

# ACCOMMODATION OF ACCESSIBILITY SURVEY IN PRIMARY CARE CLINICS OF A RURAL ALBERTA COMMUNITY

**By Dr. Erich van der Linde**

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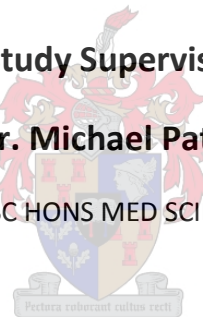
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Family Medicine and Primary Care

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South Africa

*Dissertation presented in partial fulfillment of the requirements for the degree M Med (Family Medicine)*

**October 2014**

## **Declaration**

I, **Dr Erich van der Linde** the undersigned, hereby declare that the work contained in this assignment is my original work and that I have not previously submitted it, in its entirety or in part, at any university for a degree. I also declare that ethics approval for the study was obtained from the Health Research Ethics Committee (HREC) of Stellenbosch University (Ethics Reference number: S12/08/212) and the Community Research Ethics Board of Alberta (CREBA- Protocol: 1230).

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**Signed:**

**Dr Erich van der Linde**

**Date:**

**October 2014**



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Signature:

Date: .....

2020/11/19

# Accommodation of accessibility survey in primary care clinics of a rural Alberta community

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## ABSTRACT

### Introduction:

According to the Society of Rural Physicians of Canada's National Rural Health Strategy, 21% of Canadian residents are rural but only 9.4% of Canadian physicians live in rural areas.<sup>1,2</sup>

### Aim:

To evaluate patient experience and the accommodation of accessibility to four primary care clinics in Brooks, Alberta.

### Objectives were to:

- measure and compare the actual versus expected waiting times in the physician's office.
- assess patient satisfaction with the current organization of access and quality of care.
- elicit ideas from patients on how to improve the accommodation of access.
- elicit feedback from patients regarding the employment of alternative practitioners in the clinics.

### Methods:

**Design:** cross-sectional survey.

**Setting:** Four primary care clinics in the city of Brooks.

**Subjects:** The study sample (n=391) included registered patients including emergency walk-in consultations, consultations for office procedures, short visits for prescription refills as well as annual physical examinations.

## **Results:**

The mean perceived waiting room time was 12.35 minutes versus 5-15 minutes actual waiting room time for 60.5% of the participants. The mean perceived exam room waiting time was 10.58 minutes versus 5-15 minutes actual exam room waiting times for 81.4 % of the participants. Mean perceived time spent with the physician was 11.65 minutes versus 5-15 minutes actual time spent with the physician for 67.1 % of the participants.

Patients who felt that they can get a timely appointment were 8.4 times more likely to be happy with the quality of care received. Patients who got prompt return of their calls are 10.4 times more likely to be happy with access to primary care clinics. Patients who felt that the clinic hours of operation were acceptable were 15.6 times more likely to agree that they received adequate health care. Patients who felt that the waiting time for an appointment at the clinic were acceptable to them were 8.1 times happier with the quality of care.

## **Conclusion**

No major differences exist between perceived and actual waiting times in the physician's offices. The waiting time for scheduled appointments is generally too long. The most satisfied patient appears to be someone whom waits no longer than 5-15 minutes in the waiting room, then no longer than 5-15 minutes in exam room for a 5 -15 minute consultation. The shorter the waiting times for an appointment and the shorter the different waiting times during a consultation in the clinic the more satisfied the patient.

## **INTRODUCTION**

Arguably, one of the biggest challenges faced by rural Canada is the problem of access to health care providers. Increasingly physician shortages in rural regions mean that many rural residents must travel for care – most for a considerable distance.<sup>3</sup>

According to the Society of Rural Physicians of Canada's National Rural Health Strategy 21% of Canadian residents are rural but only 9.4% of Canadian physicians live in rural areas.<sup>2</sup> Long waiting times are a reality in Canada's publicly financed healthcare system. While there is ample data around waiting times for specialized investigations and procedures, little published data exists on waiting times to see a family

physician.<sup>4</sup>The issue of access to medical services in rural and remote areas is one of the most complex and difficult problems in health care policy.<sup>5</sup>

## LITERATURE REVIEW

Currently nearly 5.4 million Canadians do not have a family physician. In the 2005 Canadian Community Health Survey, 85.6% of Canadians 12 years of age and over reported having a regular family physician. According to the Commonwealth Fund, 95% of Canadians felt that it was important to have one practice or clinic where the physicians and nurses knew them and provided and coordinated their care. However, 9% reported having no usual place or physician from whom they regularly received care.<sup>6</sup> Those with a regular source of primary care tended to receive more appropriate preventative care, be more likely to have their health problems recognized, have fewer diagnostic tests and prescriptions, receive more accurate diagnoses, and have lower costs of care than individuals without a regular source of care.<sup>7</sup> People without a regular source of primary care are more likely to delay visiting a physician in the presence of symptoms, are less likely to seek timely, requisite preventative services, and have higher mortality rates and healthcare costs.<sup>8</sup>

It was conservatively estimated that Canada had a shortfall of 3,244 family physicians in 2009.<sup>9</sup> Patients in Alberta wait up to a few weeks for a routine family physician visit due to the current shortage in a strained health care system.<sup>10</sup> Two-thirds of Canadians said that it was very or somewhat difficult to get after-hours care without going to the emergency department. Based on the Commonwealth Fund's study of the health care systems of seven countries, 40% of Canadians do not have access to after-hours care (care other than 9 a.m. to 5 p.m. weekdays) from their regular health care provider, and 34% of primary care physicians report that they do not provide these services.<sup>11</sup> This rate is similar to that in the U.K., but higher than that of other countries studied. In addition, 22% of Canadians reported that it is somewhat or very difficult to contact their physician by phone during regular practice hours, and only 9% could communicate with their physician or the practice by email.<sup>6</sup> Twenty-two percent reported that they booked an appointment to see their regular physician on the same day, the lowest rate among the seven countries studied. Three in 10 people waited six days or more - 10% more than the next closest countries, the U.S. and Germany.<sup>12</sup>

