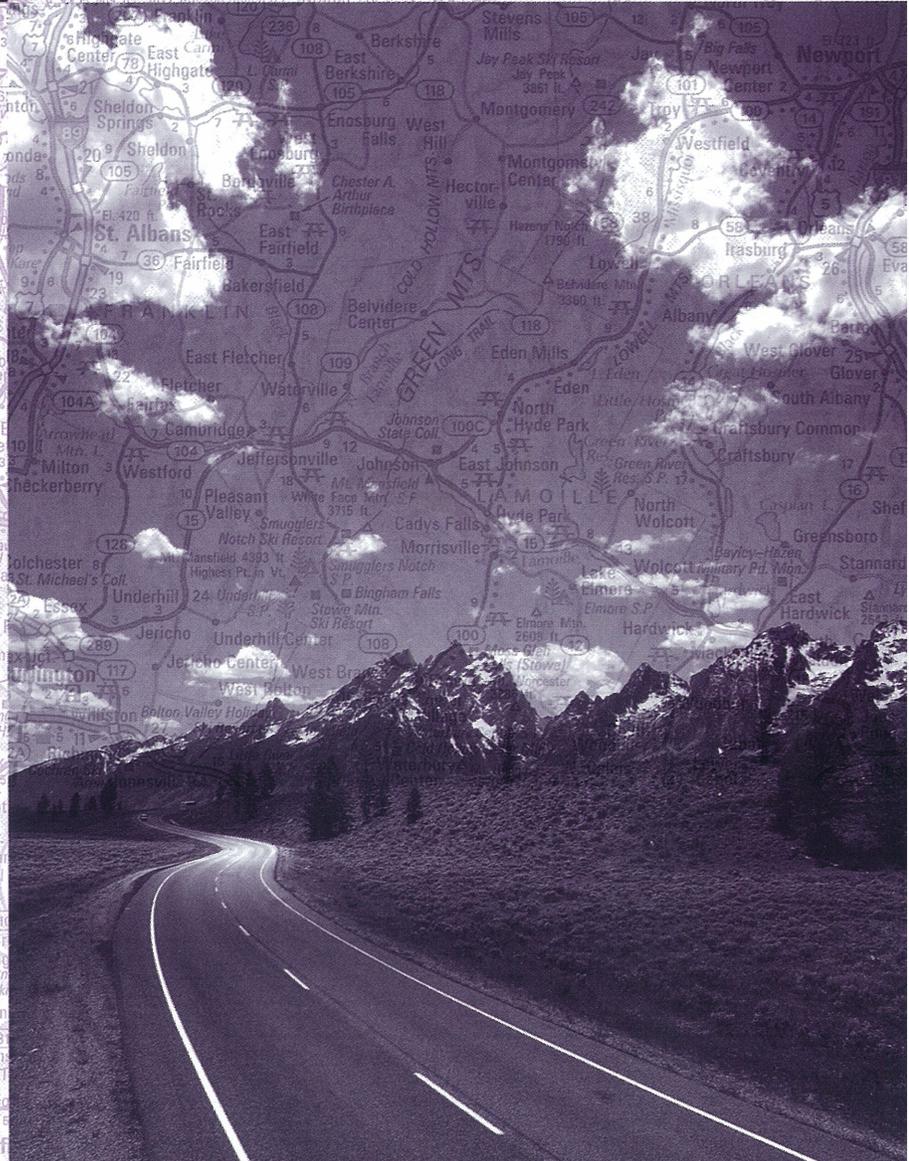
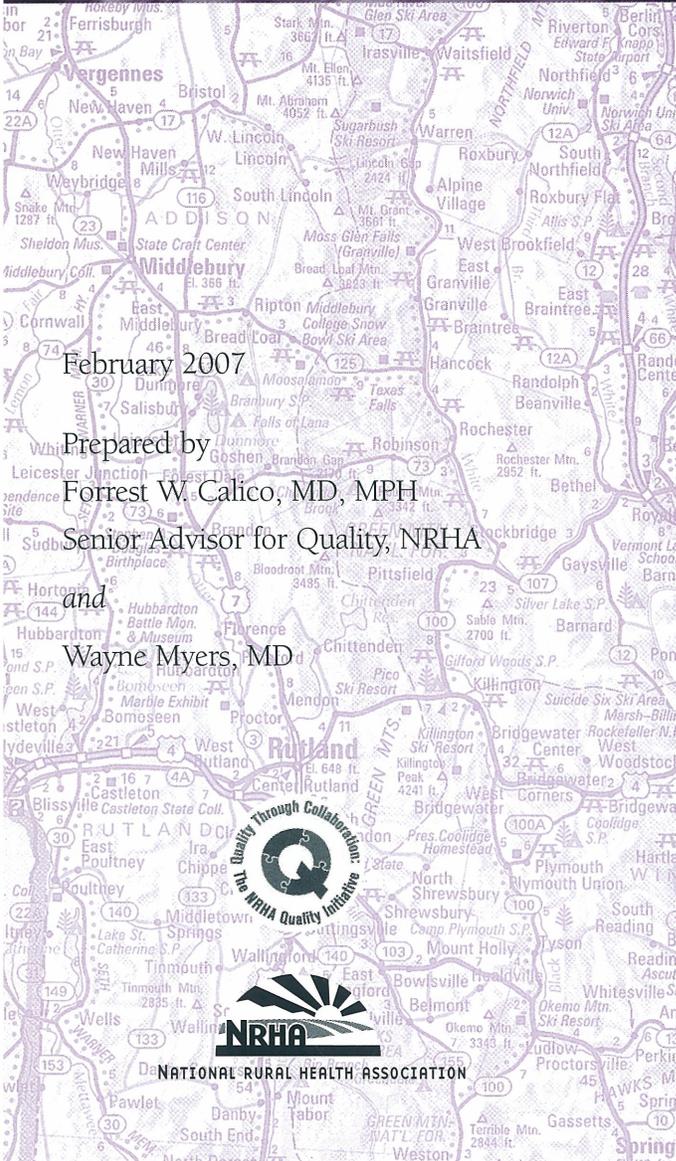


What Makes Rural Health Care Work?

An NRHA American Tour



February 2007

Prepared by
 Forrest W. Calico, MD, MPH
 Senior Advisor for Quality, NRHA
 and
 Wayne Myers, MD



NATIONAL RURAL HEALTH ASSOCIATION

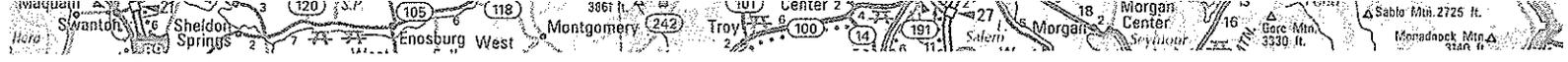


Table of Contents

	Page
<i>Introduction: Our Challenge Is Our Opportunity</i>	1
<i>Minnesota: Saving Rural Hearts — CAH to Tertiary Care and Back</i>	2
<i>Pennsylvania: Innovation Germination! Three-Part Harmony</i>	5
<i>Indiana: Just How Much Can a State Rural Health Association Do?</i>	8
<i>Oregon: Collaborating, Strategizing, Reforming</i>	10
<i>Georgia: Brains Saved in Rural America</i>	15
<i>Washington: Competitors Collaborate for Rural Health Information Technology</i>	16
<i>Vermont: State Government Innovates Rural Care</i>	19
<i>Montana: All in the Family: Large System Includes Rural Service Area</i>	21
<i>Mississippi: Rural Emergencies Get State-of-the-Art Care</i>	23
<i>Michigan: Regional Access Coalition Reforms Rural Health Care</i>	25
<i>West Virginia: Quality Improvement Organization — Partner for Safety</i>	26
<i>South Dakota: City/Country Partners — Live the Mission, Actualize the Vision</i>	28
<i>Kentucky: An Information Technology Counterpoint</i>	30
<i>Conclusion: Do We Accept the Challenge?</i>	32

Supported by grant funding from the
Federal Office of Rural Health Policy
Cooperative agreement number U16RH03702
Bureau of Primary Health Care
Cooperative agreement number U30CS00212
DHHS/HRSA
Copyright 2007 National Rural Health Association
All rights reserved

No part of this publication may be reproduced without the prior written consent of the National Rural Health Association. Copies of National Rural Health Association (NRHA) publication number PU0507-84 are available for \$20 for members and \$25 for non-members to cover the costs of postage and handling.

This document and other NRHA publications may be ordered on-line from the NRHA's Web site: www.NRHArural.org

To order a copy of this book, please send a check or credit card information to:

National Rural Health Association
Publications Department
521 East 63rd Street
Kansas City, MO 64110
Phone: (816) 756-3140
Fax: (816) 756-3144
Pubs@NRHArural.org



Introduction: Our Challenge Is Our Opportunity

The stories you are about to read are true. There is even more truth within these stories than could be told in these pages. And these truths illuminate answers to a very important question: *What makes rural health care work?* Clearly the answer includes obvious components such as: people, leadership with vision, resources, communication, and care. But how are these essentials combined to develop a system that exceeds expectations and is sustainable? There are examples of such success, and here are some of them.

There is no presumption that these are the only or necessarily even the best and most exemplary stories and programs. They are presented because they provide lessons of what is working and can be adapted and implemented in every rural community in the nation. All rural people deserve the best health and health care. By combining all the exemplary features presented here in our rural health care settings, this ideal can become our reality. This then confronts us with a challenge: Do we in rural health care possess the will to move from today's status quo to develop health systems that provide health and care that measure up to current knowledge and best practice? We know it can be done because, as you will see, our colleagues are doing it. The National Rural Health Association presents this challenge to national and state policy makers, health professions educators, the tertiary care world, rural communities and, most particularly, all rural health organizations and providers. And consider this: due to our special characteristics in rural communities, we have the best opportunity to lead the entire nation in developing a functional, effective, and efficient system of health care for all, and here are models to enable us to do just that. But most important of all is the opportunity to vastly improve access and quality for those we serve in rural America.

First, how would we recognize a rural health care operation that is working? Characteristics might include, at a minimum:

- Safety
- Timeliness
- Effectiveness
- Efficiency
- Patient-centeredness
- Equity
- 100% access for all in the service area
- High satisfaction of both providers and consumers
- Consistency with current knowledge
- Measured results with continuous improvement
- Measured improvement of the health status of the service area population

Be prepared to encounter certain pervasive themes in these stories that address the answer to our overarching question: *What makes rural health care work?* These include but are not limited to:

- Working together
- Trust
- Knowledgeable, caring people
- Communities that care
- Information technology
- Communication
- Focus on patients
- Systems to provide continuity
- Standardization of procedures
- Shared protocols
- Leadership and vision
- Overcoming perverse reimbursement policies
- The realization that our “go it alone” instinct may be strategically non-viable

Who bears responsibility for the development and maintenance of rural health care systems possessing these characteristics and addressing these themes? The easy answer is that we all share the responsibility because we are in rural health care. But more specifically, government at all levels, tertiary care organizations, health professions educators, rural communities and their leaders, health-related professional organizations of all types, rural providers and non-profit and grant-making organizations have core responsibilities in creating a system of health care that works. The unique behaviors described in these brief scenarios or vignettes must become the norm rather than the exception, and individuals in leadership roles in the institutions mentioned must step up to the challenge.

So let us begin our journey. We will visit one-fourth of our states. In each, we will describe one or more exemplary health services for rural people. Each vignette contains its own principles and lessons that will help us know how to improve health and care in every rural part of America. Beyond that, they also illuminate the path to high quality health care and improving health status for our entire



nation: urban, suburban, and rural. The intent is to demonstrate what can be done with the expectation that others can improve as a result. We will see exemplary behavior by tertiary care organizations in relation to their rural service area. We will recognize states with effective programs for improving rural health and will see that state-level activity can take numerous forms with notable results. We will highlight exemplary behavior of at least four health systems toward their rural constituencies. And of course, we will examine several rural communities, provider consortia, and regional coalitions that are making extraordinary contributions to improving rural health and care. Please note that all these exceptional programs are operating successfully in the existing reimbursement and grant-making environment. Also, at the end of each section is a test. The test consists of one or two questions, all very similar, that present a challenge. I trust that your answers will take the form of serious thought followed by collaborative strategic thinking, new relationships, and redesigned processes; herein lies our opportunity.

Minnesota: Saving Rural Hearts — CAH to Tertiary Care and Back

Contact: Barb Unger — burger@mplsheart.com

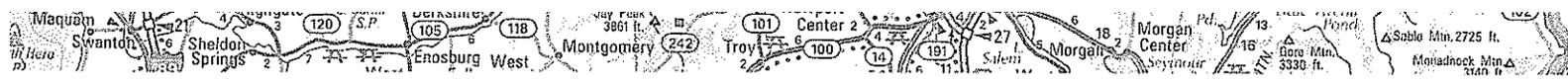
Message: Every tertiary care system with a rural service area should be doing this. The rural communities must “gang up on” their referral centers and require them to perform optimally as partners if they expect to care for our patients.

Learn more: Henry et al., “Design of a standardized system for transfer of patients with ST-elevation myocardial infarction for percutaneous coronary intervention,” *American Heart Journal*, Vol. 150, September 2005, pp 373-384.

Would you start your search for model rural health programs in midtown Minneapolis? Perhaps not, but it turned out to be a great idea! I hope it is for all of us. When this program was presented to a group of American Heart Association experts trying to figure out how to improve the care of patients with acute myocardial infarction, it was immediately perceived to be the standard of care for rural patients in terms of current professional knowledge and best practices. You see, the quality of care for patients experiencing a heart attack is inversely proportional to the length of time that the heart muscle is deprived of blood flow, so the faster definitive care is achieved, the better the outcome and quality for the patient. Recognizing that rural patients were not consistently receiving appropriate care (reestablishing blood flow) within the necessary time frame (two hours), Dr. Tim Henry at Abbott Northwest Hospital and the Minneapolis Heart Institute resolved to figure out how to get the job done for heart attack patients in their rural service area (a radius of 200 miles including parts of three states). This has been accomplished and its value demonstrated. It is called the “Level I” program, the code for this extremely urgent process of care. Over 1,300 patients have been treated with the outcome (which has now become the expectation) that rural people walk out of the hospital in two or three days with normal heart function in even severe cases of coronary occlusion. How can this be?



Led by Dr. Henry’s vision, cardiologists, cardiac cath lab leadership, hospital operations including security, leaders of rural hospitals, and emergency transport (both ground and air) began to work together to develop a program of care that would achieve optimal outcomes for rural people. Note that this was done in the absence of large grants or directives from regulatory bodies. The pilot program began in 2002. Using existing technology, people, and resources they developed standard protocols, communication channels, management techniques, record keeping, continuity, trust, and community education to achieve their goal. They have become so efficient that sometimes a rural



patient may get to the cath lab faster than a patient brought to Abbott Northwest directly by ambulance from a residence in the city. Briefly, here is how it works.

A patient in a rural community (say 100 miles away) awakes with chest pain. She has heard from the community education programs put on by the local critical access hospital (who has an operating agreement with Abbott Northwest to be a "Level I" participant) that she should call 911 and not wait to see if it gets better. She calls, is rushed to the local emergency room, and is instantly entered into the protocol. An EKG is done, blood is drawn, and ST elevation is confirmed. A single call is made. The Abbott Northwest cardiologist, the cath lab, hospital security, and the nearest helicopter are all activated immediately. Note that the helicopters are stationed in the rural service area for immediate response. Within 20 minutes the patient is aboard the helicopter, arriving on the roof of the urban hospital within 40 minutes. The patient is rushed from the helicopter to the waiting elevator and directly into the cath lab where the team and interventional cardiologist are ready to perform the procedure. Fifteen minutes later, the patient has full circulation to her heart muscle and is on her way to recovery. The cardiologist makes a phone call to inform the referring physician of the process and status. The time from symptom onset to open artery is approximately 110 minutes. The patient is demonstrated to have a fully normal ejection fraction, indicating normal heart function. She is entered into a rehabilitation program in her hometown and discharged on appropriate medications, to be followed in the most appropriate way. It should be noted that during this entire process, data follows the patient using fax technology, obviating the need for any duplication of effort. Training and experience develop the level of trust that enables such a streamlined process to occur. While there has been some limited grant funding, sustainability of the program rests on reimbursement for care provided.

