BARRIERS IN ACCESSING DENTAL CARE FOR RURAL IOWA SENIORS by Mallory Obenauf

There are a lot of reasons people avoid going to the dentist. For some people it's the cost of a visit or a lack of dental insurance. For others it's not being able to get to the dentist because they are homebound or simply live too far away from a dental care provider. Sometimes people will even avoid going to the dentist because of severe dental anxiety (Chi 2019). Although there are many barriers in accessing dental care for young people, the senior population often experiences different barriers than their younger counterparts. Additionally, being a senior living in a rural area presents unique challenges in accessing dental care (Allison et al. 2007). Being a rural resident in Iowa is often accompanied with many challenges that are not typically known to residents of suburban or urban Iowa areas. These challenges often include long commutes to the grocery store or workplace, unreliable internet connection, or trouble finding a local dentist (Bush et al. 2010). For senior Iowans living in rural areas, these challenges are often magnified. One study found that rural residents were less likely to report a dental visit in the past year compared to urban residents (Vargas et al. 2002). This may have been because of the distance to a dental office, financial barriers, transportation issues, or a multitude of other reasons. In a study of rural seniors living in Australia, it was found that most of the rural seniors only went to the dentist for emergency cases such as having extreme pain, gum problems, loose teeth, or missing teeth (Kruger et al. 2007). What many seniors do not realize is that preventative care is often more important and effective than only receiving emergency care. A long-term lack of proper oral health care negatively affects senior's quality of life including tasks related to chewing, speaking, and swallowing (Dhama et al. 2017).

To date, there has been minimal research looking at barriers to dental care for rural Iowa seniors. The following project aims to identify potential barriers for rural Iowa seniors in accessing dental care and promote the need for further research on the topic.

METHODS

The Statewide Innovation Model (SIM) data set was utilized as the sample to identify and explain barriers to dental care for rural Iowa seniors. This collection of questions was distributed via a telephone survey to a random sample of 2,474 Iowans in 2018 and 2019. Questions asked during the phone interviews included topics such as unmet healthcare needs, determinants of health, and demographics. For the purpose of this project, only certain questions and topics of the data set were analyzed in order to explore possible patterns leading to unmet dental care needs by rural Iowa seniors.

The primary dependent variable in this study was the question: "When was your last dental check-up?". During the original SIM data collection, the responses were categorized as: within the last year, 1 to 2 years ago, more than 2 years ago, or I've never been to a dentist. A special interest was taking into the participants who answered "more than 2 years ago" to the dependent variable question.

Other questions in the data set were selected as possible determinants to that question. Independent variables that were considered included: perceived need for dental care by themselves or a dentist, reasons for not going to the doctor's office or clinic, self-rating of overall physical health, difficulty living on household income, telephone or cellphone access, ability to pay unexpected expenses, ability to get transportation to appointments, being a licensed driver, and access to plumbing utilities. Each of these independent variables were ran against the primary dependent variable in crosstabs using the STATA program. The crosstabs were then further analyzed to screen for indications of patterns or trends to explain disparities in access to dental care for rural Iowa seniors. No additional analysis was completed to support any causal claims of the primary dependent variable and the various independent variables.

RESULTS

Several of the independent variables listed in the previous section were collapsed or recategorized in order to better summarize the results. The variable of overall physical health rating was collapsed to include those who rated themselves as either "fair" or "poor" as one group. The variable of difficulty living on household income was collapsed to only include individuals who responded as "somewhat difficult", "very difficult", or "extremely difficult". The variable discussing the ability to pay unexpected expenses, individuals who responded with "not too confident" or "not at all confident" were placed into one group.

