Implementation Guide for Public Health Practitioners

The St. Johnsbury Community Health Team Model

April 2015

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention

CDC

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Acknowledgements

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Commonly Used Acronyms

APCP   Advanced Primary Care Practice

CDC   Centers for Disease Control and Prevention

CDSMP   Chronic Disease Self Management Program

CHT   Community Health Team

CHWs   Community Health Workers

DHDSP   Division for Heart Disease and Stroke Prevention

EHR   Electronic Health Record

I. Introduction

The purpose of this implementation guide is to describe key lessons learned from the evaluation of the St. Johnsbury Vermont Community Health Team (CHT) Model. This document is intended for public health practitioners who are interested in implementing a public health approach that is both a multi-disciplinary coordinated team effort and promotes community-clinical linkages within their communities. Example users of this document include, hospital or health system administrators, community based program implementers, or state health department program managers. Using lessons learned from the evaluation, this document includes considerations when trying to replicate this approach in different settings and with different audiences.

The document is organized into five main sections:

1. Introduction

2. Getting a Community Health Team Started in Your Community

3. Core Elements of the St. Johnsbury Community Health Team

4. Program Monitoring and Evaluation

5. Conclusions

All references are included at the end of the document, and a glossary of key terms presented in this document is included in Appendix A.

Readers are encouraged to consider the unique needs and assets of their specific target audience, as well as the unique characteristics of their setting. These considerations will allow practitioners to tailor the delivery of core elements as needed to better adjust the program to a specific context.

Background

Hypertension (commonly referred to as high blood pressure) affects about 1 in 3 U.S. adults—an estimated 68 million.[1] Despite many efforts in public health, rates of hypertension in the United States have remained steady over the past 10 years with no sign of decline, and it has had a great impact on the U.S. health care system.[2] Although there are a number of evidence-based strategies for effectively managing hypertension, the condition remains uncontrolled for a notable proportion of patients with a hypertension diagnosis.[3] The Million Hearts® Initiative goal to achieve ≥ 70% control among U.S. adults with a hypertension diagnosis, underscores the need to identify clinical practice, policy, and systems-level strategies that promote hypertension control.[4] In 2010, a report by the Institute of Medicine entitled "*A Population-based Policy and Systems Change Approach to Prevent and Control Hypertension*" further supported these findings by recommending the deployment of **community health workers** (CHWs) as a population-based strategy for heart disease and stroke prevention.[5]

With these priorities in mind, the Centers for Disease Control and Prevention's (CDC's) Division for Heart Disease and Stroke Prevention (DHDSP) embarked upon a series of evaluation projects to better understand how systems strategies—and the use of health care extenders such as CHWs—might effectively bridge the gap between patients and providers and improve hypertension control. Using the findings from a **pre-evaluation assessment**, DHDSP and a panel of experts selected the **Community Health Team** (CHT) Program in St. Johnsbury, Vermont, to participate in a rigorous evaluation. The program was identified as a promising practice that engages CHWs to help prevent and control chronic conditions, such as hypertension. The St. Johnsbury CHT offers an illustrative example of an initiative that aligns with a number of strategic directions supported by CDC and other national organizations, such as the Community Preventive Services Task Force and the Robert Wood Johnson Foundation.

This document has been designed with public health practitioners in mind and presents recommendations learned from the evaluation of the St. Johnsbury CHT model.

Program Overview

The St. Johnsbury CHT was developed under the auspices of the **Vermont Blueprint for Health** (or Blueprint), a State health reform agency founded in 2003. A central goal of Blueprint is seamless coordination across the broad range of health and human services (medical and nonmedical) that are essential to

- Optimize patients' experience (including quality, access, and reliability) and engagement;
- Improve the long-term health status of the population;
- Ultimately, reduce (or at least control) health care costs.[6]

As illustrated in the program **logic model** in Appendix B, the St. Johnsbury CHT model specifically targets outcomes at the individual, community, and health care system levels to support improved well-being, patient health outcomes, and decreased emergency room and inpatient hospital utilization.

Why Consider This Model?

In evaluating the St. Johnsbury CHT model, CDC found outcomes that demonstrate the impact of the CHT model on health care practices and individual-level outcomes. Those outcomes include the following:
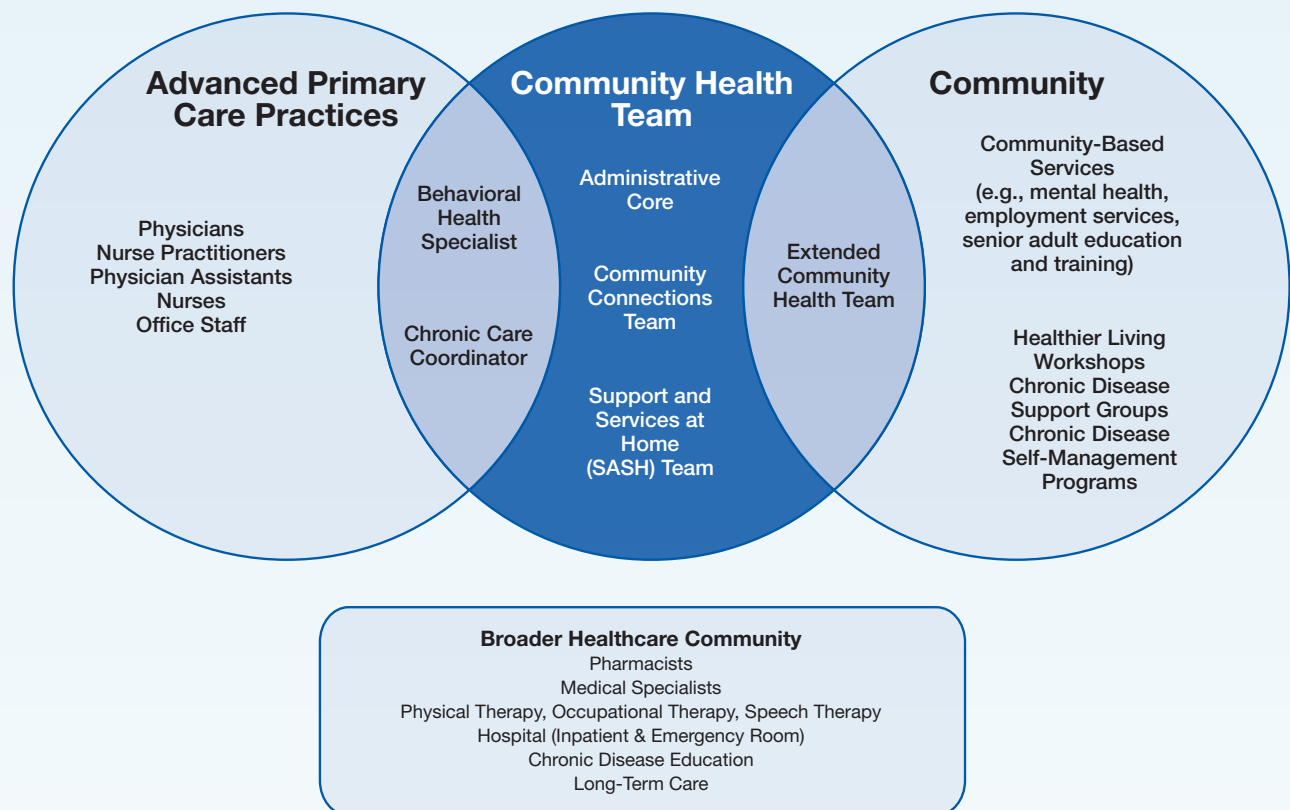
- Compared to the overall sample, higher proportions of individuals exposed to any given component of the CHT also were exposed to other components of the CHT. This suggests CHT members work together to successfully coordinate care for the clients they serve.

- Health care providers who participated in the evaluation expressed that the CHT model has helped to streamline their practices. The model provides opportunities for providers to use the limited time available during patient encounters to provide more comprehensive care. Providers also indicated that the CHT model allows them to link patients to other CHT members for support in addressing a full range of patient needs.

- There were statistically significant improvements among CHW clients in key aspects of well-being targeted by the Community Connections CHWs, including: access to health insurance and prescription drugs, secure housing, and the need for health education counseling. These areas align with constructs associated with social determinants of health and Healthy People 2020 objectives. Analyses indicate that these improvements may represent the difference of a client in a crisis situation and making progress towards stability.