This program is not for the faint at heart. Patients with a level of risk that would be avoided by many are welcomed in the Level I program, as these data describing the patients clearly demonstrate:

- Age: Mean = 62 years ($\geq 65 = 44\%$, $\geq 80 = 15\%$)
- Sex: Male 71%
- Diabetes: 15%
- Hypertension: 53%
- Smoking history: 63%
- Previous MI: 15%
- Previous revascularization: 17%
- Cardiogenic shock: 12%
- Cardiac Arrest: 10%
- Required endotracheal intubation prior to PCI: 7%

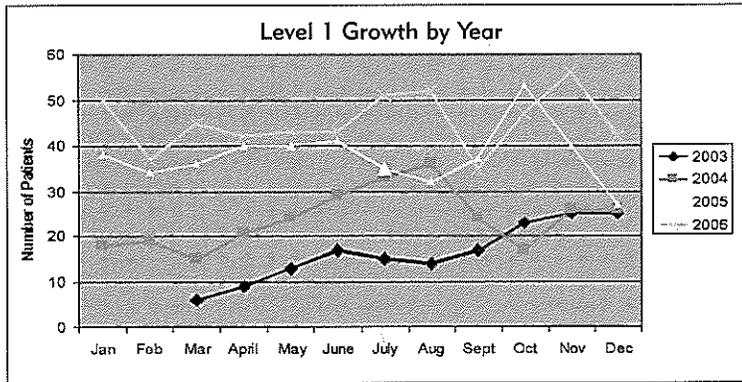
None the less, results are excellent as demonstrated in the table below. The first column lists frequent complications. The rates of their occurrence for rural patients are compared to those of patients entering directly into care at the tertiary care center (col. 2). Zone I reflects rural Level I patients relatively close to the center (col. 3), while Zone 2 patients are more distant (col. 4).

COMPLICATION	ABBOTT NORTHWEST (N=158)	ZONE 1 (N=364)	ZONE 2 (N=210)
Stroke	3 (1.9%)	4 (1.0%)	2 (0.9%)
Re-infarct or Ischemia	5 (3.2%)	3 (0.8%)	0
Bleeding: Any	6 (3.7%)	12 (3.2%)	15 (7.1%)
Major	0	4 (1.1%)	1 (0.5%)

The next table reflects the median time in minutes consumed in the three phases of care (rural emergency department, transport, and revascularization). Note the zones as described in the previous table and the comparison to Abbott Northwest (AN).

PATIENT SOURCE	RURAL ED	TRANSPORT	DOOR-TO-BALLOON, AN	TOTAL IN DOOR TO BALLOON
Zone I (n=441)	49	22	20	95
Zone II (n=279)	60	32	18	120
AN (n=204)	NA	NA	65	65

This sequence and these data fairly illustrate the process of care and its outcome. Over 30 rural hospitals participate. The protocol is adjusted according to the distance from the tertiary care center (note the zones mentioned above). The image and reputation of the rural hospitals have greatly benefited from the program as local people recognize the quality and value it brings to them. This is particularly true when influential individuals in the rural community are the beneficiaries of the process. Visits to five participating hospitals and observation of training programs confirmed the effectiveness and value of the program to the satisfaction of this observer. The success has led Abbot Northwest to begin expansion of the principles and processes to other time-sensitive conditions. The program has steadily grown since its inception in terms of the numbers of patients served.



The cement that holds this program together can be characterized in two ways. First, there is a relentless focus on the needs of the patient for optimal care and quality. This focus helps hold at bay the usual culprits that obstruct care: turf, financial focus, and medical politics. Second is the key person who monitors the program full time, receives every communication and responds in real time if any glitch arises. This person is a nurse named Barb Unger. She constantly figures out how to make the process work within the larger system of the tertiary care center and the network of hospitals. Her personal and relationship skills combined with extraordinary commitment to the program

make it all work and ensures that problems have no opportunity to fester and impair the success of the program. Her take-away messages to the rural health care universe are:

Here are some of the elements that make this program such a stellar success:

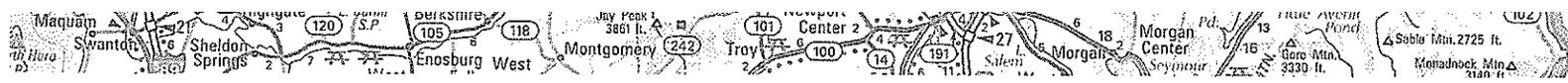
- *Intentional design as a **system of care***
- *Communication: a primary focus, in real time*
- *Continuity of information flow and patient care*
- *Transport integrated into the system of care*
- *Constant attention to detail (accompanied by real-time communication)*
- *System design by people who do the work*
- *Mutual respect between urban and rural providers*
- *Patient-centeredness (including careful arrangements for rural families of patients)*
- *Tertiary care center attention to high-touch in addition to high tech*
- *HIT organized to put needed information only one click away from the physician*
- *Single agreed protocol of care across the continuum, unanimously supported by physicians*
- *Strong research orientation*

- Standardize protocols of care across the continuum
- Simplify!
- Continuously review, assess, and communicate in real time
- Use data and feedback for quality improvement
- Individualize transfer arrangements
- Enable a single phone call to “do it all” (empower the rural emergency staff)
- Train extensively!

The Institute of Medicine has selected six criteria for high quality health care. Do you see elements of this program that meet the criteria?

- Safe (note the low rate of complications)
- Timely (intervention gets done within the critical time frame)
- Effective (evidence based, outcome objectives met)
- Efficient (existing resources used to improve care; sustainable)
- Patient centered (remember the unrelenting focus on the patient)
- Equitable (rural people get optimal care through collaboration)

What can you learn from this program to improve care for rural people with urgent/critical problems in your service area?



Pennsylvania: Innovation Germination! Three-Part Harmony

Contacts: Lisa Davis — lad3@email.psu.edu; Michele Stefanides — tcp33@epix.net; Susan Browning — sbrowning@shscares.org

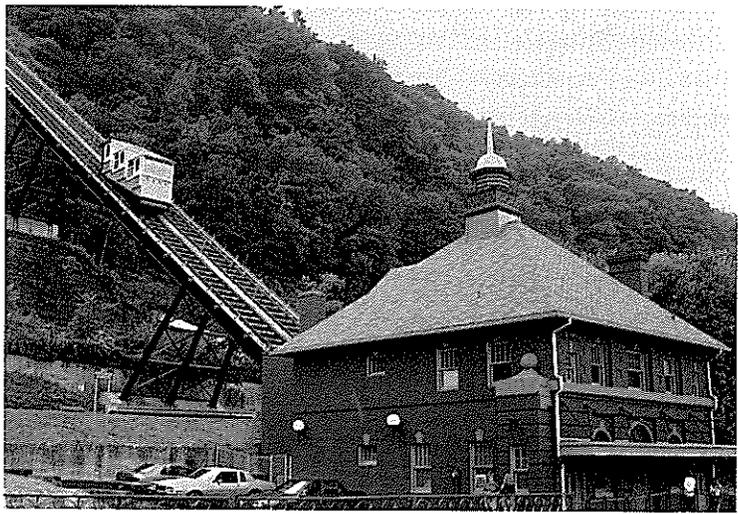
Message: States can lead, communities can collaborate to improve health, and health systems can enhance health care in their service area. The three are synergistic.

Learn more: www.tiogapartners.org and www.svrhp.org

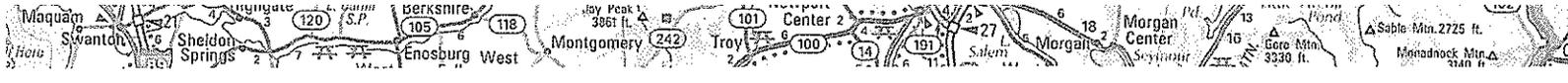
I. In 1997, the Pennsylvania Department of Health inaugurated the State Health Improvement Plan (SHIP). Based on the Healthy People 2000 categories of action (remember the 22 priorities?), the program was designed to provide limited funding to communities (usually counties) to convene stakeholders in health, form partnerships for health, and define priorities for improving the health of the community. They could then apply for funding to implement their solutions. The local programs were mechanisms for achieving state goals. Pilot programs were instituted, and they advised the state that their needs from the state were expertise, knowledge, and seed money. Unfortunately, the program suffered from insufficient funding and staffing so that the original vision was not achieved state-wide. The most successful programs have been based in the local hospitals. They continue to have semi-annual public health institutes as part of the program. There continues to be success from this program, which leads us to the second part.

II. Tioga County is a picturesque rural area in north-central Pennsylvania with a renowned community health partnership that is the model of SHIP intent. Its partnership predates the SHIP initiative by several years. It began in 1991 as a result of visionary leadership by the CEO of the hospital (Laurel Health System). His view of community was the county in its entirety, and he persuaded his board to invest in a collaborative approach to addressing county-wide health issues. This occurred in a setting characterized by existing community pride and civic-mindedness, so the initial public meeting attracted 150 interested people who formed a community care network. With the aid of grant funding, the partnership — the Tioga County Partnership for Community Health — evolved rather than being designed. The partners include the health system, Mansfield University, county government, the economic development group, the integrated human services agency, the Area Health Education Center (AHEC), and the health department. Many other entities are actively involved in partnership activities. The early (and continuing) organizational structure consisted of “workgroups with passion,” in which interested parties convened around pressing issues of particular interest to them and who then leveraged partnership strength to address that issue. Currently, there are 16 active groups. Examples of results of their work include:

- The formation of the “Countryside Council” by the agricultural community resulting in a Tioga County Food Alliance for buying locally grown produce
- Legislative involvement with the partnership leading to participation by Temple University to help resolve the oral health needs of the uninsured and children
- A highly effective diabetes project
- Tioga Care Net for assisting the uninsured to get access to care including laboratory procedures and pharmaceuticals
- Senior Expo
- Assisting seniors with Medicare Part D, advance directives, and transitions in care from setting to setting



A community survey was performed and analyzed in 1995 and repeated in 2000 to identify needs, leading to the formation of other workgroups such as the diabetes program and oral and mental health. Since the workgroups do not provide services, it was essential to find partners to develop service programs. The dental clinic has been spun off to its own board, and strategies for doing the same with mental health are being developed. All partners must have their own strategic plan and all partners participate in developing the partnership strategic plan. Since surveys are expensive, the partnership is adding county-specific questions to the State Behavioral Risk Factors survey to obtain current data. The role of the state in this partnership is deemed to be very important.



Milestones for progress include successful application for a large grant in 2001 and becoming a 501c.3 organization in 2000 with full-time staff and an executive director. Identified factors leading to the long-term success of the partnership include:

- Clear values and purpose, shared and articulated regularly
- Commitment of community leadership; organizations recognize partnership work as part of the employees' jobs
- Every agency is involved and *heard*
- Positive local newspaper coverage
- Grant-writing talent actively sought
- Facilitation of meetings consciously designed to build trust
- Non-profit status
- Appropriate political involvement
- Communication
- Neutrality
- Strategic planning as an integral partnership function
- Staff involvement in designing, measuring, and improving processes
- Celebration ("We love to party")
- Workgroups with passion
- Consistent leadership
- Studiously avoid win/lose situations; always craft win/win processes and outcomes
- Capture and report in-kind contributions in detail
- Sustainability is a product of patience and leadership in addition to money
- "Let the data shine"

It is fair to observe that these bullet points constitute a guide for others who would like to develop a community based healthy community initiative. Please link to the web site noted at the beginning of this vignette for information about the partners, workgroups, outcomes, and details of the history and activities of the partnership.

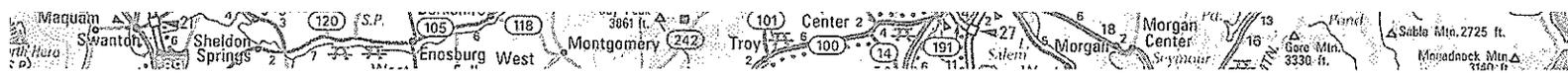
In your setting, who would be the partners? How would you get input from the community at large? What can you glean from the Tioga success to apply in your community?

III. Let us travel south a few miles to Williamsport, Pa., where we find the Susquehanna Valley Rural Health Partnership. The Pennsylvania Office of Rural Health also had a hand in developing this project, and you will see that there is a kinship with the Laurel Health System in Tioga County also. The partnership serves three counties and includes the major hospital in Williamsport and three critical access hospitals: Bucktail Medical Center, Jersey Shore Hospital, and Muncy Valley Hospital. The Jersey Shore CEO was the networking champion and first president of the partnership board. Muncy has been affiliated with Williamsport since 1994. Bucktail is small and more remote than the other facilities. It works very closely with Jersey Shore. The partnership has several important functions which you can learn about on the web site noted at the beginning of this vignette. Here we will focus on the information technology (IT) aspect of the partnership's contribution.

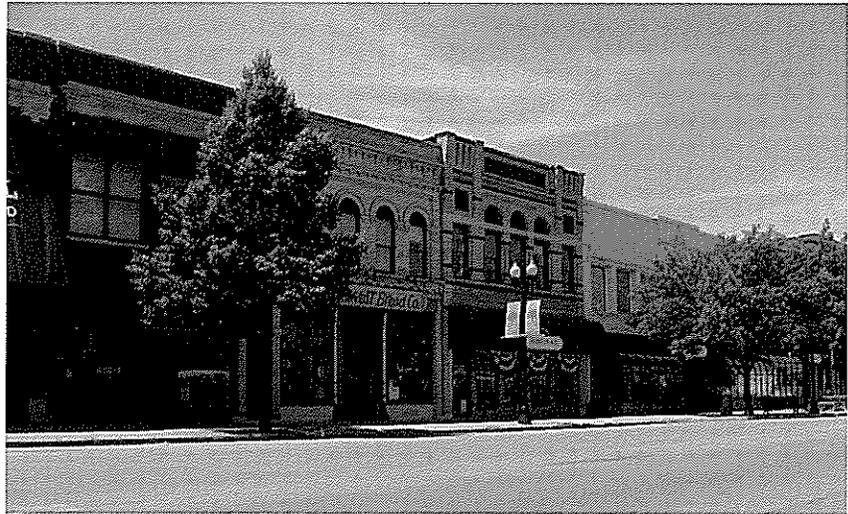
Success factors identified include:

- *Readiness to work together*
- *Focus on patient care that is safe, effective, and efficient*
- *Pennsylvania Office of Rural Health support (participation in meetings, technical assistance, challenging the partners)*
- *Participation of many entities in partnership activities (public health, AHEC, medical society)*
- *Health System not trying to control the partnership*
- *Long-term view and strategic thinking*
- *Conscious intent to "do no harm"*

"IT is not the goal; it is a tool to achieve optimal health care." (Lou Ditzel, former CEO, Jersey Shore). The focus is on mutual benefit in reaching the vision of efficient and effective health care for the service area, and clearly a technology initiative was required to meet the "hunger" for technology manifested by rural providers. Components of the system include business applications, clinical lab and radiology, electronic medical record (EMR), computerized physician order entry (CPOE), and pharmacy. As of September 2006, the first two items are operational. EMR is just coming online in Jersey Shore and Bucktail and is operational in Williamsport and Muncy. Pharmacy is operational in Muncy and Williamsport and CPOE is in its initial stages in Williamsport. The effectiveness of the technology-supported pharmacy program at Muncy deserves special note. As we all know, pharmacy services are becoming progressively harder to obtain in rural hospitals, yet



quality and safety require intimate involvement in clinical care. This has been achieved in this setting. Muncy is linked with the central pharmacy in Williamsport in real time to have orders reviewed and verified. The automated dispensing system also works effectively and is resupplied daily. Medication errors have been dramatically reduced by using this regional technological approach. *This may well be the viable model for pharmacy services in rural hospitals everywhere.*



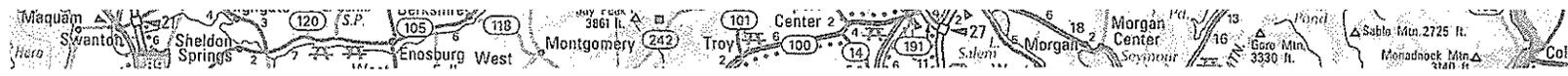
The connection with Laurel Health System in Tioga County emerged in 1996 when representatives from Laurel visited Williamsport to look at their developing information technology and requested to partner with them in the system development. Susquehanna Health then became the IT provider for Laurel under a cost-based contract. Mutual benefit is clear: efficiency, stronger staff, greater experience, and reduced overhead exemplify mutuality. Clearly this helps Susquehanna afford system expansion to the other members of the partnership (the critical access hospitals). Muncy has been a part of the initiative from the beginning. Jersey Shore came on board in 2000, and now Bucktail is being brought online simultaneously.

