

**RURAL WESTERN AND CENTRAL MAINE BROADBAND INITIATIVE**

**SUBMISSION TO THE FCC  
RURAL HEALTH CARE PILOT PROGRAM  
WC Docket No. 02-60**

**Franklin Community Health Network  
Farmington, Maine**

*In collaboration with:*

**HealthReach Community Health Centers  
Waterville, Maine**

**Central Maine Healthcare  
Lewiston, Maine**

**FUNDING AMOUNT REQUESTED: \$1,845,863**

**TABLE OF CONTENTS**

	<b>Page</b>
<i>Project Summary</i>	4
<b>I. The Region / Demographics</b>	5
Franklin Community Health Network Service Area	
HealthReach Community Health Centers Service Area	
Central Maine Healthcare Service Area	
<b>II. The Lead Organization</b>	11
Franklin Community Health Network	
<b>III. Goals and Objectives of the Proposed Network</b>	13
<b>IV. Budget</b>	18
<b>V. Budget Narrative</b>	19
<b>VI. The Proposed Network</b>	20
<b>VII. Previous Experience</b>	20
Franklin Community Health Network	
HealthReach Community Health Centers	
Central Maine Healthcare	
Collaborative Reality and Potential	
Oxford Network	
<b>VIII. Project Management Plan</b>	34
Leadership and Management Structure	
Workplan	
<b>IX. Sustainability</b>	39
<b>X. Appendices</b>	
Appendix A: Quoted implementation costs	40
Appendix B: Healthcare facilities in the network	43
Appendix C: Map of proposed network	57
Appendix D: Work group curricula vitae	58
i. Ralph Johnson, CIO, FCHN (Project Leader)	
ii. Daniel W. Burgess, Director of Applications Development, MaineGeneral Medical Center/HealthReach Network	
iii. Cherri M. Waters, Director of eHealth, CMHC	
Appendix E: Letters of commitment and support	67

*Letters from Maine's Congressional Delegation:*

1. US Senate – Maine (Senator Susan Collins)
2. US House of Representatives – Maine, 1<sup>st</sup> District  
(Representative Tom Allen)
3. US House of Representatives – Maine, 2<sup>nd</sup> District  
(Representative Michael H. Michaud)

*Letters of Commitment:*

4. Franklin Community Health Network (Richard Batt, President & CEO)
5. Franklin Community Health Network (Ralph Johnson, CIO)
6. HealthReach Community Health Centers (Connie Coggins, President & CEO)
7. Central Maine Healthcare (Peter E. Chalke, CEO)
8. Oxford Networks (Craig Gunderson, President & CEO)

*Letters of Support:*

9. Maine HealthInfoNet (Devore Culver, Executive Director)
10. Maine AHEC Network (Holly Korda, Director)
11. University of Maine at Farmington (Theodora J. Kalikow, President)
12. University of Maine at Farmington (Mal Carey, Director, Computer Center)
13. Rural Broadband Initiative (Sam Elowitch, Executive Director)
14. Bridgton Hospital (John M. Carlson, President & CEO)
15. Rumford Hospital (John Welsh, CEO)
16. Central Maine Heart and Vascular Institute (Susan Horton, Executive Director)
17. Central Maine Medical Center School of Nursing (Sharon Kuhrt, Director)
18. Central and Western Maine Regional PHO (Jim Kane, Executive Director)
19. Androscoggin Home Care & Hospice (Julie Shackley, President/CEO)
20. Greater Franklin Development Corporation (Alison Hagerstrom, Executive Director)
21. Healthy Androscoggin (Angela Westhoff, Executive Director)
22. North Country Associates (Carol M. Timberlake, Administrator)
23. NotifyMD (Jonathan McDevitt, Chief Technology Officer)

24. The Opportunity Center of North Franklin County, Inc.  
(William C. Crandall, Chair, Board of Directors)

## NARRATIVE

### Project Summary

The Rural Western and Central Maine Broadband Initiative, is a unique, non-proprietary, self-sustaining project proposed by Franklin Community Health Network, a 501c3 nonprofit rural healthcare system, in collaboration with HealthReach Community Health Centers and Central Maine Healthcare. It will establish broadband access in rural western and central Maine communities. **\$1,845,863 is requested from the FCC to support a total project cost of \$2,171,603.**

In addition to supporting key broadband connections and establishing redundancy connections between healthcare providers, this initiative will provide high-speed Internet connections to the communities we serve. This project will be achieved in partnership with Oxford Networks, a 100-year old Maine-based company that has pledged a **15% cash match** of construction costs to build a fiber optic backbone as part of its commitment to this project. Unlike other applications, which may be system architecture planning proposals, **ours is an implementation proposal**, with both new broadband access and critical redundancy established by the end of the grant period. Within the first year, new fiber optic cable will be put in place to Franklin Memorial Hospital, Rockomeka Family Practice, Bethel Area Health Center, Belgrade Regional Health Center, Western Maine Health Center, and Bridgton and Rumford Hospitals, with additional sites to be added in year two.

Beyond a few pockets in western and central Maine communities, much of this region lacks access to broadband Internet access. While an above average number of Mainers own computers (67.9 % of households, as compared to national rate of 61.8 %); only 54.7% have Internet access – the lowest rate in New England.<sup>1</sup> This rate is even lower in the rural areas of western and central Maine, an area of approximately 4,400 square miles. Successful implementation of this broadband initiative will provide high-speed Internet access to key rural regions in five Maine counties.

The resulting broadband infrastructure will link healthcare providers in the region, providing many important benefits and increasing the region's capacity for innovative healthcare technology. However, as a non-proprietary network, this infrastructure will also link local communities. Increased broadband access will yield significant benefits to the local economy, and for healthcare providers, social service agencies, and community members alike.

- *Healthcare Providers.* In an increasingly digital age, healthcare is changing. Broadband access will allow healthcare providers in this area to embrace emerging new technologies such as digital imaging systems, electronic medical records, and secure two-way messaging, and to increase current capacity to

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<sup>1</sup> 2000 U.S. Census.

support the education needs of area health professionals. This initiative will also create important redundancy connections between providers.

- *Economy.* The collaborators believe that a healthy economy contributes to a healthy population. The presence of broadband Internet access will make this region more attractive to new and developing businesses. The introduction of Oxford Networks into the area will also bring competition into the few areas that currently have broadband access, thus making broadband more affordable in many communities.
- *Education.* In addition to maximizing the region's capacity for distance learning programs (no small feat in such a rural area), increased broadband accessibility will benefit area students, many of whom will enjoy easier access to online educational resources. Additionally, area educators will benefit from a greater capacity to use the Internet as a tool in their curricula. Broadband connectivity will also promote important connections between FCHN and the University of Maine at Farmington, and support the education programs at Franklin Memorial Hospital's Ben Franklin Education Center, Maine's only rural Area Health Education Center (AHEC) site.
- *Social Service Organizations.* Community broadband access will provide social service agencies with new ways to educate, connect with, and provide services to the community. Increased teleconferencing capabilities through reliable high-speed lines will also benefit their ability to connect with other organizations in the region and beyond.
- *Community Members.* Community members will benefit immensely from resources available through the Internet – particularly multimedia resources that are only viable on high-speed connections. Additionally, as more people turn to the Internet for health information and resources, this provides yet another way for rural healthcare providers to connect with people living in all corners of their service areas. In fact, a number of emerging health initiatives will rely on community-based high-speed Internet availability.

From new telemedicine programs that provide specialized services to isolated areas to the community member who suddenly finds a wealth of information at her fingertips, widespread broadband Internet access has the potential to improve not just healthcare, but virtually every aspect of life in rural western and central Maine.

Once regional broadband infrastructure is established, broadband access in this region will be sustained through regular subscription fees to Oxford Networks by community members and area organizations. Further, continued access to broadband technology for FCHN will be supported by discounted subscription fees from Oxford, thus ensuring that the FCHN service area has access to the same technologies available to urban providers into the future. Sustainability will not be dependent on future grants or significant contributions by FCHN, HealthReach, or CMHC.

## I. THE REGION / DEMOGRAPHICS

**Franklin Community Health Network** (FCHN) is Maine's premier rural healthcare system. The organization formally consists of: Franklin Memorial Hospital, a 70 bed facility located in Farmington; Evergreen Behavioral Services; Pine Tree Medical Associates; Healthy Community Coalition; and Northstar EMS. The organization's primary service area encompasses all of Franklin County and several neighboring towns. Though some services overlap with the service areas of providers affiliated with Central Maine Healthcare (CMHC) in Oxford and Androscoggin Counties, FCHN and CMHC have a long tradition of working together to provide high quality care to the people of the entire region. Central and western Maine is also populated with federally qualified health centers (FQHCs), a number of them run by HealthReach Community Health Centers. FCHN and HealthReach also have a long history of collaboration, including joint strategic planning around community health issues via the innovative and very successful biennial "Health Visioning" conference and a 9-year partnership developing and promoting Franklin Health Access (a healthcare program linking the uninsured to donated services) that is widely cited as a model in State and National forums.

Franklin County has a population of 29,467 living within its 1,744.31 square miles (4.9% of Maine's total area). Population density per square mile is 17.4 persons and 11.3 housing units. There are 26 municipal subdivisions (plantations, unorganized territories [UTs], towns and cities, excepting census-designated places [CDPs]), 25 of which are classified as being exceptionally rural (5,000 people or fewer). Farmington, the central location of FCHN affiliated organizations and the County seat, is classified as rural (5,001 – 10,000 people).<sup>2</sup>

**HealthReach Community Health Centers** (HRCHC) is a network of 11 federally qualified health centers (FQHCs) scattered throughout western and central Maine. Headquartered in Waterville, Maine, HealthReach's providers and staff deliver high quality, affordable primary care services to over 36,000 Maine residents and visitors annually, regardless of insurance status or ability to pay. In this proposal, HealthReach will focus on needed broadband connections in FCHN's service area, as well as health centers in Bethel and Belgrade that will be easily integrated into Oxford's developing network.

Franklin County: Approximately 25% of the residents of Franklin County receive primary care services at one of HealthReach Community Health Centers' four practices in the region: Mt. Abram Regional Health Center in Kingfield (5,647 medical visits in 2006), Western Maine Family Health Center in Livermore Falls (21,512 medical visits in 2006), Rangeley Region Health Center in Rangeley (6,337 medical visits in 2006), and Strong Area Health Center in Strong (8,419 medical visits in 2006). In January 2003, further expansion of the Strong facility was completed and a state-of-the-art Dental Center added, making Strong the first HealthReach facility to offer dental care, a much-needed service in this area of the state. In 2006, 1,084 patients obtained dental care for a total of 3,200 dental visits.

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<sup>2</sup> 2000 US Census

Oxford County: Bethel Family Health Center serves residents of Andover, Bethel, Gilead, Greenwood, Hanover, Newry, Upton, and Woodstock, as well as the surrounding towns. The center also serves many visitors to the region, which is home to the popular Sunday River ski resort. 4,221 residents and visitors of all ages sought healthcare services at Bethel during 2006, making a total of 16,054 visits.

Kennebec County: Belgrade Regional Health Center has served the rural Belgrade Lakes region, since 1977. In 2006, 2,643 patients visited the health center for a total of 8,929 visits.

**Central Maine Healthcare** (CMHC) formally consists of: Central Maine Medical Center, a 250 bed tertiary care hospital and Level II trauma center; two critical access hospitals, Bridgton Hospital and Rumford Hospital; the Central Maine Heart and Vascular Institute; Central Maine Medical Center School of Nursing; and affiliated long-term care facilities, clinics and practices. The organization's primary service area consists of Androscoggin County, part of Oxford County, and part of upper Cumberland County. The secondary service area extends into surrounding counties and across Maine's vast 'central tier' to the coast. The combined primary and secondary service area is predominantly rural. For purposes of this collaborative proposal with Franklin Community Health Network (FCHN), CMHC will refer to the broadband needs of its primary service area.

Androscoggin County has a population of 103,800 living within its 497.23 square miles (1.4% of Maine's total area). Population density per square mile is 220.7 persons and 97.7 housing units. There are 13 municipal subdivisions (towns and cities, excepting CDPs), 10 of which are exceptionally rural (5,000 people or fewer), 1 is rural (5,001-10,000 people), and 2 are urban (20,001+). The urban areas are the twin cities of Lewiston and Auburn, population 35,690 and 23,203 respectively.<sup>3</sup> Central Maine Medical Center, the hub of CMHC, is located in Lewiston.

Oxford County is home to CMHC affiliated Rumford Hospital, in Rumford. More rural than Androscoggin County, Oxford has a population of 54,755 living within its 2,175.26 square miles (6.1% of Maine's total area). Population density per square mile is 26.3 individuals and 15.5 housing units. There are 36 municipal subdivisions (plantations, UTs, towns and cities, excepting CDPs), 35 of which are exceptionally rural. Only Rumford, with a population of 6,472, is classified as rural.<sup>4</sup> Oxford County is also home to Stephens Memorial Hospital, a rural facility whose primary service area overlaps that of CMHC.

Cumberland County is home to CMHC affiliated Bridgton Hospital, in Bridgton. Upper Cumberland County differs greatly from the much more populous southern part of the county, which contains Portland, the state's largest urban area, and the populous southern coast. Bridgton itself, and the surrounding towns of Harrison, Naples, Sebago, Casco, and Baldwin are all classified as exceptionally rural.<sup>5</sup>

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<sup>3</sup> Ibid

<sup>4</sup> Ibid

<sup>5</sup> Ibid

It should be noted that located within CMHC's broad service area is a Federally Qualified Health Center – the DFD Russell Medical Center – with sites in Leeds, Monmouth and Turner. DFD Russell is not formally affiliated with CMHC.

**Industry in western and central Maine** (the combined service area of the proposal) was traditionally in forestry and manufacturing (primarily wood products and shoes), and the towns in which major facilities were located became single-industry towns. In the last decade of the 20<sup>th</sup> century both industries entered a period of decline, and western Maine's rural population entered a corresponding period of widespread economic hardship. By 2000, Maine's top four industrial sectors were: manufacturing (engaging 14.24% of the total civilian workforce age 16+); retail trade (13.52%); healthcare and social assistance (13.43%); and educational services (9.79%). Agriculture, forestry, fishing, hunting and mining *combined*, accounted for only 2.58% of economic activity<sup>6</sup>

The combined service area is also home to a traditional and growing tourist trade. With its many lakes, wooded regions and ski areas, the region is rich in second homes. During the summer the populations of towns surrounding recreational areas like the Rangeley Lakes (located in northern Franklin County) may triple. Thus, the economies of these vacation enclaves rise and fall with the seasons.

Coincidentally, this decline of traditional industry coincides with what is being referred to as the arrival of 'the perfect demographic storm,' one that has profound implications for the healthcare industry. This is the aging of the Baby Boomers, the largest demographic cohort in the country's history - bringing with them the challenges of chronic and other illnesses associated with old age. Their arrival is already impacting Maine's healthcare workforce, particularly in rural areas where providers are chronically in short supply. Thus, health professions education is already a major concern across the combined service area. FCHN is the rural site of the Maine AHEC system and the model site for rural health education in Maine. FCHN's Ben Franklin Center offers distance learning to nursing candidates locally in collaboration with Central Maine Medical Center School of Nursing.

The aging Baby Boomers are also increasingly familiar with, and willing to use, the Internet to locate and interact with healthcare providers, so their expectations differ greatly from the generation of seniors that preceded them. According to recent research from the Pew Internet & American Life Project, one in five Americans report that "the Internet has greatly improved the way they get information about health care."<sup>7</sup> In March of that same year (2006), a staggering 7 million Americans identified the Internet as "play[ing] a crucial or important role as they themselves coped with a major illness"; meanwhile, caregivers reported that the Internet plays a vital role as they search for services, locate support, and find information on behalf

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<sup>6</sup> Ibid (www.censusscope.org)

<sup>7</sup> Mary Madden and Susannah Fox, "Finding Answers Online in Sickness and in Health," May 2, 2006, available online at: [http://www.pewinternet.org/pdfs/PIP\\_Health\\_Decisions\\_2006.pdf](http://www.pewinternet.org/pdfs/PIP_Health_Decisions_2006.pdf)

of a loved one, with many identifying the Internet as “the *most important* source” of such information.<sup>8</sup>

The Internet has become a powerful tool in the realm of healthcare, equipping individuals with the ability to find vital information about diagnoses, learn more about treatment options, and connect with others to share their experiences. Unfortunately, the Internet has also become a source of inaccurate and unproven information as well, and many healthcare consumers are left bewildered by often contradictory or even risky health information easily accessed on the web. Within this electronic information frontier, consumers are ironically seeking out trusted, close-to-home sources of information to filter through the cacophony of advice-givers in the virtual world.

The FCHN web-based Maine Health Forum, which provides up-to-the-minute healthcare news and information, and the CMHC interactive Portal Project for both providers and consumers, are innovative initiatives that speak to this paradigm shift and attempt to provide that trusted, locally based source of information and patient/provider secure messaging. Indeed, the Maine Health Forum website already achieves over 20,000 user hits per week, clearly indicating that Mainers appreciate online sources of health information. In Section 7 of this proposal we will discuss current and future health related initiatives for which broadband access in the combined service area is, and will increasingly be, critical.

**Health disparities** in these rural regions is particularly dire. Health disparities for Maine, and FCHN’s primary service area of Franklin County, include:

- Asthma: Franklin County and Maine have the highest rates in the country (8.8 % and 8.9 % respectively, compared to 7.5 % nationally);<sup>9</sup>
- Obesity: 60.2 % of Franklin County residents report being overweight (36.0 %) or obese (24.2 %) compared to state and national rates of 56.7 % and 56.8 % respectively;<sup>10</sup>
- Oral health: Maine has some of the most severe oral health needs in the country: 24.3 % of Maine residents report losing six or more teeth to gum disease compared to the national rate of 17.6 %;<sup>11</sup>
- Adolescent suicide: In Maine suicide is the second leading cause of death for children aged 10 to 19, and, indeed, Maine has one of the highest rates in the country. The rate, however, is significantly higher in Franklin County.<sup>12</sup>

In addition, Maine residents also suffer from diabetes, cancer and chronic lower respiratory disease and Alzheimer’s disease at higher rates than national averages.<sup>13</sup> Combined with low rates of health insurance (14.9% reported having no insurance in Franklin County in 2000, compared to 11.1% and 9.9% for the state and

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<sup>8</sup> Ibid; their italics.