- CHW clients who participated in in-depth interviews reported that they were more aware and attentive to their overall health after receiving services. This suggests that CHW efforts have the potential to ultimately impact the overall health of clients.

- Primary care providers recalled examples of patients who had dramatic changes in their health as a result of engaging with the CHT members, highlighting how CHT has contributed to increasing patient adherence to treatment protocols. Examples included better compliance due to patient-led goal setting, making follow-up appointments, and employing tools to improve medication use.

Further, as previously noted, the St. Johnsbury CHT aligns with a number of strategic directions supported by CDC, which includes the following:

Promote Community-Clinical Linkages

CDC promotes strategies to improve community-clinical linkages that ensure that health care systems refer patients to community supports and programs that improve management of chronic conditions. These linkages help aid individuals with or at high risk of chronic diseases to access community resources and also provide support to prevent, delay or manage chronic conditions once they occur. As illustrated in Exhibit 1, the St. Johnsbury CHT model is an example of how an initiative can be structured to promote community-clinical linkages.

Exhibit 1. An Illustration of the Community-Clinical Linkages in the St. Johnsbury Community Health Team Model

Advanced Primary Care Practices

Physicians
Nurse Practitioners
Physician Assistants
Nurses
Office Staff

Community Health Team

Behavioral Health Specialist

Chronic Care Coordinator

Administrative Core

Community Connections Team

Support and Services at Home (SASH) Team

Extended Community Health Team

Community

Community-Based Services
(e.g., mental health, employment services, senior adult education and training)

Healthier Living Workshops
Chronic Disease Support Groups
Chronic Disease Self-Management Programs

Broader Healthcare Community
Pharmacists
Medical Specialists
Physical Therapy, Occupational Therapy, Speech Therapy
Hospital (Inpatient & Emergency Room)
Chronic Disease Education
Long-Term Care

Support a Team-Based Care Approach to Chronic Disease Management

Based on evidence from 80 studies, the Community Preventive Services Task Force recommends team-based care to improve blood pressure control. In a team-based care model, a multidisciplinary team that includes the patient, the patient's primary care provider, and other professionals such as nurses, pharmacists, dietitians, social workers, and CHWs, coordinate comprehensive disease management plans.[7] The organizational structure of the St. Johnsbury

CHT helps facilitate implementation of a team-based care approach through its network of community and clinical partners.

Address Patients' Social Needs as an Important Component of Overall Well-being and Health

In a survey of 1,000 U.S. physicians, four in five physicians (85%) said "patients' social needs are as important to address as their medical conditions." This has highlighted a growing problem known as health care's "blind side;" that is, there are not enough resources and time for physicians to help patients with their social needs, such as unemployment, housing assistance, nutrition, or regular exercise.[8] The report stressed the need for reducing silos and bridging gaps in care. The St. Johnsbury CHT model explicitly addresses a patient's social needs as a critical factor in his or her overall health and well-being. Further key areas targeted by the CHT align with constructs associated with social determinants of health and Healthy People 2020 objectives.

Core Elements of the St. Johnsbury Community Health Team Model

Exhibit 2 presents the four core elements of the St Johnsbury CHT model.* Subsequent sections describe each of the elements in greater detail and provide further considerations related to implementation.

Exhibit 2. Description of the Key Components of the St. Johnsbury Community Health Team

Core Element	Description
Administrative Core	The Administrative Core consists of two staff members: • a **program manager** who provides managerial and programmatic support, as well as oversight, for the CHT; • a **care integration coordinator** is responsible for overseeing CHT components and actively building and sustaining partnerships with community organizations collectively known as the Extended Community Health Team.
Extended Community Health Team	The Extended Community Health Team consists of community partners that provide a variety of psychosocial and health services to the community.[+]
Community Connections Team	The Community Connections Team consists of **CHWs** and **chronic care CHWs**. **CHWs** are primarily responsible for linking clients[+] to community-based and local State agencies that can provide financial and other tangible resources to meet clients' needs, such as vouchers for heating and transportation assistance. The **chronic care CHW** provides similar services, but primarily acts as a health coach to clients to improve their self-management skills related to chronic disease. The Community Connections Team is managed by the **care integration coordinator** to promote integration with the larger CHT.
Advanced Primary Care Practices	The St. Johnsbury CHT model includes the National Committee for Quality Assurance (NCQA)–recognized **patient-centered medical homes**, referred to as Advanced Primary Care Practices (APCPs). Working in collaboration with the health care providers, office staff, and other CHT members, chronic care coordinators are responsible for coordinating the care of patients with or at risk for chronic conditions. **Behavioral health specialists** provide short-term, solution-focused therapy to patients (three to eight sessions). They refer patients requiring longer-term mental health services to mental health providers in the community.

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* Please note that a fifth core element of the St. Johnsbury model was added in 2012: Support and Services at Home (SASH). This component was not included in the original scope of the evaluation plan drafted in 2011. Therefore, this document focuses on the four core elements studied as part of the CDC-funded program evaluation.

[+] In St. Johnsbury, the Extended Community Health Team is referred to as the Functional Health Team. Because CHWs are not health care providers, the individuals served by the CHWs are referred to as clients in the context of the Community Connections Team.

II. Getting a Community Health Team Started in Your Community

When developing a community health team, it is important to consider the tasks necessary to get the program off the ground. Prior to implementation of a community health team, like the St. Johnsbury CHT, the following tasks must be addressed:

- Understand community needs and assets
- Consider funding mechanisms
- Plan for sustainability

Below is further description of each task to be addressed prior to implementation.

Understand Community Needs and Assets

A key lesson learned in evaluating the factors that support implementation of the St. Johnsbury CHT model is that the model was informed by a systematic assessment of community needs and assets that helped to identify CHT components that would meet the specific needs of the community. By assessing community needs and assets, the CHT avoided duplication of efforts by other community organizations and facilitated buy-in and support for the CHT from community organizations.

Questions to Address in an Assessment of Community Needs and Assets:
• What are the health services available to members of your community?
• What are the psychological, social, and economic services (e.g., education, employment, mental health, substance abuse, transportation, child care) available to members of your community?
• What are the priority health issues that individuals in your community face?
• What are priority psychosocial and economic issues that individuals in your community face?

Potential Data Sources for Addressing Community Needs and Assets:
• State or local health department health status reports
• Hospital community needs assessments
• Behavioral Risk Factor Surveillance Survey data
• U.S. Census data
• Input from community stakeholders
• Environmental scan of available resources
• Electronic health record queries or reports

Once you have assessed your community's needs and assets, consider the core elements of the St. Johnsbury CHT model that are most relevant to your community.

Consider Funding Mechanisms

The St. Johnsbury CHT receives financial support as a result of Vermont Blueprint for Health payment reforms. Private insurers are mandated by legislation to provide a total of $350,000 per year for each CHT unit in the state of Vermont. A unit is defined as five full-time equivalents (FTEs) per 20,000 patients. This support allows for CHT-provided services to be offered free of charge to patients and practices with no copay or prior authorization required. These funds are paid to the administrative entity within each hospital service area. For more information on the Vermont Blueprint for Health payment reforms, please consult the Blueprint Implementation Manual.[9]

Costs Associated with the Community Connections Team

In particular, the Northeastern Vermont Regional Hospital serves as a major fiscal contributor to the operation of the Community Connections Team. A detailed cost analysis of the Community Connections Team revealed that program costs for the 2010–2011 program year were $274,447. Ninety percent ($248,495) of that amount was devoted to labor and 10% ($25,952) accounted for operational costs (e.g., office space, training, program expenses). For more information on the Community Connections Team cost analysis study, visit: http://link.springer.com/article/10.1007%2Fs10900-013-9713-x#

As of 2011, Blueprint funds 6.8 FTE core CHT members in St. Johnsbury.[10] These funds are used to support the care integration coordinator, chronic care coordinators, chronic care CHW, and the Support and Services At Home (SASH) coordinator. The remaining positions are funded from various sources through Northeastern Vermont Regional Hospital and Advanced Primary Care Practices. In St. Johnsbury, the Northeastern Vermont Regional Hospital also supports the CHT infrastructure (i.e., facilities, marketing, and administrative support).

Plan for Sustainability

Regardless of the specific funding streams available to support your CHT, it is important that your CHT leadership plan for the sustainability of the CHT initiative from its inception. Here are three steps that you can take to help promote sustainability of a CHT in your community.