Issues and challenges abound, of course. Those mentioned by the partners include:

- Expectations often exceed capabilities and capacity
- Resources (people, dollars)
- Infrastructure (particularly in small rural environments)
- Autonomy of individual facilities versus partnership goals
- IT (scaling a project to precisely meet the needs of all parties)
- Sustainability (partners are committed to find a way after grant funding expires)

The glue that holds this partnership together is identified as having two components. First is commitment to the shared vision of safe, efficient, and effective care for the population of the service area. Second is the collegial relationship among the partners and the recognition of the value and efficacy of collaboration.

Please refer to the web site noted at the beginning of the vignette for much more information about this extraordinary partnership. Note the role of the state and the synergy among the elements of this PA experience. What do you see here that applies in your community, your health care organization, and your state government? Can you not only act locally but also advocate for greater effectiveness at the state level?



Indiana: Just How Much Can a State Rural Health Association Do?

Contact: Tina Elliott — telliottirha@bizma.rr.com or Cindy Large — clargeirha@bizma.rr.com

Message: Every state rural health association should aspire to lead rural health care to higher levels of access, quality, and safety, and rural providers should actively support their association and help it to achieve a level of effectiveness comparable to Indiana's.

Learn more: www.indianaruralhealth.org

The Indiana Rural Health Association (IRHA) has over 1,000 members. Each annual conference brings in a minimum of 525 attendees. They sponsor numerous educational programs every year and actively support Indiana's 35 Critical Access Hospitals (CAHs). Their involvement in rural health in their state is broad and deep. They foster a host of important partnerships and are influential with state government. By almost any measure, they are successful — the center of the rural health universe in Indiana. Would it not be truly wonderful if IRHA represented the 'average' state rural health association (RHA)? Let us examine one of their activities and partnerships and consider how other RHAs might emulate this resounding success. This vignette will not endeavor to address the full spectrum of their activities; we will discuss one example only. Note that the association had its roots in the primary care association and has been in existence for only about 10 eventful years. It continues to enjoy rapid growth.

The example is a three-way partnership: IRHA; the American Heart Association (AHA); and the Indiana Quality Improvement Organization, Health Care Excel (HCE). The object of the partnership is to improve cardiac care in Critical Access Hospitals (CAHs). The State Department of Health/State Office of Rural Health is providing funding for the project. IRHA and HCE had previously worked together to develop quality benchmarks for the hospitals, so it was easy when the American Heart Association's "Get With the Guidelines" project became available to use the measures already adopted and generally accepted to work together to help the CAHs participate. Consolidating quality improvement and measurement programs reduced the burden and benefited everyone involved. The partnership has also had a positive impact on the physician community, as they more willingly adopt evidence-based processes of care and work with data, demonstrating improved outcomes. Pooling expertise and capabilities enables the partnership to address all aspects of need on the part of participating hospitals. For example, Greg Poe with the AHA is able to spend time in the facilities working to provide assistance in improvement and data collection as required. Note that the hospital association is very supportive of the approach. The IRHA is working with a consultant in a neighboring state to develop a CAH network (also supported by the hospital association). Turf simply has not emerged as an issue in Indiana.

This story would not be accurate without mention of another partner with IRHA: the Richard G. Lugar Center for Rural Health. This is a neighboring organization based in Union Hospital in Terre Haute that is not directly associated with IRHA but is closely connected by relationships, proximity, and congruent goals. The center has a dramatically modern education and technology center as a part of its family medicine residency. It has rural clinical sites where the best of modern comprehensive rural care is provided. It helps run a free clinic in Terre Haute. It is an exemplary program and makes an important contribution to the intellectual environment and strategic thinking that make rural health so progressive in Indiana.

The impact of the Indiana collaboration is far reaching. CAHs are improving their quality and image, patient outcomes are improving, and hospital boards are focusing on quality and performance. This is consistent with IRHA's goal: build partnerships to provide consistent high quality for all Indiana residents, recognizing that success begets success, and that access depends on supporting care in rural communities. How do the IRHA leaders account for their success and for the absence of turf issues? Success factors include:

- Getting back immediately when questions arise (communication)
- Collaboration of hospital association and sharing of their resources
- Consistent message from all partners
- Understanding the needs and goals of all partners and seeking specific areas for collaboration
- Delivering on promises to build trust
- Feedback to everyone involved
- Cooperation rather than competition
- A relationship-based non-hierarchical approach to doing what works (pragmatic)
- Staying connected! Conference calls and face to face
- A proactive shared vision, allowing each locality to tailor implementation



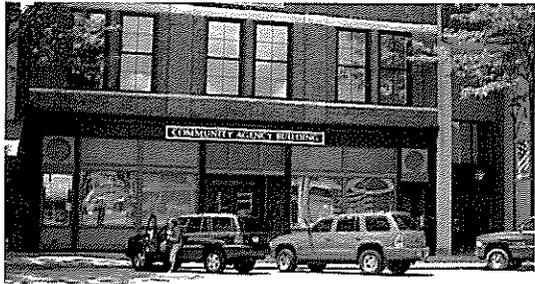
Certain characteristics serve to hold the partnership together and strengthen it:

- Shared commitment to improving health of the population
- Mission and vision larger than any single organization
- Geographic proximity
- Optimization of all resources
- Mutual support; effective convening of all parties
- Share learning from experience and national conferences

What do you see in this program that could be applicable to the rural health organizations in your state? Should we have higher expectations of our organizations? Should we as members take responsibility for energizing our organizations?

While we are in Indiana, let's stop in Seymour!

In an environment so positive for rural health as we have described in Indiana, good things happen that are not directly connected to the major IRHA thrust. Such is the case in Seymour, a small town in Jackson County, midway between two urban areas. Their health care facilities serve three agricultural counties. What happened in Seymour?



Concerned citizens became increasingly aware that the health needs of this agricultural service area were not being adequately met. For example, 400 children nominally covered by Medicaid were unable to access care. Physicians were skeptical but when the data became clear they accepted the reality with the leadership of an extraordinary physician champion — Dr. Kenneth Bobb, a prototype of the genre. A community steering committee was established, with representation from the Community Foundation, the United Way, the health department, human services, the newspaper, Dr. Bobb, and the local hospital. After a false start, the decision was made to seek official 'medically underserved' status and align with Indiana Health Centers, the regional community health center and become one of their affiliated expansion sites, the Community Health Center of Jackson County. Patient care started in March 2004. Growth has continued. The dental facility held its open house in 2006. Here is the facility, a historic building renovated by community volunteers.

The breadth and depth of the community partnership deserves our most serious attention. Volunteers assist the operation in every respect, including providing labor and materials for renovation of the historic building just noted. Most notable is the commitment of the hospital, the Schneck Medical Center. This is demonstrated in many tangible ways including discounted laboratory services for the needy served by the Community Health Center and honoring the sliding scale of charges. This represents real dollars — \$115,000 in adjustments occurred in a single month (June 2006) as a result of this partnership.

Success factors identified by the staff include:

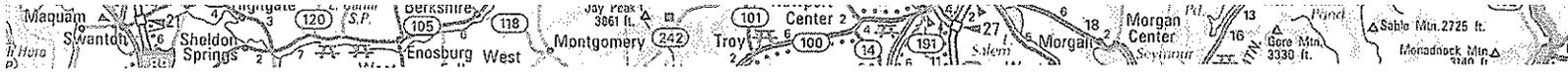
- Community leaders supportive in real terms
- Universal desire to serve; genuine belief in the mission
- Use of feedback to improve
- Standard policies and procedures
- Meaningful involvement by community partners
- Communication peer-to-peer
- Planning and using data
- Being a part of the Indiana Health Centers organization

This is a dramatic success for the people of the three-county service area of this coalition of health providers. Outcomes data are demonstrating the value of this collaborative approach to improving access and quality. What do you see in this experience that can be applied in your service area to improve access and quality?

Here are the take-away messages from the IRHA staff:

- **Believe** in health care for rural people
- **Persist!**
- **Convene potential partners**
- **Share the belief and passion with partners**
- **Seek more stakeholders, including the unexpected**
- **Promote transparency of quality and safety issues**

For more information, contact Shannon Rockey — srockey@ihcinc.org



Oregon: Collaborating, Strategizing, Reforming

Contact: Fran Spigai — franspikai@charter.net

Message: In an innovative environment, when the time is right, a committed group of community volunteers can convene all the right players and “strike while the iron is hot.” This confluence of circumstances can produce sustained and dramatic collaborative improvement in health care for a community.

Learn More: Network of Care Website www.lincoln.or.networkofcare.org/mh/home/index.cfm.

Other valuable information is available at these web locations:

- **Improving Chronic Illness Care.**

[improvingchronicillnesscare.org.]

The web home for materials, assessment tools, PowerPoint, audio and video presentations, and comprehensive information and history about the Chronic Care Model (CCM)

- **American College of Physicians.** “The Advanced Medical Home. A Patient-Centered, Physician-Guided Model of Health Care.” ACP Policy Monograph. January 22, 2006.

http://www.acponline.org/hpp/statehc06_5.pdf

- **World Health Organization.**

http://www.acponline.org/hpp/statehc06_5.pdf
Chronic Disease page with links to statistics and publications. One can find the beautifully presented “WHO Global Report: Preventing chronic diseases: a vital investment” as a link on this page

- **California Healthcare Foundation.** *Improving California Healthcare Delivery and Financing.* www.chcf.org/

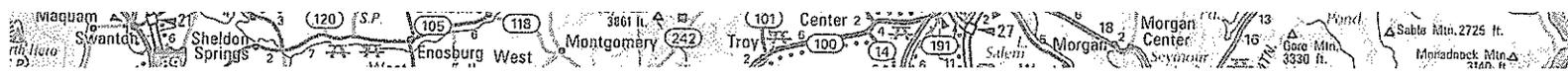
This is where the Strategic Plan (which will continue to be revised) and Meeting Notes (for the monthly meetings) are stored. The Chronic Care Committee (CCC) plans to have its own web site in place by early summer 2007. Meanwhile, contact franspikai@charter.net for questions.

Sitting in one of our planet’s most beautiful places, Lincoln County perches on the central Oregon coast overlooking the Pacific Ocean on US Highway 101. In addition to being geographically blessed, it happens to be the home of one of the most thoughtful and progressive health coalitions in the nation. The enlightened citizens and providers who created it call it the Community Health Improvement Partnership (CHIP). CHIP is a program to help Lincoln County to improve its health care services and the health status of the residents of the county. This is done by involving residents in health decision making, prioritizing needs, building consensus, and defining solutions. It has several members and components that we will mention, and then we will focus on the work of the Chronic Care Committee (CCC), one of the major components of the partnership.

First of all, who are the partners? The CCC lists 25 members from 14 organizations. Major partners are Samaritan Health Services (SHS), Oregon Health and Science University (OHSU) and the Lincoln County Health and Human Services (LCHHS). Others include the North Lincoln Health District, the Diabetes Coalition, Lincoln City Medical Clinic, Samaritan Depoe Bay Clinic, Public Health Advisory Committee, and RxSafe. Meetings typically attract 12-15 participants.

Samaritan Health Services (SHS) has been very supportive of community-based projects in the county, monetarily as well as functionally. The director of the SHS Foundation is on the CCC and participates infrequently, but keeps in touch regularly. In September 2005 they hired a chronic care coordinator, who is now working for both SHS Lincoln County hospitals. She is systems-oriented, conceptual, and very compassionate. She is a regular attendee at CCC meetings and provides updates on chronic care clinical matters three to four times a year. Her entrée to clinical staff is also very positive.

Lincoln County hospitals, clinics, local Health & Human Services, and the community have had a useful history with Oregon Health & Science University (OHSU) and its rural outreach components — Oregon Pacific Area Health Education Center; Oregon Office of Rural Health; Oregon Rural Practice-based Research Network (ORPRN) and OHSU’s Department of Informatics. OHSU has made educational programs available to our communities, provided education and medical research leadership for clinicians, and the opportunity to have input from both clinical and community aspects in local research performed by OHSU (i.e., RxSafe). The Community Health Improvement Partnership (CHIP) project was a year-long partnership between OHSU and SHS to assess the health care needs in Lincoln County. Begun in 2002, this project continues to grow and to receive some funding from OHSU in addition to other sources.



Lincoln County Health & Human Services (LCHHS) is one of five Oregon grantees to implement the Chronic Care Model in cooperation with local clinicians. Their major points of emphasis include:

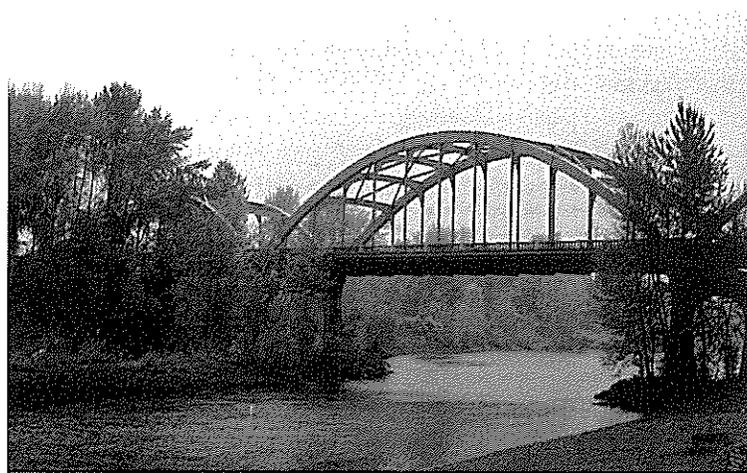
- Work with local clinics to create and populate registries on two of four chronic conditions: asthma, diabetes, hypertension, and high blood lipids
- Work with the clinics to set up the registries to achieve the most effective and efficient patient visits
- Provide a robust choice of chronic disease, self-management, and disease management programs taught by trained staff. The Living Well with Chronic Disease program is required to be one of those included
- Educate clinicians about the value of these programs in order to stimulate referrals from clinicians to patients, to help patients become proactive health care consumers, and to establish good communications between clinicians and community resources
- Determine the best ways of marketing to the community for self-referrals and patients who will complete the program

Prior to this project, LCHHS managed a number of grants geared to those with chronic conditions (smoking cessation, asthma). The local Diabetes Coalition has been a successful program to support those with diabetes.

These partners of the CHIP planning process have identified seven major priorities and have formed workgroups to develop plans for implementation and funding. As of January 2007, the update of activities was as follows:

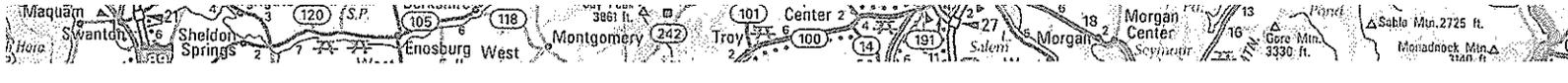
CHILDREN'S HEALTH — Funding of \$4,000 for support of the public health children's immunization program and the Oregon Mother's Care prenatal outreach and case management program.

