

Vermont Blueprint for Health

2010 Annual Report January, 2011

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1. EXECUTIVE SUMMARY

In 2010, the Vermont Blueprint for Health, Vermont's cutting edge health reform program and public-private partnership, made tremendous progress and maintained a strong focus on preparation for statewide expansion.

Significant changes included the enactment of Act 128 in May 2010 by the Vermont General Assembly. The Act mandates the statewide expansion of Blueprint Integrated Health Services (IHS) – a model that includes Advanced Primary Care Practices (APCPs) with recognition as patient-centered medical homes (PCMHs) and community health teams (CHTs), supported by multi-insurer payment reforms. In order to continue serving Vermonters, all major insurers must participate in this model as it is expanded statewide. Evidence of this expansion requires a minimum of two primary care practices in each health service area (HSA) becoming APCPs by July 2011. The Act requires the involvement of all willing primary care providers in Vermont by October 2013 (full statewide spread).

A large part of the Blueprint's work in 2010 involved preparing for the statewide expansion by working with practices and communities throughout the state.

A second significant achievement in 2010 was the Blueprint's successful application for the Centers for Medicare & Medicaid Services' Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration Project. In November 2010, Vermont was chosen as one of eight states to participate in this 3 year innovative Medicare program. The MAPCP will eventually include up to approximately 1,200 medical homes serving up to 1 million Medicare beneficiaries. Other participating states include: Maine, Michigan, Minnesota, New York, North Carolina, Pennsylvania and Rhode Island. The demonstration allows Medicare to come on board as a participating insurer with the Blueprint for Health – joining private insurers and Vermont Medicaid – to provide financial support for the ACPCs through this multi-insurer payment initiative, beginning in mid-2011.

Other major changes include:

- Launch of the third Blueprint IHS pilot community in Central Vermont in January 2010. There are currently three original pilot communities: St. Johnsbury (July 2008), Burlington (October 2008) and Central Vermont. Altogether, in these 3 pilots, 11 APCPs, 58 primary care providers and 3 Community Health Teams take care of 60,000 patients -- or approximately 10 percent of the state's population.
- Expansion to the fourth Blueprint IHS community in the Bennington area in November 2010, moving the Blueprint firmly from pilot to program. These 7 practices now combine with the original pilots to serve a general population of approximately 80,000 patients in 18 APCPs.
- The statewide expansion is expected to quickly accelerate in the first half of 2011, with six more primary care practices in 4 HSAs on or around the first of the year and full Blueprint recognition of at least 2 primary care practices in every Hospital Service Area in the state by July 2011. (See Table 1: Blueprint Expansion through January 2012 and Figure 4: Expansion Map.) Pediatric practices are also becoming recognized through the same process in the coming year as part of the expansion, a departure from the original focus on adults.
- Release of The Blueprint Manual – a comprehensive guide to creating a recognized Blueprint Integrated Health System (IHS), including Advanced Primary Care Practices (APCPs), adoption of Health Information Technology and creation of Community Health Teams at the local level.
- Establishment of the Expansion and Quality Improvement Program (EQUIP). Practice facilitators, highly skilled and intensively trained clinical and process coaches, will be working with primary care practices throughout the state and guiding them as they make quality improvement changes on the path towards becoming APCPs. These facilitators will support the creation of a Learning Health System throughout the state and beyond.
- Release of Vermont Blueprint for Health multi-tiered evaluation results (See Section 5).

2. BACKGROUND AND HISTORY

Legislation

The Douglas Administration formally launched the Vermont Blueprint in 2003. The goal at the time was to address the increasing costs of caring for people with chronic illnesses, with an early emphasis on diabetes management in response to the overwhelming projected burden of morbidity and resource utilization. The transition to a more broadly defined Health Reform agent of change has occurred over time. Throughout the Blueprint's history, the Legislative and Executive branches have been critical in its support and development as follows:

- **2006** – The Blueprint officially became law when the Vermont Legislature passed Act 191, sweeping Health Care Reform that also created Catamount Health to provide coverage to uninsured Vermonters. The Act included language that officially endorsed the Blueprint and expanded its scope and scale.
- **2007** -- The Legislature further defined the infrastructure for administering the Blueprint with Act 71 and mandated “integrated” pilot projects to test the best methods for delivering chronic care to patients -- based on the Patient Centered Medical Home model and multi-disciplinary locally-based care coordination teams (Community Health Teams). The original pilot sites were chosen through competitive request for proposals processes in 2007 and 2008 from communities that had been actively involved in Blueprint quality improvement initiatives. Voluntary payment reform to support these innovations in health care delivery was introduced. This transition ultimately led to the Advanced Primary Care Practice model now being implemented statewide.
- **2008** -- Act 204 further defined the Integrated Pilots and officially required insurer participation in their financial support, which covered approximately 10 percent of the state population.

- **2009** – Launch of the Vermont Accountable Care Organization Pilot (ACO) -- A project led by the Vermont Health Care Reform Commission (HCRC) to investigate how ACOs might be incorporated into the state’s comprehensive health reform program.
- **2010** – Act 128 updates the definition of the Blueprint for Health as a “program for integrating a system of health care for patients, improving the health of the overall population, and improving control over health care costs by promoting health maintenance, prevention, and care coordination and management.” It also requires the Commissioner of the Department of Vermont Health Access to expand the Blueprint for Health to at least two primary care practices in every hospital services area no later than July 1, 2011, and no later than October 1, 2013, to primary care practices statewide that wish to participate.

Advanced Primary Care Practice Model and Blueprint Integrated Health Service Program

The Advanced Primary Care Practice model (the basis for the original Blueprint Integrated Pilots and subsequent expansion to the Integrated Health Service program) is characterized by seamless coordination of care. It stresses the importance of preventive health – engaging people when they are well, as well as giving patients the tools to keep existing conditions from worsening. Patients are encouraged to become active partners in their own care, and practices become effective and efficient teams.

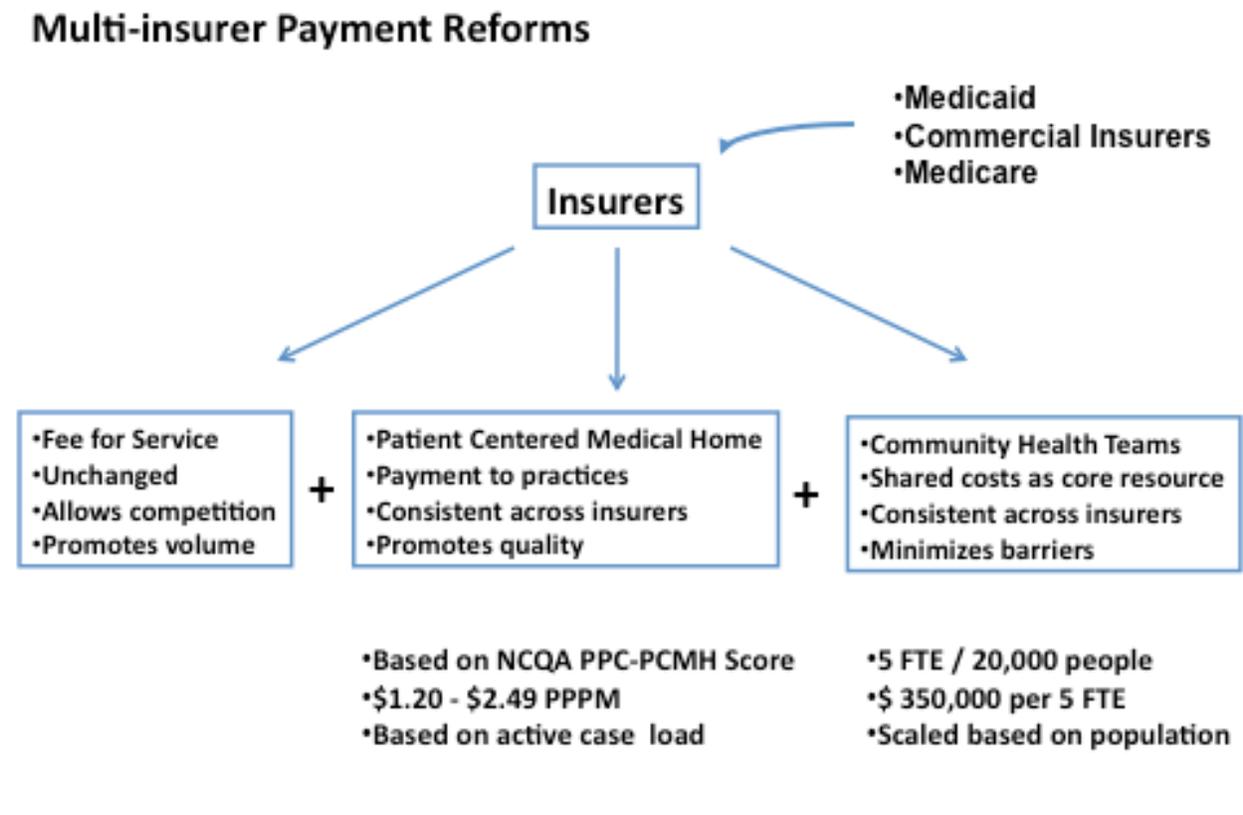
As one of the requirements of recognition as a Blueprint IHS ACP, practices must meet a set of criteria for Patient Centered Medical Homes, established by the National Committee for Quality Assurance (NCQA), a non-profit organization dedicated to improving health care quality. Using the NCQA Physician Practice Connection – Patient Centered Medical Home (PPC-PCMH) recognition rubric, practices are scored on their compliance meeting standards related to areas such as access and communication, patient tracking and registry functions and advanced electronic communications. These evolved practices create internal teams, maximizing the effectiveness of their staff and expanding the definition of their roles within the site and beyond.

Another key IHS requirement is to form Community Health Teams (CHTs) – locally based groups of multi-disciplinary practitioners that support patients who receive care in the associated

APCPs. The teams are designed at the local level, informed by community-wide assessments of local resources and gaps, to help patients with and without chronic conditions adhere to preventive health guidelines.

Payment Reform

Figure 1. Payment Reform Schematic Diagram



Vermont’s Integrated Health System APCP model includes two components of payment reform, which are applied consistently to all participating public and commercial insurers. Currently, fee-for-service methodology remains intact, with the reforms below in addition.

1. Enhanced Payments to Advanced Primary Care Practices

All insurers pay each recognized APCP an enhanced provider payment above the existing fee-for-service payments – calculated on a per patient per month (PPPM) basis – and based on the quality of the health care they provide as defined by the NCQA PPC-PCMH

standards. In order to calculate payment, each insurer must count the number of their beneficiaries that are attributed to a practice, and multiply that by the PPPM amount.

2. *Community Health Team Payments*

The Vermont Blueprint emphasizes that the excellent and challenging work of an APCP must be supported by more than just the NCQA PPC-PCMH-triggered payments. A dedicated Community Health Team (CHT) provides this essential range of services. Insurers currently share the costs of CHTs equally. This support allows the services of a CHT to be offered free of charge to patients and practices, with no co-pay or prior authorization. Insurers provide a total of \$350,000 per full CHT annually, which serves a general population of 20,000, with shares paid to a single existing administrative entity in each HSA. This combined funding covers the salaries of the core team, allowing for barrier-free access to the essential services provided. While this “core” CHT often works one-on-one with patients to meet a wide range of needs, the “functional” team may be much larger, including members of other local individuals and organizations who work in partnership with the CHT and the APCP.

Planning and refining these elements are achieved through consensus in the Blueprint Expansion Design and Evaluation Committee, and the details of implementation at the Blueprint Payment Implementation Work Group. Both groups are well represented by a wide variety of stakeholders and serve to advise the Blueprint Executive Director. (See Appendix II for Blueprint advisory committee membership.)

Community Health Teams

The Blueprint’s cutting edge payment reforms allow for the innovative Community Health Teams (CHTs) to provide services free of charge to the APCP patients. The multidisciplinary CHT partners with primary care offices, the hospital, and existing health and social service organizations. The goal is to provide Vermonters with the support they need for well-coordinated preventive health services, and coordinated linkages to available social and economic support services. The CHT is flexible in staffing, design, scheduling and site of operation, resulting in a cost-effective, core community resource which minimizes barriers and provides the individualized support that patients need in their efforts to live as fully and

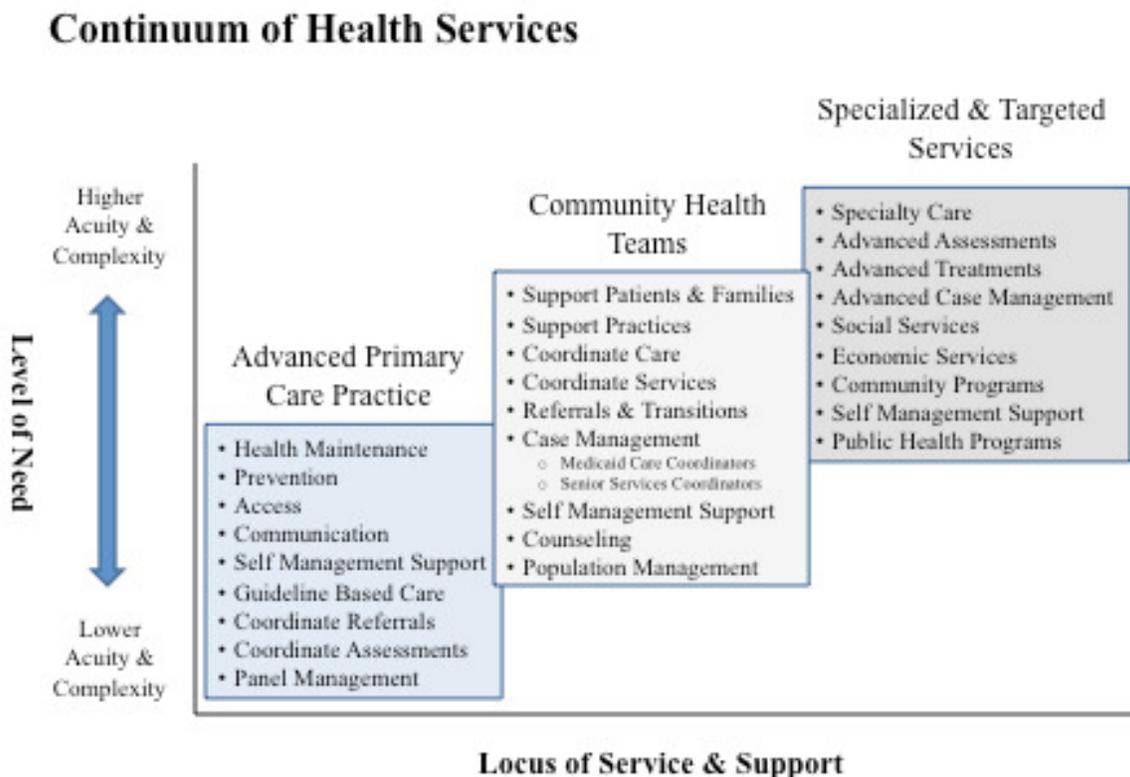
productively as possible. The CHTs function as extenders of the practices they support, and their services are available to all patients (no eligibility requirements, prior authorizations or co-pays).

To ascertain the local Health Service Area's specific needs, the local IHS workgroup identifies current health services and existing gaps for patients and providers in participating primary care practices and the surrounding community. Based on the information obtained, the group will build the foundation of the CHT by working together to determine how existing services can be reorganized and what new services are required.

The overall design of the Blueprint Integrated Health Services model provides patients with seamless and well-coordinated health and human services. This includes transitioning patients from patterns of acute episodic care to preventive health services. Well structured follow up and coordination of services after hospital based care has been shown to improve health outcomes and reduce the rate of future hospital based care for a variety of patient groups and chronic health conditions (e.g. reduce emergency department visits, hospital inpatient admissions, re-admissions). CHT members, hospital staff, and other community service providers work closely together to implement transitional care strategies that keep patients engaged in preventive health practices and improved self-management. A goal of the Blueprint model is seamless coordination across the broad range of health and human services (medical and non-medical) that are essential to optimize patient experience, engagement, and to improve the long term health status of the population.

The Community Health Team serves as the central locus of coordination and support for patients. The spectrum of services from those appropriate for the general population to those targeted to subgroups with specific needs is illustrated in Figure 2, below.

Figure 2. Spectrum of Health and Health-Related Services



Self-Management

A central part of the Blueprint’s self-management efforts has been the Healthier Living Workshop (HLW), Vermont’s version of the evidence-based Stanford Chronic Disease Self Management program, offered throughout the state since 2007. The original workshops are not specific to any chronic disease, but rather teach patients self-management skills and provide a peer-support network for individuals with chronic conditions. HLWs empower individuals as self-managers through education, support and skill-building exercises, notably, goal-setting and problem-solving.

This year, the workshops have been expanded to more specifically target common problems including diabetes and chronic pain. Successful pilots have paved the way for broader spread statewide. Plans are also underway to pilot an online Healthier Living Workshop program in partnership with the Stanford program and the National Council on Aging.

The Blueprint also helps provide clinical practices with the skills and resources needed to create a self-management infrastructure – and in conjunction with the Jeffords Center for Quality at Fletcher Allen Health Care, offers educational sessions that train coaches and practice facilitators to assist individual practices with self-management support. This educational effort has successfully trained clinic-based practice coaches (“local talent”) to complement the EQUIP personnel.

