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Research Article:

Perceived Barriers to Accessing Specialized Medical Care in Rural Communities of Ontario: A Pilot Study

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Abstract

Background. Rural residents seeking health care face barriers due to a shortage of healthcare professionals and the travel distance required to obtain medical services. This can lead to potentially harmful health outcomes, particularly when these citizens are unable to access specialized medical care. Few studies have specifically evaluated rural residents' ability to access medical specialists.

Methods. A pilot study was conducted to examine rural residents' ability to access specialized care. This quantitative pen and paper survey was implemented in two communities with similar health care infrastructure (Tweed, Ontario and Hensall, Ontario).

Findings. The majority of respondents (75.8% n= 72 in Tweed and 77.8% n=77 in Hensall;) had received a referral to see a medical specialist in the last five years (total of 352 referrals), which necessitated travelling beyond their communities. Only 5.4% (n=8) of respondents from both communities felt that the travel distance was "too far". Other important issues identified by respondents included the need for more health services (such as more after-hours access to primary care) as well as the need for better access to medical specialists.

Conclusion. Although access to medical specialists in each community is limited, the distance required to access medical specialists in larger centres is not currently perceived to be a barrier to rural residents receiving specialist care. This suggests that barriers to accessing specialist care are surmountable in moderately rural communities and the travel distance to medical specialists is not a significant contributor to poor health outcomes for rural residents.

Introduction

The services available to rural populations in Canada are often very different from those available in urban areas due to a sparsely distributed population and different infrastructure. These discrepancies are important in understanding the differences in morbidity among urban and rural populations, and planning services for these rural populations.

In rural areas, individuals seeking medical care face several barriers, including a short supply of healthcare workers[1,2,3] and an extensive travel time to obtain medical services[4,5,6]. These two distinct, but inter-related barriers have been a focus in the literature and have led to the identification of "rurality" as a cause of lower health status in rural residents when compared to their urban counterparts[7,8,9,10]. Rurality encompasses specific characteristics associated with living in a rural area, which is not likely to be experienced by populations living in urban regions. In Ontario, an increased "degree of rurality" has been found to correlate with increased rates of respiratory and circulatory disease, diabetes, arthritis, suicide and overall mortality[1]. The causes of these regional differences in morbidity are of interest to healthcare professionals and policy makers striving to provide equitable healthcare.

Within many rural communities, access to medical specialists, such as cardiologists, obstetricians and gynaecologists, are particularly limited[13]. Rural family physicians and rural medical infrastructure are often not equipped to manage more complex medical issues. Thus rural residents are often forced to travel to urban centres for specialist care[14,16,17,18]. Inability to access specialist care may lead to sub-optimal diagnosis and management of medical issues for these rural residents. Distance to travel

for medical care has been cited as one of the major causes of the health discrepancies between urban and rural populations[1,19,20]. This issue is compounded by an aging population; as the rural population ages, care will become more complex and increase the demand for specialist care[21,22,23,24,25].

Ontario is the most populous province in Canada and has a mix of highly populated, dense, urban areas and sparsely populated, vast, rural areas. In Ontario, approximately 14.9% of the population (approximately 1.81 million people) is considered as rural. However, only 2.4% of medical specialists in Ontario practice in rural areas[26, 27], a trend which is seen throughout much of North America[4]. In Ontario alone, 140 communities have been identified as "medically underserviced", defined by difficulty attracting and retaining health care professionals[28]. Most underserviced communities in Northern Ontario are over 100 kilometers away from the nearest specialist[29]. The need for rural medical specialists in other areas of the province is also salient, but has yet to be formally addressed[30, 31].