- Obtain provider buy-in by demonstrating the value of the CHT model on primary care practice.
- Promote shared ownership of the CHT across the different organizations involved.
- Facilitate formal collaborations across clinical and community entities.

What this Means for My Community
• Conduct a systematic assessment of your community's needs and assets.
• Identify appropriate funding sources for core CHT staff.
• Ensure that efforts are sustained by involving providers early and often to facilitate collaboration and promote shared ownership of the team.

III. Core Elements of the St. Johnsbury Community Health Team

The CHT includes four core elements:

1. Administrative Core

2. Extended Community Health Team

3. Community Connections Team (community health workers)

4. Advanced Primary Care Practices

Information describing each of the four core elements is organized into three areas:

- A general description of each core element
- An overview of how St. Johnsbury implemented these elements
- Factors to consider when implementing these elements in your community

Core Element 1: Administrative Core

Description of the Administrative Core

The Administrative Core of the CHT model is the nucleus of the team that promotes internal collaboration and community-clinical linkages. Using the CHT model, a patient can access the CHT through a number of entry points and be referred to other components within the team, as appropriate. The referral and communication processes are patient-centered and thus complex. Therefore, management and oversight of the team is a critical element in promoting seamless coordination and a positive patient experience.

St. Johnsbury's Implementation of the Administrative Core

In the St. Johnsbury CHT, the Administrative Core is centrally managed from the Northeastern Vermont Regional Hospital. Depending on the organizations in your community with the capacity to manage and oversee implementation of a CHT, the administrative entity may vary. The Administrative Core in the St. Johnsbury CHT model is comprised of a program manager and a care integration coordinator.

Program Manager

The program manager for the CHT provides managerial and programmatic support and oversight to the CHT.[9] The program manager works with the care integration coordinator and CHT members to identify and secure support for the CHT and increase awareness of the CHT services and activities. The program manager also reports to Blueprint on the implementation of the CHT model.

Care Integration Coordinator

The care integration coordinator is responsible for overseeing the integration and monitoring of the components of the CHT. The coordinator plays an active role in building and sustaining partnerships with community organizations via the Extended Community Health Team. In the St. Johnsbury CHT, the care integration coordinator also provides management and oversight directly to the Community Connections Team. This direct relationship with the Community Connections Team helps to reinforce collaboration across the CHT and with community-based agencies.

Reinforcing Collaboration across the CHT

The relationships among CHT members were a key facilitator in the implementation of the St. Johnsbury CHT model (see the CHT organizational structure in Exhibit 3 below). The St. Johnsbury CHT was described as a tight-knit group. Team members communicate with each other regularly through both formal channels (e.g., messaging via an electronic health record (EHR) system, standing team meetings) and informal channels (e.g., impromptu calls). Knowing one another and each other's roles and areas of expertise has helped CHT members (including the Extended Community Health Team members) to reach out to one another and collaborate.

Exhibit 3. Organizational Structure of the St. Johnsbury Community Health Team

St. Johnsbury CHT Program Manager

Care Integration Coordinator

Advanced Primary Care Practices

- Providers
- Other Clinical Staff
- Office Staff
- Chronic Care Coordinators
- Behavioral Health Specialists

Community Connections

- Managed by Care integration Coordinator
- Chronic Care Community Health Worker
- Community Health Workers

Extended Community Health Team (Functional Health Team)

- Oversight by Care Integration Coordinator
- 30+ representatives of community-based agencies

The care integration coordinator reinforces these relationships by organizing and facilitating formal opportunities for the collaboration and encouraging informal communication among team members. For example, the care integration coordinator fostered this collaboration through frequent internal team meetings with CHT members at Advanced Primary Care Practices and the Community Connections Team, and larger monthly meetings that also included the Extended Community Health Team.

Key Factors for Implementing the Administrative Core

When planning the Administrative Core and implementing its basic functions in your community, key actions to consider include the following:

- Identify a program manager to provide oversight and serve as a central point of contact for the team.

- Identify a staff person to serve as a care integration coordinator. The coordinator plays an active role in building and sustaining partnerships between the clinical entity and community organizations. Clinical and community relationships are essential to successful implementation of the CHT model.

- Develop a CHT organizational chart to illustrate the relationships between the team components and clarify lines of responsibility.

- Along with the organizational chart, create a brief document that outlines the roles and responsibilities of all team members to promote a shared understanding.

- Establish regular monthly meetings for the full CHT to foster collaboration and integration.

- Consider an electronic communication system to allow CHT members to communicate. If you have access to an EHR system, we encourage you to use it to promote patient-centered communication and coordination.

- Create and maintain a directory of CHT members so that members know who to contact for specific services.

Core Element 2: Extended Community Health Team

Description of the Extended Community Health Team

The Extended Community Health Team is composed of representatives of community-based organizations. The team plays a critical role in facilitating community-clinical linkages through regular communication and collaboration and helps to establish a network of community resources to support overall health and well-being. The relationships established with the Extended Community Health Team are critical to the success of the Community Connections Team as described in greater detail in the subsequent section.

St. Johnsbury's Implementation of the Extended Community Health Team

The St. Johnsbury Extended Community Health Team, known as the Functional Health Team, includes approximately 30 community partners that provide a variety of services to the community. The team meets for an hour once per month from 8:00–9:00 a.m. so that team members can attend on their way to work. On average, 30–45 individuals participate in the meeting. During a portion of each meeting, Extended Community Health Team members take turns delivering presentations on different topics. For example, in one meeting, a representative of a community-based organization spoke on depression and exercise. This monthly meeting allows everyone to know what is available; how to support and collaborate with each other; and how to identify the gaps in community support services.

Examples of Partners to Consider for An Extended Community Health Team

- Human service agencies
- Area transportation authorities
- Youth service agencies
- Public housing trusts and authorities
- Non-governmental organizations (e.g. United Way, YMCA)
- Corrections department
- Senior service agencies
- Major area employers
- Parks and recreation department staff
- Area educational institutions
- Behavioral and mental health services

Examples of Topics to Cover in Regular Team Meetings

- Annual review of the assessment of community needs and assets
- Identify and address gaps in community services
- Overview of services offered by community agencies
- Share research and evaluation findings
- Identify lessons learned and best practices for working with one another

Key Factors for Implementing the Extended Community Health Team

When implementing the Extended Community Health Team in your community, key actions to consider include the following:

- Identify community partners based on your assessment of community needs and assets. Consider the examples from the text box above.

- Establish formal and informal communication channels with members of the Extended Community Health Team. This may be accomplished by:

  - Participation in regular monthly meetings for the full CHT.

  - An electronic communication system to allow members to communicate freely and frequently. If you have access to an EHR system, use it to promote patient-centered communication and coordination. Create and maintain a directory of CHT members so other CHT members know who to contact for specific services.

  - Creation of a follow-up system to monitor participants' access and outcome to referred services.

- Promote a shared understanding of the services available in the broader community by addressing the following topics during monthly meetings:

  - Annual review of the assessment of community needs and assets

  - Identify and address gaps in community services

  - Overview of services offered by community agencies

  - Share research and evaluation findings

  - Identify lessons learned and best practices for working with one another

Core Element 3: Community Connections Team

Description of the Community Connections Team

The Community Connections Team is perhaps the most innovative core element of the St. Johnsbury CHT model. The CCT includes two CHWs and one Chronic Care CHW. These CHWs help foster integration and collaboration between the health system and community. CHWs help clients develop an action plan to manage chronic conditions and link clients to community-based, local and state agencies that can provide financial and other tangible resources to meet clients' needs. With a focus on improving patients' chronic disease self-management skills, the Chronic Care CHWs serve as health coaches by conducting health assessments, playing an active role in reinforcing provider-initiated treatment plans, providing hands-on assistance in support of chronic disease self-management and teaching stress management techniques.

St. Johnsbury's Implementation of the Administrative Core

Community Health Workers

The St. Johnsbury Community Connections Team uses an **asset-based model of care** to link clients to economic, social, health, mental health, and community supports via state agencies and community-based organizations. With this model, CHWs help clients identify what resources are available to them based on their individual needs and the community-based organizations and services available. This helps CHWs establish relationships of trust with their clients.[12]

> ### Health Assets
>
> The World Health Organization (WHO) describes health assets as individual, group, community or population-level resource(s) that support the ability of individuals, groups, communities, populations, social systems and/ or institutions to maintain health and well-being.[11]

CHWs support their clients by helping them to develop and implement client-centered action plans. They then follow up with clients on a regular basis to help them implement the action plans. This client-centered approach helps clients feel supported and embraced, which, in turn, helps promote their overall well-being.