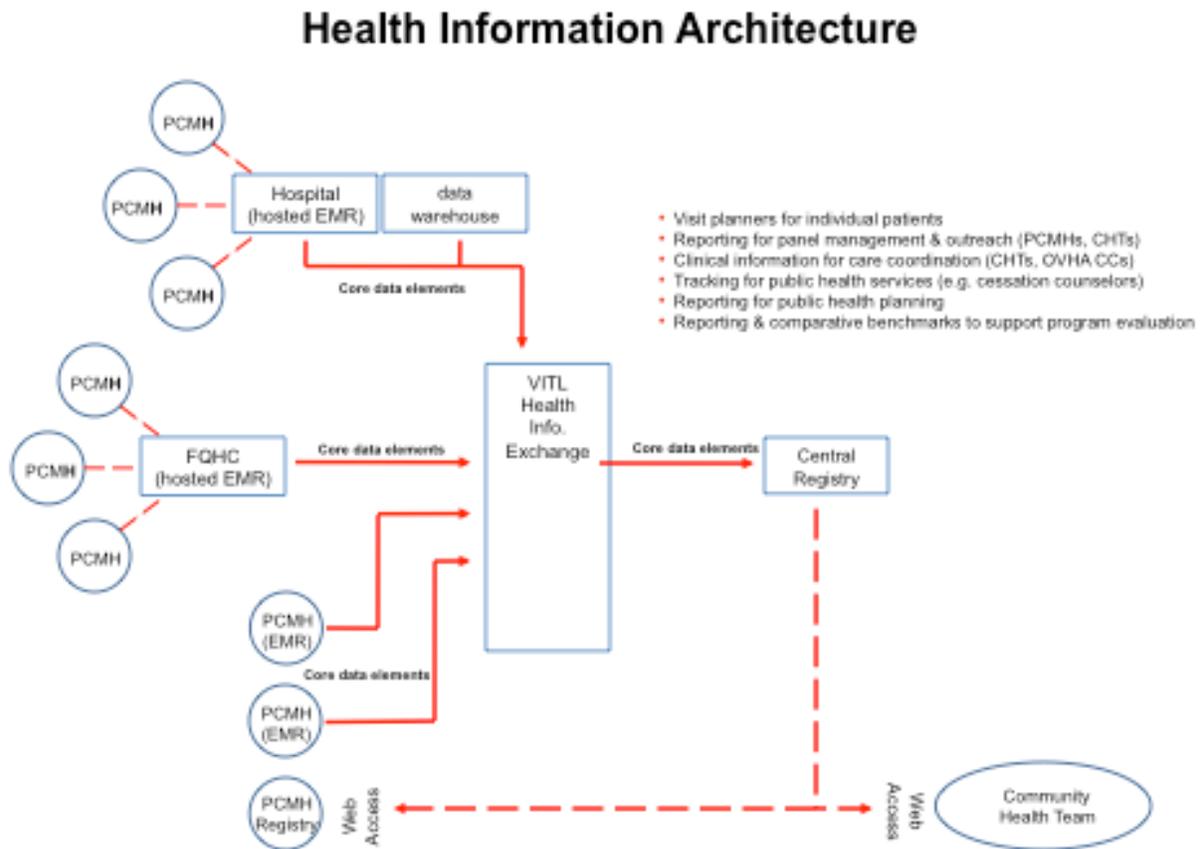
Health Information Architecture

The Blueprint works closely with the Vermont Information Technology Leaders (VITL) – the state-sponsored Health Information Exchange (HIE) – to develop infrastructure that supports the meaningful use of health information. The core of this infrastructure is the Blueprint’s centralized registry and web-based clinical tracking system: DocSite-Covisint. The registry is used to produce visit planners that guide individual patient care, and to produce reports that support population management, quality improvement, program evaluation and comparative benchmarking.

Data from the IHS APCP sites are sent to DocSite from the point of care, either entered manually into the web-based portal or via interfaces and direct feeds. It is a major goal to facilitate the entry of data at the point of care while minimizing any disruptions to the work flow of the practice. This is a major improvement process at the practice level, facilitated by the EQUIP and internal practice teams.

All aspects of the Blueprint’s information architecture are designed to meet strict guidelines concerning data access and privacy protections.

Figure 3. Blueprint Health Information Technology Architecture



3. STATEWIDE EXPANSION

The Blueprint is expanding the Integrated Health Services Advanced Primary Care Model to the entire State of Vermont as outlined in Act 128. Expansion is defined as the opportunity for all willing providers of primary care (primary care internal medicine, family medicine, pediatrics and obstetrics and gynecology) to be in fully recognized APCPs by October 2013. An interim goal is to have demonstrable statewide impact of spread by July 2011, with a minimum of two practices per HSA. The Blueprint is well on its way to exceeding this goal.

The Blueprint team is actively engaged in planning and readiness activity in every Health Service Area in Vermont as outlined in Act 128. This work begins by forming a broad-based multi-stakeholder planning group in each HSA and identifying clinical practices that want to participate. The lead local administrative entity will support the work of the overall HSA Planning Committee including the work of two committee subgroups, an Integrated Health

Services (IHS) workgroup and a Health Information Technology (HIT) workgroup. The IHS workgroup provides the forum for planning community health team composition, strategies for coordinated health services, and logistics for scoring participating primary care practices based on NCQA Physician Practice Connections - Patient Centered Medical Home (PPC-PCMH) standards. The HIT workgroup provides the forum for leaders from each practice and organization to work with Vermont Information Technology Leaders, Inc. (VITL) and the entity operating and maintaining the Blueprint centralized registry (Covisint DocSite), to plan and implement participation as part of Vermont's health information infrastructure. This includes planning how each organization and practice can optimize use of core guideline based data elements, transmit data to the central registry, and develop interfaces for connection to the HIE network. These groups include, but are not limited to: clinicians and staff from primary care practices; hospital administrative and IT leadership; medical and non-medical providers from community service organizations, and public health leadership from local district offices.

Statewide Expansion Timeline

The Blueprint is expanding the Integrated Health Services Advanced Primary Care Model to the entire State of Vermont as outlined in Act 128. Expansion is defined as the opportunity for all willing providers of primary care (primary care internal medicine, family medicine, pediatrics and obstetrics and gynecology) to be in fully recognized APCPs by October 2013. There are currently 545 physicians (MDs and DOs) and 239 mid-level providers (APRNs, CNMs and PA-Cs) in Vermont in 220 primary care practices.

An interim goal stated in the legislation is to have demonstrable statewide impact of spread by July 2011, with a minimum of two practices per HSA. The Blueprint is well on its way to exceeding this goal.

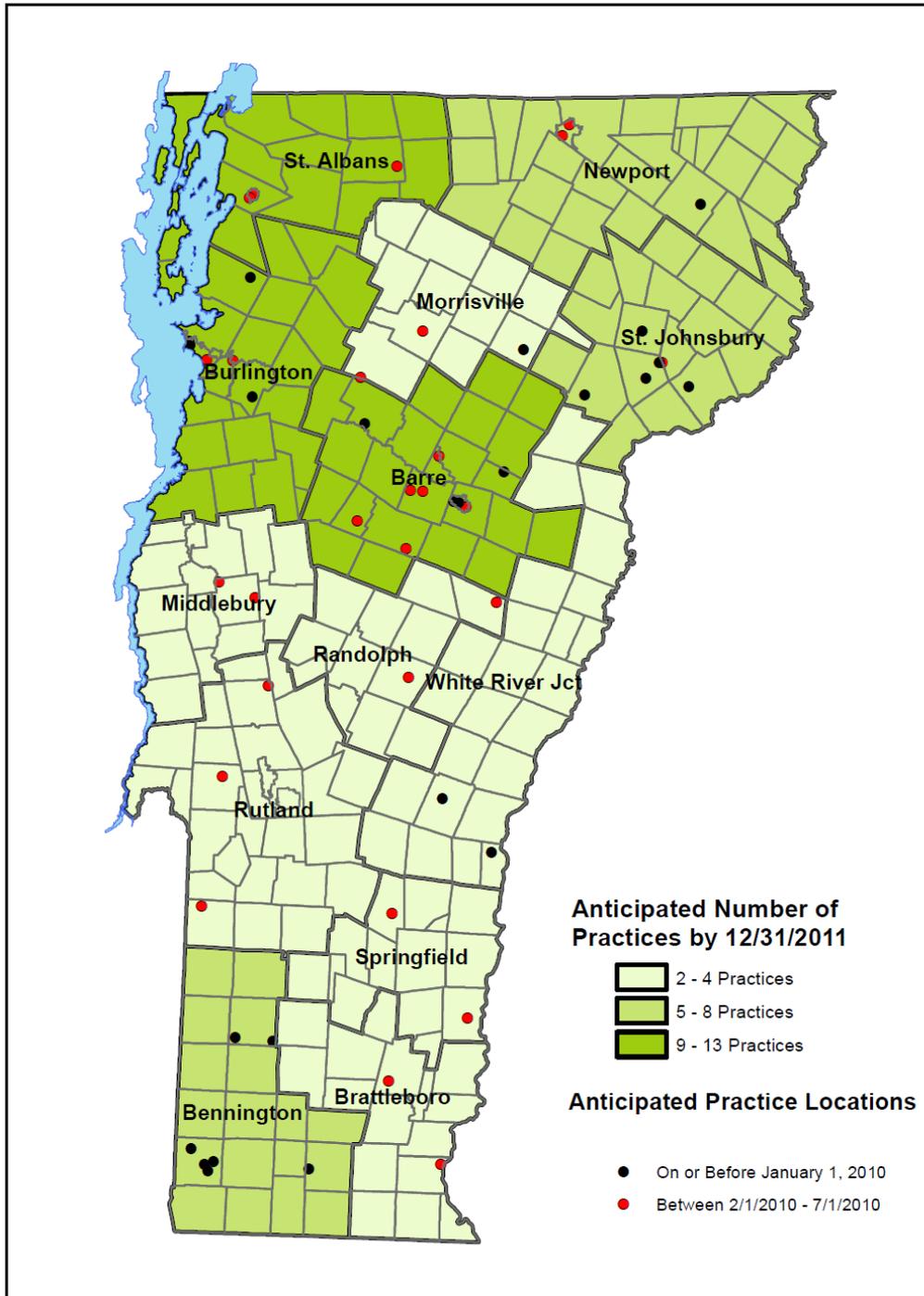
Table 1 and Figure 4 illustrate the planned Blueprint expansion timeline.

Table 1. Expansion Timeline Table

Blueprint Expansion: Anticipated Advanced Primary Care Practices Through January 2012					
Hospital Service Area		July 1, 2010	January 1, 2011	July 1, 2011	January 1, 2012
Barre	Practices	4	4	9	9
	Providers	26.0	26.0	51.0	51
	Patients	17,235	17,235	37,561	37,561
Bennington	Practices	0	7	7	8
	Providers	0.0	16.0	16.0	17
	Patients	0	19,212	19,212	20,212
Brattleboro	Practices	0	0	2	3
	Providers	0.0	0.0	3.5	13
	Patients	0	0	9,200	21,200
Burlington	Practices	2	4	10	16
	Providers	10.0	22.0	66.0	90
	Patients	13,300	25,145	66,724	93,555
Middlebury	Practices	0	0	2	5
	Providers	0.0	0.0	8.0	23
	Patients	0	0	6,200	15,370
Morrisville	Practices	0	1	3	3
	Providers	0.0	4.0	15.0	15
	Patients	0	5,575	21,542	21,542
Newport	Practices	0	1	3	6
	Providers	0.0	2.0	21.0	32
	Patients	0	1,200	11,283	19,183
Randolph	Practices	0	0	2	6
	Providers	0.0	0.0	6.5	21
	Patients	0	0	3,113	10,628
Rutland	Practices	0	0	3	4
	Providers	0.0	0.0	22.0	32
	Patients	0	0	18,000	30,000
Springfield	Practices	0	0	2	4
	Providers	0.0	0.0	4.0	6
	Patients	0	0	10,899	14,446
St. Albans	Practices	0	0	3	7
	Providers	0.0	0.0	3.0	15
	Patients	0	0	5,400	35,400
St. Johnsbury	Practices	5	5	6	6
	Providers	26.0	26.0	32.0	32
	Patients	18,890	18,890	26,522	26,522
Windsor	Practices	0	2	2	2
	Providers	0.0	18.0	18.0	18
	Patients	0	14,425	14,425	14,425
State	Practices	11	24	54	79
	Providers	62.0	114.0	266.0	364
	Patients	49,425	101,682	250,081	360,044

Figure 4. Blueprint Expansion Map

Blueprint Expansion: Anticipated Advanced Primary Care Practices (January 2011 through January 2012)



Date: 1/25/2011

The Blueprint Implementation Manual

The Blueprint developed and released the *Blueprint Manual* in November 2010 to guide primary care practices, health centers, hospitals and providers of health services (medical and non-medical) in implementing the Blueprint's Integrated Health Service Advanced Primary Care Practice model in their communities. It is the implementation ("how-to") arm of Bulletin No. 10-19 (the Blueprint Rules), and is a working and responsive document reflecting the growing experience of putting the Integrated Health Service program into place.

The manual outlines the expectations for compliance with each component of the Integrated Health Services APCP model, and provides detailed instructions for each community and practice interested in participation in the program. The *Blueprint Manual* is available at: www.dvha.vermont.gov/budget-legislative/blueprintforhealthimplementationmanual2010-11-17.pdf.

The Expansion and Quality Improvement Program (EQuIP)

The Blueprint launched the EQuIP program to provide guidance and support to primary care practices through the process of transitioning to the APCP model. Through this program, the state has hired a team of nine facilitators who will coach the practices and assist them in the transformation from episodic to preventive health services. Each facilitator has been assigned regions of the state where they will work closely with the practices.

The facilitators are helping practices to:

- Achieve NCQA PPC-PCMH recognition as patient-centered medical homes.
- Effectively use IT systems such as the Covisint DocSite registry and portals to improve patient care.
- Integrate self-management support, shared decision making and planned care visits.
- Redefine practice roles and establishing team-based care.
- Seamlessly connect with community resources and specialty referrals.

Facilitators' skills include:

- The ability to conduct assessments
- Systems thinking and an understanding of process improvement methods
- Critical thinking and the ability to use data to drive change
- The ability to facilitate and negotiate in a supportive way
- The ability to help groups set and achieve goals
- An understanding of the team approach.

Additional training and interactive learning is planned to strengthen the capacity of the EQuIP facilitation team. The Blueprint is bringing experts in process improvement, practice coaching, and systems change from the U.S. and Canada to Vermont in 2010-11 to conduct trainings for facilitators and practice-based coaches. Curricula will be shared electronically with other practice extension programs in the U.S. and Canada.

Expansion to Pediatric Practices

As part of the expansion, the Blueprint APCP model will be extended to pediatric practices and patients of all ages throughout the state. The first three pediatric groups will be fully recognized and implemented by March 1, 2011. There are two pediatric practice facilitators (See EQuIP section) dedicated to working with pediatric practices and family medicine groups that serve a significant number of children, made possible through a collaboration with the Vermont Child Health Improvement Program and the Office of Vermont Health Access, the recipients of a competitive CMS (federal) Children's Health Insurance Program Reauthorization Act of 2009 grant. Pediatric practices are on the same timeline as adult primary care groups.

Other Areas of Expansion

The Blueprint has been pursuing expansion strategies in several new areas.

Discussions with mental health and substance abuse treatment professionals and advocates are continuing, with attention focused on both the engagement of patients in their primary care setting as well as the “reverse medical home” for severely affected individuals in the Community Mental Health Centers. Work is being done to create a scoring and payment mechanism for the

concept of the Mental Health Patient Centered Medical Home, led by the Behavioral Health Network.

The Seniors Aging Safely at Home (SASH) program is an organizational framework for formalizing care coordination at the community level. SASH coordinators and supervising nurses, who are part of the developing CHTs, can extend the impact of the teams to Vermont's at risk seniors. Medicare will be supporting this new aspect of the CHTs.

The statewide congestive heart failure (CHF) program based at Fletcher Allen Health Care continues with an emphasis on inpatient management, discharge planning, transitions of care, outpatient follow up and surveillance, outreach activities and measurement of program efficacy.

The definition of primary care practitioners includes those providers in the field of obstetrics and gynecology. Conversations with these primary care professionals will begin in 2011.

4. FEDERAL PARTNERSHIPS AND OPPORTUNITIES

The Centers for Medicare and Medicaid Services Multi-Payer Advanced Primary Care Practice Demonstration Project (MAPCP)

In September 2009, U.S. Health and Human Services' Secretary Kathleen Sebelius announced the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration as part of CMS' Center for Innovation. This demonstration project allows Medicare to join Medicaid and private insurers to participate in existing state-based health reform initiatives aimed at improving the delivery of primary care. A competitive application process followed with all states eligible to apply.

In November 2010, Vermont was selected to participate as one of eight states nationwide, including *Maine, Michigan, Minnesota, New York, North Carolina, Pennsylvania and Rhode Island*.

