

## Facilitators and Barriers to Adoption of a Successful Urban Telemedicine Model

---

<b>Principal Investigator:</b>	McConnochie, Kenneth, M.D., M.P.H.
<b>Organization:</b>	University of Rochester
<b>Mechanism:</b>	PAR: HS08-270: Utilizing Health Information Technology to Improve Health Care Quality (R18)
<b>Grant Number:</b>	R18 HS 018912
<b>Project Period:</b>	September 2010 – August 2013
<b>AHRQ Funding Amount:</b>	\$418,029

---

**Summary:** Since its inception in 2001, the Health-e-Access telemedicine network (HeA) in Rochester, NY, has been used to manage acute childhood illness. Three telemedicine service models have evolved from HeA's ability to bring care directly to children, instead of children traveling to their care provider. The three models focus on care in school, daycare, and after-hours neighborhood settings. School settings include all Rochester city schools and a large center for children with severe developmental disabilities. These models give families in Rochester several new options for care of children with acute illnesses. Dr. McConnochie and his research team hypothesized that families will embrace the use of telemedicine via these new service models once they recognize their advantages over traditional care models, such as the use of emergency department care.

The goal of this project is for HeA to replace inefficient traditional models of care with more convenient, high-quality, lower-cost models. The project is deploying and solidifying sustainable business models for each of the three telemedicine service models in the four inner-city zip code areas of Rochester. Additionally, the project is identifying facilitators of and barriers to implementation, monitoring the impact on utilization patterns, and creating and disseminating an implementation and sustainability toolkit. The research team is using both qualitative and quantitative methods of research, including unstructured key informant interviews, semi-structured interviews, and statistical analysis of utilization patterns. The identification of facilitators and barriers to implementing a similar telemedicine model may promote widespread replication in other communities and for a broader range of patients.

### Specific Aims:

- Achieve substantial deployment and solidify sustainable business models for each of the three urban telemedicine service models. **(Ongoing)**
- Identify facilitators and barriers to dissemination of the three telemedicine service models. **(Ongoing)**
- Monitor impact of the HeA models on utilization patterns **(Ongoing)**
- Create and disseminate an implementation and sustainability toolkit. **(Ongoing)**

**2012 Activities:** A number of methods were used to identify and assess barriers and facilitators of telemedicine implementation. Key informant interviews were conducted with parents, nurses who manage parent phone calls, telemedicine assistants who enable visits, providers, site staff, and leadership from various collaborating organizations. Focus groups were conducted with parents of children who were eligible for these visits.

The research team developed and implemented a phone-based community illness survey to assess how families respond to the medical needs of a sick child. Survey recipients were obtained from a Rochester City School District list of randomly sampled children eligible for telemedicine visits. The survey has been completed and analysis is underway.

As last self-reported in the AHRQ Research Reporting System, project progress and activities are mostly on track and spending is on target.

**Preliminary Impact and Findings:** Information gathered from key informant interviews with office telephone triage nurses indicated that they believe telemedicine is valuable and would use it for their own children. These nurses speculate, however, whether the number of dropped calls (calls in which the parent hangs up while on hold) increases when nurse spend the time to offer the telemedicine option. Since most parents are unfamiliar with telemedicine, the process of explaining it requires significant time. This increases on-hold times and increases dropped calls. To address this, the team developed a script to help nurses explain telemedicine to parents more efficiently.

Focus groups have included urban mothers without telemedicine experience, the demographic target for the study. Telemedicine was described as a more convenient way to get medical care for children because it does not require going to the doctor's office or waiting for an appointment. Among parents with telemedicine experience, satisfaction has been very high, and convenience has been a dominant theme among perceived benefits. Yet among mothers without telemedicine experience, most had a somewhat negative response to the "convenience" benefit. Participants perceived the convenience of telemedicine as "cutting corners," and said that "good mothers" do not cut corners; rather, they bring their children to the doctor's office. As a result, HeA now markets telemedicine as quality care that can reduce time spent in waiting rooms to allow more quality family time. The participants also expressed that a demonstration of telemedicine would greatly facilitate their understanding of the technology and that recommendations by their own providers would be a key determinant of their interest in using telemedicine for their children.

There were 1,946 telemedicine visits in 2011 and 1,578 in 2012. Among the 2011 visits, 55 percent resulted in a prescription. Because this value is similar to the proportion of in-person illness visits yielding a prescription, this observation supports findings of utilization studies (based on billing claims) that telemedicine visits replace traditional types of care rather than increasing utilization.

---

**Target Population:** InnerCity\*, Pediatric\*

**Strategic Goal:** Develop and disseminate health IT evidence and evidence-based tools to improve health care decisionmaking through the use of integrated data and knowledge management.

**Business Goal:** Implementation and Use

---

*\*This target population is one of AHRQ's priority populations.*