

September 7, 2016



To: Members of the Legislative Council Study Committee on Rural Broadband

From: Matthew Stanford, General Counsel

Re: Broadband infrastructure impacts on health care access and recommendations

On behalf of our more than 140 hospital and health system members, the Wisconsin Hospital Association (WHA) appreciates the opportunity to submit these comments on rural health care access and broadband, and ideas to consider as the Committee reviews the Wisconsin Broadband Expansion Grant Program. The Wisconsin Hospital Association is submitting this comment to you because affordable, fast, reliable broadband access throughout Wisconsin is critically important for hospitals and the communities they serve, impacting access to rural health care and economic development.

We offer comments on specific ways broadband impacts access to care and economic development in rural areas, as well as specific suggestions for how the committee could help Wisconsin prioritize scarce dollars to maximize investments in broadband infrastructure.

Access to Health Care and Broadband Infrastructure

Access to health care is not only a key determinant in an individual’s health, but is also a key driver of economic development. According to a 2015 report from the University of Wisconsin-Cooperative Extension Department of Agricultural and Applied Economics and the Wisconsin Hospital Association: “Employers see the availability of good health care as an asset when they are deciding where to locate a new business or expand an existing facility. Access to quality health care is also an important human resources asset when employers are recruiting new or retaining existing employees.”

Affordable, fast, and reliable broadband is becoming increasingly connected to improving and ensuring access to health care in Wisconsin, particularly in rural areas of the state. As the Committee considers how to prioritize state support for rural broadband, it should consider that a rural community’s access to health care is impacted by its broadband infrastructure in three key ways:

- **Physician recruitment** (residential infrastructure)- Physician recruiting and retention to rural communities is impacted by availability of residential broadband.
- **Outlying rural clinics and telemedicine** (commercial infrastructure) - The locations of and services available at outlying rural clinics – including specialty access through telemedicine - is impacted by availability of affordable high-speed broadband connectivity between outlying rural communities and larger rural and urban communities.
- **Emerging E-Visits and Home Health Monitoring** (residential infrastructure) – Emerging “e-visit” and home health monitoring technologies are enabling individuals to connect with their health care providers from home, but these population health strategies to improve access and reduce health care spending are impacted by availability of residential broadband. These population health strategies can help improve health and reduce health care spending by preventing more costly interventions incurred because of distance barriers to accessible health care.

Physician Recruiting and Retention

Wisconsin has a shortage of physicians, particularly in rural areas, that is projected to become more severe. Wisconsin needs to ensure that it is as attractive as possible to physicians in order to ensure patients throughout Wisconsin have access to health care. Access to high speed access at work and home is a critical part of making Wisconsin as attractive to physicians as possible.

Physicians are often trained in urban areas and often become accustomed to urban lifestyle opportunities and amenities. High speed internet at work and home is one such amenity. Now, and in the future, rural Wisconsin communities lacking in residential high-speed broadband infrastructure will find it increasingly difficult to recruit physicians to provide local care in their community.

Outlying Rural Clinics and Telemedicine Reduce Distance-based Access to Care Barriers

One challenge that many rural residents of Wisconsin face is the travel distance between their homes and jobs and services such as health care. Those distance barriers can create barriers to accessible health care, and in turn impact an individual's overall health. One often misunderstood fact is that a higher percentage of people in rural Wisconsin are in poverty than those who live in Wisconsin's urban centers. For those in poverty in rural Wisconsin, travel cost and time to access health care become an even bigger barrier to health care access and health. For the Medicaid program, travel distance also has a direct impact on Medicaid program expenditures, because Medicaid pays transportation costs for its enrollees to see a health care provider.

Outlying rural health clinics and new telemedicine technologies are helping to bridge that health care access and health disparity gap in rural areas, by providing patients with local access to health care without having to travel long distances. But, affordable, fast, and reliable broadband access from an outlying clinic to larger rural or urban health centers is key to the success of these remote clinics and telemedicine opportunities.

Rural Clinic EHR Dependence on Broadband

Health care delivery has become far more data dependent and dependent on sophisticated Electronic Health Record Systems (EHRs). Because of the cost, complexity and sophistication of EHR system software, an outlying rural health clinic's EHR system software is oftentimes not maintained locally at the clinic, but is instead accessed remotely from a health system's hub and shared by multiple clinics (analogous to utilizing Outlook Web Mail for email rather than utilizing Outlook installed on your desktop for email). While this enables an outlying rural clinic to have access to the same EHR system maintained in a larger hospital, that access can require a fairly robust high speed broadband connection. As the dependence on and sophistication of EHR systems increases, whether an outlying rural community has access to affordable high speed broadband will likely be a key factor in the sustainability of an existing or proposed clinic in that outlying community.