CHWs also use **motivational interviewing** techniques, a client-centered yet directive approach to encouraging clients to change their behavior.[13] Essentially, with this approach, CHWs help clients to explore and realize their capacity to make a behavior change that is in their best interests. This interviewing technique also builds and sustains relationships with clients to help them improve health and overall quality of life.

The four main principles of motivational interviewing consist of "(a) expressing empathy, (b) developing discrepancy, (c) rolling with resistance, and (d) supporting self-efficacy."[13] CHWs use these principles to help clients realize that it is important to them to make a behavior change, and help build clients' confidence in actually making that change.[14]

Chronic Care Community Health Workers

In the St. Johnsbury CHT model, Chronic Care CHWs provide similar services as CHWs, but they act primarily as health coaches to help clients improve chronic disease self-management skills. There was one Chronic Care CHW for every two to three CHWs in St. Johnsbury; however, you might consider a mix of staff based on the size of your community, available funding, and the skills and experience of your team members.

In the St. Johnsbury CHT model, the Chronic Care CHW leads the Chronic Disease Self-Management Program (CDSMP) workshops, and other health education workshops designed to increase patients' abilities to self-manage and eventually improve their health conditions.

We have included more specific details on the roles and responsibilities of the St. Johnsbury CHWs and Chronic Care CHWs roles in Exhibit.[4]

Chronic Disease Self-Management Program

Vermont's CDSMP is based on the Stanford CDSMP model which consists of weekly sessions for patients. Session topics cover content related to adopting exercise programs, learning about guided relaxation techniques, improving diet and nutrition, managing sleep and emotional states, training in better health communication with physicians, and making health care decisions.[15] Using self-efficacy theory, patients learn how to model and practice better self-management behaviors and strategies to improve their own health.[15]

Exhibit 4. Community Connections Team Roles

	Community Health Worker (CHW)	Chronic Care Community Health Worker
Role	- Helps clients navigate the health and social service systems - Advocates for individuals and families and connect them to services - Assists with scheduling appointments - Identify client needs	- Provides hands on support to assess client needs - Provides health information and support, and educates clients with chronic conditions to reinforce the treatment plans from the primary care office or other health care professionals - Facilitates the patient's decision-making and self-management goals
Responsibilities	- Links clients to community-based and local state agencies that can provide financial and other tangible resources to meet clients' needs, such as vouchers for heating and transportation assistance - If clients do not have a usual source of care, the CHW refers these clients to a local medical home, or APCP. This will help promote the CHT model twofold by offering avenues for clients to have regular access not only to an APCP but also to Community Connections Team members - Refers clients, as appropriate, to behavioral health providers, including behavioral health specialists in APCPs or other mental health clinicians available in the primary care practice for short-term, solution-focused therapy aimed at addressing and removing the behavioral health–related barriers to self-management - Refers clients, as appropriate, to local community-based lifestyle intervention programs, such as the CDSMP - Leads workshops with the Chronic Care CHW that focus on self-management for chronic disease, diabetes, and chronic pain - Proactively follows up with clients to ensure adherence to their action plans	- May make home visits, and accompany patients to appointments - Assists patients in accessing opportunities for physical activity and provides coaching to help Assists patients in stress reduction techniques - Assists patients in complying with medications, including setting up pill boxes and assisting with overcoming financial barriers to purchasing medications - Uses health assessment tools to help identify health conditions, including depression, and communicates findings to the primary care office - Makes referrals to chronic disease self-management workshops that stress patient self-management techniques. In St. Johnsbury, VT, examples include the Healthier Living Workshops, Tobacco Cessation, and other community based programs such as Growing Stronger or A Matter of Balance

	Community Health Worker (CHW)	Chronic Care Community Health Worker
Education, training, certification, and experience requirements	• High school diploma • Experience working with existing local social service and health care agencies • Experience working with individuals or families in need • Valid driver's license and reliable transportation required	• High school diploma • Experience working with existing local social service and health care agencies preferred • Experience working with women or families in need • At least 2 years of experience in a community health or human service setting • Associates degree in human services or health education preferred • Valid driver's license and reliable transportation required

Additional Aspects of the Community Connections Team

In the St. Johnsbury CHT model, the care integration coordinator (see Core Element #1 for more information) provides oversight for the Community Connections Team. This helps to reinforce internal relationships among CHT members and relationships with community-based agencies. Strong relationships, communications, and collaboration among team members and with community partners are key qualities to ensure effective implementation. For example, in St. Johnsbury, CHWs and chronic care CHWs work together, and at times with the care integration coordinator, to share work and support each other when client loads are higher than normal, and when appointments are overbooked.

Regular meetings with representatives from community-based agencies in the Extended Community Health Team help CHWs and chronic care CHWs know who to contact when they need assistance for a client. This helps to break down barriers and increase familiarity among all partners, encouraging knowledge sharing and greater willingness to provide services.

While CHWs may find it challenging to obtain services from state or community programs because of restrictions in the funding streams for other organizations, working collaboratively with Extended Community Health Team members helps offset those challenges. Through relationships built by attending regular CHT meetings, CHWs can gain a better understanding of the facilitators and barriers to accessing resources for their clients and how to navigate them.

Key Factors for Implementing the Community Connections Team

When implementing the Community Connections Team element in your community, key factors to consider include:

- Identify individuals to serve as CHWs. The information in Table 2 can serve as a job description for these roles. This can be accomplished by modifying the roles of current staff or hiring new staff.

- Provide adequate and ongoing training to Community Connections Team members
  - To promote adoption of an asset-based model of care.
  - To encourage the use of motivational interviewing and client-centered care.

- Ensure CHWs work with clients to develop client-centered action plans to link clients to community-based and local state agencies that can provide financial and other tangible resources to meet clients' needs.

- Ensure CHWs are familiar with community-based resources to assist clients. This can be accomplished by
  - Building and maintaining a community resource guide for CHWs to use as a reference.
  - Actively involving CHWs in regular Community Health Advisory Team meetings.

- Identify at least one CHW to serve as a chronic care CHW to focus on providing health coaching to patients. This CHW should have additional training and preparation in health education and chronic disease self-management.

- Establish formal and informal communication channels with other members of the CHT. This may be accomplished by
  - Participating in regular monthly meetings for the full CHT.
  - Using an electronic communication system to allow CHT members to communicate. If you have access to an EHR system, use it to promote patient-centered communication and coordination.
  - Creating and maintaining a directory of CHT members so that CHT members know who to contact for specific services.

Core Element 4: Advanced Primary Care Practices

Description of the Advanced Primary Care Practices

The Advanced Primary Care Practices (APCPs), also known as patient-centered medical homes (PCMHs), deliver team-based care using a multidisciplinary team consisting of providers, mid-level providers (e.g., nurse practitioners), nurses and nonclinical staff. Unique to these practices are the addition of a chronic care coordinator and behavioral health specialist, who are part of the CHT, but also are embedded within the primary care team and located onsite. This integration helps enhance coordination and transitions of care; ensures a seamless linkage between different clinical and community disciplines; and provides multidisciplinary support services to the patient in one location.

> ### Care Integration Coordinator
>
> The care integration coordinator—a member of the Administrative Core and Community Connections Team—can encourage and facilitate collaboration across practices and CHT members. This will reinforce the relationships between team members and their respective practices, and also to the larger CHT.

> ### Community Health Team Member Roles
>
> To establish consistency in patient experience and CHT member satisfaction across practices, it is important to establish and reinforce a shared understanding of CHT member roles. This is particularly important for CHT members positioned within primary care practices. These roles should be communicated consistently to all CHT members.

St. Johnsbury's Implementation of the Advanced Primary Care Practices

In the St. Johnsbury CHT model, all of the APCPs are National Committee for Quality Assurance (NCQA)-recognized PCMHs, and this is recommended for any community that is considering implementing the CHT model. Relationships, coordination, and collaboration across components of CHT are reinforced with designation of CHT members in the context of primary care practices. To that end, chronic care coordinators and behavioral health specialists are assigned to each practice. The physical placement of chronic care coordinators and behavioral health specialists within the APCPs has been a key factor in the success of the CHT in the St. Johnsbury model.

