.55)
Post Year 5	152,454	($322)	($425)	($219)	($49,065,266.00)	($64,790,616.98)	($33,340,067.48)
Total					**($76,452,617)**	**($102,089,366)**	**($50,815,985)**

Table 2 repeats this exercise, but shows the estimated saving attributable to Patient-Centered Medical Home activities **excluding** SMS expenditures. When considering the averted health care spending for all payers, excluding Special Medicaid Services, results indicate a calendar year 2016 saving of between $71.3 million and $119.1 million.

Table 2: Savings in Total Risk-Adjusted Expenditures Excluding Special Medicaid Services, Calendar Year 2016

Program Stage	PCMH-Attributed Patients	Relative DID in Total Annual Expenditures Excluding SMS per Person			Subtotals for Relative Differences in Annual Expenditures Excluding SMS		
		Estimate	LCL	UCL	Estimate	LCL	UCL
Pre Year							
Implementation Year							
NCQA Scoring Year	5,982	($107)	($186)	($28)	($641,234.74)	($1,112,044.59)	($170,417.72)
Post Year 1	7,554	($275)	($359)	($190)	($2,074,562.59)	($2,710,407.87)	($1,438,724.86)
Post Year 2	4,770	($365)	($450)	($280)	($1,741,464.99)	($2,148,818.22)	($1,334,116.53)
Post Year 3	36,097	($426)	($514)	($339)	($15,391,109.36)	($18,562,036.19)	($12,220,182.53)
Post year 4	50,254	($272)	($363)	($181)	($13,677,495.10)	($18,234,985.01)	($9,120,005.18)
Post Year 5	152,454	($404)	($501)	($308)	($61,654,633.06)	($76,305,486.48)	($47,003,779.63)
Total					**($95,180,500)**	**($119,073,778)**	**($71,287,226)**

Table 3 shows the estimated return on the investments in Patient-Centered Medical Homes, Community Health Teams, and the Blueprint program, in calendar year 2016 across all payers (column 2) compared to the relative decrease in total risk-adjusted expenditures (column 3) and total risk-adjusted expenditures excluding SMS (column 6) carried from Table 1 and Table 2. The investments considered in the calculation of the ROI include the total Patient-Centered Medical Home per-member per-month payments, total Community Health Team payments by Medicaid, Medicare, and commercial insurers for calendar year 2016, and the Blueprint program budget for calendar year 2016. The Blueprint program budget includes staff salaries, community grants for Project Managers and Project Facilitators, contracts, and other estimated operating expenses.

Overall, the estimated ROI indicates that every dollar invested in Patient-Centered Medical Homes, Community Health Teams, and the Blueprint program including its local network, yielded a savings of between two and four dollars in averted health care expenditures. The estimated return is even greater when SMS expenditures are excluded, with a $1.00 of investment yielding between $2.80 and $4.70 in averted non-SMS health care expenditures.

Table 3: Estimated Return on Investment for All Payers, Including and Excluding Special Medicaid Services, Calendar Year 2016

All-Payer	Investment	Reduction in Total Expenditures	Confidence Interval (95%) for Reduction in Total Expenditures		Reduction in Total Expenditures Excluding SMS	Confidence Interval (95%) for Reduction in Total Expenditures Excluding SMS	
			LCL	UCL		LCL	UCL
Reduction in expenditures		($76,452,617)	($102,089,366)	($50,815,985)	($95,180,500)	($119,073,778)	($71,287,226)
PCMH Payments	$10,573,172						
Core CHT Payments	$10,005,119						
Total Payments	$20,578,291						
Blueprint Program Budget	$4,683,628						
Total investment	$25,261,919						
Return on Investment		**3.0**	4.0	2.0	**3.8**	4.7	2.8

6.11 MEDICAID ROI

To calculate the return on investment for the State of Vermont's Medicaid population in 2016, the same methodology for all payers, as described above, was used. Note that the Medicaid ROI calculation includes investments in Patient-Centered Medical Homes and Community Health Teams, but not the Blueprint program budget because that budget is an investment designed to serve patients with all types of insurance.

Table 4: Savings in Total Annual Risk-Adjusted Expenditures for Medicaid Beneficiaries, Calendar Year 2016

Program Stage	PCMH-Attributed Patients	Relative DID in Total Annual Expenditures per Medicaid Beneficiary			Subtotals for Relative Differences in Total Annual Expenditures		
		Estimate	LCL	UCL	Estimate	LCL	UCL
Pre Year							
Implementation Year							
NCQA Scoring Year	1,550	$0.05	($165.41)	$165.51	$79.80	($256,311.38)	$256,470.68
Post Year 1	3,187	($0.13)	($170.04)	$169.79	($401.55)	($541,910.25)	$541,107.47
Post Year 2	1,055	($77.53)	($252.80)	$97.74	($81,769.94)	($266,624.79)	$103,084.71
Post Year 3	11,934	($106.14)	($277.81)	$65.54	($1,266,695.47)	($3,315,513.15)	$782,126.99
Post year 4	19,833	($11.35)	($184.11)	$161.40	($225,196.00)	($3,651,313.54)	$3,200,923.52
Post Year 5	51,831	$22.19	($160.09)	$204.47	$1,150,096.65	($8,297,727.45)	$10,597,925.94
Total					**($423,887)**	**($16,329,401)**	**$15,481,639**

As might be expected, given the similarity between Blueprint and comparison Medicaid patients across programmatic years in total per capita expenditures as well as the nonsignificant DID finding, results indicate substantial uncertainty in the direction or magnitude of the effect of the Blueprint initiative on total risk-adjusted expenditures for the Medicaid population. The inability to statistically isolate any aggregate reduction in total expenditures for the Medicaid population is consistent with prior iterations of this analysis and yields an estimated ROI that does not concretely indicate net cost or net savings.

Table 5: Savings in Total Annual Risk-Adjusted Expenditures Excluding Special Medicaid Services, Calendar Year 2016

Program Stage	PCMH-Attributed Patients	Relative DID in Total Annual Expenditures Excluding SMS per Medicaid Beneficiary			Subtotals for Relative Differences in Annual Expenditures Excluding SMS		
		Estimate	LCL	UCL	Estimate	LCL	UCL
Pre Year							
Implementation Year							
NCQA Scoring Year	1,550	($83)	($177)	$11	($128,468.24)	($274,092.81)	$17,156.17
Post Year 1	3,187	($133)	($231)	($36)	($425,406.02)	($735,362.67)	($115,451.28)
Post Year 2	1,055	($180)	($281)	($79)	($189,984.04)	($296,191.41)	($83,775.50)
Post Year 3	11,934	($204)	($303)	($106)	($2,439,574.46)	($3,617,561.39)	($1,261,587.54)
Post year 4	19,833	($116)	($216)	($15)	($2,292,438.49)	($4,291,194.81)	($293,692.09)
Post Year 5	51,831	($134)	($240)	($27)	($6,927,635.52)	($12,462,580.94)	($1,392,700.47)
Total					**($12,403,507)**	**($21,676,984)**	**($3,130,051)**

However, also consistent with prior iterations of this evaluation, considerable savings could be isolated once Special Medicaid Services expenditures are excluded from consideration. As shown in Table 5, for the Medicaid population, Blueprint activities were associated with a reduction in total risk-adjusted expenditures, excluding SMS, of between $3.1 million and $21.7 million in calendar year 2016. In terms of ROI, Table 6 shows that, in calendar year 2016, every $1.00 of investment effectively reduced non-Special Medicaid Services Medicaid spending by between $0.41 and $2.87. Table 6 also shows ROI calculations that include the Blueprint program budget. The Blueprint serves Vermonters regardless of payer, but because its program budget comes from the State of Vermont Department of Vermont Health Access (i.e. Vermont Medicaid) and not from other payers, it is useful to determine what the State of Vermont as a fiscal entity recoups on its investment in the Blueprint. In this calculation, each $1.00 of investment effectively reduced State of Vermont non-Special Medicaid Services health care expenditures by between $0.26 and $1.77. A similar calculation that does include Special Medicaid Services shows no statistically significant ROI.

Table 6: Estimated Return on Investment for the Medicaid Population, Calendar Year 2016

Medicaid	Investment	Reduction in Total Expenditures per Medicaid Beneficiary	Confidence Interval (95%) for Reduction in Total Expenditures		Reduction in Total Expenditures Excluding SMS per Medicaid Beneficiary	Confidence Interval (95%) for Reduction in Total Expenditures Excluding SMS	
			Lower Limit	Upper Limit		Lower Limit	Upper Limit
Reduction in expenditures		($423,887)	($16,329,401)	$15,481,639	($12,403,507)	($21,676,984)	($3,130,051)
PCMH Payments	$3,876,179						
Core CHT Payments	$3,685,950						
Total Payments	$7,562,129						
Medicaid-Specific ROI		**0.06**	**2.16**	**-2.05**	**1.64**	**2.87**	**0.41**
Blueprint Program Budget	$4,683,628						
Total investment	$12,245,757						
State ROI		**0.03**	1.33	-1.26	**1.01**	1.77	0.26

6.12 Patient Experience: The Consumer Assessment of Health Care Providers and Systems (CAHPS) Survey

Each year, the Blueprint, in collaboration with the Green Mountain Care Board, invites primary care practices to participate in the Consumer Assessment of Healthcare Providers and Systems (CAHPS) PCMH survey. This survey evaluates patients' experiences in their primary care practices and with their

primary care provider. The topics covered by the CAHPS survey include access to care, communication, coordination of care, information, self-management care, and specialists. The survey results reported here compare Hospital Service Area results. Practice-level results are shared directly with the practices and are used for quality improvement. The survey is fielded from October – January, and the results here are from 2016 (and very early 2017).

Vermonters score their primary care practices and providers favorably, as they have in previous years. The greatest opportunity for improvement continues to be in supporting self-management. For the Blueprint, the specific opportunity is to increase focus on supporting providers in consistently asking patients about personal health goals and barriers to self-care.

Figure 9: Community Scores for CAHPS Survey Access to Care Questions Composite

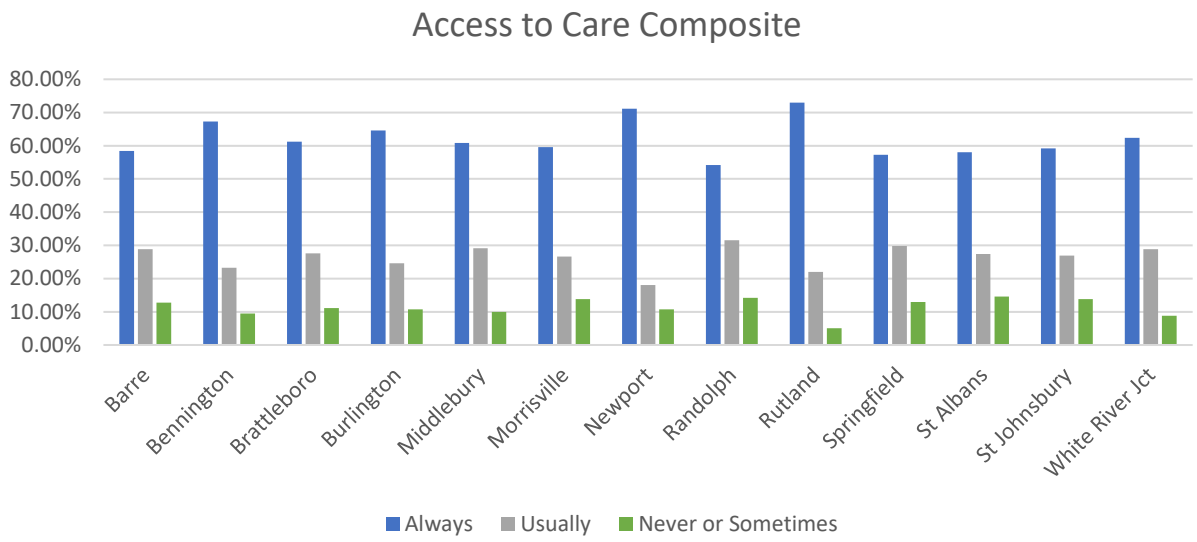


Table 7: CAHPS Survey Access to Care Questions

Access to Care Questions
- In the last 12 months, when you phoned this provider's office after regular office hours, how often did you get an answer to your medical question as soon as you needed?
- In the last 12 months, when you phoned this provider's office to get an appointment for a check-up or routine care with this provider, how often did you get an appointment as soon as you needed?
- In the last 12 months, when you phoned this provider's office to get an appointment for care you needed right away, how often did you get an appointment as soon as you needed?
- Wait time includes time spent in the waiting room and exam room. In the last 12 months, how often did you see this provider within 15 minutes of your appointment time.
- In the last 12 months, when you phoned this provider's office during regular office hours, how often did you get an answer to your medical question that same day?

Figure 10: Community Scores for CAHPS Survey Communication Questions Composite

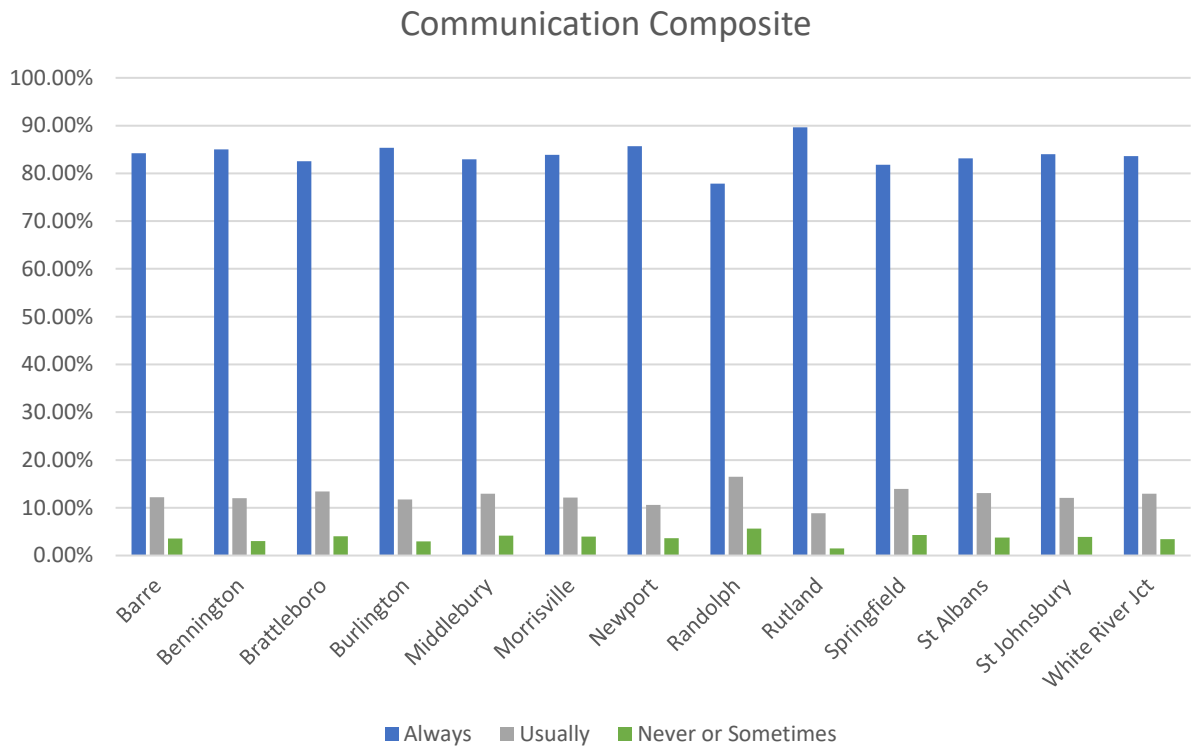


Table 8: CAHPS Survey Communication Questions

Communication Questions
- In the last 12 months, how often did this provider give you easy to understand information about these health questions or concerns? - In the last 12 months, how often did this provider show respect for what you had to say?
- In the last 12 months, how often did this provider explain things in a way that was easy to understand?
- In the last 12 months, how often did this provider seem to know the important information about your medical history?
- In the last 12 months, how often did this provider listen carefully to you?
- In the last 12 months, how often did this provider spend enough time with you?

Figure 11: Community Scores for CAHPS Survey Coordination of Care Questions Composite

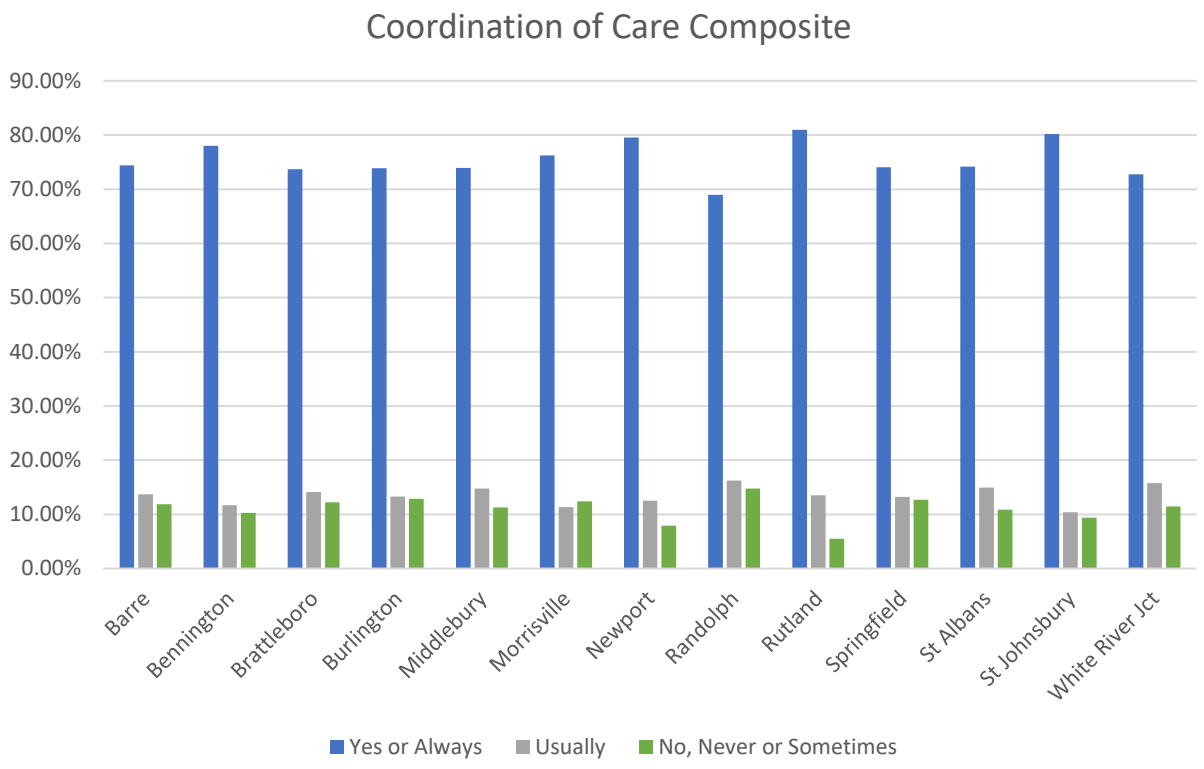


Table 9: CAHPS Survey Coordination of Care Questions

Coordination of Care Questions
- In the last 12 months, when this provider ordered a blood test, x-ray or other test for you, how often did someone from this provider's office follow up to give you those results?
- In the last 12 months, how often did the provider named in Question 1 seem informed and up-to-date about the care you got from specialists?
- In the last 12 months, did you and anyone in this provider's office talk at each visit about all the prescription medicines you were taking?

Figure 12: Community Scores for CAHPS Survey Information Questions Composite

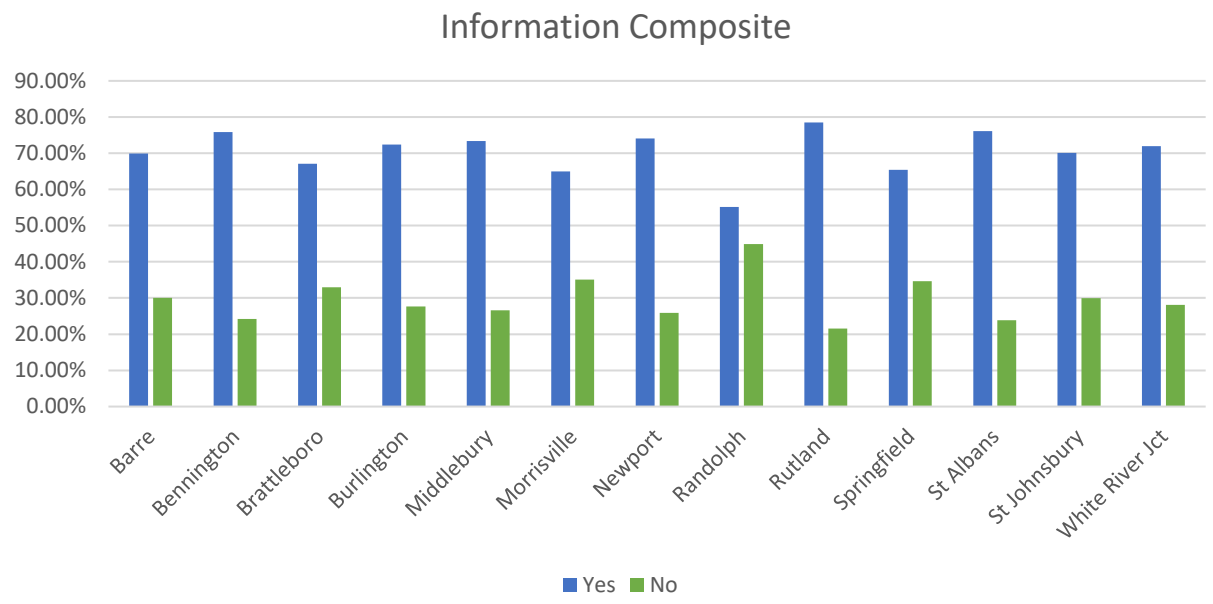


Table 10: CAHPS Survey Information Questions

Information Questions
- Did this provider's office give you information about what to do if you needed care during evenings, weekends, or holidays?
- Some offices remind patients between visits about tests, treatment or appointments. In the last 12 months, did you get any reminders from this provider's office between visits?

Figure 13: Community Scores for CAHPS Survey Office Staff Questions Composite

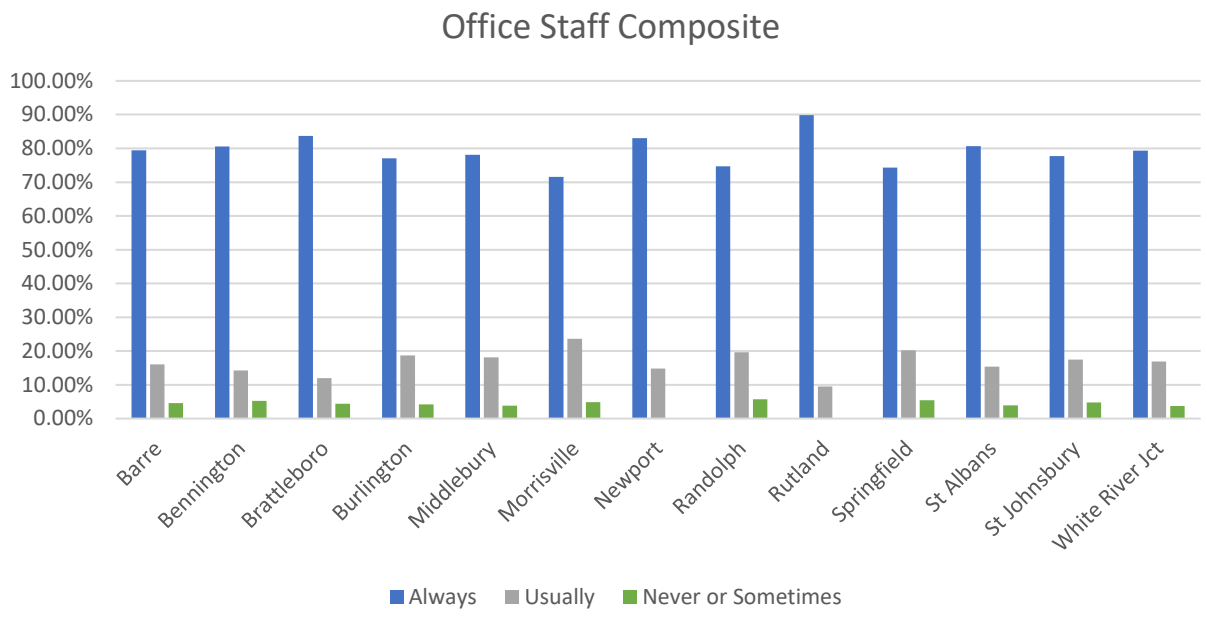


Table 11: CAHPS Survey Office Staff Questions

Office Staff Questions
- In the last 12 months, how often did clerks and receptionists at this provider's office treat you with courtesy and respect?
- In the last 12 months, how often were the clerks and receptionists at this provider's office as helpful as you thought they should be?

