Testimony
Before the Subcommittee on Health
Committee on Veterans Affairs
United States House of Representatives

Telemedicine Activities at the Department of Health and Human Services

Statement of
Carolyn M. Clancy, M.D.
Director
Agency for Healthcare Research and Quality
U.S. Department of Health and Human Services

Agency for Healthcare Research and Quality
Advancing Excellence in Health Care www.ahrq.gov

For Release on Delivery
Expected at 10:00 a.m.
on Wednesday, May 18, 2005

Mr. Chairman and Members of the Subcommittee, I am Dr. Carolyn Clancy, the Director of the Agency for Healthcare Research and Quality (AHRQ), a component of the Department of Health and Human Services (HHS). Today I have the privilege of representing the Department and want to thank you for the opportunity to participate in this discussion of the role of telemedicine in improving the health care of America's veterans.

The Department of Health and Human Services (HHS) has had a long-standing commitment to understanding and advancing the effective use of health information technologies, including telemedicine, to improve the health of all Americans. As we use the term, telemedicine is the use of telecommunications technology for medical, diagnostic, monitoring, and therapeutic purposes when distance and/or time separates the participants. At the outset, we need to acknowledge that a great deal is not known about telemedicine. But we share a common interest with our colleagues at the Department of Veterans Affairs in attempting to identify best practices and promising interventions. So we are delighted to participate in this hearing to provide a brief overview of our Department's telemedicine activities and share our preliminary findings and experience.

Setting the Context

I would like to begin by offering seven observations regarding telemedicine.

First, the use of telemedicine in the private sector is still relatively small but growing.

Second, there is evidence that the technology can work, and can be used beneficially from a clinical and economic standpoint. However, I must add a note of caution. While there are many promising initiatives underway, there are few mature telemedicine programs and few good scientific evaluations. There are, nonetheless, lessons learned that may prove useful to the VA. However, there is an obvious need to work collaboratively to identify best practices.

Third, it is also difficult to assess the appropriateness, effectiveness or cost effectiveness of telemedicine in the abstract. It is best to focus on the service that telemedicine is being used to provide (such as the provision of radiology services or specific home health services), how it is being used for that purpose, and in what types of settings it is being used. Telemedicine may be

effective in one specialty but not in another.

Fourth, as with all technologies, telemedicine is merely a means to an end. Too many evaluations assess aspects of the technology itself. What should be assessed is whether the telemedicine service leads to better patient care and at what cost. Specific applications should always be assessed in terms of how they further our common goal to provide access to clinically effective, safe, and timely care to our patients efficiently.

Fifth, the array of obstacles to adoption and use of telemedicine services in the private sector is different in some ways from those confronted by the Department of Veterans Affairs' relatively "closed" health care system. For example, financial incentives or legal issues such as antitrust, malpractice, and cross-state licensure are more significant issues outside the VA. As a result, some of our Department's work related to use and adoption in the private sector may not always be directly transferable to the context in which the VA operates.

Sixth, with certain exceptions, such as tele-radiology, clinicians and system managers have been slow to adopt telemedicine. It is increasingly clear that a variety of factors need to be in place before clinicians believe that the value gained exceeds the effort required to implement new technology. User operability issues are complex and are important to the adoption of effective telemedicine services. Similarly, the education of users is a critical issue.

Finally, under Secretary Michael Leavitt's leadership, HHS is giving the highest priority to fulfilling the President's commitment to promote widespread adoption of interoperable electronic health records. This movement could be a significant enabler for the adoption of telemedicine in the future. The prospect of direct, immediate, interactive linkage between telemedicine applications and a patient's electronic health record, across settings of care, has the potential to alter the calculus for their evaluation of specific telemedicine applications and ease clinician concerns regarding the effort required to use the technology.

HHS Telemedicine Activities

HHS agencies have supported telemedicine research or demonstration projects for over three decades but the level of activity increased significantly in the last decade. As more agencies became interested in telemedicine, HHS took two steps to increase coordination within the Department and the rest of the Federal Government. The first action, in 1995, was the establishment of a Joint Working Group on Telemedicine to enhance coordination within the Department and other Federal agencies to more systematically identify barriers to telemedicine deployment.

