DEPARTMENT OF HEALTH AND HUMAN SERVICES

STATEMENT

OF

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COMMITTEE ON INDIAN AFFAIRS

ON

“INTERNET INFRASTRUCTURE IN NATIVE COMMUNITIES:

EQUAL ACCESS TO E-COMMERCE, JOBS,

AND THE GLOBAL MARKETPLACE”

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Mr. Chairman and Members of the Committee:

Good afternoon, I am Dr. Howard Hays, Acting Chief Information Officer for the Indian Health Service (IHS). I am pleased to have this opportunity to testify on the Indian health system’s use of health care technology innovation, and the potential for such innovation to improve access in Native communities to e-commerce, jobs, and the global marketplace.

The IHS plays a unique role in the U.S. Department of Health and Human Services to meet the Federal trust responsibility to provide health care to American Indians and Alaska Natives. The IHS provides comprehensive health service delivery to 1.9 million members of Federally-recognized American Indian and Alaska Native (AI/AN) Tribes through a system of Federal and Tribally operated health facilities and Urban health programs based on treaties, judicial determinations, and Acts of Congress. The mission of the agency is to raise the physical, mental, social, and spiritual health of AI/ANs to the highest level, in partnership with the population we serve. The agency aims to assure that comprehensive, culturally acceptable personal and public health services are available and accessible to the service population. Our foundation is to promote healthy AI/AN people, communities, and cultures, and to honor the inherent sovereign rights of Tribes.

The IHS works in partnership with the Tribal governments and communities it serves and benefits from the guidance of local, regional and national Indian health boards in all aspects of the Indian health care delivery system. Additionally, under the Indian Self-Determination and Education Assistance Act (ISDEAA), many Tribes across the country have assumed full authority for all or part of health care delivery within their communities, including hospital operations.

**Access to Quality Healthcare**

Over the past 40 years, there have been many improvements in health status for American Indians and Alaska Natives. For example, mortality from unintentional injuries, homicides, alcohol-related deaths, and tuberculosis have significantly decreased.[[1]](#footnote-1) Despite these improvements, disparities in access to care, preventable morbidity and mortality, and the burden of chronic disease persist. For example, the prevalence of heart disease and diabetes is considerably higher among AI/ANs compared with the rest of the U.S. population.[[2]](#footnote-2) American Indians and Alaska Natives are also at higher risk for certain mental health disorders compared with other racial/ethnic groups.

Such challenges make innovation a vital priority within Indian healthcare. Innovative processes and tools enable our care delivery system to adapt and help meet the changing needs of the communities we serve. National efforts, such as the Improving Patient Care initiative, exemplify the IHS's commitment to performance improvement in health care delivery. This commitment is also demonstrated by the expanding use of health information technology. Health Information Technology (HIT) is a key category of innovation in health care; in Indian health, HIT supports and facilitates an array of activities focused on effective healthcare delivery and efficient resource management. In partnership with Tribes and Tribal programs, and with priorities set by the joint Tribal/federal Information Systems Advisory Committee (ISAC), the IHS emphasizes the timely use of health information technology and delivery system innovation to address the preventive and treatment needs of our patients, families, and communities. While HIT innovation takes many forms, such as electronic health records, personal health records, and related information systems, I would like to speak today specifically about telehealth service delivery, an important example of the IHS emphasis on access and quality in our service delivery model.

**Telehealth Innovation**

Telehealth is an increasingly critical part of patient-centered care - within a community orientation and population health perspective. The diverse "toolkit" of telehealth includes real-time videoconferencing, "store-and-forward" consultation, remote patient monitoring, and "mHealth" or mobile health. These rapidly-evolving tools and capabilities enhance timely consultation, diagnosis, and treatment, supporting best practice approaches to care. They enable new models of quality service delivery, models that emphasize relationships and communication while facilitating improved health care quality, cost-effectiveness, and value. In the IHS, delivering the right care in the right place at the right time is a top priority. But telehealth permits two additional "rights": the use of right innovation tools in ways that promote the right patient-care team relationships.

The use of telehealth is not new to Indian country. In the early 1970s, the IHS pioneered mobile telehealth service through the "Space Technology Applied to Rural Papago Advanced Health Care" (STARPAHC) project. A collaboration among the IHS, National Aeronautics and Space Administration, Health Education and Welfare, and the Papago (Tohono O'odham) Tribe, STARPAHC represented a novel use of leading edge technology and communications to provide mobile outreach to Tribal communities in southern Arizona. Over 25 years later, Indian health again demonstrated leadership in telehealth service delivery innovation, through the collaborative development of the Alaska Federal Health Care Access Network (AFHCAN) and the IHS Joslin Vison Network Tele-Ophthalmology Program. Both of these recent programs evidence the continued commitment to innovation within Indian health. Both have demonstrated the vital role of collaboration in service delivery. Both have also shown impressive results.