SCHOOL-BASED HEALTH CENTERS — School-based health centers became federally qualified health centers on July 1st. Additional services will be provided to all school clinics. Lincoln City Rotary club provides funding for three dental van visits, and the local Health Foundation provides funds for a part-time psychiatric nurse practitioner. Youth Advisory Councils are working on school wellness policy and fund-raising opportunities at all four sites.



CHRONIC DISEASE MANAGEMENT — Volunteer nurses have successfully recruited and provided training for nine new parish nurses. The parish nurses are providing a number of outreach services through their churches. Activities include walking programs, blood pressure checks, and community education programs. Seven Lincoln County clinics are participating in a learning collaborative project focusing on providing better care to patients with diabetes and hypertension. This is a Samaritan/OHSU Rural Research sponsored project. Lastly, the CCC has completed work on a long-range strategic plan, begun work on a marketing plan to promote local chronic disease management classes and designed a data-gathering plan for clinical and community health measurements. (Read further for more information on the CCC.)

HEALTHY COMMUNITY PROMOTION — The community garden at the Ridge apartments, funded by OHSU Office of Rural Health, is a notable success. Master Gardeners work with children on the garden. Two new gardens were built this summer in Lincoln City, a children's garden and a garden for the food bank. Healthy Community committee members provided the school district with specific recommendations about the school wellness policy. These recommendations were a result of the Healthy Communities Conference. Their newest project is a teen pregnancy reduction plan, with a community forum planned for February 2007.



ACCESS AND REFERRAL — 3,200 resource guides were updated and printed in September and were distributed to area clinics, libraries, and various social service agencies. Samaritan Health Services and the Siletz Foundation funded the cost of the new guides. A Vista worker at SHS and the FQHC clinics provide help to patients applying for prescription assistance.

TRANSPORTATION — The medical transportation committee is working on a \$10,000 planning grant from OHSU. Health Districts have committed funds for transportation vouchers.

AFFORDABLE HEALTH INSURANCE — Oregon Health Access and school-based health centers continue to promote federal health insurance subsidy programs. Public health clinics began providing expanded primary care, dental, and mental health services to patients in Lincoln City and Newport on July 1st using FQHC funding.

Now let us focus on the extraordinary work of the Chronic Care Committee. The goal can be stated simply: “We wish to have a wellness plan and a healthy environment for every resident of Lincoln County. Implementation of that goal will require adoption of the chronic care model developed by the Improving Chronic Illness Care (ICIC) program of the Robert Wood Johnson Foundation.” The following excerpts from the executive summary of the strategic plan can best illustrate the thinking and work of the committee:

“Chronic care quality improvement is one of the priorities established in 2004 as a result of a Lincoln County health needs assessment begun in 2002 by the Lincoln County Community Health Improvement Partnership (CHIP). The Chronic Care Committee, established by CHIP, learned of the chronic care model and used the assessment tools of its developers to determine local strengths and weaknesses for building a future program. A one-day conference on Preventing and Managing Chronic Disease in Lincoln County was sponsored by local and regional health care organizations and by community organizations. The conference, held in October 2005, energized the Committee to take action, based on positive outcomes described for other communities in the U.S. that had adopted the chronic care model. Adopting the chronic care model is helping many communities in the United States improve the quality of their health care. Based on these facts, the Committee, consisting of a diverse group of health care professionals and volunteers, met monthly after the October conference and collaborated on the development of the strategic plan. The Committee proposed a plan for improving the health of residents of Lincoln County, Oregon, especially those with or at risk for one or more chronic conditions. The goal of the strategic plan can be summarized with a slogan: ‘A Wellness Plan and a Healthy Environment for Everyone’; the goal of health care should be improving quality of life...”

“The chronic care model is applicable to everyone, not just those with chronic conditions. The model requires informed patients, proactive health care providers, and strong community support. The model requires new roles for everyone:

- *Patients are asked to accept direct responsibility for their own health, manage their own disease conditions, and become active and informed partners of health care providers*
- *Clinicians are asked to work with others in a “prepared, proactive practice team” implementing the model as a whole and supporting patients who are learning their new more informed and active roles*
- *Health care organizations are asked to redesign their health care delivery systems and develop clinical information systems and decision support systems for clinicians and patients*
- *The community (local government and citizens) is asked to create local policy that will encourage healthy activity (provision of exercise and healthy eating opportunities, avoidance of hazards, and making available patient support, education, self-management training, and disease screening opportunities)*

Many incidences of chronic conditions are preventable or have much less severe consequences when people adopt healthy lifestyles, such as avoiding tobacco and other dangerous substances, eating healthy foods, maintaining appropriate weight and getting regular exercise. Tobacco use, inactivity and poor diet are the leading causes of avoidable deaths in Oregon. Full implementation of the chronic care model also requires prevention services and community support for healthy lifestyles.” “..individuals should participate in developing their own plans in consultation with their health care providers.”

“This strategic plan recommends that the latest national guidelines for evidence-based medicine be made readily accessible to both clinicians and patients for use in developing each person’s wellness plan.”

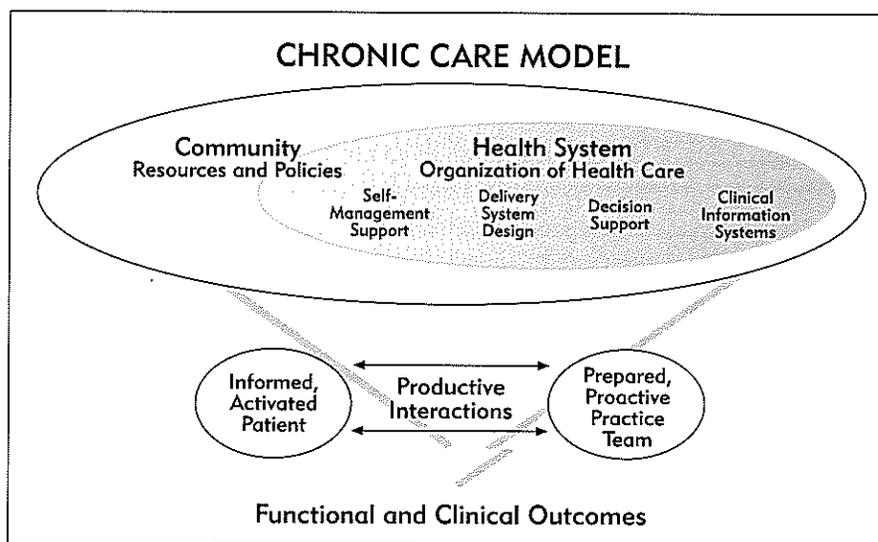


“Information technology, including Internet-based services, enables improved medical practice and improved distribution of medical information to both clinicians and patients. Electronic health records and patient registries facilitate improved care in medical clinics. Health records should be accessible to patients as personal health records (available on paper or through secure, confidential Internet connections) and become part of each individual’s wellness plan. People without their own personal computers should be able to use computers at public libraries or other public locations to access securely their own personal health records and to provide additional input for their own wellness plans.”

“This plan is intended as a five-year plan. Grant funding is needed to implement the several components. The first grant application, sought by Lincoln County Health and Human Services Department, was successful and the first project began September 1, 2006.”

The committee developed its own adaptation of the familiar Chronic Care Model, as illustrated. But for them, it is more than an image; it describes their work!

Some unique insights emerged from our conversations as to reasons for the extraordinary effectiveness of the Chronic Care Committee of the partnership. These fall into four categories: timing, engaging the right people, a pivotal conference, and the process of applying for grants. Timing may have been the most important element and has three aspects. First is the issue of readiness. Both internally within the community and externally in Oregon and the university, there was a readiness for innovation and recognition of need to change and of possible effective models for change. The second aspect relates to the conference, which served as a “tipping point” to convert readiness to action. Finally,

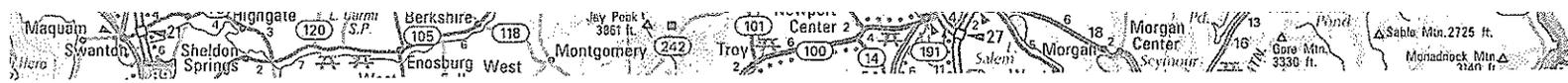


under the heading “strike while the iron is hot,” at the conclusion of the formal presentations at the pivotal meeting, the entire group of attendees participated in a strategy session while enthusiasm was at its maximum.

With respect to the second element, all the right people or stakeholders were invited to the table from the beginning. While all these entities and individuals have continued to be involved, a core group has self-selected to become the continuity or “glue” to continue partnership progress. This appears crucial as it avoided the risk of important partners feeling left out or that their participation was sought as an afterthought.

In October 2005, the partners organized a conference in Lincoln City with a variety of speakers and including ‘all the right people’ as noted. The format was to have formal presentations on the first day and then while everyone was engaged to hold a strategy and planning session involving this large group. In retrospect, the wisdom of this approach has become apparent. The planning process resulted in sustained participation by all invitees. It has been followed by regular meetings that have 12 to 18 participants with a core group of eight that provides continuity and cohesion of the entire process. So while the content of the conference was of value, the unique value was achieved by fortuitous timing related to readiness and the immediate engagement around planning of the entire group before enthusiasm was submerged by return by the participants to business as usual.

The value of applying for grants is viewed in a most interesting light. Although the early applications were not fruitful in terms of the desired outcome (dollars), the process of developing the applications produced learning, involvement, and motivation that could not have been achieved in other obvious ways.



Four success factors are identified in detail by partnership staff:

- **Ability to get funding:** Starting with grants (three in six years) for videoconferencing equipment gave our committee credibility to raise other funds. It enabled the committee to raise funds and garner in-kind services from both the local and regional health care community and the general community in order to present the Chronic Care Management Conference in 2005. Follow-on support from the hospitals and the county Health & Human Services Department makes it possible to use their meeting rooms and have meals supplied in many instances. Likewise, costs for copying, audiovisual support, and other supplies are often provided. This level of support makes it easier to have a steady stream of “professional” work accomplished, with only a minimum of clerical coordination done by the committee members. Also, having a small “slush fund” permits the committee to solve small needs immediately and speeds up project activity.
- **Clinician involvement:** Two practicing physicians, two practicing nurses, and a retired surgeon are part of the committee. Because the scope of the Chronic Care Model (CCM) requires communication and coordination between the community resources and clinicians, it has been essential to have this expertise as part of the committee.
- **The committee:** As is the case in many communities, there was a history of NOT working together among Lincoln County organizations. Once the two hospitals both chose Samaritan Health Services to manage them, a county health care mindset began to emerge. CHIP was the first health care project that focused on the whole county equally. Through CHIP, a large group of citizens and health care professionals came to a consensus on what areas of health care needed to be priorities for the county. Chronic Care was one of the priorities chosen. The eclectic membership of the committee provided linking capabilities. A nursing school in the Oregon Coast Community College (OCCC) provided another reason to cooperate to “grow our own” nurses, and a new OCCC campus includes locations at both south and north parts of the county. New and potential alliances enhanced the positive attitude of what the county was able to do.
- **Vision.** At the end of the Lincoln County CHIP health care needs assessment in 2003, chronic care was made a health care priority for the county. A further assessment of capabilities made clear that focusing on diabetes would yield a higher capacity for success than focusing on other conditions. A conference (October 2005) featured nationally known speakers as well as regional and local ones. One-half told what the county had done and could do; the other half told what was going on elsewhere and what was possible. A next-day session was scheduled (the “morning after” group) to create a committee to follow up on the interest in chronic care. The committee has been meeting monthly since and currently supports several active projects.

The shared understanding that *chronic care and prevention are priorities* sustains the partnership. This might be considered the “glue” that holds the group together. There is a sufficiently large contingent that believes the Chronic Care Model is the right way to get the job done. The caveat is dependency on funding each new step of the way. Also, loss of two or three of the key members of the committee could prove devastating.

THE FUTURE: “We plan to continue educating the community and gathering endorsements for the strategic plan as well as answering questions from the health care community and the community. We will plan to use many means to communicate: the web, newspapers, local meetings, etc. We’ll continue to build cross-institutional linkages. The Data Committee has started the plan to monitor progress with measurable goals. We must develop a succession plan and develop our strategy for growing the committee in an orderly fashion and spreading the information about the benefits of using the CCM to obtain a community with improved health and improved health care. These are our next biggest challenges.”

What aspects of this broad collaboration, use of proven models, and thoughtful planning process are applicable in your community? There seems to be an enormous amount of “food for thought” here!

Recommendations for other communities:

- *Establish meeting protocols early. Agree on how the areas of cost will be shared.*
- *Agree on how you will raise funding and who you want for partners.*
- *Don't be discouraged if it takes quite a while to make big changes; cooperation and communication have their own need for redundancy and require lots of time.*

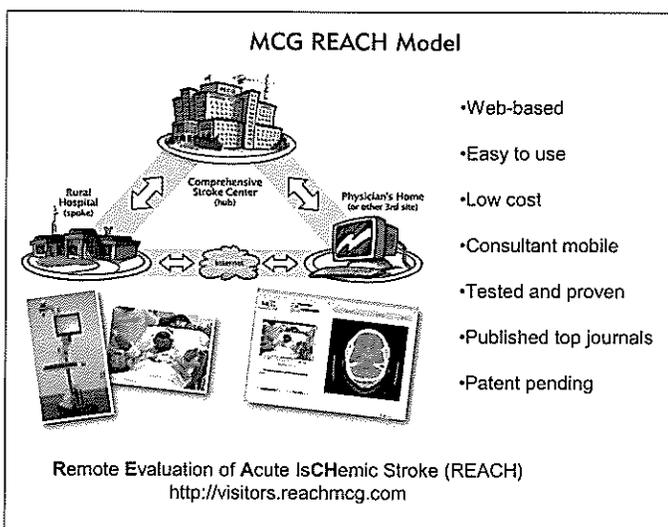
Georgia: Brains Saved in Rural America

Contact: David Hess MD, dhess@mail.mcg.edu

Message: Every rural region must develop the capacity to provide this level of care for rural stroke patients. Through negotiation with tertiary care facilities, it is the responsibility of rural providers to work together regionally to develop systems of care similar to the one described to achieve that end.

Learn more: Hess et al. "REACH; clinical feasibility of a rural telestroke network," *Stroke* vol. 36, September, 2005, pp 2018-2020. Wang et al. "Remote evaluation of acute ischemic stroke in rural community hospitals in Georgia," *Stroke* vol. 35, July 2004, pp. 1763-1768.

Remember that we said earlier that saving heart muscle depends on quick intervention? The same is true of stroke, a common problem for rural people. For the most common type of stroke, there is a window of time during which medication can be administered that can save brain! So again, the quality of care for stroke patients is inversely proportional to the time from onset of symptoms until appropriate treatment. In addition to the issue of speed, the appropriate diagnosis must be made because giving the drug when it is not indicated can result in a catastrophic outcome. In Augusta, Ga., at the Medical College of Georgia, Dr. David Hess and his colleagues in the Department of Neurology have developed a hub-and-spoke system of care for patients with stroke symptoms to get state-of-the-art care and prevent devastating results of a stroke. It is called the REACH (Remote Evaluation for Acute Ischemic Stroke) and is possible because of the application of existing technology. Here is how they are doing it.



A rural person develops symptoms of onset of a stroke, such as slurred speech or clumsiness in one hand. He or she immediately goes to the emergency room of their community Critical Access Hospital which is affiliated with the REACH program. A CT scan of the patient's head is initiated and the internet-based stroke network is accessed. The neurologist on call for the network (who can be almost anywhere if broadband is available) comes online. He or she is able to see the CT and the patient simultaneously on his or her laptop computer, along with relevant clinical data. Verbal communication in real time further enhances the ability of the neurologist to evaluate the patient remotely. A diagnosis is established, risk is assessed and a decision is made as to whether the individual patient should receive the drug to dissolve the clot causing the symptoms. If so, the patient-specific dose is calculated using the data built into the REACH software and is

administered. The patient recovers and is discharged on appropriate management to prevent recurrence and future devastating stroke.