Figure 14: Community Scores for CAHPS Survey Self-Management Questions Composite

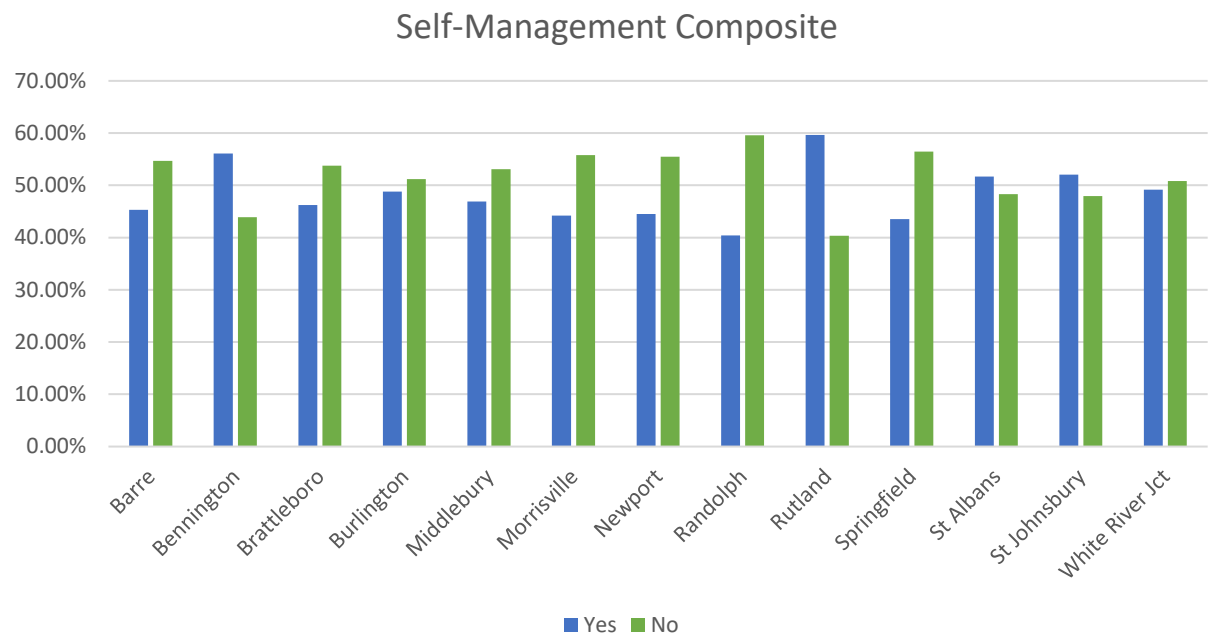


Table 12: CAHPS Survey Self-Management Questions

Self-Management Questions
- In the last 12 months, did anyone in this provider's office talk with you about specific goals for your health?
- In the last 12 months, did anyone in this provider's office ask you if there are things that make it hard for you to take care of your health?

Figure 15: Community Scores for CAHPS Survey Specialist Questions Composite

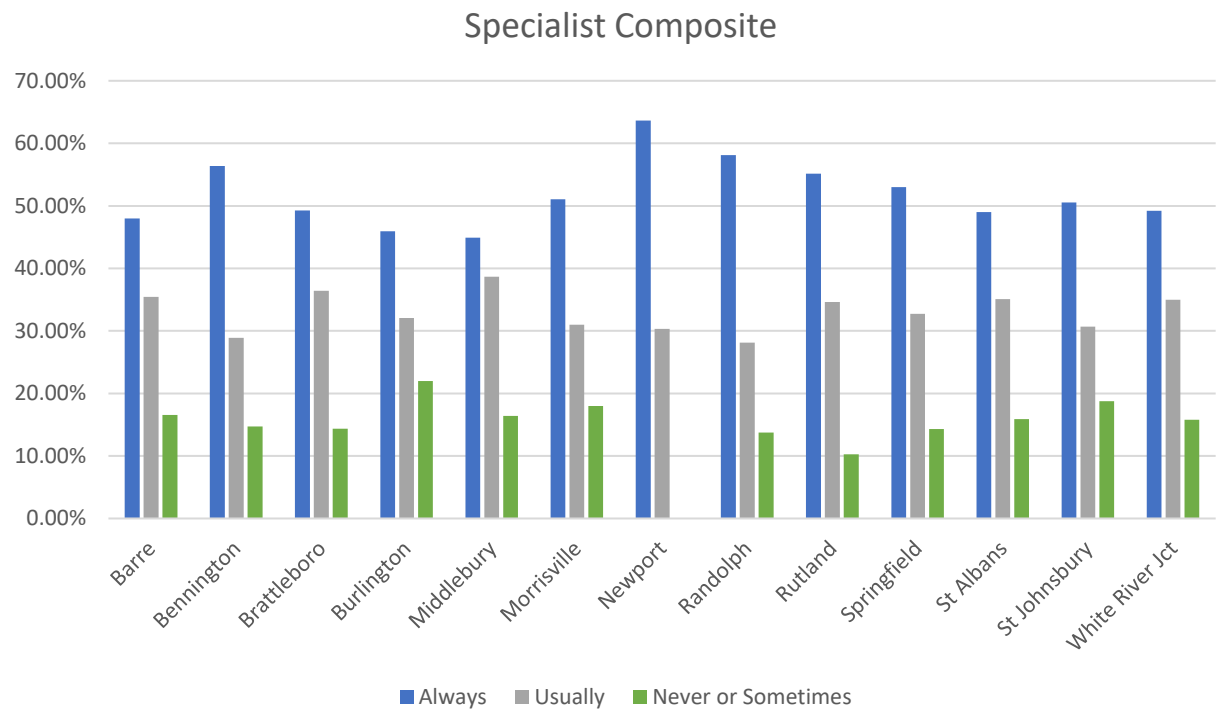


Table 13: CAHPS Survey Specialist Questions

Specialist Questions
- In the last 12 months, how often was it easy to get appointments with specialists?
- In the last 12 months, how often did the specialist you saw most seem to know the important information about your medical history?

7 PROGRAM HIGHLIGHTS FOR 2017

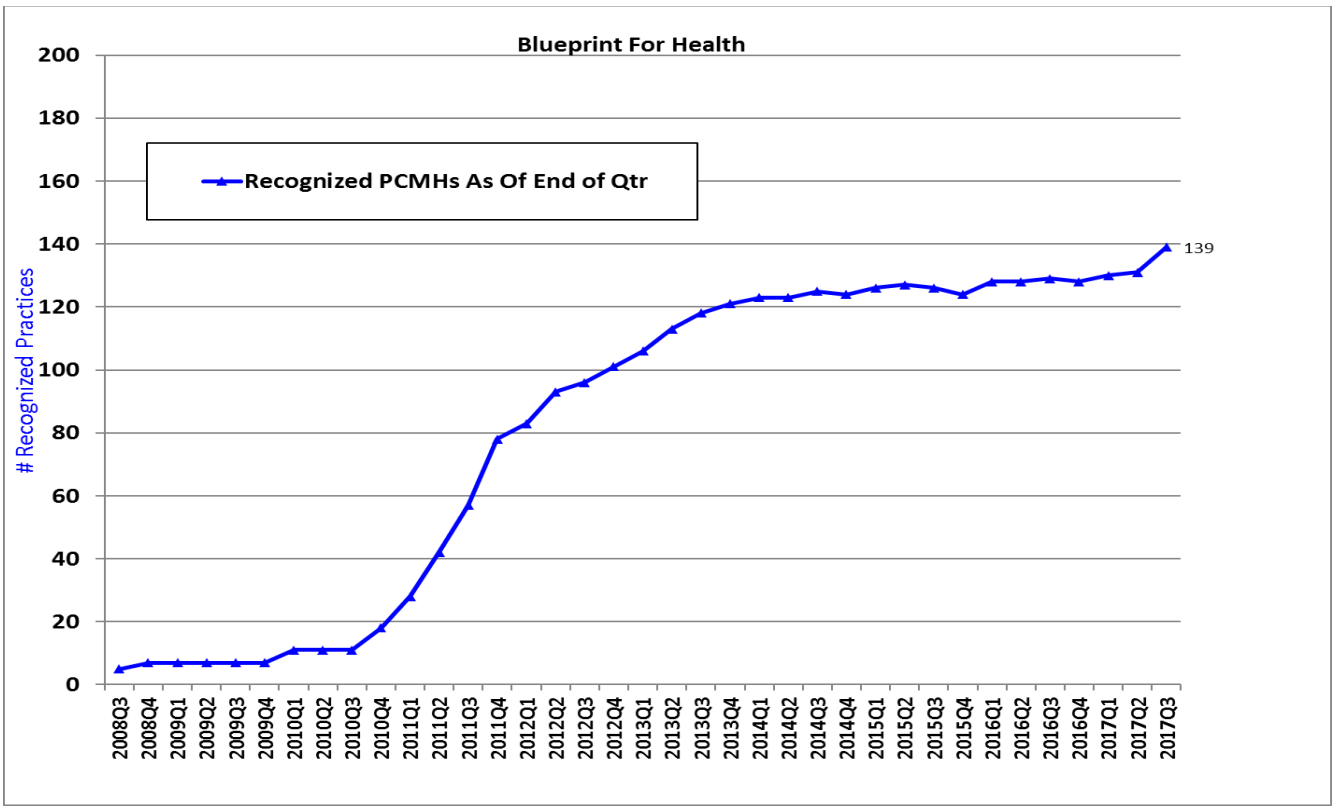
7.1 PATIENT-CENTERED MEDICAL HOMES

The Blueprint's Patient-Centered Medical Homes continued to provide evidence-based, patient-centered, cost effective care in 2017. At the same time, the Patient-Centered Medical Homes built new connections with the social and economic services that help their patients care for themselves and their families.

The Blueprint had previously reported that it was approaching a saturation point, where the program had recruited most of the available primary care practices. The team was surprised by new influx of practices in 2017, representing many of the remaining primary care practices with more than one provider that are known to the Blueprint. The net gain in recognized Patient-Centered Medical Homes in Vermont was seven practices in 2017.

The Blueprint credits sustained practice participation (and the interest of new practices) on several factors, most importantly the Legislature's allocation of increased practice per-patient per-month funding beginning in 2015. Clinicians and practice staff also appreciate that the Blueprint engages them in program design, including piloting new recognition standards.

Figure 16: Blueprint Practice Participation



Achieving recognition as a Patient-Centered Medical Home has always required significant effort from practices. Beginning in 2015, the Blueprint partnered with the National Committee on Quality Assurance (NCQA) to advise on redesign of a new recognition process, including piloting and providing feedback on early versions of that process. Everyone involved aimed for a process that preserved the rigor of earlier recognition standards while eliminating as much administrative burden as possible.

Patient-Centered Medical Homes were previously required to repeat the NCQA recognition process every three years. This process provided little incentive for continued attention on quality improvement activities, and a sometimes-stressful reengagement at the beginning of each new recognition cycle. Advising on process redesign, Blueprint Leadership, Practice Facilitators, and Clinicians encouraged NCQA to develop a less burdensome and more continuously engaging process.

The new method of NCQA recognition rolled out on October 1, 2017. The new process drops the three-year recognition cycle in favor of annual virtual audit on performance and quality improvement. Practices no long prepare extensive paper documentation and instead connect with an NCQA

representative virtually through screen sharing, to show them how their practice works. Additionally, Patient-Centered Medical Homes can renew their recognition at an accelerated pace, attesting to some practices, reviewing others, or progressing directly to annual reporting. Practices who have requalified using the new standards appreciate the changes.

Each Blueprint Patient-Centered Medical Home is free to choose its own improvement priorities, tailoring its activities to the needs of its patient population. Most practices also choose to engage with state and ACO-sponsored quality improvement opportunities, including the 2017 learning collaboratives on hypertension management, women's health, opioid prescribing, and Spoke practice management. Additionally, most practices now engage with their local Community Collaborative, co-designing local population health improvement initiatives.

7.2 COMMUNITY HEALTH TEAMS

As Community Collaboratives continue to mature in each Blueprint Health Service Area, the work of Community Health Teams adapts to meet the priorities and projects identified by these groups. Each Community Collaborative identifies priority populations including populations with high health risks and high health care resource utilization. Based on the needs of the identified populations, the Community Collaborative then defines priorities for quality improvement using data from Blueprint HSA Profiles and other sources.

The quality improvement projects often align with ACO priorities and the ACO core measure set, such as projects to reduce emergency department utilization or all-cause 30-day hospital readmissions. Community Collaboratives and Community Health Teams also have discretion to work on locally meaningful initiatives.

Once quality improvement projects are identified, work groups form to undertake a quality improvement framework to identify issues and their root causes, plan interventions, identify evaluation and data collection strategies, and modify their practice based on the effectiveness of tried interventions. Community Health Team members participate in these work groups and are often tasked with implementing the interventions in their day-to-day work.

In each of the 14 Blueprint HSAs in the state, a Community Health Team Leader supervises the day-to-day work of Community Health Team staff. CHT Leaders participate in monthly meetings of all ACO and Blueprint field team staff (including Project Managers, Practice Facilitators, CHT Leaders, and Clinical Quality Improvement Consultants).

CHT Leaders join the Blueprint's monthly All Field Team meetings, for updates on health care reform, information about new opportunities like the Women's Health Initiative and the latest learning collaboratives, plus sharing best practices with peers from other Vermont Communities.

7.3 Women's Health Initiative

The Women's Health Initiative launched January 1, 2017 to Women's Health provider practices, including Obstetrics, Gynecology, Midwifery, and Family Planning providers. The Blueprint was supported by the Department of Vermont Health Access to develop this initiative, and worked with the Vermont Department of Health and a broad group of content experts and community stakeholders to design interventions aimed at helping women be well, avoid unintended pregnancies, and build thriving families.

The Women's Health Initiative now includes 19 Women's Health practices. At each participating practice, clinicians, and practice staff design practice workflows that include enhanced screening with brief treatment and referral to more intensive services for depression, intimate partner violence, substance abuse, food insecurity, and housing stability (using evidence-based tools developed by content experts), comprehensive contraceptive counseling, and same-day access to long acting reversible contraception (LARC) for women who choose that method. To provide brief intervention and follow-up, each participating Women's Health Initiative practice is joined by a mental health clinician. The minimum staffing level is 0.5 full time equivalent (FTE), and staffing is scaled at 1 FTE per 1200 patients.

Three payments support Women's Health providers participating in the initiative:

- A one-time per member payment to assist practices in launching Women's Health Initiative strategies including designing new workflows, providing evidence-based comprehensive contraceptive counseling, stocking LARC, and offering same-day insertion to patients who choose LARC
- A recurring per member per month payment to practices
- A recurring payment to Community Health Teams (via the area administrative entities) for Women's Health Initiative staff

Details about payment amounts and calculation of attributed members can be found in the Blueprint Implementation Manual on the Blueprint website in the Implementation Materials section.

Each Health Service Area is building a workgroup that includes participating Women's Health practices, primary care practices, and community organizations that serve youth and women at risk of unintended pregnancy. Together, they develop referral pathways and commitments to providing community clients with quick access to necessary Women's Health services.

Early program success encouraged the Women's Health Initiative Steering Committee and the Blueprint Executive Committee to approve expansion of the program to Patient-Centered Medical Homes beginning July 1, 2017. In the first quarter of this expansion, participating Patient-Centered Medical Homes were eligible for the one-time per-member payment only. Practices qualify for this payment by attesting to:

- implementing enhanced screening, comprehensive contraceptive counseling, and same-day insertion for those women who choose LARC as their preferred birth control method;
- increasing affordable access to LARC and other forms of contraception; and
- developing referral protocols for at least 3 community-based organizations to see patients within one week of being referred for family planning services.

Beginning October 1, 2017, the Blueprint further expanded inclusion of Patient-Centered Medical Homes in the Women's Health Initiative, making them eligible for the monthly payment in addition to the one-time payment. Practices qualify for this per member per month payment by attesting to:

- implementing enhanced screening with brief treatment and referral to more intensive services for depression, intimate partner violence, substance abuse, food insecurity, and housing stability
- incorporating staff and services of the local Community Health Team into the practice.

Figure 17 below shows the growth in participating practices in the Women's Health Initiative in 2017.

Figure 17: Women's Health Initiative Practice Participation

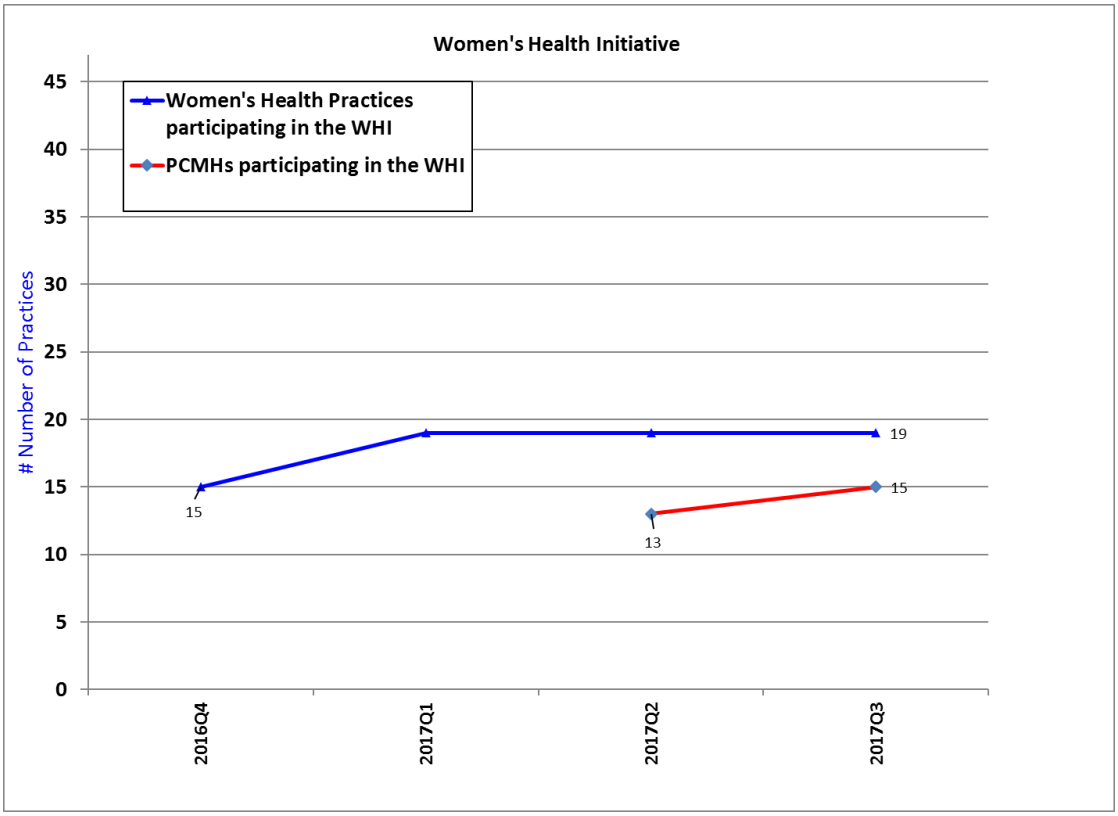
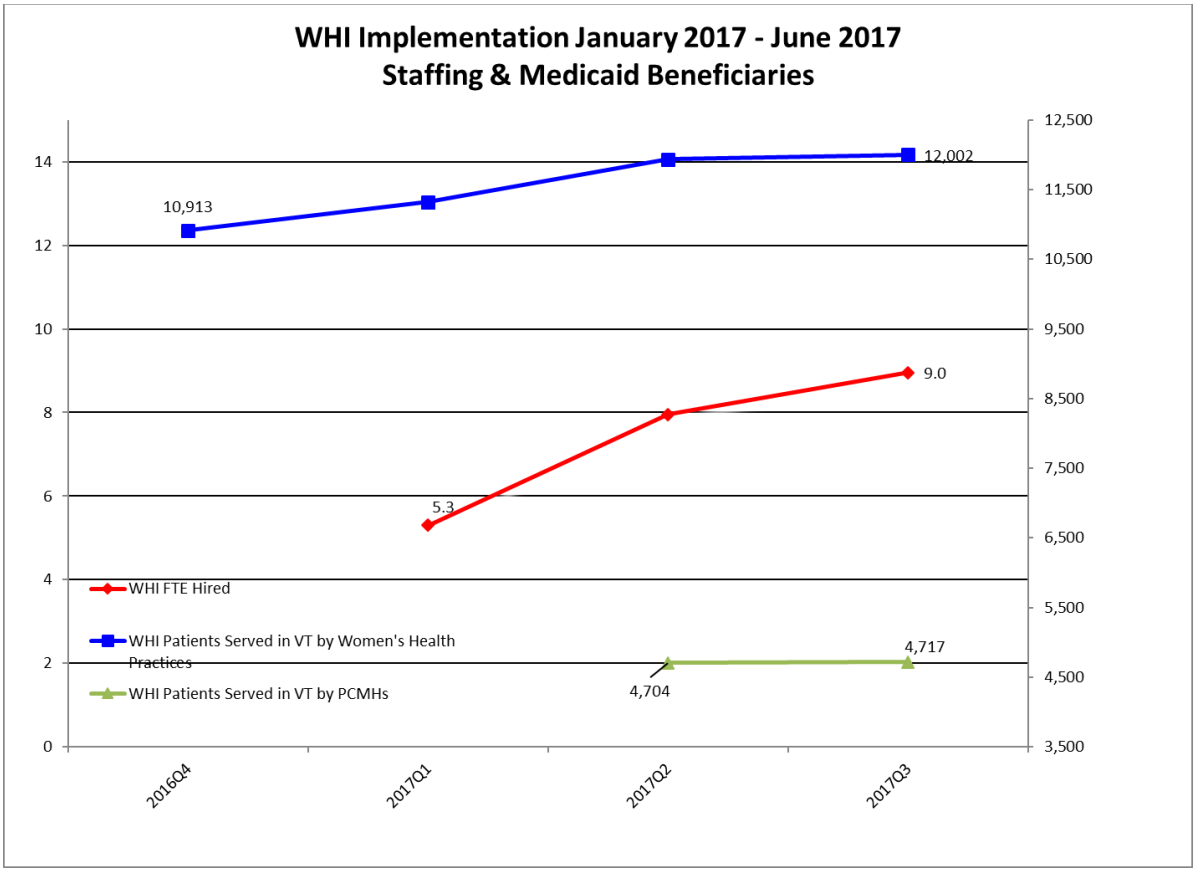


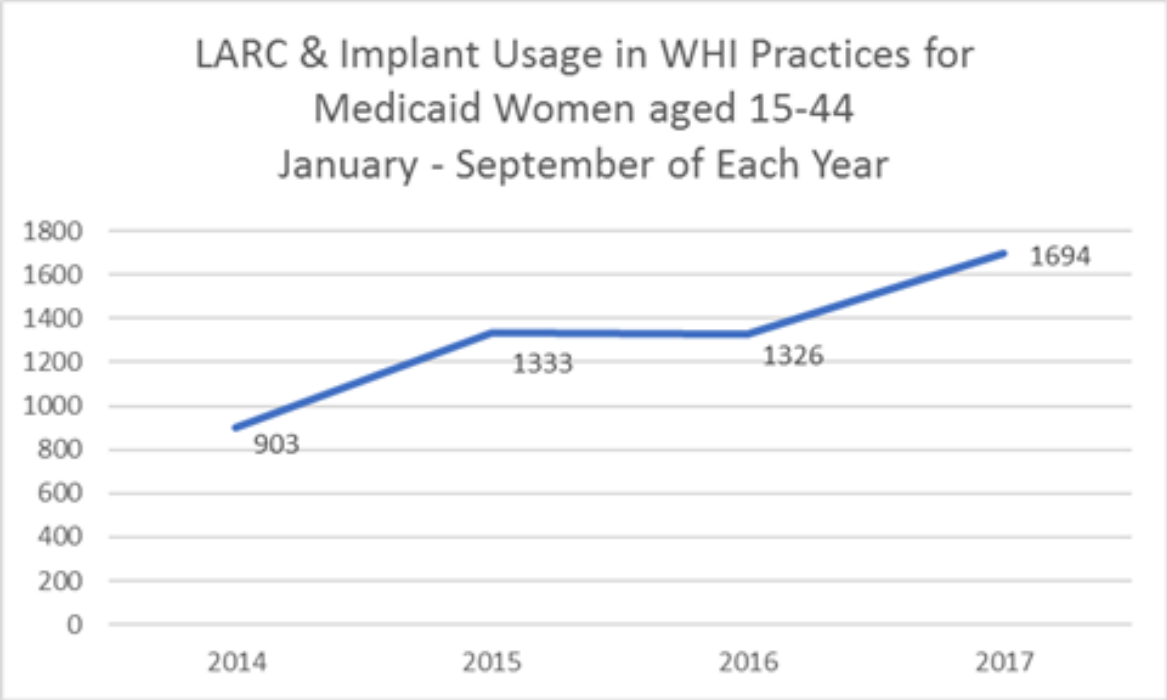
Figure 18: Women's Health Initiative Beneficiaries and Staffing



The Blueprint is currently working with its analytics contractor, Onpoint Health Data, to develop data profiles like the Blueprint Practice Profiles, Blueprint Community Health Profiles, and Hub & Spoke Profiles, with data specific to the Women's Health Initiative. These profiles will help the community workgroups and participating practices identify quality improvement priorities.

Early data analysis by the Blueprint team shows an increase in use of LARC and contraceptive implants by women seen in Women's Health Initiative Practices. Figure 19 below shows the number of LARC and implants provided by Women's Health Initiative Practices to Medicaid beneficiaries in January-September of each measurement year. The chart shows growth in use of these most effective forms of contraception from 2016 – 2017.