CHT members on staff at APCPs report directly to other health care professionals to help build a sense of ownership among all APCP staff of the CHT. This ensures that chronic care coordinators and behavioral health specialists work efficiently and effectively within the practice. Provider buy-in and engagement during the process of selecting CHT staff to operate within APCPs helped to facilitate this interaction.

Benefits of the Community Health Team Model as Noted by St. Johnsbury Health Care Providers

- The proximity of the chronic care coordinators and behavioral health specialists allows providers to take care of patient needs more immediately. Tasks such as linking patients to services, such as mental health, may mean simply walking them down the hallway. Patients can typically get such needs met even in the same day during their primary care visit.
- Providers reported that this model allows them to link patients to other CHT members for support in addressing a full range of patient needs.
- Providers indicated that working with CHT members means that they do "less teaching and more referring," which makes office visits more efficient.
- Providers reported that working with CHT has given them the opportunity to use the limited time available during patient encounters to provide more comprehensive care.
- Providers reported that they now know what is going on with their patients from many different perspectives—via follow-up and EHR notifications.
- Providers expressed that the CHT has contributed to increasing patient adherence to treatment protocols.

Chronic Care Coordinators

Chronic care coordinators work collaboratively with the health professionals in their practices to help coordinate patient care, particularly for patients with chronic conditions. Chronic care coordinators blend health coaching skills in working with patients along with panel management skills in working with both patients and providers.

Liaison Function

In the St. Johnsbury CHT model, chronic care coordinators act as liaisons between APCPs and the larger CHT by referring patients to Community Connections Team staff and other CHT members, as needed.

As a "health coach," the chronic care coordinator provides basic short-term care management for patients with chronic conditions; refers patients to health education services, specialists, and diagnostic testing; and follows up with patients to track their progress toward achieving chronic disease self-management goals.

With panel management, chronic care coordinators monitor and track patient metrics and monitoring reports to identify and follow up with patients and providers on appointment schedules and ensure patients are up to date on diagnostic tests and treatment protocols.

Behavioral Health Specialists

Behavioral health specialists are mental health professionals who provide short-term, solution-focused therapy to patients. In the St. Johnsbury CHT model, these specialists provide three to eight sessions to patients, as needed, and refer patients who require more intense, longer-term mental health services to mental health providers in the community. Because they are located within primary care practices, patients can get behavioral health services more quickly, possibly the same day during their primary care visit. Patients may be more willing to go to a specialist who is onsite at their primary care practice, particularly since direct access is an attractive feature to patients because they can receive immediate treatment and an opportunity to unload their stresses and concerns right away (i.e., get out of crisis mode).

We have included more specific details on the roles and responsibilities of the chronic care coordinators and behavioral health specialists in Exhibit 5 below.

Mental Health and Primary Care Integration

Many individuals associate mental health care with a negative stigma, but in the context of the CHT, they may be more willing to see someone who is readily available in their APCP's office. This helps clients gain access to mental health services more readily, potentially offsetting physical problems such as those caused by chronic diseases. Physiological problems are closely tied to psychological problems, and if psychological issues can be addressed quickly while the patient is at the office, it may help prevent further physiological problems.

Exhibit 5. Advanced Primary Care Practice Team Member Roles

Details	Chronic Care Coordinator	Behavioral Health Specialist
Role	• Works with physicians, nurse practitioners, physicians' assistants nurses, and office staff in the APCP offices, coordinates the care of patients with or at risk for chronic conditions, and liaises between the primary care practices and the Community Connections Team	• Works with physicians, nurse practitioners, physicians' assistants, nurses, and office staff in the APCP offices to provide short-term solution-focused therapy to patients
Responsibilities	• Serves as primary referral source for Community Connections Team • Increases physician familiarity with and use of the Community Connections Team • Refers patients, as needed, to behavioral health specialists, or other mental health clinicians, who also are located in the same practice • Assists with or leads quality improvement activities, conducts panel management, and provides follow-up to patients after they have been hospitalized or treated in the emergency room (depending on practice) • Tracks patients for overdue appointments, lab tests, eye exams • Runs and monitors registry reports, and works with IT to ensure accuracy of reports • Provides basic short-term care management for complex patients • Follows up with patients and pharmacies to ensure patients are filling and taking their medications, as prescribed • Tracks and follows up on referrals for specialists, diagnostic testing, and health education • Follows up with patients to facilitate self-management goals	• Provides short-term solution-focused therapy to patients, approximately three to eight sessions • Makes referrals to community-based mental health clinicians for ongoing therapy, if needed • Works with the providers in the offices to identify patient needs, as well as medication evaluation

Details	Chronic Care Coordinator	Behavioral Health Specialist
Education, training, certification requirements	• Though not required, primary care practices may prefer individuals with a nursing background (e.g., LPN, RN) for this position	• Current licensed Masters Degree in mental health counseling related field (e.g., Mental Health Counseling, Masters of Social Work, Substance Abuse Counseling) • As needed, training certification in primary care/behavioral health certificate course (metabolic syndrome, heart disease and stress, pain management, narrative therapy)

Key Factors for Implementing Advanced Primary Care Practices

Key factors to consider when implementing the Advanced Primary Care Practices in your community include:

- Review the application of the PCMH model in your practices. Appendix C contains several resources on how you might implement the model.

- Identify individuals with technical skill sets, such as behavioral health specialists or chronic care coordinators, who can meet the unique needs of your population. The information in Table 3 can serve as a job description for these roles. This can be accomplished by modifying the roles of current staff or hiring new staff.

- Establish formal and informal communication channels with other members of the CHT. This may be facilitated by:

  - Participation in regular monthly meetings for the full CHT.

  - An electronic communication system to allow CHT members to communicate with each other (if an EHR system is available, use it to promote patient-centered communication and coordination).

  - Creating and maintaining a directory of CHT members so that CHT members know who to contact for specific services.

IV. Program Monitoring and Evaluation

For some, the idea of conducting an evaluation can be intimidating, but it does not have to be. Some might see evaluation as a program requirement that you just "have to get done." However, program monitoring and evaluation provides a number of benefits to public health practitioners. Specifically, it allows you to

- measure progress toward your specific program goals;
- identify opportunities for improvement;
- demonstrate the effectiveness of your program to stakeholders.

This section was developed to provide general guidance to public health practitioners and is not intended to be an exhaustive resource on program monitoring and evaluation. Rather, it is intended to provide a brief overview of core concepts in program monitoring and evaluation and issues to consider when developing and implementing a CHT. Much of what is presented here is based on our experience evaluating the St. Johnsbury CHT.

While there are multiple types of evaluations, here we focus on process evaluation (including program monitoring) and outcome evaluation. We encourage you to use the CDC Framework for Evaluation in Public Health (http://www.cdc.gov/eval/framework/index.htm) and the resources referenced in Appendix C for more information.

Steps for Planning Program Monitoring and Evaluation

In order to conduct program monitoring and evaluation activities of any program, it is important to conduct a number of steps. Below are some key steps to include when planning any program monitoring and evaluation efforts of a quality improvement learning collaborative.

Determining Key Activities and Outcomes for the Community Health Team

Before you can begin to evaluate a program such as CHT, it is important to develop a solid understanding of what activities are implemented and how the activities link to specific outcomes. Engaging program stakeholders is an essential and necessary step to describing the program through a logic model. A program logic model can serve as a foundation for monitoring and evaluating your CHT. We have included a logic model specific to the St. Johnsbury CHT in Appendix B. You may wish to consult this logic model and develop a logic model of your own, or you may use the logic model template provided to tailor a logic model that reflects your program's specific activities and expected outcomes. In either approach, ensure that stakeholders provide input in the development of the logic model as well as key steps of developing and implementing the evaluation plan.

> ## Logic Model and Program Monitoring
>
> Your program logic model can serve as a primary resource for establishing your program monitoring plan. Specifically, the outputs column specifies the direct and tangible results or products of program activities—often things that can be counted. These are often represented by documentation of progress on implementing program activities (e.g., program materials developed, partnerships formed, number of providers trained, women screened).

Developing the Evaluation Questions and Design

Once a program logic model has been developed, information gathered about a program can be used to create appropriate evaluation questions and design. Evaluation questions are often process or outcome focused and align with a program's objectives. Process evaluation questions facilitate the exploration of a program's implementation, while outcome evaluation questions allow for the exploration of a program's impact on specific outcomes. Exhibit 6 below provides the evaluation questions used to guide the evaluation of the St. Johnsbury CHT.

