Wyoming Rural Healthcare Study

FINAL REPORT

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EXECUTIVE SUMMARY

Study Background

The Wyoming Healthcare Commission's Access and Affordability Subcommittee engaged Navigant Consulting, Inc. in July 2004 to study Wyoming's healthcare delivery system and models in comparable states that might be replicated to increase access and cost effectiveness.

Purposes and Scope of the Study

The Wyoming Healthcare Commission requested that the Study include:

- An identification of areas of the State that lack geographic access to a core group of services that are essential for rural and frontier healthcare
- An identification of areas in the State where the number of healthcare practitioners may be insufficient to meet the projected needs of the population they serve now and in the future
- A description of Wyoming residents' use of inpatient hospital services in and out of state
- A framework for how Wyoming can organize and prioritize rural and frontier healthcare services across the state
- Strategies for how communities, the State and regions can develop and implement initiatives to address their residents' healthcare needs

As part of this Study, Navigant Consulting, Inc. has:

- Identified a need for development and maintenance of a centralized Wyoming healthcare resource database
- Evaluated access to hospital and nursing facility services
- Analyzed Wyoming residents' use of inpatient hospital services
- Researched healthcare service delivery models designed for rural and frontier regions, and their advantages and disadvantages relative to Wyoming's current healthcare system

- Researched initiatives other states have used to address rural and frontier residents' healthcare needs

- Recommended a framework for how Wyoming can organize and prioritize rural and frontier healthcare services

- Recommended strategies for developing and implementing initiatives to address rural and frontier Wyoming residents' healthcare needs

Approach to Evaluating Access to Healthcare Services in Wyoming

Access to healthcare services for rural and frontier residents has at least three dimensions: geography, capacity and economy. In this study, we attempted to evaluate Wyoming residents' geographic access – that is, are residents within a reasonable distance to a provider of a particular service? We also attempted to evaluate capacity – that is, are there a sufficient number of providers in a location relative to the size of the population in the area?

Data limitations regarding the number of providers, their full-time equivalency and other factors prevented us from developing findings or making recommendations regarding geographic access and capacity, except in relation to inpatient hospital and nursing facility services. Economic access encompasses a range of issues from providers' willingness to accept Medicare and Medicaid, to consumers' ability to pay for services. Analysis of these issues is outside of the scope of this study.

Navigant Consulting presented the Commission's Rural Healthcare Study Subcommittee with several approaches to determining geographic access guidelines for Wyoming. Based on the discussion with Subcommittee members, we determined that the best approach to determine access guidelines was to adapt the Department of Veterans Affairs Veterans Health Administration (VHA) travel time guidelines. Those guidelines are applied to primary, hospital and tertiary care to measure access to healthcare services for a distinct veteran population in a geographic area. With input from members of the Subcommittee, we developed a list of core services for rural and frontier Wyoming residents:

- Primary care
- Obstetrical Care Services
- Mental health/substance abuse treatment
- Emergency transportation
- Dental care
- Home health
- Inpatient hospital care
- Nursing facility care
- Pharmacy services

To evaluate capacity, we identified healthcare resource-need benchmarks that appeared applicable to Wyoming, as shown in Table 1.

Table 1: Provider-to-Population Ratios Used as Benchmarks for Evaluating Wyoming Communities' Healthcare Resource Needs

Service	Benchmark Provider-to-Population Ratio	Benchmark Source
Primary Care Services - Primary Care Physicians	1 to 2,500	North Carolina Rural Health Research and Policy Analysis Center and various states' Medicaid managed care programs
Obstetrical Care Services – Obstetricians and Gynecologists (OB/GYNs)[1]	1 to 12,345	Dartmouth Atlas Project
Mental Health/Substance Abuse Services - Psychiatrists	1 to 15,000	State of Nevada's Strategic Plan For Rural Health Care[2]
Dental Services - Dentists	1 to 3,000	State of Nevada's Strategic Plan For Rural Health Care
Nursing Facility Care Services– Nursing Facility Beds and Hospital-based Skilled Nursing and other Long-term Care Beds	• 0.58 beds per 1,000 population (ages 0 to 64) • 10.95 beds per 1,000 population (ages 65 to 74) • 38.96 beds per 1,000 population (ages 75 to 84) • 120.69 beds per 1,000 population (ages 85 and over)	State of North Carolina 's Certificate of Need program[3]
General Surgery Services - General Surgeons	1 to 10,989	Dartmouth Atlas Project
Cardiologists	1 to 31,250	Dartmouth Atlas Project
Orthopedic Surgeons	1 to 17,421	Dartmouth Atlas Project