Figure 19: LARC and Contraceptive Implants Provided to Medicaid Beneficiaries in Women's Health Initiative Practices from January-September of Each Measurement Year



In the year ahead, the Blueprint will continue engaging new practices who wish to join the Women's Health Initiative. The Blueprint will also continue demonstrating the initiative's value and return on investment by modeling program costs and sharing program outcomes. The Women's Health Initiative launched with the financial support of Medicaid while continuously engaging commercial insurers in design, planning, and guidance. The Blueprint hopes to expand the financial support from commercial payers in the future.

7.4 Support and Services at Home

Support and Services at Home (SASH) was originally a component of Medicare's MAPCP demonstration program, funded by the Center for Medicare and Medicaid Innovation (CMMI) and awarded to the Blueprint in 2011. SASH funding is now included under the All-Payer ACO Model agreement between the State of Vermont and the Centers for Medicare and Medicaid Services (CMS).

Administered statewide through Cathedral Square and six Designated Regional Housing Organizations (DRHOs), the SASH model is a caring partnership of non-profit housing, community-based health, and social services agencies and hospitals collaborating to support participants' efforts to remain healthy and safe at home. SASH participants are typically elder Vermonters, but also include younger disabled adults.

By design the program serves all Medicare beneficiaries as needed, so participants may live either in subsidized housing or in residences in the community at large. Each panel of 100 SASH participants is served by one full-time housing-based SASH Care Coordinator and one quarter-time Wellness Nurse. Staffing is provided by the non-profit affordable housing organizations and primary partners, including Home Health Agencies, Area Agencies on Aging, and Community Mental Health Organizations.

Each SASH team meets regularly with other SASH teams in the region, as well as with the Community Health Team, representatives of local Home Health Agencies, Area Agencies on Aging, and mental health providers. A Memorandum of Understanding between all partner organizations formalizes the roles and responsibilities of the team members. This SASH partnership connects the health and long-term care systems for Medicare beneficiaries statewide. Together, these systems facilitate streamlined access to the medical and non-medical services necessary for this vulnerable population to remain living safely at home.

SASH teams focus their efforts around three areas of intervention proven most effective in reducing unnecessary Medicare expenditures:

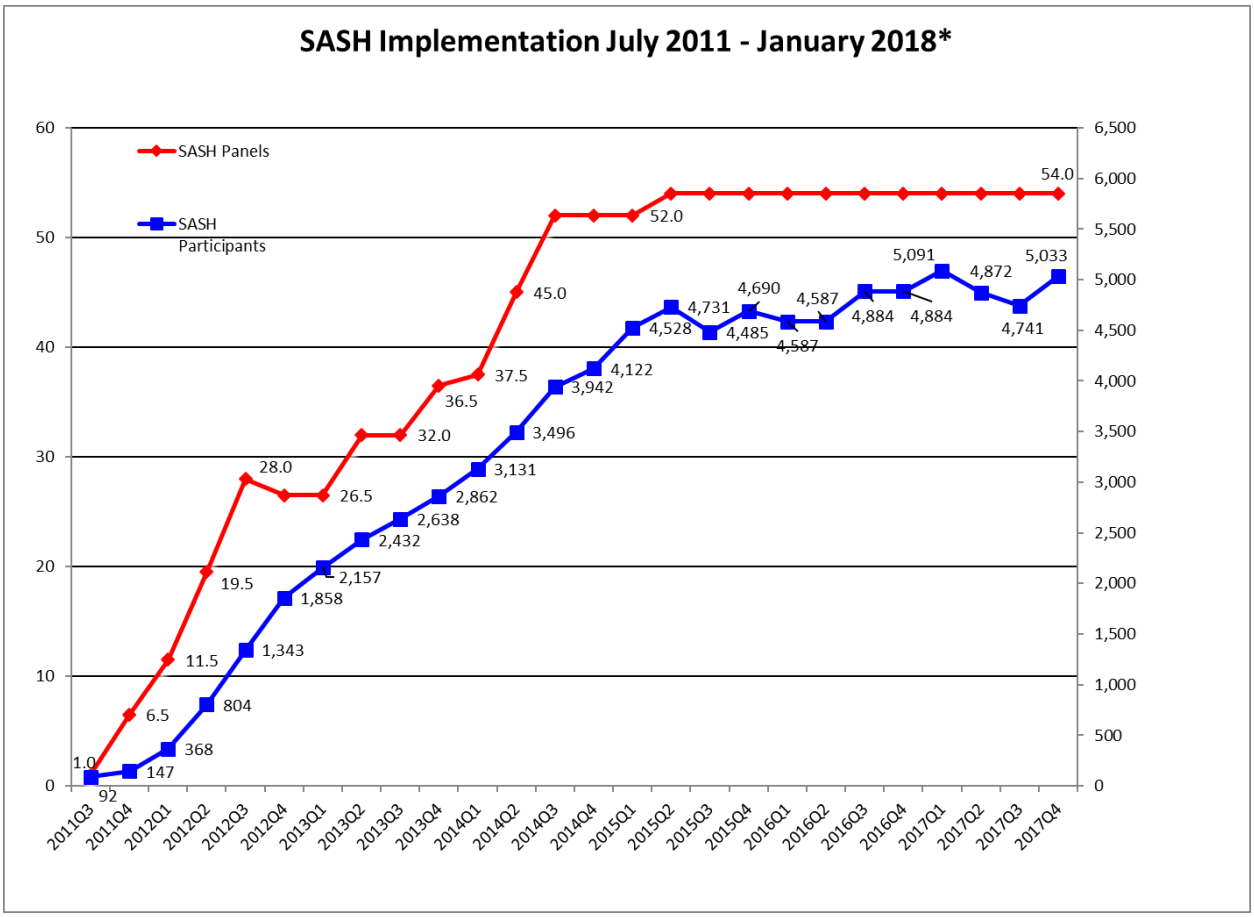
1. transition support after a hospital or rehabilitation facility stay
2. self-management education and coaching for chronic conditions and health maintenance
3. care coordination

Evidence-based practices provided by the core SASH team (SASH Care Coordinator and Wellness Nurse) also include a comprehensive health and wellness assessment, creation of an individualized care plan, on-site, one-on-one nurse coaching and care coordination, and group health and wellness programs.

7.4.1 SASH Outcomes

With 54 teams in place, the total number of people served by SASH was 5,033 as of December 31, 2017. (Last year's Annual Report reported that SASH had grown to include 5,396 participants at the end of 2016. This number was inflated due to challenges with the interim data management system that was in place in 2016. The corrected number of SASH participants at the end of 2016 is 4,884). See Figure 20 for SASH growth from January 2011 through the end of 2017.

Figure 20: SASH Program Growth



*On September 1, 2015 the monthly participant count methodology was changed to reflect active participants only. Active participants are identified as those who are active in a panel on the last day of the month. This is a change from previous monthly participant counts which reflected cumulative participants to date, inclusive of deceased individuals.

Additionally, Cathedral Square, as the statewide administrator for SASH, tracks outcome measures for all SASH participants in four key performance areas: Advance Directives, Immunizations, Falls, and Hypertension. These outcomes have shown positive improvements over time and in comparison, to national trends.

- **Advance Directives**: The percentage of all SASH participants with a documented end-of-life plan in place increased from 59% to 66% between 2016 and 2017, which is well above the national rate of 26% of adults with advance directives.

- **Immunizations**: The percentage of SASH participants with shingles vaccines increased from 34% to 39% between 2016 and 2017, which is above the national rate of 31% for persons age 60 and older. Pneumococcal vaccine rates increased from 63% to 69% for SASH participants between 2016 and 2017. Flu shot rates for SASH participants increased from 61% to 67% between 2016 and 2017, higher than the current rate of 59% for Vermonters age 65 and older.
- **Falls**: The rate of falls for SASH participants was 26% in 2017, which is below the national rate of 32% for the elderly.
- **Controlled Hypertension**: SASH participants with diagnosed hypertension and documented blood pressure readings classified as "in control" by the National Quality Forum (NQF) standard increased from 77% in 2016 to 87% in 2017. This is well above the recently released national data from the Centers for Disease Control (CDC) that shows the rate of controlled hypertension among adults age 60 and over at just 49%.

SASH added a new performance measure in 2017 – identification of social isolation and a plan for intervention. The program uses the Lubben Social Network Score-6 (LSNS-6), a validated screen, and were able to assess 41% of SASH participants in 2017. Of participants assessed with LSNS-6, 28% scored "at-risk" and were provided staff follow-up to gauge participant interest in setting a goal to improve social connectedness. All SASH panels provide a robust community health and wellness program which offers activities, workshops and opportunities to combat loneliness and social isolation.

7.4.2 Evaluation Finds Savings for Early SASH Cohort

The SASH independent evaluator, RTI, released its 3rd evaluation report on SASH publicly in October 2017. The new report reviews the first four years of SASH (2011-2015). Researchers examined Medicare claims for SASH participants and interviewed staff, participants, and stakeholders. They found that members of SASH groups established before April 2012, which primarily served residents living at congregate, affordable-housing communities, had fewer hospital admissions and saved an estimated $1,227 per person per year in Medicare expenditures. While these specific results did not translate into groups created after April 2012, which included higher rates of residents living in surrounding communities rather than only those in affordable-housing properties where SASH staff are based, all participants reported less difficulty managing their medications, higher overall functional status, and greater awareness of the relationship between nutrition and health.

7.4.3 SASH in Action: Managing Hypertension at Home

The following is a true story of how one SASH participant was helped to successfully manage her hypertension at home:

In the summer of 2016, Theresa (not her real name) a 79-year old SASH participant living in a public housing authority apartment was at home recovering from a recent fall. The SASH Wellness Nurse visited Theresa as part of the routine transitions care provided in SASH. While visiting with Theresa the nurse conducted medication reconciliation to root out possible causes for the fall and found that

Theresa's blood pressure medication was missing and that she was confused about how to take her medications. When checked during the wellness nurse visit, Theresa's blood pressure was 172/90- well above what is considered "controlled."

Hypertension (high blood pressure), often referred to as the "silent killer" is the most common chronic condition reported by Vermonters participating in the SASH program. SASH, in partnership with the Vermont Department of Health, and funded by the Centers for Disease Control (CDC), developed a home-based clinical change program to help participants manage their hypertension. The fundamentals of the program include:

- Consistent stratification of blood pressure through the SASH Hypertension Management Protocol
- Consistent monitoring of blood pressure at home - available through on-site nurse-run blood pressure clinics or through the SASH home blood pressure monitor loaner program;
- Tracking of blood pressure readings on a standard flowsheet to support sharing with Primary Care Providers;
- Lifestyle initiatives provided at the housing site including nutrition evaluation, goal setting, health coaching on risk factors, and access to evidence-based programs.

The program is making a difference. Of those SASH participants with hypertension, 87.8% have readings considered "in control" by industry standards. This is well above the national prevalence of controlled hypertension at 49.3%. Importantly, program participants saw positive clinical change quickly with 70% of the SASH participants in the program showing a reduction in systolic blood pressure in just 3-6 months.

Theresa was no exception. In less than one year of participating in the hypertension initiative, Theresa's blood pressure was under control, with readings of 138/74 now her norm. Through routine monitoring, tracking and regular communication between her SASH support team and her PCP, Theresa has the tools she needs to successfully self-manage her chronic condition at home.

More information about SASH can be found at http://sashvt.org

7.5 Hub & Spoke: The Care Alliance for Opioid Addiction

7.5.1 Treating Opioid Use Disorder in Vermont

The national opioid epidemic continues: rates of overdose deaths are rising in rural areas, and overdoses are the leading cause of death in the injury category, surpassing motor vehicle accidents (CDC, 2017). Many people with opioid use disorder are switching from prescription opioids, which have become less readily available, to heroin. The dangers associated with using heroin, especially if heroin is adulterated with fentanyl, are evident in the alarming rate of overdose deaths in Vermont. In Vermont, drug-related fatalities were 37% higher in 2016 than those recorded in 2015. Of the 148 drug-related fatalities

recorded in Vermont for 2016, 112 were opioid-related (VDH, 2017). Across the state, Vermonters are demanding a solution – beginning with treatment options that are available immediately, as soon as their family members, friends, and neighbors are ready to begin treatment.

Vermont's Hub and Spoke program for treating opioid use disorder has garnered national attention for its comprehensive approach to providing Medication Assisted Treatment (MAT). Hub and Spoke integrates programs providing higher levels of care (opioid treatment programs, called "Hubs") with programs offering treatment in general medical settings (office-based opioid treatment programs, called "Spokes"). Richard Baum, the White House Acting Director of the Office of National Drug Control Policy visited Vermont in July 2017 to learn more about this approach. In a press conference at the end of his visit, Mr. Baum said, "What Vermont has accomplished by establishing a unique hub and spoke system for responding to the opioid crisis is an incredibly valuable national model."

The dedication and commitment of Hub and Spoke staff, health systems, and community leaders is evident in the increased treatment capacity in high-need areas, increased coordination among community partners, and a focus on treating the factors that contribute to the complexity of opioid use disorder. Some notable recent advances include:

- Burlington, Rutland, and St Albans have dedicated staff working with local treatment providers to expand the use of Vivitrol and prioritize access for Vermonters served by the Department of Children and Families (DCF) and the Department of Corrections;
- The newest Hub opened in June 2017 in St. Albans, made possible by State and local community support. It was temporarily housed on the Northwestern Medical Center campus, then moved to its permanent location on Main Street. This Hub expands overall treatment capacity in the northwest of the state, and makes it possible for people living in far northwestern areas to access care closer to home;
- The opening of the new Hub also helped reduce the waitlist at the Chittenden County Hub. This has allowed for additional movement between the levels of care, and increased integration between the Hubs and Spokes;
- The University of Vermont Medical Center (UVMMC) Family Medicine group has more than 60 providers waivered to provide MAT. Additionally, many Advanced Practice Providers – Nurse Practitioners (NPs) and Physicians Assistants (PAs) – are currently in training to be able to provide MAT.
- New buprenorphine providers are offering treatment in previously underserved areas, including Newport and Arlington. These providers participated in this year's Spoke Learning Collaborative;
- Wide distribution of Narcan/Naloxone kits are helping to prevent deaths from drug overdose;
- Enrollment in treatment programs continues to grow; and, for the first time, many regions report immediate availability for treatment.

As access has increased, teams providing MAT have been able to begin focusing on providing care coordination from the first moment an individual indicates he/she needs treatment. In communities like

Central Vermont and Lamoille Valley, and within Chittenden County, providers are able to triage individuals to the appropriate level of care and coordination of services begins with the first phone call to the regional contact.

The Blueprint, in collaboration with the Vermont Department of Health Division of Alcohol and Drug Abuse Programs (VDH/ADAP) and community health and human services partners, continued expansion and evolution of the Hub & Spoke treatment initiative throughout 2017. Key program and evaluation milestones are described here.

7.5.2 Engaging Providers to Expand Access in Spokes

By federal regulation, physicians providing MAT with buprenorphine must apply for and receive waivers of the special registration requirements defined in the Controlled Substances Act to prescribe MAT. Previously, prescribers could serve no more than 30 patients in the first year and, upon request, up to 100 patients after that. Federal legislation (The Comprehensive Addiction Recovery Act) passed in 2016 raised the maximum to 275 patients, and a few Vermont physicians have applied to increase their caseload. The same federal legislation allows Nurse Practitioners and Physician Assistants to be waivered to prescribe buprenorphine for opioid use disorder. This change was requested by professionals who could previously prescribe opioids, but not buprenorphine. To date, nearly 60 new Nurse Practitioner and Physician Assistant prescribers have obtained their waivers and are now prescribing medication for Vermonters with opioid use disorder. Continuing education to support these new prescribers was offered by many organizations, including the University of Vermont of Medical Center and the Vermont Department of Health Division of Alcohol and Drug Abuse Programs (VDH/ADAP)

Vermont will need to continuously engage new providers and welcome them into the practice of providing MAT for opioid use disorder to meet demand for these services.

In collaboration with the leadership of DVHA and VDH, the Blueprint actively encourages Physicians, Nurse Practitioners, and Physician Assistants to offer MAT, especially to patients they may already see for primary care. The most often-cited barriers are:

- patient complexity
- provider time
- lack of access to specialty care
- concern that the practice will be flooded with too many patients requiring complex care
- skepticism about the efficacy of the treatment

To help address these barriers, the Blueprint, in collaboration with the VDH, offers training and support for practices to implement MAT protocols with the help of Blueprint Practice Facilitators and learning collaboratives designed to advance prescriber and team knowledge and confidence in the provision of care. These opportunities provide Spoke nurses and counselors with the support necessary to

implement best practices, design workflows in advance of seeing patients for MAT, set up program protocols, and begin the process of providing team-based, patient-centered care for Vermonters with opioid use disorder.

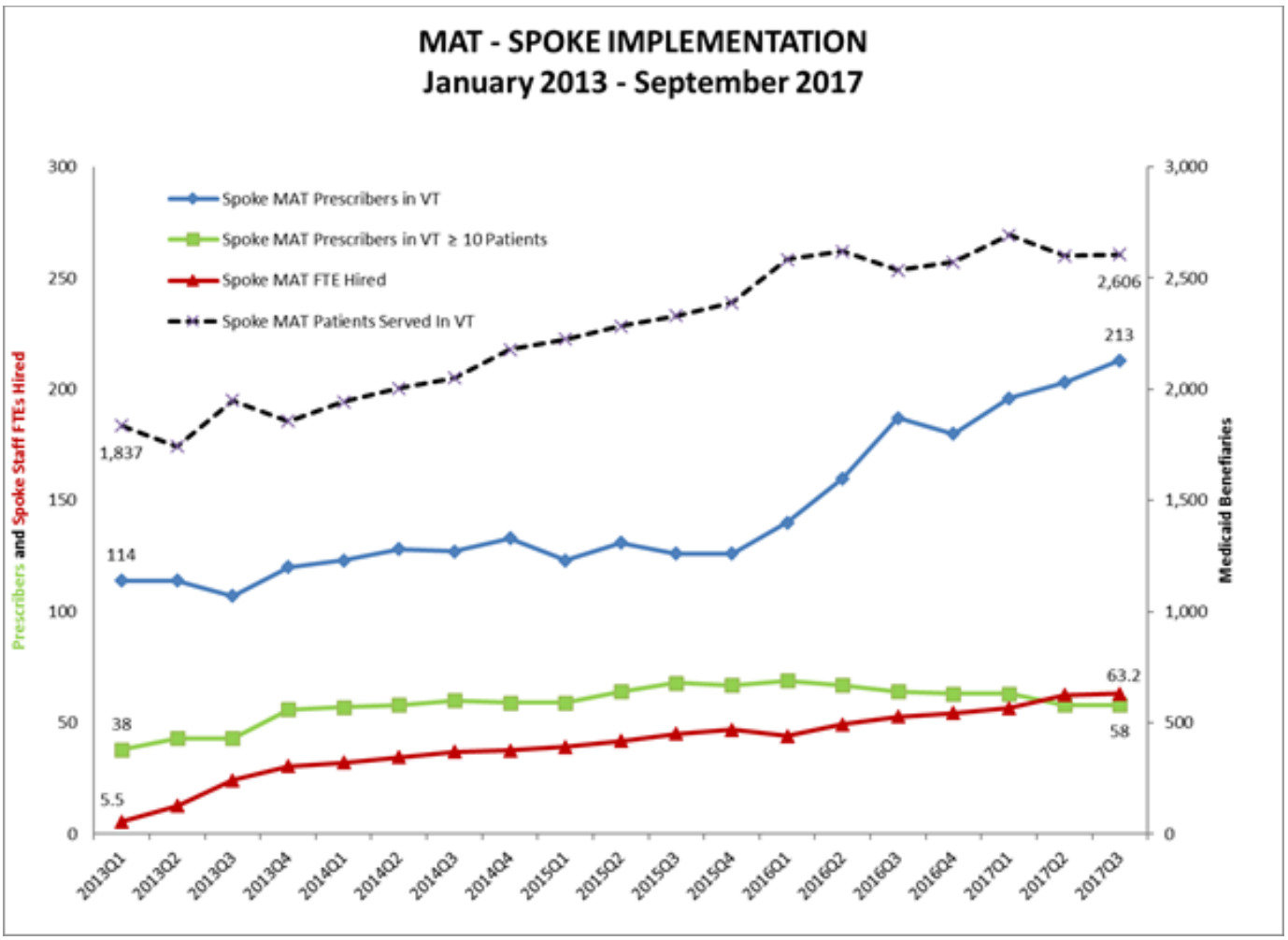
7.5.3 Measuring Medication Assisted Treatment in Spokes

The Blueprint tracks three measures of access to MAT in Spoke settings:

1. Total number of unique Medicaid beneficiaries receiving MAT for opioid use disorder;
2. Total number of prescribers who actively prescribe buprenorphine or Vivitrol to Medicaid beneficiaries; and
3. Number of physicians who actively treat 10 or more patients.

Since January 2013, there has been a significant increase, from 114 to 213, in the total number of prescribers offering MAT to Medicaid beneficiaries with opioid use disorder. The number of physicians who actively treat 10 or more Medicaid patients has modestly increased, from 38 to 58. The total number of unique Medicaid patients provided Medication Assisted Treatment in Vermont Spoke settings grown from 1,837 in March 2013 to 2,606 in September 2017. Since the Hub & Spoke initiative was implemented, the total number of Spoke staff hired has grown to 63 full-time equivalents (FTEs) by September 2017.

Figure 21: Medication Assisted Treatment - Spoke Implementation



7.5.4 Reducing Waitlists in Hubs

The VDH/ADAP tracks waiting lists and caseloads in the Hub programs. 2017 marked a breakthrough in the Hub waitlists statewide and most dramatically in Chittenden County. Last year this report noted that the statewide waitlist had fallen below 500 for the first time. As of September 20, 2017, the statewide waitlist had dropped to 110. In Chittenden County, the waitlist had once been nearly 300 people long, with some waiting for treatment for over a year. In July of 2017, the community celebrated the total elimination of its waitlist for Hub treatment.

The Blueprint recognizes the work of the VDH in opening a new Hub in St. Albans in 2017 as a key factor in eliminating the Chittenden County waitlist. Additionally, cross-organization teams operating in

Chittenden County have been instrumental in maximizing available resources and actively steering people in need to the treatment options that best suit their unique needs, as soon as those options become available. A “Triage Team” including a Blueprint Project Manager and other Blueprint staff members, along with staff from the Hub (called The Chittenden Clinic locally), The Howard Center, the Community Health Centers of Burlington, inpatient rehabilitation providers, and others have met weekly since January 2016 to triage the people on the waitlist. The team helps connect people with complex addictions to Hub treatment as soon as possible, helps people with less complex addictions access care in Spokes, and plans interim supports for people still waiting. This collaboration has been widely recognized both by national peer learning organizations and by the UVM Medical Center itself, which awarded the team its “Better Together” honor late this year. The Chittenden County story is dramatic success story, and it includes the work of many more partners and creative interventions than fit in this report. Yet it is not unique in its demonstration of community-wide commitment to helping people fight opioid use disorder. Across the state, communities are pulling together to get their citizens the help they need to begin recovery from opioid use disorder.