In 1998 the Office for the Advancement of Telehealth (OAT) was established to serve as a focal point for coordinating telehealth programs within the Health Resources and Services Administration (HRSA) and to work with other Federal, State, and private agencies to advance the field. In 2002, Congress formally established the Office in statute.

The overall focus of HHS' telemedicine activities has been to expand access to quality health care through the use of telecommunications and information technologies. It is not solely focused on the technology.

Grant Programs

Since 1988, the Department has awarded at a minimum more than $250 million in telemedicine projects in every state of the Nation, with over 400 communities benefiting from these grants. In 2005, OAT will administer approximately 150 telehealth projects; this number includes 15 new competitive awards in FY05 for $3.9 million. In addition, HRSA, at the direction of Congress in P.L. 108-447, will make approximately 77 awards for a total of $31 million for telehealth projects. These projects include classic telemedicine programs for the delivery of health care, electronic health record/information system development and deployment (including telepharmacy, e-prescribing), and distance education. The majority of these grants serve rural communities.

The data on home care is quite promising. Although the studies are small, experience indicates that major savings and improvements in quality of care can be achieved for chronic care patients.

By more closely monitoring these patients in their home, they were able to prevent acute exacerbations of chronic disease. For example, one grantee study showed that expenses can be cut in half through the use of telemedicine for a cohort of chronically ill patients with congestive heart failure and diabetes, compared to national statistics for a similar population. Similar findings have been shown in studies by Kaiser Permanente and the VA.

Promoting Access in Rural Areas

While there are few programs from which high quality data are available, a baseline analysis by HRSA's Office of Advancement of Telehealth of 19 rural telemedicine program grantees showed that many communities would have no access to adult psychiatric services, pediatric psychiatric services, dermatologist services, neurological services, specialized wound care consultation services, and genetic counseling, if telemedicine services had not been provided by these grantees.

A baseline study of eight rural telemedicine grantees with tele-home care programs found significant potential productivity gains were found for nurses by reducing travel time. During the baseline period (September 2002-August 2003), approximately 2,100 nurse hours were saved through reduced travel for trips that otherwise would have been done in person. These hours translate into approximately $80,000 of salary and travel costs saved during the baseline period. In reality, rather than simply reducing nursing costs, the nurses who spent less time driving were able to care for more patients – stretching the short supply of nurses to improve access for more patients. Homecare agencies that spend less on gas can spend more on other supplies or services.

The Indian Health Service

The Indian Health Service (IHS) is the closest HHS parallel to the context in which the VA operates. IHS and Tribal facilities report experience with over thirty different types of telemedicine clinical service. Similar to national U.S. experience, tele-radiology, tele-retinal screening, tele-dermatology, tele-mental health, and tele-cardiology are leading clinical telemedicine applications in Indian health. Opportunities for expanded service delivery, however, are under development. These opportunities include new clinical telemedicine

applications as well as project development for cost-effective and quality-focused Virtual Centers of Excellence

Many different types of telemedicine have been successfully used by the IHS and Tribal hospitals and clinics. Such telemedicine services have helped address a diverse array of clinical needs, and highlight evolving opportunities for both evidence-based and community-based chronic disease management. For example, at 30 IHS and Tribal facilities, patients with diabetes receive remote diagnosis and management of diabetic eye disease via the IHS-Joslin Vision Network. In Alaska, 800 to 1000 tele-consultations are performed each month via the broadband Alaska Federal Health Care Access Network. Many children with ear problems receive pre and post-operative care from ENT surgeons at the Alaska Native Medical Center in Anchorage via tele-consultation on this network. In southern Arizona, patients with heart failure have access to cardiologist case management services from the Native American Cardiology Program via home telehealth. Tele-cardiology care also supports interpretation of electrocardiograms and echocardiograms performed at rural Indian health facilities.

On the Navajo Nation, women's health services include rapid mammography interpretations through telemedicine links from Navajo Area IHS and Tribal facilities to a specialty Breast Center in Tucson. Similar tele-mammography services will soon be available from a mobile women's health project set to begin in North Dakota and South Dakota.

Tele-mental health service is a growing part of many rural Indian health programs. One program offers confidential and parent-consented tele-mental service to high school students in a school-based clinic. Finally, community outreach via telemedicine extends medication refill service and creative health promotion /nutrition education for patients and families on the Western Navajo Nation.