[1] Like other physician-to-population ratios, OB/GYN-to-population ratios are expressed in terms of total population rather than in terms of the female population of reproductive age only.
[2] State of Nevada, Department of Human Services, "Strategic Plan for Rural Health Care," (October 2002). Available online: http://www.hr.state.nv.us/shcp/documents/RuralHealth_Documents/NVReportAppendix/ NV-Report-FINAL.pdf.
[3] North Carolina Department of Health and Human Services, *Proposed 2005 State Medical Facilities Plan*, p. 197.

Data Limitations

We encountered numerous data collection and analysis challenges in our efforts to assess Wyoming residents' access to healthcare services, including the absence of accurate, consistently collected datasets that would allow us to determine the number of practicing healthcare professionals, estimate their full-time equivalencies and identify where and to whom they provide care.

The supply of healthcare providers is dynamic — practitioners enter and leave the state, newly-trained practitioners establish new practices, older practitioners retire or restrict their practices — presenting a challenge to capturing accurate provider counts. A particularly challenging issue is the determination of whether healthcare professionals are practicing full- or part-time, whether they are practicing in more than one town or providing outreach services to other communities, whether or not a provider is accepting new patients and whether they accept patients with various insurance plans. One of our key recommendations is that the State develop and maintain a centralized database containing the number and practice patterns of Wyoming's providers. We believe that this information is essential to the State's healthcare planning efforts.

We did not have the same set of limitations related to hospital and nursing facility data, however, there were some challenges. We were able to obtain hospital discharge data for most Wyoming hospitals and hospitals in surrounding states to analyze Wyoming residents' use of their facilities, but a few Wyoming hospitals did not report their data and Idaho has no centralized hospital discharge database. We estimated discharges in these cases to compensate for the missing data and we acknowledge that this is less than perfect; however, we were unable to obtain any additional data in the time period allotted for this Study. We believe the final list of providers and the hospital utilization pattern information on which our analyses are based represents as complete and accurate a picture as was possible to compile within this study's scope, however, it must be interpreted with caution because of the limitations discussed here.

Major Findings

As we describe earlier, there were a number of limitations to the data we compiled for this study, and with the exception of inpatient hospital and nursing facility services, we believe further analysis is necessary to refine the data regarding current utilization before they can be used to assess access to healthcare services.

We were able, however, to draw some conclusions regarding inpatient hospital and nursing facility services.

- Few Wyoming residents appear to lack adequate geographical access to inpatient hospital care services, although we recognize that the presence of a hospital in a

community does not suggest access to all hospital services and that limited access may be especially problematic for some individuals who need hospital services more frequently. In addition, the current number of inpatient hospital beds appears to be sufficient now and through 2020; however, population projections indicating the aging of the population suggest that the mix of inpatient hospital services may change as the population ages.

- Adequate access to nursing facility services is generally less a matter of geography than of available beds and few, if any, Wyoming residents have inadequate geographical access to nursing facility services. The principal determinant of nursing facility services is the age of the population. It appears that the State, in the aggregate, currently has sufficient nursing facility beds now and thru 2010, but by 2015, additional beds will be needed. Some counties, however, have fewer beds than needed, and will require additional beds.

