

# Compendium of Rural Best Practices/Models

Innovations to Strengthen Rural Health Care:  
Technology, Quality Improvement, Collaboration,  
and Training



National Rural Health Association





**NATIONAL RURAL HEALTH ASSOCIATION**

**COMPENDIUM OF RURAL BEST PRACTICES/MODELS**  
**Innovations to Strengthen Rural Health Care:**  
**Technology, Quality Improvement, Collaboration, and Training**

A document developed by the National Rural Task Force

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## **PREFACE**

The National Rural Task Force brought together a collection of innovative programs occurring in rural areas across the country. The document is seen as a collection of summaries highlighting best practices from rural health care programs.

This document is envisioned to be “living” and dynamic, designed for ongoing use and modification by various entities. Opportunities for change are built into the document, allowing it to serve as an evolving national rural technology, training and workforce development compendium.



# Collaborating to advance the medical home model in New Hampshire

## Program: National AHEC Organization

[www.nationalahec.org](http://www.nationalahec.org)

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### **Purpose:**

AHEC-CHC linkages in collaborating to advance the medical home model in New Hampshire

### **Summary:**

Lamprey Health Care (LHC) and Southern New Hampshire Area Health Education Center (SNHAHEC) have embraced the medical home concept and are collaborating to promote practice change spearheaded by frontline staff in support of the medical home model. LHC is a federally qualified health center in New Hampshire with three sites: Newmarket, Raymond and Nashua. The Newmarket site has been recognized by the National Committee for Quality Assurance as a level 3 primary care medical home. This is the highest level of recognition and is awarded to practices that function as medical homes demonstrating their use of systematic patient-centered approaches to care.

To maintain and improve its recognition at one site and to achieve recognition at the other two sites, LHC invested in a process improvement coach, Paula Smith, SNHAHEC director. The AHEC director/process improvement coach's role was to facilitate discussion, brainstorming and problem-solving to reach the goal of improved processes to support patient-care. As a result of the organizational relationship between LHC and SNHAHEC (SNHAHEC is a program of LHC), Smith

facilitated LHC senior management team meetings and participated in other change processes initiated by LHC. Smith participated in the Dartmouth Institute for Health Policy and Clinical Practice "Coach the Coach" training, which taught skills necessary to coach a team of people through process improvement activities using the microsystem process improvement ramp and meetings skills. Using this approach, teams meet weekly to tackle issues related to quality, access to care, patient safety, customer satisfaction and efficiencies, to name a few. One of the first projects undertaken by the LHC microteam was to improve the efficiency of prescription refills. Community health center (CHC) policy states that a prescription should be refilled within 48 hours. Refills were an issue for patients, the provider and the front desk staff. After data collection, flow charting and discussing change of processes, a new workflow was developed. After approximately six weeks, the team measured their intervention and found that refills went from an average of 50 hours to less than five hours per prescription. Satisfaction of staff and patients increased, and the number of phone calls decreased, allowing front desk staff more time to assist with other projects. The facilitated microteam process enabled the people of the frontline to focus on the workflows that impacted them.

Another project undertaken by a microteam comprised of nurses. The desire to move to a medical home model encouraging patient-centered care and measurable quality outcomes led this group to establish a nurse education model focused on improving chronic disease management. The microteam utilized a survey tool developed by Dartmouth to assess the knowledge and perception of patients regarding their care. Overall results were positive; however, responses to a few questions raised concerns. The discussions about the data showed a lack of continuity in patient education. There was a gap in the ability to track what education was done and whether the patient was ready to move on to another topic, or needed reinforcement in the current topic. Through microteam meetings over the course of several months, this group, working with the IT department, developed global and specific aims statements. The action plan resulted in a new nurse educator encounter form in

the electronic health record, time scheduled in the nurses' week to do education and population management, and a cadre of nurses committed to patient education. As a result, the number of nurse education visits increased. Preliminary impact data show patients have higher satisfaction with the new process.

**Program effectiveness:**

The collaboration of the health center and the AHEC fulfills the CHC mission of providing high-quality health care and is directly connected to the AHEC commitment for workforce development. The microteam process is fulfilling to staff as they are engaged in changing their own work and patients benefit through enhanced patient-centered care.