Nations with similar population distributions to Canada, such as Australia and the United States, face similar concerns with respect to access to specialist care[32,33]. To date, policies and programs that target rural access to primary health care have done little to improve access to medical specialists[34,35,36,37], as sub-specialized care is simply not available in most rural regions[38]. In order to further understand these issues, research is needed to determine what barriers, if any, rural residents face when they attempt to access specialized medical care. Despite concerns regarding access to both primary health care providers and specialists in rural areas and the availability of statistics on the quantity of medical specialists in rural areas[39], literature on barriers to specialist care from the perspective of rural residents is lacking. The patient's perspective is important because it provides an appropriate assessment of the implementation of services and the areas in need of improvement.

In reviewing the 2003 Canadian Community Health Survey (CCHS 2.1), Sibley and colleagues emphasize that not only do inequities exist in Canada across the rural-urban continuum, but that large scale studies might not account for these inequalities due to the spectrum of rurality that exists in Canada. Large studies like this, which have been completed to date, group a broad spectrum of rural populations into subsets that may mask differences resulting from the degree of rurality in different communities[40]. Our study is a good example of a smaller scale study that addresses a specific rural demographic. It is recognised that healthcare issues in rural areas are complex due to a variety of factors; however, in spite of these issues, concerns relating to accessing medical care are remarkably similar[12,18]. This paper presents findings of a pilot study exploring perceived barriers of accessing specialised medical care from the perspective of rural residents.

Methods

Community Selection

Two communities in rural Ontario were selected because they have similar demographics, healthcare infrastructure and availability of healthcare providers. The two communities have similar proportions of elderly citizens; Tweed has a median age of 44.8 years with 24.0% of the population older than 60; Hensall has a median age of 44.6 years with 25.8% of the population older than 60[41]. Both communities also boast similar healthcare facilities, as each has one outpatient medical centre for primary care and one long-term care facility. Each has three general practitioners and numerous nurse practitioners, but neither has any permanent medical specialists. Based on the Rurality Index of Ontario (RIO), the communities are similar demographically and are considered moderately rural and have comparable travel distances to health care services; Tweed had a RIO score of 45, while Hensall had a score of 48[42].

Survey Design

A mail-out survey was distributed in two rural Ontario communities. Based on a conservative expected response rate of 25% for mail-out surveys, surveys were distributed to 250 households and in addition, unaddressed surveys were randomly placed in mailboxes throughout each community. In an effort to increase return rate, a stamped return envelope was included in each package.

The survey consisted of 22 closed-ended Likert scale questions that aimed to examine how rural residents utilize health care, their main health care concerns, frequency of referrals to medical specialists and perceived barriers when attempting to access specialised medical care. Subjective measures of distance to medical specialists were used in order to understand how each individual perceived the distance travelled. The survey was designed to be completed by English-speaking individuals

over the age of 18. The complete survey is included in Appendix 1.

Analysis

Data was analysed using the Statistical Package for the Social Sciences (SPSS, 18.0.0) to generate frequency tables. Cross-tabulation was also used to compare data from each site.

Ethics

Approved by the Health Science Research Ethics Board at The University of Western Ontario (protocol #15669E).

Limitations

This was a pilot study that looked at a relatively small sample size within two rural communities and may not necessarily be representative. Due to regional variation, the results obtained from these rural communities cannot necessarily be extrapolated to other rural regions of Ontario. To facilitate broader understanding, a larger sample could be examined beyond the two communities, while continuing to stratify groups by their degree of rurality.

Our participants were mainly females of child-bearing age and adults over the age of 45. As such, there may be a response bias due to the increased utilisation of healthcare services and need for specialist medical care in child-bearing years and in older age.

Results

Respondent Characteristics

Response rates calculated based on delivery to 250 homes were 38.0% (n=95) and 35.6% (n=89) in Tweed and Hensall respectively. Since extra surveys were delivered randomly throughout both communities, the response rate may be lower. Overall, this provided sufficient data for a 10% confidence interval with 95% confidence. The majority of participants were female (72.6%, n=127) and a plurality of 46-60 years old (43.9%, n=79). Full results of age and gender distributions are shown in Figure 1.