We were also able to analyze inpatient hospital services data to understand Wyoming residents' use of this type of care. Our analysis of hospital discharges revealed that:

- Hospitals in Wyoming provided an estimated 84 percent (totaling an estimated $481 million in gross charges) of Wyoming residents' hospitalizations, while hospitals in surrounding states accounted for an estimated 16 percent (totaling an estimated $223.5 million in gross charges) of all Wyoming residents' hospitalizations.

- Fifty-four percent of Wyoming residents' hospitalizations in surrounding state hospitals were surgeries, whereas 27 percent of discharges from Wyoming hospitals were surgeries.

- Wyoming residents used surrounding state hospitals for cardiac, orthopedic and nervous system services most often; these three diagnostic categories accounted for 44 percent of Wyoming residents' hospitalizations in surrounding states.

- Wyoming residents who go out of state for hospitalization were more likely to use Colorado hospitals than other states' hospitals. Thirty-two percent of Wyoming residents used Colorado hospitals, compared to 27 percent who used Montana hospitals and 25 percent who used Utah hospitals.

Recommendations for a Wyoming-Specific Rural Healthcare Service Delivery System

Wyoming, like other states, has employed traditional methods of preserving healthcare delivery and access such as professional recruitment and retention. However, State agencies and private organizations are competing for professionals and working independently without a central vision and coordination. If the State continues to employ this disjointed

traditional approach, improving access to care in rural and frontier areas will be increasingly challenging. Since most of the modest population growth projected for Wyoming is to occur in Casper, Cheyenne and larger towns and not rural and frontier areas, relying on physicians to establish practices in shrinking communities is not a viable solution. Patients need to be "brought" to a loci of providers, via telemedicine or physical transport. Such approaches will require investments in telemedicine, transportation and a professional recruitment infrastructure optimally made and coordinated at the State level with regional/local planning input.

We identified rural and frontier healthcare delivery models and initiatives that Wyoming may consider in addressing particular access issues. These models and initiatives are based on our review of approaches that other states have used to improve access to healthcare services in rural and frontier areas. In some cases, initiatives include activities already underway in Wyoming.

Although we could not complete the study of existing healthcare resources in Wyoming, based on our work and discussions with the Wyoming Healthcare Commission, we can at this time make some recommendations regarding a framework for organizing and prioritizing healthcare services in Wyoming.

We recommend the following component structure for organizing and prioritizing rural and frontier healthcare services across the State:

- Creation of a State Board to direct healthcare planning
- Facilitation of community input through Regional Boards
- Determination of healthcare needs at a regional level by the State Board
- Prioritization of healthcare needs at a regional level by the State Board
- Use of regional input in reviewing best practices and selecting initiatives to address healthcare needs

We explain each of these recommendations in more detail below.

Creation of a State Board to Direct Healthcare Planning

As we noted above, State agencies, communities and private organizations are competing for professionals and working independently to resolve rural and frontier health issues without a central vision and coordination. Some of these activities have been successful, others less so; without a central vision, financial and human resources may be expended in vain. Therefore, we recommend that the State consider appointing a State Board to centralize and direct healthcare planning throughout the State.

This Board will play a role in many areas. Most importantly, it can determine how and where financial resources will be directed by prioritizing needs and evaluating tradeoffs, for example, what new resources should be developed at the community level vs. what new resources should be developed at the regional level. The State Board will set priorities for recruitment, coordination of services, emergency transportation and other initiatives described in this report. The State Board can also determine where State resources should be used to identify and apply for federal and private foundation grants and to provide technical assistance. Any investments by the State should be consistent with the goals and priorities established by the State Board

The State Board can also facilitate voluntary network development and dialogue among hospitals and other providers in regions by creating forums for discussion. Individual parties who make up a network must share a common vision and goals and see a clear reason for participating, and again, it is the responsibility of the State Board to establish this vision and articulate it effectively to all parties to secure their buy-in. By providing funding for network development, the State creates incentive for communities to develop rural and frontier healthcare networks and collaborate within regions. Regional alliances are built by a state requirement that only one grant application be submitted for each region. There are federal funding opportunities for development of rural and frontier health integrated networks.