The goal of the demonstration is to evaluate the effectiveness of APCPs, and whether those practices will reduce avoidable health care utilization and expenditures. It will also evaluate

whether the APCP model will improve the safety, efficiency and timeliness of health care – and have an impact on patient decision-making and the delivery of care to the underserved.

The MAPCP is a cornerstone of the overarching expansion, as all insurers are now paying for their own beneficiaries. Until this point, the Blueprint budget covered the pilot Medicare patients, an unsustainable model.

The demonstration is expected to be fully implemented by mid-2011 and will operate for three years.

Creation of a Learning Health System – Activity Outside Vermont

One of the key steps in the successful application for the MAPCP demonstration was the work of the Multi-State Collaborative, a coalition of Health Care Reform personnel in other parts of the country. This group has been meeting regularly, focused on reform strategy and consistent evaluation of our various initiatives. This collaboration lays the framework for regional and ultimately nation-wide information platforms, a powerful set of tools to understand the impact of ongoing innovations.

Dr. Craig Jones represents the State of Vermont as a member of the Institute of Medicine Roundtable on Value and Science-Driven Health Care at the National Academies. In addition, he serves on the Consensus Committee on the Learning Health System in America, a peer review effort to produce evidence-based recommendations for the development and sustaining of such national and coordinated efforts. Dr. Jones has been involved in discussions at CMS, HHS and the White House, and is an opinion leader in the rapidly moving field of Health Care Reform.

The Blueprint continues its work with the Institute for Healthcare Improvement, both with the Triple Aim initiative and as faculty (Dr. Lisa Dulsky Watkins) at the IHI's Annual National Forum.

Valued partners in collaborative efforts include the Milbank Memorial Fund, the Commonwealth Fund, AcademyHealth, the National Association for State Health Policy, the Patient Centered Primary Care Collaborative, the Foundation for Informed Medical Decision Making, the Center

for Healthcare Strategies, the Medicaid Evidence-Based Decisions Project, the Canadian Health Services Research Foundation and the New England Rural Health Roundtable, among others.

5. EVALUATION AND EARLY PROGRAM IMPACT

Introduction

The Blueprint for Health is a state led program intended to transform the way that healthcare and health services are provided for the citizens of Vermont. Overall the program is intended to achieve the aims of improved healthcare and health services for individuals, improved health of the population, and improved control over healthcare costs. The Blueprint model is designed to accomplish this by leading a complex transformation from an environment characterized by fragmented services to a new environment that provides Vermonters with ready access to well-coordinated preventive health services. It is designed to operate as a dynamic Learning Health System that includes rapid cycle evaluation and skilled facilitation to assist with ongoing quality improvement as part of routine operations.

This section of the 2010 Annual Report briefly discusses the evaluation infrastructure that the program has put in place to assure transparent evaluation and to support a Learning Health System. In addition, this section presents early results from the pilot communities that took the lead and worked so hard to implement, test, and refine the Blueprint's Integrated Health Services model.

Evaluation Strategy & Resources

As part of a systems based approach to healthcare reform, the Blueprint has established a multi-faceted assessment process to support evaluation and ongoing refinement of a complex transformation process, with a constant focus on high quality and high value health services. Where possible, evaluation and reporting build on Vermont's steadily growing health information infrastructure with centralized clinical and administrative data sources that are populated as part of the normal daily activities of health service providers. Web based flexible reporting is being instituted to make best use of these centralized data sources in a way that supports rapid cycle evaluation. In addition, supplemental research activities are required to

more fully understand the impact of the program, particularly the human and societal impacts that may not be readily determined with structured clinical and administrative data captured as part of routine operations. The major components and current status of the Blueprint evaluation program is summarized below (Table 2).

Table 2. Major Components and Status of the Blueprint Evaluation Infrastructure

Data Sources	Databases	Measures	Reporting	Status
Data feeds from EMRs and Hospitals through Vermont Information Technology Leaders (VITL) health information exchange network. Direct use of registry as health services tracking system by practices and other service providers.	Web based central clinical registry. Developed and hosted by Covisint - DocSite.	<ul style="list-style-type: none"> ▪ Clinical Processes ▪ Health Status ▪ Performance ▪ Comparative Effectiveness 	<ul style="list-style-type: none"> ▪ Web based flexible reporting by registry system ▪ Feeds to University of Vermont (UVM) Informatics Platform 	<ul style="list-style-type: none"> ▪ Active data transmission and reporting ▪ Expand interfaces and data transmission in collaboration with VITL as Blueprint expands statewide
Data feeds (demographic & paid claims data) from insurers. Common format allowing integration into single data base.	Multi-payer claims database. Developed and hosted by Onpoint Health Data.	<ul style="list-style-type: none"> ▪ Healthcare Patterns ▪ Resource Utilization ▪ Healthcare Expenditures ▪ Performance ▪ Comparative Effectiveness 	<ul style="list-style-type: none"> ▪ Analysis & standard reports generated by Onpoint Health Data ▪ Includes detailed evaluation of utilization & costs for patients treated in Blueprint model with comparison cohorts. ▪ Feeds to UVM Informatics Platform 	<ul style="list-style-type: none"> ▪ Complete data sets from all commercial insurers. ▪ Vermont Medicaid implementing data transmission ▪ Work beginning with CMS to get Medicare data sets
Data sets from hospital, practice, and insurer administrative data systems. Supplied by Information Technology staff at hospitals for hospital affiliated practices.	Data sets maintained and analyzed by Jeffords Institute at Fletcher Allen Health Care	<ul style="list-style-type: none"> ▪ Emergency Room Visits ▪ Hospital Admissions ▪ Utilization rates as affiliated practices transition to Blueprint model 	<ul style="list-style-type: none"> ▪ Analysis & standards reports generated by Jeffords Institute at Fletcher Allen Health Care. ▪ Includes trends over time in hospital based care for patients treated in Blueprint model 	<ul style="list-style-type: none"> ▪ Data and early trends available for hospital affiliated practices available from Blueprint pilot communities ▪ Medicaid preparing data set across communities
Structured chart reviews in primary care practices conducted by Vermont Child Health Improvement Program (VCHIP) based at the University of Vermont (UVM)	Chart review data set maintained and analyzed by VCHIP at UVM	<ul style="list-style-type: none"> ▪ Clinical Processes ▪ Health Status ▪ Performance ▪ Comparative Effectiveness 	<ul style="list-style-type: none"> ▪ Analysis and standard reports generated by VCHIP / UVM ▪ Includes analysis of healthcare quality and health outcomes, trends over time 	<ul style="list-style-type: none"> ▪ ~ 4500 charts reviewed annually. ▪ ~ 3 years of data available thru CY 2009 ▪ Early trends available for pilot and comparison communities
Structured scoring of practices based on National Committee on Quality Assurance Physician Practice Connections-Patient Centered Medical Home (NCQA PPC-PCMH) standards conducted by VCHIP at UVM.	NCQA PPC-PCMH scoring data set maintained and analyzed by VCHIP at UVM	<ul style="list-style-type: none"> ▪ Clinical Processes ▪ PCMH Standards 	<ul style="list-style-type: none"> ▪ Analysis & standard reports generated by VCHIP at UVM ▪ Includes analysis of the relationship between NCQA PPC- PCMH standards, clinical quality, and health status measures from chart review 	<ul style="list-style-type: none"> ▪ Baseline NCQA PPC-PCMH Scoring available for practices in pilot communities. and in near term expansion communities ▪ Repeat scoring available in select practices
Structured qualitative assessments using focus groups and interviews addressing the experience of practice based providers, community health team members, and patients. Conducted by VCHIP/UVM.	Qualitative assessment data maintained and analyzed by VCHIP/ UVM	<ul style="list-style-type: none"> ▪ Consistent trends and key findings based on the experience of practice based providers, community health team members, patients. ▪ Strengths, challenges, recommendations for improvement 	<ul style="list-style-type: none"> ▪ Analysis & standard report generated by VCHIP/UVM 	<ul style="list-style-type: none"> ▪ Early findings available for Blueprint pilot communities and one comparison community
Hospital Discharge data through Vermont Department of Banking, Insurance, Healthcare Administration (BISHCA). Behavioral Risk Factor survey data, and Youth Risk Factor survey data generated by Vermont Department of Health (VDH)	Public Health Registries maintained and analyzed by VDH Epidemiology & Statistics Section.	<ul style="list-style-type: none"> ▪ Rates of hospital admissions, emergency care, procedures, associated charges, demographic risk factors, social risk factors, economic risk factors, behavioral risk factors, clinical risk factors 	<ul style="list-style-type: none"> ▪ Analysis & standard reports generated by the VDH Statistics Section ▪ Includes mapping and trends over time for multiple variables related to chronic conditions. 	<ul style="list-style-type: none"> ▪ Report available that includes 10 year trends in Vermont. ▪ Useful for planning health services strategies and tracking change over time at a population level
Data feeds from multi-payer claims database (Onpoint) and central clinical registry (Covisint DocSite) currently planned. Potential for other data sources (e.g. public health registries).	Integration of data and merged database maintained by Center for Translational Sciences at UVM	<ul style="list-style-type: none"> ▪ Clinical process ▪ Health status ▪ Utilization ▪ Expenditures ▪ Predictive modeling 	<ul style="list-style-type: none"> ▪ Web based flexible reporting from novel statewide integrated informatics platform (e.g. merged clinical, utilization, and expenditure data) ▪ Data sets for advanced analytics. 	<ul style="list-style-type: none"> ▪ Informatics platform under development at UVM ▪ Data sharing agreements being prepared for multi-payer claims data and central clinical registry data

Currently, the Blueprint team is working with stakeholders on statewide expansion of the programs Integrated Health Services model. Evaluation methods need to account for different phases of expansion. During early phases, non-intervention groups (practices, patients) will be available for comparative evaluation. As the program expands statewide, and non-intervention comparison groups are no longer available, comparative evaluation will continue with regional and national data as available. Vermont has the same multi-payer database vendor as several other states providing a substantive opportunity for comparative reporting. Longitudinal evaluations (e.g. change from baseline, time to endpoint, comparative effectiveness) will be conducted for all objectives at the practice, organization, HSA, and state levels, with comparisons across active participants. Reports will be used by Blueprint leadership, its multi-stakeholder advisory committees, and policy leaders to evaluate program impact at least annually, make recommendations for adjustment and improvement, and, to help inform state policy going forward including future payment and delivery system reforms. Reporting (web, annual) will be used by EQUIP facilitators (See Section 3), Advanced Primary Care Practice providers, Community Health Team members, and other community participants to guide ongoing quality improvement activities.

Program Objectives

The Blueprint evaluation is designed to monitor the impact of the program in the context of a series of specific objectives, and, to provide detailed insight into factors that may be associated with changing outcomes. The Blueprint evaluation will be used to determine the ability for the model to achieve the following objectives by mid CY 2014.

Objective 1. *≥80% of all primary care practices in the state achieve NCQA PPC-PCMH recognition, and for recognized practices to achieve a 5-10% annual improvement in their scores.*

Objective 2. *A 10% increase in the proportion of patients that receive guideline based care for prevalent chronic conditions and recommended health maintenance (selected measures, change from baseline).*

Objective 3. *A 10% increase in the proportion of patients that achieve control of their chronic health conditions (selected measures, change from baseline).*

***Objective 4.** Achieve proposed impact estimates that reflect a shift in patterns of healthcare utilization and expenditures from acute episodic care to preventive care.*

***Objective 5.** Achieve estimated reduction in the rate of growth of overall healthcare costs as investments in Vermont's advanced primary care infrastructure are offset by savings in other sectors of healthcare.*

Sufficient data are available to report on results related to each program objective. Detailed reports will be posted separately as they are completed. This annual report will focus on early trends in hospital based care and healthcare expenditures that have been observed in the pilot communities. A summary of key findings related to other program objectives is also included.

Characteristics of the Blueprint Pilots

The Blueprint's Integrated Health Services model has been fully implemented in three pilot communities starting with the St. Johnsbury Service Area (July 2008), the Burlington Service Area (October 2008), and the Barre Service Area (January 2010). In each service area the model has included Advanced Primary Care Practices (Patient Centered Medical Homes), multi-disciplinary Community Health Teams (CHTs), and supportive multi-insurer payment reforms. A summary of each pilot's characteristics and participants is provided in Table 3.

Table 3. Characteristics and Participants in the Three Blueprint Pilot Communities

	St Johnsbury Service Area	Burlington Service Area	Barre Service Area	Total
# Advanced Primary Care Medical Home Practices	5	2	4	11
Practice Type	1 IM 4 FP	2 IM	4 FP	3 IM, 8 FP*
Practice Ownership	1 Hospital 4 FQHC	1 Hospital 1 Private	3 Hospital 1 FQHC	5 Hospital, 5 FQHC 1 Private**
# Primary Care Providers	26	10	26	62
Primary Care Provider Type	MD/DO, APRN, PA***	MD/DO	MD/DO, PA, APRN	
# Community Health Teams (CHTs)	1	1	1	3
# Full time staff on CHTs	5.0	5.5	5	15.5
CHT Staffing (core team supported by payment reforms)	RN, Care Manager, Behavioral Health, Community Health Workers	RN, MSW, Health Educator, Dietician, Discharge Coordinator, Administrative Support, Data Entry	MSW, Administrative Support, Health Coach, Panel Manager, Counselor	
# Patients Served by Medical Homes and CHTs	17,235	13,300	18,890	49,425

*IM = Internal Medicine. FP = Family Practice

**FQHC = Federally Qualified Health Center. Barre originally had 3 hospital owned practices, 1 private practice, and 1 FQHC. The private practice merged with one of the hospital owned practices.

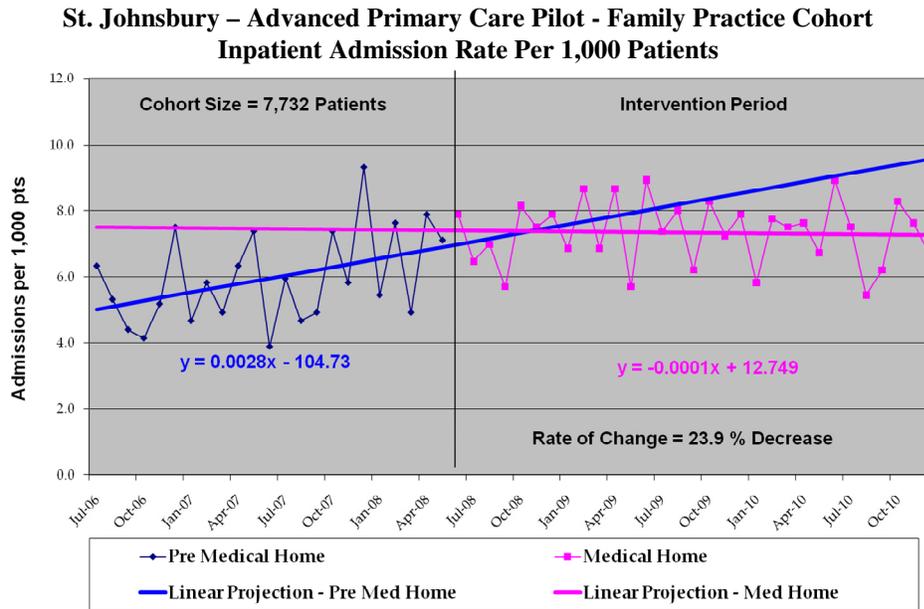
*** MD/DO Medical Doctor/Osteopathy, APRN Nurse Practitioner, PA Physician's Assistant

Trends in Hospital Inpatient Admissions & Emergency Department Visits

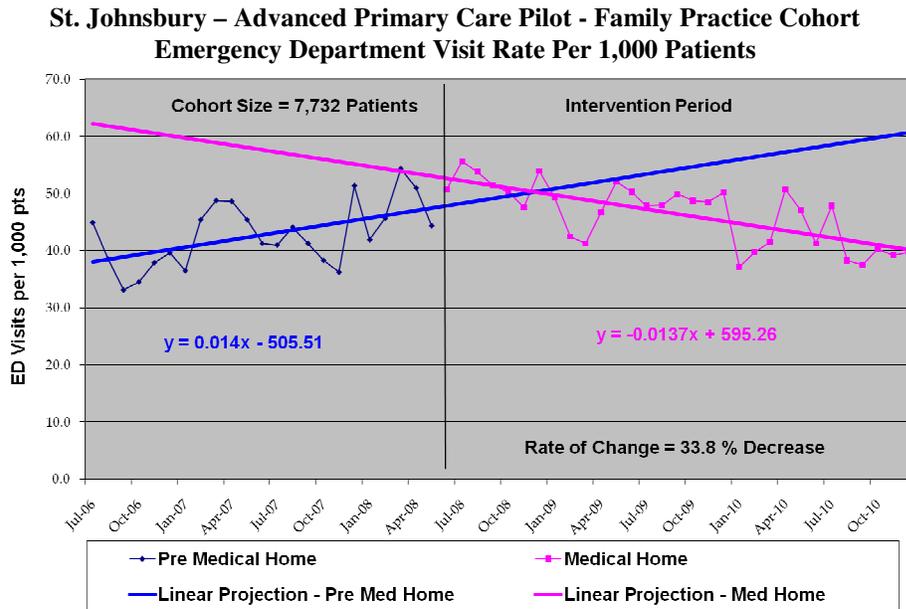
The pilots in St Johnsbury and Burlington have been operating for a sufficient period of time to examine early trends in hospital based care. The Barre pilot, which has been operating a shorter period of time, provides a comparison to determine if similar trends are observed in their community prior to and during implementation of their pilot. Results include a 4 year review of trends for total (all cause) Hospital Inpatient (IP) Admissions and Emergency Department (ED) Visits for patients treated in Advanced Primary Care Practices (Blueprint pilot practices).