Travel to Medical Specialist

Overall, a total of 81.0% (n=149) of respondents from both communities had received a referral to a medical specialist in the past 5 years. The average number of referrals per person was 1.9 (SD=1.6). Two participants did not attend a medical appointment with the specialist to whom they were referred, although the reasons were not specified.

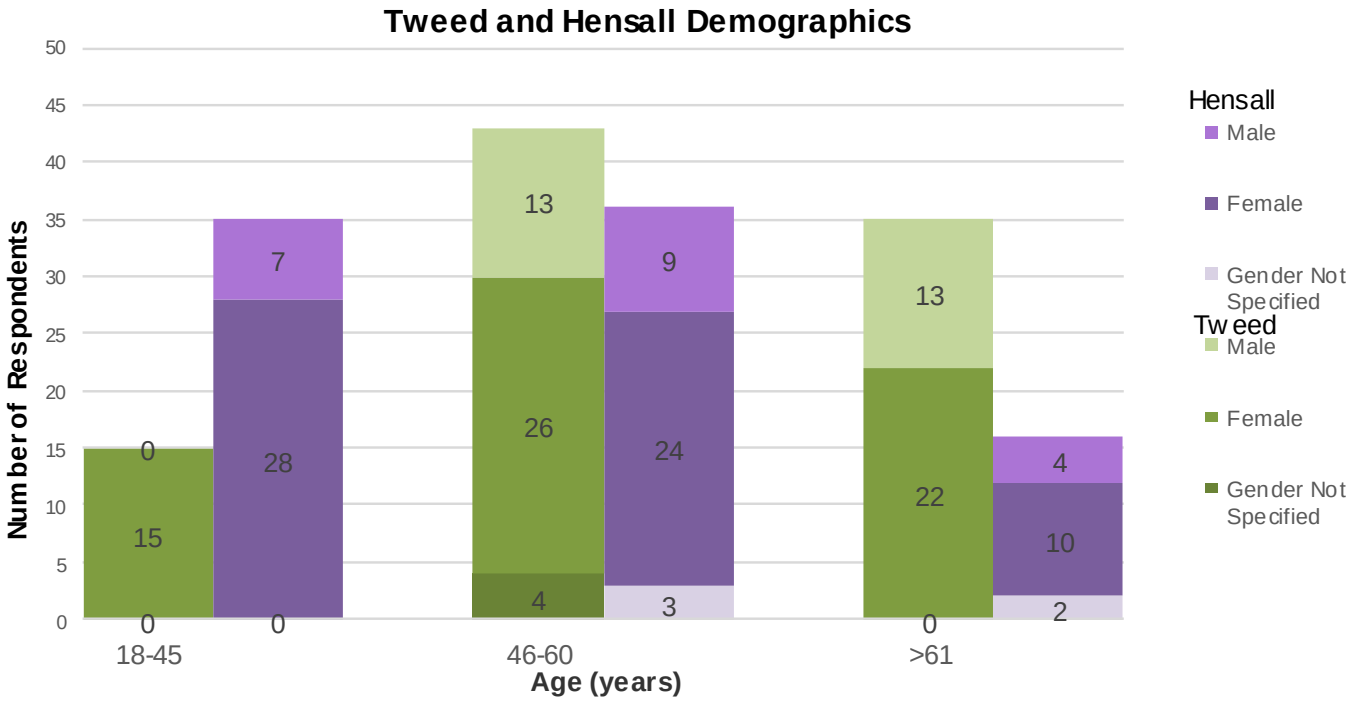

Figure 1. Demographics of Tweed and Hensall respondents. Two females from Hensall did not specify their age.

Out of the 149 respondents (n=72 Tweed; n=77 Hensall) who had a received a medical referral in the past 5 years, the average distances travelled to see a medical specialist were 82.9 km and 63.6 km for Tweed and Hensall respectively. Respondents were asked to rate the appropriateness of the distance travelled to see a specialist. Only 5.4% (n=8) of respondents from both communities felt that the distance they had to travel to see a medical specialist was "too far". The average distance that presented "no problem" was 49.5 km in Hensall and 50.2 km inn Tweed. Almost all of the respondents receiving a referral noted that they had "no problem" in travelling to see the specialist, in spite of travel distances up to 120 km.