Exhibit 6. Process and Outcome Evaluation and Evaluation Questions

Type of Evaluation	Description
Process Evaluation	Process evaluation is used to determine whether a program is being implemented as intended. Process evaluation focuses on the left side of the program logic model, with program inputs, activities, and outputs Process evaluation is used to establish the plausible links between your program activities and program outcomes. By demonstrating with process evaluation that the program was implemented as intended, you can set the stage for your expected outcomes as part of an outcome evaluation.[16, 17] **Example Process Evaluation Questions:** • What are the core elements of the CHT program? • What are the factors that affect implementation of the CHT program? • What is the reach (proportion of individuals or organizations served by the intervention) of the CHT program?
Outcome Evaluation	Outcome evaluation focuses on the short-term, intermediate, and sometimes long-term outcomes of the program (the right side of the program logic model).[16] Outcome evaluation is used to determine the effectiveness of the program on the expected outcomes. For the CHT program, consider improvements that go beyond health outcomes, such as well-being, the efficiency and quality of care provided, and changes in the networks between health systems and the community. **Example Outcome Evaluation Questions:** • What impact does the CHT have on the health of program participants? • What impact does the Community Connections Team have on client well-being?

Stakeholders should contribute to the identification of evaluation questions that align with your program objectives. Also, consider your evaluation priorities from the following perspectives.

- Stage of program development
- Short-term vs. long-term evaluation priorities
- Budget and feasibility factors

An evaluation matrix (as depicted in Exhibit 7 below) can help organize the planning process and ensure that all of the evaluation questions are addressed.

Exhibit 7. Example Evaluation Matrix

Evaluation Question	Data Sources	Methods	Indicators	Analyses
What is the impact of the Community Connections Team (CCT) on client well-being?	• CCT Client Intake Forms • CCT client interviews • CHW administrative data	• Secondary analysis of intake and administrative data • Thematic analysis of qualitative data	• Changes in CCT client social conditions and health-related quality of life • Frequency of CCT visits • Client satisfaction with CCT visits	• Descriptive statistics • Inferential statistics • Thematic analysis

In order to actually begin addressing evaluation questions, it is important to determine appropriate methodologies. Many evaluations do not rely on one single type of evaluation, but instead use a mixed-method approach, using both quantitative and qualitative methods. In the mixed-methods evaluation of CHT, both quantitative and qualitative approaches were used.

- **Quantitative methods** are methods used to collect numerical data that can be used to make calculations and draw conclusions in terms of percentages, proportions, and other values.[18] Examples of quantitative methods include surveys, structured observations, physiological tests, and record abstractions. The data are numerical in nature and answer questions that are quantifiable like "how much" or "to what extent;" commonly used quantitative analytical methods include descriptive statistics, one- and two-tailed t tests, correlations, cross-tabulations, and multiple regression or other advanced statistical models.

- **Qualitative methods** are methods used to collect descriptive information in the form of notes, verbal responses, transcripts, and written responses.[18] Examples of qualitative methods include interviews, focus groups, document review, and unstructured observations. Qualitative data are usually in the form of notes or transcripts and answer questions that are descriptive like "why" or "how;" common qualitative analytical methods include participant observation and content, thematic, or pattern analysis.

An additional key decision is whether the evaluation will rely on existing, or secondary data sources, or if new data—primary data sources—will need to be collected. Your program monitoring and evaluation methods, data sources, and analyses should be driven by the evaluation question. We encourage you to consider the availability of existing data that will help you address your evaluation questions. This can help reduce the costs associated with data collection and the burden of conducting monitoring and evaluation activities on program staff and participants. Exhibit 8 below presents an overview of the data sources and measures used in the evaluation of the St. Johnsbury Community Health Team.

Exhibit 8. Overview of Data Sources and Measures Used in the St. Johnsbury CHT Evaluation

Data Sources	Example Measures
Community Connections Team Client Intake Forms	• Health-related quality of life (from the Behavioral Risk Factor Surveillance System Survey) • Detailed assessment/rating of changes that were observed in patients' social conditions (e.g., health insurance, housing, transportation, legal issues, health education, family relationships)
Electronic Health Records	• Number of primary care appointments • Smoking status • Blood pressure • Body Mass Index (BMI) • Emergency room visits • In-patient hospital days
Interviews with CHT Staff	• Barriers and facilitators to implementing the CHT • Networks and interactions with CHT members
Interviews with Providers	• Impact of the CHT on practice • Perceived impact on patients • Networks and interactions with CHT members
Interviews with Community Connections Team Clients	• Impact of the CHT on their well-being/quality of life • Satisfaction with Community Connections Team services • Experience working with Community Connections Team

Interpreting and Disseminating Evaluation Findings and Implications for Program

When data collection and analysis are complete, it is important to interpret the evaluation data to determine what the data say about a program. This interpretation allows evaluators to give meaning to the data collected. During this process, it is important to engage stakeholders, as they can help review the data and provide additional context. In addition, the way in which evaluation results will be disseminated and shared should be considered prior to end of the evaluation period. Sharing lessons learned is a key step in evaluation of a program, as it can help to inform the field and build the evidence for the use of a particular strategy.

When reporting your findings, consider multiple communication channels for disseminating the findings (i.e., evaluation reports, executive summary, fact sheets/briefs, newsletter articles, formal and informal presentations, and journal publications). Finally, and perhaps most importantly, be sure to use your evaluation findings to identify ways to further improve your CHT. The findings of the St. Johnsbury evaluation inspired the creation and dissemination of this implementation guide, which we hope public health practitioners will use to inform the development and implementation of similar programs.

For More Information

Appendix C includes a range of resources that you may wish to consult as you develop, |implement, monitor and evaluate your CHT.

V. Conclusions

Overall Strengths of the St. Johnsbury CHT Model

The St. Johnsbury CHT is an innovative model of care designed to address health and psychosocial and economic needs of patients in St. Johnsbury, Vermont. The core elements of this model are integrated to provide seamless coordination of care tailored to meet the needs of specific patients. In reviewing the use of the collaborative model as implemented by St. Johnsbury, some of the inherent strengths of the program include the following:

- The St. Johnsbury CHT demonstrates an intervention intended to address issues related to the social determinants of health in order to create an environment where patients can effectively manage their health. The social determinants of health are crucial in eliminating health disparities and improving overall health.

- The St. Johnsbury CHT model was informed by a systematic assessment of community needs and assets that helped to identify CHT components that would specifically meet the needs of the community. By assessing community assets, the CHT avoided duplication of efforts by other community organizations.

- Community engagement in the development and implementation of the St. Johnsbury CHT model was deliberate. This appears to have resulted in strengthened relationships between community institutions and enhanced care coordination.

- Providers' support for the St. Johnsbury CHT model was critical. Providers reported a number of benefits to their practice. They also support community and clinical linkages through the use and promotion of the CHT model.

- Payment reforms were essential to establishing the St. Johnsbury CHT model. In light of the Affordable Care Act, public health practitioners may identify similar opportunities to implement a model like this.

Key Recommendations for Implementation

Through the evaluation of the St. Johnsbury CHT Model, the evaluation team was able to develop key recommendations for implementing this model in other settings. In summary, the recommendations are as follows:

- *Program design and infrastructure.* It is important to conduct a systematic assessment of a community's needs and assets to inform the development of a program similar to the CHT model.

- *Community support.* Regular collaboration with a team of community organizations, such as an Extended Community Health Team, can help facilitate linkages between clinical and community entities.

- *Provider support.* Provider involvement early and often in the initiative is necessary to help facilitate collaboration and promote shared ownership of the team.

- *Staffing structure.* It is important to identify a program manager to provide oversight and serve as a central point of contact for the team. Likewise, it is critical to identify a team member to serve as a care integration coordinator. The care integration coordinator plays an active role in building and sustaining partnerships between the clinic and community organizations.

- *Funding.* Public health practitioners will need to identify appropriate and sustainable funding sources for core CHT members. In light of the Affordable Care Act and other health care services initiatives, public health practitioners may need to identify similar payment reforms to support the CHT model.

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Appendix A. Glossary of Key Terms

Note: This glossary of terms consists of terminology and definitions as used in this guide. You may consider adapting this terminology to work with the staffing and stakeholders already in place in your community.