What are the results over the past few years? Over 400 consults have been made using the system resulting in administration of the drug to 69 patients. No significant complications have occurred and results have been excellent in terms of "brain saved." The scoring system has been validated as accurate when done remotely using this technology. There are 13 hospitals participating in Georgia with the single hub and server at the Medical College. But there is more to the story!

The New York Commissioner of Health learned about the program and brought the payer community to the table, including Medicare and Medicaid. Also, the software has been improved and the program has become an enterprise (versus a project of an academic center) called "REACH MD Consult." New York is now starting a statewide system with five hubs with consulting neurologists on call.

Financial arrangements have been worked out that are advantageous to both the hub and the spoke facilities. Other states are exploring the feasibility of implementing the REACH program. The program has the capacity to become national in scope! Up-front costs are about \$25,000 for a hospital, and monthly

New York-REACH

- Pilot in 4-10 rural sites
- Expand to all rural sites (50?)
- Expand to entire state including urban and suburban areas
- Start with stroke and acute Neurological emergencies, then add STEMI, others
- Consultants are NY Neurologists and Stroke Specialists





maintenance is approximately \$2,800, so the business model is financially sustainable. Imaging capability and broadband internet connection are required. Note that the system is HIPAA-compliant. On the horizon is integration of the clinical system with electronic medical records where available which will greatly enhance clinical efficacy. Laptops require a gigabyte of RAM. Any commercially available webcam works with the system. Training is in two components: clinical (provided by the hub hospital) and technical (provided by the enterprise). Every installation is unique due to the technological hurdles encountered in our small rural hospitals.

Every rural person should have the opportunity to receive this level of care, and we can do this! What do you see in this example that you can apply in your setting by working with your rural regional colleagues and your referral center for neurology?

Washington: Competitors Collaborate for Rural Health Information Technology

Contact: Tom Fritz — Fritz@inhs.org

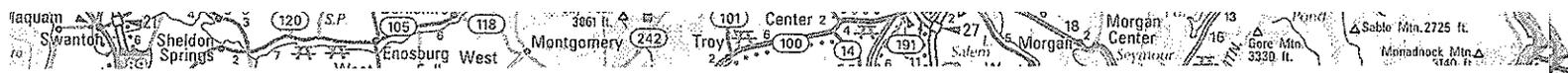
Message: Competing tertiary care systems can choose to work together in selected areas to their mutual benefit. Incorporating a rural focus within the collaboration provides win-win value for all involved! Rural organizations can impact relations with tertiary care institutions.

Learn more: <http://www.inhs.info/sub.aspx?id=13>

Inland Northwest Health Services (INHS) was created in 1994 when executives from Spokane's four major hospitals — Deaconess, Holy Family, Sacred Heart, and Valley — collaborated to merge competing business lines and form a new non-profit organization to oversee them. INHS now oversees several collaborative health care services. Tom Fritz has been the CEO of INHS since it was formed 12 years ago. INHS has three divisions (1) information technology, (2) helicopter emergency transport services, and (3) rehabilitation services (not addressed in this discussion). In their final year of separate, competitive operation the two helicopter services lost a total of \$6.5 million. Inland Northwest Health Services was formed as a not-for-profit joint venture to carry out functions in which the large Spokane hospitals were competing and losing money. Originally, the vision was for INHS to serve five Spokane hospitals; then small rural hospitals asked to participate. The organization now serves 38 hospitals from Sandpoint Idaho to the east to Shelton in southwestern Washington. Also included are a few hospitals in Oregon and in northern California. The original technology goal was integration. It evolved into a large network with a number of outstanding features.

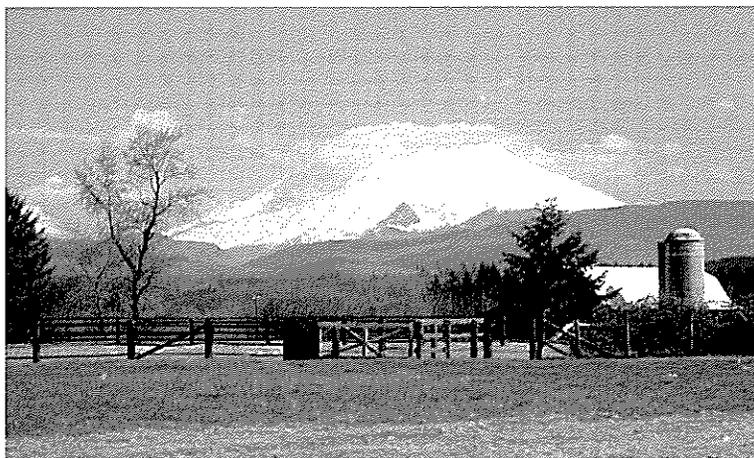
First, this is a MediTech system with standard platforms for applications. INHS has developed a user-friendly format and is the premier integrated site for MediTech. It is very affordable, as IT goes, in part due to the leverage in negotiating with vendors because of the size of the enterprise. Updates are automatic system wide! An exceptional feature is the Common Master Patient Index which includes over two million unduplicated individuals. Thirty-eight clinics, 280 providers and 1,400 users can access these records (in a HIPAA-compliant manner). The Community Digital Image Store serves the region. INHS spends 10 percent less than the national industry standard on IT. Yet 10 of their participating hospitals are in the top 100 "wired hospitals" in the country. INHS subsidizes the participation of (and services received by) 13 of the smaller hospitals to the tune of \$1.8 million/year. Physicians requested support in managing their data, so there is now a new server farm with an Application Service Provider model (GE is the vendor) so that 40 percent of physicians now participate in the private practice support service. It is noted that this percentage is growing and that non-adopters are at the table where growth of this service is being discussed.

INHS tried various strategies to increase physician participation. The big winner for them was providing clinicians with portable handheld units, and making lab and X-ray reports available on these. All the participating hospitals are now "wireless capable." In some cases, INHS has had to erect transmission towers to relay data to hospitals and physicians' homes.



Individual hospitals do occasionally decide to go outside the network for particular IT services. Sooner or later, in almost all cases, these episodes wind up costing INHS significant time and energy to correct malfunctions attributable to unilateral modifications. In addition to these mistakes, vendors offering more than they can deliver represent another challenge.

INHS has not had difficulty finding qualified staff members who now number over 700. INHS is now nationally known and an attractive employer. It may also be significant that Hewlett –Packard's computer division had a sizable operation in Spokane in the 1980s.



Generating bills for clinical services is an important part of the business. Currently developing lines of business include case management for Workers Comp and patient education for diabetics and new parents.

Return on investment for the parent organizations is realized by increased utilization by physicians and decreased direct costs in getting information to them. Physicians save time and increase revenue by participation so are more likely to choose the network facilities.

A Visit to Lincoln Hospital, Davenport, WA

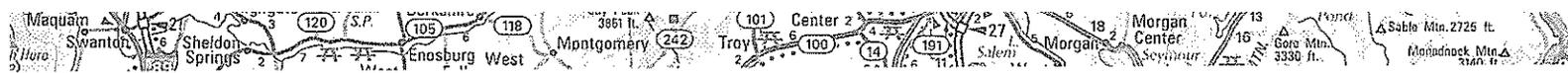
Lincoln Hospital is a Critical Access Hospital led by CEO Tom Martin. They are leaders in the western Washington quality network and are one of the national models in this particular arena. This is one of 13 hospitals getting tele-mediated automated inpatient pharmacy services from Sacred Heart Hospital in Spokane, including tele-supervised refilling of the machines. The hospital is well maintained, but there is no borrowing capacity under state laws governing municipal borrowing to replace the facility. Lack of access to capital is a factor in the hospital's decision to secure state-of-the-art CT scanning equipment services in the hospital from an outside contractor on a volume dependent charge ranging from \$250/scan to as low as \$150 per scan. The arrangement seems to be working well.

The ER treatment room is now equipped with "on demand" interactive tele-consultation equipment. Emergency Room docs in Spokane at Deaconess and Sacred Heart Hospitals are responsible for answering tele-consultations immediately on demand. This is an INHS service under the functional rubric that also supports the Spokane helicopter medevac system. The conference participant in Spokane can direct the ceiling mounted camera to see, as well as be told about, the clinical status of the patient. Sound quality is excellent. The Davenport Hospital has found the INHS owner hospitals to be cooperative in negotiating clinical protocols, starting emergency intervention procedures immediately on presentation by the patient at the rural hospital. (It is of interest to note that as a part of this conversation, we discussed the Minneapolis program previously described and now they are working together to further improve care for cardiac patients in the region.)

All things considered, the administrative leadership of the hospital feels that INHS and the Rural Hospital Quality Network have been instrumental in improving the quality of care in Davenport and are synergistic. They note that sometimes the internal needs of the large hospitals which own INHS take precedence over the needs of small rural providers. The small hospitals HAVE lost the ability to use competition between the two large hospitals to negotiate for better local services, but they feel that the cooperative INHS arrangement is generally serving small rural hospitals well.

Another field trip: Pullman and Colfax, WA

The hospital in Pullman has recently implemented electronic inpatient medical records. The process has not been smooth or easy. A major incentive for physicians has been the ability to access the records including recent lab, imaging reports and nursing notes, and work on their charts, from home or office. The Pullman experience has been that physician willingness to adapt to the new system does not correlate with age but rather with individual style or personality. An emergency physician whom we interviewed briefly was



mildly supportive of the electronic record but seemed less than enthusiastic, mentioning occasional problems getting quiet access to a terminal. Our guide mentioned an ongoing effort to make the system more user-friendly.

The Colfax hospital signed on with INHS for financial services in 1995, one of the first rural hospitals to do so. From the beginning of the relationship, service by INHS has been excellent. The hospital soon added lab reporting and pharmacy recording.

The Colfax clinic is a private group practice housed in a building adjoining and rented from the hospital. Roughly a decade after the hospital began buying electronic record service from INHS, the clinic group decided to go to an electronic outpatient record so the doctors could have access to records at home. Some difficulties in implementing the electronic record have been encountered. Some clinicians seem able to use the electronic record in “real time” and finish their work, including their records, within normal hours. At the other extreme is a physician who is over 700 encounters behind. The INHS staff had not heard this before and committed to work with the clinic staff to make the record process more user-friendly and help the clinic personnel through these difficulties.

Factors in the INHS success include:

- INHS reputation for integrity in managing data, scrupulously avoiding any opportunity for the owning/controlling hospitals to get insights into other participants’ data. “We are like the post office...in handling confidential data”
- Using only structured, formatted data for analyses
- Avoiding aggressive behavior and holding to the general administrative philosophy of collaboration to overcome the small facility fear of the large organization
- Avoiding any strategy that pulls patients out of rural communities into the large owner hospitals
- Expertise in interoperability among component systems, and sufficient size to induce software companies to cooperate in resolving interoperability issues
- Complementarity with the Rural Hospital Quality Network Group services
- Getting dependable clinical information to physicians is seen as a responsibility
- Effectively capturing and processing charges
- Shared vision of connectivity and data exchange
- National recognition
- Improved outcomes
- Demonstrable return on investment

Lessons learned include: the rural solution is a collaboration and cannot be achieved in a stand-alone mode; rural coalitions can push tertiary care organizations to collaborate and improve performance (they can “force gorillas to behave”).

What features of this experience and of the relationship between these competitors and the rural facilities can be applied in your service area?

Editorial thoughts:

The large Spokane hospitals are saving money by using INHS instead of their own competing services. They are also subsidizing services received by small rural hospitals either directly or by letting them ride along on necessary capital investments. Rationale for these altruistic behaviors may include: it's the right thing to do, it expands their referral perimeter, they avoid antitrust issues for their joint venture by broadly extending the benefit, and national recognition for INHS adds value. Does the disappearance of competition in IT and helicopter services between the large urban hospitals strengthen or weaken the position of smaller hospitals in the region? How can NRHA help rural hospitals bargain with referral centers? Should NRHA be trying to come up with ways to encourage the formation of regional resource organizations like INHS in addition to focusing on the behavior of the small rural providers?





Vermont: State Government Innovates Rural Care

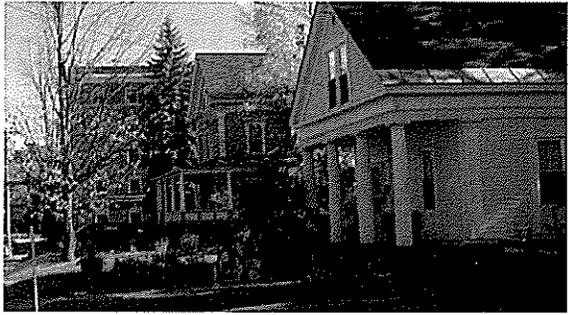
Contact: Denis Barton — DBarton@vdh.state.vt.us; Laural Ruggles — L.Ruggles@nvrh.org; Dr. Mark Novotny — mnn@phin.org

Message: Leadership at the state government level can create extraordinary opportunity for improving rural health and access to resources. We must all use our influence in our states to encourage legislators and the executive branch to be proactive for health as in this example.

Learn more: www.healthvermont.gov

What might a blueprint for health look like? You only have to go to Vermont to find out. This extraordinary program was conceptualized by a former commissioner of health, adopted by the governor, ensconced in legislation by the state legislature and is being implemented under the leadership of the Department of Health. An elaborate strategic plan has been written, funding has been appropriated by the legislature and two pilot projects are well under way. First note that the blueprint is designed to be consistent with the Robert Wood Johnson ‘Improving Chronic Illness Care’ model and the Institute for Healthcare Improvement (Don Berwick et. al.) programs, which represent the best current thinking in health care. Let us look at this more closely and determine whether there are lessons for all of us here.

There are five components of the blueprint. These are *practice change, information technology, implementation of the chronic care model, self management*, and what is referred to as system change which primarily involves payment policies. The bulk of resources at the current time are devoted to information technology and provider practice change. The entire program constitutes and implements a public policy for promoting health for all 600,000 citizens of Vermont. It is important to recognize that due to the geography and demography of Vermont, this is effectively a rural initiative; there are no large urban centers in the state. From a financing perspective, all commercial insurers and Medicaid participate in the blueprint project. Sadly, Medicare does not. This is particularly important since payer policies must be consistent and federal influence is required. Only 11 percent of Vermonters are uninsured, and the legislature has passed legislation called ‘Catamount’ which is intended to address this issue and include the “last 10 percent” so as to achieve universal inclusion in health care financial access.

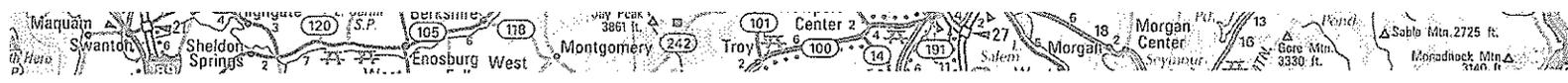


In addition to the sheer magnitude and scope of the program, the most interesting features of the blueprint may be the community strategy of implementation and the adaptation of the care model to a public health application. We will address these as we present the two pilot communities. State funding is helping the Health Information Technology (HIT) initiative get off the ground. Vendor partners are Orion and GE. Their Regional Health Information Organization (in which providers in a region work together to ensure interoperability of information systems so information can be shared appropriately) is in the early stages of development. The provider practice change workgroup includes physicians, managers, and advocates and is developing and overseeing specific practice guidelines. It works closely with the IT workgroup. The ‘systems’ group is addressing issues such as care management and physician compensation with the objective of ensuring that the program is financially sustainable. Finding ways to keep the pharmaceutical companies engaged in the discussion is a challenge.

