

Summary of Issues Discussed during the May 12th and 13th Conference Calls about the Rural Health Care Pilot Program

1. **Why should we participate? Based purely on costs, I don't see any savings. For some of us, "It's more expensive than our current service!" And we already have a high-speed internet connection.**

The proposal does not easily withstand *what's-it-cost-now-versus-what-does-this-new-thing-cost?* comparison. The arguments for participation are largely technological and future-oriented. For that reason, you should involve your IT staff and top executives, not just the purchasing department. Please consider these seven reasons why your organization should participate in the network.

- **Dedicated to healthcare.** First, having an Internet connection is not the same as belonging to a dedicated healthcare network. The Pilot Program network is dedicated to healthcare. In addition to accessing the Internet and the research-based Internet2, you can use this MPLS network to *securely* connect to any other healthcare provider in the network or use a VPN to connect to healthcare providers outside the network.
- **Fiber optic.** Second, if you received a quote for a fiber optic connection—80 percent of the Primary Preference Tier requests and 50 percent of the Secondary Preference received fiber quotes—each such site will receive a *direct* fiber connection. A fiber connection is “future-proof.” Your bandwidth can be easily upgraded (or reduced) as needed to meet your growing needs (see below). You will have the capability to adopt the most advanced, cost-saving technologies, such as Voice-over-IP (VoIP) and video conferencing, which could further reduce your costs. One healthcare provider that plans to use its fiber connection to adopt VoIP estimates that the one-time construction costs will be paid back in nine months through the elimination of various telecomm bills.
- **More bandwidth.** Third, this network will probably provide much more bandwidth than the *nominal* speed of your current Internet connection. Each site will be able to use the full amount of its selected bandwidth, whether that's 1 mbps, 10 mbps, 45 mbps, or 1 gbps, for healthcare network activity, the Internet, and/or Internet2. Sites will also be given their own set of static and publicly routable IP addresses, from 256 for a Tier 1 site to 16 for a Tier 4 site.
- **Reliability.** Fourth, because of its ring architecture, the network is designed to be much more reliable than your current provider's; there are also service level agreement (SLA) penalties built into the contract with the vendor. Network monitoring, outage response time, repair time, and site-specific network usage reporting are all likely to be significantly better. The network will be monitored by a 24-hour, seven-days-a-week network operations center (NOC).
- **One-time opportunity.** Fifth, if in a couple of years you decide that you do not have sufficient bandwidth, will a Federally-funded program cover 85 percent of the initial costs to obtain a fiber optic connection? It is unlikely, given the expanding budget

deficits. If you have been offered a direct, fiber optic connection, you may be passing up on a rare opportunity to “future-proof” your telecomm infrastructure.

- **Rural health care “Normal” program.** Sixth, another FCC subsidy program may help reduce your out-of-pocket monthly service costs. See the next question below.
- **Protecting your budget or handicapping the organization’s future?** Last, at the Federal and State levels, enormous sums of money are being spent on promoting health information technology (HIT): ordering lab tests and receiving results; exchanging patient clinical summaries, entire electronic health records (EHRs), and images; having images read by experts at distant locations; checking eligibility for insurance and benefits; handling claims; ePrescribing, fulfilling refill requests, and maintaining Rx fill status and medication fill history; video conferencing; fulfilling your public health reporting responsibilities; reporting healthcare quality measures; etc. It is estimated that each medical professional attempting to meet the criteria for meaningful use of EHRs will ultimately consume 1 mbps. As more core and ancillary healthcare activity is performed electronically and over distance, what will your future bandwidth needs be? Will you have sufficient bandwidth in two or three years? If not, who will provide it then? At what cost? Are you being penny-wise but pound-foolish by minimizing the IT budget while your staff members sit at their computers waiting for files to upload or download? Could you be handicapping your organization by foregoing this Federally-subsidized opportunity to obtain a direct fiber link to the healthcare community and the Internet? We are *not* trying to second-guess you. We know these are difficult economic times in Michigan, and healthcare budgets are boa constrictor-tight. But the State has invested considerable energy to offer this unique opportunity to you. Please consider it carefully.

2. Can the FCC’s Rural Health Care Support Mechanism (the “Normal” Program administered by USAC) help defray the monthly service costs after the Pilot Program subsidies, which are available during the first 12 months of each site’s operation, end?

If a site is eligible for the Pilot Program, it is probably eligible for the Rural Health Care “Normal” Program that spawned the “Pilot” Program. Each site’s *likely* eligibility for the Normal Program is shown on the Election Worksheet.¹ If a site is eligible, the Normal Program will provide a discount on monthly charges for telecommunications and Internet access services after the Pilot Program subsidy ends. For an internet connection, the amount of the Normal Program subsidy is on the order of 25 percent, but healthcare sites served by dedicated T-1 lines may experience much higher subsidies. However, you will have to apply to the Normal Program to learn the magnitude of the Pilot Program discount for which you are eligible. MPH

¹ Eligibility requirements for the Pilot Program and the Normal Program vary slightly. To determine eligibility for the Normal program, visit <http://www.usac.org/rhc/health-care-providers/step01/eligible-health-care-providers.aspx>. The Normal Program is described at http://www.universalservice.org/_res/documents/rhc/pdf/RHC-Welcome-Packet.pdf.

plans to help HCPs migrate directly to the Normal Program at the end of the first year of operation in the Pilot Program network.