<sup>9</sup> BRFSS 2000.

<sup>10</sup> Ibid.

<sup>11</sup> Ibid

<sup>12</sup> Maine Kids Count, 2002.

<sup>13</sup> BRFSS 2000.

nation respectively),<sup>14</sup> this results in significant challenges for area health providers striving to meet the needs of the communities they serve.

**Broadband access** in Franklin, Androscoggin, Oxford and upper Cumberland Counties is currently extremely limited. FCHN's Franklin Memorial Hospital is one of the few hospitals in Maine that lacks access to a high-speed broadband connection. At this time, the hospital's connectivity is achieved through a single T1 line maintained by the organization at its own cost.

Specific coverage data for Maine is notoriously difficult to obtain; however, limited surveys and anecdotal evidence make it clear that access to high-speed Internet connections is extremely limited. While an above-average number of Mainers own computers (67.9 % of households, as compared to national rate of 61.8 %); only 54.7 % have Internet access – the lowest rate in New England.<sup>15</sup> This rate is even lower in the rural areas of western and central Maine. Anecdotal testimonies collected by the Governor's ConnectME Authority have supported this fact. This is in keeping with national trends: the Pew Internet & American Life Project reported in February 2006 that only 24 % of rural Americans have high-speed Internet connections at home, significantly lagging behind urban and suburban cohorts with 39 %.<sup>16</sup>

Community dissatisfaction with local Internet prompted the formation of the Rural Broadband Initiative in 2003, a group which has had statewide influence, and has been referenced in national publications such as the New York Times as experts in rural broadband issues. In 2004, the Rural Broadband Initiative performed a survey and needs assessment on high-speed Internet usage in the Franklin County towns of Farmington and Wilton. This survey revealed overwhelming support for expanded availability of high-speed Internet access, with over two-thirds of 120 respondents indicating dissatisfaction with the Internet service currently available, and over 80% noting that high-speed Internet would improve efficiency at their workplace, and facilitate their ability to sell products and services in the area. High-speed Internet access has been recognized as an important tool for residents and businesses in rural areas. Rural communities in western and central Maine are currently lacking a key opportunity for development.

Current network connections for the collaborators in this proposal are as follows:

Franklin Community Health Network. The hospital's core tech network is based on Cisco technology, and the main campus at Franklin Health Common in Farmington is configured with point-to-point fiber-optic network for voice and data communications. The remote facilities are connected with point-to-point T-1 or

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<sup>14</sup> *Franklin County Community Health Profile 2000*: A collaborative project of MaineHealth, MaineGeneral Health, the Maine Bureau of Health, and the Maine Center for Public Health utilizing the CDC BRFSS.

<sup>15</sup> 2000 U.S. Census.

<sup>16</sup> John Horrigan and Katherine Murray, "Rural Broadband Internet Use: Data Memo," February 2006, available online at [http://www.pewinternet.org/pdfs/PIP\\_Rural\\_Broadband.pdf](http://www.pewinternet.org/pdfs/PIP_Rural_Broadband.pdf).

Frame Relay connections depending on service availability. Due to cost restrictions, there is no redundancy built into the FCHN network design. The T-1 and Frame Relay circuits do not provide sufficient bandwidth for PACS and other imaging technologies.

HealthReach Community Health Centers. HealthReach currently runs its practice management and electronic medical record system through a T-1 Frame Relay. Contingency planning for the sites has revealed the need for secondary routes for network traffic. Acceptable bandwidth (minimum 768K) is achievable at ten of the eleven practices; however, operating costs for such bandwidth ranges from \$160 to over \$1500 per site per month, which is unsustainable at current reimbursement rates.

Central Maine Healthcare. The CMHC data center and main hospitals are connected in a “Y” network configuration. The branch clinics are laid out in a star configuration, the hub being located at 300 Main Street in Lewiston, Maine. The Central Maine Medical Center (CMMC) Data Center Core is located at 29 Lowell Street in Lewiston.

The core and the network WAN connections are based on Cisco technology. The CMMC WAN network consists of three hospitals connected in a flat configuration lacking any redundant connections. CMMC is connected to Bridgton Hospital with a 50 Meg Verizon circuit, and Rumford Hospital is also connected with a 50 Meg Verizon circuit terminated at the CMMC campus. Hospital clinics are connected throughout the region by T1 technology, provisioned from Verizon. They star out from the CMMC facility.

Oxford Networks will provide infrastructure needed for this project. Oxford Networks, founded in 1900 as a telephone and telegraph company, currently has a 600-mile fiber-optic network. Oxford’s experience with Maine communities, and commitment to supporting community infrastructures – Oxford built Maine’s first large-scale Fiber to the Premise Network (FTTP) in Norway, Maine, enabling an economic revitalization of the area – make Oxford an appropriate partner. Oxford’s presence in western and central Maine through this grant will bring competition and redundancy capability to the few areas in this region that do have broadband access, and will extend the reach of broadband to many municipalities that currently have no broadband Internet access.

It was necessary to identify a technology partner during the planning process for this initiative in order to create a detailed and accurate work plan. While FCHN’s CIO approached all area Internet providers for preliminary discussions, only Oxford was willing to commit to participation in this project. Because of these circumstances, the collaborators ask that competitive bidding requirements be waived for the construction of the fiber optic network. However, in order to assure all parties that their costs are appropriate and competitive, Oxford has agreed to leave their books open to audit for a period of four years.

To demonstrate their commitment, Oxford has pledged a **15% cash match** for the costs associated with building the fiber optic network. Oxford has also committed to

subsidized subscription and installation rates for lead organization FCHN. This will result in annual savings of \$79,200 per year in operational costs as a result of the subsidized rate and the elimination of the \$60,000 per year currently paid by FCHN for its PACS connection, and will help sustain FCHN's participation in broadband technology into the future.

## II. THE LEAD ORGANIZATION

**Franklin Community Health Network** is the project's lead organization, and will be legally and financially responsible for the conduct of activities supported by the grant. HealthReach Community Health Centers and Central Maine Healthcare are the project's healthcare provider collaborators. The project's for-profit technology partner will be Oxford Networks, a regional broadband provider through which new and redundant access will be achieved to the project sites identified in this proposal. As previously noted, a 15% cash match for the construction of a fiber optic network will be provided by Oxford Networks, with a 15% cash match of remaining project costs committed by FCHN.

**History of collaboration:** FCHN has demonstrated a strong commitment to collaboration. Unlike many small rural hospital systems today, FCHN has resisted opportunities to affiliate with larger health systems, choosing instead to work with a variety of different organizations on a number of different initiatives. This has led to a long history of successful collaboration with a wide variety of partners. For example, after recognizing community need for increased access to mental health services, the network partnered with Sisters of Charity Health System in Lewiston to create Evergreen Behavioral Services in 1994. FCHN frequently partners with the University of Maine at Farmington (UMF), providing internship opportunities for students of the university's Community Health program, the premier undergraduate program of its kind in Maine. FCHN also co-founded the Maine Health Research Institute at UMF, an outcomes-based research institute that provides health consulting and research services to the Maine Department of Health and Human Services. Partnership with HealthReach Community Health Centers and local social service agencies resulted in Franklin Health Access, a program that connects uninsured residents to donated health and social services.

A number of collaborative projects undertaken by FCHN support initiatives not traditionally associated with healthcare. Although some healthcare organizations would not consider such projects within the scope of their services, FCHN is committed to an inclusive philosophy of healthcare, one that entails a commitment to the health of the community as a whole. For example, FCHN is co-founder and a continuing sponsor of the Greater Franklin Development Corporation, a nonprofit organization established in 1998 in an effort to strengthen the economic development of the area. FCHN has also supported community initiatives to improve Maine's formula for subsidizing local school districts, resulting in a very significant increase in support. This initiative, which will support FCHN's

technology needs at the same time that broadband access is extended to the community, further demonstrates this commitment.

FCHN enjoys long-standing collaborative relationships with its two partners in this proposal, HealthReach and CMHC. FCHN has partnered with the four HealthReach Community Health Centers in its service area on a number of projects in addition to the Franklin Health Access Program referenced previously, including the network's biennial Community Health Visioning conference, a process through which health leaders and community members identify priorities for healthcare in the coming years, and a 1999 National Library of Medicine grant that enhanced Internet connectivity at area provider sites. HealthReach providers also routinely benefit from the teleconferencing resources available through the Ben Franklin Center at Franklin Memorial Hospital for the purposes of telemedicine, professional workshops, and educational opportunities.

FCHN and CMHC have similarly worked together on a number of initiatives and the provision of health services, including the Western Maine Center for Heart Health and ScoreHealth, a proven, practical technology for improving the health of communities and workforces. FCHN's Ben Franklin Center is currently a distance learning satellite location for CMMC's School of Nursing.

**Experience in leadership:** For a small rural health system, FCHN has extensive experience in leadership. The organization has been the driving force behind many collaborative projects mentioned previously, including the formation of Franklin Health Access, an initiative in partnership with HealthReach to connect uninsured residents with services donated by area clinicians and offered to Franklin Health Access members on a sliding fee scale. FCHN has provided leadership in economic development (co-founder and sponsor of the Greater Franklin Development Corporation), sexual assault and domestic violence awareness (founder and continued administrator of Peace in Our Families, a successful collaborative community initiative), and community health (sponsor of the biennial Community Health Visioning process, and parent organization for the Healthy Community Coalition, Maine's oldest and largest such health promoting organization).

In 2004, FCHN's Ben Franklin Center at Franklin Memorial Hospital became the critical rural site for Maine AHEC, based at the University of New England School of Osteopathic Medicine, its programs a model for rural health education. One of Maine's four AHEC sites, FCHN's particular leadership role in AHEC is to develop and implement rural models for education of current and potential health professionals. To achieve this, FCHN makes use of its high level of technological capacity to offer distance learning at its Ben Franklin Center, including partnering with Central Maine Medical Center's School of Nursing to offer a nursing degree to area residents. FCHN's success in rural health education has implications not only for residents of the Greater Franklin County region, but for the State of Maine in partnership with the Maine AHEC Network.

Many innovations born at FCHN have been used as models for healthcare organizations both regionally and nationally. In 1996, FCHN was named runner-up for the American Hospital Association's prestigious NOVA award, a program that

recognizes effective, collaborative programs to improve community health. FCHN was also 2003 Winner of the Carolyn Boone Lewis Living the Vision Award for living the American Hospital Association's vision of a society of healthy communities where all individuals reach their highest potential for health. Some recent notable innovations include the Franklin Health Insurance Incentive Program, a collaboration with Greater Franklin Development Corporation that provides a 30% subsidy to uninsured small businesses that are offering health insurance for the first time, and Contract for Care, an award-winning, nationally acclaimed program that provides qualified individuals with the option to volunteer for an available project in payment for their hospital bill.

**Organizational capacity:** FCHN houses a number of diverse projects and organizations. Its affiliates include a 70 bed hospital, an organization of physician practices that provide the vast majority of the region's primary care and specialty practices, an outpatient mental health service, the region's ambulance service, and the state's largest and most active community health coalition. FCHN provides accounting and financial oversight to all these diverse entities, in addition to other administrative supports such as human resources, maintenance, and purchasing.

FCHN and its affiliates have effectively managed numerous projects and initiatives, including a major multi-year grant from the Health Research and Educational Trust (HRET) of the American Hospital Association as one of eight Community Care Network Demonstration Program sites, a grant from The Robert Wood Johnson Foundation to support the first three years' operation of the Franklin Health Access Project, and three years' funding from the federal Office of Rural Health Policy to implement ScoreHealth, as well as grants from HRSA, the National Library of Medicine, the Kellogg Foundation, the Kresge Foundation, the Legacy Foundation, SAMSHA, and the USDA Rural Utilities Service. As discussed in the preceding sections, many projects have been managed in collaboration with other community partners, including a number of successful partnerships with this project's collaborators, HealthReach and CMHC. FCHN's Chief Information Officer, Ralph Johnson, who brings 23 years of experience in healthcare information technology and substantial project management experience to this project, will act as Project Manager for this initiative and will coordinate all activities, including working with FCHN's finance department to submit required reports and audits throughout the duration of this project.

### **III. GOALS AND OBJECTIVES OF THE PROPOSED NETWORK**

The Goals, Objectives, Strategies, Outcomes and Evaluation Process related to the collaborative project are as follows:

**Goal 1:** To establish new and redundant broadband access to identified health related sites in the project's combined service area of western and central Maine, in order to improve healthcare and access to health related services for everyone in the region.

**Objective 1.1** To establish broadband access to identified FCHN sites where it currently does not exist.

Strategic task	Responsible Party	Expected Outcome	Evaluation
1.1.1 Extend fiber optic cable to Franklin Memorial Hospital	Oxford Networks	Availability of a high speed network connection	Successful implementation of task 1.1.2
1.1.2 Upgrade Internet connection at FMH	FCHN	High speed Internet connection in place	Successful transmission of data through new connection and a fail-over test
1.1.3 Establish network connection with Rockomeka Family Practice	FCHN	High speed connection in place	Successful test of data transmission through new connection and a fail-over test
1.1.4 Establish network connection with FMH Outpatient Services in Livermore Falls	FCHN	High speed connection in place	Successful test of data transmission through new connection and a fail-over test

**Objective 1.2** To establish new and redundant broadband access to identified HealthReach sites.

Strategic Task	Responsible Party	Expected Outcome	Evaluation
1.2.1 Extend fiber optic cable to Bethel Area Health Center	Oxford Networks	Availability of a redundant network	Successful implementation of task 2.21
1.2.2 Extend fiber optic cable to Western Maine Health Center	Oxford Networks	Availability of a high speed network connection	Successful implementation of task 2.2.2
1.2.3 Extend fiber optic cable to Belgrade Regional Health Center	Oxford Networks	Availability of a redundant network	Successful implementation of task 2.2.3
1.2.4 Establish a redundant connection to Bethel Area Health Center	HealthReach	Redundant network connection in place	Successful transmission of data through new connection and a fail-over test
1.2.5 Establish a	HealthReach	Redundant network	Successful transmission

Strategic Task	Responsible Party	Expected Outcome	Evaluation
redundant connection to Western Maine Health Center	h	connection in place	of data through new connection and a fail-over test
1.2.6 Establish a redundant connection to Belgrade Regional Health Center	HealthReac h	Redundant network connection in place	Successful transmission of data through new connection and a fail-over test
1.2.7* <sup>17</sup> Extend fiber optic cable to Strong Area Health Center	Oxford	Availability of a redundant network	Successful implementation of task 1.2.10*
1.2.8* Extend fiber optic cable to Mt Abram Regional Health Center	Oxford	Availability of a redundant network	Successful implementation of task 1.2.11*
1.2.9* Extend fiber optic cable Rangeley Region Health Center	Oxford	Availability of a redundant network	Successful implementation of task 1.2.12*
1.2.10* Establish a redundant connection to Strong Area Health Center	HealthReac h	Redundant network connection in place	Successful transmission of data through new connection and a fail-over test
1.2.11* Establish a redundant connection to Mt Abram Regional Health Center	HealthReac h	Redundant network connection in place	Successful transmission of data through new connection and a fail-over test
1.2.12* Establish a redundant connection to Rangeley Region Health Center	HealthReac h	Redundant network connection in place	Successful transmission of data through new connection and a fail-over test

**Objective 1.3** To establish new and redundant broadband access to identified CMHC sites.

Strategic Task	Responsible	Expected Outcome	Evaluation
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<sup>17</sup> Strategies marked with \* will be completed in the second year of funding.

	Party		
1.3.1 Extend fiber optic cable to Rumford Hospital	Oxford	Availability of a redundant network	Successful implementation of 1.3.3
1.3.2 Extend fiber optic cable to Bridgton Hospital	Oxford	Availability of a redundant network	Successful implementation of 1.3.4
1.3.3 Establish redundant connection from CMHC to Rumford Hospital	CMHC	Redundant network connection in place	Successful transmission of data through new connection and a fail-over test
1.3.4 Establish a redundant connection to Bridgton Hospital	CMHC	Redundant network connection in place	Successful transmission of data through new connection and a fail-over test

**Goal 2:** To utilize high-speed capabilities to implement programs over high-speed connections in order to improve healthcare and access to health related services for everyone in the region.

**Objective 2.1** To implement programs over high-speed connections to support healthcare professionals and health services

Strategic Task	Responsible Party	Expected Outcome	Evaluation
2.1.1 Upgrade video conferencing equipment to take advantage of high speed connectivity	FCHN, HealthReach, CMHC	High speed, high quality video conferencing capabilities	Successful test of video conferencing between all three organizations
2.1.2 Implement high speed access to the Electronic Medical Record remotely and securely for providers when off premise	FCHN	Immediate access to medical record information for caregivers, enabling them to make timely decisions	Quantitative: Observed utilization of the resource Qualitative: Continual feedback and process improvement, surveying providers to evaluate satisfaction with the system
2.1.3* <sup>18</sup> Establish Referral Portal for FCHN providers	CMHC and FCHN	FCHN physicians will be able to send and receive secure messages to and from CMHC.	Quantitative: (number of physicians utilizing) and Qualitative: Continual feedback and

<sup>18</sup> Strategies marked with \* will be completed in the second year of funding.

Strategic Task	Responsible Party	Expected Outcome	Evaluation
		Increased provider and patient satisfaction.	process improvement, surveying to evaluate provider and patient satisfaction

**Objective 2.2** To implement consumer education programs over high-speed connections for the benefit of healthcare consumers in the region.