Operational since 2001, the AFHCAN provides telehealth services to over 300 Alaska villages and federal sites across Alaska. In the past decade, more than 106,000 telehealth cases have been created within the Alaska Tribal Health System alone, for primary and specialty care. This secure system of timely "store-and-forward" consultation has improved access to quality care, reduced costs, and improved efficiency in measurable ways. For example, the use of tele-consultation via the AFHCAN telehealth solution has significantly reduced waiting times for Ear, Nose and Throat (ENT) specialist evaluations, decreasing the percentage of patients who wait 4 or more months for an ENT evaluation in one Alaska village community from 48%, before telehealth, to less than 3% after telehealth began.[[3]](#footnote-3) It has resulted in earlier diagnosis of treatable conditions and an improvement in specialist efficiency.[[4]](#footnote-4) Almost 75 percent of tele-consultations at the Alaska Native Medical Center are now completed in one business day. The expanded us of telehealth in Alaska has increased access to health care while significantly decreasing patient related travel costs. Such savings create opportunities for additional care.

Similarly, the IHS Joslin Vision Network (JVN) Tele-Ophthalmology Program has demonstrated impressive results. Diabetes is 2.2 times more prevalent among AI/ANs than among the general U.S. population.[[5]](#footnote-5) The IHS JVN solution is deployed throughout Indian country for the remote diagnosis and management of diabetic retinopathy, the leading cause of blindness in the United States. To date, the IHS JVN solution has been installed at 78 sites in 22 states, with additional communities served through a portable deployment strategy. Since the program's inception, almost 50,000 patient examinations have been completed. Of note, in 2010, over 10,000 patients with diabetes who had not previously received an annual retinal examination received such an examination. Published data documents both the diagnostic accuracy and cost-efficiency of this important innovation.

Telehealth has been used in Indian health to support primary and specialty health care in over 30 clinical disciplines. Its utilization in Indian health continues to expand. Additional examples of care models undergoing change as a result of telehealth include:

* *Behavioral health.* Telehealth visits in behavioral health are growing at a significant rate across Indian health, with many Indian health facilities now relying on mental health and behavioral health service through telehealth. This service is providing access to care that was either previously unavailable or only available through significant travel and expense. The IHS Tele-Behavioral Health Center of Excellence in Albuquerque supports such behavioral health service expansion through direct care via videoconferencing, assistance with standards and operational specifications, and partnerships with expertise at the University of New Mexico Center for Rural and Community Behavioral Health and the University of Colorado Health Sciences Center.
* *Chronic disease management.* Through the Improving Patient Care initiative, 12 IHS and Tribal facilities are piloting the use of home blood pressure monitoring, as part of a new model of care coordination for patients with diabetes and poorly controlled blood pressure.
* *Nutrition.* Over four years, tele-nutrition services from a single program office in Arizona have provided real-time medical nutrition therapy in over 1600 patient visits, in 6 Native communities, across 3 states - patients who otherwise would not have received such services. In addition, over 150 hours of nutrition training have been provided to community-based diabetes outreach workers and fitness instructors.
* *Specialty services.* Dermatology, cardiology, radiology, pharmacy, and many other services are increasingly provided via telehealth. One novel project involves remote neurosurgical consultation for head trauma. A collaboration between the IHS Navajo Area and the University of New Mexico Regional Trauma Center, this service has improved timely consultation for head trauma management to the Gallup Indian Medical Center, resulting in rapid and accurate evaluation of head injury and a significant decrease in unnecessary patient transfers.

Each year, an increasing number of IHS, Tribal, and Urban health facilities and programs gain using telehealth and related innovation. As noted, this experience spans many clinical disciplines. But it also supports educational and other health system needs. Of special note, telehealth tools facilitate new approaches to e-learning and training. Web-based tools, video-conferencing, and emerging capabilities via cellular and smart phones are revolutionizing access to medical information and training. Such capabilities hold significant promise for health education, health promotion and disease prevention, epidemiology and communicable disease tracking, social support, and human resource development. These tools are an increasingly important part of workforce development; on-line coursework permits many employees and community members to remain in their local communities. This avoids expensive travel, job displacement, and extended leave from or relocation of families. In addition, it facilitates leadership succession planning, allowing capable employees to remain in their jobs, within Indian health, while pursuing advanced degrees and training.