Figure 22: Growth in Hub Services by Region

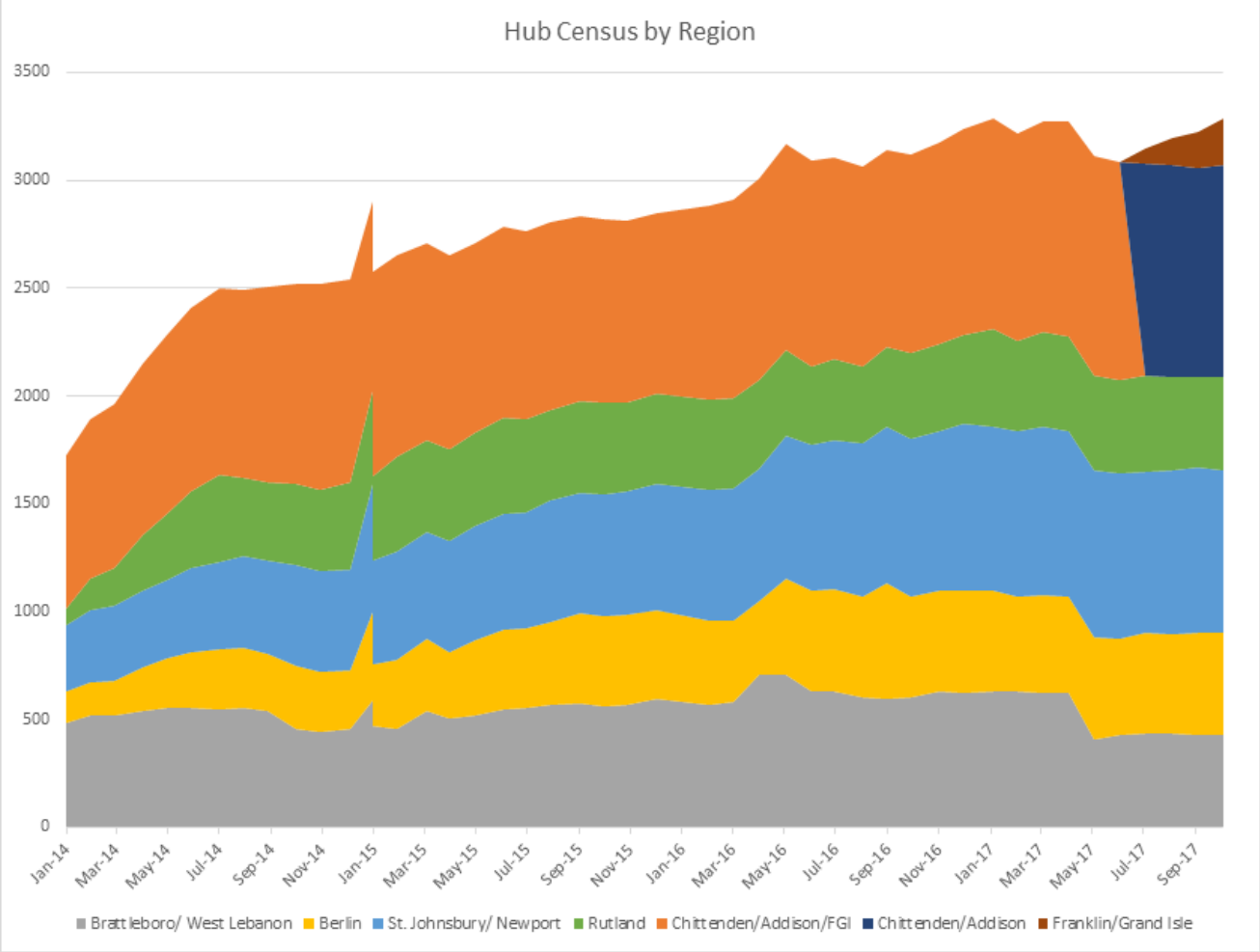
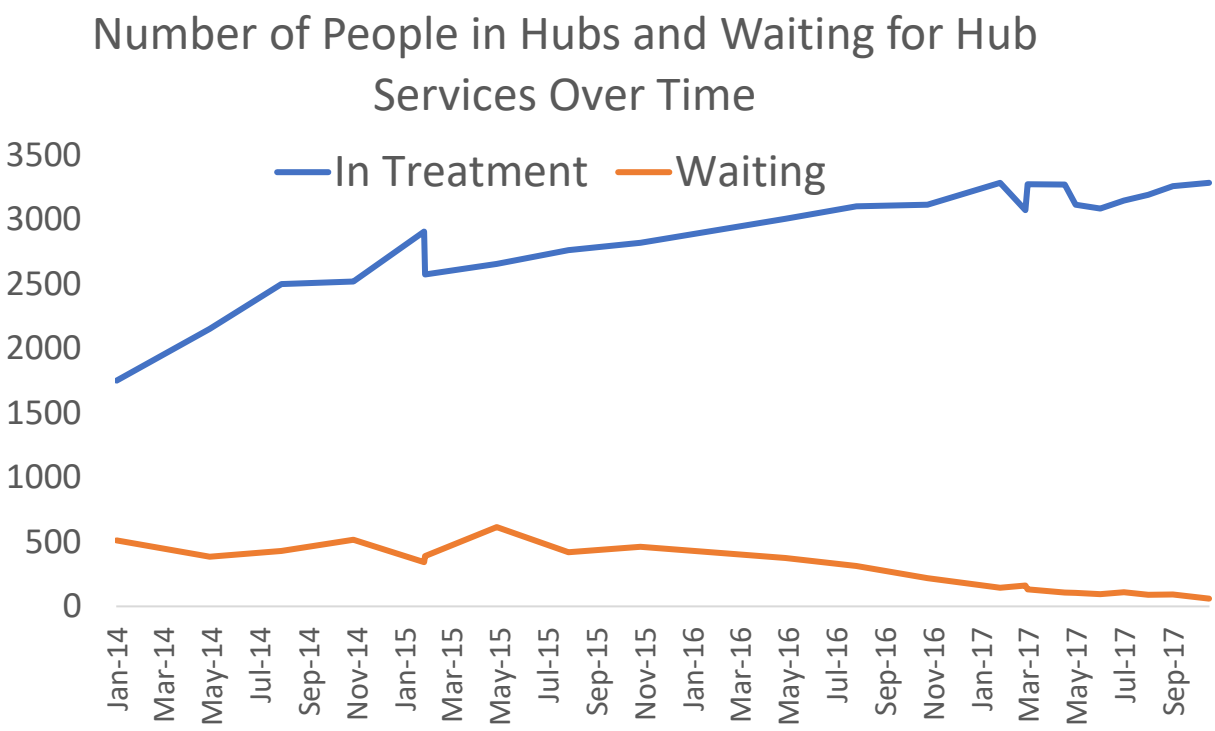


Figure 23: Statewide Growth in Hub Census and Decrease in Waitlists



	Jan-14	Apr-14	Jul-14	Oct-14	Jan-15	Jan-15	Apr-15	Jul-15	Oct-15	Apr-16	Jul-16	Oct-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	17-Oct
In Treatment	1751	2152	2499	2520	2573	2656	2762	2820	2906	3005	3104	3116	3285	3074	3273	3271	3114	3086	3148	3193	3260	3285
Waiting	513	384	431	516	389	615	419	462	343	375	313	218	145	162	133	106	104	95	110	90	92	60

7.5.5 Improving the Standard of Care

The Blueprint is committed not only to improving access to MAT for opioid use disorder, but also to supporting providers in providing the highest quality care to people in recovery. Each year, VDH transfers $165,000 to the DVHA to help Blueprint primary care practices care for people with co-occurring mental health problems and substance use disorder. Since 2013, the Blueprint has used this funding to support practice improvement in MAT through a series of learning collaboratives. In 2017, the UVM Medical Center was awarded the contract to provide expert faculty and develop curriculum for these learning sessions.

The learning collaboratives aim to educate and support prescribers and their practice teams, to increase the numbers of patients appropriately receiving MAT, to reduce the non-medical use and diversion of the medication, and to use evidence-based practice guidelines to improve patient and community outcomes. The learning collaborative approach combines lectures, peer-to-peer sharing of clinical

experience, and collecting and sharing common outcome measures. The sessions include lectures, peer-to-peer sharing, and collecting and sharing common outcome measures and clinical experiences.

The participating practices measure substantial improvement in care, including:

- prescribing buprenorphine or Vivitrol only to patients who meet diagnostic criteria for opioid use disorder
- adhering to dosage range recommendations
- conducting regular, observed random drug urine screens
- increasing frequency of office visits for unstable patients and appropriately transitioning a patient to a higher level of care when necessary
- routinely using the Vermont Prescription Monitoring System (VPMS)
- maintaining patients in treatment (retention)
- documenting coordination of care with other medical and community providers

The learning collaboratives include several tracks to meet the needs of new and experienced teams, and teams in different areas. In 2017, the Blueprint completed a learning collaborative aimed at improving the flow of patients between a Hub and the Spokes in its region. Another learning collaborative offers support specific to new prescribers and practice teams, and is offered in both the South and North of the state for ease of access. Additionally, a virtual learning collaborative enables teams to participate together from their office. The more the 63 full-time equivalent (FTE) "Spoke" staff of nurses and addictions counselors, who collectively work in nearly 80 different practice settings met four times between December 2016 and June 2017 to share program protocols and learn together.

7.5.6 MAT Analytics and Evaluation Plan

The Blueprint and VDH/ADAP have developed an analytic plan to evaluate the impact of MAT on Medicaid beneficiaries. The Blueprint's analytic contractor, Onpoint Health Data, is conducting this multi-stage evaluation. The Vermont study, which will proceed in phases, will test the impact of MAT on health care expenditures and utilization, clinical health outcomes, incarceration, and employment in Vermont. In addition, VDH/ADAP has contracted with a national research expert to conduct a qualitative study to better understand the impact of Hub & Spoke services on patients and their families, through in-depth interviews with 80 current recipients of care, 20 individuals who left care, and 20 family members.

In addition to the evaluation work, the Blueprint and its analytics vendor have developed data profiles for Hubs and Spokes that help MAT prescribers and their teams, and health systems and community leaders, understand the demographics and health status of people in treatment, along with their health care utilization and outcomes. Like the Blueprint's Community Health Profiles, these profiles present both claims and clinical data for a comprehensive look at the care accessed by people in MAT. This data

can help providers and teams identify improvement priorities and track quality improvement projects. It can also help health systems leaders and policy makers assess program investments.

Among the data presented in these profiles are the average health care costs of people with Opioid Use Disorder who do and do not receive Medication Assisted Treatment. Figure 24 and Figure 25 show that individuals with opioid use disorder receiving MAT have lower health care expenditures than do individuals with opioid use disorder who receive substance abuse treatment care as usual.

Figure 24: Extract from Spokes Profile

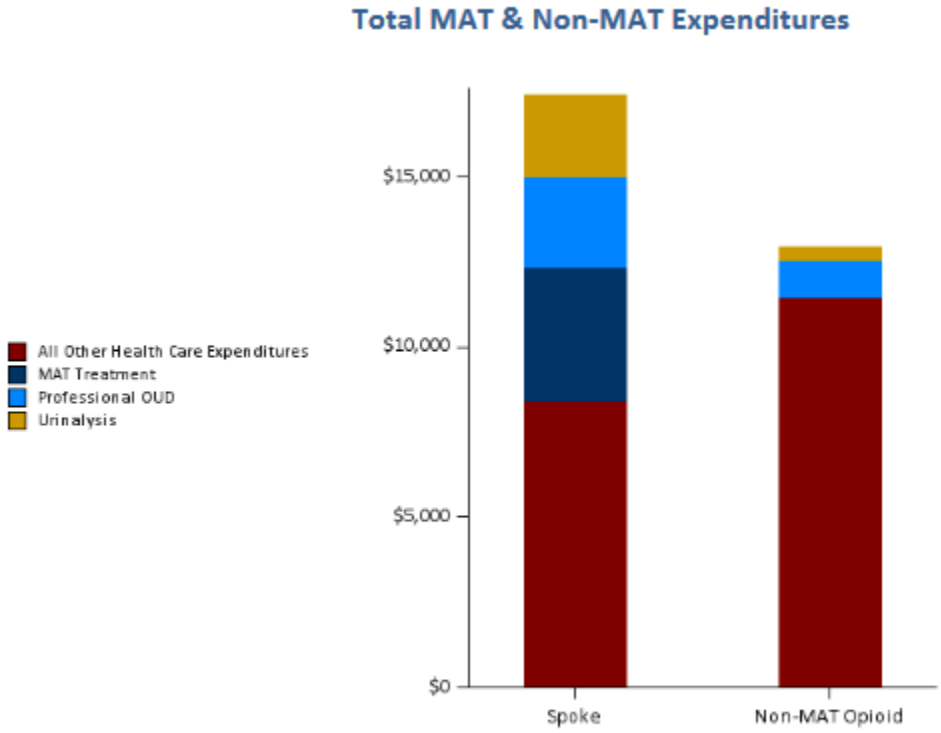


Figure 3: *Presents annual crude rates for Medication Assisted Treatment (MAT) expenditures, Non-MAT expenditures, Professional Opioid Use Disorder (OUD) expenditures, and Urinalysis expenditures with expenditures capped statewide for outlier patients.*

Figure 25: Extract from Hubs Profile

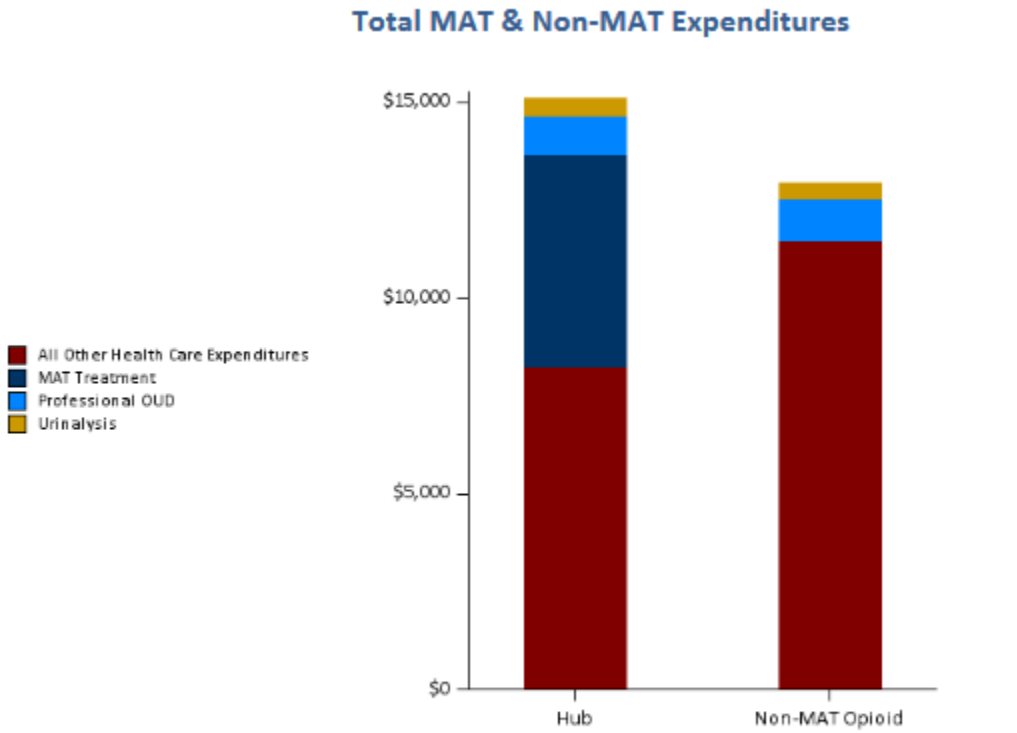


Figure 2: *Presents annual crude rates for Medication Assisted Treatment (MAT) expenditures, Non-MAT expenditures, Professional Opioid Use Disorder (OUD) expenditures, and Urinalysis expenditures with expenditures capped statewide for outlier patients.*

7.5.7 MAT Baseline Study, Pre-Post Study, and Incarceration Data Analysis

Analysis of health care claims for 2007 through 2013 (prior to full implementation of the Hub & Spoke program) was conducted for Medicaid beneficiaries receiving MAT in both specialty opioid treatment programs (OTPs) and general medical office (OBOT) settings. The study focuses on Medicaid beneficiaries, since Medicaid is the dominant insurer for MAT and is the only payer participating in the service enhancements to OBOT settings.

Other research currently in development includes analysis of data from the Department of Corrections (DOC) “Offender Management System” in combination with health care claims data, which will look at the impact of MAT on incarceration.

7.5.8 Initial Expenditure and Utilization Analysis Pre-Post Hub and Spoke

An initial baseline study comparing adult Vermont residents, who were Medicaid beneficiaries, diagnosed with opioid use disorder and receiving MAT compared with Medicaid members diagnosed with opioid use disorder but receiving other forms of substance use treatment, demonstrated that MAT was associated with lower (not statistically significant) total care expenditures, lower health care expenditures excluding MAT costs (statistically significant) and lower health care utilization (statistically significant[8]). The baseline study used calendar year Medicaid eligibility and claims data for 2008-2013 from Vermont's all-payer claims database, the Vermont Health Care Uniform Reporting and Evaluation System (VHCURES).

Starting in 2013, the Blueprint for Health, and ADAP's "Hub & Spoke" model expanded access to treatment for opioid use disorder and enhanced the services provided to patients receiving MAT. This section provides a first look at initial analyses of the expenditure and utilization trends post program implementation 2014 through 2016 calendar years. In addition, this report includes available data for Vermonters enrolled in commercial plans and diagnosed with opioid use disorder that are receiving treatment.

7.5.9 Methods

The methods used to identify patients receiving MAT or other forms of treatment (non-MAT), evaluate the demographics and health status, and report rates of utilization and expenditure can be found in the Hub & Spoke profiles technical documentation on the Blueprint website at http://blueprintforhealth.vermont.gov/hub-and-spoke-profiles. Members served in Hubs were identified by the billing code for Hub services and members served in Spokes were identified by pharmacy claims for buprenorphine.

The non-MAT comparison group was also identified from claims as members with opioid addiction by having one or more inpatient visits, one or more outpatient emergency department (ED) visits, or two or more non-hospital outpatient visits with a diagnosis for opioid use disorder but who did not receive Hub services or prescribed buprenorphine. The non-MAT group received substance abuse treatment as usual in the form of individual and group outpatient services, intensive outpatient programs, partial hospitalization, detoxification, or residential treatment services.

Adjusting for partial length of enrollment during a year is used throughout the analysis, and average members (the number of individuals participating in an insurance plan / 12 months) is reported. All utilization and expenditures adjust for extreme outlier cases by capping measures at the 99th percentile.

[8] Impact of Medication-Assisted Treatment for Opioid Addiction on Medicaid Expenditures and Health Services Utilization Rates in Vermont. Journal of Substance Abuse Treatment 67 (2016) 9–14 https://www.ncbi.nlm.nih.gov/pubmed/27296656

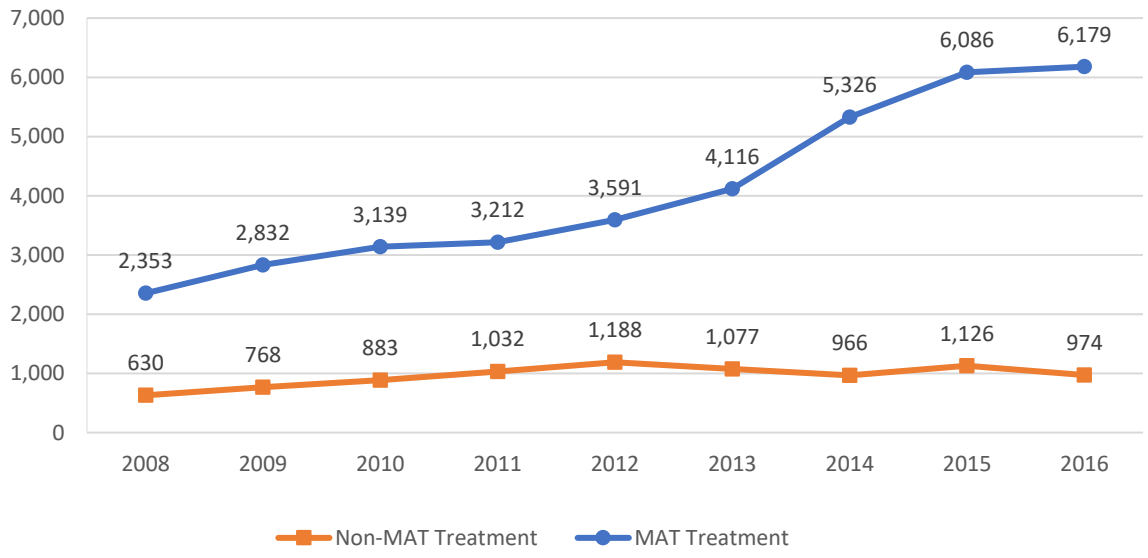
Expenditures were measured based on the allowed amount on claims, which included both the plan payments and the member's out-of-pocket payments (i.e., deductible, coinsurance, and copayments).

Opioid use treatment expenditures include claims for individual and group outpatient services, intensive outpatient programs, partial hospitalization, detoxification, residential treatment services, buprenorphine dispensed in a Hub, buprenorphine, Hub bundled payments, and urinalysis and include the staffing cost associated with the enhanced Hub & Spoke program.

7.5.10 Demographics and Health Status

Figure 1 provides the trend analysis for the study population across Medicaid and Commercial payers[9]. Enrollment in MAT treatment began to increase with the opening of the Hub and Spoke program in 2013. Comparing 2016 to 2008, the MAT treatment group increased by 163 percent from 2,353 to 6,179 average members.

Figure 26: MAT and non-MAT Average Members



Analysis of proportion of Payers (Medicaid, Commercial) within the groups indicated distribution was similar for the MAT and non-MAT populations.

[9] Medicare data was not included in the analysis due to redaction of mental health and substance abuse claims in some years by the Centers for Medicare and Medicaid Services (CMS).

Analysis of health status indicated the non-MAT population tended to have higher rates of treatment for mental health and substance abuse conditions than the MAT population. The MAT population was more likely to be female and have pre- and perinatal care which reflects the prioritization in the program to serve pregnant women. In addition, the MAT treatment group had slightly higher rates of treatment for Hepatitis C consistent with program enrollment priorities.

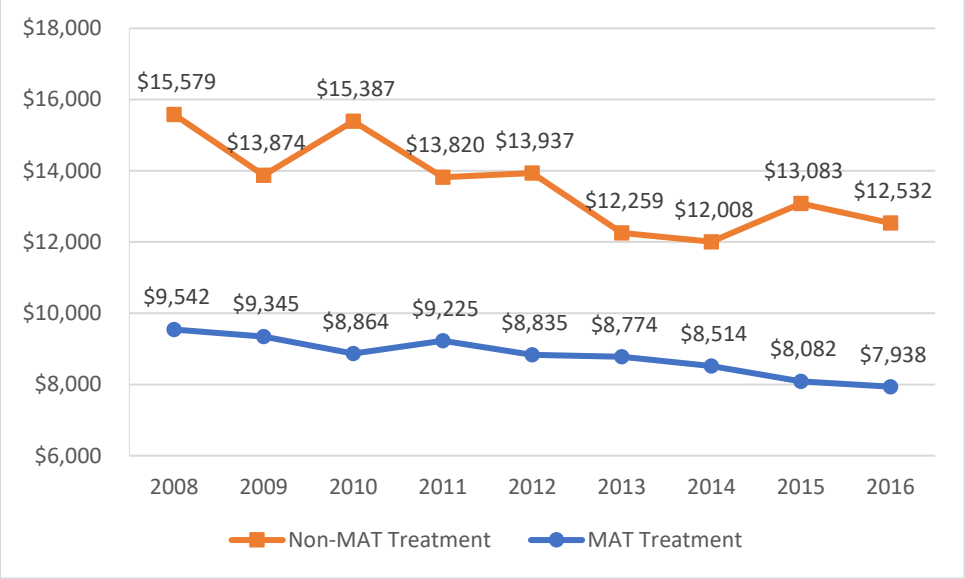
7.5.11 Trends in Expenditure and Utilization Rates

Total expenditures rates include the expenditures for cost of opioid treatments, Hub & Spoke staffing costs, and all non-treatment medical and pharmacy expenditures. The total expenditures per capita in 2016 for MAT were slightly higher than non-MAT ($15,792 vs. $15,224). MAT expenditures for inpatient care were 51 percent lower than the non-MAT group ($1,965 vs. $4,018) and were consistently lower over each year in the study period.

Among variances in expenditures for treatment, urinalysis expenditures were higher for the MAT than non-MAT during 2016 ($1,463 vs. $652) and increased dramatically during 2014-2016 compared to 2008-2013. This increase was found in both the Medicaid and commercial populations receiving MAT and non-MAT treatment. The differential urinalysis expenditures have a significant impact on the evaluation of trend in the total expenditures measure but not in the evaluation of trend with treatment cost excluded.

Comparing health-related treatment expenditures the MAT group had per capita expenditures that were 37 percent lower in 2016 than non-MAT ($7,938 vs. $12,532). Excluding treatment expenditures for opioid treatment the MAT group per capita expenditures were consistently lower than the non-MAT group (Figure 27).

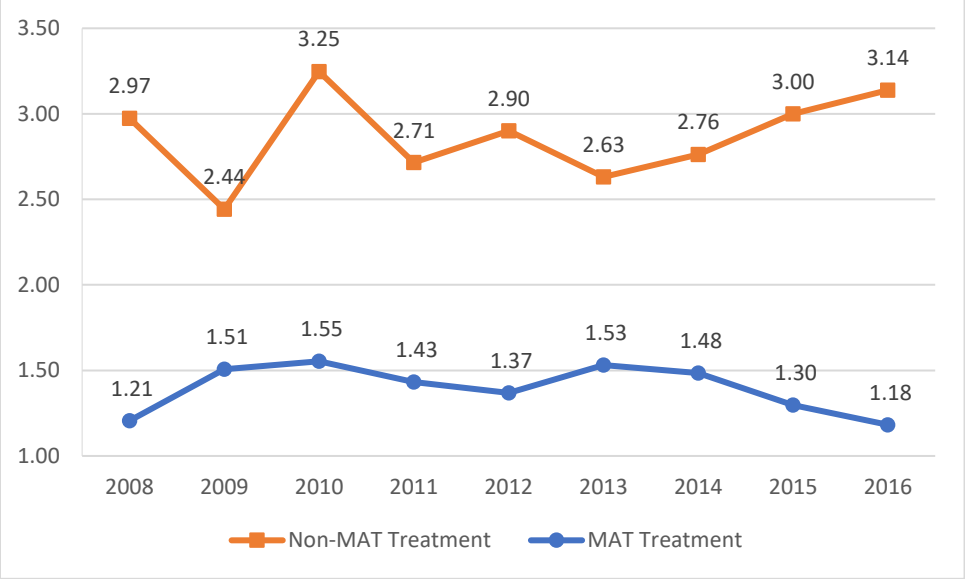
Figure 27: MAT and Non-MAT per Capita Rate of Health Care Expenditures, Excluding Opioid Use Disorder Treatment Costs



Between 2013 and 2016 per capita inpatient expenditures in the MAT group declined by 24 percent from $2,583 to $1,965 while per capita inpatient expenditures increased in the non-MAT group by one percent from $3,962 to $4,018.

The population-based rate of inpatient hospitalizations was 54 percent lower in 2016 for MAT than non-MAT (0.21 vs. 0.46). The population-based rate of total inpatient hospitalization days was 62 percent lower in 2016 for MAT than non-MAT (1.18 days vs. 3.14). There is also evidence that the rate of inpatient days declined after 2013 for MAT while it increased for non-MAT (Figure 3). The trend pattern for inpatient days is similar to the trend pattern in inpatient expenditures.