Telemedicine Dependence on Broadband

Health care providers are increasingly exploring and utilizing telemedicine technologies as a way to provide patients better access to health care throughout Wisconsin. Especially in rural Wisconsin communities, telemedicine is being leveraged to enable rural clinics to provide telemedicine access to specialists that would not otherwise have sufficient volume to maintain a specialist.

While telemedicine is dependent upon broadband, the technical broadband needs to enable telemedicine solutions are often different from "regular" commercial broadband needs and can vary from one type of telemedicine application to another. While download speeds are important, two-way telemedicine can require not only high-speed downloads, but also suitable upload speeds and low latency (delay), packet loss and downtime.

For example, teleradiology applications that allow a radiologist to remotely consult with another physician regarding x-ray, CT, or MRI scans can require up to 10Gbps in bandwidth or more to transmit a full case study in an on-demand fashion. However, telemedicine applications that allow a psychiatrist to have a remote visit with a patient via high definition video conferencing can require as little as 1.5Mbps in bandwidth. But, varying applications also have varying requirements for acceptable latency (delay), packet loss, and downtime sensitivity. For example, a one second delay for an x-ray image transmission would be acceptable while a one second delay during patient video conferencing would not be acceptable. Some telemedicine applications are also “store-and-forward” type applications while others are in “real-time.”

Emerging E-Visits and Home Health Monitoring

While traditional telemedicine delivery requires a patient to travel from their home to an outlying clinic to receive care, emerging technologies are enabling individuals to connect with their health care provider from home utilizing “E-Visit” technology and home health monitoring technology. But, reliable broadband to the home is necessary to leverage the individual and population health benefits of these emerging technologies.

E-visits can take multiple forms with ranging from audio and video communications between a patient and a physician to interactive web-based text-based diagnostic assessment tools. For chronic disease management, emerging home health monitoring technologies enable individuals to send a myriad of health information from the home that can help the individual and his or her clinician identify and manage health problems before they become acute. In both cases, accessing and managing care at home can remove substantial travel-related barriers to health among Medicaid enrollees and those in poverty in rural areas.

Recommendations

WHA offers four recommendations for the committee to consider as it reviews the Wisconsin Broadband Expansion Grant Program and ways the State of Wisconsin can work to address rural broadband needs.

- **Add Medically Underserved Criteria** - Add impact on medically underserved and Medicaid populations as an evaluation criteria for state broadband grants. Because broadband access both at remote rural clinics and at home is increasingly a means to improve access to and reduce health care expenditures in rural areas, particularly for Medicaid enrollees with travel challenges, grant applications that have a greater impact on medically underserved and Medicaid populations should be prioritized.
- **Create Community Broadband Needs Assessments** - Broadband needs vary across communities, and state or national broadband standards may be more or less than what a community needs. Wisconsin could incentivize the creation of regular “Community Broadband Needs Assessments” that gather input from community stakeholders to help guide local prioritization of broadband expansion. Such an assessment could be modeled off of Federal rules that require hospitals to develop a Community Health Needs Assessment every three years that takes into account input from persons that represent the broad interests of the community served by the hospital and to have an implementation plan for meeting those needs. Whether for community health needs or for community broadband needs, a local multi-stakeholder involved process to identify and guide needs and priorities can help ensure that local needs are prioritized.
- **Facilitate contacts between successful grant applicants and prospective grant applicants** – To both encourage grant applications and ease the burden of the state grant application, contacts between previous grant applicants and prospective grant applicants should be encouraged. At a minimum, the PSC could review their application materials and website to make it easier for potential grant applicants to identify peer contacts that have had successful grant applications.

- [Public “road map” for broadband utilities](#) – Wisconsin should investigate the creation of a publicly available street level map of all broadband fiber, wire, and wireless infrastructure to help communities, businesses, and residences make more informed decisions about new broadband infrastructure investments. Testimony was provided during the August 3 meeting of this Committee that a community and hospital looking at adding new broadband infrastructure did not realize that a fiber line ran adjacent to the hospital. While information on Wisconsin’s transportation infrastructure down to street level is readily available, that example illustrates that a lack of easily accessible public information about the physical location of Wisconsin’s broadband infrastructure can lead to ill-informed community and business decisions.

Wisconsin faces challenges in ensuring that it has affordable, fast, and reliable broadband throughout the state. As discussed above, Wisconsin’s broadband needs are also connected to Wisconsin’s health care needs, but there is no one-size-fits all broadband solution to meet those needs. As the Committee continues its review of the Wisconsin’s rural broadband strategies, we encourage the committee to encourage solutions that dove tail with Wisconsin’s health needs and programs and that enable local stakeholder input, local prioritization of needs, and flexibility to enable locally developed solutions.

Should you have any questions or would like further information, please feel free to contact Matthew Stanford, General Counsel, at 608-274-1820 or mstanford@wha.org.