Strategic Task	Responsible Party	Expected Outcome	Evaluation
2.2.1 Enhance MaineHealthForum.org with multimedia capabilities	FCHN	High quality, trusted health information available for the public	Quantitative: Observed utilization of multimedia resources through traffic level reports Qualitative: Continual user feedback and process improvement

**Timeline**

Timeline by Quarter	Year One				Year Two			
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
<b>Strategy and Outcome</b>								
1.1.1 Extend fiber optic cable to FMH to provide a high-speed network connection		X						
1.1.2 Upgrade Internet connection at FMH to put high-speed network connection in place			X					
1.1.3 Establish network connection with Rockomeka Family Practice to provide a high-speed network connection				X				
1.1.4 Establish network connection with FMH Outpatient Services in Livermore Falls to provide a high-speed network connection				X				
1.2.1 Extend fiber optic cable to Bethel Area Health Center to make redundant connection possible	X							
1.2.2 Extend fiber optic cable to Western Maine Health Center to provide a high speed network connection		X						

<b>Timeline by Quarter</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q5</b>	<b>Q6</b>	<b>Q7</b>	<b>Q8</b>
1.2.3 Extend fiber optic cable to Belgrade Regional Health Center to make redundant connection available		X						
1.2.4 Establish a redundant connection to Bethal Area Health Center to provide a redundant network		X						
1.2.5 Establish a redundant connection to Western Maine Health Center to provide a redundant network			X					
1.2.6 Establish a redundant connection to Belgrade Regional Health Center to provide a redundant network				X				
1.2.7* <sup>19</sup> Extend fiber optic cable to Strong Area Health Center to make redundant connection available					X			
1.2.8* Extend fiber optic cable to Mt Abram Regional Health Center to make redundant connection available					X			
1.2.9* Extend fiber optic cable to Rangeley Region Health Center to make redundant connection available						X	X	
1.2.10* Establish a redundant connection to Strong Area Health Center to put redundant network connection in place						X		
1.2.11* Establish a redundant connection to Mt Abram Regional Health Center to put redundant network connection in place						X	X	
1.2.12* Establish a redundant connection to Rangeley Region Health Center to put redundant network connection in place							X	
1.3.1 Extend fiber optic cable to Rumford Hospital to make redundant network available	X							
1.3.2 Extend fiber optic cable to Bridgton Hospital to make redundant network available	X							
1.3.3 Establish redundant connection from CMHC to Rumford Hospital to put	X							

<sup>19</sup> Strategies marked with \* will be completed in the second year of funding.

<b>Timeline by Quarter</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q5</b>	<b>Q6</b>	<b>Q7</b>	<b>Q8</b>
redundant network connection in place								
1.3.4 Establish redundant connection from CMHC to Bridgton Hospital to put redundant network connection in place		X						
2.1.1 Upgrade video conferencing equipment to support high-speed, high quality video conferencing			X					
2.1.2 Implement high speed access to the Electronic Medical Record remotely and securely for providers when off premise to support immediate access to medical record information				X				
2.1.3* Establish Referral Portal for FCHN providers to enable providers to send and receive secure messages to and from CMHC						X	X	
2.2.1 Enhance MaineHealthForum.org with multimedia capabilities in order to provide high quality, trusted health information for the public				X				

**IV. BUDGET**

\$1,845,863 is requested from the FCC to support a total project cost of \$2,171,603 for the first year.

<b><i>Construction Costs</i></b>		
<b><u>Purpose</u></b>	<b><u>Description of Work</u></b>	<b><u>Cost</u></b>
Build a redundant loop fiber optic backbone network	40.5 miles of fiber optic cabling, including necessary electronics at approx. \$48,783 per mile avg.	\$1,975,700
<b><i>Equipment Costs:</i></b>		
<b><u>Item</u></b>	<b><u>Computation</u></b>	<b><u>Cost</u></b>
Video Conferencing IP Hub	1 at \$41,900 each	\$41,900
IPSEC Compliant VPN/Router equipment	12 at \$5,000 each	\$60,000

Citrix software and servers, 50 concurrent licenses	Quoted implementation	\$72,000
		=====
		=
	Total Equipment costs	\$173,900

***Travel and Training:***

<u>Purpose of Travel</u>	<u>Location</u>	<u>Item</u>	<u>Computation</u>	<u>Cost</u>
Citrix Training	South Portland	Mileage	.445 per mile, 3 classes=3 trips @ 186 miles roundtrip	\$248
		Hotel	\$92 per night, 3 nights per class, 3 staff attending	\$2,484
		Training Class	\$1699 per class w/ 3 classes per session, 3 staff attending each	\$15,291
Cisco 3515 Video Conferencing Training	South Portland	Mileage	.445 per mile, 186 miles round trip	\$83
		Training Class	\$1,299 per student, 3 staff	\$3,897
				=====
				=
		Total Travel and Training		\$22,003

***Budget Summary***

<u>Category</u>	<u>Total Amount</u>	<u>15% match</u>	<u>Grant Request</u>
Construction Costs	\$1,975,700	\$296,355	\$1,679,345
Equipment Costs	\$173,900	\$26,085	\$147,815
Travel and Training	\$22,003	\$3,300	\$18,703
	=====	=====	=====
	=	=	=
	\$2,171,603	\$325,740	\$1,845,863

<b>Total Federal Request:</b>	<b>\$1,845,863</b>
<b>Non-Federal Amount:</b>	<b>\$325,740</b>

**Source of Financial Support:** Oxford Networks has committed to paying 15% of construction costs for the fiber optic backbone network (total \$1,975,700; cash match of \$296,355). FCHN has committed to paying remaining project costs (total remaining costs \$195,903; anticipated 15% cash match of \$29,385).

## V. BUDGET NARRATIVE

### **CONSTRUCTION: \$1,975,700**

This amount will fund the construction of a redundant loop fiber optic backbone network by Oxford Networks. The backbone will consist of 40.5 miles of fiber optic cabling, including necessary electronics at an average rate of approximately \$48,783 per mile. Oxford's quote is attached in **APPENDIX A**.

### **EQUIPMENT: \$173,900**

#### **Video Conferencing IP Hub \$41,900**

This portion of the grant will support purchase of one video conferencing IP hub, which will be used to support video conferencing at FCHN, HealthReach, and CMHC.

#### **IPSEC Compliant VPN/Router equipment \$60,000**

This will fund purchase of 12 routers (\$5,000 each) for establishing VPN to identified sites. 6 routers will be used by FCHN, 4 will be used by HealthReach, and 2 will be used by CMHC.

#### **Citrix Software and servers, 50 concurrent licenses \$72,000**

This amount will fund the purchase of Citrix software and servers needed to construct the network. Oxford's quoted implementation cost of \$72,000 is attached in **APPENDIX A**.

### **TRAVEL AND TRAINING: \$22,003**

#### **Citrix Training \$18,023**

This amount will support 3 training sessions for 3 FCHN IS staff members on the use of Citrix equipment. Training takes place in South Portland, Maine, and each session lasts 3 days. This includes mileage (186 miles round trip @ \$0.445/mile for 3 trips; total \$248); accommodations (estimated \$92/night for 3 staff for 9 nights each; total \$2,484); and the cost of the training class (3 classes @ \$1,699/class for 3 staff members; total \$15,291).

**Cisco 3515 Video Conferencing Training \$3,980**

This amount will support training for 3 FCHN IS staff members on the use of Cisco 3515 video conferencing technology. Costs include mileage to South Portland (186 miles round trip @ \$0.445/mile; total \$83) and the cost of the training class (3 staff @ \$1,299/student; total \$3,897).

**ANTICIPATED SECOND YEAR COSTS** are approximately \$2,065,250, with approximately \$1,755,463 in funding requested. This amount will support \$1,960,250 in material and construction costs for the second year fiber optic backbone (see Oxford's quoted implementation costs in **APPENDIX A**). It will also support the purchase of 6 routers, and costs associated with establishing a Referral Portal for FCHN providers (see **Work Plan: Year Two Anticipated** in Section VII for more details).

## **VI. THE PROPOSED NETWORK**

The network to be built in **year one** will link 8 healthcare facilities in 7 towns at 8 separate addresses. The network anticipated in **year two** will link 3 healthcare facilities in 3 towns at 3 separate addresses. Facility addresses, Rural Urban Commuting Area (RUCA) codes, and contact information are located in the appendix. This encompasses rural areas of Franklin, Oxford, and Androscoggin Counties, as well as portions of Kennebec and Cumberland.

A list of the health facilities, including RUCA codes and contact information, is attached in **APPENDIX B**. A map outlining the resulting fiber optic backbone is attached in **APPENDIX C**.

## **VII. PREVIOUS EXPERIENCE**

### **Franklin Community Health Network**

Despite the challenges facing rural healthcare providers in accessing sophisticated health information technology, FCHN has managed to obtain and employ telemedicine and other technologies most frequently enjoyed by larger urban health systems. Indeed, FCHN has proven to be a leader in the state in this field, having developed extensive regional and statewide networks for sharing health information, medical resources, and radiology records. However, in the case of all these initiatives, as well as many important future projects, capacities are limited by the low bandwidth connection currently serving FCHN sites. This means that important initiatives like distance learning and telemedicine initiatives from FCHN's Ben Franklin Education Center are unable to operate at capacity; it also means that future initiatives such as the implementation of an Electronic Medical Record, or the further development of online consumer resources, face real barriers.

FCHN has a strong history of recognizing technology as a vital tool when facing the challenges involved in serving a rural population. Interactive telemedicine and computerized records were used by healthcare leaders in Franklin County as far back as the 1970s, starting with the Rural Health Associates, an innovative group of physicians who recognized that such technologies provided new capacities to provide care for rural populations. FCHN continues this tradition with this grant proposal, using innovations in technology to meet the challenges associated with providing high quality care in a very rural service area.

**Internet Connection for All Area Physicians:** In 1999, Franklin Memorial Hospital was awarded \$49,968 in National Library of Medicine (NLM) grant funding in order to extend and enhance Internet connectivity for itself and its Franklin Community Health Network affiliates, plus five<sup>20</sup> area federally qualified HealthReach Network health centers, all local physicians (in both group and solo practices), a home-health agency, and four nursing homes. The project built upon an existing private enterprise network and developing Wide Area Networks (WAN), and established increased bandwidth capabilities.

Support from NLM allowed increased bandwidth (to T1) of the then existing 56K line to the ISP, purchase of an NT-based firewall and a modem bank, aid in offsetting a portion of the first year's cost of an additional upgraded line, and purchase of routers and connecting equipment (CSU/DSU's) for 3 additional WAN connections.

As its contribution to the project, Franklin Memorial Hospital firmly committed the additional human and monetary resources to support the fiber-optic cabling of all local physician offices (affiliated or not), upgrade of the hospital's internal network equipment, installation of network equipment at affiliates and the fiber-optic campus extension, connection of two out of three additional WAN locations, all line charges associated with WAN connections, purchase of PC and/or modem equipment for all locations that lacked basic equipment, end-user training, network support, and project coordination.

This NLM grant established the connectivity that serves FCHN affiliates and sites today. While this initiative greatly enhanced capacity at the time, the needs of healthcare providers have since grown to necessitate greater broadband connectivity. The current T1 line does not support the image-heavy technology, such as PACS, that providers require in this digital age, or support robust telemedicine, distance learning, and consumer health initiatives. As previously noted, FCHN's Franklin Memorial Hospital is one of a few in Maine that lacks access to high-speed broadband. In order to meet the healthcare needs of its service area, embrace new technologies and trends, and meet recruitment and professional training challenges, FCHN will require a high-speed broadband connection.

A primary goal of the NLM initiative was to connect area physicians with the network and with one another. As resources in technology have evolved, it is no longer enough to provide rural physicians with high-speed access at the hospital or

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<sup>20</sup> The Farmington FQHC closed in 2000, leaving the current four FQHCs in the service area.

clinic. These resources must be available to them in their homes, 24/7, especially when providers are on-call. Only then will it be possible to develop electronic medical records or projects like Maine's HealthInfoNet (the state's developing Regional Health Information Organization, or RHIO), which aims to provide all clinicians in the state with access to a statewide electronic patient information system. In 2005 FCHN was awarded \$1.7 million to establish e-prescribing in all the physician practices and HealthReach Community Health Centers in the service area, a project that similarly would benefit greatly from access at provider homes. These initiatives will be discussed in greater detail in the section on electronic record systems.

**Telemedicine:** Telemedicine has had a presence in FCHN's service area since the 1970s, when a sophisticated (for the times) system of movable cameras and propane-generated communication towers located on local mountains were used by Rural Health Associates for consultations, meetings, and other communications. Telemedicine, albeit more technologically advanced, continues to be a vital priority today in the way FCHN delivers care across a large rural area.

In 1999, FCHN's Franklin Memorial Hospital obtained \$342,148 from the USDA Rural Utilities Service to develop a distance learning and telemedicine network for rural west central Maine, including the four HealthReach federally qualified health centers that serve isolated parts of the hospital's service area. This project was part of an expansion of the hospital that created the Ben Franklin Center, a health education center that houses the teleconferencing equipment that makes current telemedicine programs possible. Since its installation, the Integrated Services Digital Network (ISDN) has been used by FMH's Wound Clinic, allowing a consulting physician in Lewiston (60 miles away) to view wounds on patients in Farmington. The network has also allowed the delivery of dermatology consultations to FMH from Portland's Maine Medical Center, bringing a much-needed service to this area, which currently lacks its own dermatologist. These and other services are used by providers at FMH, as well as providers in the remote sites of Rangeley, Kingfield, Livermore Falls, and Strong.

However, despite the state-of-the-art equipment available at the Ben Franklin Center, FCHN's capacity for telemedicine programs is limited without access to a high-speed broadband connection. The ISDN line currently serving the network is slow and unreliable, and FCHN maintains it at the disproportionate expense of \$2 per minute. Without broadband, FCHN will be unable to support additional telemedicine programs.

For example, FCHN's Evergreen Behavioral Services (EBS) is currently only able to use its teleconferencing equipment infrequently for meetings or Grand Rounds. Without reliable high-speed access, the equipment cannot be used for therapy services, due to the delays that interfere with clear free-flowing communication between therapist and client. High-speed access would allow EBS to explore the use of its teleconferencing equipment for a variety of needed services, such as counseling inmates onsite at the Franklin County Jail instead of on FCHN's campus. Increased capacity for teleconferencing would also allow EBS to explore increasing psychiatric

specialty coverage in this area through consultations with specialists located in Lewiston or Portland.

**Distance Learning & Education:** The Ben Franklin Center at Franklin Memorial Hospital was created to provide patients, professionals, students, and community members with access to health information and educational programming. The health education center opened in 2003 with support from the 1999 USDA Rural Utilities Service grant mentioned above. The strategic importance of FCHN and the new Ben Franklin education facility was recognized in 2004, when Franklin Memorial Hospital became the critical rural site for the newly reconfigured Maine Area Health Education Center (AHEC), based at the University of New England School of Osteopathic Medicine (UNECOM). As the state's rural AHEC site, the Ben Franklin Center models successful approaches to health education in rural areas for other rural areas in Maine and beyond.

The Ben Franklin Center addresses a number of pressing local needs. Recruitment and retention of professionals in rural Maine has always been inherently difficult, and will be compounded by an impending shortage of registered nurses and other direct care health workers, as the Boomers enter old age. Maintaining professional skills and licensure at a distance from urban learning centers is a challenge. Local residents, too, have voiced their needs for health and disease-specific information. Through the hospital's biennial Health Visioning Conferences, the community has made clear its need for health education and information.

The Ben Franklin Center provides needed professional education and information to area healthcare providers, including ITV courses, video-conferenced professional Grand Rounds, and workshops, thereby improving patient care, meeting licensure requirements, and enhancing the recruitment and retention of professionals. It has allowed local residents to pursue careers in the health professions without leaving the area, thus helping to plug the "brain drain" of bright young people from the local university and the area. The Center also meets the education needs of community members, as patients, students, and local residents are now able to access health and disease-specific information using online resources at the Ben Franklin Center Medical Library.

The same challenges exist for the Ben Franklin Center's distance learning programs as those that face its telemedicine programs. The Ben Franklin Center is unable to operate at capacity due to the limitations of its current connectivity. While the Center's interactive video and audio conferencing equipment is some of the most sophisticated in the state, it is supported by unreliable, poor quality satellite technology or low-speed Internet connections. Despite the poor quality of the technology supporting these programs, however, this connectivity, obtained at a rate of \$2 per minute, is nonetheless extremely expensive to maintain. This limitation results in complications for any distance learning or telemedicine program, and limits the number of such programs that the Ben Franklin Center is able to sponsor.

One example of such a limitation to future use is in the area of health professions education. UNECOM is beginning to move some didactic instruction to a Web-based "virtual classroom" model, such as in the new Master in Public Health program. As

these and other health professions programs across the region and the country adopt this model, reliable and increased broadband capacity at all end-user sites and to all service area towns will be crucial.

**PACS and Other Digital Imaging Technology:** Healthcare providers have greater need for digital imaging systems than ever before, and therefore exert an unprecedented demand for broadband on health systems. In the past year alone, Franklin Memorial Hospital has obtained a sophisticated 64-slice CT scanner and implemented a Picture Archiving and Communications System (PACS), providing its patients with state-of-the-art technology often available only in large urban hospitals. Such technology represents a new trend in healthcare, as digital imaging is embraced by many providers as more accurate, more efficient, and safer for patients.

64-slice CT Scanner. In 2006, FMH installed an innovative 64-slice CT (computed tomography) scanner that provides precise imaging to help physicians rapidly obtain the information needed to diagnose disease and life-threatening illnesses, such as cardiovascular disease, cancer, and stroke, or identify injuries to internal organs in cases of trauma. Whole body evaluations can be performed more than twice as fast as conventional multi-slice CT scanners, thereby decreasing the amount of exposure to radiation. The detail and precision provided by the CT makes it the preferred method for studying the chest or abdomen, as well as diagnosing different cancers.

PACS. In a collaborative effort with Maine Medical Center (MMC) - Maine's largest tertiary care hospital, located approximately 100 miles away in Portland - Franklin Memorial Hospital obtained funding in 2004 to implement a Picture Archiving and Communications System (PACS). This was made possible through a \$1.4 million federal grant award to MMC from the Agency for Healthcare Research and Quality (AHRQ). MMC extended its PACS to FMH and another rural hospital in an innovative consolidated imaging project, dubbed 'CI-PACS' (Consolidating Imaging - Picture Archiving and Communication System).

PACS is a digital radiology tool that allows the sharing of patient records by moving from the traditional film-based radiology to digital radiology. It not only cuts down costs associated with film handling and archiving; it ensures higher quality and faster interpretations of images because radiologists are able to manipulate the images to get the best views. It also allows medical professionals to diagnose and treat patients without waiting for records to arrive and gives doctors at a distance from one another the ability to simultaneously share information. PACS ensures a smoother data flow between institutions and allows patients to benefit from the expertise of specialists not located at their hometown hospitals.