Two different types of data have been used to evaluate early trends in hospital based care. Hospitals have provided data for patients in their affiliated practices. The Department of Vermont Health Access has provided data for Medicaid beneficiaries. In each case, an active Advanced Primary Care Practice (APCP) cohort was identified that included all patients 18 and older with a visit in the APCP between the start date of the pilot and the most recent date in CY 2010 where data is available. In both cases monthly rates of ED visits and IP admissions (all cause) for the APCP cohorts were evaluated during two time periods, a minimum of 2 years prior to the start of the pilot, and the time period since the start of the pilot. Each of the charts below displays the two different data series and trend lines for the same APCP cohort (Figures 5-12). Results are displayed for two indices- Total IP Admission Rate per 1000 and Total ED visit rate per 1000.

Figure 5. Trends in hospital based care in the St Johnsbury Service Area for the overall Advanced Primary Care cohort.



NORTHEASTERN VERMONT REGIONAL HOSPITAL  Data Provided by Northeastern Vermont Regional Hospital
Analysis Prepared by Jeffords Institute Fletcher Allen Health Care

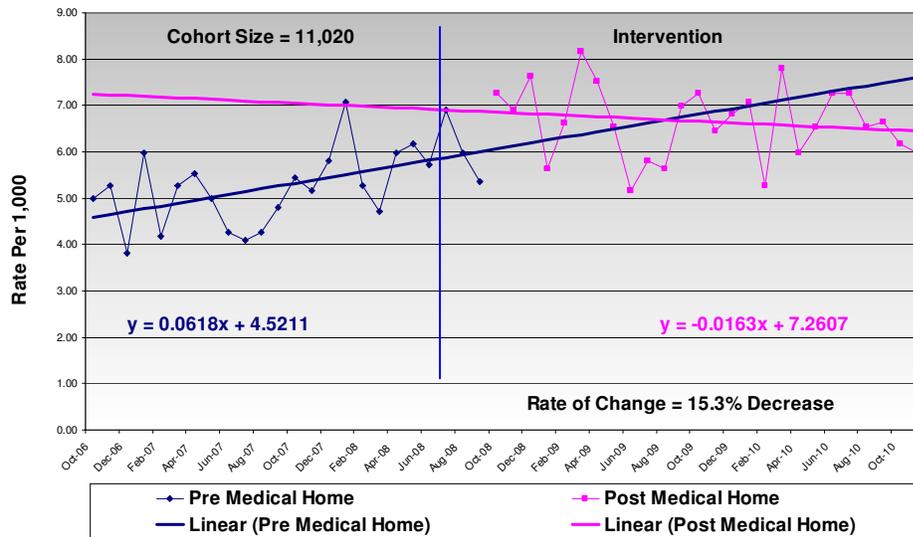


NORTHEASTERN VERMONT REGIONAL HOSPITAL  Data Provided by Northeastern Vermont Regional Hospital
Analysis Prepared by Jeffords Institute Fletcher Allen Health Care

Results in the St Johnsbury Service Area indicate a reduction in the rate of change of hospital based care for patients who have been seen in the Advanced Primary Care setting. This change was not evident in the first 6 to 12 months of the pilot.

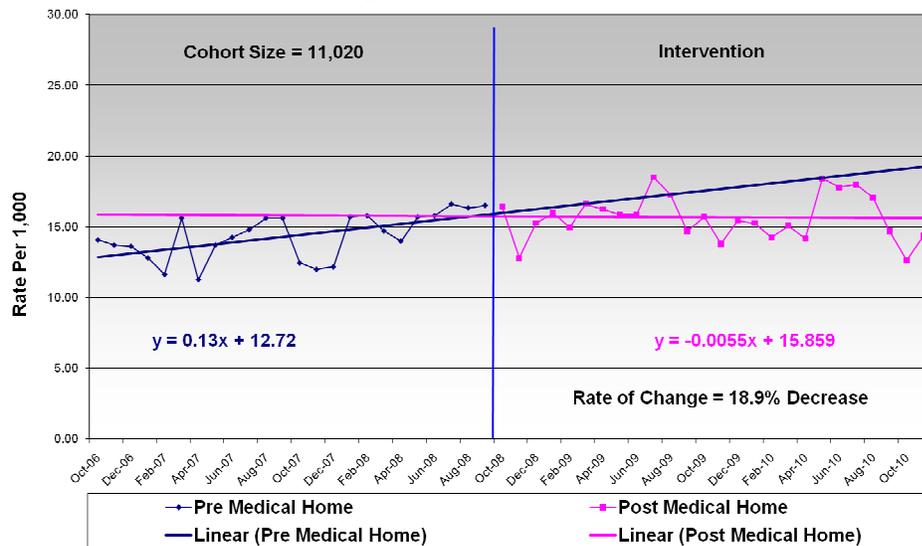
Figure 6. Trends in hospital based care in the Burlington Service Area for the overall Advanced Primary Care cohort.

Burlington Service Area-Fletcher Allen Health Care-Advanced Primary Care Pilot Internal Medicine Cohort - Inpatient Admission Rate Per 1,000 Patients



Prepared by Jeffords Institute
Fletcher Allen Health Care

Burlington Service Area - Fletcher Allen Health Care – Advanced Primary Care Pilot Internal Medicine Cohort - Emergency Department Admission Rate Per 1,000 Patients

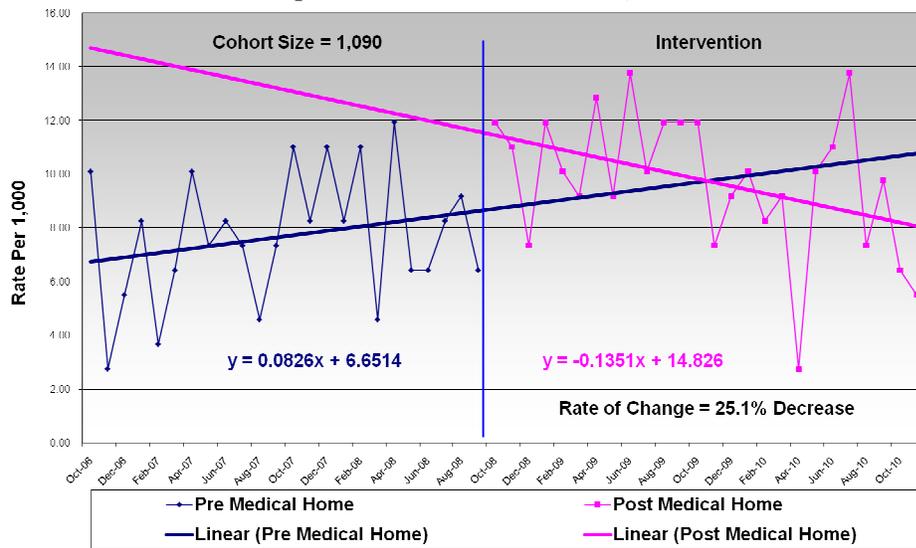


Prepared by Jeffords Institute
Fletcher Allen Health Care

Results in the Burlington Service Area indicate a reduction in the rate of change of hospital based care for patients who have been seen in the Advanced Primary Care setting. This change was not evident in the first 6 to 12 months of the pilot.

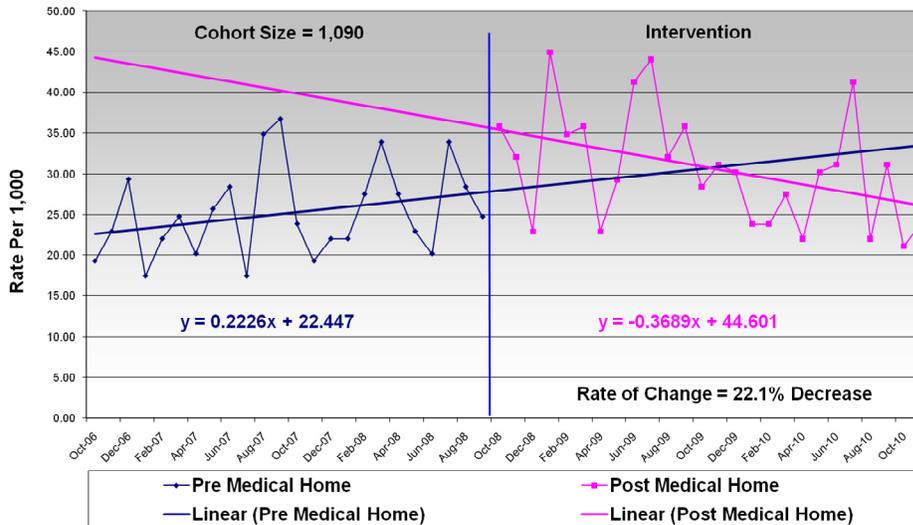
Figure 7. Trends in hospital based care in the Burlington Service Area for patients supported by the Community Health Team.

Burlington Service Area - Fletcher Allen Health Care – Community Health Team Cohort - Inpatient Admission Rate Per 1,000 Patients



Prepared by Jeffords Institute
Fletcher Allen Health Care

Burlington Service Area - Fletcher Allen Health Care – Community Health Team Cohort - Emergency Department Admission Rate Per 1,000 Patients

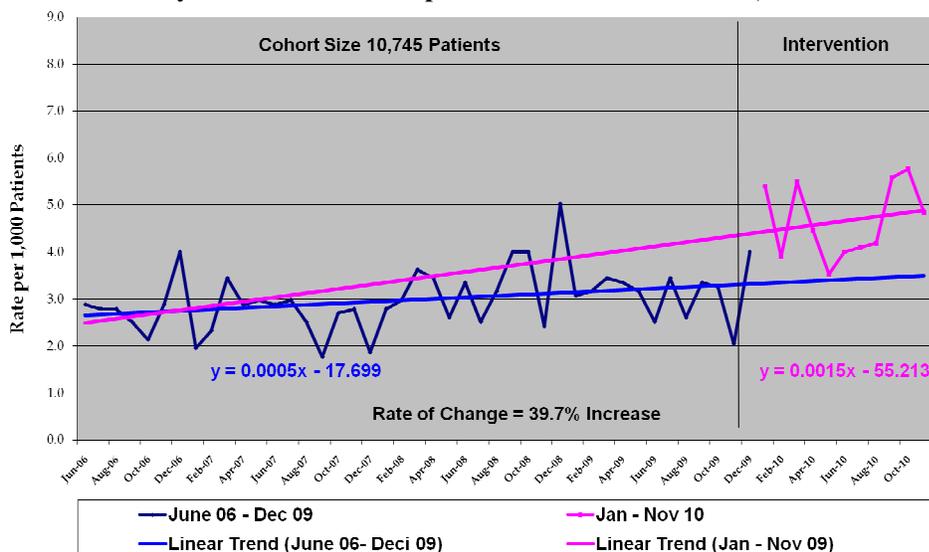


Prepared by Jeffords Institute
Fletcher Allen Health Care

Results in the Burlington Service Area indicate a greater reduction in the rate of change of hospital based care for the CHT cohort (a subgroup of the overall Advanced Primary Care cohort). This change was not evident in the first 6 to 12 months of the pilot.

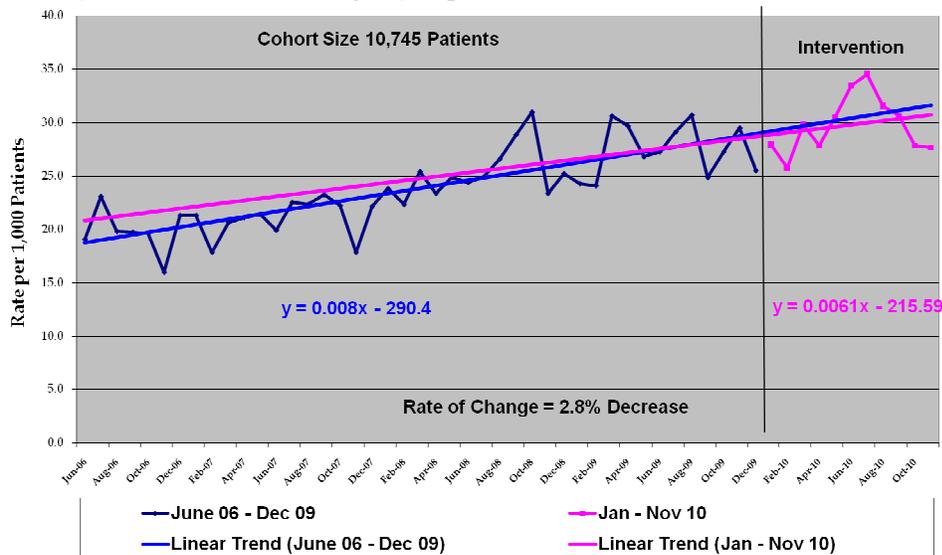
Figure 8. Trends in hospital based care in the Barre Service Area for the overall Advanced Primary Care cohort.

Barre Service Area - Central Vermont Medical Center– Advanced Primary Care Pilot-Family Practice Cohort - Inpatient Admission Rate Per 1,000 Patients



Data Provided by Central Vermont Medical Center
 Analysis Prepared by Jeffords Institute Fletcher Allen Health Care

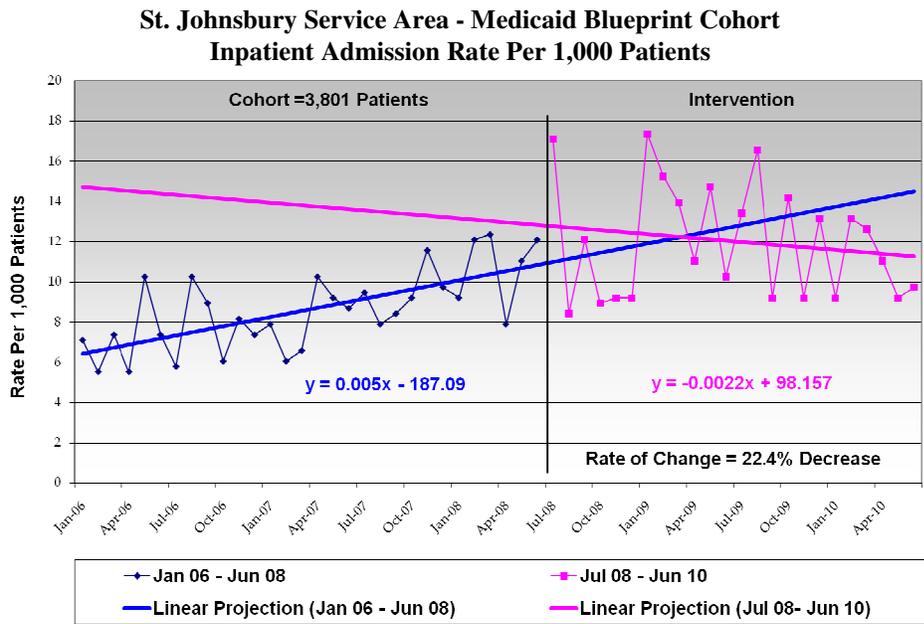
Barre Service Area - Central Vermont Medical Center– Advanced Primary Care Pilot Family Practice Cohort - Emergency Department Admission Rate Per 1,000 Patients



Data Provided by Central Vermont Medical Center
 Analysis Prepared by Jeffords Institute Fletcher Allen Health Care

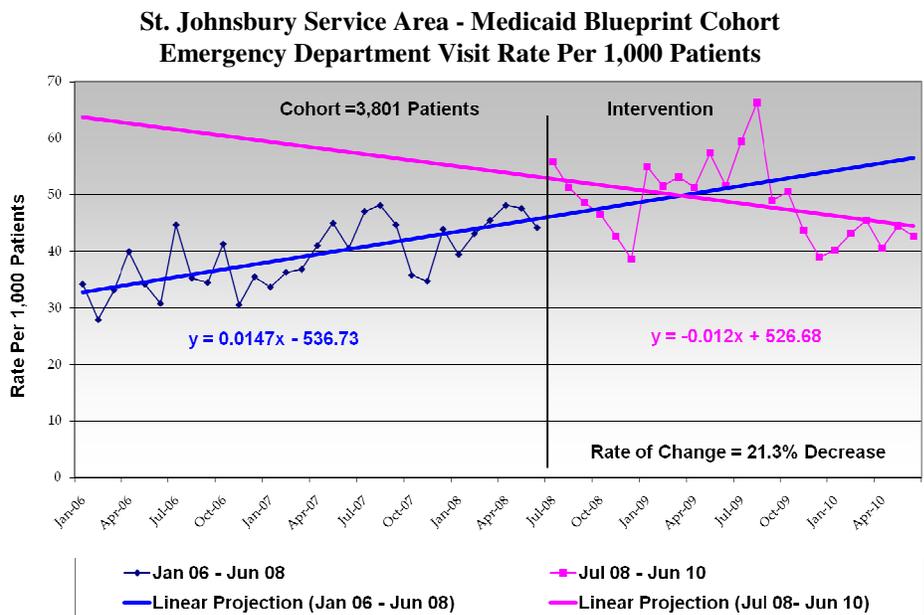
Trends in hospital based care in Barre did not change during CYs 2008 & 2009 (prior to their pilot), indicating that the trends in the first pilot communities (St. Johnsbury, Burlington) were not occurring in all areas of the state. Early trends in the Barre pilot (first 6-12 months) are similar to early trends in the first two pilot communities at the same time points.