Figure 28: MAT and Non-MAT Per Capita Rate of Total Inpatient Days



7.5.12 Adjusting for Comorbidity, 2016 MAT vs. non-MAT Results

As noted above, there were differences between MAT and non-MAT groups in demographics, payer-mix, and comorbid conditions. The higher proportion of pregnant women in the MAT group might predict higher cost due to claims for delivery. The slightly higher proportion of commercial members in the MAT group might predict higher cost due to higher reimbursement rates per service by commercial compared to Medicaid. In contrast, the lower proportion of members with comorbid non-substance abuse mental conditions and comorbid other non-opioid substance abuse would predict lower cost in the MAT group. Regression models were used to determine the difference in cost and utilization controlling for the demographic, payer mix, and comorbid conditions (Table 3).

Adjusted for demographic, payer, health status, and continuity of coverage, during 2016 MAT had higher total expenditures ($2,068), lower expenditures excluding MAT treatment costs (-$3,386), lower inpatient expenditures (-$1,595), lower inpatient hospitalizations (-0.62), lower inpatient total days (-0.68), lower outpatient emergency (-0.30), and higher primary care visits (0.41)

Table 14:Comparison of MAT and non-MAT 2016 Measures Adjusted for Demographic, Payer, Comorbid Health Status, and Continuity of Coverage

Measure	MAT vs. Non-MAT
Total Expenditures	+$2,068
Total Expenditures Excluding Treatment and Staffing Cost	-$3,386
Inpatient Expenditures	-$1,595
Inpatient Discharges	-0.62
Inpatient Days	-0.68
Outpatient Emergency Department Visits	-0.30
Primary Care Visits	+0.41

7.5.13 Summary of Medication Assisted Treatment Evaluation

This analysis offers a first look at the post Hub & Spoke expansion that began in 2013 for both Medicaid and commercial payers excluding opioid disorder treatment and staffing costs for both the MAT and non-MAT groups, the results indicate that expenditure rates and inpatient use were declining for those receiving MAT treatment. They also indicate that those receiving MAT treatment have lower cost and utilization in all years than those receiving non-MAT treatment. The results also reinforce that the MAT and non-MAT populations have differences in comorbid conditions that may influence cost and utilization measures. During 2016, after adjusting for those differences MAT had lower expenditures excluding treatment, lower inpatient and outpatient emergency department use, and higher primary care visits than non-MAT.

7.5.14 The Work Ahead

There is more work needed to create a sustainable system for providing care for those with substance use disorders. Vermont continues to experience deaths due to overdoses and, despite increased capacity, the health and human service systems in most regions are still unable to meet demand for assistance with health-related social needs that frequently co-occur with substance use disorders. Community groups across the state are organizing coordinated efforts to address the social determinants of health as increasing rates of poverty, housing instability, food insecurity, etc. are observed.

The Hub and Spoke model is also challenged by one-payer participation, as Medicaid is the only payer participating fully in the funding of the Hub and Spoke model. Vermont's major commercial insurers participate in the Hub component but not in Spoke staffing, and Medicare funds neither the Hubs nor the Spokes. This presents a challenge for communities and practitioners who want to provide the same standard of care to all patients seeking treatment for opioid use disorder, regardless of their insurer. More importantly, without full support for the Hub and Spoke Program across public and private payers, those being supported in the Hub and Spoke model to remain in recovery may, as they improve health, attain employment, and improve their lives, experience transition to an insurer who no longer covers the services they received when they were previously on Medicaid. The reality of service provision is that most providers do not limit their offerings to only those patients with the appropriate insurance, but rather spread the resources they are provided by any insurer over all patients who could benefit from them. This may result in fewer resources (usually in the form of staff time) being devoted to each patient.

7.6 Vermont Chronic Care Initiative

The Vermont Chronic Care Initiative (VCCI) is a statewide Medicaid health care reform program that provides short-term, intensive case management and care coordination to non-dually-eligible Medicaid members who are high-risk and high-cost. These members often have multiple chronic conditions and complex health histories and psychosocial needs, including poor health literacy, that challenge their ability to self-manage their chronic health issues.

VCCI primarily focuses on improving outcomes and reducing unnecessary utilization for this population by using a holistic approach that addresses their chronic health conditions, as well as socio-economic barriers to health and health care, safe and stable housing, transportation to a primary care medical home, pharmacy management, education, and coaching toward behavior change goals to support effective self-management and sustainable results.

7.6.1 Determining Eligibility for VCCI Services

The VCCI historically targeted high risk and/or high-utilizing eligible members in the top 5% of Medicaid utilizers and who accounted for roughly 39% of Medicaid expenditures. In 2017, the VCCI expanded its target population to include those in the top 10% to gain greater penetration of at-risk members, given the implementation of the Medicaid next generation ACO in 4 pilot communities. ACO attributed members are not eligible for VCCI. Eligibility for VCCI services is determined primarily, though not solely, on the following criteria:

- non-ACO attributed
- not receiving other CMS-funded case management services, such as Choices for CARE, CRT, etc.
- not dually eligible (Medicare or other primary insurance)

- included in top 10% of Medicaid cost/utilization or on the trajectory to become a high utilizer
- high emergency department and hospital utilization, including ambulatory care sensitive events
- multiple prescribed medications (polypharmacy) and/or providers
- one or more chronic health conditions
- co-occurring conditions of substance use/abuse and mental health

VCCI further targets members determined to be "impactable" based on a vendor analysis of clinical acuity and recent utilization patterns, using the Johns Hopkins evidence-based predictive analytics software. For each Medicaid member, this analysis considers the member's:

- past utilization and predictive risk score
- actual per-member-per-month cost to the Medicaid program
- number of chronic conditions
- number of emergency department and inpatient encounters
- polypharmacy
- evidence of fragmented, uncoordinated care, such as several encounters with different providers in a short amount of time
- frailty and other risk measures

Finally, at-risk members are also identified for VCCI services through direct referrals from:

- internal DVHA unit including the Quality and Clinical Integrity unit for members with substance use and/or mental health inpatient stays, and the Clinical Operations Unit, for those members with prolonged inpatient stays requiring post discharge transitions in care and prevention of 30-day readmission rates. The VCCI also receives referrals from the Pharmacy unit, for members receiving high cost new medication regimens to support medication knowledge and adherence in partnership with the pharmacy benefits manager
- primary care providers
- hospital providers and case managers in both the emergency department and inpatient settings
- field and embedded staff in AHS district offices and high-volume provider partner locations
- other internal and external statewide partners, including Blueprint CHT staff, who partner with VCCI at the local/Health Service Area (HSA) level for direct referrals and transitions of care support between levels of service for the Medicaid population

7.6.2 Outreach to VCCI Clients

VCCI employs a decentralized model, reaching Medicaid members primarily through a team of registered nurse (RN) case managers and licensed alcohol and drug abuse counselors (LADCs) operating at the local level. Licensed staff serve members in a variety of settings including as embedded clinical resources within provider practices and hospitals with a high volume of Medicaid members.

Embedded staff facilitate:

- direct communication, referral, and case management and care coordination support, including home visits to best assess clinical, psychosocial and socio-economic needs
- transitions between the levels of services, including hospital and the patient's primary care provider or between the VCCI intensive case management resource to other community based resources, such as Community Health Team staff, to support sustainable change
- access to a PCMH when one is not being utilized, such as members referred with high volume emergency department utilization.

Multiple hospitals also provide VCCI with daily secure data transfers on emergency department and inpatient admissions to further support members post-hospitalization care and to minimize hospital readmission rates, an area of significant expenditures among the high utilizer cohort that VCCI serves.

Employed by DVHA, VCCI case managers are also located in state Agency of Human Services (AHS) district office settings and work closely with AHS partners, including AHS District Field Directors, Economic Services, DCF/Reach-up, Vocational Rehabilitation and protective services staff, Department of Corrections (DOC) probation and parole colleagues, and VDH/local health office leadership and staff. This collaboration supports care coordination and access to wrap around services and resources for vulnerable members.

7.6.3 Blueprint-VCCI Collaboration

The Blueprint works closely with VCCI, and VCCI staff are partner of local Blueprint Community Health Teams. VCCI case managers work closely with the primary care provider, AHS partners, CHT staff, and other local partners to identify and ensure wrap-around services are in place to support the plan of care. The VCCI staff are also members of most of the statewide Community Collaboratives and participated with Blueprint CHT colleagues in the Integrated Communities Care Management Learning Collaborative.

7.6.4 VCCI Data and Analytics Vendor Transition

The VCCI legacy vendor provided both the care management software system for tracking and analytics and 15 professional and analytics staff members. The legacy vendor contract was replaced by the new MMIS/Enterprise Care Management vendor in late 2015. The new Enterprise vendor is continuing in its roll out of system business functionality, including analytical tools, toward CMS system certification and enhanced funding opportunities for the State. The system supports the three core priorities of the DVHA which include information technology, Results Based Accountability (RBA) and payment reform, leveraging the CMS investment in the care management software. The tool will support targeting members for intervention, performance monitoring and clinical and financial evaluation on the intervened population. The Medicaid Chief Medical Officer will be able to query the system for regional trends for quality improvement initiatives.

7.7 Self-Management Programs

In 2005, the Stanford Chronic Disease Self-Management Program was introduced in Vermont as Healthier Living Workshops. The Healthier Living Workshops found a natural home in the Blueprint, where they have been gradually expanded to include six group wellness courses, each offered multiple times a year in every part of the state. The offerings include a general chronic disease management workshop, along with workshops for diabetes prevention, diabetes management, smoking cessation, living with pain, and mental health and emotional well-being.

Table 15. Self-Management Programs

Workshop Name	Target Population	Program Purpose
Diabetes Prevention Program (YDPP)	Individuals with pre-diabetes or at risk for developing Type 2 diabetes	Reduce the prevalence of diabetes by reducing the number of people with pre-diabetes and diabetes risk factors who then go on to develop diabetes
Vermont Quit Partners / Freshstart® tobacco cessation program	Current tobacco users	Reduce the rate of Vermonters who use tobacco by assisting current tobacco users in quitting
Healthier Living Workshop – Chronic Disease	Individuals experiencing symptoms from a chronic condition and those who support them	Increase the number of people with chronic health conditions who have the skills to self-manage their conditions
Healthier Living Workshop – Diabetes	Individuals diagnosed with diabetes and those who support them	Increase the number of people with diagnosed diabetes who have the skills to self-manage their diabetes
Healthier Living Workshop – Chronic Pain	Individuals experiencing chronic pain and those who support them	Increase the number of people suffering from chronic pain who have the skills to self-manage their pain
Wellness Recovery Action Planning (WRAP)	Individuals experiencing symptoms from a mental health condition, substance use disorder condition, or who want to improve their emotional well-being	Increase the number of people with mental health or substance abuse conditions who have the skills to plan for improving their emotional well-being

The self-management program was administered in each Health Services Area through the local Blueprint network. Technical assistance to the communities and statewide data collection was managed by the YMCA of Greater Burlington through the first three quarters of 2017. The Blueprint selected a new technical assistance vendor for the next contract period, and the University of Vermont Medical Center took over program technical assistance beginning October 1, 2017. The University of Vermont's Community Health Improvement division was selected based on their experience providing wellness support to thousands of people in its surrounding communities and its proposed approach to enhancing

coaching support for the regional self-management coordinators. Their work will build upon the work of the YMCA, whose important contributions included the centralized collection, aggregation, and reporting of data about the uptake of the self-management programs, which is driving future program evolution.

Through the 280 completed workshops, many Vermonters gained a better understanding of their health condition(s), explored their motivations, identified their strengths, developed plans for achieving their health goals, and worked with knowledgeable coaches and supportive peers to begin putting those plans into action. The table below shows the number of Vermonters who registered for each of the programs, participated in one or more sessions, or who completed most of the sessions.

Table 16: Self-Management Workshop Participants

Self-Management Program Workshop Participants Statewide 10/1/16 – 9/30/17			
Workshop Type	Registrants	Participants	Graduates
Chronic Disease	236	199	141
Chronic Pain	361	288	196
Diabetes	256	218	149
Diabetes Prevention (YDPP)	331	290	219
Wellness Recovery Action Planning (WRAP)	179	146	99
Tobacco Cessation	690	598	459
Total	**2053**	**1739**	**1263**

7.8 Data Collection, Analysis, and Reporting

7.8.1 The Vermont Clinical Registry in 2017

The Vermont Clinical Registry (previously known as DocSite or the Blueprint Clinical Registry) is a State of Vermont-owned and managed warehouse for clinical data from the electronic medical records of practices all across Vermont. Unlike most clinical data sources, the Vermont Clinical Registry includes data from practices large and small, independent and hospital owned, ACO-affiliated and not, using many different electronic medical records. The data comes from patients with every type of insurance, and even uninsured patients. As Vermont's All-Payer Model of health care and health care payments matures, the Vermont Clinical Registry offers a critical source of multi-system, multi-insurer clinical data that makes it possible to assess progress in health status and health care outcomes for all Vermonters.

7.8.2 Sprints Bring More Data into the Registry

Blueprint practices across the state have been populating the clinical data registry for over eight years. The utility of the Registry depends upon most practices in the state sending their clinical data. The

Blueprint's vendor for Registry maintenance and optimization, Capital Health Associates, works closely with practices to onboard practice data to the Registry through time-limited, intensive projects called "Sprints." The Sprints involve working with practices to improve the workflow of clinical care documentation in Electronic Medical Records (EMRs), working with VITL and practices to test the reliability of the interface to the Vermont Health Information Exchange (VHIE), and again with the practices to ensure that the data flowing through the interface and into the VHIE to populate the registry is complete and in a standard format that is digestible by the Registry. Sprints are not a one-time only event, they may need to be repeated, for instance, if a practice switches EMR vendors. For practices that cannot send data through VITL, the Blueprint makes it possible to submit data to the Clinical Registry directly. Major Sprint achievements in 2017 include:

- Onboarding to the Registry clinical data from all University of Vermont Medical Center Patient-Centered Medical Homes
- Onboarding clinical data, including all historical data, from Springfield Medical Center. Springfield Medical Center had gone offline in 2014.
- Similarly, Mt. Ascutney Patient-Centered Medical Homes had been offline since 2015, and are now back online
- Supporting Brattleboro Memorial Hospital in their transition to a new EMR
- Plus, onboarding many smaller independent Patient-Centered Medical Homes

The data flowing to the Registry from these Patient-Centered Medical Homes represents a significant increase in the number of Vermonters whose health care data is captured in the Registry, enabling more comprehensive and accurate reporting on Vermonters health status and health care outcomes.

7.8.3 Barriers to Data Submission

Some practices who are interested in providing data to the Registry are prevented from doing so by 42 CFR regulations. 42 CFR helps protect the confidentiality of substance use disorder treatment records, in recognition of the stigma associated with substance use disorder and the potential that people may avoid treatment if records of that treatment were less than completely private. Most data in the Registry flows to the Registry through the Vermont Health Information Exchange. This data may then be visible to providers through VITL Access. VITL Access is designed for providers to access their patients' records of care from other providers, which may not be available in the providers' own medical records. Some of the organizations the Blueprint works with provide both primary care and substance abuse treatment, and interpret 42 CFR to prohibit them from sending clinical care records into an environment where it can be accessed by other practices and providers without patients' specific consent. Unlike VITL Access, the Blueprint Registry is not designed to provide access to individual patient records, but rather to support data analysis on populations of patients. With this in mind, the Capital Health Associates Team is working with practices whose contributions are limited by 42 CFR to explore the possibility of sending data directly to the Registry, bypassing the Health Information Exchange (HIE) and VITL Access.

A few other practices in the state are interested in sending data to the Clinical Registry, but are limited by the Electronic Medical Records their practices use. Practices unable to connect their Electronic Medical Records to the Health Information Exchange for technical reasons may still contribute to the Registry, but submitting their data as flat files through an FTP site or another secure pass-through service. Having data from as many practices as possible included in the Registry helps provide useable data to, for instance, the Agency of Human Services to inform future program design, and to programs like Hub and Spoke for purposes of program evaluation.

7.8.4 Incentives for Data Submission

Patient-Centered Medical Homes value the data analysis they receive, in the Blueprint Practice Profiles, which use the data they have submitted to the Clinical Registry. The performance payments that the Blueprint began in 2016 also provide incentives to connect with the Registry as some of the outcomes selected require a clinical measurement (such as hypertension control) for at least some individuals in their Health Service Area. This requirement generated additional interest in engaging with Capital Health Associates in Sprints and/or submitting flat files of their clinical data to the Registry.

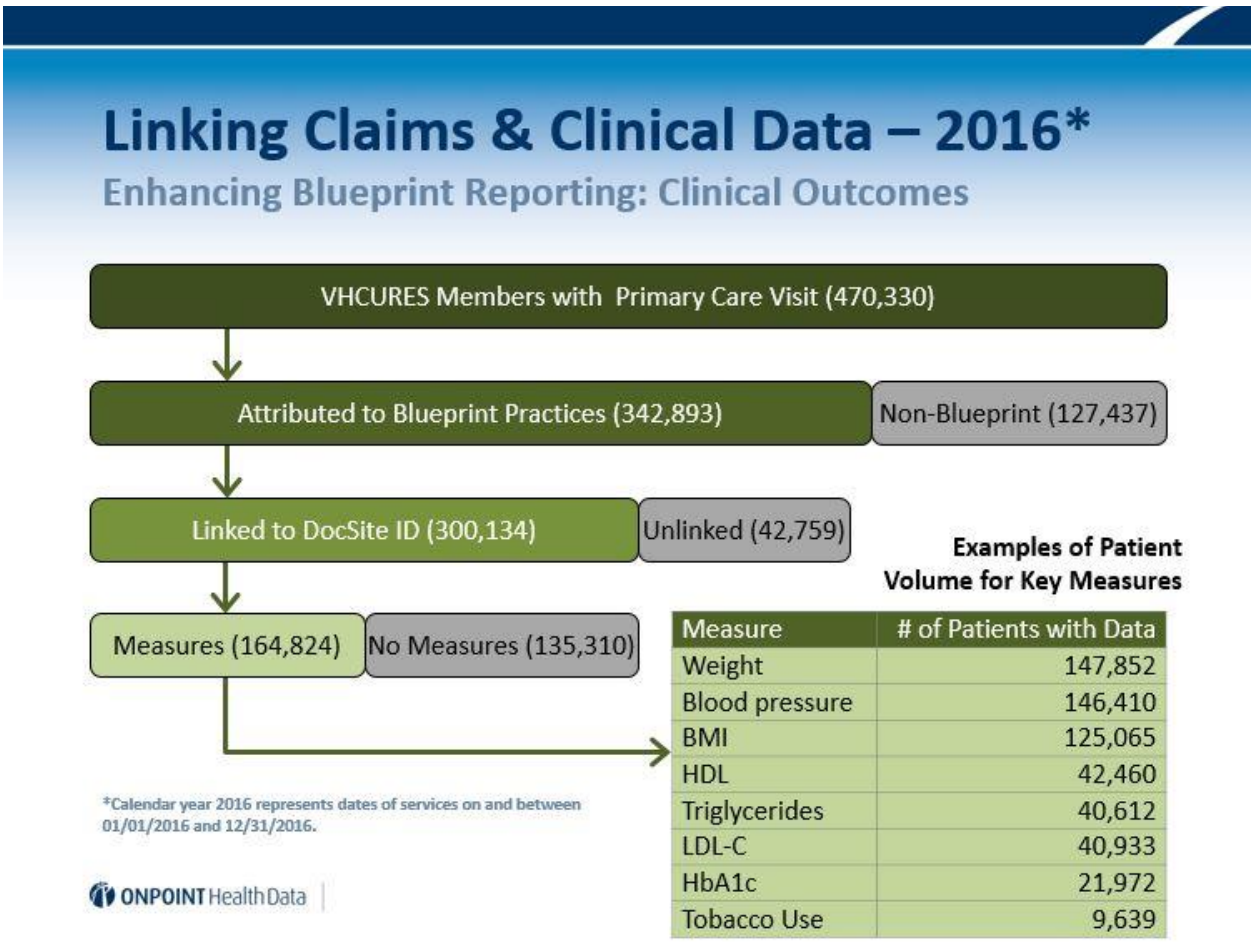
7.8.5 Collecting Data on Social Determinants of Health

In addition to working to engage as many practices and health systems as possible in submitting high-quality data to the Clinical Registry, the Blueprint and its vendor Capital Health Associates are working to expand the types of data included in the registry. The expansion focus for the year ahead is capturing data about social determinants of health. The Women's Health Initiative is implementing new screenings in practices, screenings for psychosocial risk factors like substance use, mental health, partner violence, housing and food insecurity. As Vermont's health system shifts attention and resources to keeping people healthy through primary prevention and community-based interventions addressing the social determinants of health, its data collection, analytics and reporting must follow. In the field, this becomes a technical process of investigating each type of EMR and its configuration in practices, looking for places to collect data about screenings and interventions, ensuring the data is codified, and then once the technical requirements are in place, building practice workflows to collect and enter the data during patient care. This expansion of the Registry's data to include more tracking of social determinants will be a focus area in 2018.

7.8.6 How Clinical and Claims Data are Aggregated for Comprehensive Reporting

The Blueprint has developed a process for aggregating Vermont's clinical data from the Vermont Clinical Registry, and claims data from the all-payer claims database, also known as the Vermont Health Care Uniform Reporting and Evaluation System (VHCURES). After analysis of the data in the Registry for quality and completeness, the data are de-identified and linked at the person level with the corresponding individual's claims records in VHCURES. This linkage is conducted by the Blueprint's analytics vendor, Onpoint, who determines the portion of the population in VHCURES for which clinical data can be associated with claims.

Figure 29: Step-Down of Claims and Clinical Data Aggregation



The linked data that is available begins to tell a compelling story of population health across regions. **Error! Reference source not found.** shows claims-based data on the percent of individuals with diabetes in an HSA's population who received HbA1c testing (chart on the left) and the clinical-based data on the proportion of those with HbA1c testing whose percent of glycosylated HbA1c is greater than 9%, an indication that their diabetes is not well-controlled (chart on right).

As another example of how the merging of claims and clinical data can benefit the health system, **Error! Reference source not found.** shows the difference in costs and utilization rates associated with individuals with diabetes who have their diabetes in control (HbA1c < 9%) and individuals with diabetes who do not (HbA1c ≥ 9%). These types of cost comparison dashboards, using clinical and claims data, can be used to provide meaningful guidance for state, community, and practice-level quality improvement initiatives.

Figure 30: Community Profile Extract Showing Reporting of Linked Clinical and Claims Data

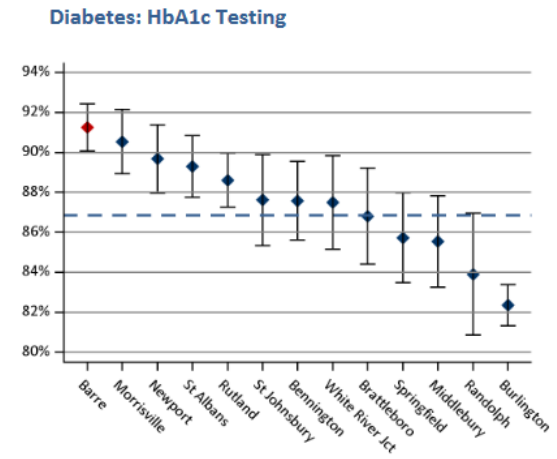


Figure 9: *Presents the proportion, including 95% confidence intervals, of continuously enrolled members with diabetes, ages 18–75 years, that received a hemoglobin A1c test during the measurement year. The blue dashed line indicates the statewide average.*

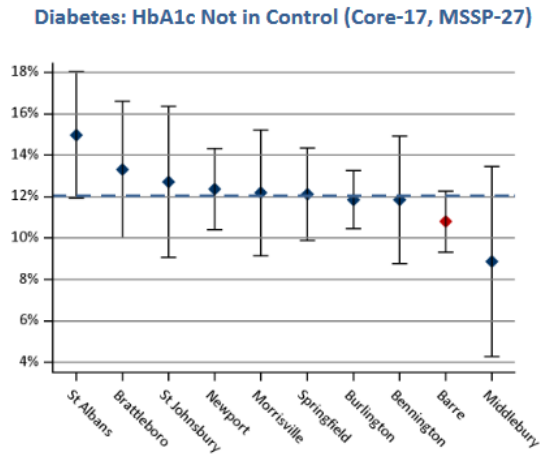


Figure 10: *Presents the proportion, including 95% confidence intervals, of continuously enrolled members with diabetes, ages 18–75 years, whose last recorded hemoglobin A1c test in the Blueprint clinical data registry was in poor control (>9%). Members with diabetes were identified using claims data. The denominator was then restricted to those with clinical results for at least one hemoglobin A1c test during the measurement year. The blue dashed line indicates the statewide average.*

7.8.7 Data Reports to Practices and Health Service Areas

Building on the Blueprint's data aggregation utility and data analysis capabilities, the program produces Practice Profile reports for all Blueprint practices with patient populations large enough for meaningful comparative analysis. There are distinct profiles for adults and for pediatric populations. These profiles report on a wide range of quality and utilization measures and compare practice results to local peer practices and a state average.

In 2017, the Blueprint produced two sets of profiles. The regular release of the profiles, with historical information included, provides primary care practices with a longitudinal look at their outcomes. They also help practices and Blueprint Practice Facilitators identify and prioritize quality improvement projects.