3. If we want to keep our existing firewall hardware, do we have to pay for the “VPN” hardware the project’s vendor intends to supply to each site?

No. Larger Tier 1 and Tier 2 and perhaps some Tier 3 sites may already own firewall hardware. If you want to keep that hardware and use it instead of purchasing the vendor’s suggested hardware configuration, please contact us (contact information will be found at the bottom of this list of questions). We will quote the cost savings by e-mail, and you can rely on these figures when committing or withdrawing sites on the Election Worksheet. Using your own firewall will reduce the one-time construction cost but will not affect the monthly service charges. However, there is an advantage to using the project-provided firewall in addition to your own: another level of redundancy. In addition, you keep the project-provided firewall upon contract expiration.

4. The cost figures on the Election Worksheet are estimated numbers. Won’t the final or actual cost figures we receive this summer—after MPHI has compiled the list of committed/ withdrawn sites and the vendor has re-priced the network—rise dramatically because the network will have lost a large number of sites?

Not necessarily. Cost is a function of location, proximity to nearby sites, the selected bandwidth, the choice of fiber or more traditional technology, and many other factors. If all of the sites near you have withdrawn but you happen to be located near an existing fiber run, your costs may not change. If you are in the path of a fiber run that will be built regardless of participation changes, your costs may not increase. On the other hand, if you are located in an isolated area where the network was priced on the assumption of 100 percent participation, then your costs could increase. Regardless, if the actual cost for a site exceeds its estimated cost by the nominal percentage described in the cover letter and embedded in the Commitment Agreement (contract), then you may withdraw the site from the project without penalty. If you wish to discuss this opt-out provision in more detail, please contact us.

5. Will we be charged an extra amount for access to the Internet?

No. The “monthly operating costs” shown on the Election Worksheet include access to the healthcare-dedicated network, the Internet, and Internet2. You may allocate the bandwidth you select to all three in any proportion. For example, if you selected a Tier 3 10 mbps, you could devote all of it to the Internet at any given time, all of it to the healthcare network at any given time, or simultaneously use the 10 mbps bandwidth for both.

6. If a “Tier 4” network connection is made with a T-1 line, will the connection speed be 1 mbps (the advertised “Tier 4” speed) or the traditional T-1 connection speed of 1.5 mbps?

1.5 mbps.

7. Are the “upload” and “download” speeds the same?

Yes.

8. Which vendor won the bid and will build and operate the network?

Great Lakes Comnet (GLC), a for-profit Michigan corporation, has been selected. GLC is owned by 21 independent telecommunications companies operating throughout Michigan. GLC serves Michigan’s Lower Peninsula and an area just below Michigan’s southern border from Chicago to Toledo. It plans to extend service to the Upper Peninsula and along Wisconsin’s Lake Michigan coastline from Iron Mountain through Green Bay and Milwaukee to Chicago. GLC offers fiber, T-1, ISDN, SS-7, ISP, directory assistance, video conferencing, toll-free, long distance, operator, voice messaging, collocation, trunking, host Centrex, VoIP, data backup and storage, consulting, and many other services. More information is available at the GLC website, <http://www.glcom.net/>. In addition, you may ask Great Lakes Comnet for a personal consultation. (Please note: GLC is not related in any way to Great Lakes Communications, a local exchange carrier (LEC) located in Iowa.)

9. Later on, outside of the project, may we contract for service directly with Great Lakes Comnet and bypass the project?

Yes, of course. But you may lose the economies of scale in cost, the Pilot Program subsidies, and all of the network performance requirements MPHI has negotiated as a result of this sealed-bid process. We cannot stipulate to Great Lakes Comnet how it treats sites that join the network at a later date.

10. How will network usage be reported to us?

Great Lakes Comnet will provide reports that detail, by site, HCP-to-HCP, Internet, Internet2, VLAN, and other traffic.

11. What will happen to the network after the five-year contract runs its course?

The healthcare providers and Great Lakes Comnet will be free to negotiate service and prices. However, the network built with the help of Federal funds will have to remain dedicated to healthcare use for the remainder of its useful life. Since Great Lakes will need you as customers for that network, it will have an incentive to offer prices that you find attractive. In addition, the costs to build the healthcare network have been front-loaded. Unlike some of the other bids we received, Great Lakes did not low-ball the construction costs with the intent of recovering those costs long-term through high, ongoing monthly service costs.