Figure 9. Trends in hospital based care in the St Johnsbury Service Area for the Medicaid Advanced Primary Care cohort.



Department of Vermont Health Access

Data Provided by Department of Vermont Health Access
Analysis Prepared by Jeffords Institute Fletcher Allen Health Care

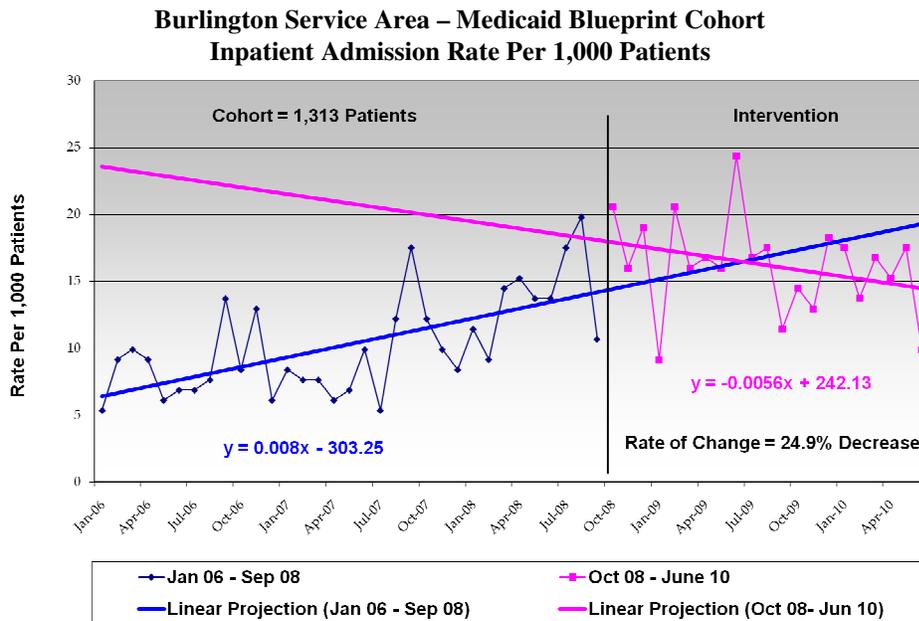


Department of Vermont Health Access

Data Provided by Department of Vermont Health Access
Analysis Prepared by Jeffords Institute Fletcher Allen Health Care

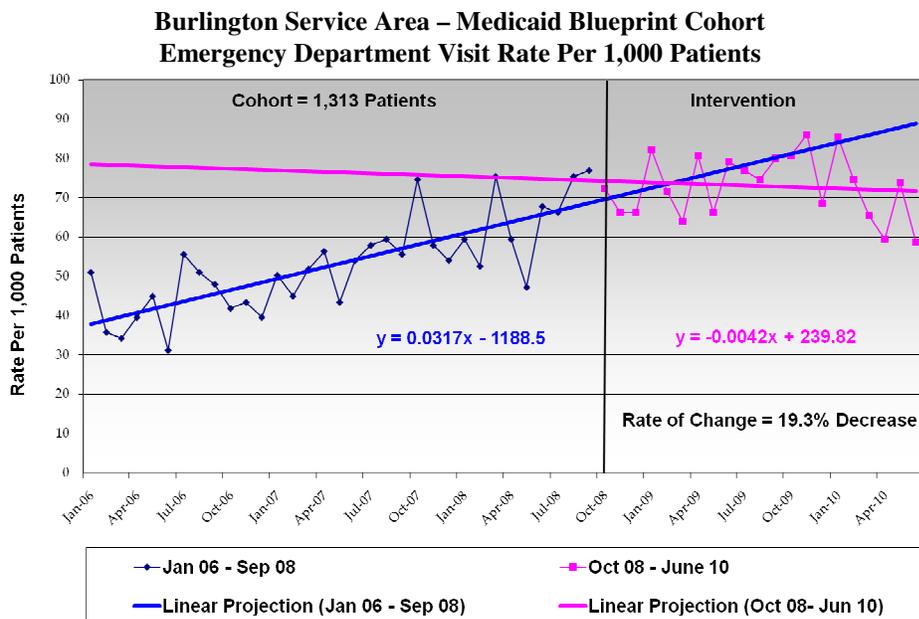
Results in the St Johnsbury Service Area indicate a reduction in the rate of change of hospital based care for Medicaid patients who have been seen in the Advanced Primary Care setting. This change was not evident in the first 6 to 12 months of the pilot.

Figure 10. Trends in hospital based care in the Burlington Service Area for the Medicaid Advanced Primary Care cohort.



Department of Vermont Health Access

Data Provided by Department of Vermont Health Access
Analysis Prepared by Jeffords Institute Fletcher Allen Health Care

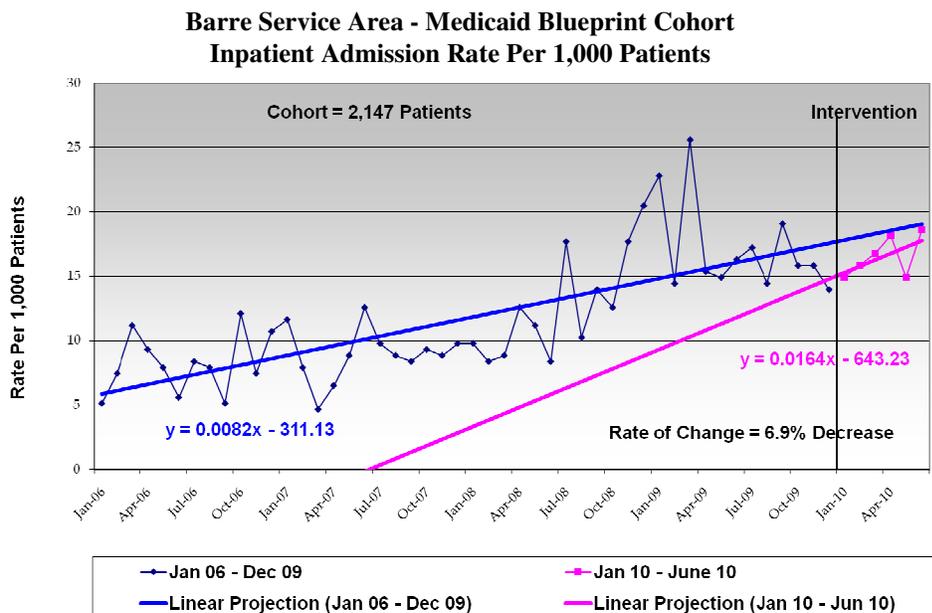


Department of Vermont Health Access

Data Provided by Department of Vermont Health Access
Analysis Prepared by Jeffords Institute Fletcher Allen Health Care

Results in the Burlington Service Area indicate a reduction in the rate of change of hospital based care for Medicaid patients who have been seen in the Advanced Primary Care setting. This change was not evident in the first 6 to 12 months of the pilot.

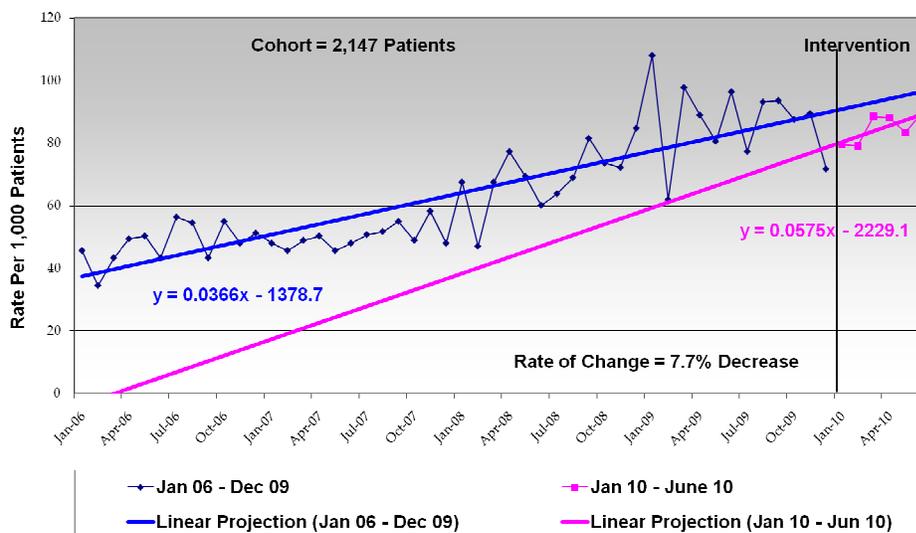
Figure 11. Trends in hospital based care in the Barre Service Area for the Medicaid Advanced Primary Care cohort.



Department of Vermont
Health Access

Data Provided by Department of Vermont Health Access
Analysis Prepared by Jeffords Institute Fletcher Allen Health Care

Barre Service Area - Medicaid Blueprint Cohort Emergency Department Visit Rate Per 1,000 Patients

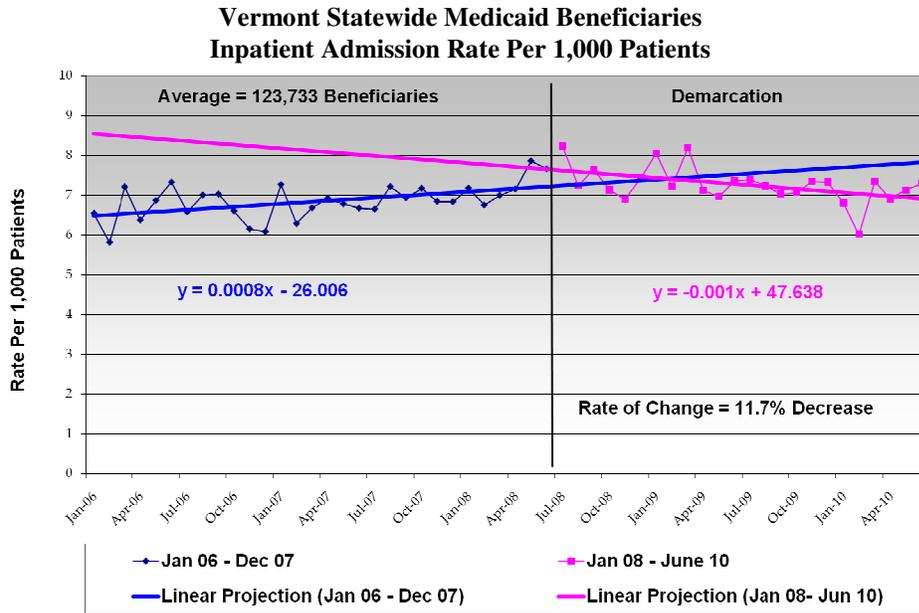


Department of Vermont
Health Access

Data Provided by Department of Vermont Health Access
Analysis Prepared by Jeffords Institute Fletcher Allen Health Care

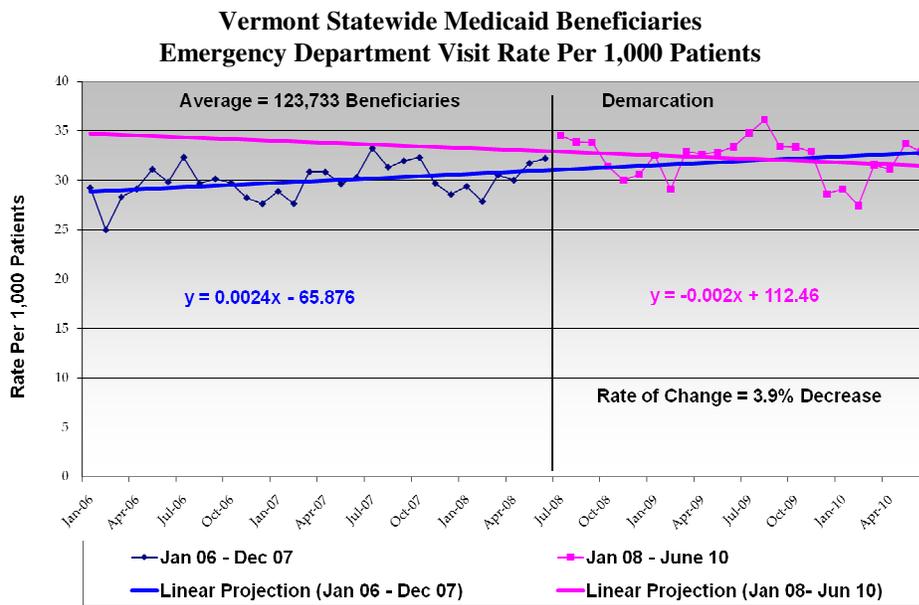
Trends in hospital based care in Barre did not change prior to the start of the pilot, indicating that the trends for Medicaid patients in the first two pilot communities (CYs 2008 & 2009) were not universal in all areas of the state. Early results in Barre during the first 6 to 12 months of the pilot are suggestive of trends similar to those observed in the first two pilot communities.

Figure 12. Statewide trends in hospital based care for all *Medicaid* beneficiaries.



Department of Vermont
Health Access

Data Provided by Department of Vermont Health Access
Analysis Prepared by Jeffords Institute Fletcher Allen Health Care



Department of Vermont
Health Access

Data Provided by Department of Vermont Health Access
Analysis Prepared by Jeffords Institute Fletcher Allen Health Care

On average, trends in hospital based care have improved for all Medicaid beneficiaries in Vermont since July 2008. Reductions in the rate of change of ED visits and IP utilization are not as high on a statewide basis as they are in the first two pilot communities during the same period of time.

Overall, these findings suggest a change in gross directionality of hospital encounter volumes, and are suggestive of change with a trajectory that is sustained over time making it unlikely to be a Hawthorne effect (change in the behavior of an individual or a group to meet the expectations of the evaluator). It should be pointed out that the results reflect utilization rates only, and do not reflect changes in healthcare costs per capita. These results are not predictive, but do display early trends in utilization rates with simple linear regression methods. Specifically, the trends indicate the following for each of the Advanced Primary Care Practice (APCP) Cohorts:

Pilot # 1- St Johnsbury Service Area APCP Cohort (July 1 2008 start date)

- A 33.8% decrease in the rate of change for ED Visits (all APCP patients, hospital data);
- A 23.9% decrease in the rate of change for IP Admissions (all APCP patients, hospital data);
- A 21.3% decrease in the rate of change for ED Visits (Medicaid patients, Medicaid data);
- A 22.4% decrease in the rate of change for IP Admissions (Medicaid patients, Medicaid data);
- Reductions in the rate of change of hospital based care are greater for Medicaid beneficiaries in the St. Johnsbury Blueprint pilot than for Medicaid beneficiaries statewide (which are also favorable).

Pilot # 2-Burlington Service Area APCP Cohort (October 1, 2008 start date)

- A 18.9% decrease in the rate of change for ED Visits (all APCP patients, hospital data);
- A 15.3% decrease in the rate of change for IP Admissions (all APCP patients, hospital data);
- A 19.3% decrease in the rate of change for ED Visits (Medicaid patients, Medicaid data);
- A 24.9% decrease in the rate of change for IP Admissions (Medicaid patients, Medicaid data);
- Reductions in the rate of change of hospital based care are greater for Medicaid beneficiaries in the Burlington Blueprint pilot than for Medicaid beneficiaries statewide (which are also favorable)
- Patients who received support from the Community Health Team (patients with greater need) had a larger reduction in the rate of change of IP and ED utilization than the general APCP cohort.
- *Notably* - similar reductions in the rate of change of IP and ED utilization were seen in Fletcher Allen's non-pilot primary care practices even though they were not part of the Blueprint pilot. This may be associated with a system wide quality improvement effort as Fletcher Allen has been preparing all its practices to operate as patient centered medical homes (data not shown).

Pilot # 3- Barre Service Area APCP Cohort (January 1 2010 start date)

- IP and ED utilization continued to increase in Barre during CYs 2008 and 2009, prior to the start of their pilot. This suggests that changes observed in the first two pilot communities during the same period of time were not universal trends in all areas of the state.
- Early patterns in the Barre Service Area pilot, including an increase in IP utilization, are similar to patterns that were observed during the first 6 to 12 months in the first two pilot communities.

Early Trends in Overall Healthcare Expenditures & Utilization

Early results from claims data on utilization and healthcare expenditures are available from the Vermont Healthcare Claims Uniform Reporting & Evaluation System (VHCURES). VHCURES is a multi-payer claims data base, operated by Onpoint Health Data (formerly Maine Health Information Center) under the supervision and management of the Vermont Department of Banking, Insurance, Securities, and Healthcare Administration (BISHCA). Currently, data from VHCURES is limited to commercially insured patients.

Results include data on the 2008 to 2009 trend in healthcare expenditures for commercially insured patients treated in Advanced Primary Care Practices (APCPs) in the first two Blueprint pilot communities. Preliminary results based upon analysis of Onpoint reporting of Blueprint flagged participants in both the St. Johnsbury and Burlington Service Areas are presented in the Tables 4 and 5 below. Major observations resulting from analysis of the data follows each table.