Of the rural seniors surveyed, 73% of them had seen a dentist within the past 12 months, 8% had seen a dentist in the past 1-2 years, 19% of the seniors had not had a dental checkup in more than 2 years. When analyzing the independent variables, an emphasis was placed on the seniors who had not seen a dentist in more than 2 years. For the variable of perceived overall physical health, 19% of seniors who had not seen a dentist in more than 2 years rated their overall physical health as "fair" or "poor". Of the rural seniors who had not visited the dentist in more than 2 years, 23% were not too confident or not at all confident of their ability to come up with $2,000 if an unexpected expense came up in the next month. 44% of seniors who had not seen a dentist in more than 2 years reported that it was "somewhat difficult" or "extremely difficult" to live on their household income. 11% of seniors who had not seen a dentist in the past 2 years did not have a toilet, hot water heater or some other form of plumbing working.

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• christopher-kromphardt@uiowa.edu • ppc.uiowa.edu

• 319-335-6800 • 310 S. Grand Ave, Iowa City, IA 52242

uippc @uippc @uippc

DISCUSSION

Overall, there were not any emerging patterns that pointed to one overarching barrier to dental care for rural Iowa seniors. One variable that may be holding back seniors from seeing the dentist regularly was cost. This data set did not examine dental insurance enrollment or other forms of health insurance enrollment. However, the data suggests that there are seniors who may not be making enough money in their household income to prioritize regular dental care. It is more likely that those seniors will only see a dentist for an emergency case or an immediate dental problem. For individuals who are on a tighter budget, dental care is often not seen as a necessity but rather a luxury and will therefore be put off until necessary because of functional issues or pain.

From the SIM data, an interesting data point that emerged was about the seniors who had not seen a dentist in 2 or more years and rated their overall physical health as “fair” or “poor”. Although this data may not accurately reflect their oral health, if a senior has other health conditions that they need to be monitoring, those conditions will usually take priority over oral health issues. Seniors are often concerned with other aspects of their health and they don’t realize the impact that oral health can have on their overall health. Since the oral cavity is seen as the gateway to the rest of the body, proper oral care and prevention methods are extremely important in preventing other chronic illnesses and conditions.

One barrier to care that has been commonly observed in similar studies was a lack of dentists near the senior or an inability to get to the appointment. The analysis of the SIM data revealed that most of the seniors had little to no trouble getting to the dental office when they had an appointment. Most of them reported being licensed drivers or having the ability to get a ride from a friend or relative. However, there are still many counties in the state of Iowa that are operating with few or no dental care providers. The residents of these counties will often have to seek dental care in another Iowa county or forgo receiving care at all. This barrier was not analyzed in depth during this project and should be further explored in future studies.

Other limitations of this project include the limited generalizability of the results due to the specific subject matter. This project focused heavily on the rural senior population in the state of Iowa. Rural seniors living in other states may experience different barriers in accessing dental care and thus the results would be different from the ones presented here. Another limitation of this project is the ability to identify causations. Because this project did not include methods such as a bivariate or multivariate regression, no causations could be described. Further research should include these methodologies.

CONCLUSION

Using data from the 2018 Statewide Innovation Model, several variables were identified as possible barriers to accessing dental care for rural Iowa seniors. Overall, more research and analysis are needed to identify causations for these barriers and how to overcome them. As mentioned in the discussion, methods such as bivariate or multivariate regressions should be used to help identify and describe the causations for these barriers. The most prominent barrier was cost. Many participants in the study indicated difficulty living on their current household income, which may be affecting their ability to afford dental care. As noted earlier, insurance was not a variable considered during this project, but should be looked at in future studies relating to dental care access for the rural Iowa senior population.

Another prominent barrier observed was perceived overall physical health. There are many conditions they may prevent an individual from going to the dentist. Sometimes an individual may feel that their own oral health is too poor even for a dental professional and will avoid their appointments. More studies should be conducted regarding a possible connection between perceived oral health and regular dentists for the rural senior population of Iowa.

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Peter Damiano
Director and Distinguished Research Fellow, Public Policy Center
Bernstein Professor, College of Dentistry

Chris Kromphardt
Educational Support Services Manager, Public Policy Center

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