The State Board will oversee the development and maintenance of a statewide health resources database, which will record information on health resources, their locations and professions and full-time equivalences for planning purposes.

Facilitation of Community Input Through Regional Boards

The State Board will facilitate the appointment of Regional Boards of community stakeholders to create a partnership between the State and local governments. These Regional Boards can provide input to the State Board in overall resource investment and allocation through determining needs, evaluating priorities and making recommendations for financing.

Based on our review, we believe that the Wyoming Trauma Care Program's[4] five regions provide a geographic framework within which to build a regional approach to healthcare planning. Trauma Care Program regions are based on the locations of hospitals, the natural loci of healthcare services. The purpose of expanding these regions beyond trauma care would be to facilitate health services planning and priority setting and foster integration

[4] The Wyoming Trauma Programs divides the State into five regions or TRACs. TRAC 1 includes the northeastern part of the State, TRAC 2 includes the central part of the State, TRAC 3 includes the southeastern part of the State, TRAC 4 includes the southwestern and western part of the State and TRAC 5 includes the northwestern part of the State.

among providers. The Trauma Care Program model also provides a blueprint for patient referral and transfer relationships.

Determination of Healthcare Needs At The Regional Level by the State Board

While the State Board will establish priorities for resources, we recommend that the State Board evaluate these healthcare resources and needs at the regional level. Once formed, Regional Boards will assist the State Board in determining healthcare needs by assisting in the analysis of the current environment within their respective regions. This includes understanding the demographics and existing health services within the region, and assisting in gathering information for the statewide health resources database. Wyoming's aging population creates new pressures and issues for the State. Projected changes in the population's age composition will mean increasing demand for some types of health care in Wyoming, particularly primary care, nursing facility services and home- and community-based services.

Prioritization of Healthcare Needs At a Regional Level by the State Board

Regional Boards will uncover multiple unmet needs and report these to the State Board. The State Board, with assistance from the Regional Boards and their communities, will determine how to prioritize needs and organize health care services to respond more effectively to these regional needs. The State Board will also involve Regional Boards and their communities in a meaningful way in planning for services and notifying residents regarding options available to them.

Use of Regional Input in Selecting Initiatives to Address Healthcare Needs

Our report describes initiatives other states have used to improve rural and frontier healthcare delivery systems. These are best practices Wyoming can implement, including:

- Providing non-emergency transportation for rural and frontier residents to healthcare services in distant locations
- Organizing mobile healthcare services to provide primary and preventive health services rural and frontier residents
- Encouraging education, training and recruitment of health professionals with financial incentives including scholarships and loan forgiveness
- Ensuring retention of health professionals with financial and non-financial incentives
- Providing resources for telemedicine and telehealth

- Updating professional licensure laws to widen scope of practice and encourage cross-training
- Creating centralized provider and health databases
- Encouraging the provision of rural and frontier healthcare in schools, churches and other community settings

What initiatives regions' stakeholders decide will be most effective for them depends on a number of factors, including the region's needs, what it will take to implement an initiative and the potential for sharing initiatives among different regions.

Although our analysis regarding geographic and capacity analysis could not be completed based on available data, our research on Wyoming and other states suggest priority areas in healthcare planning initiatives. Therefore, we also provide strategies for developing and implementing healthcare initiatives based on the priorities identified by communities. We identified healthcare service areas we think the State should label and treat as priorities. These include several of our aforementioned core healthcare services – primary care, obstetrical care, cardiology and general surgery, mental health/substance abuse treatment, emergency transportation, and home- and community-based services.

We recommend that the Commission use the results of this study to outline a structure for organization of healthcare delivery on a regional basis and implementation of initiatives established as best practices in other states. A key to success is focusing expenditures on and allocation of services identified by communities as priorities. This Study, combined with the Commission's other studies that address economic access issues, should serve as the basis for the State of Wyoming to develop a more effective and cost-efficient rural and frontier medical services model.