Table 4. Utilization and expenditure trends for APCP patients in St Johnsburry Service Area

ST JOHNSBURY (Start date July 1, 2008)						
LINE OF SERVICE:	2008		2009		% CHANGE	
	UTL/1000	PMPM	UTL/1000	PMPM	UTL/1000	PMPM
HOSPITAL INPATIENT	48	\$58	37	\$46	-22.92%	-20.69%
HOSPITAL OUTPATIENT	1,210	\$139	1,019	\$118	-15.79%	-15.11%
PHYSICIAN INPATIENT	265	\$12	204	\$8	-23.02%	-33.33%
PHYSICIAN OUTPATIENT	5,223	\$68	4,833	\$60	-7.47%	-11.76%
EMERGENCY ROOM	213	\$14	148	\$9	-30.52%	-35.71%
LABORATORY	1,601	\$32	1,326	\$34	-17.18%	6.25%
PHARMACY	5,165	\$57	5,044	\$59	-2.34%	3.51%
NURSING HOME	0	\$0	0	\$0	N/A	N/A
HOME HEALTH CARE	58	\$1	25	\$1	-56.90%	0.00%
MENTAL HEALTH	723	\$9	749	\$9	3.60%	0.00%
OTHER	<u>2,482</u>	<u>\$24</u>	<u>2,085</u>	<u>\$22</u>	<u>-16.00%</u>	<u>-8.33%</u>
TOTAL PLAN AND MEMBER	16,988	\$414	15,470	\$366	-8.94%	-11.59%

NOTES:

- 1) HOSPITAL INPATIENT EXCLUDES PRIVATE HOSPITAL MENTAL HEALTH INPATIENT.
- 2) HOSPITAL OUTPATIENT IS NET OF HOSPITAL-BASED MENTAL HEALTH OUTPATIENT, ER, LAB, AND PHARMACY.
- 3) MENTAL HEALTH INCLUDES MENTAL HEALTH HOSPITAL INPATIENT, MENTAL HEALTH HOSPITAL OUTPATIENT AND MENTAL HEALTH PROFESSIONAL SERVICES.

Major Observations of the St. Johnsburry Service Area are as follows:

- Inpatient utilization and PMPM costs both decreased substantially year over year (approximately -21% and -22% respectively);
- Both hospital outpatient utilization and PMPM costs decreased substantially year over year (approximately -16% and -15% respectively);
- Physician inpatient utilization and PMPM costs decreased substantially year over year (approximately -23% and -33% respectively);
- Physician outpatient utilization and PMPM costs both decreased year over year, but not as much as physician inpatient utilization and PMPM costs;
- Emergency Room utilization and PMPM costs decreased substantially year over year (approximately -31% and -36% respectively);
- Overall utilization and PMPM costs were both down significantly year over year (approximately -8.9% and - 11.6% respectively).

Table 5. Utilization and expenditure trends for APCP patients in Burlington Service Area

<u>BURLINGTON (Start date October 1, 2008)</u>						
<u>LINE OF SERVICE:</u>	<u>2008</u>		<u>2009</u>		<u>% CHANGE</u>	
	<u>UTL/1000</u>	<u>PMPM</u>	<u>UTL/1000</u>	<u>PMPM</u>	<u>UTL/1000</u>	<u>PMPM</u>
HOSPITAL INPATIENT	40	\$35	37.00	\$37	-7.50%	5.71%
HOSPITAL OUTPATIENT	842	\$66	1,078.00	\$82	28.03%	24.24%
PHYSICIAN INPATIENT	186	\$13	182.00	\$10	-2.15%	-23.08%
PHYSICIAN OUTPATIENT	5,513	\$93	4,375.00	\$73	-20.64%	-21.51%
EMERGENCY ROOM	102	\$10	103.00	\$11	0.98%	10.00%
LABORATORY	1,176	\$17	1,167.00	\$19	-0.77%	11.76%
PHARMACY	4,990	\$54	5,286.00	\$62	5.93%	14.81%
NURSING HOME	0	\$0	0.00	\$0	N/A	N/A
HOME HEALTH CARE	48	\$1	27.00	\$1	-43.75%	0.00%
MENTAL HEALTH	851	\$10	1,114.00	\$11	30.90%	10.00%
OTHER	<u>3,302</u>	<u>\$37</u>	<u>2,714.00</u>	<u>\$31</u>	<u>-17.81%</u>	<u>-16.22%</u>
TOTAL PLAN AND MEMBER	17,050	\$336	16,083.00	\$337	-5.67%	0.30%

NOTES:

- 1) HOSPITAL INPATIENT EXCLUDES PRIVATE HOSPITAL MENTAL HEALTH INPATIENT.
- 2) HOSPITAL OUTPATIENT IS NET OF HOSPITAL-BASED MENTAL HEALTH OUTPATIENT, ER, LAB, AND PHARMACY.
- 3) MENTAL HEALTH INCLUDES MENTAL HEALTH HOSPITAL INPATIENT, MENTAL HEALTH HOSPITAL OUTPATIENT AND MENTAL HEALTH PROFESSIONAL SERVICES.

Major Observations of the Burlington Service Area are as follows:

- Although inpatient utilization decreased 7% year over year, PMPM costs increased approximately 5.7 %;
- Both hospital outpatient utilization and PMPM costs increased substantially year over year (approximately 28% and 24% respectively);
- Physician outpatient utilization and PMPM costs decreased substantially year over year (approximately -21% and -22% respectively);
- Pharmacy utilization increased over 5% and PMPM costs approximately 15% year over year;
- Although overall utilization decreased approximately 5.7% year over year, PMPM costs were basically flat over the same time period.

St. Johnsbury clearly demonstrated substantial improvement year over year across most lines of service measured, reducing its overall PMPM costs from \$414 per member in 2008 down to

\$366 per member in 2009. While Burlington did show some overall improvement in year over year utilization, PMPM costs rose slightly from \$336 in 2008 to \$337 in 2009. It is important to note that comparisons with traditional or routine care were not available at the time that this report was prepared. A detailed utilization and expenditure report, with matched patient groups, is currently being prepared. This report will be posted publically when available.

Summary of Trends in Healthcare Quality and Outcomes

This section summarizes key findings from a more detailed report on *Medical Record Review Findings at Traditional and Advanced Primary Care Practices (APCPs)*, conducted by the Vermont Child Health Improvement Program (VCHIP) at the University of Vermont (UVM). VCHIP reviewed a random sample of approximately 4,000 medical records at over 40 primary care practices in six of Vermont's hospital service areas (HSAs) to learn more about the health status of Vermonters with chronic conditions¹ and the healthcare they receive. From this review of medical records, we learned that during 2009:

- 58.6% of patients with diabetes whose medical records were reviewed were having their hemoglobin A1C tested at least twice a year as recommended and 82.8% were having their LDL cholesterol checked at least once as recommended;
- the mean hemoglobin A1C of patients whose records were reviewed was 7.3 (HgbA1cs should 7.0 or less) and LDL was 97 (LDLs should be 100 or less);
- 99.1% of patients with hypertension whose records were reviewed had their blood pressure checked at least once at the practice, and patient reporting of blood pressure self-monitoring was seen in 31.5% of records reviewed;
- patients with hypertension had a mean systolic blood pressure of 136 and diastolic blood pressure of 81 (recommendations are for systolic blood pressure less than 140 and diastolic blood pressure less than 90 for patients with hypertension);
- of records belonging to patients with asthma, 43% had at least one primary care visit at which their asthma control was assessed in some way (the majority of these assessments did not include a complete assessment in accordance with recommendations), of those patients, 21% had well-controlled asthma;

¹ Individuals between the ages of 18 and 80 with diabetes, hypertension, or asthma

- self-management goals were set by 38% of patients with diabetes, 25.5% of patients with hypertension, and 18% of patients with asthma;
- and 12.9% of patients with diabetes, 4.4% of patients with hypertension, and 5% of patients with asthma were referred to some sort of self-management resource.

When medical records from traditional primary care practices were compared to records from APCPs, several differences emerged:

- for medical records belonging to patients with asthma, the percentage of records with at least one assessment of lung functioning increased from the period prior to the implementation of the APCP model to the period in which practices began transitioning to APCPs for practices that have become APCPs, but not for practices that have not yet undergone this transition;
- for medical records belonging to patients with diabetes, the percentage of records with self-management referrals and self-management goal-setting increased from the period prior to the implementation of the APCP model to the period in which practices began transitioning to APCPs for practices that have become APCPs, but not for practices that have not yet undergone this transition;
- and similarly, for medical records belonging to patients with hypertension, the percentage of records with a self-management referral increased from the period prior to the implementation of the APCP model to the period in which practices began transitioning to APCPs for practices that have become APCPs, but not for practices that have not yet undergone this transition.

VCHIP is currently conducting another round of reviews to understand how the APCP model is influencing healthcare and health outcomes over time.

Summary of Early Trends for Medical Home Scores

This section summarizes key findings from a more detailed report on the *Relationship between NCQA Scores and Medical Record Outcomes*. This study was conducted by the Vermont Child Health Improvement Program (VCHIP) at the University of Vermont (UVM). As described in the Vermont *Blueprint Manual*, one component of becoming an Advanced Primary Care Practice (APCP) is receiving recognition from the National Committee for Quality Assurance through the Physician Practice Connections- Patient Centered Medical Home (NCQA PPC-PCMH) program.

NCQA PPC-PCMH scores are used to set an enhanced per person per month (PPPM) direct payment to the APCPs use to improve patient care. NCQA PPC-PCMH scores can range from zero to 100. Higher scores denote greater fidelity to the patient-centered medical home model and a higher PPPM rate².

NCQA PPC-PCMH scores were compared to the health and healthcare status of patients receiving care at Advanced Primary Care Practices as measured by a review of medical records belonging to patients with diabetes, hypertension, or asthma during the year 2009³.

For records belonging to patients with diabetes, as NCQA PPC-PCMH scores increased, the likelihood of medical records having:

- at least two Hemoglobin A1C measurements during the year increased,
- at least one LDL cholesterol measurement during the year increased,
- a body mass index (BMI) value recorded increased,
- and having some indication that an influenza vaccine had been received during the year decreased.

For medical records belonging to patients with hypertension, as NCQA PPC-PCMH scores increased, the likelihood of medical records having:

- a body mass index (BMI) value recorded increased,
- and the number of visits at which blood pressure was recorded increased.

For medical records belonging to patients with asthma, as NCQA PPC-PCMH scores increased, the likelihood of medical records having:

- a body mass index (BMI) value recorded increased,
- evidence of a treatment plan set by the provider and patient increased,
- and having an explicit indication that the patient's current treatment plan that was working increased.

² NCQA scores and corresponding PPPMs are actually based on a combination of raw points earned on the NCQA survey and the number of "must pass" elements that a practice passes. This report is based only on the raw points earned.

³ Not all practices had become APCPs by this time.

Summary of Participant Experience in Blueprint Pilot Communities

This section summarizes key findings from a more detailed report entitled a *Qualitative Evaluation of Provider and Provider Practice Staff, Community Health Teams and Patient Perceptions Related to the Vermont Blueprint for Health*, conducted by the Vermont Child Health Improvement Program (VCHIP) at the University of Vermont (UVM). According to the 39 primary care providers, nurses, practice managers, and other practice staff that took part in five focus group discussions, the Blueprint has had many positive influences on the provider practices and communities in which it has been implemented. Participants described improved workflow, operation of electronic health records (EHRs), staffing levels, and patient interactions. Strengths and accomplishments most frequently voiced included the advent of Community Health Teams (CHTs) in the Hospital Services Areas (HSAs) in which they had been implemented. According to participants, patients' outcomes seemed to be improved as a result of the introduction of the CHT and the holistic and prevention-focused approach adopted by the Blueprint, enhanced access to mental health services and community supports, and the training and education offered to patients often in the form of nutritional, diet, exercise or self-management counseling or workshops.

Challenges to implementation and sustainability reportedly included financial and time constraints, the sustainability of buy-in from practice staff, and the integration of different electronic systems into everyday workflow. Participants working in rural locations also mentioned transportation issues and limited patient access to specialists. Participants described looking forward to increased communication, collaboration and coordination among partners and emphasized the importance of using data that is being gathered to inform best practices and the evolution of the Blueprint.

Discussions with 14 members from the initial three CHTs revealed that effectively staffed and cohesive CHTs are imperative to providing the patient-centered healthcare that is the hallmark of the Advanced Primary Care Practice model. Participants described the importance of collaboration, flexibility, and practice buy-in and suggested that teams could be strengthened by adding additional staff and services to meet specific community needs. Acknowledging the up-front cost of a larger CHT, participants hypothesized providing patients more options and opportunities would in the long-run result in healthier patients more adept at managing their own

health and healthcare. They consistently expressed physical space and access to practice providers, staff, and systems as challenges to providing needed assistance to practices and patients. In addition, participants suggested that greater effort is spent introducing the concept of a medical home and the role of the CHT to practices prior to the arrival of team members to ensure all staff are familiar with their practice's goals and are aware of new practice resources.

Approximately 20 healthcare consumers asked to describe recent changes in their health and healthcare attributed a variety of improvements to interactions they had had with CHT members and when patients' needs were assessed, services provided by CHTs topped their lists.

Healthcare consumers asked for more diversity in health education opportunities and easier access to the physical and human resources they need to manage their health.

Conclusions

Preliminary results are just now becoming available from the Blueprint's first three pilot communities. The Blueprint's multi-dimensional evaluation is designed to support a detailed examination of health reforms at a number of important levels including healthcare quality, clinical outcomes, experience of patients and providers, patterns of health services and resource utilization, healthcare expenditures, and overall financial impact. Early results suggest the following trends in Blueprint pilot communities.

- Favorable trends are occurring in the first two pilot communities with reductions in the rate of change of IP and ED utilization per 1000 patients treated in the Advanced Primary Care setting. The results seen in the first two pilot communities for the overall APCP population, and the Medicaid population, do not appear to be occurring to the same degree in other areas of the state. Consistent trends are being observed with data from independent data sources (hospitals provided data for affiliated practices, Medicaid data for beneficiaries). Notably, increases in the rate of change in IP and ED utilization are observed in all 3 pilot communities during the first 6 to 12 months of each pilot followed by a bending of the utilization curve as rates of change reduce.
- In a separate analysis similar trends are observed with data from VHCURES (Vermont's multi-payer database). Although comparison with matched cohorts with broad based payer data is unavailable at the time of this report, early trend lines in hospital based care (IP

admissions, ED visits) per 1000 commercially insured Blueprint participants in the first two pilot markets appear to be favorable. Trend lines in the case of PMPM costs are particularly favorable in the St. Johnsbury Service Area, but not as favorable (flat) in the case of Burlington.

- It should be emphasized that the data sets used for these analyses are preliminary and have limitations. Neither data set has been evaluated in contrast to a matched cohort, or control group. Therefore, the results have not yet been compared with a patient population mirroring the Blueprint patient population that did not have the benefit of Blueprint clinical interventions. A detailed utilization and expenditure report with Blueprint patients compared to a matched cohort (control group) is currently being prepared from VHCURES. Further, the VHCURES data set represents only a sampling (84% of claims processed) of the commercial/private payer market, and does not reflect the patient populations of the other major payer groups, most notably Medicare and Medicaid. Given that utilization experience can vary from payer group to payer group, the results may only be taken as an early indicator, and could potentially change as the other payer groups are built into the VHCURES data base.
- Favorable trends in healthcare quality are beginning to be observed in the Advanced Primary Care Practice setting as compared to the traditional primary care setting. Results to date suggest an increasing focus on enhanced self-management and prevention. Independent scoring of primary care practices is beginning to allow the Blueprint to work with its evaluation partners to conduct a novel examination of the relationship between the National Committee on Quality Assurance standards for a Patient Centered Medical Home, clinical quality, and health outcomes. .
- A qualitative evaluation using focus groups and interviews suggests positive early trends in patient and provider experience, and in particular a positive impact due to introduction of Community Health Teams. These evaluations also highlight challenges for transforming the primary care practice setting providing insight for ongoing quality improvement and refinement of the Blueprint model.
- In aggregate, results to date are encouraging with favorable trends in hospital based care, expenditures, healthcare quality, and the experience of patients and providers. However, it is too early to determine whether these trends reflect a changing environment that will translate into well coordinated preventive health services, sustained improvement in health status, and prevention of the rates and consequences of chronic conditions.

- Detailed reports related to each of the program objectives will be posted on the Blueprint's website (www.hcr.vermont.gov) as they become available. Notification and electronic copies of the reports will be sent to policy leaders in Vermont and members of key Blueprint committees.