Key Term	Definition
Administrative Core	The Administrative Core is the nucleus of the CHT model that promotes internal collaboration and community-clinical linkages. In the St. Johnsbury CHT model, the Administrative Core is comprised of a program manager and care integration coordinator.
Advanced Primary Care Practice (APCPs)	In the St. Johnsbury CHT model, APCPs are National Committee for Quality Assurance (NCQA)–recognized patient-centered medical homes. CHT members strategically placed within the medical homes include behavioral health specialists and chronic care coordinators.
Asset-based Model of Care	The World Health Organization describes health assets as individual, group, community, or population-level resources that support the ability of individuals, groups, communities, populations, social systems and/or institutions to maintain health and well-being.[11] In the asset-based model of care used in the St. Johnsbury CHT model, community health workers (CHWs) help patients identify what assets are available to them based on patients' individual talents and skills and the community-based organizations and services available.[9]
Behavioral Health Specialist	Behavioral health specialists are mental health professionals who provide short-term, solution-focused therapy to patients (three to eight sessions) within APCPs. They refer patients requiring longer-term mental health services to mental health providers in the community.
Care Integration Coordinator	The care integration coordinator is responsible for overseeing the integration and monitoring of the components of the CHT. The coordinator plays a key role in building and sustaining partnerships with community organizations via the Extended Community Health Team. The care integration coordinator in St. Johnsbury also provides management and oversight directly to the Community Connections Team.

Key Term	Definition
Chronic Care Community Health Worker	Chronic Care CHWs provide similar services as CHWs, but they primarily act as health coaches to help clients improve chronic disease self-management skills. Their responsibilities include • conducting health assessments; • playing a more active role in reinforcing provider-initiated treatment plans; • providing hands-on assistance in support of chronic disease self-management, such as going grocery shopping with a client to assist him or her with choosing healthy options; • teaching stress management techniques; • facilitating health promotion programs (such as Chronic Disease Self-Management Programs).
Chronic Care Coordinator	Chronic care coordinators work collaboratively with the health professionals in their practices to help coordinate patient care, particularly for patients with chronic conditions. Their duties generally fall into two categories: health coaching and panel management. Health coaching includes • providing basic short-term care management for patients with chronic conditions; • referring patients to health education services, specialists, and diagnostic testing; • following up with patients to track their progress toward achieving chronic disease self-management goals. Panel management includes • monitoring and tracking patient metrics and monitoring reports; • following up with patients and providers on appointment schedule; • ensuring patients are up to date on diagnostic tests and treatment protocols.
Community Connections Team	A team of CHWs and Chronic Care CHWs who use an asset-based model of care and motivational interviewing to link clients to economic, social, health, mental health and community supports via state agencies and community-based organizations.
Community-Clinical Linkages	Initiatives that seek to establish connections between clinical entities (such as health care providers, hospitals, and clinics) to community institutions in an effort to improve program efficiency and the overall health and well being of populations.[19]

Key Term	Definition
Community Health Team (CHT)	Coordinated team of health and human services (both medical and non medical) professionals that coordinates patient services in an effort to • optimize patients' experience (including quality, access, and reliability) and engagement; • improve the long-term health status of the population; • ultimately, to reduce (or at least control) health care costs.[6] • The four core elements of the St. Johnsbury CHT model are • Administrative Core • Extended Community Health Team • Community Connections Team • APCPs
Community Health Worker (CHW)	CHWs as described in this implementation guide provide a range of services that are not necessarily health-specific. In this context, the function of the CHW is to connect clients to psychological, social, and economic community resources that support chronic disease management.
Evaluation	CDC defines evaluation as a systematic approach to collecting, analyzing, and using data in order to determine the effectiveness and efficiency of programs and to inform continuous program improvement.[18]
Extended Community Health Team	The Extended Community Health Team consists of representatives of community-based agencies who provide a variety of services to the community (e.g., education, social services, transportation, and others). In St. Johnsbury, this team is referred to as the Functional Health Team.
Logic Model	A program logic model visually illustrates the linkages between program activities and outcomes. Logic models can help guide evaluation activities and in interpreting the findings.
Motivational Interviewing	Motivational interviewing is a theoretically-based client-centered yet directive approach to motivating clients to change their behavior.[3]
Patient-Centered Medical Home	Agency for Healthcare Research and Quality (AHRQ) defines a patient-centered medical home as a model for organizing primary care that is patient-centered. This model has five primary components: • Comprehensive care • Patient-centered • Coordinated care • Accessible services • Quality and Safety

Key Term	Definition
Pre-evaluation Assessment	Also referred to as evaluability assessments, pre-evaluation assessment involves a document review and a 2.5-day site visit during which site visit teams assess program implementation, data collection, and explore options to determine whether a program is ready for an in-depth evaluation.
Program manager	In the CHT model, the program manager provides overall managerial and programmatic support and oversight to the team.
Team-Based Care	The team-based care model is based on a multidisciplinary team comprised of the patient, the patient's primary care provider, and other professionals such as nurses, pharmacists, dietitians, social workers, and CHWs, who coordinate comprehensive disease management plans.
Vermont Blueprint for Health	The Vermont Blueprint for Health is a Vermont State health reform agency established in 2003.

Appendix B. St. Johnsbury Community Health Team Logic Model

St. Johnsbury Community Health Team

The St. Johnsbury Community Health Team is a model of coordinated care using a multidisciplinary team approach that involves CHWswho work in partnership with health and behavioral health providers, State and community-based providers, and patients and their families to improve the management of chronic conditions.

Logic Model Key
- Administrative Core and Functional Health Team
- Community Connections Team
- ACPCs
- All Elements

Inputs

Staff
- Providers
- CIC
- CCC
- BHS
- CHWs
- CC-CHW

Funding
- Fee-for-service reimbursement
- Pay for performance reimbursement
- Additional funding from healthcare payers

Partners
- Vermont Blueprint for Health
- NVRH
- Functional Health Team

- Vermont Blueprint for Health
- St. Johnsbury Community Health Team Core
- State legislation Act 71
- State legislation Act 128

Activities

- Provide statewide leadership toward health care reform
- Payment reforms
- Implement centralized registry and performance monitoring

St. Johnsbury CHT Core
- NCQA PPC PCMH Scoring
- Provide leadership, management oversight and support to the CHT
- Build and sustain strong community partnerships in support of the CHT
- Facilitate care integration and coordination
- Performance monitoring for St. Johnsbury HSA

All CHW
- Provide linkages to state and community-based resources to address psycho-socioeconomic needs
- Refer clients to APCPs as needed

CC-CHW
- Conduct health assessments
- Provide health coaching and stress management
- Provide hands on support for behavior change

Primary Care
- Provide patient centered care

Chronic Care Coordination
- Coordinate care for patients with or at risk for chronic disease

Behavioral Health
- Provide short-term focused therapy
- Refer patients for longer-term community-based mental health care as needed
- Refer patients to CCT or CCCs

Outputs

- # and types of efforts to promote program
- Frequency and types of training and TA to HSAs
- Payment reforms instituted
- Centralized registry completed and used for performance management
- % of certified APCPs
- # and type of core CHT members
- # partners participating in monthly FHT meetings
- # and type of referrals within CHT

- # clients served
- # and types of interactions per client
- types of assistance provided to clients
- # and types of referrals to State and community organizations
- # health assessments conducted
- % of clients served by CC-CHW with behavior change goal plan

- # patients served by practice
- # patients served by CCCand BHS
- # and types of patient referrals within and outside of CHT

Short Term Outcomes

- Increased efficiency and quality of care
- Increased population care management
- Improved clinical and community linkages
- Increased coordination of care

- Improved well-being (add info from conceptual model)
- Improved life satisfaction
- Increased desirable health behaviors

- Patient-centered medical care
- Increased desirable health behaviors
- Increased adherence to treatment and self-management plans

Long Term Outcomes

Well-Being
- Increased patient satisfaction
- Increased self-sufficiency

Health
Improved chronic disease prevention and management (including. blood pressure control, cholesterol control)

Healthcare Utilization
- Decreased ER visits
- Decreased inpatient hospital stays

Impact

Decreased morbidity and mortality due to chronic disease

Decreased healthcare costs

Acronyms	
APCP	Advanced Primary Care Practice
BHS	Behavioral Health Specialist
CCC	Chronic Care Coordinator
CCT	Community Connections Team
CHT	Community Health Team
CHW	Community Health Worker
CIC	Chronic Integration Coordinator
ER	Emergency Room
FHT	Functional Health Team
HSA	Hospital Service Area
NCQA PPC–PCMH	National Committee for Quality Assurance Physician Practice connections–Patient Centered Medical Home

Appendix C. Resources

This appendix includes a selection of references and links to resources that may be helpful to you in developing, implementing, and evaluating a Community Health Team (CHT) in your community. These resources are organized by the four core elements of the CHT: Administrative Core, Extended Community Health Team, Community Connections Team, and Advanced Primary Care Practices.