Since September 2014, practices have been receiving whole population profiles with data from all payers combined into a single report. Previously, performance data came separately from each payer. Providers rarely consider payer affiliation in their interactions with patients, so payer-specific data has limited usefulness in improving care. Very few practices had the resources to piece these reports together and assess performance for their patient population overall. This limitation persists with the ACO's attribution-based model as it comes to scale. The Blueprint overcomes these challenge with whole population profiles that include data for Vermont residents enrolled in major commercial health

plans, Medicaid enrollees for whom Medicaid was the primary payer (excluding dual-eligible beneficiaries), and Medicare enrollees for whom Medicare was the primary payer (ages 18 years and older and including duals).

The Blueprint distributes practice profiles directly to the primary contact on file with the Blueprint for each practice and to the Project Manager and Practice Facilitator representing the geographic hospital service area (HSA), as defined by the Vermont Department of Health (VDH), in which the practice is located.

The Blueprint also develops profiles at the hospital service area (HSA) level, essentially an aggregation, or "roll up," of the profiles for all practices within an area. These HSA Profiles provide data comparing utilization, expenditures, and quality outcomes within an individual HSA to all other HSAs and the statewide average.

Partnering with Vermont's ACOs, the Blueprint offers the HSA Profiles as a tool better operationalize statewide data collection and reporting, especially for ACO measures with a clinical component. To reduce the burden of clinical data collection (often through practice-level chart review) for production of the ACO measures, the Blueprint takes an extract from the statewide Blueprint Clinical Registry and sends it to the analytics vendor, Onpoint Health Data. The clinical data extract is then linked to the claims data from VHCURES to produce clinical and hybrid (claims/clinical) measures.

Socioeconomic and behavioral data from the Behavioral Risk Factor Surveillance System/BRFSS, a telephone survey conducted annually by the Vermont Department of Health (VDH), is also included in the HSA profiles (**Error! Reference source not found.**). This inclusion helps communities identify root causes of health disparities and identify behaviors that may impact health outcomes, with a goal of arming communities with the data they need to identify opportunities and integrate upstream prevention into the strategies they implement locally.

Figure 31: Extract of Community Profiles Showing Inclusion of Social Determinants Data

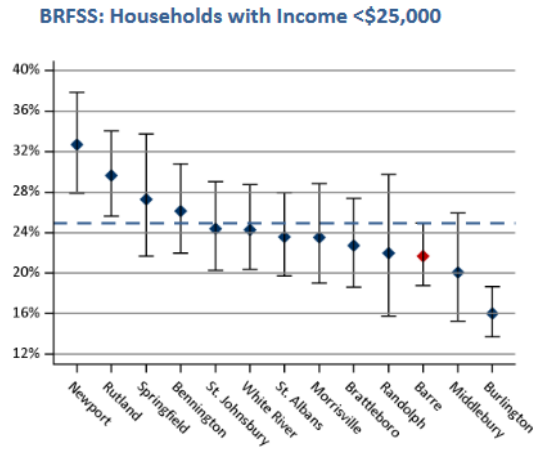


Figure 41: *Presents the proportion, including 95% confidence intervals, of Vermont residents, ages 18 years and older, that reported a household income of less than $25,000 per year. This data was collected through the Behavioral Risk Factor Surveillance System (BRFSS) Between January 2015 and December 2016. The blue dashed line indicates the statewide average.*

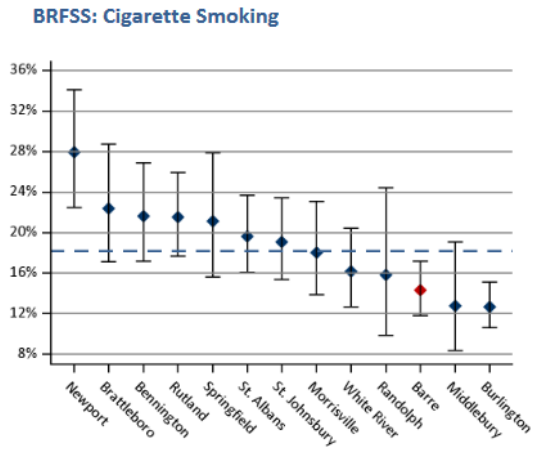


Figure 42: *Presents the proportion, including 95% confidence intervals, of Vermont residents, ages 18 years and older, that reported being cigarette smokers. This data was collected through the Behavioral Risk Factor Surveillance System (BRFSS) Between January 2015 and December 2016. The blue dashed line indicates the statewide average.*

The regular production of timely HSA Profiles across all payers that feature ACO core measures and key population health indicators serves as a starting point for community-wide quality improvement initiatives. Additionally, in January 2016, performance payments were implemented based on utilization (as reported in Practice Profiles) and quality measures (as reported in HSA Profiles).

Complete sets of both adult (ages 18 and older) and pediatric (ages 1 through 17) Blueprint HSA Profiles can be found on the Blueprint website: http://blueprintforhealth.vermont.gov/community-health-profiles. This year the Blueprint introduced profiles for the Hub and Spoke program, and these can also be found on the Blueprint website, at: http://blueprintforhealth.vermont.gov/hub-and-spoke-profiles.

7.9 Payment Reforms and Funding

7.9.1 Value-Based Payment Before 2017

In 2016, the Blueprint launched its first performance payment, providing Blueprint Patient-Centered Medical Homes with up to $0.50 per-member per-month for excellence in preventative and chronic care, and for appropriate hospital utilization. This payment built upon the base Patient-Centered Medical Home payments, and the Community Health Team payments, both of which were early examples of value-based payments rather than fee-for-service payments. In 2016, Blueprint leaders supported All-Payer Model planning, and its expansion of value-based payment. The model that emerged maintains the existing Blueprint Patient-Centered Medical Home and Community Health Team payment structure.

7.9.2 Impact of Enhanced Patient-Centered Medical Home Payments, Performance Payments

The Vermont Legislature approved the first increase in Blueprint Patient-Centered Medical Home funding in program history in the 2015 legislative session. The distribution of the addition funds was planned through a multi-stakeholder process, and new payments went into effect on January 1, 2016. These payments included both an increase in Patient-Centered Medical Home base per-member per-month payments and a new performance component. The overall payment increase was an essential tool for maintaining practice participation. Practice leaders had advocated for a funding increase for many years, telling the Blueprint and other health systems leaders that the cost of putting Patient-Centered Medical Home processes and procedures in place, and going through the scoring process, required far more resource than the payments supported. Several practices threatened to withdraw from the program if payments were level funded. The biggest impact of the enhanced payments has been continued participation of all practices in the Blueprint program (except for a small single-provider practice that closed when the provider relocated) and even the addition of new practices to the program.

The addition of a performance component sparked several advances in the program. First, the performance payments encouraged practices and communities to focus their attention and quality improvement work on the measured areas. For instance, almost fifty practices participated in the University of Vermont College of Medicine's Child Health Advances Measured in Practice (CHAMP) initiative funded by the Vermont Department of Health, which helped practices progress in providing developmental screening to more of their patient population ages 0-3.

Additional advances related to the new payments included more practices engaging with Blueprint vendor Capital Health Associates to submit their clinical data to the Vermont Clinical Registry, a collaborative process between the Blueprint and ACOs to plan the payment measures and amounts, and practice engagement with Community Collaboratives either directly or through their ACOs to satisfy a requirement for receiving the base payment.

Now that the Blueprint has operated for two full years with the enhanced payments, and has one full year of data available about practice performance on the measures associated with the performance payments, the Blueprint can begin estimating the impact of this payment component.

The table below shows the progress Blueprint Patient-Centered Medical Homes have made in providing adolescents in the patient population with well visits and the babies age zero to three with developmental screenings. The table also shows the progress they have made in reducing the percentage of their patients with diabetes whose last HbA1c test showed their diabetes in poor control. Lastly, the table shows a measure of hypertension in control, but it should be noted that the hypertension measure was recently substituted for a Chronic Care Composite measure in the payment model and was not targeted for improvement by the payment model during 2016.

Table 17: Progress of Blueprint Practices on Performance Payment Data

	RY 2015	CY 2015	RY 2016	CY 2016	2016 HEDIS 90th Percentile [Calculated from Commercial and Medicaid]	Which Direction is Better?
Adolescent Well Visit	50%	49%	41%	52%	64.15%	Higher
Developmental Screening < 3	46%	50%	54%	58%	N/A	Higher
Diabetes Poor Control >9	14%	12%	12%	12%	27.96%	Lower
Hypertension In Control		68%	66%	66%	73.04%	Higher

7.9.3 Creative Approaches to Funding PCMHs and CHTs in Year Zero of the All Payer Model

The All-Payer Model negotiations moved fast, and by late 2016 the Blueprint was planning for funding distribution under the new model. At this point, a challenge emerged: the All-Payer Model itself included Blueprint Patient-Centered Medical Home and Community Health Team funding beginning in Year One of the Model (2018). The start-up funding, for Year Zero (2017) did not include such funding. Blueprint leadership, Vermont health care reform leadership, and the Centers for Medicare and Medicaid Innovation Services (CMMI) worked together to remedy this. CMS released a grant designed to bridge this gap "Medicare Funding; Start-Up Funding in Support of the Vermont All-Payer Accountable Care Organization (ACO) Model-Cooperative Agreement." Vermont applied, and its application was accepted. While the grant's performance period spanned 2017, funding was not available beginning January 1. Vermont received the funds on March 3, 2017. After the state received the funds, more time was needed for the Joint Fiscal Office to ensure the state could completely comply with the grant's terms. Patient-Centered Medical Homes and Community Health Teams received their Blueprint payments for the first and second quarter of 2017 on April 14th. This unusual situation required open and ongoing communication between the Blueprint leadership and payments team and each Health Service Area's administrative entity, Patient-Centered Medical Homes, and Community Health Team. For the few communities that identified this delay as a substantial hardship, the Blueprint was able to provide interim funding through funds leftover from the early days of the MAPCP demonstration. This was also how the Designated Regional Housing Organizations were paid for Support and Services at Home (SASH) programming in the beginning of 2017. The Department of Vermont Health Access was instrumental in supporting this payment process. It is a testament to the communications and mutual trust between the Blueprint, DVHA, and participating communities that this funding gap was bridged with no interruption of services.

7.9.4 Aligning Medicare PCMH Payment Structure with Medicaid and Commercial Payment Structure

The major change to Blueprint payments in 2017 was a shift in the structure of Medicare's Patient-Centered Medical Home payments to align with Medicaid and commercial insurers' Patient-Centered Medical Homes payments structure. In 2016, under the advice of providers, the Blueprint changed

Patient-Centered Medical Homes Medicaid and commercial per-member per-month payments from an amount based on each practice's National Committee for Quality Assurance (NCQA) Patient-Centered Medical Home qualifying score to a flat base payment that is the same for every practice, supplemented by a performance payment. Providers preferred the flat base payment, because aiming to pass the NCQA Patient-Centered Medical Home qualification threshold would be less administratively burdensome than achieving a high score. It should be noted that the median practice score was higher after the flat base payment was adopted than when the base payment was calculated based on qualifying score. The freedom provided by the All-Payer Model allows Vermont to make its own decisions about the structure and amount of Medicare payments. On November 20, 2017, the Blueprint Executive Committee and the Blueprint Planning and Evaluation Committee approved a recommendation from Blueprint leadership to adopt a flat per-member per-month Patient-Centered Medical Home Medicare payment beginning January 1, 2017. That payment will be $2.00, $1.00 less than the Medicaid and commercial payments.

8 HEALTH SERVICE AREA (HSA) HIGHLIGHTS FOR 2017

Each year Blueprint Project Managers in all 14 HSAs tell us what the highlights of their year were for inclusion in the Annual Report. They report on which practices are part of the program in their area, staffing of their Community Health Teams, Spoke Medication Assisted Treatment teams, Women's Health Initiative, and SASH panels, how many referrals their Community Health Teams received or patient encounters they conducted, and more. They also report on their area's Community Collaborative, describe one or more key quality improvement projects, and highlight a major achievement their team is proud of. Please read on for more about what local Blueprint leaders (our Transformation Network) achieved in each HSA in their own words.

BARRE HEALTH SERVICE AREA
PROJECT MANAGER – Mark Young

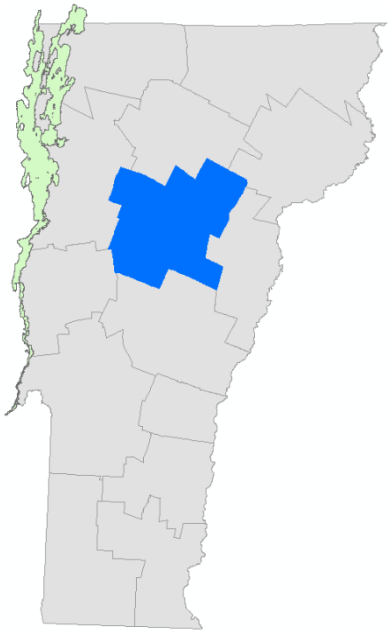


Photo of Barre Blueprint Team. *Bottom row left to right:* Tim Brennan, Panel Coordinator, Sandy Smith, Panel Coordinator, Meghan Lewia, Panel Coordinator, Maria Doon, RN, Kari Little, LICSW, Mindy Parisi, RN, Jennifer Taylor, MA; *Second row left to right:* Ginger Cloud, LCMHC, LADC, David Hernandez, RD, Deborah Pinard, RN, Monika Morse, Practice Facilitator, Kate Anderson, RN, Laura Phillips, LICSW, Dorothy Robinson, MSW, Amber Larrabee, LPN; *Back row left to right:* Evan Smith, MAT Lead, Mark Young, Project Manager, Kate Bean, RD, CDE, Sharon Lykins-Brown, RN, Lisa Champagne, Self-Management Regional Coordinator, Walter Ziske, Panel Coordinator

Barre by the Numbers

30,259	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
19.69	Community Health Team Staff FTEs
6.45	Spoke Staff FTEs
1.0	Women's Health Initiative Staff FTEs
5.5	SASH Teams
22	Self-Management Workshops Offered in 2017
141	Self-Management Workshop Graduates in 2017
8,678	Community Health referrals or Community Health Team encounters
425	All-Payer Patients in Medication Assisted Treatment
250	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

BARRE HEALTH SERVICE AREA continued . . .

Community Collaborative

Community Alliance for Health Excellence

Community Collaborative

The Community Alliance for Health Excellence represents 23 organizations in our medical neighborhood, with a steering committee consisting of 13 organizations that meet monthly. There are four subgroups with the following focuses: Care Coordination and Case Management for Complex Patients; Reducing Admissions/Readmissions for Congestive Heart Failure; Screening and Intervention for Adverse Childhood Experiences (ACEs); and Increasing Palliative Care/Hospice Utilization.

Spotlight on QI Projects

Complex Care Coordination – Goal: Improve care coordination by collaborating with community partners to develop a shared care plan, lead care coordinator, and data collection for patients engaged with multiple service providers. Since the initiation of the Complex Care Coordination Pilot we have collected data showing a decrease in emergency department and inpatient visits, and an increase in primary care and community resource utilization. We have aligned the work of the Complex Care Coordination Pilot with the Vermont Medicaid Next Generation ACO care model, utilizing the tools from the pilot to engage patients and communicate with care partners. Our current focus is on expanding the number of users accessing and communicating in Care Navigator across organizations in our medical neighborhood.

Congestive Heart Failure (CHF) - Goal: Reduce hospital readmissions by 5% for patients with CHF. The pilot employed a team based approach to caring for a CHF panel of patients for one PCP in a PCMH. Patients received panel management, care coordination, case management services, and scheduled for pre-planned co-visits with the community health team and provider on specific disease oriented "CHF Clinic Days." Patients participated in co-visits with the physician and patient navigator. Data from the CHF pilot suggested cost savings, higher rates of advanced care planning, and increased quality of care. The pilot was expanded to Adult Primary Care-Barre with a devoted RN Community Health Team navigator to provide team based care for CHF patient panel.

Hospice and Palliative Care – Goal: Improve utilization, understanding, and access to Hospice Care by 5% in Central VT through provider and community education. A total of 44 providers attended a CME that focused on Advanced Directives, Hospice Services and ACT 39, and consequent utilization of advance care planning CPT billing codes being tracked. Approximately 177 community members participated in a film showing of "Being Mortal" and discussion that addressed end of life conversation and hospice services. Current efforts focus on revising policies and changing workflows to achieve a systematic change ensuring that the advanced care planning materials are accessible at all patient contact points: Registration, Inpatient, Emergency Department, and Outpatient.

Prevention of Adverse Childhood Events (ACEs) – Goal: Decrease ACEs in our community by addressing the social determinants of chronic toxic stress in families and reduce health care utilization and long-term costs by reducing disease burden in our population. Pilot universal screening for ACEs with family support specialists embedded within a primary pediatric practice.

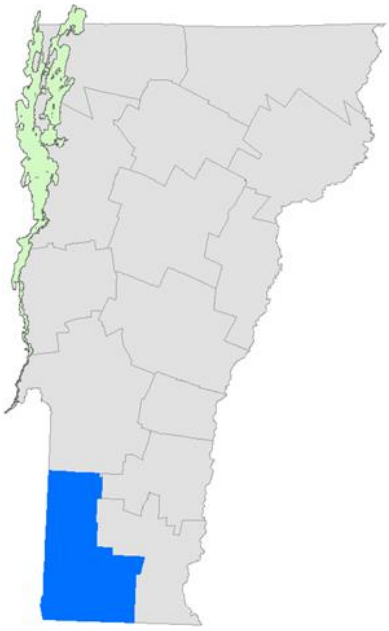
Screening Brief Intervention and Referral to Treatment (SBIRT) – Goal: Integrate SBIRT services into our Women's Health Clinic, Emergency Department, Inpatient Hospitalist Unit, and Patient Centered Medical Homes. Our team works diligently to coordinate patient care between these settings. The Washington County Substance Abuse Regional Partnership, an SBIRT initiated group of substance abuse treatment stakeholders, have been working together to create patient /family centered pathways to receiving comprehensive care.

BARRE HEALTH SERVICE AREA continued . . .

Blueprint Practices:

CVMC Adult Primary Care - Barre
CVMC Adult Primary Care - Berlin
CVMC Family Medicine - Berlin
CVMC Family Medicine - Mad River
CVMC Family Medicine - Waterbury
CVMC Granite City Primary Care
CVMC Green Mountain Family Practice
CVMC Integrative Family Medicine
CVMC Pediatric Primary Care – Barre
CVMC Pediatric Primary Care – Berlin
Green Mountain Natural Health
The Health Center
UVMMC Family Medicine - Berlin

BENNINGTON HEALTH SERVICE AREA
PROJECT MANAGER – Jennifer Fels, MS, RN



Bennington Community Collaborative

Bennington by the Numbers

17,249	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
6.6	Community Health Team Staff FTEs
5.2	Spoke Staff FTEs
0.5	Women's Health Initiative Staff FTEs
4.5	SASH Teams
24	Self-Management Workshops Offered in 2017
73	Self-Management Workshop Graduates in 2017
9,576	Community Health Team encounters
340	All-Payer Patients in Medication Assisted Treatment
230	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

BENNINGTON HEALTH SERVICE AREA continued . . .

Community Collaborative

Bennington Community Collaborative

About the Community Collaborative:

The Bennington Community Collaborative meets eight times per year. Membership includes Agency of Human Services, Department of Health, Southwestern Vermont Medical Center (SVMC), Blueprint for Health, SASH, Home Health, Long Term Care, Council on Aging, FQHC, Bennington Free Clinic, United Counseling Services, and OneCareVT.

Spotlight on QI Projects

Reserved bed at the Bennington Homeless Shelter
Development of Co-management agreement among Bennington Spoke Practices
Bennington Prescription Task Force – Medication Drop Box Installed at SVMC
Initiation of Bennington RiseVT
On-boarding a 6th Spoke Practice

Major Achievement

In 2017, the Bennington Health Service Area (HSA) implemented the Blueprint Women's Health Initiative. The initiative has strengthened community relationships that build on shared goals, which directly impacts the health of the population. WHI project has included universal risk screening in the practice and next day appointments.

Blueprint Practices:

Avery Wood, MD
Battenkill Valley Health Center (FQHC)
Brookside Pediatrics and Adolescent Medicine
Keith Michl, MD
Eric Seyferth, MD
Green Mountain Pediatrics
Mount Anthony Primary Care
Shaftsbury Medical Associates
SVMC Deerfield Valley Campus
SVMC Northshire
SVMC Internal Medicine
SVMC Pediatrics
SVMC Pownal
SVMC OB/GYN (Women's Health Initiative)
Hawthorn Recovery Center (Spoke)
United Counseling Services Intensive Medication Treatment (IMAT) (Spoke)

BRATTLEBORO HEALTH SERVICE AREA
PROJECT MANAGER – Jodi Dodge, MSN, BBA, RN

Brattleboro by the Numbers

14,594	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
10.5	Community Health Team Staff FTEs
3.5	Spoke Staff FTEs
1.0	Women's Health Initiative Staff FTEs
3	SASH Teams
20	Self-Management Workshops Offered in 2017
70	Self-Management Workshop Graduates in 2017
7,939	Community Health Team encounters
133	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

BRATTLEBORO HEALTH SERVICE AREA continued . . .

Community Collaborative

Brattleboro Health Service Area Regional Clinical Performance Committee (RCPC)

About the Community Collaborative:

The Brattleboro Health Service Area Regional Clinical Performance Committee (RCPC) meets monthly and includes leadership representation from Brattleboro Memorial Hospital, The Brattleboro Retreat, Health Care & Rehabilitation Services (HCRS), Senior Solutions, Bayada, Visiting Nurses and Hospice, Support and Services at Home, The VT Blueprint for Health, Agency of Human Services, Vermont Department of Health, and OneCare VT.

Spotlight on QI Projects

MeD Scores– The Brattleboro Memorial Hospital Medical group has taken a proactive approach to ensuring the safety and wellbeing of patients on chronic narcotic pain medication. Morphine Equivalent Dosage (MeD) scores are calculated and tracked quarterly by clinicians (patients with cancer and hospice are excluded). Workflows are in place to ensure that patients have a controlled substance agreement on record. Calendars are maintained with due dates of refills and VPMS is tracked and documented in the chart. The Medical Group has created a task force to support this work and identify opportunities to better care for these patients.

Transportation-Grace Cottage CHT identified transportation as a barrier to health care access, with 100-130 visits being cancelled each year due to transportation. To address this issue, a volunteer driver program was established in collaboration with Green Mountain RSVP. The program, which started with one dedicated driver, has grown in the past year to 7 drivers. Rides have been provided to Brattleboro Memorial Hospital, the Brattleboro Retreat, and occasionally to Cheshire Medical Center and Dartmouth Hitchcock Medical Center in urgent situations. To date, 100% of requested rides have been provided and a grant has been secured to assist volunteer drivers with fuel cards.

Substance Exposed Infants – The number of infants born exposed to substances has greatly increased over the past several years in the Brattleboro HSA. The RCPC identified this as an area of focus in 2017 and began working on a detailed list of available resources in the area. By connecting agencies focused on maternal child health and substance misuse, a new workgroup was formed. Brattleboro OBGYN's participation in the Women's Health Initiative has supported this work through enhanced psychosocial screenings and an embedded Social Worker in the practice. The group has identified a variety of ways to strengthen care coordination for high risk pregnancies, and this work will continue in 2018. In November of 2017, the Birthing Center at Brattleboro Memorial Hospital began a "cuddlers" volunteer program to support these infants.

Major Achievement

In October 2017, the Brattleboro HSA RCPC voted to begin the work necessary to become an Accountable Community for Health. Members of the RCPC are participating in the statewide ACH Learning Lab and are excited to begin the work of implementing this innovative approach to Population Health in the Brattleboro HSA.

Blueprint Practices:

Biologic Integrative Healthcare
Brattleboro Family Medicine
Brattleboro Internal Medicine
Brattleboro OBGYN
Brattleboro Primary Care
Grace Cottage Family Health
Just So Pediatrics
Maplewood Family Practice
Putney Family Healthcare
Starting Now
Windham Family Practice

BURLINGTON HEALTH SERVICE AREA
PROJECT MANAGER – Pam Farnham

Burlington by the Numbers

89,453	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
42.61	Community Health Team Staff FTEs
14.8	Spoke Staff FTEs
1.0	Women's Health Initiative Staff FTEs
18	SASH Teams
26	Self-Management Workshops Offered in 2017
132	Self-Management Workshop Graduates in 2017
7,727	Community Health Team referrals or Community Health Team encounters
508	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

BURLINGTON HEALTH SERVICE AREA continued . . .

Community Collaborative

Chittenden Accountable Community for Health (CACH)

About the Community Collaborative:

CACH meets the first Wednesday of every month. We currently have members from primary care practices, SASH, VDoH, Bayada, VNA, VCHIP, Howard Center, Age Well, Qin QIO, Agency of Human Services, VPQHC, VCCI, One Care, UVM MC, and Planned Parenthood. We have four workgroups: Mental Health, Pediatrics, Family Planning and Complex Care.

Spotlight on QI Projects

Mental Health First Aid – We aim to have at least one trained trainer in MHFA who can lead trainings in the community. The goal is to give people the resources to send people in crisis to the appropriate agency and not always the ED as well as try to de-stigmatize mental health issues within the community.

Raise Adolescent Well visits – Our plan is to target one community at a time and use a multiple sector approach for broad community education, by reaching out to school nurses, Front Porch Forum, flyers in family and adult medical homes, etc. with the goal of saturating one town before moving to the next.