6. APPENDICES

Appendix I – Blueprint Staff

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Appendix II – 2010 Blueprint Committees

Blueprint Executive Committee

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Gerhild Bjornson, PhD, MD., CIGNA Representative for Vermont
Hunt Blair, Deputy Director, Office of Health Care Reform, State of Vermont
Peter Cobb, Director, Vermont Assembly of Home Health Agencies
David Cochran, CEO and President, Vermont Information Technology Leaders
Don Curry, President and General Manager, CIGNA HealthCare of New England
Wendy Davis, MD., Commissioner, Vermont Department of Health
Don George, President & CEO, Blue Cross Blue Shield of Vermont
Paul Harrington, Executive Director, Vermont Medical Society
Michael Hartman, Commissioner, Department of Mental Health, State of Vermont
Jim Hester, Director, Health Care Reform Commission
Nicole Hill, Assistant Director, State Employee Benefits
Church Hindes, VNA of Chittenden and Grand Isle Counties
Jim Leddy, AARP Vermont State President
William Little, Vice President, Vermont MVP Health Care
Charles MacLean, MD, University of Vermont College of Medicine
Christine Oliver, Deputy Commissioner, BISHCA
Suzanne Santarcangelo, PhD., Director Health Care Operations, Agency of Human Services, State of Vermont
David Tucker, Department of Information and Innovation, State of Vermont
Deborah Wachtel, NP, MPH, Vice President, Vermont Nurse Practitioner Association
Bill Warnock, ND, Naturopathic Physician
Sharon Williams, Executive Director, VPQHC

Blueprint Provider Practice Advisory Group

Donna Izor, Central Vermont Medical Center, Co-chair
Charles MacLean, MD, Essex Junction, Co-chair
Sharon Fine, MD, Danville
David Gorson, MD, Bennington
Paul Harrington, Vermont Medical Society
Craig Jones, MD, Vermont Blueprint
John King, MD, Milton
Dana Kraus, MD, St. Johnsbury
Keith Michl, MD, Bennington
Rob Penney, MD, Burlington
Bob Schwartz, MD, Bennington
Norm Ward, MD, South Burlington
Lisa Dulsky Watkins, MD, Associate Director, Blueprint for Health
Rich White, MD, Windsor
Anthony Williams, MD, Barre

Blueprint Expansion Design & Evaluation Committee

Denis Barton, Bi-State Primary Care Association
Pam Biron, Blue Cross Blue Shield of Vermont
Gerhild Bjornson, PhD., MD., CIGNA representative for Vermont
Hunt Blair, Deputy Director, Department of Vermont Health Access
John Bond, Blue Cross Blue Shield Vermont
John Brumsted, MD, Chief Quality Officer, Fletcher Allen Health Care
Peter Cobb, Vermont Assembly of Home Health Agencies
Kevin Cooney, Northern County Health Care
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Susan Ridzon, Blue Cross Blue Shield Vermont
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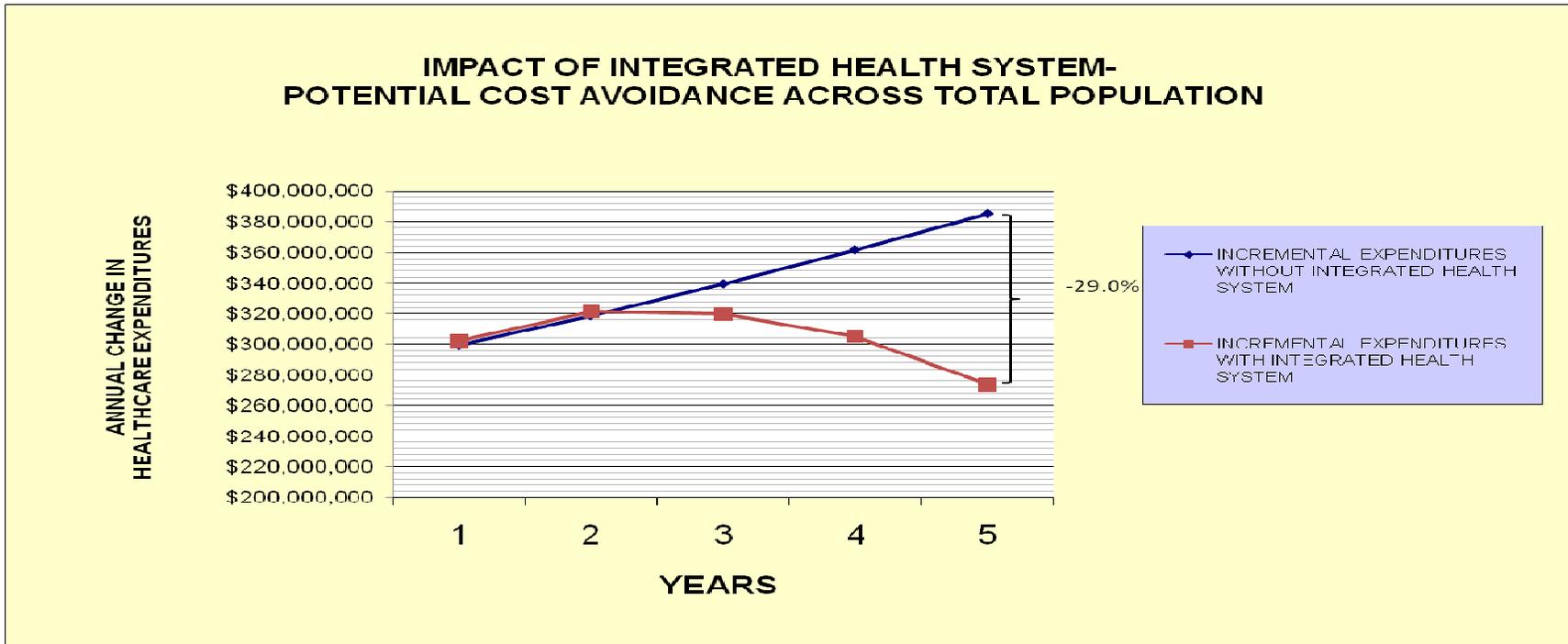
Appendix III – Blueprint Financial Impact Model Assumptions and Estimates

BLUEPRINT PROJECT
BUSINESS CASE MODEL-INTEGRATED HEALTH SYSTEM- GENERAL POPULATION
(5-YEAR PROJECTION- ALL AGES)

	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
TOTAL PROJECTED VERMONT HEALTHCARE EXPENDITURES (000'S)	\$5,224,494	\$5,564,087	\$5,925,752	\$6,310,926	\$6,721,136
BLUEPRINT ELIGIBLE POPULATION	631,430	633,324	635,224	637,130	639,041
BLUEPRINT TARGET POPULATION	126,286	316,662	508,179	637,130	639,041
NUMBER OF COMMUNITY CARE TEAMS	6	16	25	32	32
TOTAL COST OF COMMUNITY CARE TEAMS	\$1,072,855	\$5,879,067	\$9,717,768	\$12,549,161	\$12,586,809
GROSS SAVINGS PER TARGET MEMBER PER MONTH	\$3.68	\$7.42	\$11.24	\$16.56	\$17.48
PROGRAM COSTS PER TARGET MEMBER PER MONTH	\$5.34	\$4.08	\$3.93	\$3.92	\$3.92
NET SAVINGS PER TARGET MEMBER PER MONTH	(\$1.67)	\$3.34	\$7.31	\$12.64	\$13.56
TOTAL PROVIDER PAYMENTS	\$3,030,862	\$7,599,887	\$12,196,299	\$15,291,109	\$15,336,983
TOTAL PROGRAM INVESTMENTS	\$8,099,143	\$15,494,032	\$23,970,868	\$29,939,896	\$30,062,375
TOTAL PROGRAM COST AVOIDANCE	\$5,573,222	\$28,183,313	\$68,551,347	\$126,584,985	\$134,065,162
MULTIPLE OF NET INVESTMENT	0.69	2.30	3.36	4.73	4.96

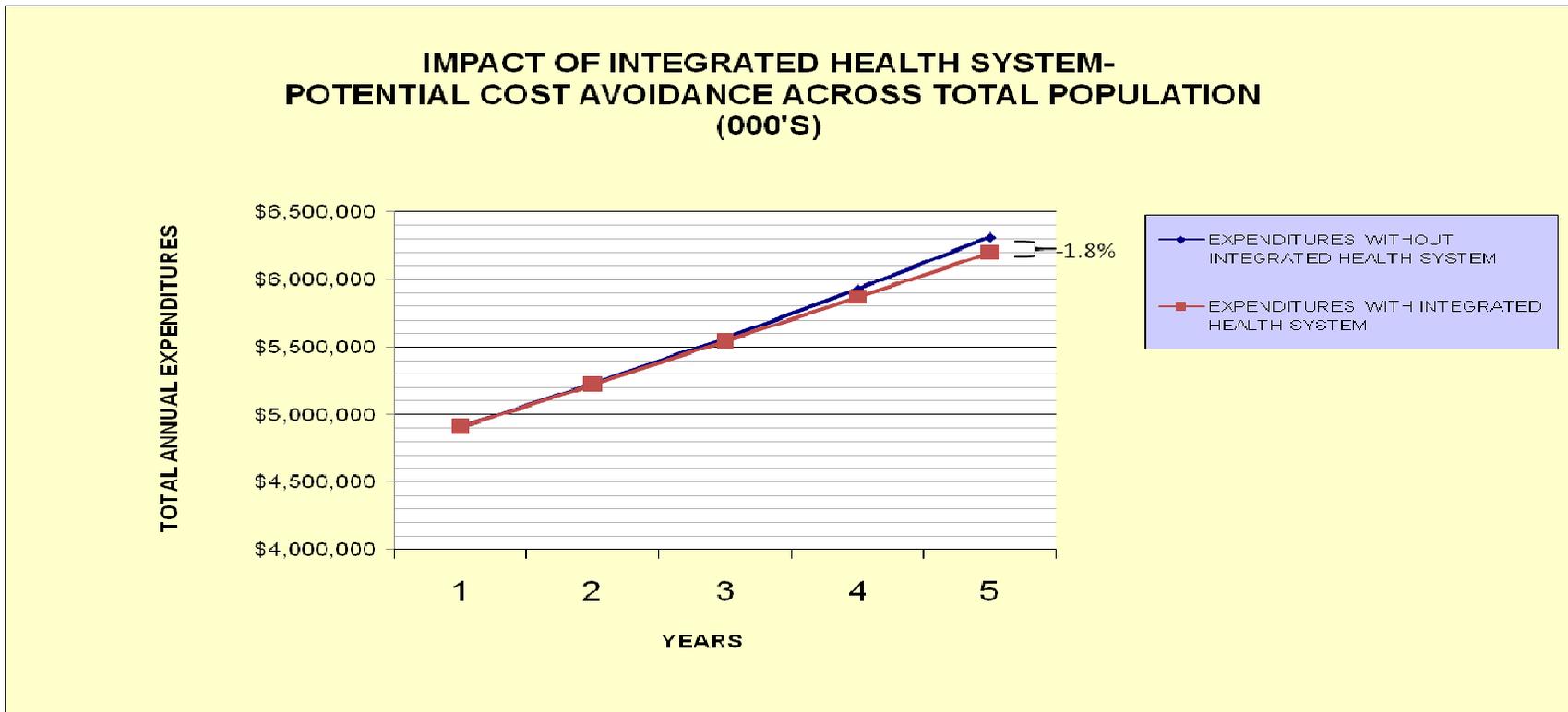
**BLUEPRINT PROJECT
BUSINESS CASE MODEL-INTEGRATED HEALTH SYSTEM- GENERAL POPULATION
(5-YEAR PROJECTION- ALL AGES)**

	Calendar Year				
	2010	2011	2012	2013	2014
TOTAL POPULATION INCREMENTAL EXPENDITURES	\$318,865,856	\$339,592,137	\$361,665,626	\$385,173,892	\$410,210,195
OVER PRIOR YR W/O INTERVENTIONS					
NET SAVINGS (COST) WITH INTERVENTIONS	(<u>\$2,525,921</u>)	<u>\$20,110,570</u>	<u>\$56,490,164</u>	<u>\$111,576,858</u>	<u>\$118,979,350</u>
INCREMENTAL EXPENDITURES LESS SAVINGS	\$321,391,778	\$319,481,567	\$305,175,462	\$273,597,034	\$291,230,845



**BLUEPRINT PROJECT
BUSINESS CASE MODEL-INTEGRATED HEALTH SYSTEM- GENERAL POPULATION
(5-YEAR PROJECTION- ALL AGES)**

	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
TOTAL POPULATION EXPENDITURES (000'S)	\$5,224,494	\$5,564,087	\$5,925,752	\$6,310,926	\$6,721,136
NET SAVINGS (COST) WITH INTERVENTIONS	(\$2,526)	\$20,111	\$56,490	\$111,577	\$118,979
TOTAL EXPENDITURES LESS SAVINGS	\$5,227,020	\$5,543,976	\$5,869,262	\$6,199,349	\$6,602,157



BLUEPRINT PROJECT
 BUSINESS CASE MODEL-INTEGRATED HEALTH SYSTEM- GENERAL POPULATION
 (5-YEAR PROJECTION- ALL AGES)

Impact of Interventions - (Percent Increase (Decrease) in Cost Versus Baseline)

Category of Expenditure	Calendar Year					
		2010	2011	2012	2013	2014
Hospital Inpatient		-4.0%	-6.0%	-8.0%	-10.0%	-10.0%
Hospital Outpatient		0.4%	0.5%	0.8%	1.0%	1.0%
Physician Inpatient		-4.0%	-6.0%	-8.0%	-10.0%	-10.0%
Physician Outpatient		0.4%	0.5%	0.8%	1.0%	1.0%
Emergency Room		-4.0%	-6.0%	-8.0%	-10.0%	-10.0%
Laboratory		3.0%	4.0%	7.0%	10.0%	10.0%
Pharmacy		0.4%	0.5%	0.6%	0.7%	0.7%
Nursing Home		1.5%	-2.0%	-5.0%	-10.0%	-10.0%
Home Based Care		1.5%	2.0%	5.0%	10.0%	10.0%
Mental Health		-2.0%	-3.0%	-6.0%	-10.0%	-10.0%
Other		0.0%	0.0%	0.0%	0.0%	0.0%

Note: Intervention Assumption Increase (Decrease) is expected to flatten after Calendar Year 2013

Appendix IV – Vermont Department of Health 2010 Coordinated Healthy Activity, Motivation and Prevention Program (CHAMPPS) Annual Report

The CHAMPPS Program

Since its inception in 2006, the Vermont Department of Health's (VDH) CHAMPPS (Coordinated Healthy Activity Motivation and Prevention Programs Program) has served as a foundation for community health and wellness initiatives throughout Vermont. In 2006, Act 215 created the CHAMPPS Program as a means of awarding comprehensive, substantial multi-year grants to communities for health and wellness projects. This commitment to community-wide prevention efforts was intended to complement the Blueprint for Health's work on the transformation of Vermont's health care system. These efforts are intended to be the result of comprehensive, local community assessment and planning efforts to identify local priorities for prevention initiatives. Also called for in Act 203 (2008), community plans are envisioned as a tool to guide community decision-making about local prevention work.

By recognizing the economic impact that chronic illness has on the health care system, the Blueprint has prioritized the prevention and management of chronic illness through clinical interventions, patient education, payment reform, use of health information technology and community health teams. Local prevention strategies funded by CHAMPPS and implemented by local coalitions and public health professionals complete the continuum of efforts to address the human and economic toll of chronic disease. In addition, since 2005, VDH's Division of Alcohol and Drug Abuse Programs has been the recipient of Strategic Prevention Framework (SPF) funds which have enabled the funding of numerous community-based substance abuse prevention projects. These SPF projects have been included as part of the CHAMPPS program to begin the process of integrating community prevention efforts.

A list of projects that were funded with CHAMPPS or SPF funds in 2011 appears at the end of this document. The list of CHAMPPS and SPF projects funded in previous years is available in the 2009 Blueprint Annual Report, published in January, 2010, at

http://www.healthvermont.gov/prevent/blueprint/documents/Blueprint_AnnualReport_2009_0110rev.pdf.

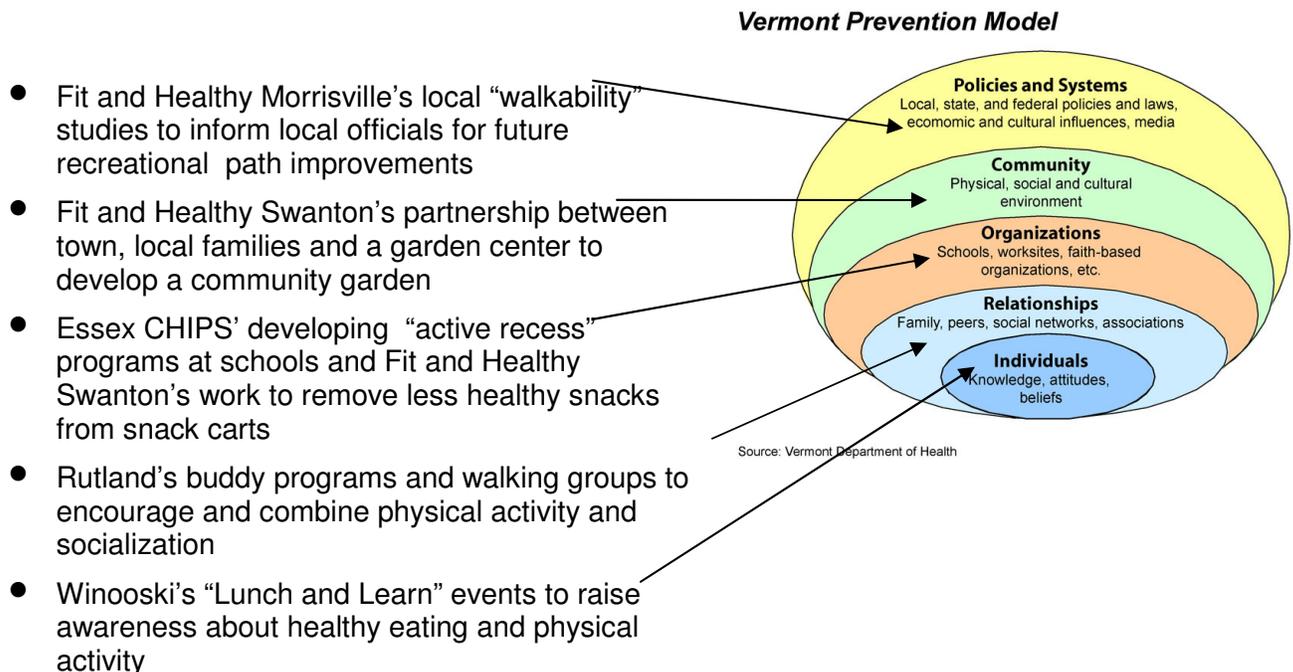
Public Health Prevention

Three conceptual frameworks have shaped the thinking and work of public health professionals with respect to their role in creating improved population health and clinical outcomes. These constructs are increasingly shaping the way in which public health staff are working with community partners to plan and implement prevention initiatives such as those supported with CHAMPPS funds. These conceptual frameworks are discussed below.