The blueprint pushes the envelope of health care improvement in every respect. No one else is addressing a statewide chronic disease management program. Factors enabling Vermont to model such an ambitious program include:

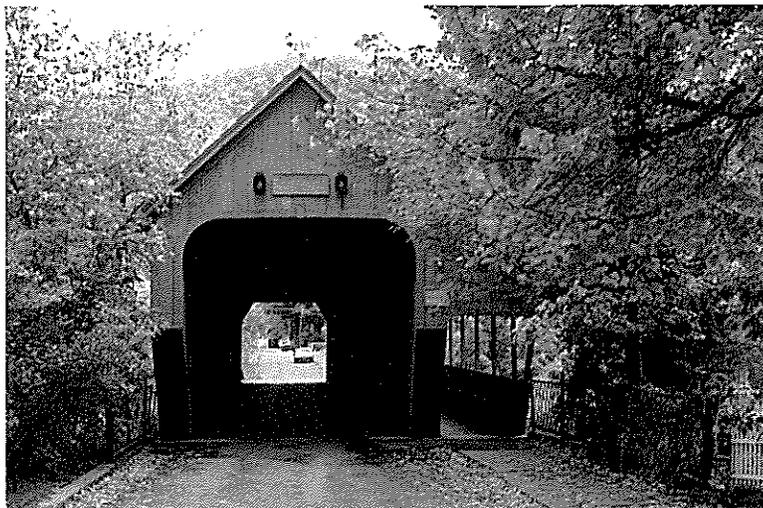
- Political will
- Good will (genuine commitment to doing the right thing)
- Forward thinking
- Small scale (a state government with a population no larger than many counties)
- “Everybody knows everybody” (enhancing development of trust)

The community implementation through community/state partnerships is active in two pilot communities. Vermont is divided into hospital districts and implementation is by district. The two pilot sites are in the Southwest (Bennington) and Northeast (St. Johnsbury) districts. We will briefly visit both.



In Bennington, we find the Southwestern Vermont Medical Center, a 99-bed general hospital serving Southwestern Vermont. It is a central resource for the entire blueprint implementation in the community. Along with the physician organization and the community coalition (Southwestern Vermont Health Care), strong leadership has emerged in both the community and health care sectors toward developing effective, efficient patient-centered acute and preventive care in the context of building a healthy community. The blueprint came on the scene in a setting where prior experience with a diabetes collaborative and an effective physician/hospital organization had prepared the participants for further development of a health care system.

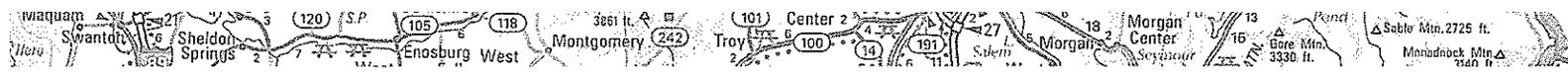
Dr. Novotny is the chief medical officer and major leader of improving care and practice. He chairs the provider practice group at the state level. This is an example of the intense integration between community and state. He believes one secret of the success enjoyed by the southwest pilot has been the state's contribution of resources to enable practice change and support information technology implementation. Training has been taken directly to the physicians ("collaborative on wheels") and a formal business agreement with physicians built around achieving blueprint goals has been implemented. Physicians are now "hooked" on using data in decision making! Effective communication and evaluation (assisted by the Agency for Healthcare Research and Quality) are of particular interest to the physician community. A difficult transition for physicians is proving to be changing practice to incorporate true self-management in which patients participate in decision making and choices of options rather than following "doctor's orders." Dr. Novotny provides extraordinary leadership and vision and provides the "glue" for effectiveness of this collaborative effort. He also notes the necessity of a full-time manager of the program.



Southwestern Vermont Health Care provides the community component of the blueprint by developing the community assessment, physical activity and tobacco prevention programs, incentives for healthy choices, and nutrition programs. Disease conditions are addressed through the development of chronic care management programs starting with diabetes and moving forward to other disease states (hypertension, hyperlipidemia and cardiovascular disease, asthma, chronic obstructive lung disease, congestive heart failure, and depression). Clearly activity is pervasive, participation is broad, optimism is high, and progress is real in the Southwest. This pilot program gives reason to expect great things from the Vermont Blueprint for Health. Now let us travel across the state to the Northeast and the extraordinarily beautiful rural community St. Johnsbury.

Here we find a Critical Access Hospital (Northeastern Vermont Regional Hospital), a large community health center (Northern Counties Health Care, Inc.), the local AHEC, the health department, and several community partners actively working together on their pilot of the blueprint. Coalitions and networking are viewed as the keys to success. The community had prior experience with a diabetes collaborative which rolled directly into the blueprint process. They are using an electronic medical record and are beginning to successfully work with data (collecting, distributing, using). The IT director for the hospital is a very active member of the blueprint information technology group. They are ready to incorporate other disease processes in addition to diabetes. Measurement of results and processes in diabetes care are very positive.

The community workgroup has developed broad support (business, insurers, schools, local government, health department leadership) for the "Fit and Healthy" community program. They focus on activating existing groups around health rather than creating new groups and new meetings. They feel that they are truly able to focus on the common good. Their goals for the current year are to increase by 5 percent the proportion of the community population who are actively exercising and eating a healthy diet. They maintain a web site, provide education programs and written information, promote wellness events, provide media information and advocacy with local government. They have influenced zoning decisions relating to the "built environment."



These observations establish that the Vermont Blueprint for Health is a bold plan that intends to make comprehensive and dramatic improvements in health and health care. What are some success factors demonstrated thus far in the two pilots?

- Coalitions, networking
- Pilot programs to learn during implementation
- Prior experience in collaboratives
- State support and leadership
- Genuinely collegial relationship between DOH staff and community leadership
- Full-time local program manager
- Beneficial program for all partners including physician practices
- Leadership
- Physician ownership of relevant program features

What aspects of the local programs could be adapted in your service area? How could you advocate with your state leaders to develop a progressive statewide program patterned after the Vermont experiment?

Montana: All in the Family: Large System Includes Rural Service Area

Contact: Kristianne B. Wilson — Kristianne@billingsclinic.org; Dr. Bill George — bgeorge2@msn.com

Message: Organizational self-perception as a regional entity rather than a central organization with rural spokes makes a dramatic positive difference in the rural/urban relationship.

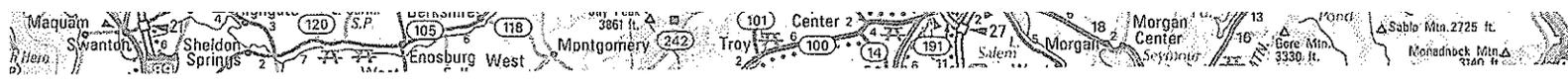
Learn more: www.billingsclinic.org

“This is not a central organization with spokes; it is a truly regional organization.” (Kristianne Wilson). This quote captures one of the key factors that makes Billings Clinic, headquartered in Billings, Mont., so unique. Other factors include the magnitude and scope of its progressive operations and aspirations. It has always considered itself to be a regional organization with a 250- mile radius service area, and this self-concept did not disappear even after the Medical Foundation, which is Billings Clinic, absorbed the tertiary care hospital with which it was affiliated. Hence the ‘family’ connotation referred to in the title above. This article makes no pretense of capturing all the facets of this extraordinary organization. For that I refer you to the web site listed at the beginning of this vignette. We will focus on two aspects of particular importance: the affiliates’ function and the health information technology enterprise. These exemplify an entirely cerebral approach to keeping its extensive rural service area in step with its progress in every area. So who is Billings Clinic? What characterizes the affiliate operation and how are they approaching information technology?

Billings Clinic is a medical foundation that runs a hospital and provides extensive physician services, continuing care, research, and regional affiliations as its operating divisions. Eight support functions include the information services operation. There are 2,900 employees, 272 licensed inpatient beds and 759,000 clinic encounters annually. The heart of Billings Clinic is the large multi-specialty group practice with over 200 physicians. Their mission includes health care, research, and education and their vision is to “be recognized as the health care organization providing the best clinical quality, patient safety, and service experience in the nation.” Their key strategies include innovation and information system solutions. They are the recipients of numerous awards for quality and excellence. Clearly a large organization with lofty goals!

Their translational research program is an integral organizational component. It involves the rural affiliates and benefits all rural health providers. It is closely connected to the quality program and addresses medication errors and reconciliation among numerous other areas. Rural participation is not about referrals but about enabling success. Benefits to the rural organization include contribution of technology, and as trust builds rural interest in participation grows.





Billings is deeply engaged with the Eastern Montana Telehealth Network (contact Thelma McCloskey — tmcclosky@emtn.org for information). Other relevant rural involvement includes the Montana Performance Improvement Network and the CMS physician group practice demonstration project.

As noted, Billings Clinic has a long history of connecting and partnering with rural communities in the service area. Over the past 10 years, the clinic has increased its attention to supporting rural partners more directly through management and regulatory assistance. This gave rise to the affiliate model and the regional affiliates management area, led full-time by a young, experienced, and dynamic administrator. This model delivers value to all parties. As rural quality and performance improve, system-wide measures improve as does the financial performance of all components of the 'family.' All aspects of strategic thinking within the organization are based on the assumption that the organization is a regional entity rather than a hub-and-spoke operation. The nature of each relationship between the organization and a specific rural component is tailored to meet the needs and interests of the community provider. There is no single ("one size fits all") approach to working with rural affiliates. For example, in Red Lodge, Mont., Billings Clinic is facilitating a replacement facility for the Critical Access Hospital (CAH) in the community while operating the outpatient facility as an affiliated clinic, an arrangement that is working well and is satisfactory to all concerned. It exemplifies the flexibility on the organizational approach and sustains high quality health services for this beautiful community just north of Yellowstone Park (contact Dr. George for information).

So how does the information technology component fit into this picture? The information system is viewed as a tactic — enabling technology. The basic strategy is based in quality of care, and regional growth through collaboration is the interest. When Critical Access Hospitals came online and struggled with financial reporting, it was possible for Billings to provide financial IT support at a vastly reduced cost ("pennies on the dollar") while expanding the relationships into other financial and clinical services. Assistance in compliance issues, group purchasing, and liability insurance further enabled the CAH to thrive, again benefiting all aspects of the system. Integration of clinical systems is growing apace, laboratory being the most advanced. Integration will enable disease management to be successfully implemented and quality to be dramatically improved. In fact, the system development approach with the physician community is based on an appeal for quality improvement rather than practice efficiency.

Teleradiology and PACS have been operational for several years and Billings is moving toward a fully digital system. The Cerner PowerChart has been chosen as the electronic medical record. It is extraordinarily complete and flexible, incorporating both physician and patient portals. Montana has a fledgling Regional Health Information Organization in which Billings is an active participant.

We could go on. A book could be written on the subject of the rural operations of the Billings Clinic. But that is not our purpose, so I again refer you to the web site noted at the beginning of this vignette. What are some of the success factors for the exemplary performance of this organization?

- Communication
- Use of data for improvement
- Responsiveness to rural partner's needs
- Supporting rural ownership of technology and processes
- Commitment to sustaining the rural infrastructure
- Technology as a core part of the affiliate program
- Foundation model increases focus on service
- Organizational image as a regional whole rather than hub and spokes
- Individualization of relationship with partners
- Win-win results such as demonstrably decreasing bypass as a result of partnering
- Recognition of trust as the basis for partnering relationships
- Bringing real value to the partnerships
- Understanding that "sharing health care space" results in stewardship of finite health care resources

Perhaps the bottom line is that small rural health entities must collaborate with large health entities in an environment of earned mutual trust while protecting the rural infrastructure. Stand-alone 'rugged individualism' does not represent a sustainable strategy. What do you find in this story that will be useful in developing such a partnering approach in your service area? Are you aware of other foundation model organizations that might increase their effectiveness by learning from Billings Clinic?

Food for further thinking: Suppose there is interest in increasing local coordination of health care including public health in all its ramifications, the provider community, etc. What is the impact of having the rural hospital, or hospital and clinics, tightly integrated with a large regional organization (even an enlightened one)? Perhaps this is a variation on the discussion of horizontal vs. vertical integration.

Mississippi: Rural Emergencies Get State-of-the-Art Care

Contact: Robert Galli MD — rgalli@emergmed.umsmmed.edu

Message: Through creative partnerships between academic health sciences centers and rural emergency departments, combined with appropriate application of existing technology, optimal care for rural emergency room patients is readily available. Regional coalitions of rural providers must negotiate with the tertiary care centers with whom they work to assure that the rural people in the service area have access to this level of care.

Learn more: Galli et al. "TelEmergency: A novel system for delivering emergency care to rural hospital," (publication in *Annals of Emergency Medicine* pending) Henderson, Kristi. "TelEmergency: Distance emergency care in rural emergency departments using nurse practitioners," *Journal of Emergency Nursing*, vol. 32, October 2006, pp 383-393.

What happens when a critically injured victim of a severe automobile accident is brought to one of our Critical Access Hospital (CAH) emergency rooms? As you know, the answer varies greatly depending on many factors which we will not enumerate here. But "what if" that patient entered a CAH that was linked directly to the emergency room of a tertiary care center where emergency physicians receive their training, and the provider in the rural setting was specifically trained to work with the specialist there to manage serious emergencies? In Mississippi, this is reality, not a "what if." Patients in the Level 4 CAH emergency room receive quality of care equivalent to those in the Level 1 trauma center. How does this work? What are the results? How is it financed?

First, it is important to realize that there would be a need for 20,000 additional emergency physicians to staff all the nation's emergency rooms with such highly trained specialists. We all recognize that this is neither feasible nor even desirable, as they would be seriously underutilized in many low-volume settings. Dr. Galli and his colleagues found a better and much more realistic way to meet the need using technology and training of available health professionals. With grant funding from a state foundation and the clout of the Dean of the University of Mississippi Medical School (in part to help iron out licensure issues between the Boards of Medicine and Nursing), a pilot program was designed to link the emergency room at the medical center with the emergency rooms at Critical Access Hospitals using telemedicine technology. The terminal at the "mother ship" is staffed full time. In the CAH, there is a nurse practitioner hired by the local hospital and thoroughly trained by the medical center to manage emergency cases and to work collaboratively with the specialist consultant at the medical center. This capability includes the full spectrum of procedures essential for stabilizing a critically ill or injured patient such as chest tubes, abdominal taps, etc.

Now with three years of experience, 40,000 patients have been managed using this system. A high level of acceptance by all parties has been demonstrated. Better yet, excellent clinical effectiveness and efficiency have also been realized. Ten hospitals are participating and three other are ready to join. Administrators value the quality, safety, stability, and access inherent in the arrangement. The cost to the local hospital is about \$25 per hour to use the system, and it costs about \$50,000 to set up three rooms in the CAH emergency department. The system pays for itself. A major reason for this pleasant fact is that the billing department at the medical center performs the coding and billing and captures much more revenue than the CAHs had previously experienced. It should be noted that the model of practice is specifically adapted and individualized to each unique setting.

Level 4 CAH Emergency Room

How do patients feel about this approach?

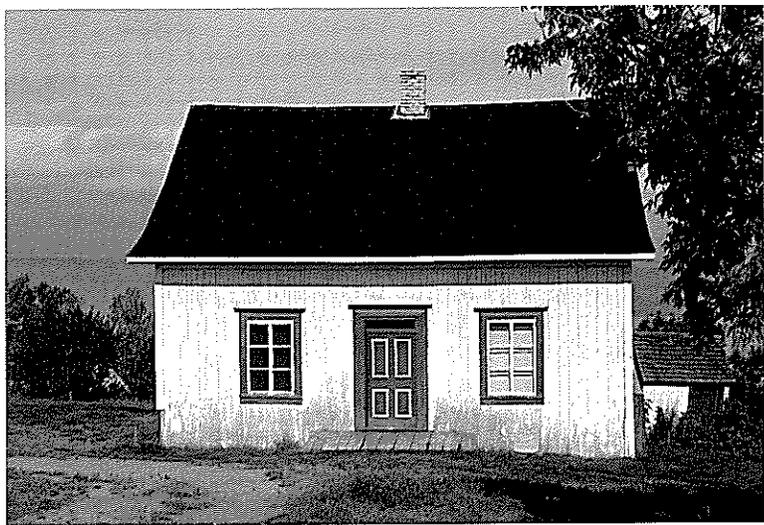
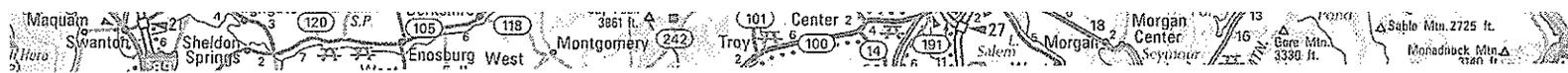
- 94% were comfortable or very comfortable with the system
- 87% felt that their care was as good or better than with a physician alone, and 86% rated their care as good or excellent
- 91% said they are **more** likely to come back to the rural ED because of the system!

