

Assessment of Telemedicine Preparedness of independent elderly population in rural Upstate NY communities. A cross sectional descriptive survey study of elderly cohorts during Covid-19.

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Hypothesis

Elderly residents living independently outside of skilled nursing facilities in rural communities are unprepared and lack resources and abilities to utilize tele-health services.

Introduction/ Objectives

COVID-19 thrust telemedicine services into exponential demand. Rapid transformation in technologies, modes of delivery, and physician reimbursement began weeks after the beginning of the pandemic. Telehealth claims increased 4,347% nationally, from 0.17% of medical claims in March 2019 to 7.52% in March 2020 (Data from Fair Health Monthly Regional Tracker). Telehealth services have been examined for decades worldwide as a tool to deliver healthcare to rural communities. Telecommunication infrastructure and appropriate access to internet are well established in most rural communities. The elderly population may have access to telecommunication resources such as smartphones and computers, but may not have the knowledge on using them.

Our objective was to evaluate the utilization of tele-health services in the independent elderly populations residing in upstate new york rural communities.

Methods / Study Design

Design: Cross sectional patient survey

Methods: Elderly patients living in rural communities were identified from a single outpatient internal medicine practice in rural upstate New York. Older population was defined as any individual living in rural upstate over age 65. Study population n=28 patients divided into cohorts by age 65-75, 75-85, 85-95 residing in the rural Adirondack communities of Upstate New York. Surveys were performed either by telephone, video conferencing or in person during March 2020-August 2020. Patient database was obtained from local community physician practices. Consent to participate in the survey was obtained by the practice.

Outcome Measures: Patients reported their age, gender, living situation, understanding of technology, availability of assistance with technology, perception and understanding of telemedicine, and comfort with the doctor visits using telemedicine.

Survey Questions:

1. How old are you?
2. Where do you live?
3. Do you Live Alone?
4. Are you, Independent?
5. Do you have anyone helping you with activities of daily living?
6. Do you see a primary care doctor regularly?
7. How far do you have to travel to see your doctor?
8. Do you own a smartphone?
9. Do you have internet access?
10. Are you familiar with telehealth services
11. Are you interested in learning how to use a smartphone or computer?
12. Have you ever had a telemedicine visit?
13. Are you interested in seeing a doctor using telehealth technology?
14. Do you have family or friends that can help you with using a computer or phone for a telemedicine visit?
15. Are you worried about healthcare privacy?

Results

Results: 70% of the population surveyed were unable to use telemedicine technology due to lack of ability and understanding. Access to the internet and devices such as phones and computers was available to 70% of the population surveyed. There were certain areas of the Adirondacks without internet access. 55% of the population surveyed had assistance from family or friends using telemedicine. 60% of the 65-75 cohort were able to participate with telemedicine visits using video conferencing. 25% of older cohort 75-95 were able to participate in telemedicine visit. Elderly males are more likely to be uncomfortable with technology than elderly females.

Demographic Characteristics

Mean Age

Cohort 65-75 - n=13. Mean age - 71
Cohort 75-85 - n= 9. Mean age - 78
Cohort 85-95 - n= 6. Mean age - 90

Gender 46% Female 55% Male

Education Level

Up through 8th grade - 34%
Up through High school - 63%
Up through College - 49%
Vocational School - 58%
Graduate Level Education - 23%

Other Characteristics

Living Independently - 89%

Access to Care Giver - 55%

Availability of Internet -70%

Ability to Use Telemedicine Technology 29%

Discussion / Conclusion

Discussion: Data from The Older Population in Rural America: 2012-2016 revealed that 17.5% of the rural population was 65 years or older compared to 13.8% of the urban population. Furthermore the share of urban population 65 and older living in skilled nursing facilities was 3.1% compared to only 1.4% of people in rural areas. More elderly are living independently in rural communities than in urban. Ailments associated with aging poses a challenge as healthcare resources are limited in rural communities. It is well established that Telehealth services can provide significant healthcare resources to the aging population. Our brief survey shows that there may be a need to provide telecommunications support to elderly living independently in rural communities

Conclusion: With increasing populations of elderly living independently telehealth visits can be instrumental in treatment of acute illness and maintenance of physical and psychological health. Our study demonstrates that there may not only be a need to reinforce technologic infrastructure such as internet access but also develop community based education systems for the elderly where they can be taught the basics of using mobile devices and computers and the internet. Our study was limited due to the small sample size and its design.

Future Direction: It is projected that the population of elderly will steadily increase in both rural and urban regions of the United States. As elderly populations increase there will become a need to educate older patients on the use of telecommunication technologies such as smart phones, computers, and the internet. Such education is lacking in rural communities for elderly residents. Development of such programs can give easier access to Telehealth services and allow elderly to have access to better healthcare

References

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