Non-Clinical Uses

Innovation is also underway for non-clinical telehealth projects. These projects use videoconferencing technology for distance learning, program planning, and administrative meetings. Many Indian health care facilities currently participate in such activities. New

approaches to learning include Virtual Grand Rounds, distance education via the Pathways into Health project for American Indian and Alaska Native students seeking Medical Technologist and other health professional degrees, and multi-media continuing education coursework in a variety of clinical disciplines.

Telemedicine for many IHS and Tribal facilities is made possible by partnerships with state telemedicine networks and regional telecommunications infrastructures. Noteworthy examples of such partnerships include: the Alaska Federal Health Care Access Network, the Navajo Area and Phoenix Area Telehealth Networks; and the Arizona Telemedicine Program. The Alaska Federal Health Care Access Network extends telemedicine services to 200 IHS and Tribal sites in the state of Alaska. The Arizona Telemedicine Program facilitates diverse telemedicine activities at numerous IHS/Tribal facilities in the Southwest United States.

Building and Understanding the Evidence Base for Telemedicine

At the request of the Centers for Medicare and Medicaid Services (CMS), my agency, AHRQ, developed an evidence report in 2001 that reviewed the available evidence on the effectiveness of telemedicine interventions for the Medicare population. The report concluded that the use of telemedicine is small but growing. Active programs demonstrate that the technology can work, and their growing number indicates that telemedicine can be used beneficially from both clinical and economic standpoints. The longevity of these programs, however, is not clear, and many may fail to survive beyond initial funding or enthusiasm.

The report went on to state that the evidence for the efficacy of telemedicine *technology* is less clear. The problem is not that studies have strong evidence against efficacy, but rather that their methodologies preclude definitive statements. Many of them have small sample sizes that decrease the statistical power of the findings, and the settings of others may not be equivalent to real life clinical settings.

2005 Update of the Evidence Report

In 2004, AHRQ began an update of the 2001 evidence report on telemedicine services for the Medicare population and convened a workshop that provided additional input from leaders in the

field regarding pressing issues in telemedicine. The report is now undergoing peer review to ensure its accuracy. We expect a final report next month and we will provide copies to the Committee as soon as it is available.

The report focuses on what types of telemedicine services are more strongly supported by scientific evidence and for which settings. It identifies health care services that could be provided using telemedicine and describes existing programs in three categories of telemedicine:

- store-and-forward;
- home-based; and
- office- and hospital-based services.

The bottom line is that the evidence base for telemedicine is still incomplete but improving.

I should note that we recognize that policymakers and system administrators often do not have the luxury of waiting until an intervention is proven effective beyond a shadow of a doubt. For those who need to make decisions in the absence of perfect information, AHRQ will work with them to better understand and interpret existing evidence. At the same time, it is clear that a major impediment to public and private sector reimbursement has been the absence of more reliable evidence on the effectiveness of specific telemedicine approaches. We all need to work together to try to build that evidence base more quickly using innovative research methodologies. For example, given the growing use of electronic health records, selective data could be extracted on patients with telemedicine interventions to assess them longitudinally. Such studies will be most feasible in large integrated delivery networks with advanced electronic health record systems such as the Veterans Administration and private sector plans with similar capabilities.

Cutting Edge Research

I also wanted to mention two cutting edge research projects that may be of interest to the Subcommittee. Intuitively, it makes sense to support further research into telehealth opportunities for the "visual" specialties that require more than voice or text communication to be most effective. A project funded by the National Library of Medicine (NLM) of the National Institutes of Health that is taking place at the University of North Carolina, Chapel Hill, is

developing and testing 3D telepresence technologies that come close to supporting the illusion of being at a remote location. This experience will allow remote consultations to benefit from the added information gained from a three-dimensional environment. Consultations in such diverse areas as emergency medicine, dermatology and surgical consultations will utilize this important breakthrough.

The second exciting and innovative project, funded by AHRQ, utilizes a combination of telemedicine, cutting edge cancer therapy, and clinical decision support and is pioneered by Dr. Karen Fox at the University of Tennessee Health Science Center in Memphis. The Technology Exchange for Cancer Health Network, or TECH-Net, provides a systematic cancer care program for patients located in rural communities surrounding Memphis. Patients are seen at the University, where initial diagnostic and therapeutic interventions take place. The majority of care is then provided in a patient's home community by a team comprised of the patient's primary care physician supported by University oncology and hematology specialists. These critical specialists communicate via clinical decision support tools and a dedicated telehealth network.