Family Planning – The goal is to improve access to family planning, improve care coordination for family planning services, and provide list of community referrals resources to family planning clinics.

Major Achievement

We have incorporated the Health Assistance Program (HAP) into CHT. In the words of one of our HAP case managers:

"The Health Assistance Program is more than just a fund that pays for people's prescriptions. Our team of dedicated case managers put patients and their families first, and works to ensure that their needs are met. Without the support of the UVMMC and community partners, families would have to overcome barriers that stand between themselves and wellness. This work reminds me that I am part of a system that is made up of people. It can be frustrating to see pharmaceutical companies and insurance companies control an individual's healthcare, but I know at the UVM Medical Center it is the faces of *people* that truly matter."

We have also had amazing success with our Healthier Living Workshops, as quoted by a participant:

"The (Diabetes Self-Management) program was good reminder of much of what I already knew, regarding maintaining my health as a Type II Diabetic. It was helpful to be with other participants who shared many similar challenges to my own. During the time I was also able to develop plans that have allowed me to return to my regular exercise routine, after interruptions to that schedule earlier in the summer."

Blueprint Practices:

Adult Primary Care – Burlington, Essex, South Burlington, Williston
Affiliates in OBGYN
Alder Brook Family Health
Appletree Bay Primary Care
Champlain Center for Natural Medicine
Champlain OBGYN
Charlotte Family Health Center
Chris Hebert, MD
Community Health Centers of Burlington
Essex Pediatrics
Evergreen Family Health
Family Medicine – Colchester, Hinesburg, Milton, South Burlington, Williston
Frank Landry, MD, PLC
Gene Moore, MD
Hagan; Rinehart and Connolly Pediatricians; PLLC
Mountain View Natural Medicine
Pediatric Primary Care – Burlington, Williston
Richmond Family Medicine
Timber Lane Pediatrics
Thomas Chittenden Health Center
UVMMC Infectious Disease Clinic
Winooski Family Health
VT Naturopathic Clinic

MIDDLEBURY HEALTH SERVICE AREA
PROJECT MANAGER – Susan Bruce

Photo *L – R*: Susan Bruce, Michele Butler, Kathleen Van De Weert, Tammy Nary, Michelle Clark, Cathy Swearingen, Angel Bishop. Missing: Ed Lieberman, Matthew Couch, Doug Corey, Amanda Van De Weert, Anne Bolger, Sumra Harper-Deas, Therese Giles, Shawn Thompson-Snow, Emily Mason, Deb Eaton

Middlebury by the Numbers

14,600	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
7.8	Community Health Team Staff FTEs
2	Spoke Staff FTEs
0.5	Women's Health Initiative Staff FTEs
3.5	SASH Teams
4	Self-Management Workshops Offered in 2017
12	Self-Management Workshop Graduates in 2017
2,000 +	Community Health Team encounters
150	All-Payer Patients in Medication Assisted Treatment
84	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

MIDDLEBURY HEALTH SERVICE AREA continued . . .

Community Collaborative

Community Health Action Team (CHAT)

About the Community Collaborative:

CHAT is a Community collaborative that promotes the cohesive integration of health and human services addressing both the medical and non-medical needs that impact measurement results and outcomes, including social, economic, and behavioral factors. The structure, with administrative support locally from the Blueprint and the ACOs, will result in more effective health services as measured by improved results in quality, health status, utilization, and experience of care.

Spotlight on QI Projects

Well-Child Visit Rates: In Oct 2016, Porter Pediatrics began an initiative to improve their well child visit rate. 26% of patients (approx. 800 patients) were overdue and not scheduled. The practice began outreach via letters and phone calls. They also set a policy of encouraging all patients to schedule their next physical before leaving the office. To assist in this practice, the receptionists reviewed the schedule each day to determine who needed to schedule a well visit. After one year, the rate of overdue and unscheduled patients was lowered from 26% to 17.5% (down 300 patients). Those with their next well visit scheduled rose from 26.4% to 42.8%.

Improve transitions of care management from ED visits and inpatient hospitalizations (Mountain Health Center): In early 2017 MHC signed up for Patient Ping to receive notification when one of our patients is discharged from a hospital in VT which we now use as a tool to assist in our transitions of care. When a "ping" is received MHC is requests a discharge summary if not received within a day. It is our goal to receive all discharge summaries within two business days following a discharge. Patients discharged from an inpatient stay are called by an RN to follow up on their current condition, review discharge instructions, review medication changes/instructions, new prescriptions, address questions/concerns and to schedule a follow up appointment with their PCP. We also follow up with patients after ED discharges to encourage them to make hospital follow up appointments when appropriate. The implementation of Patient Ping has been essential to providing timely, comprehensive transitions of care to our patients.

Major Achievement

We have increased our number of MAT waivered providers from two to seven over the last year and have started seeing MAT patients at three practices (up from one).

Blueprint Practices:

Middlebury Family Health
UVM Health Network Porter Medical Center Primary Care Middlebury
Rainbow Pediatrics
UVM Health Network Porter Medical Center Pediatric Primary Care
Mountain Health Center
UVM Health Network Porter Medical Center Primary Care Bristol
UVM Health Network Porter Medical Center Primary Care Vergennes
UVM Health Network Porter Medical Center Primary Care Brandon

MORRISVILLE HEALTH SERVICE AREA
PROJECT MANAGER – Elise McKenna, RN, MSED, MPH

Morrisville by the Numbers

18,228	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
7.5	Community Health Team Staff FTEs
4.8	Spoke Staff FTEs
1.0	Women's Health Initiative Staff FTEs
1.0	SASH Teams
21	Self-Management Workshops Offered in 2017
79	Self-Management Workshop Graduates in 2017
1105	Community Health Team unique patients seen for face-to-face visits
2346	Community Health Team face-to-face visits
334	All-Payer Patients in Medication Assisted Treatment
242	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

MORRISVILLE HEALTH SERVICE AREA continued . . .

Community Collaborative

Unified Community Collaborative (UCC): Our UCC involves eleven health care and human service organizations. We meet monthly. The leadership team of this group, the Executive Committee of Health Organizations (ECHO), meets quarterly. The work of the Lamoille UCC focuses on Collective Impact and health care reform efforts through partnerships and multi-organizational initiatives across continuum of care settings.

Executive Community Healthcare Organization (ECHO): There are a total of eight HSA-wide QI initiatives integrated through the UCC: Post-hospital Home visits for medication reconciliation, Care Management Team for complex patients, PCP referral request from patients seen in the ED, Maintaining a "no wait list" for patients seeking office-based opioid treatment, increasing the number of self-management workshops offered in the HSA, increasing the number of participants in self-management workshops in the HSA, reducing the number of individuals with diabetes in poor control (defined by an HbA1c over 9), and increasing the number of adolescent well visits.

Spotlight on QI Projects:

The ED project: A Social Worker (SW) was hired in the Copley ED to both reduce the number of frequent utilizers and improve patients connected to Primary Care that went to the ED who did not have a PCP. There were 378 referrals to a PCP, of these 216 (58%) were connected to a Primary Care Medical Home. For this project, a pilot study was performed in which 29 "Super Utilizers" (> than 4 in 90 days) accounted for 143 visits (or 4% of the total ED visits) in the first 90 days. In the second 90 days after care coordination interventions, they accounted for 32 ED visits (or 1% of the total ED visits in that time.) This was an estimated cost savings of $144,300.

The AWV project: The initiative started last year with just two medical homes and now all eight (100%) of medical homes in the HSA are performing Adolescent Well Visits (AWV) outreach. The goal to increase the number (AWVs) throughout the HSA.

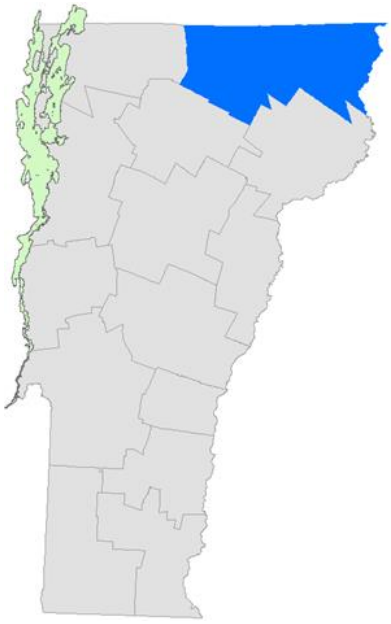
Major Achievement

The most significant achievements in our HSA are the growing multi-organizational partnerships established to create Collective Impact on populations where there are gaps in our healthcare system. These partnerships are particularly essential when a patient has both clinical and social health needs. Two significant examples include: the coordination of care involving at least eight organizations to address complex patients through a sharing of patients' clinical & social information between the Lamoille Care Management Team and the Local Interagency Team. The second is the partnership between Copley Hospital, Community Health Services of Lamoille Valley (CHSLV), and the Primary Care Medical Homes for an Emergency Department Social Worker as mentioned above.

Blueprint Practices

Family Practice Associates
Stowe Natural Family Wellness
Appleseed Pediatrics
Stowe Personalized Medical Care PLLC
Paul Rogers
Morrisville Family Practice
Stowe Family Practice

NEWPORT HEALTH SERVICE AREA
PROJECT MANAGER- JULIE RIFFON



Newport by the Numbers

13,482	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
4.3	Community Health Team Staff FTEs
0	Spoke Staff FTEs
0	Women's Health Initiative Staff FTEs
3.5	SASH Teams
10	Self-Management Workshops Offered in 2017
71	Self-Management Workshop Graduates in 2017
2,538	Community Health Team unique patients seen for face-to-face visits

*Claims-attributed

NEWPORT HEALTH SERVICE AREA continued . . .

Community Collaborative

Upper Northeast Kingdom Community Council (UNEKCC)

About the Community Collaborative:

The purpose and mission of the UNEKCC as an Accountable Health Community is described as "commitment to significantly improving the health and wellbeing of the people in Orleans and Northern Essex counties." Membership includes the Chief Executive Officers or their designee from North Country Hospital, NEK Community Action, NEK Human Services, Northern Counties Health Care, RuralEdge, Newport District VT Department of Health, Orleans Essex VNA & Hospice, Council on Aging and the supervisory unions serving the HSA. The aim is to address the Priority Health Concerns identified in the 2015 Community Health Needs Assessment by utilizing the key principles of the collective impact model.

Spotlight on QI Projects

Opioid Prescribing: Implementation of new opiate prescribing workflows to meet the 7/1/17 rules across all primary care, specialty practices and hospital departments. This QI Project linked to the priority health concern of substance abuse identified by NCH's Community Health Needs Assessment.

Food Security: Implementation of HealthCare Shares program with goal to increase % of vegetables consumption among participants. Orleans County has the lowest % vegetables and fruit consumption in Vermont. This included 60 families who were referred by primary care and pediatric practices, with 195 individuals, including 84 children. All participated in the 12-week program which provided weekly locally grown vegetables, food samples and recipes. North Country Hospital collaborated with the Vermont Youth Conservation Corps, Upper Kingdom Food Access and other community partners to launch this program. This QI Project linked to priority health concern of overweight/obesity identified by NCH's Community Health Assessment

Access to Mental Health Services: Expansion of psychiatric services embedded in primary care and development of related referral workflows with goal to provide 5 days/week of psychiatric services. This QI Project linked to the priority health concern of access to mental health services identified by NCH's Community Health Needs Assessment.

Major Achievement

Successful collaboration between North Country Hospital and Northern Counties Health Care resulted in the award of a HRSA grant to build a full service Dental Center in Orleans, VT which opened in January 2017, significantly improving oral health services within the HSA.

Blueprint Practices:

Island Pond Health Center
North Country Pediatrics
North Country Primary Care Barton Orleans
North County Primary Care Newport

RANDOLPH HEALTH SERVICE AREA
PROJECT MANAGER – PATRICK CLARK

Pictured (left to right): Noreen Fordham, CHT Care Coordinator; Megan Sault, SMP Regional Coordinator/CHT Care Coordinator; Carolyn Higgins, Health Coach/CHT Care Coordinator; Jean Copeland, CHT Care Coordinator; Kayla Thibault (and son), CHT Care Coordinator; Patrick Clark, BP Project Manager; Lisa Delegato, CHT Supervisor

Randolph by the Numbers

9,667	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
4.6	Community Health Team Staff FTEs
3.1	Spoke Staff FTEs
0.5	Women's Health Initiative Staff FTEs
1	SASH Team
18	Self-Management Workshops Offered in 2017
121	Self-Management Workshop Graduates in 2017
740	Community Health Team referrals
100	Medicaid Patients in Medication Assisted Treatment

*Claims-attributed

RANDOLPH HEALTH SERVICE AREA continued . . .

Community Collaborative

Randolph Executive Community Council (RECC)

About the Community Collaborative:

The RECC has representation from 17 community partners within the Randolph HSA. We have begun developing our Care Coordination, Rise VT/3-4-50, Self-Management Programs, and Clinical Quality Improvement subgroups. In addition, we currently have an Opioid Workgroup. The RECC meets monthly and the members are committed to working across organizational boundaries to determine how we can best serve all segments of our population in a person-centric fashion.

Spotlight on QI Projects

Advance Directives: We have been working diligently with community partners to increase the number of individuals with completed advance directives. The CHT has been meeting with patients one-on-one to guide them through the process, and we organized trainings to educate community partners on the process. We are reporting out to the PCMHs monthly their percentage of patients with completed advance directives.

ED High Utilizers: We have a workgroup focused on reducing ED utilization for patients with 6 or more ED visits within a 12-month period. We have completed ED action plans for this patient cohort, and created a mechanism within our EHR that notifies ED staff members that an action plan is active for this patient cohort. In addition to the ED action plans, we are also completing shared care plans for these patients in the primary care setting. This workgroup also updated all community resource guides so that the ED staff can provide accurate info to patients seeking community resources.

Shared Care Planning/Care Coordination: We have expanded our shared care planning operations by creating two additional recurring multi-organizational care team meetings. One is for individuals receiving VT Chronic Care Initiative supports, and the other is for individuals receiving services at both Gifford Health Care and the Clara Martin Center.

Major Achievement

Over the past year, we have greatly increased our capacity to treat people with substance use disorders, including more than tripling our capacity to provide medication assisted treatment to people with opioid use disorder. The addition of the new Addiction Medicine program at Gifford and the expansion of treatment services at the Clara Martin Center should contribute to improving rates of initiation and engagement in treatment within our Health Service Area.

Blueprint Practices:

Bethel Health Center
Chelsea Health Center
Gifford Addiction Medicine
Gifford Health Center at Berlin
Gifford OB/GYN and Midwifery
Gifford Primary Care and Pediatrics
Rochester Health Center
South Royalton Health Center
Twin River Health Center

Rutland HEALTH SERVICE AREA
PROJECT MANAGER Sarah Narkewicz RN, MS CDE

Rutland by the Numbers

28,977	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
13	Community Health Team Staff FTEs
5.3	Spoke Staff FTEs
1.5	Women's Health Initiative Staff FTEs
5	SASH Team FTEs
58	Self-Management Workshops Offered in 2017
218	Self-Management Workshop Graduates in 2017
507	Community Health Team referrals: 348 for case management, 120 for advance directions, 39 for in-home asthma intervention
316	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

Rutland HEALTH SERVICE AREA continued . . .

Community Collaborative

Rutland Collaborative for Health System Improvement, Innovation and Integration, (RHSIII) is Rutland's community collaborative and the ACH is Achieving Rutland County Health (ARCH), whose membership includes executive leadership of core health related agencies. The community collaborative focuses on clinical health improvement efforts and ARCH focuses on aligning community wide health improvement efforts. The plan for 2018 is to merge the two leadership groups.

Spotlight on QI Projects

RCPC: Focuses on All Cause Readmission by increasing appropriate referrals to palliative care (supportive services), the use of common education materials across the community, identifying root cause of readmissions, creating a standard process for transitions in care and patient engagement. The All Cause Readmission rate dropped from 11.0% in FY16 to 11.3% in FY17.

Integrated Community Care Coordination Collaborative: The effort to support patients who are the highest users of the Emergency Department and In-Patient visits continues to expand. To date 43 patients have been targeted, and 34 of these patients are engaged with a Lead Care Coordinator. Hospital visits for the engaged population has decreased, with 11 of the 34 patients having no hospital visits in September and October 2017. Lead Care Coordinators represent the CHT, Primary Care, VCCI and the Designated Agency, Rutland Mental Health. Two thirds of the targeted patients qualify for Medicaid. Care Coordination Skills training is offered once a quarter with 12 health and human service professionals attending each session.

Women's Health Initiative: RRMC Women's Health Center is already seeing a dramatic increase in the use of LARC. In 2016, 252 devices were placed; and in 2017, 676 devices were placed. The screening for risk factors has found that over 50% of the women screened have an identified need. For the months of September and October 2017, the highest risk factor is binge drinking (42%) followed by emotional health (28%). Social workers are providing brief intervention and referrals for these women.

Major Achievement

Community System for Care Coordination: RRMC and CHCRR are partnering to develop a seamless care management program. The two organizations have agreed to jointly hire a Senior Director of Care coordination that will oversee the system of care in both organizations. Changes to systems include creating hospital teams that are assigned to care for in patients from designated practices. CHCRR has assigned Care Managers for each practice to support high and very high-risk patients. These care managers will determine which patients are referred to the CHT and other services. The American Academy of Family Physician's Risk Stratification matrix is used to identify patient risk levels.

Blueprint Practices:

Allen Pond Community Health Center
Associates in Primary Care
Brandon Medical Center
Castleton Family Medical Center
Dr. Jennifer FauntleRoy
Drs. Peter and Lisa Hogenkamp
Marble Valley Family Medical Center
Mettowee Valley Family Health Center
CHCRR Pediatrics
Planned Parenthood of Northern New England Rutland Clinic
Recovery House
Rutland Community Health Center
Rutland Regional Medical Center Women's Health Center
Shorewell Community Health
Westridge Center for Addiction Recovery (NCQA Specialty Recognition)

ST. ALBANS HEALTH SERVICE AREA
PROJECT MANAGER –Lesley Hendry

St. Albans by the Numbers

21,314	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
11.65	Community Health Team Staff FTEs
9.1	Spoke Staff FTEs
1.0	Women's Health Initiative Staff FTEs
2.5	SASH Team
16	Self-Management Workshops Offered in 2017
57	Self-Management Workshop Graduates in 2017
4,138	Community Health Team In-Person Encounters
396	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

ST. ALBANS HEALTH SERVICE AREA continued . . .

Community Collaborative

Regional Clinical Performance Council

About the Community Collaborative:

All ACO participating providers and affiliates meet once a month to plan for community-wide quality improvement projects, resource allocation, and governance planning for the next phases of payment and delivery reform. The Care Coordination/Management, Medication Reconciliation, and RWJF grant all report directly to the RCPC on a quarterly basis.

Spotlight on QI Projects

Integrating Behavioral Health into Primary Care – Primary Care learning collaborative in Partnership with our Designated Agency, Northwestern Counselling and Support Services, and One Care Vermont established to integrate mental health professionals into primary care to address the screening for, and intervention on, behavioral health concerns in the community.

Medication Reconciliation Through Transitions of Care – Workgroup encompassing primary care practices, the hospital, and community partners to identify process improvements that contribute to accurate and complete reconciliation of medications. This will support a decrease in the rate of adverse drug events and a decrease in prescription errors related to unreconciled medications.

Major Achievement

The Integrating Behavioral Health into Primary Care Learning Collaborative met quarterly and most practices chose to work on depression screening and follow-up. All practices undertook workflow changes to create a system where a positive screen results in a warm hand-off, when possible, or a referral to services. As a result, one practice showed an increase in screening rates from 50% to 93% within the grant year. Other significant successes were the creation of templates to better document screening and actions, and practice reports that having an embedded Social Worker is invaluable.

Blueprint Practices:

Alburgh Health Center
Cold Hollow Family Practice
Enosburg Health Center
Fairfax Associates in Medicine
Fairfield Street Health Center
Northwestern Primary Care
Northwestern Georgia Health Center
Northwestern Pediatrics- Saint Albans
Northwestern Pediatrics- Enosburg Falls
Northwestern Pediatrics- Swanton
Richford Health Center
Saint Albans Primary Care
Saint Albans Health Center
Swanton Health Center
Northwestern Primary Care

ST. JOHNSBURY HEALTH SERVICE AREA
PROJECT MANAGER – Laural Ruggles

St. Johnsbury by the Numbers

12,430	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
11.3	Community Health Team Staff FTEs
2	Spoke Staff FTEs
0.75	Women's Health Initiative Staff FTEs
2.5	SASH Teams
23	Self-Management Workshops Offered in 2017
150	Self-Management Workshop Graduates in 2017
8,808	Community Health Team Referrals or Community Health Team Encounters
815	All-Payer Patients in Medication Assisted Treatment
91	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

ST. JOHNSBURY HEALTH SERVICE AREA continued . . .

Community Collaborative:

Caledonia and So. Essex Accountable Health Community

About the Community Collaborative:

Our Accountable Health Community is committed to our shared goal of improving the health and well-being of the people in Caledonia and southern Essex Counties by integrating our efforts and services, with an emphasis on reducing poverty in our region. Our communities will be: Well Nourished, Well Housed, Physically Healthy, Mentally Healthy, and Financially Secure.

Spotlight on QI Projects:

Concord Health Center, Danville Health Center, St. Johnsbury Family Health Center
Diabetes Visits: Our project aim is to increase the number of people with diabetes scheduled for timely follow-up visits and receiving at least annual HgA1c testing. Several interventions were initiated: calling patients overdue for a diabetes visit; proactively scheduling three or six-month follow up visits; sending out letters asking about eye care appointments. Our goal is to get to 90%. We started with a baseline of 81% in June 2017 and improved to 84% by September 2017.

St. Johnsbury Pediatrics Adolescent Well-Care Visits: The project began with a Learning Session in September 2016 and as completed by May 2017. Project Goals: Increase the number of adolescents 12 – 21 who came in for any visit who have had a well-care visit in last year to 10% above baseline; Increase the number of adolescents 12-21who come in who have not had a well-care visits in the last year, who leave with a scheduled well-care visit appointment to 10% above baseline; Track the number of adolescents 12-21 who did not show up for their scheduled well-care visit in the last month; Increase the number of adolescents 12-21 scheduled for well-care visit and did not show and were contacted to reschedule by 10% above baseline. By making some minor changes in our appointment outreach and scheduling method, we reached our goal of a rate of 100% for yearly adolescent well-care visits.

Kingdom Internal Medicine Narcan Prescriptions: Our focus was to provide Narcan nasal spray prescriptions to patients who receive high dose opioid (exceeding morphine milligram equivalent daily dose of 90mg otherwise known as MDD) or an opioid/benzodiazepine combination. An Opioid spread sheet was developed to identify patients that exceed MDD or have these combinations of medications. Providers were notified of patients on high dose medication on an opioid flow sheet. A discussion of Narcan, prescription, and a list of area agencies who provide free Narcan and education on administration were then given to patients at their regularly scheduled prescription renewal appointments. We currently follow the “Rule Governing the Prescribing of Opioids for Pain” outlined in the state of VT section 7.0 page 10, which addresses the addition of the Narcan prescription. We reached our goal to have 100% of Kingdom Internal Medicine patients currently prescribed opioids greater then MDD having Narcan prescriptions.

ST. JOHNSBURY HEALTH SERVICE AREA continued . . .

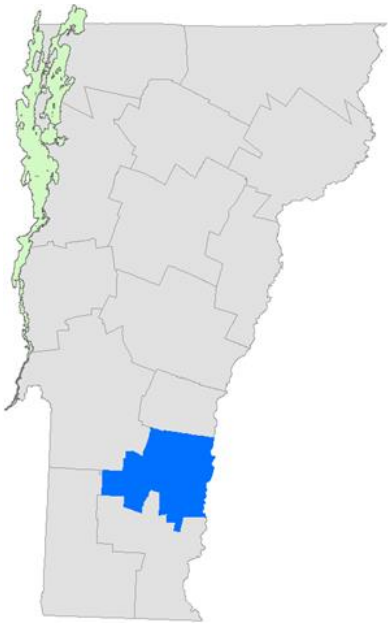
Major Achievement:

Team Based Care Training: Creation and implementation of a regional training curricula on Team-Based Care featuring identification of at risk and high-risk individuals who would benefit from a team, using patient engagement tools like eco-maps and Camden Cards, recruiting the individual to the team, identification of a lead care coordinator, facilitating a team meeting, and creating a shared care plan. Medical home care coordinators and case managers from the NEK Council on Aging designed the training models with input from our Complex Care Collaborative members. Three trainings were held in 2017 with more scheduled for 2018.