Administrative Core-Related Resources	
Agency for Health Research and Quality (AHRQ) Resources	*Clinical-Community Linkages*. This Web site offers an overview of clinical-community linkages and describes how they can improve patient care. http://www.ahrq.gov/legacy/clinic/pcc/clincomlink.htm *St. Johnsbury CHT Profile*. This profile describes the St. Johnsbury community health team model and how it has influenced care. http://www.innovations.ahrq.gov/content.aspx?id=2666
Centers for Disease Control and Prevention (CDC)	*CHANGE Tool*. CHANGE stands for Community Health Assessment and Group Evaluation. This tool and action guide is designed to help community leaders conduct a community health needs assessment to identify and prioritize community assets and areas for improvement in order to develop an action-oriented plan for change. http://www.cdc.gov/healthycommunitiesprogram/tools/change.htm
The Guide to Community Preventive Services	*Team-based Care*. While the St. Johnsbury CHT model is not in and of itself a team-based care intervention, it does reflect some of the concepts of team- based care. This Web site presents an overview of the model and the Community Preventive Task Force's findings regarding team-based care as a strategy to improve blood pressure control. http://www.thecommunityguide.org/cvd/teambasedcare.html
Vermont Blueprint for Health (VBFH)	*Vermont Blueprint for Health Web site*. This Web site offers an overview of the VBFH program and provides annual reports, meeting materials, implementation materials, and other resources. http://hcr.vermont.gov/blueprint *Vermont Blueprint for Health Implementation Manual* (2010). This document provides detailed "how-to" information on planning and implementing the Vermont Blueprint for Health model. http://hcr.vermont.gov/sites/hcr/files printforhealthimplementationmanual2010-11-17.pdf

Extended Community Health Team-Related Resources	
CDC Resources	*CDC Healthy Communities Program Website*. The Healthy Communities Program seeks to support community leaders and stakeholders' skills and commitment related to developing and implementing effective population-based strategies to reduce the burden of chronic disease and to promote health equity. This Web site contains a number of action-oriented guides and resources to support community teams (such as coalitions). http://www.cdc.gov/healthycommunitiesprogram/ *Communities Putting Prevention to Work Resource Center: Foundational Skills*. This section of the CDC's Communities Putting Prevention to Work Resource Center contains a number of resources to support community-based initiatives. These resources address the following topics: community engagement, leveraging support or funding, health equity, coalition management and internal communication, legal issues, and sustainability. http://www.cdc.gov/CommunitiesPuttingPreventiontoWork/resources/foundational_skills.htm
Community Commons	*Community Commons Web site*. This Web site contains a number of resources that support community collaboration efforts. Many of these resources concern healthy eating and active living community efforts and include links to data and maps. http://www.communitycommons.org/

Community Connections Team-Related Resources	
* *As you review these resources, please keep in mind that the concept of community health workers (CHWs) is not standard across communities. CHWs as they are described in this implementation guide provide a range of services that are not necessarily health specific. The function of the CHW in this context is to connect clients to community resources.*	
Northeastern Vermont Regional Hospital	Community Connections Team Web site. This Web site offers an overview of the VBFH program and provides annual reports, meeting materials, implementation materials, and other resources. http://www.nvrh.org/interior.php/pid/6/sid/101
CDC Resources	Addressing Chronic Disease through Community Health Workers: A Policy and Systems-level Approach. This policy brief provides guidance and resources for implementing CHWs into community-based efforts to prevent chronic disease. http://www.cdc.gov/dhdsp/docs/chw_brief.pdf Community Health Worker's Sourcebook: A Training Manual for Preventing Heart Disease and Stroke. This training manual provides instruction for CHWs on preventing heart disease and stroke. http://www.cdc.gov/dhdsp/programs/nhdsp_program/chw_sourcebook/pdfs/sourcebook.pdf Diabetes: Community Health Workers/Promotores de Salud. This Web site provides CDC guidance and information on CHWs. While it is specific to diabetes, it contains information that may be useful to CHWs working on a number of health-related issues. http://www.cdc.gov/diabetes/projects/comm.htm
AHRQ Resources	Health Care Innovations Exchange. The Health Care Innovations Exchange contains resources and profiles to help improve health care quality and reduce disparities. The Web site allows you to search for innovations that have used community health workers. http://www.innovations.ahrq.gov
Rural Assistance Center	Community Health Worker Toolkit. http://www.raconline.org/communityhealth/chw/

Advanced Primary Care Practice (APCP)-Related Resources	
American College of Physicians (ACP)	*Patient-Centered Medical Home (PCMH)*. This Web site provides information describing the PCMH model and resources to help develop and implement a PCMH. http://www.acponline.org/running_practice/delivery_and_payment_models/pcmh/
AHRQ Resources	*Implementing Care Teams*. This module provides guidance on setting up care teams in the context of primary care practices. http://www.ahrq.gov/professionals/prevention-chronic-care/improve/system/pfhandbook/mod19.html *Care Coordination*. This Web site provides an introduction to the core concepts of care coordination and provides links to a number of resources on care coordination. http://www.ahrq.gov/professionals/prevention-chronic-care/improve/coordination/index.html *The Academy for Integrating*. This Web site provides a wealth of information, resources, and links related to integrating behavioral health and primary care. http://integrationacademy.ahrq.gov/
Robert Wood Johnson Foundation	*Reform in Action: Improving Quality in Medical Offices*. This Web site contains links to a number of reports, resources, and multimedia commissioned by the Robert Wood Johnson Foundation. http://rwjf.org/en/about-rwjf/program-areas/quality-equality/research/reform-in-action--improving-quality-in-medical-offices.html
Safety Net Medical Home Initiative	*Care Coordination*. This Web site contains resources (including Webinars and an implementation guide) on care coordination in primary care settings. http://www.safetynetmedicalhome.org/change-concepts/care-coordination
The Commonwealth Fund	*Patient-centered Care*. This Web site contains a number of publications, multimedia, and other resources related to patient-centered care and transforming primary care clinics into medical homes. http://www.commonwealthfund.org/Topics/Patient-Centered-Care.aspx

Program Monitoring and Evaluation-Related Resources	
AHRQ Resources	*Clinical-Community Relationships Measures Atlas*. This document provides a measurement framework and recommended measures for conducting research of clinical-community relationships efforts. http://www.ahrq.gov/professionals/prevention-chronic-care/resources/clinical-community-relationships-measures-atlas/index.html
CDC Evaluation Resources	*Division for Heart Disease and Stroke Prevention: Evaluation Resources*. This Web site contains a number of resources (including guides, tip sheets, and presentations) on conducting evaluation. While the Web site is specific to heart disease and stroke programs, the contents of the resources is applicable to a number of health-related evaluation issues. http://www.cdc.gov/dhdsp/evaluation_resources.htm *Office of the Associate Director: Program Evaluation*. This Web site contains documents and resources specific to the CDC Evaluation Framework. It also contains links to numerous other resources on program evaluation in general. http://www.cdc.gov/eval/index.htm
The Commonwealth Fund	*Patient-Centered Medical Home (PCMH) Evaluators' Collaborative*. This Web site contains a collection of reports, briefs, and other resources on methods and measures for conducting evaluation in the context of PCMHs. http://www.commonwealthfund.org/Publications/Other/2010/PCMH-Evaluators-Collaborative.aspx
The University of Arizona Rural Health Office and College of Public Health	*The Community Health Worker Evaluation Toolkit*. This toolkit contains a number of evaluation resources (including data collection instruments) for evaluating initiatives that use CHWs. https://apps.publichealth.arizona.edu/CHWToolkit/
Rural Assistance Center	*Community Health Worker Toolkit: Module 6*. Module 6 of the Community Health Worker Toolkit contains guidance on measuring the impact of CHW programs. http://www.raconline.org/communityhealth/chw/module6/

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