Skilled Nursing Facilities

Finally, there is another report currently under development by the Department in response to Section 418 of the Medicare Modernization Act. The statute required an evaluation regarding the possibility of including skilled nursing facilities (SNFs) as a Medicare telehealth originating site for purposes of Medicare reimbursement. The statute required an evaluation and a report to Congress that includes recommendations on "mechanisms to ensure that permitting a skilled nursing facility to serve as an originating site for the use of telehealth services or any other service delivered via a telecommunications system does not serve as a substitute for in-person visits furnished by a physician, or for in-person visits furnished by a physician assistant, nurse practitioner or clinical nurse specialist, as is otherwise required by the Secretary." Because the findings regarding the use of this technology within nursing home facilities may be of interest to the Subcommittee, we will provide you with copies as soon as it is ready for release.

Indian Health Service – Veterans Health Administration Collaboration

As I noted earlier, the context in which the Indian Health Services operates is the closest to that of the VA system. I am delighted to report that there is an evolving collaboration between the IHS and the Veterans Health Administration (VHA) telemedicine programs that exemplifies the benefit of inter-agency information exchange and sharing. A Memorandum of Understanding between the IHS and the VHA has enabled telemedicine program coordinators from both Departments to identify key areas for cooperation and possible shared resource development. IHS and Tribal participation in the 2005 VHA Care Coordination and Telehealth Forum underscores the commitment of both agencies to facilitate regional and local partnerships that will optimize resources and improve care for American Indian and Alaska Native veterans. In partnership with conference organizers and interested VHA employees, eighteen IHS and Tribal attendees at the April 2005 Forum developed a strategic framework for ongoing telemedicine collaboration. This framework highlights standards-based approaches to telemedicine service delivery that will facilitate local IHS-VHA information sharing, secure operational capacity development, and collaborative clinical service outreach for American Indian and Alaska Native veterans.

The VHA has provided pioneering commitment for improved service delivery via home telehealth. This commitment demonstrates the emerging ability of clinicians and caregivers to reach patients and families at the point of care. Home telehealth, delivered in a care coordination model, offers new opportunity for enhanced access and health care system value. VHA leadership in home telehealth and care coordination establishes a benchmark by which IHS and other health care organizations may integrate the patient's home into the health care delivery network.

Private, confidential telemedicine service to American Indian veterans in rural communities is not only possible – it is already occurring. A unique partnership in South Dakota between the Rosebud Sioux Tribal Veterans Program, the Rosebud IHS Indian Hospital, the Hot Springs Veterans Affairs Medical Center, the Denver VA Medical Center, and the Center for Native American TeleHealth and TeleEducation at the University of Colorado Health Sciences Center

provides weekly tele-mental health treatment and counseling services for Northern Plains American Indian veterans struggling with post-traumatic stress disorder. This partnership evidences the capability of multi-system collaborations to provide culturally sensitive psychiatric care to rural, isolated communities. It has become a model for additional tele-mental health projects currently underway or under development in other American Indian communities in Montana.

Conclusion

Telemedicine has long been viewed as a promising tool for enhanced access to health care services, improved patient safety, and timely medical decision-making. Telemedicine may also enable more effective care management for patients with chronic medical conditions. The barriers to access that telemedicine can overcome -- geographic isolation, functional isolation, economic barriers, a scarcity of health professionals, or a combination of these factors – are clear.

Widespread adoption of individual telemedicine applications in the private sector will continue to grow slowly, however, unless creative ways are found to speed the development of solid, scientifically generalizable findings of their effectiveness. In addition a number of legal issues, including cross-state licensure and antitrust concerns, must be resolved. By moving down that path, the understandable reluctance of payers to reimburse telemedicine applications appropriately will begin to be overcome.

As the Indian Health Service example demonstrates, our two Departments have demonstrated an ability to work collaboratively in ways that benefits the populations we directly serve. The use of telemedicine applications in public programs will increase as we continue to work together to address the common barriers to broader telemedicine use, such as the wariness of clinicians and system managers to embrace telemedicine applications, build the evidence base for effectiveness, and identify best practices.

Mr. Chairman, this concludes my prepared statement. I would be delighted to answer any questions that you or the Members of the Subcommittee may have.