**Note:**

The full article, "Collaborating to Advance the Medical Home Model in New Hampshire," was published in the *Journal of the National AHEC Organization*, volume XXVIII, number 1, spring 2012, pages 7-8, <http://www.nationalahec.org/publications/documents/NAOjournalSpring2012.pdf>

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**Funding:**

Health Resources and Services Administration



# **Lean/Six Sigma at Monadnock Community Hospital**

**Submitted by: Monadnock Community Hospital (MCH), Peterborough, N.H.**

**Program: Lean/Six Sigma program**  
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## **Purpose:**

The Lean/Six Sigma program at MCH was originally conceived to focus on:

1. Waste removal/expense reduction
2. Patient and documentation flow through the organization
3. Growth and revenue enhancement

More recently MCH staff members have recognized its impact to quality, patient and physician satisfaction and have set the goal that 50 percent of Lean/Six Sigma projects shall directly relate to these items.

## **Summary:**

The Lean program is a strategic initiative at MCH designed to achieve results with strategic goals related to quality, safety and financial soundness. It is a grouping of process improvement activities including such practices as Lean and Six Sigma.

Lean principles originated in manufacturing (at Toyota) and are based on the idea that any step in a process that does not add value for the customer is wasteful and should be removed or refined. Lean changes often involve the speed of a process and have only recently been seen as valuable to health care business and quality.

Six Sigma is a business management strategy originally used by Motorola. The focus of this tool is to improve the quality of process outputs by identifying and removing the causes or defects (errors) and by the reduction of variability.

Lean/Six Sigma at MCH originated with a grassroots effort in the hospital lab as staff sought ways to make their processes more effective. Since that original decision, the hospital had great success with Lean/Six Sigma. With the guidance of Caldwell Butler Inc., hospital staff have established a structure to drive creativity and accountability from the level of management to the frontlines of care. They've learned to use a number of the Lean and Six Sigma concepts including 100-day cycles

and rapid cycle tests (RCT). In practice, the cycles form an accountability structure that with the RCT's allows movement much more quickly than with traditional process improvement. To support these efforts, a number of staff have been trained as yellow and green belts. This is an internationally known certification in the principles of Lean and Six Sigma. A "belt" is assigned to all of the sanctioned project teams. MCH's primary goal in training belts is to become self-sustaining in Lean/Six Sigma work, no longer needing outside assistance.

All of the teams selected may be related back to MCH's strategic initiatives. A team supported flow of patients through the emergency department prior to and after new building creation. Teams were used to support growth of ancillary and surgical services as MCH prepared to move into its new operating room suite. Teams were used to look at the flow of the patient from the point where they enter a primary provider's office through any testing ordered and through the patient's billing process.

MCH estimated that all previous workouts have yielded a return of at least 5:1 on costs. Perhaps even more important is that all leaders now look at their departments differently and make different decisions. For example, a med-surg nurse will look at their kitchen supply levels and realize if too many items are stored too long they will expire wasting significant dollars and time. A director of a busy department such as radiology will consider cross training an existing employee when someone else leaves rather than simply hiring a replacement, saving a full full-time employee where before we would have simply replaced the position.

There have been barriers encountered at MCH. It was assumed four years ago that Lean/Six Sigma was just another flavor of the month. Some tried to hold back and limit participation. It took all the focus of the CEO and executive team to assure participation and MCH's long-term success. Although staff put great effort into the sustainability of changes and succeeded in the vast majority, there are occasional significant changes that demand staff re-look at a process such as 11 a.m. discharge or ED length of stay

MCH's Lean/Six Sigma Program is a quality program. It seeks to reduce unneeded steps and unwanted variation

that may add to the potential of clinicians making mistakes. The program is a patient and provider satisfier in that it moves patients more quickly through MCH processes in the long term actually increasing access where it might not have existed before. Also, it anticipates issues with payments and sets up a path to a financial counselor so a patient does not get an unexpected bill.

Other organizations are hearing about MCH successes and asking for more information. Changes in the health care system have and will continue to force MCH to be more creative in the ways its operates. Lean has become a hard-wired way of enhancing operations.

**Effectiveness:**

The program has been extremely effective at focusing the organization on waste and flow issues in everyday work environments. MCH essentially created a successful culture change.

**Funding:**

MCH has experienced a 5:1 return on investment on this program. It has paid for itself.