I. The Vermont Prevention Model

During the development of the CHAMPPS program, VDH and stakeholder communities adopted a model to describe various levels of focus for public health interventions. The *Vermont Prevention Model* offers a framework for understanding the importance of public health prevention efforts focused at many levels ranging from the individual level to the level of policy, systems and environmental change. (Figure 1) Although it is widely recognized that the most effective strategies involve the latter, prevention efforts must target all levels of influence in order to be effective. For example, Vermont's success in reducing the percentage of adults and youth grades 9-12 who smoke cigarettes to below the national level is largely the result of Vermont's deliberate work to address the public health issue of smoking at various levels of influence ranging from the individual level to the policy level. Similarly, efforts to improve Vermont's health outcomes with respect to the increasing public health burden of obesity are addressing nutrition and physical activity at each level of focus as the example in Figure 1 shows. Reducing the rate of obesity is one of the Center for Disease Control and Prevention's (CDC) "Winnable Battles", so named because of the large-scale impact on health and the availability of effective intervention strategies. Currently, all CHAMPPS-funded initiatives are prioritizing nutrition and physical activity for their community prevention work.

Figure 1
Prevention Strategies for Obesity



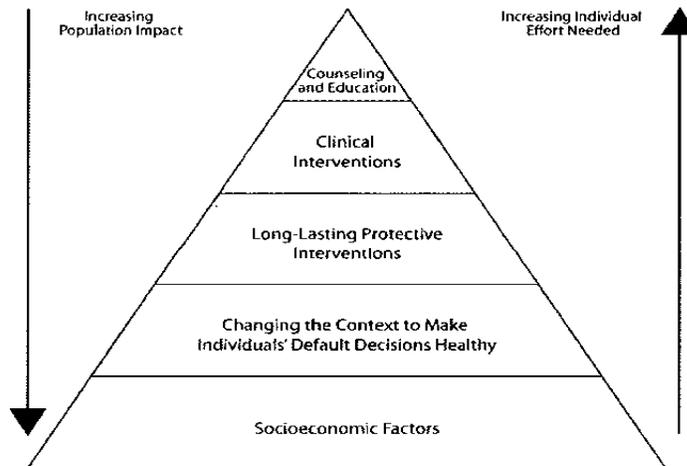
Adopted early in the process of developing the CHAMPPS initiative, the Vermont Prevention Model has and will continue to guide work that seeks to achieve improved health outcomes.

II. The Health Impact Pyramid

Since the inception of the CHAMPPS program, there has been a growing awareness that effective prevention efforts must do more than focus on the education and behavior change of individuals. In addition, it is essential that limited public health prevention resources and efforts be utilized in a manner that offers the most return on investment in terms of impact and outcomes. In early 2010, the Centers for Disease Control and Prevention’s (CDC) newly appointed Director, Dr. Thomas Frieden, shared his vision of a 5-tier *Health Impact Pyramid* as a framework for public health action. This model is conceptualized as a pyramid, the base of which consists of interventions or efforts intended to address socioeconomic determinants of health. Proceeding up the narrowing pyramid in ascending order are: interventions that change the environmental context to make individuals’ default decisions healthy, clinical interventions that require limited contact but confer long-term protection, ongoing direct clinical care and health education and counseling. Frieden describes the model in the following manner: *“In general, public actions and interventions at the base of the pyramid require less*

individual effort and have the greatest population impact, [but only by] implementing interventions at each of the levels can [we] achieve the maximum possible sustained public health benefit..⁴

Figure 2



Frieden's Health Impact Pyramid

Frieden's Health Impact Pyramid is highly compatible with the Vermont Prevention Model and underscores the importance of the field of public health's need to focus its limited resources on efforts that will result in the greatest return on investment. Educating community leaders about this concept has been a significant effort of public health professionals at both the state and local level.

The following presents two examples of how these frameworks have shaped local CHAMPPS-funded efforts to implement environmental and system change.

The **Northeast Kingdom Community Action (NEKCA)** saw a need for more healthy local fruits and vegetables at the local Food Shelf. They also found that local farmers had surplus food to share. NEKCA worked with the food shelf to increase storage space and find solutions to barriers including transportation and the quality of the fruits and vegetables. This past summer, one local farm donated 39 bushels of cucumbers, 13 boxes of summer squash and zucchini, and 5,000 pounds of corn. Food Shelf clients were pleased to receive the local fruits and vegetables, and the fresh items disappeared from the shelves quickly. A few years ago, this same farmer experienced difficult times and used the Food Shelf to help feed his own family. He is very pleased to be able to give back by donating his farm's excess produce. This project demonstrates how community-

⁴ Frieden, TR. A Framework for Public Health Action. *American Journal of Public Health*. 2010; 100(4):590-595.

level strategies, such as gleaning programs, demonstrate the multi level impact community and systems changes can have.

Essex CHIPS was instrumental in the start up of a weekly agriculture- based market focused on healthy, fresh food in a location easily accessed by pedestrians and public transportation. Essex CHIPS ensured that the market had an EBT machine and that market managers were training on how to accept electronic benefits to increase access for lower income residents.

III. Integration

The third concept guiding CHAMPPS work is that of integration. Historically, public health prevention programs have been funded from a variety of sources in a categorical manner related to a specific disease (heart disease) or risk factor (smoking). Although the need to prioritize around best practices and prevention strategies for specific outcomes will remain, integration of prevention work will maximize public health capacity and funding. Integration seeks to identify common risk factors among diseases and populations, and coordinate prevention strategies that evidence has shown to be effective in addressing them. Integration efforts will also involve identifying settings such as schools, worksites, etc. for multiple programs to target for enhanced impact. Integration does not result in compromised program identity or integrity; rather it allows for more efficient use of resources to achieve improved outcomes.

Public health prevention work in Vermont has involved the creation and support of multiple community coalitions responsible for the planning, development and implementation of local prevention strategies targeted to risk factors of poor nutrition, inactivity, tobacco use and substance abuse. Fundamental to this work at the local level are the community assessments and plans that have been completed to focus health prevention priorities. Whether through CHAMPPS-funded projects or other community-based efforts aimed at health and wellness, integration of prevention efforts will be emphasized where practical across common risk factors or settings. For example, the CHAMPPS application process has been streamlined to encourage the identification of opportunities to integrate prevention efforts related to nutrition, physical activity, tobacco, substance abuse and access to preventive health care services.

An example of integration working at the local level is the VDH Healthy Retailer project, funded by ARRA grants and the Patient Protection and Accountable Care Act. This initiative will integrate components of the work done by VDH nutrition, tobacco and alcohol prevention programs and communities. In partnership with the Vermont Grocers Association, retailers are encouraged to promote healthy foods including fresh, local fruits and vegetables, while limiting advertising of tobacco and alcohol products to youth. Prevention efforts aimed at a variety of risk factors will join forces to integrate work in retail settings. The expectation is that this integration of prevention efforts will achieve improved coordination at the state and community level.

The community assessment, planning and intervention work that is important to community-level prevention work has required a significant investment in workforce development at VDH. In 2010, the Department harnessed funds from many different sources to host a Prevention Institute for selected staff. For several days, key VDH staff representing all district offices and key prevention programs participated in an intensive

training on the skills they will need to guide their respective communities toward planning, selecting priorities for interventions and mobilizing the community to address these priorities.

As a result of these trainings, VDH district office staff have organized local and statewide prevention teams consisting of specialists of various program/disease/risk factors to focus on identifying and leading prevention and integration efforts where possible. The teams have been trained on the principles and practice of prevention, and are prepared to offer leadership and consultation to communities and coalitions on the following:

- Assessment of community needs, strengths and stages of change readiness
- Analysis and interpretation of public health surveillance and other data
- Knowledge of evidence-based and best practices for prevention
- Employment of communication, leadership and community organization skills
- Program evaluation

In each district, a member of the local public health office will also serve on the Blueprint's Community Health Team, to both offer insight into available community resources and referral options and gather information about community resource gaps that can inform planning work.

To date, the CHAMPPS initiatives have served not only as a way to stimulate local prevention efforts but also as a foundation for building the skills and experiences necessary for continued work on preventing chronic illness. These efforts and the Blueprint's system transformation efforts should contribute to improved health outcomes and to reducing the individual, social and economic burden of chronic illness.

CHAMPPS Grantees

State Fiscal Year 2011

Capacity Building Grants:

- **Green Mountain United Way** Green Mountain United Way (GMUW) is focusing on Northfield and Barre - building capacity in each of these areas and developing implementation plans to increase access to affordable, healthy foods and physical activity opportunities in each community. The communities will begin implementing the plans mid way through the grant year. \$40,000
- **Franklin Grand Isle United Way, now Fit and Healthy Enosburg.** Fit and Healthy Enosburg is continuing to build up their partnerships and solidify an advisory committee. Major strategies include: promoting and improving access to physical activity opportunities for families, working with the town on a "Brownfield redevelopment" project to include physical activity opportunities, formalizing a Safe Route to Schools program, implementing the VDH Healthy Retailers project, and supporting the Enosburg Elementary School's food service provider's efforts offering healthy, local food. \$40,000

Implementation and Grants:

- **Health Connections of the Upper Valley** - Royalton, Sharon. Health Connections is strengthening partnerships between the school and community through a “Joint Use Agreement” allowing residents access to the school gym and equipment after school hours. Health Connections is working with partners to build a trail behind the Sharon Elementary School, and adding amenities such as benches to make it more accessible to people of all abilities, and working toward increasing pedestrian safety by having pedestrian signs posted along a busy road to slow traffic. Health Connections is applying for a Farm to School grant for South Royalton School; establishing a healthy snack policy for the afterschool program; distributing information to families about farmers market coupons and Farm Share opportunities; helping make EBT machines available at the South Royalton Farmer’s Market; and establish a gleaning program to distribute produce to food shelves and day care centers. \$40,000.00
- **Northeast Kingdom Community Action (NEKCA)** - Newport. NEKCA is working closely with the Vermont Food Bank and Green Mountain Farm to School program to distribute gleaned and donated food to food shelves, schools and senior meal sites; promoting a Grow a Row campaign; and working with the after school program to create a new community trail. \$40,000
- **Essex CHIPS** - Essex Town, Westford. Essex CHIPS is focusing on “active transportation” – promoting walking and biking for work, school, and “everyday activities” by engaging the community and local businesses in a project to increase the use of walking routes through town, and are expanding their “active recess” program in local schools. Essex CHIPS is implementing initiatives to increase the use of local farmers markets, and supporting residents with eating local, healthy foods year round when farmers markets are not running. \$40,000.
- **Windsor Area Community Partnership (WACP)**- Windsor, Hartland, Weathersfield, W. Windsor. WACP is working with schools to develop “Joint Use Agreements” allowing residents to use school facilities for physical activity when school is not in session; working with schools to develop and implement school wellness policies focused on improving the nutrition environment; working with the towns to explore creating a recreation path for the community; and will be providing training and technical assistance for planning commissions and zoning boards using the Vermont Healthy Design Resource once available. \$40,000
- **Ottauquechee Community Partnership (OCP)** - Woodstock, Reading, Bridgewater. Implementing Farm to School in Reading and Bridgewater schools; working with schools to assess the school environment to develop and implement school wellness policies to improve the environment as it relates to healthy eating and physical activity; increasing participation by families in an annual, community wide healthy eating and physical activity challenge; implementing Safe Routes to Schools in Woodstock. OCP is also planning to implement the VDH Healthy Retailers project once available. \$40,000
- **Fit and Healthy Lamoille Valley** – Morristown. Engaging key decision makers in the town to implement changes based on recommendations from the 2010 walkability study conducted; drafting a Wellness Article for the Morristown Town Plan; and marketing and offering community wide events for families with young children to promote their and work and healthy lifestyles messages. Fit and Health Lamoille Valley is improving the nutrition and activity environments in child care centers, schools, and after school programs. \$40,000

- **Fit and Healthy Swanton** - Swanton. Fit and Healthy Swanton is promoting opportunities for free and low cost physical activity and equipment (snowshoes, bicycles) that is available for families in the community, working with the town to improve signage along paths, indicating where recreation fields or facilities are along the way, and is working with the school to develop and implement a “Walking School Bus” program, and the are working with the Town to enhance zoning language to ensure pedestrian access in new development. Fit and Healthy Swanton is working with the community to improve the two newly established community gardens, the school’s food service provider to ensure healthy snacks are front, center, and affordable on the schools snack cart, the Recreation Department to offer healthy foods in concession stands and will implement a community wide education campaign promoting fruit and vegetable consumption. This coalition is also continuing to work with the school and afterschool program to implement wellness policies addressing both physical activity and healthy eating. \$40,000.

Strategic Prevention Framework Grants:

2010-11 is Vermont’s final year of the federal SAMHSA-funded Strategic Prevention Framework (SPF) State Incentive Grant (SIG). These community grants are awarded to implement evidence-based strategies to reduce and prevent alcohol and marijuana use for people 25 and younger. Funds granted to community coalitions this year, through June 30, 2011, are contingent upon adequate performance of grant work specifications and deliverables.

- **The Collaborative** – based in South Londonderry and Manchester Vermont, the SPF funds are being focused in the town of Manchester, as most residents in the twelve surrounding rural communities conduct their business in Manchester. The Collaborative is funded to implement the following population level evidence-based strategies to reduce and prevent alcohol use among youth and young adults: local land use policy initiative to develop and pass a local ordinance on alcohol in public places; social marketing campaign targeted at parents to understand the legal and brain development consequences of underage drinking; Sticker Shock campaign is targeted at those who furnish alcohol to minors to increase awareness of the civil risks and criminal penalties of furnishing alcohol to minors; social norms campaign for youth focused on educating youth on the risk from regular alcohol use; social marketing campaign targeted to young adults to reduce high risk drinking, and implementation of the health departments common theme campaign, Parent UP in both middle and high school. SPF funding for FY 11 is \$ 120,000
- **Franklin County Caring Communities and Grand Isle County Clean Team** - -serve the county they are based in and both community coalitions are funded to implement both individual and environmental evidence-based strategies to reduce and prevent alcohol use among youth and young adults. Both Franklin County and Grand Isle County coalitions are funded to address the following strategies: a school-based curriculum called, “Protecting You, Protecting Me;” through collaboration with local and state law enforcement funding is provided to support Sobriety Checkpoints and Saturation Patrols; Communities Mobilizing for Change on Alcohol (CMCA) that focuses on local policy development and change regarding access to alcohol, and implementation of the health departments common theme campaign, Parent UP in both middle and high school. SPF funding for FY 11 is \$ 120,000
- **Hartford Prevention Coalition** – Serve the towns of White River Junction, Hartford, Killington, Woodstock and Quechee The Hartford Prevention Coalition is funded to implement the following population level environmental evidence-based strategies to reduce and prevent alcohol use among youth and young adults: Social Norms Media Campaign targeted at underage drinking and access to alcohol; Sticker Shock campaign is targeted at

those who furnish alcohol to minors to increase awareness of the civil risks and criminal penalties of furnishing alcohol to minors; Policy development and change targeted at social host liability laws; Mass media campaign targeted at young adults focused on the health and safety consequences of high risk drinking, and implementation of the health departments common theme campaign, Parent UP in both middle and high school. SPF funding for FY 11 is \$ 120,000

- **Prevention Partnership of Braintree, Brookfield and Randolph** – The Prevention Partnership is funded to implement the following population level, environmental evidence-based strategies to reduce and prevent alcohol use among youth and young adults: Communities Mobilizing for Change on Alcohol which is a community mobilization strategy that identifies and leads to policy development and change; Challenging College Alcohol Abuse is targeted at college students attending Vermont Technical College to change the social norm around alcohol use; a Drug Free Workplace Program targeting young adults in the work force regarding the risk and consequences of alcohol, and implementation of the health departments common theme campaign, Parent UP in both middle and high school. SPF funding for FY 11 is \$ 120,000