Support from AHRQ allowed FMH to purchase the equipment needed to establish a connection to the MMC PACS, and enabled a complete consolidation of an imaging archive from each participating hospital. This included establishing a Wide Area Network (WAN) connection between FMH and MMC to accommodate the additional bandwidth necessary to support CI-PACS implementation.

Such image heavy technologies greatly enhance the quality of patient care, and improve communications between hospitals. They also require high bandwidth connections. For example, transmitting a CT scan via FMH's current T1 line takes 108.9 seconds (almost two minutes), while transmitting the same image via a fiber line takes literally a fraction of a second (0.17 seconds). High bandwidth connections, therefore, result in much greater capacity to use these tools, and greater efficiency.

**Electronic Record Systems:** Electronic medical records (EMRs) provide healthcare with a new tool to support patients across the continuum of care through the creation of an electronic record that follows them throughout their healthcare experience. EMR systems have the potential to improve patient safety and provide a better quality of care by enabling providers to access the patient's entire medical history, including current prescriptions and services received in multiple locations.

FCHN is already a leader in the state in electronic records systems. As previously mentioned, FMH participates in a common Medical Record of Imaging through CI-PACS. In 2005, Franklin Health Access, part of FCHN, received a one-year grant from the Health Resources and Service Administration's Health Communities Access Program, totaling \$997,360. This funding is being used to support Franklin Health Access-Rx, a project that expands access to affordable prescription drugs for residents of Greater Franklin County. A key component of the project was the development of a regional electronic-prescribing infrastructure, the first of its kind in the state of Maine. This system allows providers to send prescriptions to pharmacies electronically, view all current medications that have been prescribed for their patient, view insurance formularies to ensure that the lowest cost medication is selected for their patient, and be alerted to potential medication interactions.

The Franklin Health Access-Rx electronic prescribing system is driven by the DrFirst Rcopia prescribing software and was launched in October 2006, with the implementation of a three-provider primary care practice in Farmington. Over the course of 2007, the project will be deployed to a total of 59 primary care and specialty providers, 11 of whom are practicing in 4 Federally Qualified Health Centers. Once fully connected to the new system, the providers in Franklin Health Access-Rx will be positioned to participate in Maine's developing statewide Regional Health Information Organization (RHIO)<sup>21</sup>, HealthInfoNet, a comprehensive electronic patient information system which will house pharmaceutical and other patient information.

FCHN has a commitment to support patients across the continuum of care as part of its strategic plan; an electronic medical records system is a vital part of this commitment. Building on the Franklin Health Access-RX e-prescribing system, FCHN has plans to implement a comprehensive medications record across the continuum of care. Since the network employs a large percentage of the area's physicians, this database will provide physician offices, specialty practices, and the

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<sup>21</sup> This statewide RHIO is a subsidiary of the Maine Health Information Center.

hospital with access to the same information, thus greatly reducing the chance of harmful medication interactions, and providing a higher quality of care.

CMHC's Central Maine Care Connection (which is explained later in this proposal), will enable providers at FCHN to communicate with providers at CMHC, thus providing a way for referring clinicians to provide information or follow-up on patients receiving care at any CMHC facility. Between February 2006 and February 2007, a total of 319 patients were referred from FCHN's Franklin Memorial Hospital to CMHC's Central Maine Medical Center. This number was exceeded only by the two critical access hospitals that are part of the CMHC system (Rumford Hospital, with 618 referrals, and Bridgton Hospital, with 411 referrals). Improved communication (particularly *via* the CMHC referral portal that will 'go live' in September, 2007) will increase continuity of care for this population of patients through Internet-based technologies.

For such initiatives to proceed, providers must have broadband access at all sites where a patient might receive care, whether on FCHN's main campus, at an affiliate site, at a HealthReach clinic, or with another care provider in the region. Physician access at home is also critical. During the workday, clinicians at FCHN are busy with patient visits, and focused on the patient in front of them. It is often not until the day ends that providers are able to logon to their FCHN account or delve into patient records. Providers on-call also need quick and easy access at their homes. Enabling provider access at their homes will ensure that such systems are used to their greatest capacity by all providers in the area.

**Research:** The Maine Health Research Institute (MHRI) at the University of Maine at Farmington (UMF), came into existence in August 1997 as a joint venture between UMF and FCHN. Multidisciplinary faculty and students have partnered with physicians from Franklin Memorial Hospital and policy makers at the Maine Department of Health and Human Services to address healthcare issues. MHRI seeks to combine the above intellectual resources to develop and offer a healthcare consulting and research service that addresses the issues of rural healthcare and its delivery through applied, outcomes based research.

This partnership between UMF and FCHN suffers from FCHN's lack of access to high speed Internet connections, as do many other collaborative efforts between the two institutions. While UMF's campus is connected through **proprietary** integrated wireless technology, FCHN's campus and affiliate sites are not. This limitation is always an issue with proprietary networks. FCHN's limited broadband capacity, already strained by data imaging technology and other patient care services, does not fully support connections with MHRI to access and send reports or large data files.

**Online Consumer Resources:** The increasing popularity of the Internet has transformed the way people interact with one another in virtually all aspects of life. Healthcare is no exception. The Internet provides healthcare providers with new ways to interact with consumers, many of whom rely on the Internet as a major source of health information.

Many hospital websites around the nation are adopting interactive tools, encouraging patients to manage their bills, schedule appointments, and access information about treatment options or health information online (indeed, CMHC will soon implement such a patient portal). FCHN was an early adopter of the Internet. Its website ([www.fchn.org](http://www.fchn.org)), launched in 1997, was one of the first hospital or healthcare system websites in the state. The website continues to be an important resource for community members, who use it to learn about the hospital's services, find a physician, or locate support groups and other events.

In the past two years, FCHN has launched two innovative websites to address consumer needs. The Community Connector ([www.theCommunityConnector.org](http://www.theCommunityConnector.org)), is an online database of resources, services and opportunities in Greater Franklin County. The Maine Health Forum ([www.MaineHealthForum.org](http://www.MaineHealthForum.org)) is a resource for health news and information serving not just Franklin County, but the entire state of Maine. In these online resources, community members are provided with health information from a trusted local source.

The FCHN, Community Connector, and Maine Health Forum websites are visited by nearly 50,000 unique visitors each month collectively, but the capacity to grow online resources further is currently limited. Many consumers lack access to a reliable high-speed connection in their communities. Although public access is available at local libraries, research has indicated that users are far more likely to take advantage of online resources when they have Internet access in their homes.<sup>22</sup> Increasing community access would not only increase traffic to the current websites, it would also open up new opportunities for developing these resources – such as incorporating streaming video or audio files or interactive features. These methods are particularly effective for connecting with individuals who have low literacy levels, but these initiatives will require higher bandwidth than is now available in most communities in the region. As part of FCHN's overall commitment to connecting with the community where they live, developing these resources is a key goal as FCHN moves into the future.

**Public Health:** Maine is one of a handful of states in the country without local public health departments or other formalized local or county-based public health institutions. Governor John Baldacci's administration has committed itself to rectifying the absence of local infrastructure, which has resulted in significant statewide efforts to revamp the public health system. The nascent system is being built around 30+ Healthy Maine Partnerships (HMP), organizations which were initially funded with tobacco settlement money. FCHN's affiliate Healthy Community Coalition (HCC), the oldest and largest among them, has played a pivotal role in those statewide efforts, both by providing leadership and by serving as a model for the possibilities of successful public health practice at the local level. The FCHN coalition's executive director serves on the Governor's and legislature's advisory committee on the subject, called the Public Health Work Group, as well as serving as past president of Maine Public Health Association and current chair of the Maine Center for Public Health.

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<sup>22</sup> [www.pewinternet.org](http://www.pewinternet.org)

The FCHN Coalition has also functioned as a model for the successful deployment of community health coalitions to promote health and influence cultural and policy changes that improve population health. The Coalition is the recipient of numerous awards and citations statewide and nationally, including being one of eight coalitions selected nationally as a model by the Health Research and Education Trust of the American Hospital Association. Statistics released by Maine State epidemiologists suggest that the public health emphasis in Franklin County yields positive results; for instance, despite being one of the state's poorest counties, Franklin boasts the lowest adult smoking rate and one of the lowest rates of cardiovascular disease in the state.

As a model program and leader in public health for Maine, it will be extremely important that HCC is able to connect with others as a new public health system emerges. Access to broadband connectivity is key to HCC's ability to fully participate in this important statewide initiative.

**Disaster Preparedness and Emergency Response:** FCHN was the first hospital in Maine to complete a comprehensive pandemic preparedness plan. As the first such effort, this plan has been promoted by Maine State Center for Disease Control and Prevention as a model for other hospital and healthcare organizations around the state. FCHN's planning accomplishments were showcased at a statewide Pandemic Summit in September 2006.

In the event of a pandemic or other disaster, communication with all affiliate sites and with the community will be crucial. As part of its Maine Health Forum website, FCHN currently provides comprehensive information on avian influenza ('bird flu') at [www.MaineBirdFlu.org](http://www.MaineBirdFlu.org), providing thousands of users with updated news, resources, and planning tips. FCHN also routinely informs the public of important information via [www.fchn.org](http://www.fchn.org). This method of communication was utilized most recently when a phone system failure affected all lines at Franklin Memorial Hospital. Widespread broadband access in the community and at all affiliate sites will further facilitate this important communication in times of disaster and emergency.

### **HealthReach Community Health Centers**

HealthReach Community Health Centers, a network of 11 FQHCs throughout western and central Maine (6 of which are included in this proposed network), has had a long-standing partnership with Franklin Community Health Network. The two organizations have worked together on several technological collaborations, many of which were mentioned in previous sections. FCHN provides lab services to HealthReach's regional health center locations, and telecommunication lines connecting the two entities have been established. Opportunities to leverage existing communications lines in this region have always been explored in collaboration between the two entities. HealthReach's collaboration in this initiative is thus a natural and valuable addition.

**Interactive Teleconferencing:** HealthReach has participated in successful launch of interactive teleconference technologies with FCHN, and the regional health centers

all have teleconferencing equipment and communication lines as a result. This technology assists in communications, telehealth initiatives, and reduces travel time and expenses, all significant advantages considering the isolated location of many HealthReach centers. Increased capacity to enhance or expand programs will enable HealthReach to better care for patients in their communities.

**E-Prescribing:** Very recently, the electronic prescribing project with Franklin (DrFirst) has proven the willingness of collaboration between these entities. As discussed previously, electronic prescribing will be an enormous benefit to the Greater Franklin County community, providing healthcare providers with more accurate and readily available information for medication management.

### **Central Maine Healthcare**

Central Maine Healthcare's experience in developing and operationalizing complex system-wide digital information systems is evidenced in a number of current and upcoming initiatives. They include, but are not limited to, the: Distance Learning Network; Regional Information System (RIS) and Picture Archiving and Communications System (PACS); Electronic Medical Record (EMR); Portal Project; Telemedicine Projects; Electronic-ICU; Clinical and Outcomes Research.

To optimize these and future digital initiatives, broadband access, greater bandwidth, and broadband redundancy are critical. As the following CMHC projects are discussed in more detail, it is important to note that the system has already experienced system failures due to lack of redundancy. In the Bridgton area, for example, when Verizon (the current carrier to Bridgton Hospital) experiences a break in service, there is no backup in place (such as Oxford Networks) through which information can be exchanged. When Verizon is unavailable, CMMC and Bridgton cannot communicate. In 2006, an automobile hit a Verizon pole and cut all Internet services between CMMC and Bridgton Hospital, threatening the availability of care. A second loss of service occurred when someone at Verizon's central office in Augusta mistakenly unplugged a wire, severing all connectivity. Thus, redundancy is not simply a question of pole security.

Therefore, CMHC identifies its need as being two-part:

- (1) to establish broadband access to those providers and provider organizations currently without it, and;
- (2) to establish redundancy, thus insuring integrity of the regional information system.

**Distance Learning Network:** CMHC currently has system-wide distance learning and telemedicine capabilities via videoconferencing equipment and transmission over existing phone lines at 256kbs and 384kbs bandwidths. The regional trauma program, the emergency physicians group, specialty clinics across the system, the Family Practice Residency Program, the Central Maine Heart and Vascular Institute and the School of Nursing all use distance learning and telemedicine technology to provide clinical care or educational opportunities in central and western Maine.

The Central Maine Medical Center School of Nursing provides classroom instruction to satellite locations in several rural communities: Mexico; Bridgton; South Paris; Lewiston; and Farmington, at Franklin Memorial Hospital. In 2006 the system began upgrading, and added new sites at Bridgton and South Paris. This upgrade and expansion was funded by a \$127,900 grant from the USDA Distance Learning and Telemedicine (DLT) program. In 2007 the School will apply for another DLT grant to further upgrade and expand the network, linking the School's 2-year ASN degree program with the 4-year BSN degree program at St. Joseph's College in rural Standish.

The School's long-term strategic plan is to bring the Central Maine Medical Center School of Radiologic Technology and the School of Nuclear Medicine Technology under its degree-granting umbrella. As the integration of these CMMC-based educational organizations moves forward, radiology and nuclear medicine students will also be able to receive classroom education through the distance learning network established by the School of Nursing. The distance learning program produces 'home grown' health professionals, and serves as an economic development engine for western Maine by helping insure a sufficient number of healthcare workers to staff local healthcare providers in rural communities.

As noted earlier in this proposal, the growth of PC-based 'virtual classroom' instruction for healthcare and healthcare-related professions makes it imperative that broadband access is available not only to formal healthcare and education institutions, but also to people in their homes. The proposed broadband network will not only bring broadband to specific organizations; the introduction of broadband infrastructure into the communities where these organizations are located will also allow the broadband provider (in this case Oxford Networks) to subsequently make broadband service available to individual household subscribers as well.

**RIS – PACS:** The new regional Radiology Information System (RIS) and Picture Archiving and Communications System PACS initiative will bring state-of-the-art imaging technology to the region and link the emergency rooms of the three Central Maine Healthcare hospitals. The \$2.3 million project is being partially funded by a \$500,000 DLT grant (awarded in 2005). The telecom system to support this regional tele-radiology and PACS initiative is being developed by expanding the Central Maine Healthcare WAN structure. To facilitate delivery, the hub's high speed system is being built out to include Rumford and Bridgton hospitals.

Implementation is being performed in multiple stages. The first stage is to build the Radiology Information System (RIS), which has been underway since October 2006 and is scheduled to go live June 19, 2007. The second phase is installation of the CR readers, which began March 12, 2007, and is scheduled to be completed over the course of the following 2 months at all facilities. The PACS build/infrastructure build has been underway since November 2007, and is predicted to go live in mid-September 2007.

Optimal implementation and use of the sophisticated RIS-PACS requires not only high bandwidth to those sites where broadband connections currently exist (through Verizon), but also high quality redundancy to ensure disaster recovery when connections are broken. As noted elsewhere in this proposal, lack of redundancy results in the potential for compromised patient care.

**Electronic Medical Record:** Clinicians at CMMC use both an outpatient electronic medical record (Logician) and an inpatient electronic medical record (ERNE). Logician has been in use for some time. ERNE, a more recent initiative, has been fully implemented at Central Maine Medical Center, is currently being implemented at Bridgton Hospital, and will then be implemented at Rumford Hospital. Through Logician and ERNE, patients' in-house and outpatient medical information is now linked in a single digital record. A key component of ERNE is physician order entry (CPOE), which is already being utilized by 50% of CMHC physicians.

**The Portal Suite Project** is an innovative, Web-based, single-sign-on and secure messaging system for providers and consumers – a strategic e-Health initiative aimed at using Internet-based technologies to more effectively deliver healthcare information to patients, and to support Central Maine Healthcare's initiatives for quality and growth. The Portal Suite will make it easier for providers to access multiple clinical systems, deliver information from those systems, and communicate with patients and other staff members. It will also provide outpatients with self-service tools that will allow them to manage their healthcare as it fits into their life schedule, and make it easier for them to communicate with their providers.

The Patient Portal will enable patients to manage their personal health transactions, communicate electronically through secure messaging with their providers, view and pay their bills online, and request appointments and prescription refills. It will be available in fall of 2007.

Central Maine Care Connection will improve communication between providers – within CMHC, and between CMHC and other hospitals and healthcare providers and provider organizations – to increase continuity and improve the quality of care. Accessible via high-speed Internet connection, it will ensure that referring patients to and from CMHC facilities is easy and standardized through single sign-on secure messaging technology and integration with MediTech (which is also used by FCHN and the four HealthReach FQHCs, and a number of other healthcare organizations). By using secure messaging, both referring and receiving providers will have access to a two-way communication tool, allowing for ongoing, collaborative exchange of data. The Central Maine Care Connection is being integrated with Meditech at Franklin Memorial Hospital and Parkview Hospital in Brunswick, as well as with Logician RMC, Logician FHA, Logician CMH and Cerner.

Information can be transmitted as clinical attachments to all providers, not just the integrated systems, although non-integrated providers would have to ensure that their systems can save items as images. Providers will also be transmitting clinical attachments to patients, including lab and other test results. Finally, CMHC will be pushing clinical content to patients based on diagnosis codes, effectively helping them manage their chronic and other diseases.

The Portal Suite Project in particular cannot reach its full potential without wider broadband access, including redundancy – not only to providers in their healthcare organizations, but also to providers and consumers in their homes. The ability of Oxford Networks to subsequently make broadband service available to individual household subscribers once major lines are brought to healthcare organizations, is a critical ‘plus’ for care delivery in the region - not only for CMHC, but also for all of the project’s collaborators and those served.

**Telemedicine:** The variety and number of specialists at Central Maine Medical Center has grown in the last few years. Today more than 40 medical and surgical specialties are represented in the CMMC clinical departments and affiliated private practices. *Among* these specialties are: Emergency and Trauma Medicine; Cardiology and Pediatric Cardiology; Critical Care; Endocrinology; Adult and Pediatric Hospitalists; Orthopedic Surgery; Obstetrics and Gynecology; Infectious Disease; Neonatology; Neurology and Neurosurgery; Urology and Nephrology; Anesthesia; Allergy Medicine; Oncology; Radiation and Radiation Oncology; Plastic Surgery; Rheumatology; Ophthalmology and Retinal Surgery.