The majority of participants in both communities who had received a referral (75.2%; n=112) drove themselves to see specialists. The second most common mode of transportation was driving by a family member (23.5%; n=35); other modes (such as walking or being driven by a friend or volunteer group) accounted for less than 10% of responses in each community.

Barriers to Access and Healthcare Concerns

Of the participants who had received a referral to a specialist, the majority in both communities (59.7% (n=37) in Tweed and 63.3% (n=50) from Hensall) felt that they had no major barriers to accessing medical specialists. In regards to the participants who did perceive major barriers, 19.1% of those respondents (n=13) in Tweed and 12.7% in Hensall (n=10) cited distance for travel as the greatest barrier. Refer to these findings in Table 1. All participants, regardless of whether they had received a referral to a medical specialist, were asked about perceived health care needs in their community. Over 30% of participants (n=61) reported that they perceived a need for improved accessibility to specialists. Further delineation of how residents felt that accessibility could be improved was not addressed. Respondents were also concerned about the need for other health resources such as after-hours care (66.3%, n=122), acute care hospital beds (52.2%, n=96) and long-term care beds (51.1%, n=94). These findings are summarized in Table 2.

Discussion

Traditionally, long travel distances have been perceived to be a major barrier for rural residents accessing specialist care[1,19,20]. Our study shows that the majority of surveyed rural residents felt there were no barriers limiting access to specialist care. Although the distance travelled to see medical specialists is not small (many participants travelled up to 120 km), the reported ability to travel these distances with "no problem" suggests that most rural residents are able to facilitate transportation to their appointments. As such, the distance to travel to a medical specialist is not likely a significant contributor to the differences in health outcomes between rural and urban residents in the population studied.

Table 1. Reported barriers to visiting a medical specialist among those who had received a referral.

Barrier	N (%)
No barrier	87 (58.4)
Appointment necessitated travelling a long distance	23 (15.4)
Unable to get time off work to travel to the appointment	10 (6.71)
Difficulty booking an appointment with the specialist	9 (6.04)
Unable/not willing to drive to appointment	6 (4.03)
Other	5 (3.40)
Unable to afford travel costs	4 (2.68)
No way of getting to the appointment (no one else available to drive, lack of public transportation etc.)	2 (1.34)

Table 2. Reported perceived needs about health care resources.

Perceived need	N(%)
More walk-in clinics/after-hours care	122 (66.3)
More acute care hospital beds	96 (52.2)
More long-term care beds	94 (51.1)
More community health centres	88 (47.8)
Better access to medical specialists	*61 (33.2)*
More health promotion programs	58 (31.5)
Facilities with emergency services closer to home	56 (30.4)
More access to public health services	34 (18.5)
Physical assistance in getting to medical appointments	31 (16.8)
Financial assistance in getting to medical appointments	15.2 (28)

Among the barriers that were identified, our study provides evidence that the distance required for travel is the most common barrier to accessing medical services. However, the low incidence of individuals not following through with specialist referrals (in our study only 1.3%), suggests that rural residents in our study communities are able to circumnavigate any barriers to accessing specialist care they may face and attend appointments.

However, travel distances in this pilot study are much shorter than those faced by residents of extremely remote communities where ground transportation may not be feasible. As such, barriers to accessing specialist care in these more remote communities are perhaps less surmountable[11,15,28,31]. This self-sufficiency demonstrated by our study population may also change as the population ages and existing barriers become less surmountable. As such, the need for more effective linkages with specialty services concentrated in urban centres will continue to grow.