**Roanoke Chowan Community Health Center's  
telehealth remote patient monitoring  
Program: Telehealth remote patient monitoring  
[www.rcchc.org/](http://www.rcchc.org/)**

**Submitted by: Roanoke Chowan Community Health Center (RCCHC)**

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**Purpose:**

To help patients better manage chronic diseases using daily monitoring and education.

**Summary:**

Multiple issues have impacted reaching RPM goal enrollment for the last quarter. The conversion from plain old telephone service lines to voice over internet provider (VOIP) by the area's largest phone service provider increases the need for cellular activated pods in order to transmit patients' information. Vendors have been slow in producing working cellular units. The health center has the added burden of being a trouble area for most cellular service with only two cellular providers offering consistent service (Verizon and US Cellular), and the majority of vendors service AT&T, which is not reliable in Eastern North Carolina. This has led to equipment vendors not being able to deliver enough working equipment to meet the enrollment goals. Ideallife, RCCHC's telehealth equipment vendor has been delayed in the delivery of Verizon pods for more than six months (arrived September 2012). This impacted all sites but particularly Chowan Hospital and ECHI. Two sites, Robeson HCC and Wake CHC had significant staff turnover which limited the designated TH champion's ability to be responsive to patient troubleshooting/ installations. After multiple discussions and review we determined it would be helpful to increase Robeson HCC to 30 units and pay a portion of an FTE to dedicate time specifically to RPM. Robeson HCC identified a qualified staff member and they began in August. Wake CHC had a complete staff turnover from COO, providers and TH champions and nursing. Routine on-site visits and multiple conference calls continue to be necessary to ensure TH engagement. This continues as a challenge while working with safety net providers with a high staff turnover. RCCHC's

telehealth program was suspended after the sudden death of the lead LCSW who was managing the clinical selection and patient care. A LCSW was hired so the telehealth program could be restarted. Solid Foundation, a community mental health provider, continues to successfully self-manage 29 patients through a kiosk. These patients have both behavioral health and medical diagnoses. All MOAs are signed. All employees have been hired and trained. Each partner site continues to develop and implement remote monitoring policies and procedures to include patient selection, referral, enrollment, education and competency validation; staff roles and responsibilities; provider plan of care; and equipment policies. Each site's primary care providers participated in remote monitoring and chronic care management education sessions provided by a RCCHC primary care provider either in person or by conference call. RCCHC went to each partner site to provide hardware and software training, to assist with equipment installation and to validate patient and nurse competency. Sixty-nine monitors have been deployed in patient homes or through a kiosk site in rural and urban North Carolina, and daily remote monitoring and chronic care management is occurring five days per week. RCCHC RN has access to each CHC's electronic medical records (Micro MD, EpiCare and Citrix). Federally qualified health center partners continue to be pain points due to the high percentage of uninsured patients; both Wake and Robeson have more than 70 percent uninsured, sliding fee eligible patients. RCCHC's TH team solution to designate a portion of an FTE to assist Robeson and be "boots on the ground" seems to be having a positive impact. Monthly team calls are continuing, but daily communication with our safety net partners is a must to keep the program flowing. Once patients are engaged and receiving routine TH nursing feedback, the outcomes become more predictable. Vendor issues continue to plague the industry as a whole as most vendors continue to over promise on timelines and under deliver. Vidant Health Systems, a large 29-county health system in Eastern North Carolina, has adopted RCCHC's system of RPM for their continuity of care process. Vidant has adapted RCCHC policies and procedures to address the

issue of reducing patient readmissions and overutilization of emergency room services. More than 500 units have been installed over their service area, and initial reports are indicating across-the-board reductions in readmissions related to heart disease (the major readmission diagnosis) for Vidant. The Vidant Health System leadership did not seek grant funds for this program but dedicated more than \$1 million for the first year of operations. RCCHC continues to discuss billing options with N.C. Medicaid with some early indications of a pm/pm bundled payment to be extended to a primary care provider when RPM is indicated. North Carolina Community Care Plan and the North Carolina Office of Rural Health and Community Care have sponsored a North Carolina Telehealth Summit with the intent to increase the positive impact of telehealth across the state.

**Effectiveness:**

As a result of the program, RCCHC has seen a decrease in the number of emergency room visits as well as hospital bed stays. It also teaches the patients to maintain a healthy diet and lifestyle and also to stay away from foods that elevate BPs and blood sugars. A better handle of medication is also obtained through the remote monitoring program.