To make specialist care available to patients in the rural areas in and around Bridgton and Rumford Hospitals, as well as to those in the western and central region covered by this proposal, CMMC is entering the preliminary stage of Telemedicine Program development. Broadband access and increased bandwidth and redundancy will be critical to the success of any telemedicine program.

**Clinical Research:** Participation in clinical trials and national studies has long been part of the institutional fabric at Central Maine Medical Center, particularly in Oncology, Cardiovascular Medicine and Quality. With the establishment of the Central Maine Heart and Vascular Institute (CMHVI) and strategic new hires in 2002, the first academic affiliations and peer reviewed research was brought to CMMC, with involvement of graduate and undergraduate students. As an institution CMMC brings basic ‘pluses’ to the research-ready table, among them its status as a tertiary medical center and level II trauma center, current CMHVI programs and research, ongoing clinical research in other areas such as oncology and quality, two affiliated critical access hospitals, a degree granting school of nursing, and a family practice residency program. CMMC is currently in the process of strengthening and growing its research program. As it does so, broadband access and increased bandwidth, and redundancy across the CMHC system will become increasingly important.

**Digital ICU.** Central Maine Medical Center is also in the early discussion stage of digital or e-ICU development. Unfortunately, there is a severe shortage of intensivists providing coverage for ICUs in the US. This problem is exacerbated in rural states like Maine. Developing an e-ICU would allow intensivists to electronically monitor patients at remote facilities from a centralized control center. By implementing an e-ICU monitor, CMHC would be able to allow more patients to remain at rural hospitals in their community (initially Bridgton and Rumford), yet receive the care that their condition requires. Enabling a patient to stay in a facility closer to home keeps them near their support system, such as family and friends,

and increases their satisfaction. Keeping a patient's satisfaction high will aid in their overall healing process. By providing 'off hours' monitoring, CMHC would also be able to support employing higher-specialty physicians at the rural facilities, which is better for the livelihood of those facilities and the communities in which they are located.

**Emerging Public Health System.** As noted earlier in this proposal, Maine's nascent public health system is being built around 30+ community-based Healthy Maine Partnerships (HMP), which were initially funded with tobacco settlement money approximately seven years ago. Three of these HMPs are located in the CMHC service area. By the end of 2007 the evolving public health system structure will undergo another change, as the current HMP functions become more regionalized, the number of HMPs is reduced, and new responsibilities are added to their original mission (such as chronic disease management). As the state's model HMP, Franklin Community Health Network's Healthy Community Coalition, has shown, communication with state and federal health agencies, individual consumers, providers, provider organizations, and local community government is crucial in bringing resources to bear on public health issues. As with traditional healthcare organizations like the hospitals, strong and redundant broadband access is key to moving the community based public health agenda forward.

**Emergency Management.** Additionally, in terms of public health emergency management, such as information dispersal during a widespread epidemic like bird flu, it is critical that all of the above stakeholders – including individual consumers – have constant and reliable access to information.

**Note from CMHC Concerning Their Collaborative Commitment:**

*As of the date of submission of this application, CMHC is not being included in any other application from Maine. We have been asked to be a part of the New England Telehealth Consortium application and it is possible that we would be included in this Consortium.*

*Our willingness to be part of both applications has been solely to maximize the possibility of funding, and thus extending access and crucial redundancy to the service areas of our two critical access hospitals in Bridgton and Rumford. If both proposals are funded, we will choose to remain in the Rural Western and Central Maine Broadband Initiative and back out of any duplicative components in Consortium project.*

*The Rural Western and Central Maine Broadband Initiative proposal is community oriented, and its collaborators understand that to fully participate in the many new electronic-based health initiatives being developed regionally and nationally, healthcare consumers and providers need broadband access in their homes.*

**Collaborative Reality and Potential**

While collaborative projects already exist among the project organizations, clearly the potential exists for a number of new collaborative initiatives – all aimed at improving the quality of care in the combined service area. Current projects will be enhanced by increased broadband access, bandwidth, and redundancy. New opportunities may not even be possible without it.

This broadband project will lay a technology backbone that will allow regional healthcare organizations to maximize current information technology projects and to provide a much-needed base for future growth. As described throughout the proposal, these opportunities will be in, but absolutely not be limited to, the following areas:

- Distance Learning: FCHN, HealthReach, and CMHC have already collaborated on a number of distance learning programs, including CMHC's School of Nursing at the Ben Franklin Center at Franklin Memorial Hospital. This initiative will provide new opportunities for collaboration, and increased capacity to meet the region's growing health professional shortage.
- PACS: Increased broadband means increased opportunities to participate in PACS, and to share images between providers to support patients who transfer between facilities.
- Provider-Patient Communication: The Internet is emerging as prominent method of communication. Increased broadband access in communities will support emerging projects such as CMHC's Portal Suite Project to facilitate communication between patients and providers by enabling more community members to access the Internet at home.
- Telemedicine: As outlined earlier, FCHN, HealthReach, and CMHC have collaborated in significant ways to bring services to individuals through telemedicine programs. High-speed Internet access at all sites will enhance capacity and support possibility of new services.
- Digital ICU: As e-ICUs emerge at CMHC and other healthcare facilities in Maine, broadband access in rural areas will support opportunities to collaborate with rural health providers like FCHN and HealthReach.
- Research: Both outcomes based (Health Research Institute at UMF) and clinical (CMHC) research will have new opportunities to share data and information.
- Public Health: As a new public health system emerges in the Maine, communication will be crucial. Widespread broadband Internet access will support interaction and communication between public health organizations in Franklin, Androscoggin, and Oxford counties, and throughout the state.
- Disaster Preparedness: Broadband connections between providers will enable collaboration and enhanced communication in times of disaster.
- Consumer Empowerment: Broadband access in communities will support the development of the Maine Health Forum to include multimedia resources, and of other resources to help consumers educate themselves for their own health.

## **Oxford Networks**

Oxford Networks will be the broadband infrastructure provider for the proposed Rural Western and Central Maine Broadband Initiative, and has committed to providing a 15% funding match for construction costs for a fiber optic backbone. Oxford was identified as the technological partner for this project following conversations with four other providers in the region, none of whom were interested in committing to this project at this time.

Headquartered in Lewiston, Maine, Oxford Networks provides residential and business customers with advanced communications services such as high-speed Internet, Internet Protocol Television (IPTV), and local and long distance telephone services. Currently, Oxford Networks provides Internet services to more than 12,000 subscribers. Their 600-mile proprietary fiber optic network, which stretches from Bangor, Maine, to Portsmouth, New Hampshire, grants Oxford Networks unparalleled service reliability, and has positioned them as Maine's leading high-service alternative to national carriers.

Founded in 1900 as a telephone and telegraph company in Oxford County, Oxford Networks has been committed to technology innovation for the benefit of life in Maine for the past century. Oxford Networks introduced Maine's first Network Access Point (NAP) in 2001, resulting in faster connections for Internet users in the state. Also in 2001, Oxford Networks received the Governor's Award for Business Excellence for their commitment to quality, customer service, and innovation. This innovation was demonstrated in the development of Maine's first large-scale Fiber to the Premise Network (FTTP) in Norway, Maine, which brought cutting-edge broadband infrastructure to rural Maine. In 2006, Oxford Networks was recognized as being one of Maine's Best Places to Work. Oxford Networks is now in the final phases of building a FTTP network to support IPTV, local and long distance phone service, and high-speed Internet in the twin cities of Lewiston and Auburn, Maine's second largest urban population concentration. Lewiston/Auburn is one of the only areas in Maine to have competitive wire-line cable television, and are the only cities in Maine to have advanced IPTV delivery service.

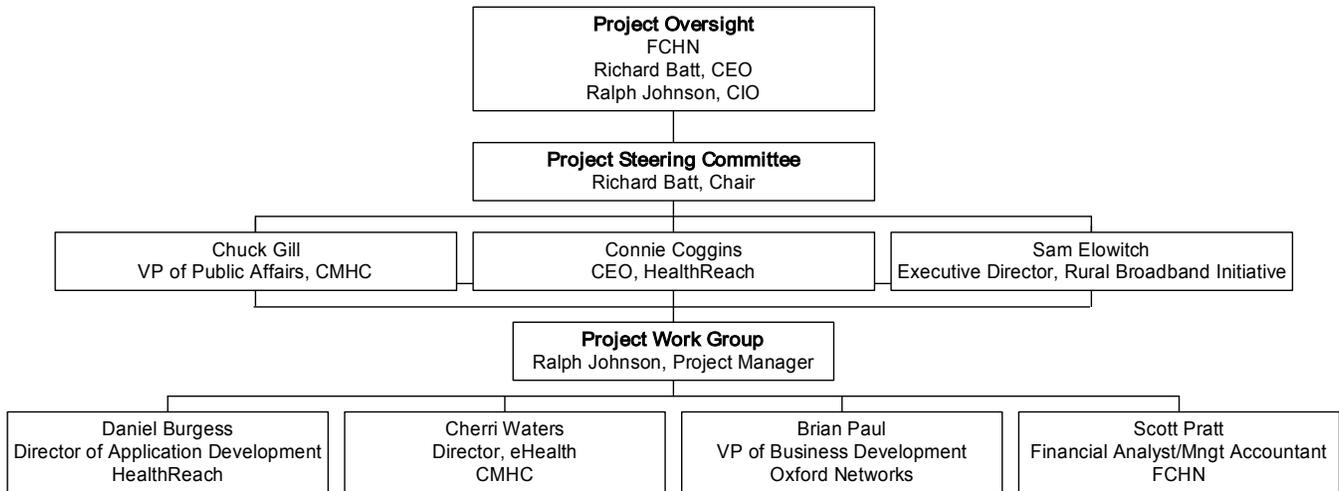
For more than 100 years, Oxford Networks has operated on the principal that investing in local community infrastructure helps communities attract and retain residents, businesses, and healthcare facilities. In the coming years, broadband network will have even greater importance as healthcare technology and bandwidth demands increase exponentially. Oxford Networks has always believed that in order for communities to thrive and prosper, a business has a moral obligation to support and give back to the communities it serves. To this end, Oxford Network generously donates grants, employee time, and telecommunication services to numerous local organizations. This commitment to community development, combined with Oxford's experience with innovations in technology, makes Oxford Networks an ideal partner for this initiative.

## VIII. PROJECT MANAGEMENT PLAN LEADERSHIP AND MANAGEMENT STRUCTURE AND WORK PLAN

### Leadership and Management Structure

Implementation of this initiative will be coordinated by a work group consisting of skilled professionals in healthcare information technology, and overseen by a project steering committee made up of senior administration from FCHN, HealthReach, CMHC, and a member of the Rural Broadband Initiative. Ralph Johnson, Chief Information Officer at FCHN, will act as project leader, and will provide project management and oversight over the entire initiative.

The management structure will be as follows:



Project Steering Committee. This initiative will be overseen by a group consisting of senior administration from FCHN, HealthReach, and CMHC, as well as a representative from the Rural Broadband Initiative to represent the community’s perspective on the project. Membership will include:

- Richard Batt, President and CEO of Franklin Community Health Network. Richard will serve as **committee chair**.
- Constance Coggins, President and CEO of HealthReach Community Health Centers
- Chuck Gill, Vice President of Public Affairs of Central Maine Healthcare
- Sam Elowitch, Executive Director of the Rural Broadband Initiative and member of the Broadband Access Infrastructure Board

The steering committee will meet quarterly to hear project updates from Ralph Johnson, CIO at FCHN and the Project Manager, and to provide guidance to the overall project. Ralph will be responsible for communicating the interests of the

steering committee to the project work group. Sam Elowitch's perspective as Executive Director of the Rural Broadband Initiative, a group with statewide recognition and influence, will help the committee explore ways to promote broadband access in the community, and to make people aware of the accomplishments of this initiative.

Project Work Group. The work group for this initiative will be composed of healthcare information technology experts from FCHN, HealthReach, CMHC, and Oxford, as well as a member of FCHN's finance staff to help with audits and required reports. The group will meet monthly throughout the initiative to report progress and plan implementation.

As a robust collaborative project, it is worth noting that each individual in the work group has experience collaborating with other organizations to achieve ambitious technological projects. In fact, both Ralph Johnson and Cherri Waters (CMHC) have worked together successfully on several large information technology projects in previous positions.

As mentioned previously, Ralph Johnson, Chief Information Officer at FCHN will be responsible for coordinating and managing these meetings and overall project implementation. He will also be responsible for managing FCHN's responsibilities. Ralph brings 23 years of experience to this initiative, seven and a half of which were spent managing the network and telecommunications departments for the largest health system in Maine. Ralph's leadership roles have included heading a project that created a private multi-strand fiber optic network from Falmouth to Scarborough, and managing a data center that provided completely redundant telecommunications circuits for 7 hospitals in Maine. These experiences have prepared him to lead this large collaborative project successfully. (See curriculum vitae, attached in **APPENDIX D**, for more information)

Cherri Waters, Director of E-Health at Central Maine Healthcare, will manage responsibilities for CMHC. Cherri has over 15 years of experience in Information Technology, and has spent the last 5 specializing in the healthcare. She has a strong record of achievement combining skills in diverse areas of organizational development, group/staff leadership, program development and project management, building partnerships and community relations. (See curriculum vitae, attached in **APPENDIX D**, for more information)

Daniel Burgess, Director of Application Development at MaineGeneral Medical Center, parent organization for HealthReach Community Health Centers, will be responsible for overseeing projects for HealthReach. With 17 years of experience in healthcare information technology, Daniel has led automation projects in areas including practice management, clinical documentation, data center redundancy, and disaster recovery. Like Ralph and Cherri, Daniel has developed many successful working relationships with other healthcare information technology leaders in the Central Maine region. (See curriculum vitae, attached in **APPENDIX D**, for more information)

Brian Paul, Vice President of Business Development at Oxford Networks, will be responsible for Oxford’s participation in the initiative. Brian has worked in the telecommunications industry for 15 years, and has held diverse Management positions including Customer Service, Sales & Marketing, Engineering, Legislative/Regulatory, and Business Development.

Scott Pratt, Financial Analyst/Management Accountant at FCHN, will be responsible for facilitating required audits and financial reports. During his time at FCHN, Scott has been financially responsible for tracking and reporting on many federal grants including HCAP Grant from the Department of Health and Human Services (DHHS) and the Health Resources and Services Administration (HRSA) to support Franklin Health Access RX; a Rural Health Care Services Outreach Grant Program from DHHS, HRSA; and Drug Free Communities Support Program from DHHS, Substance Abuse and Mental Health Services Administration (SAMHSA). Throughout this initiative, Scott will work with Ralph Johnson to assure required audits and financial reports are completed and submitted in a timely manner. They will meet monthly in separate meetings from the rest of the project work group.

**Work Plan**

Considerable planning work has already been completed. Plans for a possible second year of funding are also indicated below.

**YEAR ONE:**

<b>Task</b>	<b>Equipment needed</b>	<b>Cost</b>	<b>Responsible party</b>	<b>Targeted Completion Date</b>
Build fiber from the junction of Rt. 232 and Rt. 2 in Rumford Pt to Rumford Hospital (10.26 miles)	Cisco 15310 at Rumford Hospital	\$161,900	Oxford	Month 1, 1 <sup>st</sup> Quarter
Build fiber from end of Main street in Norway to Bridgton Hospital via 117 (17.63 miles)	Cisco 15310 at Bridgton Hospital	\$448,750	Oxford	By the end of Month 2, 1 <sup>st</sup> Quarter
Establish VPN from Rumford	Routers	\$5,000	CMHC	By the end of Month 3, 1 <sup>st</sup> Quarter
Build fiber to Bethel Area Health Center (.75	FTTP Nid	\$3,750	Oxford	By the end of Month 3, 1 <sup>st</sup> Quarter

<b>Task</b>	<b>Equipment needed</b>	<b>Cost</b>	<b>Responsible party</b>	<b>Targeted Completion Date</b>
miles)				
Build fiber from end of existing fiber line at Canton Bridge to Western Maine Health Care (Livermore Falls) (9.74 miles)	Cisco 15310 at Western Maine Health Center	\$154,100	Oxford	By the end of Month 1, 2 <sup>nd</sup> Quarter
Establish VPN to Bridgton Hospital	Routers	\$5,000	CMHC	By the end of Month 1, 2 <sup>nd</sup> Quarter
Establish VPN to Bethel Area Health Center	Routers	\$5,000	HealthReach	By the end of Month 1, 2 <sup>nd</sup> Quarter
Build fiber from Western Maine Health Care (Livermore Falls) to Franklin Memorial Hospital (Farmington) via Rt 133. (11.51 miles)	Cisco 15310 at Franklin Memorial Hospital	\$238,200.00	Oxford	By the end of Month 2, 2 <sup>nd</sup> Quarter
Franklin Memorial Hospital to Belgrade Regional Health Center (Belgrade Lakes) (24.66 miles)	Cisco 15310 at Belgrade Regional Health Center	\$624,500.00	Oxford	By the end of Month 3, 2 <sup>nd</sup> Quarter
Build from Belgrade Regional Health Center to the end of existing fiber in Waterville on Kennedy Memorial Drive (13.78 miles)		\$344,500	Oxford	By the end of Month 2, 3 <sup>rd</sup> Quarter
Upgrade Internet at Franklin Memorial Hospital		(labor costs only; not included in grant)	FCHN	By the end of Month 3, 3 <sup>rd</sup> Quarter

Task	Equipment needed	Cost	Responsible party	Targeted Completion Date
		request)		
Establish VPN to Western Maine Health Care (Livermore Falls)		(labor costs only; not included in grant request)	HealthReach	By the end of Month 3, 3 <sup>rd</sup> Quarter
Upgrade Video Conferencing Equipment	Cisco 3515 & training	\$53,900	FCHN	By the end of Month 3, 3 <sup>rd</sup> Quarter
Establish VPN to Rockomeka Family Practice (Livermore Falls)	Routers	(labor costs only; not included in grant request)	FCHN	By the end of Month 1, 4 <sup>th</sup> Quarter
Establish VPN to Belgrade Regional Health Center	Routers	\$10,000	HealthReach	By the end of Month 1, 4 <sup>th</sup> Quarter
Establish VPN to FMH Outpatient Services in Livermore Falls	Routers	\$5,000	FCHN	By the end of Month 2, 4 <sup>th</sup> Quarter
Enhance Maine Health Forum for multimedia capabilities	Servers (multimedia )	\$10,000	FCHN	By the end of Month 3, 4 <sup>th</sup> Quarter
Implement Citrix Access to EMR	Citrix equipment & training	\$102,003	FCHN	By the end of Month 3, 4 <sup>th</sup> Quarter

**YEAR TWO ANTICIPATED:**

Task	Equipment needed	Cost	Responsible party	Targeted Completion Date
Build from Jct of Oak Street and RT 2 in Farmington to Strong Area Health Center (11.4 miles)	Cisco 15310 at Strong Area Health Center	\$293,000.00	Oxford	By the end of Month 2, 5 <sup>th</sup> Quarter

<b>Task</b>	<b>Equipment needed</b>	<b>Cost</b>	<b>Responsible party</b>	<b>Targeted Completion Date</b>
Build from Strong Area Health Center to Mt Abram Region Health Center in Kingfield via Rt 145/142 (13.14 miles)	Cisco 15310 at Mt Abram Region Health Center	\$336,500	Oxford	By the end of Month 3, 5 <sup>th</sup> Quarter
Build from Mt Abram Region Health Center to Farmington Jct of Rt2 and 27 (23.32 miles)		\$583,000	Oxford	By the end of Month 2, 6 <sup>th</sup> Quarter
Establish VPN to Strong Area Health Center	Routers	\$10,000	HealthReach	By the end of Month 3, 6 <sup>th</sup> Quarter
Build from Jct of Rt 4 and Rt 145 in Strong to Rangeley Region Health Center (29.59 miles)	Cisco 15310 at Rangeley Region Health Center	\$747,750	Oxford	By the end of Month 1, 7 <sup>th</sup> Quarter
Establish VPN to Mt Abram Region Health Center	Routers	\$10,000	HealthReach	By the end of Month 1, 7 <sup>th</sup> Quarter
Establish VPN to Rangeley Region Health Center	Routers	\$10,000	HealthReach	By the end of Month 2, 7 <sup>th</sup> Quarter
Establish Referral Portal for FCHN providers		\$75,000	CMHC, FCHN	By the end of Month 2, 7 <sup>th</sup> Quarter

### IX. SUSTAINABILITY

Once the proposed infrastructure is in place, the fiber optic backbone established through this initiative will be sustained by regular subscriber fees to Oxford Networks. This project offers a uniquely sustainable model, as broadband access will be supported by subscription fees from community members and area organizations, in the same way that access is sustained in metropolitan areas. Future access will

not depend on future funding or significant contributions by the collaborators in this proposal.