How do hospital administrators feel about it?

- 100% believe care is better or the same
- 87% believe volume has increased and that costs are lower or equal to prior arrangements
- 87% have an overall good or excellent opinion of the system

How about reimbursement?

- Average charges with local coding: \$139.92
- Average charges with system coding: \$215.20
- For an average increase of about 54%!

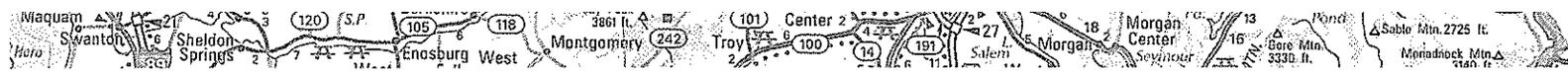


The training of the nurse practitioner is of particular importance and is a critical success factor of the program. A lengthy discussion of training and practice with nurse practitioner Mickey Aldridge revealed a high level of competence and confidence in his abilities and the system. A rigorous seven-month academic course is followed by approximately 150 hours of supervised emergency department experience, maintaining a log to ensure that required competencies are achieved. There are quarterly updates to ensure competence is maintained. Entry requirements (see reference 2) and standards of practice are rigorously maintained. Guidelines as to the types of cases that can be managed by the nurse practitioner alone (54%), that require consultation and that require joint management for stabilization and transport are clearly

spelled out. Forty-six percent of patients require consultation. Seventy-six percent of patients are discharged home, 15% are admitted to the local hospital, and 8% are transported to a referral hospital. The facility to which the patient is transferred is a local decision. There is no requirement to use the medical center, and this accounts in part for the high level of acceptance of the program.

This program is remarkably dynamic. It has the capacity to expand to serve up to 30 sites. Emergency physicians who are unable physically to tolerate the rigors of the emergency room could be a resource for staffing the base consultant unit. Developing a Division of Telemedicine similar to the Arizona model and developing a clinic telemedicine schedule is envisioned. Work will continue to develop regulatory oversight at the federal level in order to obviate the problems associated with non-uniform state licensure issues. Expanding the uses and capability of the data repository as a state resource is a goal. The potential for this program to improve health care for Mississippi and the nation has barely been tapped. Broad national involvement and visionary leaders and champions will accelerate realization of this potential.

This capability properly should be a universal part of the rural health care armamentarium! Remember this: one of the principle reasons that rural people consistently give for their desire to maintain hospital services in their community is *access to high quality emergency services*. Clearly this model is an option for emergency care for rural people that can be adapted and implemented in different settings across the nation. What do you see in this program that can be applied in your service area, working with your colleagues and referral centers to provide this level of care for that critical accident victim we mentioned?



Michigan: Regional Access Coalition Reforms Rural Health Care

Contacts: Stacie Kucera — skucera@uphealthaccess.org; Angela Emge — aemge@msu.edu (for the Michigan Center for Rural Health)

Message: Communities can work together and influence providers to join in meeting needs of the rural underserved.

Learn more: www.uphealthaccess.org, www.com.msu.edu/micrh and www.cjonline.net (Communities Joined in Action)

Michigan is blessed by having a highly effective State Office of Rural Health. A great example of their effectiveness is the Michigan Critical Access Hospital Quality Network (MICAHQN). See the sidebar for more information on this powerfully effective award-winning organization. Their effective application of resources and enthusiasm for the rural health mission are major factors in the Michigan environment of energy, creativity, and innovation in rural health. Many of the Critical Access Hospitals (CAHs) in Michigan are in the Upper Peninsula (UP), which is a large and truly rural part of the state. These CAHs are part of the UP Health Access Coalition (UPHAC).

Project Access is a nationwide phenomenon with coalitions in several states. These coalitions rely heavily on organized voluntarism to provide access to care for uninsured poor people by leveraging resources and organizing existing capacity. Their activities include:

- Outreach and enrollment
- Finding medical homes with coordinated services
- Access to prescription medications
- Chronic disease management
- Organized donated clinical care
- Coverage for low-wage workers
- Prevention and wellness
- Stable and adequate safety net of care providers

UPHAC is a "Project Access." It is remarkable because of its size, success, and vision. Its mission is to facilitate access to quality health care with dignity for residents of the UP. It started in 2001 in Marquette and now covers the entire UP from six hubs. It is a partnership which includes over 400 physicians, 13 of the 15 hospitals in the UP, six health departments, 15 county governments, local pharmacies, and leaders in human and social services, business, communities and the state. Patient enrollment, inaugurated in Marquette in 2001, is now under way in the sixth hub as of September 2006. There are over 15,000 uninsured persons in the UP below 200 percent of the Federal Poverty Level, and their goal is to serve them all. They are nearing the first third of that goal. It is worthy of note that 84 percent of the patients served have some form of employment. The value of care provided by the coalition during the past year is over \$2 million, 85 percent of which is donated (the other 15 percent is purchased).

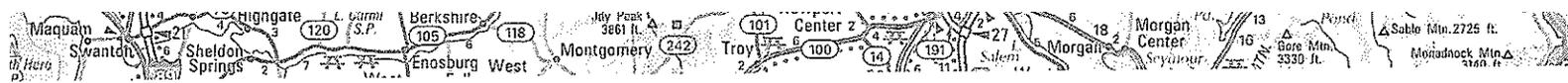
Outcomes demonstrated in other Project Access sites and fully expected to be demonstrable in the UP as the project progresses include:

- Double the number of uninsured with a medical home
- Reduce charity care
- Reduce emergency room utilization and inpatient costs
- Improve health status of the uninsured population

The work includes gathering data, developing a passion and commitment for the effort, identifying partners, and convening around the issue of access to care. But primarily it involves face-to-face contact and persuasion. Success factors include:

- Focus on the mission
- Collaboration within communities
- Regional collaboration
- Determination and passion
- Innovation

The Michigan Critical Hospital Quality Network is active across the state including the members of the UPHAC. It has been growing for several years to gather quality data and provide feedback to members for improving performance. All this is clearly synergistic with the work of UPHAC. It now uses a web-based system for reporting and receiving relevant feedback in conjunction with the hospital association. It has won the Governor's Award for improving health care quality. There is a strong focus on building an institutional culture for safety and quality in member hospitals. There are 34 CAHs in Michigan, and all are members of the quality network. It truly is a model for State Offices of Rural Health and CAHs across the nation. For more information, go to the Michigan Center for Rural Health web site, click on CAH Program, then go to Quality Network.



Challenges abound and include improving partnering skills, improving evaluation, and strategizing to gain 100 percent access. Clearly insurance status is not the only barrier to access, but addressing the financial aspect of the problem is of incalculable value and represents an obvious place to start in improving access in our communities and our nation. Projected areas of increasing emphasis by UPHAC include quality of care, chronic disease management, prevention, and wellness.

We all are aware of poverty and un- or underinsured status in our service areas. Clearly this creates an almost insurmountable barrier to improving health status of the population of our service areas. As you look at the extraordinary effort and success in the UP, what are the

possibilities that you see to apply these principles of increasing access to care in your community? What benefits might accrue individually, collectively, and to the health care provider community?

West Virginia: Quality Improvement Organization — Partner for Safety

Contact: Patricia Ruddick — pruddick@wvmi.org, and Kim Izold — Kizold@ighops.org

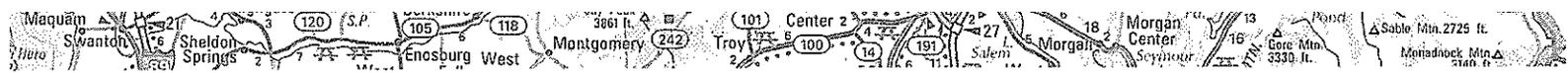
Message: Quality Improvement Organizations (QIOs) can be and often are invaluable partners for rural health care providers in improving care, quality, and safety. Every rural provider should make it a point to be very good friends with their QIO, and should expect significant support in improving care.

Learn more: www.wvmi.org

North of Charleston, W.Va., in the heart of Central Appalachia, we find Jackson General, a 50-bed hospital. This exceptional rural hospital actively participates in a patient safety project (as do all the rural hospitals in West Virginia). It is a leading member of a nine-hospital collaborative for falls prevention and has noted an 80 percent reduction in falls since implementing root cause analysis and prevention programs. Jackson General is involved in teaching other facilities and participates in national patient safety conferences. There is strong support by CEO Sandra Elza and extraordinary effectiveness by quality officer Kim Izold. They participate in the collaborative's standards-based leadership development program where skills are taught and modeled, policies and procedures are shared, and mock surveys are performed. The hospital staff fully buys into the culture of safety and has reflected strong support for the program based on a formal opinion survey. The facility is intimately involved with the community and enjoys strong support under the charismatic and effective leadership of CEO Elza. They are nationally recognized in part because of the national role played by quality officer Izold, a 'gold star' shared by only a few of our small rural hospitals. How did all this come about? To answer this very important question, and in addition to the exceptional local leadership noted above, let us change our track completely and examine the work of the West Virginia Quality Improvement Organization, because their philosophy and activities have been highly instrumental in this example of a rural success.

The following paragraphs, taken from the West Virginia Medical Institute (WVMI) web site noted at the beginning of this vignette, will give you an excellent sense of the nature and work of the WVMI, the Quality Improvement Organization for West Virginia, Pennsylvania and Delaware.

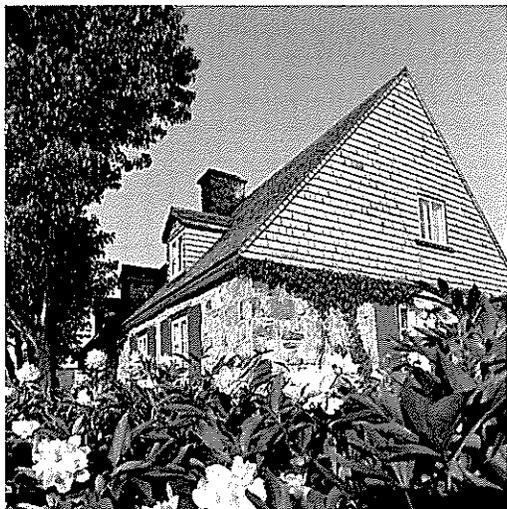
The West Virginia Medical Institute's patient safety project, "Partnering to Improve Patient Safety in Rural West Virginia," was one of four in the nation featured at a June 2005 conference sponsored by the Agency for Healthcare Research and Quality (AHRQ) in Washington, D.C. WVMI's project was chosen from among more than 100 recipients who also received a Transforming Healthcare Quality Through Information Technology Grant from the AHRQ.



WVMI in October 2004 received more than \$800,000 in federal funding as part of a \$1.7 million matching grant to use technology to improve patient safety in the state. The other grant partners are the West Virginia Hospital Association, the West Virginia State Office of Rural Health, Verizon, and Quantros Inc.

Under the grant, the partners provide rural hospitals with software and technology to record medical errors and “near misses” (errors that could have happened but were averted). For their efforts, hospitals receive educational opportunities, reports of system-wide “near misses” and opportunities to share lessons learned and improvements that lead to better, safer health care.

The grant was used to expand the project, which is in its third year of funding. Twenty-nine hospitals voluntarily provide WVMI with data on medical errors, and more than 33,000 events have been reported. WVMI’s leaders began laying the groundwork for the project in 2001 after the Institute of Medicine released the landmark report *To Err is Human*.



The West Virginia Medical Institute (WVMI) is a nonprofit organization that provides services designed to improve health and maximize the quality of health care nationally and regionally. WVMI strives to help hospitals, medical centers, and health care delivery programs provide the highest quality of care to consumers by improving processes and efficiency.

Governed by a board of directors consisting of physicians, hospital representatives, and consumers, WVMI implements health care improvement projects with the Centers for Medicare & Medicaid Services, the Department of Veterans Affairs, state Medicaid programs, private payers, and nonprofit organizations, including the American College of Cardiology. WVMI’s projects have a positive impact on Medicare consumers in three states, U.S. military veterans, Medicaid recipients, and enrollees in private health plans.

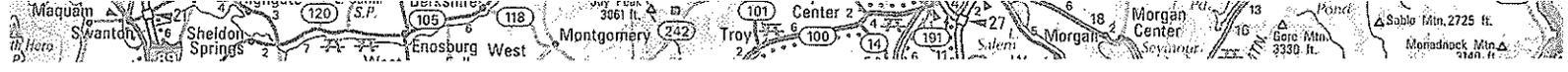
WVMI is currently leading efforts in West Virginia to promote the adoption of electronic health records and the establishment of health information networks.”

To summarize, this patient safety effort was conceptualized as a response to the IOM publication in 1999, *To Err Is Human*. It is supported, in part, by grant funding from AHRQ. The implementation began immediately and consisted of two focal areas: patient safety and health information technology. The rural partners include the West Virginia State Office of Rural Health, the Hospital Association, the individual rural hospitals, Verizon (T1 lines and technology grants), and Quantros, Inc. (software). They have achieved legislative action to protect patient safety data under peer review laws and to protect members of safety committees from liability associated with committee work. They provide the web-based reporting tool free of charge. WVMI staff work with the data to feed it back in a fully useful and comprehensible form. The hospital association provides technical assistance to the hospitals as they develop their safety programs. The QIO and hospital association work with the hospitals to develop collaboratives for patient safety including extensive education programs. Recognizing and addressing adverse drug events and developing a collaborative to prevent falls are two major current projects. Part of the education program is formally teaching root cause analysis which is being implemented in the hospitals. They hold an annual patient safety conference. Results of all these activities demonstrate great improvement in reporting with dramatic improvement in preventing adverse drug events and falls. How is all this working? Please refer back to the Jackson General Hospital example to answer this question.

Factors contributing to the success of the West Virginia patient safety project include:

- Effective partnering between local, state, and federal entities
- Strong local leadership
- Focusing on education and measurement
- Active communication at all levels
- Working to make data useful
- Participation at the national level

Our primary responsibility is to those we serve to provide safe and effective care. Our quality improvement organizations can be effective partners in discharging that responsibility. What do you see in this example from West Virginia that will help you partner with others and ensure safety of the care you provide? How can you help your QIO perceive itself as an agent for transformational change?



South Dakota: City/Country Partners — Live the Mission, Actualize the Vision

Contact: Rachael Sherard — Rachael.Sherard@avera.org

Message: A well motivated values-based health system can design and implement collaborative rural programs that benefit all concerned.

Learn more: www.avera.org

In Sioux Falls, S.Dak., we find an extraordinary health system with some of the most exceptional rural programs in the nation. We will overview the system, note several of the initiatives, and highlight an affiliated community and a neighboring national rural program. Let's see what we can learn from Avera.

In a service area encompassing parts of four states, Avera represents 28 hospitals (23 of which are critical access) with an average daily census range of 3 — 375, 19 long-term care facilities, 116 clinics and many other activities, totaling an astounding 227 organizations under the Avera banner! Their stated values are compassion, hospitality, and stewardship. Their mission statement: "Our mission is to make a positive impact in the lives and health of persons and communities by providing quality services guided by Christian values." Their history extends over more than 100 years; the roots of the organization came to life when two orders of sisters set up hospitals to meet the needs of the unserved populations of frontier river and railroad towns. In the 1980s, the organization began developing formal relationships with county hospitals. The strategy initially was one of control through a lease mechanism, but this proved unsatisfactory as community interest and support waned. The philosophy transformed over the past 25 years into today's successful partnership model based on the interests of the community. The intention is to tie the entire system together over the next few years primarily based on electronic capabilities including the electronic medical record.

