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Abstract

The primary objective of this research was to identify veterans affected by COVID-19 who have mobility needs and who live in rural areas and to quantify the cost of transportation options for meeting those needs. Secondary objectives included analyzing the role of telehealth and how the pandemic has affected mobility and isolation among veterans in rural America. Analysis showed that a coordination effort between VA medical centers and rural public transit agencies would be feasible if projected ridership levels could be met. Policies to encourage possible coordination should be considered to improve veteran medical transportation services.

Introduction

The current pandemic has affected the lives of all Americans. Rural communities are particularly vulnerable because of a lack of mobility services and the great distances individuals must travel for healthcare and other needs. Nearly five million veterans live in rural communities, representing 57% of Veterans Administration health care enrollees (MOAA 2020). COVID-19 cases and deaths among rural veterans increased at a faster rate compared to those among veterans in urban areas according to Johns Hopkins University (2020). They also found that delayed COVID-19 testing contributed to a higher rate of cases in rural areas compared to urban areas.

The VA Office of Rural Health has recently increased efforts to combat the pandemic in rural areas. These efforts include:

- 1,476% increase in Telehealth visits
- 8,000 completed contact traces
- 102,000 rural veterans reached through the suicide prevention program
- active debt referral
- 55,000 new rural veteran job hires

Federal Veterans News (2020).

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While these efforts have aided rural veterans during the past year, VA health care enrollees continue face many issues including medical provider shortages, limited broadband internet access, and transportation concerns, etc. Many rural veterans also have special mobility needs and must travel long distances to receive medical care.

Veteran Survey

The Small Urban and Rural Center on Mobility (SURCOM) designed an online survey to be distributed to veterans. The survey contained questions focusing on veteran travel patterns, food security concerns, mobility issues, and changes in medical and general travel patterns due to the COVID-19 pandemic. The survey was distributed via email to Veterans Service Officers and Veterans Affairs representatives throughout North Dakota, South Dakota, Minnesota, Iowa, and Nebraska.

Small urban and rural areas were targeted for the survey. The metro areas of Minneapolis-St. Paul, MN, Des Moines, IA, and Omaha, NE, were excluded. Representatives were asked to forward the survey to veterans within their service area, usually at the county level. A total of 150 completed surveys were received. A number of other surveys were also received, but some were either completed

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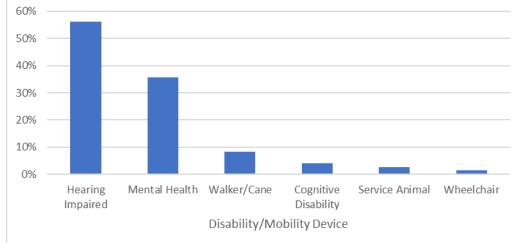


Figure 1. Veteran Disabilities

incorrectly, or some veterans completed the same survey more than once. Also, some veterans completed part of the survey, but when they felt the questions were becoming too personal they either quit responding to further questions, or responded with "this is none of your business" multiple times.

Disabled veterans were asked to specify the nature of their disability (Figure 1). This question allowed for participants to indicate more than one disability with a number of veterans selecting more than one. More than half of respondents indicated they had a hearing impairment and more than one-third specified a mental health disability. Nearly 10% indicated they use a walker or a cane because of mobility issues, while disabilities requiring either a service animal or a wheelchair were specified by less than 5% of respondents. Finally, cognitive disabilities were indicated by less than 5% of veterans as well.

Veterans were also asked how far they travel to a veteran health care facility (Figure 2). Roughly one-third of participants indicated they travel 30 miles or less one-way to their veteran health care facility. Just over 20% responded they travel between 31 and 60 miles, and nearly half of veterans replied that they travel more than 60 miles one-way to receive medical services. COVID-19 pandemic. The survey respondents that identified food insecurity as an issue during COVID-19 were within subpopulation groups identified by Babbitt and Smith (2021) that experience food insecurity. Although Babbitt and Smith (2021) studied working-age veterans between the age of 18-64 and 20% of the respondents from this study were older than 64, all of the survey respondents that reported food insecurity had a disability and 50% of the respondents were female. The food insecure veterans lived mainly in very remote

The final section of the survey

experiences during COVID-19

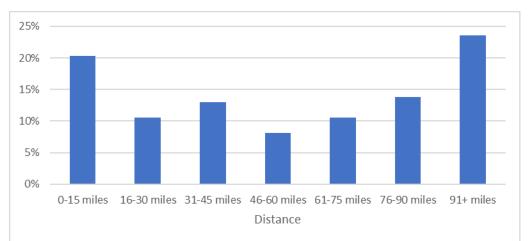
found to be an issue for 8% of

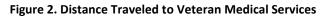
veteran respondents during the

asked veterans about their

regarding safety and food security. Food insecurity was

The food insecure veterans lived mainly in very remote areas with limited access to services during the pandemic. When asked about the reasons for food insecurity during the pandemic, 90% of survey participants specified that restaurants were closed, while 50% indicated that stores were closed as well. Thirty percent designated either the inability to purchase food online, or a lack of finances for their insecurity. Finally, 30% of respondents also indicated that not being able to wear a mask was a cause of their food insecurity because their local grocery stores were requiring them for entry to their business. Twenty percent reported the food insecurity was due to lack of transportation.