It is anticipated that increased broadband access as a result of this initiative will support greater economic development in this region as more businesses and individuals move to this area, which in turn is likely to enable more community members to obtain home broadband access. This will support and sustain community access to broadband for both providers and consumers, which is key to many evolving health initiatives described earlier in this proposal.

As mentioned previously, FCHN's access to broadband will be supported into the future through the subsidized subscription fees from Oxford Networks. Oxford has committed to supporting FCHN's broadband needs in the future via a 50% discount on installation costs and a 20% discount on subscription costs for each 10 megabyte connection. As mentioned earlier, this will result in annual savings of \$79,200 per year in operational cost savings for FCHN. In the constantly evolving world of healthcare and constantly shifting reimbursement rates, this will be a significant asset to FCHN, and will support access to evolving technologies. This entire project ensures that individuals living in rural areas of western and central Maine have access to many of the same resources as those available at large healthcare facilities.

Appendix A: Quoted Implementation Costs



Year One

- 1) Build from Jct of Rt 232 and Rt 2 in Rumford Pt to Rumford Hospital 10.26M
- 2) Build from end of Main Street Norway to Bridgeton Hospital via 117 17.63M
- 3) Build to Bethel Area Health Center .75M
- 4) Build from End of fiber line at Canton Bridge to Western Maine Health Care in Livermore Falls 9.74M
- 5) Build from Western Maine Health Care in Livermore Falls to Franklin Memorial Hospital Farmington via Rt 133. 11.51M
- 6) Franklin Memorial Hospital in Farmington Maine to Belgrade Region Health Center in Belgrade Lakes 24.66M
- 7) Belgrade Region Health Center to the end of our fiber in Waterville on KMD 13.78M

Total Cost for 1<sup>st</sup> build during 1<sup>st</sup> year

\$1,975,700.00

Grant Share \$1,679,345.00

Oxfords Share \$ 296,356.00

Year Two

- 1) Build from Jct of Oak Street and RT 2 in Farmington to Strong Area Health Center 11.4M

2) Build from Strong Area Health Center to Mt Abram Region Health Center in Kingfield via Rt 145/142 13.4M

3) Build from Mt Abram Region Health Center to Farmington Jct of Rt2 and 27 23.32M

4) Build from Jct of Rt 4 and Rt 145 in Strong to Rangeley Region Health Center 29.59M

**Total Cost for 2<sup>nd</sup> build during 2<sup>nd</sup> year**

**\$1,960,250.00**

**Grant Share \$1,666,212.50**

**Oxfords Share \$ 294,037.50**

Attached is the spreadsheet detailing the length of the builds and the cost and equipment to be installed. We will need to set down if the grant goes through and discuss the cost of the services to be provided over this fiber. This cost provided is to build this public network out.

Sincerely,

Stacy Roberts  
Senior Account Manager  
Oxford Networks  
April 19, 2007

**Year One: Material & Construction Cost**

Build segment	Segment Length	Cost / Mile	Cisco 15310	Cisco Cost	Total Cost per Segment
1	10.26	15,000	1	8,000	\$ 161,900.00
2	17.63	25,000	1	8000	\$ 448,750.00
3	0.75	5000	0	8000	\$ 3,750.00
4	9.74	15000	1	8000	\$ 154,100.00
5	11.51	20000	1	8000	\$ 238,200.00
6	24.66	25000	1	8000	\$ 624,500.00
7	13.78	25000	0	8000	\$ 344,500.00
Total Cost for Year 1					\$ 1,975,700.00
Grant Share of					\$ 1,679,345.00

Cost Oxnet Share of Cost					\$ 296,355.00
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**Year Two: Material & Construction Cost**

Build segment	Segment Length	Cost / Mile	Cisco 15310	Cisco Cost	Total Cost per Segment
8	11.4	25,000	1	8,000	\$ 293,000.00
9	13.14	25,000	1	8,000	\$ 336,500.00
10	23.32	25,000		8,000	\$ 583,000.00
11	29.59	25,000	1	8,000	\$ 747,750.00
Total Cost for Year 2					\$ 1,960,250.00
Grant Share of Cost					\$ 1,666,212.50
Oxnet Share of Cost					\$ 294,037.50

**Appendix B: Healthcare Facilities in the Network**

The following healthcare facilities will be included in the network. Their addresses, Rural Urban Commuting Area (RUCA) codes, and contact information are as follows:

**Franklin Community Health Network**

**BY TOWN** - 3 end-users in 2 towns at 3 separate addresses will be connected via the proposed network. These sites are indicated in **BOLDED TYPEFACE**.

All technical questions for FCHN should be directed to **Ralph Johnson, Chief Information Officer** at 207-779-3154 (phone) or 207-779-2548 (fax), or via email at [rjohnson@fchn.org](mailto:rjohnson@fchn.org).

Facility	RUC A Code	Phone / Fax / Contact E-Mail
<b>FARMINGTON</b>		
Franklin Community Health Network 111 Franklin Health Commons Farmington, ME 04938	7	Contact: Richard Batt Phone: 207-779-2265 Fax: 207-779-2548 (FCHN Administration) E-Mail: <a href="mailto:batt@fchn.org">batt@fchn.org</a>
<b>Franklin Memorial Hospital</b> <b>111 Franklin Health Commons</b> <b>Farmington, ME 04938</b>	7	Contact: Jerry Cayer, COO Phone: 207-779-2456 Fax: 207-779-2548 (FCHN Administration) E-Mail: <a href="mailto:jcayer@fchn.org">jcayer@fchn.org</a>
Evergreen Behavioral Services 111 Franklin Health Commons Farmington, ME 04938	7	Contact: April Guagenti, Director Phone: 207-779-2444 Fax: 207-779-2460 E-Mail: <a href="mailto:aguagenti@fchn.org">aguagenti@fchn.org</a>
Pine Tree Medical Associates 111 Franklin Health Commons Farmington, ME 04938	7	Contact: Leslie Hawkins, Administrator Phone: 207-779-2470 Fax: 207-779-2303 E-Mail: <a href="mailto:lhawkins@fchn.org">lhawkins@fchn.org</a>
Pine Tree Internal Medicine Mt. Blue Health Center 131 Franklin Health Commons	7	Contact: Karen Cowan, Office Manager Phone: 207-779-2619 Fax: 207-779-0646

Facility	RUC A Code	Phone / Fax / Contact E-Mail
Farmington, ME 04938		E-Mail: kcowan@fchn.org
Pine Tree Pediatrics Mt. Blue Health Center 131 Franklin Health Commons Farmington, ME 04938	7	Contact: Michelle Sullivan, Office Manager Phone: 207-779-2698 Fax: 207-778-0133 E-Mail: msullivan@fchn.org
Pine Tree Family Practice 116 Franklin Avenue Farmington, ME 04938	7	Contact: Celeste Farrington, Office Manager Phone: 207-779-3154 Fax: 207-778-3102 E-Mail: cfarrington@fchn.org
Pine Tree Women's Care 200 Livermore Falls Rd. Farmington, ME 04938	7	Contact: Mavis Dubord, Office Manager Phone: 207-778-6405 Fax: 207-778-2886 E-Mail: mdubord@fchn.org
Franklin Orthopedics 105 Mt. Blue Circle Suite 1 Farmington, ME 04938	7	Contact: Sharon Myrick, Office Manager Phone: 207-779-6177 Fax: 207-778-6072 E-Mail: smyrick@fchn.org
Franklin Surgery 167 Livermore Falls Road Farmington, Maine 04938	7	Contact: Joan Toothaker, Office Manager Phone: 207-778-6579 Fax: 207-778-6409 E-Mail: jtoothaker@fchn.org
Franklin Urology 126 Middle Street Farmington, Maine 04938	7	Contact: Priscilla Bartlett, Office Manager Phone: 207-778-4353 Fax: 207-778-4238 E-Mail: pbartlett@fchn.org
<b>LIVERMORE FALLS</b>		
<b>Franklin Memorial Hospital Outpatient Services 76 Main Street - Central Plaza, Livermore Falls, Maine 04254</b>	9.1	Contact: Heidi Greenleaf, Office Coordinator Phone: 207-897-2600 Fax: 207-897-2918 E-Mail: hgreenleaf@fchn.org

Facility	RUC A Code	Phone / Fax / Contact E-Mail
<b>Rockomeka Family Practice</b> <b>38 Union St</b> <b>Livermore Falls, ME 04254</b>	9.1	Contact: Wendy Hall, Office Manager Phone: 207-897-6601 Fax: 207-897-4339 E-Mail: whall@fchn.org
<b>WILTON</b>		
Healthy Community Coalition 20 Church St. Wilton, ME 04294	10.3	Contact: Leah Binder, Executive Director Phone: 207-645-5101 Fax: 207-645-4138 E-Mail: lbinder@fchn.org
Wilton Family Practice 75 Allen St. Wilton, ME 04294	10.3	Contact: Lisa Johnston, Office Manager Phone: 207-779-3184 Fax: 207-645-3259 E-Mail: ljohnston@fchn.org

**HealthReach Community Health Centers**

**BY TOWN** - 3 end-users in 3 towns at 3 separate addresses will be connected via the proposed network in the first year. These sites are indicated in **BOLDED TYPEFACE**. 3 end-users in 3 towns at 3 separate addresses will be connected via the proposed network in the second year.

All technical questions for HealthReach should be directed to **Daniel Burgess**, Director of Application Development at 207-861-3455 (phone) or 207-861-3419 (fax), or via email at [daniel.burgess@mainegeneral.org](mailto:daniel.burgess@mainegeneral.org).

Facility	RUC A Code	Phone / Fax / Contact E-Mail
<b>BELGRADE</b>		
<b>Belgrade Regional Health Center</b> <b>4 Clement Way</b> <b>P.O. Box 274</b> <b>Belgrade Lakes, ME 04918</b>	5	Contact: Deborah Rocque, Practice Manager Phone: 207-495-3323 Fax: 207-495-3353 E-Mail: <a href="mailto:deborah.rocque@healthreach.org">deborah.rocque@healthreach.org</a>
<b>BETHEL</b>		

Facility	RUC A Code	Phone / Fax / Contact E-Mail
<b>Bethel Family Health Center</b> 32 Railroad St. P.O. Box 1367 Bethel, ME 04217	10.6	Contact: Diana Milot, Practice Manager Phone: 207-824-2193 Fax: 207-824-3005 E-Mail: diana.milot@healthreach.org
<b>KINGFIELD</b>		
Mt. Abram Regional Health Center 25 Depot St. P.O. Box 188 Kingfield, ME 04947	10	Contact: Carolyn Tranten, Practice Manager Phone: 207-265-4555 Fax: 207-265-5004 E-Mail: carolyn.tranten@healthreach.org
<b>LIVERMORE FALLS</b>		
<b>Western Maine Family Health Center</b> 80 Main Street Central Plaza Livermore Falls, ME 04254	9.1	Contact: Diane Levoie, Practice Manager Phone: 207-897-4345 Fax: 207-897-2321 E-Mail: diane.levoie@healthreach.org
<b>RANGELEY</b>		
Rangeley Regional Health Center 42 Dallas Hill Road PO Box 569 Rangeley, ME 04970	10	Contact: Kate Quimby, Practice Manager Phone: 207-864-3303 Fax: 207-864-2969 E-Mail: kate.quimby@healthreach.org
<b>STRONG</b>		
Strong Area Health Center 177 N. Main Street PO Box 189 Strong, ME 04983	10.3	Contact: Jewellyn Baker, Practice Manager Phone: 207-684-4010 Fax: 207-684-3368 E-Mail: jewellyn.baker@healthreach.org

**RUCA GRID**

**Central Maine Healthcare**

This RUCA grid represents the provider network of CMHC – i.e. 80+ practice end users at more than 40 separate addresses in 12 towns. The CMHC provider/practice list, and the sites at which providers are located continues to grow and change on a sometimes weekly basis. For FY 2008, Central Maine Medical

Center employed physician practices alone are projected to grow to 152 providers at 40 sites. Broadband redundancy is currently being established in Lewiston – but for the providers across the entire network to maximize new and emerging electronic based initiatives, service and redundancy must be available across the ENTIRE system. Therefore, we are showing the CMHC healthcare system in its entirety.

As shown in our project WORKPLAN and TIMELINE, the *Rural Western and Central Maine Broadband Initiative* will bring broadband access and critical redundancy to rural parts of this covered region in year one, with access provided to additional sites in year two. We are providing this extended RUCA grid to show the potential impact of this broadband implementation project by showing the general breadth and size of the CMHC provider/practice network. : **In year one, fiber optic cable will be brought to Bridgton Hospital and Rumford Hospital. Both of these sites are identified on the RUCA list in BOLDED TYPEFACE.**

Just as importantly, this list does NOT include the residential addresses of providers, though the *Rural Western and Central Maine Broadband Initiative* will also bring broadband into communities and parts of communities where providers (and consumers!) live.

**All technical questions for CMHC should be directed to Cherri Waters, Director of eHealth at 207-755-3807 (phone) or 207-753-7233 (fax), or via email at cherri.waters@acs-hsc.com.**

Facility	RUCA Code	Phone / Fax / Contact	E-Mail
<b>BRIDGTON</b>			
<b>Bridgton Hospital hospital</b> 10 Hospital Drive Bridgton, ME 04009	10.4	Contact: John Carlson, CEO Phone: (207) 647-6032 Fax: 207-647-6006 E-Mail: carlsonj@bh.cmhc.org	
<i>Drs. Patt, Passero</i> General Surgery 10 Hospital Drive Bridgton, ME 04009	10.4	Contact: Tami Kelley – Practice Mgr Phone: (207) 795-5987 Fax: 207-647-6006 E-Mail: KelleyT@cmhc.org	
Bridgton OB/GYN 15 Hospital Drive Bridgton, ME 04009 ( <i>Drs. Cilley, Lastra</i> )	10.4	Contact: Tami Kelley – Practice Mgr Phone: (207) 795-5987 Fax: 207-647-6006 E-Mail: KelleyT@cmhc.org	
Bridgton Internal Med 25 Hospital Drive Bridgton, ME 04009	10.4	Contact: Tami Kelley – Practice Mgr Phone: (207) 795-5987 Fax: 207-647-6006	

Facility	RUCA Code	Phone / Fax / Contact E-Mail
<i>(Drs. Dater, Kleinert, Laband, Roy)</i>		E-Mail: KelleyT@cmhc.org
Bridgton Pediatrics 25 Hospital Drive Bridgton, ME 04009 <i>(Drs. Chan, Ryan, Sarindus)</i>	10.4	Contact: Tami Kelley – Practice Mgr Phone: (207) 795-5987 Fax: 207-647-6006 E-Mail: KelleyT@cmhc.org
N. Bridgton Family Practice 14 Wyonegonic Road Bridgton, ME 04009 <i>(Drs. C. Smith, S. Smith)</i>	10.4	Contact: Tami Kelley – Practice Mgr Phone: (207) 795-5987 Fax: 207-647-6006 E-Mail: KelleyT@cmhc.org
<i>Dr. R. Gaindh – Contracted Group</i> Pathologist South High Street Bridgton, ME 04009	10.4	Contact: Susan Hamel – Regional Lab Mgr Phone: 207-647-6200 Fax: 207-647-6006 E-Mail: hamelsue@bh.cmhc.org
<i>Dr. R. Doyle</i> General Surgery 87 High Street Bridgton, ME 04009	10.4	Contact: Dr. Robert Doyle Phone: 207-647-8841 Fax: - E-Mail: DoyleRo@bh.cmhc.org
<i>(Dr. Frenette)</i> Orthopedic Surgery 103 High Street Bridgton, ME 04009 (207) 647-4214	10.4	Contact: Tami Kelley – Practice Mgr Phone: (207) 795-5987 Fax: 207-647-6006 E-Mail: KelleyT@cmhc.org
<b>RUMFORD</b>		
<b>Rumford Hospital</b> <u>hospital</u> 420 Franklin Street Rumford, ME 04276	7	Contact: John Welsh, CEO Phone: 207-369-1032 Fax: 207-364-4513 E-Mail: welshjo@cmhc.org
Rumford Orthopedic Clinic 420 Franklin Street Rumford, ME 04276	7	Contact: Sonjia Jackson-Ellis – Coord Clinics Phone: 207-369-1130 Fax: 207-364-4513 E-Mail: JacksoSo@cmhc.org
Swift River Health Center <u>health center</u> 430 Franklin Street	7	Contact: Kathy Schandelmeier, Practice Mgr Phone: 207-369-1152

