

ABSTRACT

BACKGROUND: Affordable Care Act (ACA) has allowed more patients that did not previously have health care insurance to have coverage and access to care. This increase in the number of patients seeking medical care will only add additional stress to the existing disproportion of supply of and demand for health care providers. In addition, rising health care costs have major effect on how, where, and even if consumers will get needed care.

Missouri is a largely rural state directly affected by the aforementioned changes in health care. Rural population has limited access to specialty care, which can get even more difficult in winter months.

AIMS: This study examined three different telehealth platforms in three different medical specialties in order to evaluate the perception that they would be appropriate vehicles for increasing access to care. We also wanted to find out what the users' perceptions of these technologies are, as that can be a driving factor in adoption of new technologies.

METHODS: This research included three separate studies. The first study examined the usability and acceptance of a new mobile application in teledermatology clinics. The second study focused on usability and acceptance of ICU Robots in a medical ICU. Finally, the third study evaluated if children and youth currently using telepsychiatry as a care delivery method would have other in-person options if telehealth was not available.

RESULTS: These studies have shown that these different telehealth technologies are tools that are easy to use, and that they are also acceptable methods for health care delivery. The mHealth app was perceived as a much more favorable device compared to the previous method for picture sharing between clinics and specialists. Similarly, the ICU Robot was found

to be an acceptable tool for providers not physically present, although the providers not trained on how to use it seemed somewhat detached and disengaged during our study. In addition, telehealth helps with access to care for the rural Missouri population, such as children and adolescents accessing psychiatry services via telehealth.

CONCLUSION: Missouri has a robust telehealth network that provides technical support for clinical and non-clinical telehealth usage. Over the years, the network has grown from a 2-site to a 160-site program. The results of this study can help identify future steps for growth and type of equipment for investment in order to improve services further and increase access to care. In addition, provider perceptions and opinions can assist with planning training and protocols.