**Funding:**

Health Resources and Services Administration  
Office of Rural Health Policy grants



# North Dakota's statewide rural behavioral health network

## Program: Coal Country Community Health Center, Beulah, N.D.

**Submitted by: Susan Helgeland, Mental Health America of North Dakota executive director, and Pat Conway, Essentia Institute of Rural Health senior research scientist**

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### **Purpose:**

The Coal Country Community Health Center (CCCHC) has partnered with tribal, advocacy and health organizations to create a statewide rural behavioral health network. The mission of the North Dakota Rural Behavioral Health Network (NDRBHN) is to increase access to behavioral health care and eliminate behavioral health disparities in rural and tribal communities. It is working to achieve its mission through three goals:

1. Develop and maintain a successful rural behavioral health network.
2. Increase knowledge regarding rural and tribal health disparities to reduce health disparities and improve outcomes.
3. Increase access to behavioral health care through outreach and policy change.

### **Summary:**

Successful efforts: In partnership with the Mandan, Hidatsa and Arikara Nation (MHA Nation), Mental Health America of North Dakota (MHAND), North Dakota Federation of Families, North Dakota Area Health Education Center, Essentia Health, and Sakakawea Medical Center, CCCHC successfully competed for a Health Resources and Services Administration network development grant to create the NDRBHN. NDRBHN is guided by a governance committee, including the six partners, which meets monthly. Technology (email, phone conferencing and Google docs) also facilitates frequent ad hoc meetings. The governance committee developed a detailed workplan, including objectives, activities and short and mid-range outcomes for each goal. A two-day strategic planning meeting, including key stakeholders from across the state, led to the development of the NDRBHN five-year strategic plan. Three committees have been created to complete network activities. Two

curricula, Mental Health First Aid and Bridging Cultures, have been offered to non-native providers, native providers and tribal members in Western and Northern North Dakota. Statewide media coverage has announced the new network to residents. "Resolana, Voice of the People," a documentary describing behavioral health needs in Western North Dakota through personal stories by rural and native providers and rural and native consumers, has been disseminated widely. A 30-minute presentation of the documentary was broadcast on North Dakota Prairie Public Television.

Challenges, hurdles and barriers: Beginning any new partnership is complex; this is even more challenging in a sparsely populated state covering a large geographic area, challenged by harsh winters. Tossing in an oil and gas boom in the western portion of the state increases the behavioral health challenges to be ameliorated. Diverse governing bodies at the local, regional, state, federal and sovereign nation levels place barriers to effective provision of behavioral health services. They also create barriers to partnering. Bringing together very different organizations and viewpoints (tribal communities, consumer and advocacy groups, veterans organizations, public and private health and behavioral health providers) without existing formal methods for decision-making or already-developed informal communication patterns, is a challenge for any newly developing network.

CCCHC had worked with the MHA Nation and MHAND on the Behavioral Health Initiative (BHI), a previous project funded through the Bristol-Myers Foundation to develop the documentary "Resolana, the Voice of the People". Out of this collaborative work emerged the identification of need for a statewide behavioral health network to bring together health and behavioral health providers and other key stakeholders, including consumers and their families, to address needs demonstrated in the documentary. CCCHC participated in grant writing to 1) obtain funds for the network, 2) serve as the fiscal agent for NDRBHN, and 3) participate in its governance and completion of activities to meet the network goals.

**Effectiveness:**

As the fiscal agent, a member of the governance committee and participants in each of the work groups, CCCHC staff play a central role in each of the successes of the network. From fiscal management and completion of federal reports to provision of the Mental Health First Aid curriculum, CCCHC staff play a pivotal role in NDRBHN, not only in the formal operations of the network, but also through the development of informal relationships within the network and with external stakeholders. Their commitment to the network has led to an effective program. In its first year of existence, the NDRBHN has developed infrastructure for the network, completed its 5-year strategic plan and annual workplan, held a statewide strategic planning meeting, conducted four days of cultural competence training and begun Mental Health First Aid training with health and behavioral health care providers. The network is positioning itself for sustainability, in order to increase access to behavioral health care and improve outcomes.

**Funding:**

CCCHC partnered to obtain current funding for the NDRBHN from Health Resources and Services Administration. They are actively working toward sustainability for the network, including identification of ongoing funding through the development of a business plan and its implementation. A key component of sustainability is the development of strong partnerships across the state.