Blueprint Practices:

Women's Wellness Center
Concord Health Center
Danville Health Center
St. Johnsbury Family Health Center
Corner Medical
Kingdom Internal Medicine
St Johnsbury Pediatrics

SPRINGFIELD HEALTH SERVICE AREA
PROJECT MANAGER – Tom Dougherty, MPH



Back row left to right: Sherri Foster, RN, Care Coord.; Scott Belt, RN, Care Coord.; Lara Peck, RD, CDE; Sarah Doyle, Self-Management Regional Coord.; Robyn Priebe, RD; Meredith Tips-McLaine, RN, Care Coord.; Julie Merrill-Snide, CHW; Tom Dougherty, MPH Project Mgr.; *Front*: Jill McNally, PCMH Spec.; Janice Zona, Panel Mgr.; Maggie Kaiser, RN, Care Coord.; Susan Norton-Weber, LPN, Care Coord.; Maureen Shattuck, RN, CDE, CHT Lead; Lindsy Mack, BHSU Care Coord.; Amy Carson, RN, Care Coord.; *Not Pictured*: Thomasena Coates, MPH, QI Facilitator; Lauren Boreham, RN, Care Coord.; Jen Tier, LPN, Care Coord.; Andria Donohue, RN, Care Coord.; Sandra Cotter, LCMHC, LADC, MAT; Brooky Sherwood RN, CARN, MAT Care Coord.; Amy Modlin, LICSW, CAADC, WHI CHW; Sarah Wimbiscus, LICSW, WHI CHW

Springfield by the Numbers

12,247	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
12.55	Community Health Team Staff FTEs
1.55	Spoke Staff FTEs
1.0	Women's Health Initiative Staff FTEs
1	SASH Team
19	Self-Management Workshops Offered in 2017
70	Self-Management Workshop Graduates in 2017
3,257	Community Health Team Referrals or Community Health Team Encounters
53	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

SPRINGFIELD HEALTH SERVICE AREA continued . . .

Community Collaborative:

Springfield HSA Community Collaborative

About the Community Collaborative:

The Springfield Health Service Area Community Collaborative (CC) has participants from over 40 organizations and agencies across our health service area who participate in one or more of nine work groups on priorities identified from our CHNA including: Oral Health, Mental Health, Integrated Family Services, Initiation and Engagement in Substance Use Treatment, ACEs, Integrated Community Care Management, Project ACTION, and Women's Health. Workgroups meet monthly with CHT support and the full CC is convened each quarter to review progress.

Spotlight on QI Projects:

Our CHT leads the system-wide Quality Improvement Collaborative (QIC) which supports practices in identifying, monitoring and tracking key Quality Improvement measures for the patients in our HSA. 2017 projects included those focused on:

Decrease Admissions for COPD/CHF: Following the lead on data pointing to poor med reconciliation as a factor in COPD/CHF admissions, practices arranged with pharmacies to make home visits to collect meds following a change in treatment, ensuring accurate dosing and reducing errors.

Improve rate of patients with uncontrolled diabetes: Applying best practices in panel management, patients with uncontrolled diabetes were accurately identified and a series of outreach interventions tested to effectively reduce the number of those lost to follow up and engaged in care.

Improve rate of developmental screening: System-wide review revealed variances in documentation and application of screening protocols leading to development of a new best practice and a significant improvement in the rate of screening.

Major Achievement

Access to oral health care was a top priority identified in our current CHNA. In response a multi-agency Rural Oral Health Access initiative was launched to provide oral health screening and dental hygiene services to children in elementary schools throughout our HSA and to link these children to a dental home. In the 2016-17 school year services were provided to 419 children across 15 locations and the process was begun to establish permanent FQHC access at three locations and capacity was added to increase access to dental services for adults.

Blueprint Practices:

Charlestown Family Medicine
Chester Family Medicine
Springfield Health Center Family Medicine
Springfield Health Center Pediatrics
Springfield Health Center Internal Medicine
Ludlow Health Center
Mountain Valley Medical Clinic
Rockingham Medical Group
The Women's Health Center
Springfield Area Adult Day Center

UPPER VALLEY HEALTH SERVICE AREA
PROJECT MANAGER – FRAN CLARK

Left: Lynne LaCourse (LPN), Jessica McKean (Patient Services Representative), Dr. Stephen Genereaux, Dr. Simone Lessac-Chenen, Caitlin Wilson (Clinical Care Coordinator), Tracy Thompson (LCSW), and Tiffany White (LCSW).
Right, Upper: Fran Clark, Blueprint Project Administrator
Right, Lower: Ashleen Buchanan, Blueprint Program Coordinator

Upper Valley by the Numbers

4,470	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
0.8	Community Health Team Staff FTEs
1.5	Spoke Staff FTEs
0	Women's Health Initiative Staff FTEs
1	SASH Team
7	Self-Management Workshops Offered in 2017
31	Self-Management Workshop Graduates in 2017
834	Community Health Team Referrals or Community Health Team Encounters
17	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

UPPER VALLEY HEALTH SERVICE AREA continued . . .

Community Collaborative:

Upper Valley Community Collaborative

About the Community Collaborative:

The Upper Valley Community Collaborative is a team that consists of community organizations working together to improve the health of our region. Meeting once per month, the team discusses on-going and developing initiatives and programs currently being offered in our region. Each meeting serves as an opportunity for our various organizations to hear, support, and develop action plans.

Spotlight on QI Projects:

Upper Valley Nutrition: Appointments with Melanie Loschiavo, RD, LD, CD, dietician and owner of UVN, can be scheduled online to provide secure and efficient referrals to link primary care with nutritional care from a registered dietician.

Vermont Park Rx Program: "Prescriptions" from health care providers were given to patients "prescribing" day passes to any Vermont State Park to encourage outdoor activity. The Park Prescriptions were given based on the same criteria as other recommendations to patients.

Fluoride Varnish: Recently, LRHC has taken on the initiative to offer fluoride varnish to patients from their first tooth to six years of age. Deemed a high-risk community due to the population living rurally with un-fluorinated well-water, providing this varnish to the 259 patients falling between birth to six years is hoping to yield very positive outcomes.

Major Achievement:

2017 marked the 10th year that LRHC provider, Dr. Stephen Genereaux, nurses, care coordinators, and Dartmouth medical students, have been visiting five-seven farms in the region twice a year to provide health screenings and preventative services. Each year, approximately 40-50 farmworkers have received screenings and monitoring for hypertension, depression and diabetes. In addition to these services, vaccines for influenza, tetanus, and pertussis are administered.

Blueprint Practices:

Little Rivers Health Care, Inc.
Upper Valley Pediatrics
Newbury Health Clinic

WINDSOR HEALTH SERVICE AREA
PROJECT MANAGER — Jill Lord, RN, MS

Windsor by the Numbers

8,899	Patients served in Blueprint Patient Centered Medical Homes in the past two years*
7.45	Community Health Team Staff FTEs
4	Spoke Staff FTEs
0	Women's Health Initiative Staff FTEs
1	SASH Team
12	Self-Management Workshops Offered in 2017
38	Self-Management Workshop Graduates in 2017
1,584+	Community Health Team Referrals or Community Health Team Encounters
198	Medicaid Patients in Spoke Medication Assisted Treatment

*Claims-attributed

WINDSOR HEALTH SERVICE AREA CONTINUED . . .

Community Collaborative

Windsor HSA Community Collaborative

About the Community Collaborative:

The Windsor HSA Community Collaborative leads our HSA as an Accountable Community for Health. CEOs, executive, and operational leaders from healthcare, human service agencies, mental health, SASH, Senior Solutions, and many others meet on a quarterly basis to plan, implement and evaluate initiatives designed to improve the quality, patient satisfaction and costs of healthcare in our region. Quality improvement subcommittees meet on an ongoing basis.

Spotlight on QI Projects

COPD: Implement best practice across the continuum of care, COPD/asthma admits dropped to 4.1 compared to a state average of 8.7 and goal of 7.79.

3-4-50: Primary prevention activities to educate, challenge, motivate behavioral change for nutrition, exercise and tobacco cessation reaching over 1,000 individuals, five schools, 15 Healthcare agencies, two rotaries, two planning commissions, farmers markets, etc.

Medication Assisted Therapy: Intentional outreach to maximize service provision of home health measures of care coordination, health promotion, comprehensive transitional care, counseling and referral to community and social supports

Medication Reconciliation Project: 51% knew the names of their medications, 71% knew when to take all of medications, and 71% knew the reason to take medications.

Major Achievement

We have invested significant professional expertise, time and energy in implementing a best practice model for interagency care management. We have built an active and growing network including the community health team, SASH, VCCI, HCRS, Senior Solutions, VNH, schools and other community partners in interagency care planning/conferencing and care coordination. This has significantly improved the quality and outcomes of care for high risk, complex chronic care patients and families. We have implemented annual wellness exams and nurse wellness visits which offer high quality, high impact, patient education, chronic disease self-management, assistance with advanced directives and a focus on wellness. White River Family Practice organized and facilitated a summer snack backpack program for Hartford students providing 450 snack packs for 10 weeks during the summer as well as numerous lunch packs for people with housing and food insecurity in Hartford.

Blueprint Practices:

Mt Ascutney Physician Practice
Ottauquechee Health Center
White River Family Practice

APPENDIX A: BLUEPRINT FOR HEALTH TEAM CONTACT INFORMATION

Vermont Blueprint for Health
Department of Vermont Health Access (DVHA)

NOB 1 South, 280 State Dr., Waterbury, VT, 05671
Phone: (802) 241-0231 | Fax: (802) 241-0269

Blueprint Staff

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G. Matthew Snodgrass, PhD Health Services Researcher (802) 241-0392 Matthew.Snodgrass@vermont.gov	

APPENDIX B: BLUEPRINT FOR HEALTH PROJECT MANAGER BIOS

Mark Young
Barre Health Service Area

Mark started his career as a nurse at Central Vermont Medical Center (CVMC), working in the Emergency Department. He worked with the Central Vermont Physician Hospital Organization as a Nurse Care Manager, providing case management and utilization review in delegated risk contracting with commercial insurers. Care coordination became a focus to achieve desired patient outcomes. These experiences lead to a position as Clinical Operations Manager for the Medical Group Practices of CVMC, where he trained with the Dartmouth Institute in facilitation and began the NCQA-PCMH recognition process with the practices. He developed a passion for change management and became the Blueprint Project Manager for the Barre HSA and the Director of Quality Operations for CVMC. The alignment of these positions created an opportunity to pursue change within CVMC and the Barre HSA community to facilitate a high-functioning medical neighborhood.

Jennifer Fels, RN, MS
Bennington Health Service Area

In 2006, the Bennington and St. Johnsbury HSAs became the first two communities in Vermont to pilot the implementation of the Chronic Disease Model (E. Wager) to improve the outcomes of patients living with a chronic condition. At the time, the implications of this seemingly simple action were unknown. What began as a pilot project evolved into the Vermont Blueprint for Health, the framework for many of the health reforms now unfolding across Vermont. The keys to the Bennington Blueprint's success are state-level leadership, a core group of primary care practices dedicated to excellence, a strong and capable community health team (CHT), and community partners who have adopted collaboration as a cultural norm. Jennifer's experience with the Blueprint is one of great professional satisfaction.

Jodi Dodge, MSN, BBA, RN
Brattleboro Health Service Area

Jodi Dodge began her healthcare career as an Emergency Department nurse at Baystate Franklin Medical Center in Greenfield, MA. She served in this role for ten years prior to joining the team at Brattleboro Memorial Hospital (BMH) in 2015. As Director of Patient Experience at BMH, Jodi worked with multidisciplinary teams on quality improvement projects aimed at improving the experience of patients, families, and employees. In early 2017, she became Director of Community Initiatives and in this role serves as both the Blueprint Project Manager and CHT Lead in the Brattleboro Health Service Area. In November of 2017, Jodi co-presented at the Patient Centered Medical Home (PCMH) Congress with the Executive Director of the BMH Medical Group. The presentation, "A Community Approach to PCMH" highlighted the support that the Community Health Team in the Brattleboro HSA provides to the Primary Care Practices it serves.

Pam Farnham, RN
Burlington Health Service Area

Pam serves a dual role as CHT Leader and Project Manager for the Burlington HSA and works with a team of 30 staff to support 31 clinics across Chittenden County as part of the Blueprint for Health. Her 30-year career at the University of Vermont Medical Center spans various roles, including nurse manager of a medical unit, outreach program, and staff nurse in critical care and post-anesthesia recovery. Pam also has a long history of community involvement, including, but not limited to, American Diabetes Association board member, Chair of the Coalition for Tobacco Free VT, Chair of the Coalition of Free Clinics for the Uninsured (VCCU), and Cub Scout Leader and Cub Master for Essex Junction. She is also a Master Trainer for the Stanford Self-Management Programs, leading workshops and training new leaders in all Healthier Living Workshop programs offered in Vermont. Pam is a graduate of the University of Vermont's school of Nursing and Education.

Susan Bruce
Middlebury Health Service Area

Health and wellness has always been an important part of Susan's life. Seeing others challenged with poor health due to many factors, such as poor nutrition, low socio-economic status, lack of exercise, poor mental health, and barriers to health care access, has led Susan to her current position as Blueprint Project Manager for the Middlebury HSA. Susan finds leading a team of wonderful staff and collaborating with outstanding agencies and organizations in the Middlebury HSA and beyond to be very rewarding. Susan loves working with those who are out there working one-on-one with members of the Middlebury community to help them meet their health and wellness goals in a holistic way.

Elise McKenna, RN, BSN, MPH, MSEd
Morrisville Health Service Area

Elise began her career as an Emergency Department nurse in New York City. She moved to Seoul, Korea, to complete an independent study of their developing health care delivery system, where she also assisted in writing USAID grants for demonstration projects in rural Korean communities and worked on a neonatal unit in a military hospital. These experiences led her to pursue degrees in education and public health from the University of Southern California and Columbia University respectively, blending both her passion for teaching and interest in quality and health care. After receiving her MPH, she became the Director of Quality Management for a Washington D.C.-based health care organization and was responsible for the Joint Commission accreditation of 19 free-standing ambulatory care clinics throughout the U.S. She later taught courses on the health care delivery system for over 10 years at Georgetown University. Upon moving to Vermont, Elise started HPDP Consulting in 2008, specializing in the development and promotion of successful hospital- and community-based initiatives in quality, palliative care, and care of older adults at the national, state, and local levels.

	**Julie Riffon, LICSW, PCMH CCE** *Newport Health Service Area* From 2008 through 2011, Julie served as Clinical Director of Northern Counties Health Care in St. Johnsbury, where she facilitated and provided oversight of four (4) local primary care FQHCs. These practices were among the first in Vermont and the U.S. to be recognized as Level 3 NCQA Patient-Centered Medical Homes. Information learned through this process proved instrumental in developing Blueprint for Health implementation strategies for Vermont's 2010 legislative changes resulting in the statewide transformation of primary care. Julie currently serves as the Director of Primary Care, Quality, and Care Management for the medical practices of North Country Hospital alongside her duties as Blueprint Project Manager and QI Facilitator for the Newport HSA.
	**Patrick Clark, PMP** *Randolph Health Service Area* Patrick moved to Vermont from Virginia in 2003 and has worked in the health and human services field since relocating. Over the last 14 years, he has acquired a well-balanced mix of experience in practice operations, project management, and Community Health Team leadership. In 2013, he took on some Blueprint project management duties in the Barre HSA, and in 2016 he became the Blueprint Project Manager for the Randolph HSA. His passion lies in quality improvement, efficient practice operations, and working closely with organizations and stakeholders to continue driving Vermont as a leader in health care reform. He holds a bachelor's degree in Sociology from James Madison University and is a Certified Project Management Professional.
	**Sarah Narkewicz, RN, MS, CDE** *Rutland Health Service Area* As the Director for Rutland Regional Medical Center's Community Health Improvement Department, Sarah is responsible for the integration of Vermont's Blueprint for Health improvement initiatives into the Rutland HSA. She oversees 42 CHT staff, who provide case management, care coordination, panel management, and self-management programs to a community of 62,000 residents. With the Rutland HSA participating in the ICCMLC as an early pilot community, Sarah participates actively in a statewide planning committee aimed at improving interagency care coordination. As part of this effort, she developed a Care Coordination Tools Training in collaboration with the OneCare ACO clinical quality consultants and offers that training to local agencies. Sarah is an active member of many local coalitions, including Project Vision, Rutland Area Physical Activity Program, the Promise Community, and the BlueCross BlueShield Community Advisory Committee. Sarah has been a Certified Diabetes Educator since 1994 and a Master Trainer for Stanford's Chronic Disease Self-Management Program since 2009. Her background includes teaching college nursing and health promotion courses, non-profit board leadership, and quality improvement consulting. Sarah earned her Bachelor of Science in Nursing at the University of Vermont and a Master of Science in Nursing at the University of Connecticut.

Thomas Dougherty, MPH
Springfield Health Service Area

Over the course of his career, Tom has had the good fortune of working for organizations moved to action in response to community needs. He held positions as a counselor in New York City in the peak of the crack cocaine epidemic, as a case management director and later chief administrator for the nation's largest HIV center, and, more recently, as CEO of a global health and human rights organization developing local capacity to address maternal child health, tuberculosis, and AIDS and access to care. These experiences taught him the importance of engaging a broad spectrum of stakeholders in unwieldy processes to achieve meaningful improvements in health for the larger community. Arriving in Vermont in 2015, Tom was excited to learn of the Blueprint for Health, which seems like a great fit for his experience and his commitment to implementing patient-centered care models and innovations driven by and for the community.

Lesley Hendry
St. Albans Health Service Area

Lesley joined the Blueprint as Project Manager for the St. Albans HSA in October 2015. Her unique background in law, customer service, and convenience store management has brought a fresh perspective to Blueprint operations at Northwestern Medical Center and the St. Albans community. Lesley's common-sense approach, understanding of business, and focus on quality improvement and collaboration has led the community forward in working together on implementing the statewide ICCMLC tools and processes for the highest risk citizens of the St. Albans HSA.

Laural Ruggles, MBA, MPH
St. Johnsbury Health Service Area

Laural Ruggles is the Vice President of Marketing and Community Health Improvement at Northeastern Vermont Regional Hospital. Laural has over 20 years' experience in healthcare administration, including medical office operations, marketing, and community health. She has been the Project Manager for the St. Johnsbury Blueprint for Health since 2005, and is the architect of their local Community Health Team.

"I am so fortunate to work in a region where we define health in the broadest terms; where our partners are committed to using our collective capacity to build a strong community framework for medical, mental, and social health so all residents will grow and thrive."

	**Donna Ransmeier, MS, CHTS-CP** *Upper Valley Health Service Area* Donna has championed the work of the Blueprint for Health for many years, beginning in 1993 when she became one of the first behavioral health providers embedded in primary care. Today, in her work as Project Manager for the Upper Valley HSA, she sees her most rewarding and challenging tasks as helping to form a fully integrated community health collaborative and developing the medication assisted treatment program in her area to its fullest potential.
	**Jill Lord, RN, MS** *Windsor Health Service Area* A registered nurse for over 40 years, Jill's career includes working as an inpatient staff nurse and a visiting nurse and working as a nurse leader in staff education and long-term care. For 24 years, she served as the Chief Nursing Officer and Director of Patient Care Services for Mt. Ascutney Hospital and Health Center. Her current position as Director of Community Health is a perfect blend of responsibilities with health care transformation led through the Blueprint for Health. Jill considers it a privilege, an honor, and the culmination of a lifetime of commitment to community health to lead the Blueprint for Health as Project Manager of the Windsor HSA. In this role, Jill has worked with the medical community, as well as partners in Health and Human Services, schools, police departments, and town governments. Her position allows her to be a catalyst for change, especially for the most vulnerable and at-risk community members, and to help others "catch the vision" of working together to transform people's lives and the health care system.

APPENDIX A: BLUEPRINT FOR HEALTH COMMITTEES AND WORKGROUPS

BLUEPRINT EXECUTIVE COMMITTEE AND BLUEPRINT EXPANSION, DESIGN, AND EVALUATION COMMITTEE MEETING PARTICIPANTS IN 2017

Pam Farnham
Kim Fitzgerald
Josh Plavin
Jenney Samuelson
Michael McAdoo
Aaron French
Kelly Lange
Penrose Jackson
Georgia Maheras
E Richardson
Eileen McKenna
Shawn Nailor
Judy Peterson
Tracy Dolan
Scott Strenio
Jennifer Fels
Jodi Dodge
Karen Hein
J Tarallo
Jill Lord
Tom Dougherty
Patrick Clark
Patty Launer
Stephanie Winters
Win Turner
Kerry Sullivan
Julie Krulewitz
Charles MacLean
Susan Bruce
Sarah Narkewicz
Laural Ruggles
Mark Young
Cory Gustafson
Bob Bick
Todd Moore
Corey Perpall
Jim Hester
Lesley Hendry
Jessica Barnard
Susan Gretkowski
Pamela Biron
Robin Lunge
Julie Riffon
Esther Emard
Cathy Fulton
Fran Clark
Ashleen Buchanan
Thomasena Coates
John Evans
M Lawrence
R Lawson
Michael Costa
Mike Gravett
Kevin Kelly
Mary Kate Mohlman
L Peake
Emily Yahr
Ted Mable
Maureen Shattuck
Jean Andersson-Swayze
Vicky Loner
Sara Norris
Jill Olsen
T Reinertson
Paul Reiss
Teresa Voci
Sharon Fine
Eileen Girling
Craig Jasenski
Pat Jones
Beth Tanzman

MENTAL HEALTH & SUBSTANCE USE DISORDER ADVISORY COMMITTEE

Trevor Hanbridge, OneCare Vermont
Peter Albert, Brattleboro Retreat
Sarah Munro, Vermont Recovery Network
Susan Hall, Vermont Mental Health Counselors Association
Ena Backus, Green Mountain Care Board
Rick Barnett, Vermont Psychological Association
Barbara Benton, Otter Creek Associates
Bob Bick, Howard Center
Charles Biss, Vermont Department of Mental Health
Kathleen Hentcy, Vermont Department of Mental Health
Stephen Broer, Northwestern Counseling and Support Services
Charles Gurney, Vermont Department of Health - Alcohol & Drug Abuse Programs & Department of Disabilities, Aging and Independent Living
Patrick Clark, Gifford Health Care
Ginger Cloud, Central Vermont Medical Center
Anne de la Blanchetai Donahue, Vermont Legislative Representative, House Committee on Health Care, Vice Chair, and Adverse Childhood Experiences Working Group, Vermont Psychiatric Survivors
William Eberle, AHS Field Services Director for Barre and Morrisville
Laurie Emerson, National Alliance on Mental Illness (NAMI) Vermont
Peter Espenshade, PEAR Vermont
Pam Farnham, University of Vermont Medical Center
David Fassler, Vermont Association of Child & Adolescent Psychiatry, Council of Mental Health and Substance Abuse Professionals
Jennifer Fels, Southwestern Vermont Health Care and Medical Center
Betsy Fowler, Northern Counties Health Care
Logan Hegg, University of Vermont Medical Center
Lesley Hendry, Northwestern Medical Center
Kathy Holsopple, Vermont Federation for Families
Penrose Jackson, University of Vermont Medical Center
Rodger Kessler, University of Vermont College of Medicine
Marcia LaPlante, Vermont Department of Health, Division of Alcohol and Drug Abuse Programs
Jill Lord, Mount Ascutney Hospital and Health Center
John Meyer, Shelburne Counseling Services
Carol Boucher, Northeast Kingdom Human Services
Sarah Narkewicz, Rutland Regional Medical Center
Eilis O'Herlihy, National Association of Social Workers, VT Chapter
Dillon Burns, Vermont Council of Developmental and Mental Health Services
Gloria van den Berg, Alyssum Inc.
Susan Walker, Turning Point of Windham County
Jim Walsh, Springfield Medical Care Systems
Beth Tanzman, Vermont Blueprint for Health
Nissa L. Walke, Vermont Blueprint for Health

BLUEPRINT PAYMENT IMPLEMENTATION WORK GROUP

Pam Biron, Blue Cross Blue Shield of Vermont
Susan Bruce, Porter Medical Center
Ashleen Buchanan, Little Rivers Health Care
Simone Chenen, Little Rivers Health Care
Kevin Ciechon, CIGNA
Fran Clark, Little River Health Care
Patrick Clark, Gifford Health Care
Carol Cowan, Blue Cross Blue Shield of Vermont
Ryan Dattilio, University of Vermont Medical Center
Mara Donohue, Vermont Blueprint for Health
Jodi Dodge, Brattleboro Memorial Hospital
Thomas Dougherty, Springfield Medical Care Systems
Kim Driscoll, University of Vermont Medical Center
Josh Dufresne, Springfield Medical Care Systems
Candace Elmquist, Vermont Blueprint for Health
Pamela Farnham, University of Vermont Medical Center
Jennifer Fels, United Health Alliance
Scott Frey, Blue Cross Blue Shield of Vermont
Marie Gilmond, Rutland Regional Medical Center
Roberta Gilmour, University of Vermont Medical Center
Lesley Hendry, Northwestern Medical Center
Penrose Jackson, University of Vermont Medical Center
Amy James, Blue Cross Blue Shield of Vermont
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Pat Knapp, Springfield Medical Care Systems
ShawnMarie Landers, University of Vermont Medical Center
Jill Lord, Mount Ascutney Hospital and Medical Center
Wendy Macfarlane, University of Vermont Medical Center
Michelle Matot, Porter Medical Center
Elise McKenna, Community Health Services of Lamoille County
Gail McKenzie, Mount Ascutney Hospital and Medical Center
Terri Mitchell, DXC Technologies
Susan Monica, Little Rivers Health Care
Melissa Moore, DXC Technologies
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Tracey Paul, North Country Hospital
Rita Pellerin, University of Vermont Medical Center
Suzanne Peterson, Porter Medical Center
Jack Reilly, Mount Ascutney Hospital and Medical Center
Carla Renders, MVP Health Care
Julie Riffon, North Country Hospital
Laural Ruggles, Northeastern Regional Hospital
Jenney Samuelson, Vermont Blueprint for Health
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Matt Snodgrass, Vermont Blueprint for Health
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