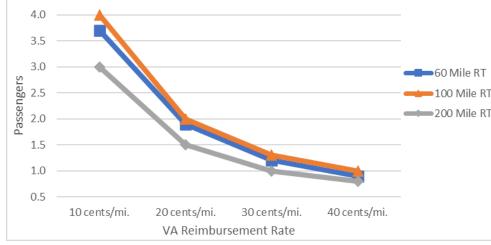


Figure 3. Fargo, ND, Veteran Health Care Simulations

Veteran Mobility Simulations

Simulations were completed from a transit agency perspective to predict the number of veteran passengers required for VA Health Care Center medical trips so that transit fare recovery levels are equaled or exceeded. Simulations were conducted for transit agencies that serve the VA health care centers in Fargo, ND, St. Cloud, MN, Mankato, MN, Sioux Falls, SD, and Norfolk, NE. Sensitivities focused on targeted fare recovery levels for all five health care centers as well. These simulations and findings build on previous work conducted by Peterson (2014).

Simulations were designed to concentrate on the feasibility of VA health care centers coordinating with transit agencies to provided veteran medical transportation. Specific attention was given to the different transportation reimbursement levels associated with each medical trip corresponding to a certain VA health care center. The specific purpose of the simulations was to determine when it would be cost-effective for transit agencies to transport veterans to their assigned health care center. All veteran medical trips were assumed to be unique and dependent on personal likings and limitations as well. To help account for the uncertainty in travel behaviors, simulations were conducted using a program called @Risk. Figure 3 illustrates that with a VA reimbursement rate of 10 cents per mile, transit agencies within both a 30- and 50-mile radius from Fargo, ND, must transport 4 passengers to exceed their current fare recovery level. Three passengers must be transported within a 100-mile radius of Fargo, ND, to exceed the fare recovery level of these agencies. This is due to the lower fare recovery level present within the 100-mile radius (200-mile round trip) compared to the 60- and 100-mile round trips, respectively. Note that all point

values shown throughout the results represent the mean values estimated.

As VA reimbursement rates increase, fewer veterans must be transported per trip to surpass current fare recovery levels. Also, all region-specific simulations included no fare charged to the veteran passenger by the transit agency. That's because transitioning veterans to public transit will be difficult enough, and charging a fare for the ride could potentially deter potential riders from using the service. Also, notice that all of the VA reimbursement levels for the simulations were set to less than the current 41.5 cents per mile reimbursement rate for beneficiary travel used for VA medical travel. Therefore, coordinating travel between rural transit agencies and VA medical centers while either meeting or exceeding transit agency ridership numbers generated by the simulations will equal, or improve upon current fare recovery rates and VA travel reimbursement payments will drop as well.

Summary and Conclusions

One objective of this research was to identify veterans affected by the COVID-19 pandemic with mobility needs and who live in rural North Dakota, Minnesota, South Dakota, Iowa, and Nebraska. Survey results of 150 military veterans showed that many veterans have experienced considerable change due to the COVID-19 pandemic. Twenty percent indicated they have had difficulties accessing VA health care facilities with nearly one-third of SMALL URBAN AND RURAL CENTER ON MOBILITY

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For more details about this study, contact Del Peterson at del.peterson@ndsu.edu

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veterans responding that they began using telemedicine as a direct result of the COVID-19 pandemic.

Two-thirds of respondents classified themselves as disabled with more than half of these indicating their veteran disability rating is greater than 60%. A disability rating of just 30% or greater is required for VA travel benefits, so all of these veterans qualified. Hearing impairment and mental health were the most common disabilities reported, followed by mobility impairments. Even with these high levels of disability among veterans, 80% of respondents indicated they drive themselves to medical appointments with more than 90% indicating they drive themselves to social activities. However, both social and work trips were much shorter on average compared to VA medical appointment trips.

Another objective was to quantify the costs of viable transportation options to meet veteran medical needs. Simulating a potential coordination effort between VA medical centers and rural public transit agencies yielded varying results by region because of differing fare recovery rates and operating costs. Norfolk, NE, simulations had the highest average fare recovery rate compared to Sioux Falls, SD, Mankato, MN, Fargo, ND, and St. Cloud, MN. Mankato, MN, had the highest average cost per mile compared to the other four locations while Norfolk, NE, had the lowest cost per mile.

Most simulations showed that a coordination effort between VA medical centers and rural public transit agencies would be feasible if projected ridership levels could be met. Policies to encourage possible coordination should be considered to improve veteran medical transportation services. The most challenging obstacle continues to be the transitioning of rural veterans, now mainly late middle to retirement age, away from their own personal vehicles to other, more long-term sustainable transportation options including public transit.

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