Facility	RUCA Code	Phone / Fax / Contact E-Mail
Rumford, ME 04276 ( <i>Drs. Kreckel, Kroger</i> )		Fax: 207-364-4513 E-Mail: SchandKa@rh.cmhc.org
River Valley Internal Medicine 431 Franklin Street Rumford, ME 04276 ( <i>Drs. Aniel, Lucas, Ledesman</i> )	7	Contact: Kathy Schandelmeier, Practice Mgr Phone: 207-369-1152 Fax: 207-364-4513 E-Mail: SchandKa@rh.cmhc.org
Rumford Hosp Surgical Assoc 431 Franklin Street Rumford, ME 04276 ( <i>Ds. Aslam, Kiley</i> )	7	Contact: John Welsh, CEO Phone: 207-369-1032 Fax: 207-364-4513 E-Mail: welshjo@cmhc.org
Rumford Commun Home <u>long term care</u> 11 JFK Lane Rumford, ME 04276	7	Contact: John Welsh, CEO Phone: 207-369-1032 Fax: 207-364-4513 E-Mail: welshjo@cmhc.org

**FRYEBURG**

Family Med of Fryeburg 253 Bridgton Road Fryeburg, ME 04037 ( <i>Drs. Royer, Gerchman, Nash</i> )	10	Contact: Tami Kelley – Practice Mgr Phone: (207) 795-5987 Fax: 207-647-6006 E-Mail: KelleyT@cmhc.org
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**DIXFIELD**

Elsemore Dixfield Center <u>health center</u> 100 Weld Street Dixfield, ME 04224 ( <i>Dr. Marden</i> )	10.6	Contact: Kathy Schandelmeier, Practice Mgr Phone: 207-369-1152 Fax: 207-364-4513 E-Mail: SchandKa@rh.cmhc.org
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**GRAY**

Gray Family Hlth Center <u>health center</u> (Gray Family Practice) 116 Shaker Hill Road Gray, ME 04039	2	Contact: Reggie Albert - Administrator Phone: 207-795-2811 Fax: 207-795-2303 E-Mail: AlbertR@cmhc.org
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Facility	RUCA Code	Phone / Fax / Contact E-Mail
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*(Drs. Benson, Van Mourik)*

**LISBON**

Lisbon Family Practice 2 Bisbee Street Lisbon, ME 04250	2	Contact: Reggie Albert - Administrator Phone: 207-795-2811 Fax: 207-795-2303 E-Mail: AlbertR@cmhc.org
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**MECHANIC FALLS**

Mechanic Falls Family Practice 22 Pleasant Street Mechanic Falls, ME 04256 <i>(Drs. Bosma, Deschenes)</i>	2	Contact: Reggie Albert - Administrator Phone: 207-795-2811 Fax: 207-795-2303 E-Mail: AlbertR@cmhc.org
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**NAPLES**

Naples Family Practice 410 Roosevelt Trail (Route 302) Naples, ME 04055 <i>(Drs. Barter, Wright)</i>	2	Contact: Tami Kelley – Practice Mgr Phone: (207) 795-5987 Fax: 207-647-6006 E-Mail: KelleyT@cmhc.org
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**POLAND**

Community Hlth Center <b><u>health</u></b> <b><u>center</u></b> (Poland Family Practice) 364 Maine Street Poland, ME 04274 <i>(Drs. Little, Raby)</i>	2.1	Contact: Reggie Albert - Administrator Phone: 207-795-2811 Fax: 207-795-2303 E-Mail: AlbertR@cmhc.org
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**TOPSHAM**

Central ME Neurology One Main Street Bowdoin Mill 202 Topsham, ME 04086 <i>(Dr. Bobker)</i>	4.2	Contact: Dr. Bobker Phone: 207-795-2930 Fax: 207-795-2000 E-Mail: BobkerDa@cmhc.org
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**LEWISTON**

Central Maine Healthcare <b><u>parent org</u></b> 29 Lowell Street	1	Contact: Peter Chalke, CEO Phone: 207-795-0111 Fax: 207-795-2303
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Facility	RUCA Code	Phone / Fax / Contact E-Mail
Lewiston, ME 04240		E-Mail: ChalkeP@cmhc.org
Central Maine Medical Center <u>hospital</u> 300 Main Street Lewiston, ME 04240	1	Contact: Peter Chalke, CEO Phone: 207-795-0111 Fax: 207-795-2303 E-Mail: ChalkeP@cmhc.org
Central ME Heart & Vascular Inst 300 Main Street Lewiston, ME 04240 <i>(Drs. Bender, Lawrence, Phillips, Langburd, Lanzieri, Soroff, Cochran, Frumiento)</i>	1	Contact: Susan Horton, Exec Dir Phone: 207-753-3736 Fax: 207-753-3903 E-Mail: HortonSu@cmhc.org
CMMC Critical Care 300 Main Street Lewiston, ME 04240 <i>(Dr. Sterling)</i>	1	Contact: Karen Boyer, Practice Mgr Phone: 207-795-5544 Fax: 207-795-5645 E-Mail: BoyerKa@cmhc.org
CMMC Emergency Medicine 300 Main Street Lewiston, ME 04240 <i>(Dr. Oliver)</i>	1	Contact: Peggy McRae, Mgr Phone: 207-795-2217 Fax: 207-795-7201 E-Mail: McRaePe@cmhc.org
CMMC Hematology / Oncology 300 Main Street Lewiston, ME 04240 <i>(Drs. Erickson, Bertram)</i>	1	Contact: Jeff Hazel, Dir Med Oncol Phone: 207-795-7541 Fax: 207-795-2303 E-Mail: HazelJef@cmhc.org
CMMC (Adult) Hospitalist Program 300 Main Street Lewiston, ME 04240 <i>(Drs. Verrill, Condit, Cyr, Dickens, Geyer, Koskinen, Lauver, Leighton, Lucarelli)</i>	1	Contact: Jim Hagen, VP CM Physician Pract Phone: 207-795-5971 Fax: 207-795-7182 E-Mail: HagenJ@cmhc.org
CMMC (Pediatric) Hospitalist Program 300 Main Street Lewiston, ME 04240 <i>(Drs. Baker, Connelly, Goodwin, Hale, Hemingway, Jacobs, Marsh, Perlman, Scholer)</i>	1	Contact: Jim Hagen, VP CM Physician Pract Phone: 207-795-5971 Fax: 207-795-7182 E-Mail: HagenJ@cmhc.org
CMMC Neonatology	1	Contact: Karen Fletcher, Practice Mgr

Facility	RUCA Code	Phone / Fax / Contact E-Mail
300 Main Street Lewiston, ME 04240 <i>(Drs. Perlman, Connelly)</i>		Phone: 207-795-5751 Fax: 207-795-5749 E-Mail: FletchK@cmhc.org
Great Falls Pathology 300 Main Street Lewiston, ME 04240 <i>(Drs. Eng, Jackson, Karn, Novak, Skinner)</i>	1	Contact: Donna Beaulieu, Mgr Lab Phone: 207-795-2330 Fax: 207-753-7211 E-Mail: Beaulieu@cmhc.org
General Surgery 10 High Street Lewiston, ME 04240 <i>(Drs. D'Augustine, Siviski, Ikossi, O'Rourke, O'Sullivan, Ingraham, Rietchel, Schumacher)</i>	1	Contact: Lisa Ledoux, Practice Mgr Phone: 207-795-5767 Fax: 207-795-2732 E-Mail: LedouxLi@cmhc.org
CMMC Bariatric Surgery 10 High Street Lewiston, ME 04240 <i>(Dr. Loggins)</i>	1	Contact: Lisa Ledoux, Practice Mgr Phone: 207-795-5767 Fax: 207-795-2732 E-Mail: LedouxLi@cmhc.org
CMMC Bennett Breast Center 10 High Street Lewiston, ME 04240 <i>(Drs. Rietchel, D'Augustine)</i>	1	Contact: Kathryn Varney, Clin Coord Phone: 207-795-2100 Fax: 207-795-2119 E-Mail: varneyka@cmhc.org
CMMC Diabetes Ed Center 10 High Street Lewiston, ME 04240 <i>(diabetes educators)</i>	1	Contact: Phone: 207-795-2735 Fax: E-Mail:
<i>(Dr. Ikossi)</i> Thoracic & Oncologic Surgery 10 High Street Lewiston, ME 04240	1	Contact: Private Practice – Dr. Ikossi Phone: 207-782-5424 Fax: - E-Mail: IkossiM@cmhc.org
Central Maine Ophthalmology 10 High Street Lewiston, ME 04240 <i>(Dr. Hamzavi)</i>	1	Contact: Lisa Ledoux, Practice Mgr Phone: 207-795-5767 Fax: 207-795-2732 E-Mail: LedouxLi@cmhc.org
<i>(Drs. Jackson, Sylvester, Kendall)</i> Rheumatologists 10 High Street Lewiston, ME 04240	1	Contact: Private Practice - Phone: 207-784-1323 Fax: - E-Mail: -

Facility	RUCA Code	Phone / Fax / Contact E-Mail
Central ME Provider Group 12 High Street Lewiston, ME 04240	1	Contact: Jim Hagen, VP CM Physician Pract Phone: 207-795-5971 Fax: 207-795-7182 E-Mail: HagenJ@cmhc.org
<i>Dr. Hamilton</i> Pediatric Cardiology 12 High Street Lewiston, ME 04240	1	Contact: Karen Fletcher, Practice Mgr Phone: 207-795-5751 Fax: 207-795-5749 E-Mail: FletchK@cmhc.org
Central ME Surgical Associates 12 High Street Lewiston, ME 04240 <i>(Drs. Crowell, Gammaitoni, Schumacher, Hopperstead)</i>	1	Contact: Lisa Ledoux, Practice Mgr Phone: 207-795-5767 Fax: 207-795-2732 E-Mail: LedouxLi@cmhc.org
Central ME Family Practice 12 High Street Lewiston, ME 04240 <i>(Drs Gushue, Wyman, Stadnicki, Thorpe)</i>	1	Contact: Debora Ouellette, Clinical Coord Phone: 207-795-4833 Fax: 207-795-2303 E-Mail: OulletD@cmhc.org
Central ME Internal Med 12 High Street Lewiston, ME 04240 <i>(Drs. Cloutier, Ferguson, Joseph, Lee, Ross, Cabatingar, Kohli)</i>	1	Contact: Tami Kelley – Practice Mgr Phone: (207) 795-5987 Fax: 207-647-6006 E-Mail: KelleyT@cmhc.org
Central ME OB/GYN 12 High Street Lewiston, ME 04240 <i>(Drs. Carlson, Commons, Page, Shanahan, Weiner-Smith)</i>	1	Contact: Anne LaFreniere, Coord Phone: (207) 795-2758 Fax: 207-795-2303 E-Mail: LafrenA@cmhc.org
Physical Medicine & Rehab Services 12 High Street Lewiston, ME 04240 <i>(Dr. Lorenzo)</i>	1	Contact: Kathy Sonagere Phone: 207-795-2590 Fax: 207-795-2589 E-Mail: Sonagere@cmhc.org
Central ME Pediatrics 12 High Street Lewiston, ME 04240 <i>(Drs. Marsh, Jacobs, Hale)</i>	1	Contact: Karen Fletcher, Practice Mgr Phone: 207-795-5751 Fax: 207-795-5749 E-Mail: FletchK@cmhc.org

Facility	RUCA Code	Phone / Fax / Contact E-Mail
CMMC Neurosurgery 12 High Street Lewiston, ME 04240 ( <i>Drs. Candia, Mujica</i> )	1	Contact: Lisa Ledoux, Practice Mgr Phone: 207-795-5767 Fax: 207-795-2732 E-Mail: LedouxLi@cmhc.org
Central Maine Bariatric Surgery 12 High Street Lewiston, ME 04240 ( <i>Dr Loggins</i> )	1	Contact: Lisa Ledoux, Practice Mgr Phone: 207-795-5767 Fax: 207-795-2732 E-Mail: LedouxLi@cmhc.org
Central Maine Gastroenterology 12 High Street Lewiston, ME 04240 ( <i>Drs. Kohli, Lewandowski, Monzel, O'Connor, Sivulich</i> ) <u>Note:</u> Drs. Sivulich, Monzel & O'Connor are located at 77 Bates St, Lewiston)	1	Contact: Crystal Buchanan, Clin Coor Bariatr Phone: 207-795-5710 Fax: 207-795-2732 E-Mail: BuchanCr@cmhc.org
Wolf Eye Associates 249 Main Street Lewiston, ME 04240 ( <i>Dr. Wolf</i> )	1	Contact: Private Practice – Dr. K. Wolf Phone: (207) 783-9653 Fax: - E-Mail: WolfK@cmhc.org
( <i>Dr. Bagley</i> ) Oral-Maxillofacial 369 Main Street Lewiston, ME 04240	1	Contact: Private Practice – Dr. Bagley Phone: (207) 782-0044 Fax: - E-Mail: -
( <i>Dr. Kippax</i> ) Oral-Maxillofacial 501 Main Street Lewiston, ME 04240	1	Contact: Private Practice – Dr. J. Kippax Phone: (207) 784-9327 Fax: - E-Mail: KippaxJ@cmhc.org
Central ME Surgical – Urology 287 Main Street Lewiston, ME 04240 ( <i>Drs. Parker, Mailhot</i> )	1	Contact: Angela Dubuc, Nurse Mgr Phone: 207-795-2725 Fax: 207-795-2303 E-Mail: DubucAn@cmhc.org
Women's Specialty Center 287 Main Street Lewiston, ME 04240 ( <i>Drs. Gaylord, Drouin, Roth</i> )	1	Contact: Tina Love, Practice Mgr Phone: 207-795-7175 Fax: 207-795-7179 E-Mail: LoveTi@cmhc.org

Facility	RUCA Code	Phone / Fax / Contact E-Mail
Central ME Endocrinology 287 Main Street Lewiston, ME 04240 (Drs. Fairfield, Peralta)	1	Contact: Tina Love, Practice Mgr Phone: 207-795-7175 Fax: 207-795-7179 E-Mail: LoveTi@cmhc.org
Central Maine Fertility Center 287 Main Street Lewiston, ME 04240 (Dr. Drouin)	1	Contact: Tina Love, Practice Mgr Phone: 207-795-7175 Fax: 207-795-7179 E-Mail: LoveTi@cmhc.org
Central Maine Plastic Surgery 287 Main Street Lewiston, ME 04240 (Dr. Bonawitz)	1	Contact: Lisa Ledoux, Practice Mgr Phone: 207-795-5767 Fax: 207-795-2732 E-Mail: LedouxLi@cmhc.org
Bladder Control Center 287 Main Street Lewiston, ME 04240 (Drs. Drouin, Gaylord, Roth)	1	Contact: Angela Dubuc, Nurse Mgr Phone: 207-795-2725 Fax: 207-795-2303 E-Mail: DubucAn@cmhc.org
Dr. A. Carey Allergist 287 Main Street Lewiston, ME 04240	1	Contact: Private Practice – Dr. Carey Phone: (207) 782-2420 Fax: - E-Mail: careya@cmhc.org
Dr. Leong Gynecology 297 Main Street Lewiston, ME 04240	1	Contact: Private Practice – Dr. K. Leong Phone: (207) 783-9433 Fax: LeongK@cmhc.org E-Mail:
Nephrology Assoc of Central Maine 710 Main Street Lewiston, ME 04240 (Drs. DeSoi, J. Smith, Thornton, Walworth)	1	Contact: Private Practice Phone: (207) 783-1449 Fax: - E-Mail: -
CMMC Fam Practice Residency 76 High Street Lewiston, ME 04240 (Drs. Claxton, Woolever, Cogle, Mock, Picker, Sherr, Kenne, Wilson)	1	Contact: Reggie Albert - Administrator Phone: 207-795-2811 Fax: 207-795-2303 E-Mail: AlbertR@cmhc.org
Central ME Infectious Diseases 76 High Street Lewiston, ME 04240	1	Contact: Jennifer Jordan, Practice Mgr Phone: 207-795-5523 Fax: 207-795-2726

Facility	RUCA Code	Phone / Fax / Contact E-Mail
<i>(Drs. Harris, Limoges, Maguire)</i>		E-Mail: JordanJ@cmhc.org
Pulmonary & Critical Care & Sleep Lab 76 High Street Lewiston, ME 04240 <i>(Drs. Duval, Guzowski, Ramser, Wilson)</i>	1	Contact: Karen Boyer Phone: 207-795-5544 Fax: 207-795-5645 E-Mail: BoyerKa@cmhc.org
<i>Dr. Fakhery</i> General Surgery 76 High Street Lewiston, ME 04240	1	Contact: Private Practice Phone: (207) 784-9512 Fax: - E-Mail: Dr. Fakher= fakherB@cmhc.org
Central Maine Eye Care 181 Russell Street Lewiston, ME 04240 <i>(Drs. Daniels, Lonsdale, Hamzavi)</i>	1	Contact: Private Practice Phone: (207) 784-1814 Fax: - E-Mail: Dr. Daniels =DanielM@cmhc.org
Neurology Associates 99 Campus Avenue Lewiston, ME 04240 <i>(Drs. Burke, Robinson)</i>	1	Contact: Susan Theiss, Practice Mgr Phone: 207-795-2927 Fax: 207-795-2000 E-Mail: TheissSu@cmhc.org
<i>Drs. Flynn, Lounsbury</i> Ear/Nose/Throat 12 Bates Street Lewiston, ME 04240	1	Contact: Anita Maheux, Office Manager Phone: 207- 784-4539 Fax: 207-784-2868 E-Mail: -
Bates Mill Dermatology 70 Lincoln Street, #6 Lewiston, ME 04240 <i>(Dr. Bouman)</i>	1	Contact: Private Practice - Dr. Peter Bouman Phone: 207-795-7540 Fax: - E-Mail: BoumanP@cmhc.org

