

Broadband USA Applications Database

Applicant Name: Children's Hospital of Wisconsin

Project Title: Community Access to Pediatric Specialists via Telemedicine (CAPST)

Project Type: Sustainable Adoption

Executive Summary

In Wisconsin there are sizable gaps in timely access to pediatric specialists during emergency situations. Community Access to Pediatric Specialists via Telemedicine (CAPST) seeks to narrow these gaps by establishing a broadband-based telemedicine network headquartered at Children's Hospital of Wisconsin (CHW) in Milwaukee. CAPST will enable rural and community emergency departments (EDs) throughout WI to consult with expert pediatric critical care physicians located at CHW to best determine the appropriate care destination—either community-based continuity of care or emergent transport to CHW.

The purpose of CAPST is to utilize broadband technology to support rural/community EDs by:

- * Providing real-time expert pediatric critical care assessment and consultation to assist with emergent care of children, improve diagnostic capability, and assist with transfer to advanced specialty care at CHW if necessary;
- * Providing child abuse consultation on an as-needed basis;
- * Enabling time-sensitive access to pediatric-trained specialists in emergent situations;
- * Minimizing patient transfer and dislocation from community and family resources if appropriate medical care exists locally;
- * Collaborating with local EDs and primary care physicians to develop and maintain pediatric care in the community;
- * Maximizing resource utilization of local ground and regional rotary transport vehicles for true emergent pediatric care and maximizing potential cost savings; and
- * Providing pediatric expertise in the event of a major disaster (e.g., pandemic, environmental).

Adoption of a broadband telemedicine network will provide an innovative solution to WI's limited access to pediatric critical care specialists. While telemedicine has been shown to be a beneficial mode of health care delivery, CAPST embodies innovation in its pediatric focus. CAPST will be the first of its

kind in WI, offering unprecedented and invaluable access to pediatric specialists during emergent circumstances.

CAPST will establish the broadband infrastructure necessary to implement this efficient method of connecting pediatric patients in community EDs with pediatric critical care subspecialists in Milwaukee. Currently, pediatric patients that present to community/rural EDs are primarily treated by adult care physicians, who may not be comfortable treating children under such time-sensitive conditions. As such, the reactive response for the rural/community ED is often to request an air transport to CHW, which costs ~\$12,000. As an alternative, CAPST will enable rural/community EDs to remotely access pediatric critical care specialists at CHW prior to making a hasty transport decision. This method of service delivery will not only result in a judicious use of resources, but also increase the likelihood that pediatric patients will not be dislocated from community and familial resources.

CAPST proposes broadband adoption by 20 community/rural EDs throughout WI and in the homes of 20 CHW physicians in Milwaukee, to provide remote consultative services to those EDs. As a result of this broadband network, over 4,000 pediatric patients will potentially benefit from CAPST during the life of the grant alone. CAPST will cover all 8 of WI's congressional districts, with patients/hospital sites most heavily concentrated in the Northeast, Northwest, Southeast and East Central (Milwaukee/Waukesha) regions of the state. Moreover, there are many areas throughout the U.S., particularly in the Midwest and Central Plains, that mirror WI's lack of accessibility to pediatric trauma centers. CAPST aims to serve as a model for pediatric emergency critical care consultation, delivered via broadband, to be replicated by children's hospitals serving similar demographics.

CAPST will create 1 new job, provide partial salary support for 5.2 full-time equivalent administrative staff positions that will support this program, and cover new "on call" physician expenses that will enable around-the-clock access to this service. In keeping with the objective of effective use of stimulus funds, CHW intends to absorb the cost of much of the initial call volume through use of existing staff. However, as call volume increases over the life of the grant and beyond, CHW will hire additional staff. In its entirety, the cost of this project is estimated to be \$3.8 million.

CHW is highly qualified to implement the proposed project to improve access to pediatric care in WI through use of broadband technology. Founded in 1894, CHW was recently ranked 3rd in the nation in Parents magazine's Best Children's Hospitals survey, and earned top-10 ratings in 5 specialty areas including emergency medicine, which ranked 2nd. CHW is recognized as a Level I Pediatric Trauma Center verified by the American College of Surgeons. In 2008, CHW had 60,000 ED visits and over 23,000 discharges. CHW's highly specialized clinical transport team transported over 1,600 children from

around the state and beyond. CHW maintains a 72-bed pediatric intensive care unit, staffed by 32 board-certified pediatric intensivists, and has 312 pediatric subspecialists offering care in all pediatric specialties.

CHW is also well positioned to lead this ED broadband network, with physicians on staff who have experience with outpatient telehealth in the areas of feeding and nutrition, dermatology, and radiology. The project's medical director, Dr. Michael Meyer, is well-versed in tele-consultation and transport coordination. He is the medical director of CHW's inter-facility pediatric transport team, providing online medical control of pediatric patients being transported to CHW by ground and air. His research includes evaluation of the effectiveness of medical transport systems and transport team training, he serves on WI's Emergency Medical Services for Children advisory board, and has extensive transport experience from his 13-year Air Force career.