



## Telehealth

**AHRQ's Health IT Portfolio.** AHRQ's health information technology (health IT) initiative is part of the Nation's strategy to put information technology to work in health care. By developing secure and private electronic health records for most Americans, and making health information available electronically when and where it is needed, health IT can improve the quality of care, even as it makes health care more cost-effective. Since 2004, AHRQ has invested over \$260 million in contracts and grants to over 150 communities, hospitals, providers, and health care systems in 48 States to promote access to and encourage the adoption of health IT. These projects constitute a real-world laboratory for examining health IT at work.

This report focuses on those grants in the health IT portfolio that are implementing telehealth—the use of electronic information and telecommunications technologies to support clinical health care, health-related education, public health, and health administration from a distance. These grants were awarded in 10 States—Arkansas, California, Minnesota, Montana, New Mexico, New York, Oklahoma, Pennsylvania, Tennessee, and Texas—and serve primarily low-income rural areas with high rates of chronic illness.

**Telehealth can improve patient safety and quality of care.** Trends found among AHRQ-funded projects point toward evidence of improvements in patient outcomes and experiences with the health care system.

- One project demonstrated that remote pharmacy services provided to rural hospitals during irregular hours (nights, weekends, and holidays) can more effectively detect and prevent dangerous medication errors than traditional methods; this can be attributed to pharmacists manually reviewing “night and weekend” orders first thing in the morning before turning to day-shift activities.
- Another project demonstrated that remote pediatric care can easily treat common childhood illnesses from schools and child care centers, helping working parents who cannot leave their jobs and saving money by reducing unnecessary visits to the emergency room.

**Implementing telehealth is not easy.** Projects funded by AHRQ experienced technical challenges with telehealth equipment.

- One project indicated that vendor-supplied home monitoring devices failed to work on a regular basis. As a result of this failure, approximately one-third of the patients who were enrolled in the study became frustrated with the devices and stopped using them.
- Two projects reported that the video cameras they were using to transmit video and still images did not provide adequate resolution to yield clear images of small pills (medications) and patient wound areas.

**Guidelines for reimbursement of telehealth are necessary for sustainability.** Although the Centers for Medicare & Medicaid Services (CMS) and some third-party payers have created telehealth reimbursement guidelines, widespread acceptance of telehealth as a cost category for reimbursement has been slow to develop. AHRQ-funded projects are working with regional payers to secure reimbursement for valuable telehealth services.



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Health IT

- One AHRQ-funded project developed a framework for reimbursement that was generally agreed upon by regional payers. The project agreed to measure component health care costs and demonstrate to regional payers the cost savings of telehealth over traditional in-person care. Specific areas being investigated by the project include: the impact of early diagnosis on the initiation of treatment; the ability to manage chronic illness via telehealth versus emergency care; and the effects of continuity of care offered by telehealth applications.

**AHRQ-funded grantees say technical support must be available around the clock to ensure patient safety.** While large health care organizations have internal IT departments that provide support for telehealth systems, smaller organizations rely primarily on vendors for technical support.

- The level of support available to projects from vendors varied; many small companies were closed during weekends and evenings.
- Projects receiving vendor support that was not available 24 hours a day, 7 days a week reported that such arrangements have the potential to negatively impact patient safety and mission-critical patient services.

**Telehealth systems should be integrated with electronic health record (EHR) systems to promote continuity of care across clinical settings.** Several AHRQ-funded projects reported that integrating their telehealth systems with EHR systems offered many critical benefits. Integration of systems allowed these projects to capture patient data using telehealth equipment and transmit that information to clinicians at the point of care.

- One project reported that integrating telehealth and EHR systems can facilitate medication reconciliation. Specifically, integrated systems can provide pharmacists, nurses, and physicians with information about what medications the patient is using at home, as well as visual confirmation of medications that are dispensed within a hospital after hours.

**Telehealth systems can support the provision of team-based care.** Because health care systems in the United States are fragmented, a team-based approach is desirable to coordinate the activities of various care providers. Several of the AHRQ-funded projects reported that telehealth fostered and supported team-based care at their organizations. These grantees reported that telehealth can improve an organization's work and safety culture.

- A project using telehealth to connect nurses at 10 community hospitals with a remote, after-hours pharmacist has been successful in encouraging nursing staff to collaborate with the pharmacy staff on medication reconciliation and error issues.

A project using telehealth to create online communities of practice among clinicians has successfully fostered collaboration to address community health issues among specialists and community providers. Furthermore, rural clinic staff members have also participated by partnering to provide enhanced patient education.

**The AHRQ-funded laboratory of telehealth projects is producing valuable, informative lessons for the Nation.** The projects are making contributions to the use of telehealth in solving some of the national health care system challenges. The lessons to date enhance understanding of various telehealth applications and the challenges involved when implementing them in a wide variety of clinical settings. Outcomes from these projects have the potential to change the U.S. health care system, and they offer valuable insight for others who look to use telehealth applications in their own organizations to produce similar results.

**For More Information:**

The AHRQ National Resource Center for Health Information Technology  
 Phone: (866) 356-3467 | Email: [NRC-HealthIT@ahrq.hhs.gov](mailto:NRC-HealthIT@ahrq.hhs.gov) | Web: <http://healthit.ahrq.gov>