**AUBURN**

Bolster Heights <b>care</b> 26 Bolster Street Auburn, ME 04210	<b><u>long term</u></b>	1	Contact: Robert Armstrong, Dir Longterm Care Phone: 207-784-1364 Fax: 207-782-2024 E-Mail: armstrob@cmhc.org
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Facility	RUCA Code	Phone / Fax / Contact E-Mail
Pain and Headache Center 10 Minot Avenue Auburn, ME 04210 <i>(Dr. LaLonde)</i>	1	Contact: Susan Theiss, Practice Mgr Phone: 207-795-2927 Fax: 207-795-2000 E-Mail: TheissSu@cmhc.org
Central Maine Neurology 10 Minot Avenue Auburn, ME 04210 <i>(Drs. Waybright, Ross, Lalonde, Lorenzo, &amp; Bobker/Topsham)</i>	1	Contact: Susan Theiss, Practice Mgr Phone: 207-795-2927 Fax: 207-795-2000 E-Mail: TheissSu@cmhc.org
Central Maine Orthopedics 690 Minot Avenue Auburn, ME 04210 <i>(Drs. Adey, Brown, J Bush, M Bush, Cain, Eriksson, Fallon, Frenette, Moody, Regan, Timoney)</i>	1	Contact: Jeff Wigton, Dir Admin Support Svces Phone: 207-783-1328 Fax: 207-795-0260 E-Mail: -
Minot Avenue Family Practice 789 Minot Avenue Auburn, ME 04210 <i>(Drs. Farrago, Kase)</i>	1	Contact: Muriel Michaud, Office Coord Phone: 207-795-8480 Fax: 207-795-8490 E-Mail: MichaudMu@cmhc.org
Androscoggin Cardiology Associates 2 Great Falls Plaza Auburn, ME 04210 <i>(Drs. Abisalih, McCann, Weiss)</i>	1	Contact: Private Practice - Phone: 207-782-4022 Fax: - E-Mail: -
Central Maine Pulmonary Associates 2 Great Falls Plaza Auburn, ME 04210 <i>(Drs. Harder, Lund, Sanal)</i>	1	Contact: Private Practice - Phone: 207-784-5489 Fax: - E-Mail: -
Family Healthcare Associates 190 Stetson Road Auburn, ME 04210 <i>(Drs. Elias, Skelton, Tardiff, Burns, Rifkin)</i>	1	Contact: Rene Hussar Phone: 207-784-7388 Fax: 207-795-2043 E-Mail: -
<i>Dr. M. Matthews</i> 117 Goff Street Auburn, ME 04210	1	Contact: Private Practice – Dr. M. Matthews Phone: 207-795-6970 Fax: - E-Mail: MattheM@cmhc.org

Facility	RUCA Code	Phone / Fax / Contact E-Mail
Maine Oral & Maxillofacial Surgery 211 Mt Auburn Street Auburn, ME 04210 <i>(Dr. Wang)</i>	1	Contact: Private Practice – Dr. T. Wang Phone: 207-783-4705 Fax: - E-Mail: WangT@cmhc.org

**Appendix C: Map of Proposed Network**

**Map is attached as pdf file. (filename:  
Proposed\_Network\_Map.pdf)**

Note: On the attached map, the fiber optic backbone constructed in the first year is indicated in blue. The fiber optic backbone constructed in the second year is indicated in red.

**Appendix D: Project Work Team: Curricula Vitae**

i. Ralph Johnson

Ralph W. Johnson II  
92 E Dixfield Rd  
Dixfield, ME 04224  
(207) 645-3618  
ralph@ralphandnancy.com

**PERSONAL:**

Date of Birth: 12/23/60  
Health: Excellent  
Marital Status: Married

**EDUCATION:**

New Hampshire Technical Institute, Concord, NH. Associates Degree in Electronic Data Processing

**WORK HISTORY:**

9/06 – Present: Franklin Community Health Network, Farmington, ME  
Chief Information Officer

Responsibilities:

- Supervise Information Services staff
- Plan and manage the deployment of computer technology, telecommunications, financial software and clinical applications for the hospital, nine physician practices a mental health services organization, a county wide ambulance service and the Healthy Community Coalition

Major Accomplishments:

- Implementation of an e-prescribing solution for nine physician practices
- Implementation of a balanced score card solution for monitoring financial performance

6/99 – 9/06: Maine Medical Center, Portland, ME  
Interim Associate Vice President of Information Services and Director of Computer Technology

Responsibilities:

- Supervise infrastructure support staff, financial systems programmers and analysts, telecommunications staff, Helpdesk and Project Management staff, Clinical Application Staff (150 staff total)

- Serve as Project leader for major computer and telecommunications implementations
- Manage an operating budget of approximately \$22 Million
- Manage a capital budget of approximately \$7 Million

Major Accomplishments:

- Reduced telecommunications operating budget \$275,000 through technology implementations and negotiations with vendors
- Led the HIPAA implementation for the medical center and achieved compliance with privacy, electronic transactions and security regulations 14 months ahead of the final deadline
- Led the implementation of a data center for MaineHealth that serves eight hospitals, saving \$350,000 annually in operating expenses
- Led the implementation of an Enterprise Master Patient Index resolving patient identification for 26 organizations
- Implemented a cost accounting system
- Implemented a patient tracking, transport and bed placement system
- Presented HIPAA compliance strategies for the Maine chapter of HFMA at multiple annual meetings and education seminars
- Conducted HIPAA security audits and education for Synernet members
- Developed a 3 year IS strategic plan
- Implemented a Balanced Scorecard on the Intranet using SAS
- Deployed both a Physician and a Consumer portal on the Internet
- Serving on the Steering committee that is implementing the Department of Health's Southern Maine Regional Resource Center for the Health Alert Network system

4/96 – 6/99: Portsmouth Regional Hospital and Pavilion, Portsmouth, NH  
Director of Information Services

Responsibilities:

- Supervise Data Processing and Computer Support Personnel
- Provide a Customer oriented support environment
- Serve as Project Leader for major computer implementations
- Ensure JCAHO compliance for Information Management
- Coordinate information needs with Corporate Headquarters
- Recommend and acquire computer hardware and software
- Perform budget planning and execution

Major Accomplishments:

- Implemented the KRONOS Time and Attendance computer system
- Implemented the Meditech clinical information system

11/84 - 4/96: Mid-Maine Medical Center, Waterville, ME  
Director of Information Services

Responsibilities:

- Initially hired as a systems programmer, promoted in January 1988 to be a supervisor, 1990 as Director
- Supervise Systems Programmers, Computer Operators, Network Engineers, Data Entry Personnel, Clinical Analysts and Financial Programmers
- Serve as Project leader for major computer implementations
  - Serve as Database manager for the TDS HCM clinical care application software on an IBM 4381-P23
- Direct the capacity planning strategy
- Recommend and acquire computer hardware and software
- Perform budget planning and execution

Major Accomplishments:

- Implemented the SMS Financial computer systems
- Developed a 3 year Information Systems Strategic Plan

4/84 - 11/84: Nashua Corporation, Nashua NH  
Systems Programmer

Responsibilities:

- Maintain and install CICS/VS, VM, DOS/VSE and all supporting systems software on a 4341-12 and 4381-2 hardware base
- Execute performance tuning and capacity planning
- Teach data processing related classes to applications and operations personnel

3/83 - 4/84: W.R. Grace & Co., Cambridge MA  
Systems Programmer

Responsibilities:

- Maintain and install CICS/VS and DOS/VSE and all supporting systems software on a 370/145 hardware base
- Performance tuning and capacity planning
- Build operations and applications standards and procedures

3/82 - 3/83: Bath Iron Works Corporation, Bath ME  
Systems Programmer

Responsibilities:

- Maintain and install DOS/VSE and all supporting systems software on a dual 4341-12 hardware base
- Write operations procedures
- Set-up incident and problem tracking system
- Support DataBase Administrator (DL/I)
- Support Communications Systems Programmer

4/81 - 3/82: Chubb/United Life America, Concord NH  
Applications Programmer

Responsibilities:

- Migrated several life insurance applications from a dual 370/145 environment in Parsippany, NJ to run on the dual 4341 environment in Concord, NH.
- Supported operations personnel in NJ for three months.
- Set-up RJE procedures in NJ to replace the 370/145 computers.

**Miscellaneous:**

Willing to travel.

Willing to relocate.

References available upon request.

Member in good standing of:

Maine Chapter of Healthcare Financial Management Association

Healthcare Information and Management Systems Society

College of Healthcare Information Management Executives.

ii. Daniel Burgess

## DANIEL W. BURGESS

2 Lantern Lane  
2344  
Waterville, ME 04901  
burgesscarey@gwi.net

Phone: (207) 873-

Email:

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### PROFESSIONAL PROFILE

18+ year progressive MIS career reflecting experience, leadership, and achievements  
in:

**System Design and Implementation  
Management**

**Fiscal Efficiency / Budgetary**

**Technical / Managerial Problem Solving**

**Strategic Planning / Forecasting**

**Employee Training / Development**

**Negotiation / Collaboration**

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### EMPLOYMENT HISTORY

*Director of Applications Development—Maine General Medical Center,  
Augusta/Waterville, ME (2004-present)*

#### Summary of Responsibilities

- Clinical Systems: Led implementation of bed tracking and patient census systems and HIS systems
- Administrative/Financial Systems: General Financial Applications implementations, Management Dashboards
- Integration Services: Complete redesign of ADT, Orders and results interface environments.
- Subsidiary Applications and Operations: Staff development, project planning, disaster recovery, policy development, and budget development (HealthReach Network and HealthReach Community Health Centers)

**Director of MIS—HealthReach Network**

(f/k/a Kennebec Valley Regional Health Agency), Waterville, ME (1989-2004)

*Multi-divisional organization with 11 rural health centers, 3 home health offices,  
1 main administrative building, and several community support and counseling  
locations*

#### Summary of Accomplishments

- Led the growth of MIS department from a one-man shop servicing 17 computers, to a 7-person department supporting 300 users; operated department at \$167,000 below budget for FY 1998
- Drafted organization-wide disaster recovery plan adopted by HR; activated plan during Ice Storm '97 relocating all MIS services for main administration office to a remote location; MIS services fully operational in 2 days
- Developed and implemented comprehensive Y2K remediation plan including budgeting, testing, and contingency planning; developed 5-year MIS technology plan used as basis for steering MIS department direction
- Served as technical consultant during installation/implementation of automated billing system for 12 health centers; primary focus on contract negotiations and system configuration
- Acted as liaison in designing and overseeing several data conversions involving general ledger, appropriations accounting, payroll, and purchasing functions
- Promoted to current position after 2 years as Computer Information Specialist serving as the single resource for troubleshooting and resolving software/hardware problems for the
- Supervised WAN with 16 email and file serving services in addition to completing numerous RFP/RFIs
- Consulted on the selection of a health care information systems program package requiring implementation of WAN consisting of 5 Novell netware file servers and 2 MS NT servers

#### **Director of MIS—HealthReach Network**

##### ***Summary of Responsibilities***

- Direct all MIS operations for entire organization including
  - supervision of IS department (primarily network administrators and information systems coordinators)
  - development and administration of a \$½ million budget
  - enforcement of company policies and procedures
  - evaluation of and planning for system upgrades, conversions, implementations
  - resolution of information system problems
  - selection of systems which conform to federally mandated collecting and reporting requirements
- Create and maintain strict internal controls and information dispersal methods
- Foster and promote positive communications among all divisions and ensure technical problems are addressed with a customer service focus
- Guarantee the data integrity support/training for network operating systems (AIX, Novell Netware, and MSNT)
- Compile and maintain proper documentation on systems, services, deficiencies, and necessary corrective action taken

- Design software application training modules for company personnel and supervise IT training activities
- Conduct feasibility studies and cost-benefit analyses on potential software/hardware purchases

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## EDUCATION

**Bachelor of Science in Computer Information Systems**, Thomas College, Waterville, Maine (1988)

**CIO Boot Camp**, College of Health Information Management Executives, Chicago, Illinois (2006)

**Kennebec Leadership Institute**, Kennebec Valley Chamber of Commerce, Augusta, Maine (2000)

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iii. Cherri Waters

**CHERRI M. WATERS**  
**15 LINDEN STREET**  
**AUBURN, ME 04210**  
**(207) 784-8807 / (207) 240-9540 (cell)**

**EDUCATION:**

BS in Business Administration, Husson College, High Honors  
MBA, Southern New Hampshire University (in progress)  
Microsoft Certified Professional

**WORK HISTORY:**

*Summary:* Over 15 years of experience in Information Technology Products and Service Delivery, the last 5 in Healthcare IT.

**2006-present – Director, eHealth**

**Central Maine Healthcare**

Lewiston, Maine

- Major projects at current facility:
  - Portal Suite Project – Responsible for delivering a multi-faceted Portal Project reaching out to internal and external customers of the Central Maine Medical Family. This project has five major phases including: Clinical Portal I, Clinical Portal II, Secure Messaging, Patient and Referral Portal. Directly responsible for the development of current and future eHealth initiatives through the use of web based technologies.
  - Positive Patient Identification – Responsible for delivering a solution to ensure Positive Patient Identification at the bedside in the areas of medication administration and specimen collection. Project will enhance patient safety and satisfaction, enhancing their overall experience.
  - Technical Project Director -- Recently assumed role of Acting Technical Project Director due to staff reassignment. This role includes oversight of all technical aspects of the facilities including hardware, software, network infrastructure and daily support.

**2005-2006 –Information Technology Manager**

**NorDx Laboratory**

Scarborough, Maine

- Responsible for the day-to-day operations and management of the IT department, providing services as an outreach lab and the laboratory at Maine Medical Center.

**2003-2005 –Site Manager (Supervisory Information Technology (IT) Specialist)  
Department of the Navy – Naval Health Care New England**

Portsmouth Naval Shipyard and Brunswick Naval Air Station

- Served as IT Manager for the health clinics on the Portsmouth, NH, and Brunswick, ME, Naval bases.
- Developed a Change Management and Configuration Management System to be used at NHCNE. Implemented Standardized Configurations and restrictive use configuration and policies.
- Integral in deployment of the GUI based EMR, including the deployment, use, and support of PCs in the exam rooms. Worked with providers to ensure they received adequate training, support, and template management to successfully deploy CPOE.
- Participated in Active Directory Design Team Meetings (appx 12 individuals) for the entire Naval Medicine Family.

**1990-2003 – Information Technology Specialist  
Department of Agriculture – Rural Development**

Lewiston, Maine

- Served as a technical writer for three agencies of USDA, providing support and documentation for major deployment initiatives. Developed a User Guide and Reference Guide that were deployed to over 45,000 employees for use in their training and support.
- Served as a member of a national pilot team from the Interoperability Lab (IOL) in Beltsville, MD, to support the deployment of Windows 2000 Server and Active Directory to all USDA offices for Rural Development, Farm Services Agency and Natural Resources Conservation Service throughout the United States. The resulting Active Directory was the largest Windows 2000 Active Directory Domain Structure in the United States. Participated in traveling throughout the U.S. to deploy the pilot, support the technical writing and training needs, etc.
- Participated in the deployment and configuration of the Windows XP environment at USDA (in conjunction with the 2000 AD transition listed above). Served as a technical writer and strategist on the development team for the entire USDA structure.

**2001-Present – Adjunct Instructor, Computer Technology  
Central Maine Technical College**

Auburn, Maine

- Six years experience as a faculty member, providing education at the college level. Classes taught include: Networks 1 and 2, Windows Server, PC Repair 2 and Exchange Server 2000/IIS.

**PERSONAL INFORMATION:**

Lives in Auburn with husband Dave and two children, Austin (7) and Meredyth (3)

President-Elect, Auburn Lewiston Breakfast Rotary Club (Rotary International)

Vice President, United Methodist Women, Park Avenue Church, Auburn, ME  
Board Member, Advocates for Children, Lewiston, ME

**Appendix E: Letters of Commitment and Support**

**Letters are attached as pdf file. (filename: FCHN\_Letters.pdf)**

Letters included in attached file:

*Letters from Maine's Congressional Delegation:*

25. US Senate – Maine (Senator Susan Collins)
26. US House of Representatives – Maine, 1<sup>st</sup> District (Representative Tom Allen)
27. US House of Representatives – Maine, 2<sup>nd</sup> District (Representative Michael H. Michaud)

*Letters of Commitment:*

28. Franklin Community Health Network (Richard Batt, President & CEO)
29. Franklin Community Health Network (Ralph Johnson, CIO)
30. HealthReach Community Health Centers (Connie Coggins, President & CEO)
31. Central Maine Healthcare (Peter E. Chalke, CEO)
32. Oxford Networks (Craig Gunderson, President & CEO)

*Letters of Support:*

33. Maine HealthInfoNet (Devore Culver, Executive Director)
34. Maine AHEC Network (Holly Korda, Director)
35. University of Maine at Farmington (Theodora J. Kalikow, President)
36. University of Maine at Farmington (Mal Carey, Director, Computer Center)
37. Rural Broadband Initiative (Sam Elowitch, Executive Director)
38. Bridgton Hospital (John M. Carlson, President & CEO)
39. Rumford Hospital (John Welsh, CEO)
40. Central Maine Heart and Vascular Institute (Susan Horton, Executive Director)
41. Central Maine Medical Center School of Nursing (Sharon Kuhrt, Director)
42. Central and Western Maine Regional PHO (Jim Kane, Executive Director)
43. Androscoggin Home Care & Hospice (Julie Shackley, President/CEO)
44. Greater Franklin Development Corporation (Alison Hagerstrom, Executive Director)
45. Healthy Androscoggin (Angela Westhoff, Executive Director)
46. North Country Associates (Carol M. Timberlake, Administrator)
47. NotifyMD (Jonathan McDevitt, Chief Technology Officer)
48. The Opportunity Center of North Franklin County, Inc. (William C. Crandall, Chair, Board of Directors)