A growing elderly population in rural communities, coupled with the exodus of younger generations, may cause seniors to face greater challenges in accessing medical care. These challenges could both increase the burden on family members and necessitate other means of transportation to specialist appointments. Although our participants, a plurality between the ages of 46 and 60, did not identify distance to travel as a key barrier, the required distance to travel is still a very important issue that will become more pronounced as our population ages. We must develop transportation strategies with the needs of rural residents at the core. Little data is currently available to validate the existence or success of such programs.

The lack of medical specialists in Northern Ontario has been well-documented[11,15,29,31], and attention is now being brought to similar shortages in more urban regions. The Society of Rural Physicians of Canada notes that "paradoxically now the greatest shortage in number of physicians is in southern Ontario"[44]. While most urban residents might not face the same "travel barrier" as their rural counterparts, accessing specialist care is fast becoming a concern for all Ontarians. As such, access to specialist care needs to be a top priority for healthcare policymakers.

This study reveals that access to medical specialists is not the major concern of rural residents; instead, they are concerned with the lack of other healthcare services in their community, such as access to emergency medical care, the lack of after-hours care and the inadequate number of long-term and acute care beds.

We are aware that the lack of perceived barriers of access to medical specialists in this study do not provide any clear answers to why there are increased rates of diseases related to speciality care and overall mortality in rural areas. However, this may be a function of how barriers were defined, the specific populations studied or another unexplored phenomenon. More research is needed to better understand the difference in these results.

Conclusion

This study suggests that residents of rural areas do not consider their access to medical specialists as being limited by travel. Overall, rural residents indicated that there were other healthcare needs in the community that present a more salient barrier to healthcare than the lack of local medical specialists. Despite these findings, we feel access to specialist care is a significant barrier for both urban and rural communities that will become more apparent as the population ages and people's ability to facilitate personal transportation declines. Future research should focus on exploring the unexpected results found in this study.

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APPENDIX 1. Mail-Out Survey

Access to Health Care in Rural Areas

1. Sex:
□ Male □ Female

2. Age:
□ 18-30 □31-45 □46-60 □ 61+

3. Do you have a family physician?
□ Yes □ No

4. In the last five (5) years, where have you *most frequently* sought medical care?
□Emergency room
□ Walk-in clinic
□ Physician office (includes community health centres, family health teams, independent physician practices)
□ Other. Please specify:_____
□ I have not sought medical care in the last five years. → **Go to Question 16**

5. In the last five (5) years, by whom were you treated m*ost frequently* when you sought medical care?

□ Family physician
□ Nurse practitioner
□ Medical specialist
□ Emergency room physician
□ Medical resident
□ Physician who is *not* my family physician
□ Other. Please specify:_____
□ Unsure

6. In last five (5) years, have you attempted to see a medical specialist(s) *without* a medical referral?
□ Yes →**Go to Question 7** □ No → **Go to Question 8**

7. In the last five (5) years, which medical specialist(s) have you attempted to see *without* a medical referral? (Check all that apply).
□ Surgeon
□ Oncologist (cancer specialist)
□ Urologist
□ Orthopaedic/Physical Therapist
□ Ear/Nose/Throat Specialist
□ Obstetrician/Gynaecologist
□ Ophthalmologist
□ Dermatologist
□ Paediatrician
□ Neurologist
□ Nutritionist
□ Cardio/Thoracic specialist
□ Psychiatrist
□ Rheumatologist
□ Radiologist/Diagnostic imaging
□ Other:_____

8. In the last five (5) years, have you been *referred to* a medical specialist(s) by a medical professional?

□ Yes→ **Go to Question 9** □ No → **Go to Question 10**

9. In the last five (5) years, which medical specialist(s) have you been *referred to by a medical professional*? (Check all that apply).

