A Survey Study Exploring the Potential of Telehealth in Critical Access Hospitals

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Critical Access Hospitals (CAHs) were established as a category of limited service hospitals eligible for Medicare reimbursement based on a reasonable cost basis rather than a prospective payment system. This program aims, among other things, to enable rural facilities to address deferred capital improvements including information technology needs. The aim of this study is to identify the current use as well as readiness for the use of telehealth applications in CAHs. A survey including 17 items was mailed to the administrators of all CAHs in one US state (Missouri). Twenty seven out of 33 surveys were returned. Information technology priorities included Electronic Medical Records (for 63\% of respondents) and telehealth and bar code systems (for 23\% of the respondents). Most respondents (66.7\%) stated that their employees have been somewhat comfortable in using new technology. In a Chi Square analysis CAH size (in number of employees) had no significant relationships (p<0.05) with the current telehealth resources in use, forecasted IT spending, or the perceived benefits of telehealth. Findings indicate that telehealth applications are currently underutilized in CAHs while it is recognized that telehealth can play an essential role in the sustainability of these organizations and quality improvement of their services.

Introduction

The Medicare Rural Hospital Flexibility Program introduced by the US Congress as part of the Balanced Budget Act of 1997, established Critical Access Hospitals (CAH). CAHs are limited service hospitals that are eligible to receive reimbursement for Medicare patients on a reasonable cost basis rather than a prospective payment system basis. This program was based on the notion that rural hospitals are vital links to health for rural and underserved populations. The intent of the reimbursement system is to improve financial performance thereby reducing hospital closures. In addition cost based reimbursement can enable many hospitals to address deferred capital improvements including information technology (IT) needs.

While it is argued that information technology can enhance the function of CAH facilities, it is not clear what types of applications would target specific needs of these facilities. Telehealth is often thought as a useful tool for rural facilities as it bridges geographic distance and increases access to clinical experts. However the current infrastructure, IT exposure and background of staff and limited resources can all impede the successful integration of IT applications in critical access hospitals. An initiative to adopt or design a telehealth system requires the identification of the specific IT needs of critical access hospitals, an understanding of the existing infrastructure and a strategy to increase technology acceptance and diffusion. The aim of this study is to identify the current use of telehealth technology in critical access hospitals, and assess their readiness and receptiveness for the use of new telehealth applications.

Methods

A survey was conducted in one US state (Missouri). Administrators from each of the CAHs (33 CAHs at the time the study was conducted) were contacted and asked to participate by filling out a survey. The instrument was designed by the research team following the philosophy of organizational readiness scales, and included 27 items, both open-ended and closed questions. A reminder note was mailed out four weeks after the first mailing. Survey data were imported in SPSS for statistical analysis.

Results

A total of 27 surveys were returned (response rate 82\%). The smallest CAH employed 30 employees and the largest 359. Information technology priorities included Electronic Medical Records (for 63\% of respondents) and telehealth and bar code systems (for 23\% of the respondents). Most respondents (66.7\%) stated that their employees have been somewhat comfortable in using new technology. CAH size (in number of employees) had no significant relationships (p<0.05) with the current telehealth resources in use, forecasted IT spending, or the perceived benefits of telehealth. Findings indicate that telehealth applications are currently underutilized in CAHs while it is recognized that telehealth can play an essential role in the sustainability of these organizations and quality improvement of their services.