12. How many IP addresses will each site receive?

Each Tier 1 (1 gbps) site will receive at least 256 static and publicly routable IP addresses; each Tier 2 (45 mbps) will receive at least 128; each Tier 3 (10 mbps) will receive at least 64; and each Tier 4 (1 mbps) will receive at least 16. Arrangements will also be made to route any existing HCP-owned IP addresses.

13. How will this network “cloud” support VoIP (Voice-over-IP) and video conferencing?

The network is dedicated to healthcare; you should not experience the occasional traffic jam and drop in bandwidth that you currently experience over the public Internet because you will have *consistent* access to the *full* bandwidth for which you are paying.

14. We are using NAT. Can we continue to do so?

Yes, NAT will still be available.

15. We are using BGP (or another advanced networking protocol). Can we continue to do so?

The network is compatible with BGP and other advanced networking protocols. If you are using or plan to use this type of technology, please contact us.

16. How will the secure connections with other healthcare providers be configured?

The contract with the vendor will cover the initial configuration of both MPLS and VPNs. Each site will be asked to which sites it wishes to connect through either MPLS or VPN. Sites may choose to use MPLS or VPN to connect to other sites *within* our project’s network, and a site may choose to use VPN to connect to sites *outside* of our network. Regarding VPNs:

- A Tier 1 site will be capable of at least 400 concurrent IPsec VPN sessions and sustained bidirectional throughput of at least 500 mbps at 256 Advanced Encryption Standard

(AES). SSL VPN Sessions and Triple DES encryption will also be provided. At the time of installation, up to 60 VPN configurations will be installed.

- Tier 2 sites will be capable of at least 200 concurrent sessions and sustained throughput of at least 35 mbps, with up to 30 VPN connections configured at install.
- Tier 3 sites will be capable of at least 100 concurrent sessions and sustained throughput of at least 8 mbps, with up to 15 VPN connections configured at install.
- Tier 4 sites will be capable of at least 50 concurrent sessions and sustained throughput of 1 mbps, with up to 10 VPN connections configured at install.
- Most Tier 3 and perhaps all Tier 4 sites will want the vendor to manage VPN issues, a service that is included in the cost figures you have been provided.

17. What firewall (VPN) and router equipment will be used?

	Router	VPN/Firewall
Tier 1	CISCO3845-AC PWR-3845-AC= MEM3800-256CF= HWIC-4ESW= \$5,260	ASA5550-BUN-K9 SF-ASA-8.2-K8 (2) ASA5500-SSL-100 ASA-VPN-CLNT-K9 ASA-180W-PWR-AC ASA-ANYCONN-CSD-K9 SSM-4GE-INC ASA5500-ENCR-K9 \$22,390.70
Tier 2	CISCO3845-AC PWR-3845-AC= MEM3800-256CF= HWIC-4ESW= \$5,260	ASA5510-SEC-BUN-K9 SF-ASA-8.2-K8 ASA-VPN-CLNT-K9 ASA5510-SEC-PL ASA-180W-PWR-AC ASA-ANYCONN-CSD- KASA5500-ENCR-K9 \$2,786.90
Tier 3	CISCO1811/K9 S181AISK9-12406T \$802.90	ASA5510-SEC-BUN-K9 SF-ASA-8.2-K8 ASA-VPN-CLNT-K9 ASA5510-SEC-PL ASA-180W-PWR-AC ASA-ANYCONN-CSD-K9 ASA5500-ENCR-K9 \$2,786.90
Tier 4	CISCO1841 MEM1841-256D=	

MEM1800-64CF= AIM-VPN/SSL-1= \$1,660.00
--

18. We initially asked for Tier 3 and Tier 4 quotes (or Tier 2 and Tier 3 quotes) (or Tier 1 and Tier 2 quotes). May we obtain a quote for a third Tier preference?

Yes. Contact us.

19. May we add sites at this time?

No. The project does not have sufficient funding to add more sites. However, if a site that is already participating moves, it can continue to participate in the project; simply notify us of the address change. MPHI is maintaining a list of sites interested in joining the project and will fund those sites in the summer of 2010 if an inordinate number of sites withdraw from the project.

20. If we have additional questions, whom do we call?

For network and other technical questions, contact:

Jeff Shaw, PMP, CPHIMS
Senior Project Manager
Michigan Public Health Institute
Office: (517) 324-6055
Cell: (517) 803-3082
Fax: (517) 324-6099
jshaw@mphi.org

For questions about the Election Worksheet, the contracts, site costs, the project process, the project timeline, etc., contact:

Harry Levins, PMP
Project Manager
Michigan Public Health Institute
Office: (517) 324-6039
Fax: (517) 324-6099
hlevins@mphi.org

Great Lakes Comnet is also quite willing to discuss your specific situation with you. Please call Harry Levins, and he will arrange for GLC to contact you.