

Southwestern Surgical Congress

Transition from grant funding to a self-supporting burn telemedicine program in the western United States



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KEYWORDS:

Telemedicine;
Burns;
Reimbursement

Abstract

BACKGROUND: Many Americans have limited access to specialty burn care, and telemedicine has been proposed as a means to address this disparity. However, many telemedicine programs have been founded on grant support and then fail once the grant support expires. Our objective was to demonstrate that a burn telemedicine program can be financially viable.

METHODS: This retrospective review from 2005 to 2014 evaluated burn telemedicine visits and financial reimbursement during and after a Technology Opportunities Program grant to a regional burn center.

RESULTS: In 2005, we had 12 telemedicine visits, which increased to 458 in 2014. In terms of how this compares to in-person clinic visits, we saw a consistent increase in telemedicine visits as a percentage of total clinic visits from .26% in 2005 to 14% in 2014. Median telemedicine reimbursement has been equivalent to in-person visits.

CONCLUSIONS: Specialty telemedicine programs can successfully transition from grant-funded enterprises to self-sustaining. The availability of telemedicine services allows access to specialty expertise in a large and sparsely populated region without imposing an undue financial burden.

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Telemedicine, defined as “the use of medical information exchanged from one site to another via electronic communications to improve patients’ health status,”¹ is in wide use throughout the health care industry. Telemedicine has been most frequently practiced and perceived as either real-time bidirectional video communication or as “store

and forward” (S/F) collection of digital images that are transmitted between providers for review. The popularity of telemedicine is now being further enhanced by burgeoning mobile health applications.²

Burn care can be delivered very effectively by telemedicine.^{3,4} However, a number of obstacles, real and perceived, have slowed the adoption of telemedicine into routine use in many areas of practice, including burns.^{5,6} Many of these obstacles are cultural, and the most prominent is concern over billing and reimbursement; recent development of a telemedicine adoption model showed that 3 of the 4 most commonly cited external challenges related to reimbursement.⁷ Our burn center began a

Project funding for the 1st phase of this project was through a US Department of Commerce Technology Opportunities Project grant.

The authors declare no conflicts of interest.

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Manuscript received April 10, 2015

telemedicine program with a federal grant nearly a decade ago. When the grant expired, we had to quickly transform our program into a sustainable effort. The goal of this study was to demonstrate financial viability of telemedicine for delivering burn specialty care in a rural and frontier region.

Methods

Program history

We began telemedicine-based burn consultations on an informal basis in 2003. In 2004, we obtained a 3-year grant from the US Department of Commerce Technology Opportunities Program (TOP) to conduct a demonstration project for synchronous emergency consultations. Our program has increased dramatically from the original 3 sites during the TOP grant to 52 sites with synchronous capabilities more than 6 states (Figs. 1 and 2). In 2011, we initiated a scheduled weekly clinic in conjunction with our partner facility St. Alphonsus in Boise, Idaho, which also increased our number of visits. Our asynchronous or S/F capabilities have expanded and allow access to providers

without the technology required for synchronous consultations.

Data acquisition and analysis

An institutional review board exemption was obtained for this retrospective review of prospectively collected data. The program coordinator for the Burn Telemedicine Program tracked the telemedicine visits documented by our 3 burn surgeons from 2005 to 2014 for both emergency consultations and scheduled teleburn clinic visits. These data were divided into 2 periods: grant (2005 to 2007) and postgrant (2008 to 2014). Before 2007, the grant covered all costs of care, and our group did not bill for care. Charge and payment data for 2007 to 2014 were obtained from the medical billing group for the burn surgeons. The billing group initially used the telemedicine scheduling type to obtain information on charges and associated payments, and these data were then verified by a search for services with a GT (telemedicine) modifier. This dual verification system was used to maximize accuracy. Data were analyzed using Stata 11.1 (StataCorp, College Station, TX).

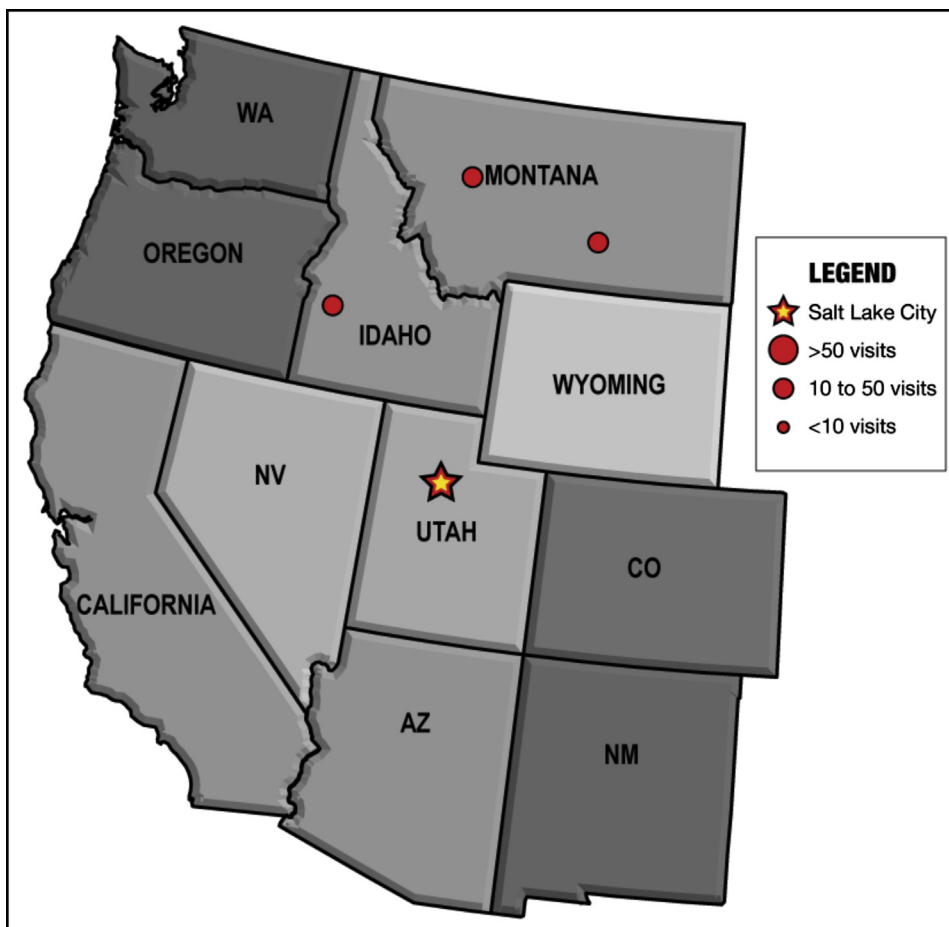


Figure 1 Original burn telemedicine network 2004. AZ = Arizona; CO = Colorado; NM = New Mexico; NV = Nevada; WA = Washington.

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