□ Surgeon
□ Oncologist (cancer specialist)
□ Urologist
□ Orthopaedic/Physical Therapist
□ Ear/Nose/Throat Specialist
□ Obstetrician/Gynaecologist
□ Ophthalmologist
□ Dermatologist
□ Paediatrician
□ Neurologist
□ Cardio/Thoracic specialist
□ Nutritionist
□ Psychiatrist
□ Rheumatologist
□ Radiologist/Diagnostic imaging (MRI, CAT, CT Scan, etc.)
□ Other: _____

10. In the last five (5) years, have you seen a medical specialist?

□ Yes → **Go to Question 11** □ No → **Go to Question 16**

11. Did the referring physician follow up to see if you had attended the appointment with the medical specialist?

□ Yes □ No

12. Who set up your appointment with the medical specialist?

□ You
□ A family member/friend
□ Medical office of referring professional
□ Medical office of medical specialist
□ Other:_____
□ Unsure

13. How did you travel to the medical specialist? (Check all that apply).

□ I walked
□ I drove myself
□ A family member drove me
□ A friend drove me
□ A volunteer group drove me
□ I used public transportation: Check all that apply:

□ Bus □ Taxi
□ I travelled by ambulance
□ Other:_____

14. Please indicate the type of medical specialist seen, the distance travelled to see *each* medical specialist and whether you felt this distance was appropriate.

Type of Medical Specialist	Distance	I had no problems travelling this distance	I was able to travel this distance, but it is not preferable	I felt it was too far.
Eg. Oncologist	**450** mi/km			X
	mi/km			
	mi/km			
	mi/km			
	mi/km			
	mi/km			
	mi/km			
	mi/km			

15. What, if anything, made it difficult for you to see the medical specialist? (Check all that all apply).

□ I was unable to book an appointment.
□ I had to travel a long distance to get to the appointment.
□ I could not/would not drive to the appointment.
□ I did not have a way of getting to the appointment (someone else to drive, public transportation etc.).
□ I could not afford to travel to the appointment.
□ I could not get time off of work to travel to the appointment.
□ There was nothing limiting my ability to get to the appointment.
□ Other: _____

16. Which of the following resources have you used? (Check all that apply).

□ Tele-health (speaking with a nurse over the phone)
□ Videoconferencing (speaking with a remote medical professional via video camera)
□ Internet
□ Naturopathic doctor/herbalist/homeopath
□ Other: _____
□ I have not used any of these resources → **Go to Question 18**

17. Did you use the above resources as an *alternative* to visiting a medical professional?

□ Yes □ No

18. If videoconferencing was available (a medical specialist in another location is able to "see" you through a video camera), would you be willing to attempt this method of health care?

□ Yes

□ No. Why not? _____

19. Rate your awareness of medical specialists in your community:

□ I am **completely aware** of the medical specialists in my community.

□ I am **somewhat aware** of the medical specialists in my community.

□ I am **completely unaware** of what medical specialists exist in my community.

20. Rate how you feel about the *number* of medical professionals in your community:

	There are too many.	**There is an appropriate number.**	**There needs to be more.**
Family Physicians			
Nurse Practitioners			
Medical Specialists*			

***See **Question 7** for a list of examples of medical specialists

21. What concerns, if any, do you have regarding access to medical care? (Check all that apply.)

□ I do not have a family doctor.

□ I have to travel a long distance in the case of an emergency.

□ I may not be able to access a medical specialist if I needed to.

□ I may not being able to afford the drugs prescribed by a physician/specialist.

□ It is difficult for me to take time off work to travel to the doctor.

□ Other: _____

□ I don't have any concerns.

22. What do you feel that your community needs, with respect to health care? (Check all that apply.)

□ More community health centres (clinic with a team of physicians, nurse practitioners, nurses, social workers, health promoters, dieticians etc.)

□ More walk-in/after-hours clinics

□ Facilities with emergency rooms closer to home

□ Increased access to public health care (immunization clinics, sexual health clinics etc.)

□ More long-term care beds

□ More acute care hospital beds (short-term hospital beds)

□ Physical assistance in getting to medical appointments (eg. someone to drive)

□ Financial assistance in getting to medical appointments

□ More health promoting programs (eg. seniors walking program, smoking cessation program)

_____