**Challenges**

Despite such successes, not all AI/AN communities benefit from emerging telehealth-enabled service models. Critical variation exists across Indian health regarding the availability of telehealth tools and the infrastructure to use them. Of note:

* Proven telehealth solutions, such as AFHCAN and JVN, are not available to all;
* Operational capacity for expanded implementation, training, and technical support is insufficient;
* Critical clinical and program support staff is limited;
* Diverse information systems require secure integration of patient health information;
* Network infrastructure requires upgrading;
* New mobile health capability demands updated security standards and policies; and
* Lagging insurance reimbursement policy for telehealth services constrains the ability of Indian health facilities to promote change.

These challenges result in variability in system capacities and the use of innovative tools. Such variability hampers the ability to expand regional successes into national models of care. The inability to develop such models of care restricts strategic use of innovation on a scale that can extend quality health care, public health support, and learning capacity to all AI/AN communities.

**Health Care Innovation and E-Commerce**

The IHS is committed to delivering the highest quality care to American Indians and Alaska Natives. Importantly, we recognize that the challenges and barriers to health care innovation are also challenges and barriers to other priorities in the communities we serve. And these other priorities - jobs, economic opportunity, safety and emergency services - are vital to personal health and a community's health status.

Investment in health information technology and telehealth capability may help address multiple priorities. In addition to enabling improved access to quality health care, telehealth tools can enable economic opportunity for Native communities as well. More jobs are needed in local communities to support health care needs in a 21st century economy. These jobs require new skills; many of the skills needed to support telehealth are similar skills for other community services, schools and social services, and small businesses. As already noted, telehealth tools such as videoconferencing and on-line training can expand access to education and advanced degrees. Such training decreases unnecessary travel, saving money for communities and community members. It increases the ability of local hospitals and businesses to recruit and retain staff that otherwise may be required to leave communities to pursue their education and training. It aids Indian health in leadership succession planning. It even allows Tribal health programs to develop service models in which the expertise can be *provided* *by* those programs to other regions and geographies, rather than the often-experienced situation in which Native communities are dependent on expertise from specialty groups in urban environments. For example, some of the best experience in the U.S. in specialist tele-consultation lies within Indian health care. The opportunity to share such experience - across Indian health and with other health care organizations - may represent a strategic business opportunity for Tribal programs, one that could be realized if some of the already noted infrastructure requirements were addressed.

**A Dynamic Environment**

New technology such as the smart phone is changing our world. This change brings exciting opportunities for health care. It also drives reconsideration of service models, resource needs, and partnership possibilities. Technology innovation, of course, is only part of the answer. How the technology is used, what changes are needed to maximize that use, what service models best leverage new technological capabilities - these are the types of questions that necessitate careful review and resource support. It will also be important to identify the similarities and differences in how new infrastructure may support diverse community needs. For example, expanded broadband infrastructure will benefit many organizations and activities in Native American communities. New 3G and 4G cellular networks will enable health programs to extend care into patients' homes. But security and privacy may mandate that the same health program's telecommunication network be appropriately partitioned, rather than shared. Consequently, a total community requirement for broadband should be considered so that sufficient capacity can be obtained to meet collective needs, rather than a situation in which there is competition within Native communities for limited broadband capacity.

**Summary**

The IHS and its Tribal partners actively embrace the expanded use of innovation in health care delivery for Native communities. Health information technology, such as telehealth, holds great promise for our models of care and the expanded educational and economic needs of the communities we serve. The realization of this promise necessitates additional policy and resource assistance so that barriers to the appropriate use of such innovation may be reduced or eliminated. We look forward to the opportunity to work together to help reach this goal.

Mr. Chairman this concludes my testimony. I will be happy to answer any questions the committee may have. Thank you for the opportunity to speak with you today.

1. *Trends in Indian Health, 2002–2003 Edition*. Available at <http://www.ihs.gov/NonMedicalPrograms/IHS_stats/index.cfm?module=hqPubTrends03> [↑](#footnote-ref-1)
2. Barnes, P. M., P. F. Adams, and E. Powell-Griner. *Health Characteristics of the American Indian or Alaska Native Adult Population: United States, 2004–2008*. National Health Statistics Reports 20. Hyattsville, MD: National Center for Health Statistics, 2010. [↑](#footnote-ref-2)
3. Hofstetter, P. J., J. Kokesh, A. S. Ferguson, and L. J. Hood. “The Impact of Telehealth on Wait Time for ENT Specialty Care.” *Telemedicine and e-Health* 16, no. 5 (2010): 551–56. [↑](#footnote-ref-3)
4. Kokesh, J., A. S. Ferguson, and C. Patricoski. “The Alaska Experience Using Store-and-Forward Telemedicine for ENT Care in Alaska.” *Otolaryngologic Clinics of North America* in press [↑](#footnote-ref-4)
5. Centers for Disease Control and Prevention. *2007 National Diabetes Fact Sheet*. Available at <http://www.cdc.gov/diabetes/pubs/estimates07.htm#4> [↑](#footnote-ref-5)