Developing community buy-in to health care and a healthy community concept is taking the form of local facilities accepting the responsibility of engaging with their communities and addressing health priorities as a community. The health care facility is involved but not attempting to control the process. To this end, Avera has stepped up the process of community leadership development. The rural partnering process is a true organizational priority as demonstrated by the fact that the Rural Health Institute is a part of the Avera management structure, managed by full-time staff with defined objectives, budget, and activities. Of the organizational priorities listed, those that are part of the Rural Initiative will be identified as such. Others, such as the quality program, equally involve rural partners along with the entire organization. So let us see if we can get our arms around some of the exceptional rural programs operated by Avera.

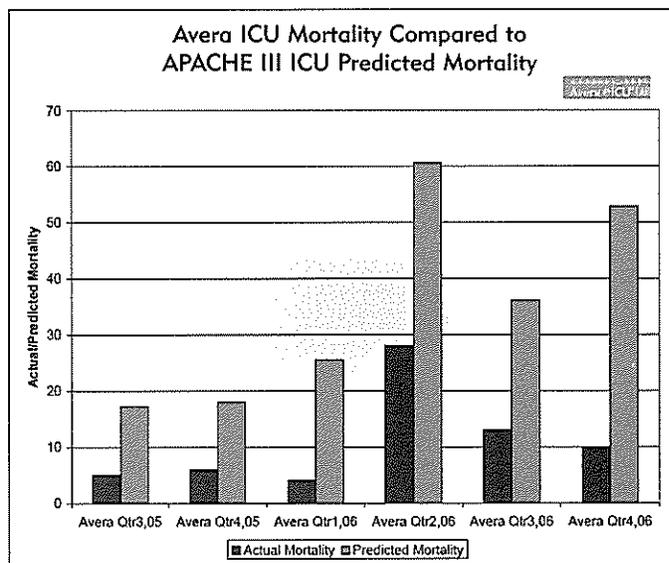
Consistent with the mission statement, the quality initiatives will be noted first. These are system wide with full inclusion of the rural partners. Quality is headed by the Chief Medical Officer, Dr. David Erickson. The organization has demonstrated gratifying results as a major participant in the CMS/Premier hospital quality incentive demonstration project. Quality indicators are tracked and reported annually in a highly readable document. There is also an annual Quality Congress, an awards program where successes from across the system are recognized and celebrated. Collaboration, clinical excellence, and superior performance in support of the three values are specifically recognized. All operational facets of the organization participate. Institute for Healthcare Improvement programs are made available to the staff via teleconference technology. Quality is central to organizational function as evidenced by the fact that the implementation of the electronic medical record and related physician leadership development through a mini-MBA program are directly linked to the quality program under Dr. Erickson's leadership.

Sibley, Iowa is blessed to be the home of Osceola Community Hospital, a Critical Access Hospital affiliated with Avera. The remarkable CEO is Janet Dykstra, who has led this facility to be one of the most exceptional community health organizations you will ever see. They have developed a Bright Beginnings child care program with a new facility and comprehensive scientifically valid programming. Within the hospital facility is a comprehensive physical activity and rehab center, through which they reach out to all segments of the population. They have developed a master's program with the University of Northern Iowa in exercise science. These are just some examples of the out-of-the-box initiatives functioning so successfully as part of an innovative community-oriented hospital under enlightened leadership. Effective community engagement and partnering are the secrets of success in Sibley! To learn more, go to the web site www.osceolacommunityhospital.org or contact Janet Dykstra at 712-754-2574.

The Avera eICU® CARE is a quality initiative with particular relevance for rural facilities. This consists of monitoring capability (data, visual, verbal) in the rural facility linked to a central station manned by an intensivist physician. This system was observed at both ends — the rural ICU bed and the central station. With the aid of decision support technology, remote critically ill patients are followed, trends in condition monitored, and support in their care provided as needed by the attending physician in the rural community. Based on nationally recognized scoring of severity, this system has demonstrated remarkably improved results of care for these patients as compared to similar patients in analogous settings lacking the benefit of this system. This is graphically demonstrated as follows:

It is an appropriate model for all rural critical care. A mobile module also makes this level of support available in emergency rooms and to rapid response teams.

Community benefit locally and system wide is clearly identified and published. While the partnering activities do not directly produce sufficient revenue to cover costs, the value is clear indirectly and in terms of community benefit for this not-for-profit organization.



In the small town of Howard, South Dakota is the most extraordinary rural development project in the nation. While it is not formally associated with Avera, it is connected in important ways by relationships, common interests, geographic proximity, and congruent rural goals. It might almost be viewed by Avera as an extension of the Rural Institute due to the commonalities in purpose and philosophy. It is called Miner County Community Revitalization and is headed by a unique visionary named Randy Parry. It works in economic development, housing, strategic thinking, education, and leadership in rural communities across the nation. They have recently opened a futuristic learning center which houses state-of-the-art technology with extraordinary connectivity. The facility even houses the headquarters of the regional Community Health Center, which shares the technology.

To learn more, see their web site www.mccr.net or contact Randy Parry at randy.parry@mccr.net or 605-772-5153.

Here are ten "lessons learned" in the course of their work (MCCR newsletter, Fall, 2006):

- Every person is a resource whose ideas are valued
- Local people can change the economic outlook of their community
- Strategic thinking, forming new alliances, and identifying emerging leaders are imperative
- Decisions based on facts rather than opinion or personal interest are critical to success
- Local people can provide the leadership to implement the community's strategic objectives
- Grass roots visioning with long-term strategies are key to sustained positive change
- Regional collaborations, relationships, and resources must be fostered and shared
- Broad-based, informed, and dedicated leadership is the foundation of community building
- Commitment to the long term is critical to success
- Sharing learning with others is essential (by everyone, with everyone)



The list of Rural Health Institute services that follows are addressed specifically to the rural communities served by Avera:

- Community leadership development: nine modules, one four-hour session each. Done at a neutral site such as a school in the community. Core competencies taught are self awareness, mission commitment, innovation, people developer, service commitment, communicator, business minded, results oriented, and collaborator. Tangible results are demonstrated. Hard for busy participants to sustain engagement after the course ends.
- Farm safety day camps
- Various investments in rural community projects, often aimed toward economic development
- Grant writing support
- Community assessment and planning assistance
- County specific health data (a need for communities across the nation)
- Annual rural health conference
- Customized services as required

What are lessons learned from Avera about successful health care in rural communities?

- Communities must own their health care
- Communities need assistance to realize their potential
- Technology enables clinical quality and excellence
- Small rural facilities should not expect to go solo in developing technology
- Organizational vision and mission fundamentally affect organizational priorities and behavior if they are real
- Partnering works!
- Allocation of resources speaks louder than words

How might you help the health system of which you are a member (if this applies to you) to expand services to their rural service area after the Avera model? Are there opportunities for rural development enterprises similar to the Miner County effort described in the sidebar? Can health care facilities in your community work together for important community benefit as is being done in Sibley (see sidebar)?

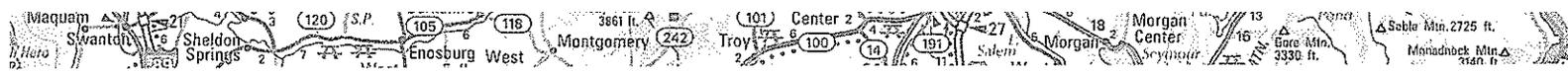
Kentucky: An Information Technology Counterpoint

Contact: Maliegha Amyx — M.Amyx@rhrcc.org

Message: In some instances, it is possible to do Electronic Health Records (EHR) independently. But carefully attend to achieving interoperability!

We have examined large system collaborations that are bringing EHRs and comprehensive information technology to many rural facilities and providers. But for some of us, this is simply not a feasible option. Our last stop on our journey to explore exemplary rural health programs that are working, before returning home to put them into practice, is Mt. Vernon, Kentucky, a small town in south-central Kentucky with a county population of about 16,000. Here we find 26-bed Rockcastle Hospital, the hub of a remarkable community system of care. Integrated with the hospital are: the 79-bed Respiratory Care Center (in operation for over 20 years and attracting referrals from a multi-state area), a physician group, home health, and a 114-bed long-term care facility eight miles away. There are about 500 highly dedicated employees, 10 physicians on the active staff and over 30 very active consultant physicians. This robust and viable organization is in the early stages of developing an integrated system of care for the entire county. This new system will be characterized by responsiveness to community interests and needs, and will address and improve the health status of the population.

Organizational strategy focuses around their Journey to Excellence, focusing on developing a culture of effective communication, quality, and safety. The five pillars of the Journey are global performance improvement, technology, people, sustained growth, and financial viability. Our focus will be on the technology pillar. This objective has been driven by the leadership; for three years the board has set aside funds to devote to the development of the information technology project. Steve Estes, the administrator, says, "The need to continuously improve the quality and safety of care we deliver outweighs acquisition and support costs." This indicates the strength of leadership commitment to the project. There is clear recognition that communication between "silos" and across settings of care has room for improvement, that technology is the best means to that end, and that technology not only influences culture, but that an evolving quality/safety culture creates demand for technology.



In this fertile context, the technology implementation team was formed. It is led by Maliegha Amyx (she has been head of the organization's IT area for several years) and includes representatives of all departments and a physician champion. The vision for the system is that it will encompass all components of the system mentioned and all aspects of the operation including pharmacy, lab, and imaging. The team's vision is that technology will foster high quality patient-centered care that is safe, efficient, timely, and equitable.



They developed a detailed (and adaptable!) plan, timeline, and communication strategy, and they have clear budgetary guidelines. They resolved to always be positive and maintain open and effective communication with all staff using different modalities. This approach has led to remarkable readiness for change and virtually no resistance. Their Quality Improvement Organization, Health Care Excel, has worked with the team and is seen as a valuable partner even though they have not contributed financially. Their first action priority was to talk with all staff, get input from all departments and analyze their strengths, weaknesses, opportunities, and priorities.

Next, the team embarked on an extensive and continuing self-education program. They determined the list of vendors who specialized in facilities with fewer than 500 beds. They attended conferences to meet vendors and learn from users. This enabled the team to narrow their search to four vendors. They interviewed these four and were able to eliminate two. Since then, they have intensely interacted with both potential vendors through visits to their corporate headquarters, site visits to users, and talking with other local users that they did not visit. The vendors spent a week on site at the hospital so that all staff and physicians had the opportunity to become familiar with both systems. This has led to the position of final negotiations. An important element now is to be sure that all specifications and expectations are in writing. In fact, the team recommends that vendor presentations be videotaped!

The team continues its commitment to becoming more educated at all steps of the process. They have had to adjust their expectations as they learn more about what is actually available. They found that the needs of various departments were similar so the vastly important aspect of standardization has been easier than expected.

The group has some recommendations for others who may consider embarking on this path:

- Educate yourselves!
- Adjust your expectations; the ideal isn't out there yet
- Video vendor presentations! (Sometimes promises can exceed capabilities)
- Be extremely compulsive about documenting specifications and expectations of capabilities, training, and performance in contractual negotiations
- Take enough time to be certain of your objectives
- Standardize across departments and assure interoperability

What are some key elements responsible for the success of this team's work?

- Leadership support and vision
- Comprehensive thought about funding and budget prior to launching the project
- Commitment to organizational culture change
- Commitment to education about the process and available capabilities
- Inclusion of all staff and physicians with open communication
- Vision and planning on part of the team



What about return on investment? As noted in the quote by Mr. Estes, the administrator, this has not been the primary focus. They know that there will be some gains in efficiency but they may be offset by losses in other areas. They believe that improved quality and safety are realistic expectations but are not counting on a directly measurable financial return on investment. It is in a sense viewed as a cost of staying in business.

Clearly, Rockcastle Hospital leadership has engaged in strategic thinking for many years and continues to do so. In hundreds of comparable rural communities across America, how can this exceptional success story provide those of you in peer organizations with examples that would lead to greater success?

Conclusion: Do We Accept the Challenge?

So what have we seen in this series of vignettes?

- Rural coalitions can positively influence the behavior of their urban referral centers (WA)
- Tertiary care providers can initiate dramatic improvements in their services to rural areas and lead in building effective partnerships (MN)
- Rural health associations can be effective and charismatic state leaders in improving rural health and building partnerships (IN)
- Large health systems can build effective partnerships with their rural components and improve quality and performance of all parties (SD, MT)
- So can smaller systems! (PA)
- Communities can band together, improve health, and influence the provider community to participate in broad health improvement activities (beyond medical care) (PA, VT, IN, and others)
- Academic health sciences centers can develop services and partnerships that vastly improve quality and access to state-of-the-art care for rural people (MS, GA)
- Quality Improvement Organizations can develop programs and partnerships and apply resources in a manner that improves rural care for an entire state (WV)
- State government has the power to take the lead and make rural health a priority (VT)
- A regional coalition can influence payers, providers, governments, and communities to improve rural health (MI)
- A county-level coalition of providers and community members can be the catalyst for strategic thinking and collaboration to provide best-practice health services to rural residents (OR)
- When necessary, strategic thinking and strong leadership produces dramatic results in a single community

It is my hope that you have learned much more from these vignettes than what we just listed. I trust that policy makers, rural health organizations, and tertiary care center leaders will gather ideas from these examples that will benefit health care for all Americans. I believe that educators of health professionals (both providers and administrative staff) will see the necessity of developing a workforce with new skills such as partnering, collaborating, and team building. We have traveled the United States coast to coast, north to south and seen some remarkably successful and progressive improvements in care for rural populations. We have seen their beliefs about what has made them successful and we have noted some of the challenges and barriers that sound quite familiar. Let us summarize some of our findings. The “glue” that holds these operations together often is identified as a focus on patient, community, and goals larger than individual organizations.



So what are we to do with these lessons? If we go about business as usual, our travels will have been in vain. If we focus on stand-alone financial survival as has been our traditional stance, failure is assured. We must learn to “play in a new sand box” (system of care development) and succeed at it if we are to truly serve our communities and patients. We have to be system builders on two levels. Internally in our communities and regions, we must ensure that everyone in the provider community works together and that the community members are engaged to build systems of care across the continuum as it exists locally to serve the entire population of the service area. And since no rural community contains the entire continuum of care, the second level of system building must consist of this local/regional coalition working intimately with their referral centers to build effective mechanisms of care as we have seen demonstrated to ensure that our rural citizens receive care that is fully equal to that available in urban tertiary care settings and academic health sciences centers. To do less is no longer acceptable because we know we can do better. We must demand, expect, and collaborate in order to achieve this level of care, and we must access and use all resources available. Our massive dollar-driven non-system of care will not rise to this level of performance unless we first do our best and then “force the gorillas to behave” (Tom Fritz, INHS).

Of-tenoted success factors include:

- Standardization
- Simplification
- Communication
- Cooperation
- Mutual respect
- Leadership
- Continuous review and improvement
- Focus on patients, communities, and goals greater than an organization or individual
- Welcoming innovation
- Creativity and resourcefulness to overcome reimbursement limitations

We are rural health care. DO WE HAVE THE WILL?? Are we sufficiently committed to the welfare of the rural people we serve to provide and demand state-of-the-art care? Are we prepared to require of our tertiary care partners that they work with us to build systems of care dedicated to necessary speed and effectiveness? To demand standardization of processes rather than continue our worship at the altar of physician autonomy? To help create a communication system dedicated to speed, effectiveness, and non-duplication? To make the standards of success effectiveness and improvement rather than reimbursement? We have demonstrated above that none of this is beyond current capability. To quote Dr. Henry from Minneapolis, “It’s a matter of will.”

The future of rural health care depends on our decisions and actions, and lives depend on our approach to that future. In every state, our challenge as rural health organizations and providers is this: *work together to make health care for those we serve everything we know it can be.* NRHA is developing new programs to assist us in the process and stands ready to be a partner in this noble endeavor. **WE HOLD THE FUTURE IN OUR HANDS.**