It is difficult to measure primary care wait times for a myriad of illnesses and conditions, and this difficulty may impede progress in finding solutions to the wait time challenges that family physicians experience. The Primary Care Wait Time Partnership (PCWTP) believes that the ability to measure and track wait times

along the full continuum of the patient's care is of utmost importance, but that this capacity in primary as well as more highly specialized levels of care is still very limited.<sup>13</sup> Thus, primary care wait time tracking, analysis and improvements should be taking into account the whole wait time continuum that patients experience, starting from the time they first seek medical care. There is a need to analyze primary care wait times so that the inequities and inconsistencies in access to care can be addressed for patients from region to region across Canada.

The PCWTP recognized that the collaboration between the Canadian Medical Association and the College of Family Physicians of Canada has the potential to enhance access to primary care. But before we can state with certainty that access to primary care is improved through particular models of care delivery, we need to continue to collect data and analyze results on primary care wait times.

The Alberta AIM (Access-Improvement-Measures) collaboration is an improvement process that assists physicians and their teams to focus on access, efficiency and clinical care improvements. Participating teams are introduced to an improvement process and a set of principles based on the belief that waits and delays are costly to the health care system, both for patients and for clinics.<sup>14</sup>

AIM success and program impact is measured by improving access: The measurement data recorded by 38 family practices shows that 21 practices (55%) showed improved patient access. Of these family practices: a) 6 practices showed improvements of greater than 50%. b) 11 showed improvements of between 20% and 44%. c) 4 showed improvement of between 5% and 13%. d) 3 showed no change in patient access. e) 3 documented a base-line measure of 0 and remained below 8.5 days at program completion. f) 7 documented a baseline and final measure of less than 10 days.<sup>15</sup>

Looking at the worst performing places in Canada as shown by the 2012 Money Sense Survey, Brooks, Alberta ranked 190th out of 190 cities for having the fewest physicians, with less than 1 physician per 1000 residents.<sup>2</sup>

Comparing Canada's physician workforce to other countries like the South African Health Workforce, we see that Canada has 204 physicians per 100 000 population compared to South Africa which has 7.7 physicians per 100 000 population. In spite of this Canada still struggles with timely primary care access.<sup>16</sup> The locally adjusted practitioner figure is 61 family physicians per 100 000.

Major reforms are on the way in the Canadian primary health care system. The goal would be to make more efficient use of primary care nurses and nurse practitioners as part of the family health care team that provides timely care to Canadian families.<sup>17</sup> There is also evidence that the greater the supply of physicians in primary care the lower the total cost of the health system.<sup>18</sup>

The WHO Health Report 2008 entitled “Primary Health Care: Now more than ever” has clearly articulated the importance of more research in primary care.<sup>19</sup> The strength of a country’s primary health care system is partially determined by the degree of development of core primary dimensions such as accessibility, comprehensiveness, continuity and coordination.<sup>20</sup>

Accessibility to primary care services can itself be defined in terms of availability, geographic accessibility, accommodation of accessibility, affordability, acceptability, utilization and equality.<sup>21</sup> Improved access to primary care can reduce socio economic and racial disparities in health.<sup>22</sup>

Waiting and cycle times in a clinic would be one measure of accommodation of accessibility - the manner in which we organize our resources to accommodate access. Cycle time is the recommended measure to assess the status of, and later improvements in, patient flow and process efficiency in the clinic.<sup>23</sup> It is simply the time from when the patient enters the office or clinic check-in, until the patient leaves. It is important to track cycle time to measure progress on efficiency improvements.

Waiting time is a variable aspect of a family practice clinic and it impacts patient care. There are large variations in the time patients wait for and spend with their physicians.<sup>24</sup> Keeping patients waiting unnecessarily can be a cause of stress for both patient and physician.<sup>25</sup> To reduce patient and physician stress, it is important to make sure that patients are not spending a long time in the waiting room, or waiting at other stages of their visit to the clinic.<sup>26</sup>

Both scheduling and patient flow affect patient waiting times.<sup>27</sup> The best schedule would consist of shorter sessions that start on time and are extended to accommodate extra patients rather than adding in patients and crowding the schedule. Studies have shown that the time a patient can expect to wait increases exponentially as the appointment interval is reduced. An appointment interval that is less than the median consultation length can result in long waits for patients with no saving of time.<sup>28</sup>

Longer waiting times for an appointment may also be the result of patient choice for a particular physician or time, which in turn is dependent on the degree of urgency, rather than the unavailability of



appointments.<sup>29</sup> The majority of booked patients arrive early for their appointments, and consequently have a longer actual waiting time than on-time or late patients.<sup>30</sup>

Patients' dissatisfaction with consultation length could be managed by making consultations longer.<sup>31</sup> Findings confirm that reduced waiting time may lead to increased patient satisfaction and greater willingness to return in primary and specialty care outpatient settings.<sup>32</sup> In a competitive or private health care system the reduction or elimination of waiting time is an important marketing tool.<sup>33</sup> The length of the consultation is one important contributor to the overall cycle time and waiting time for other patients. Only about one-third of patients could accurately gauge ahead of time how long the consultation was going to take.<sup>34</sup>

Patients with psychosomatic or severe psychosocial problems consumed the largest proportion of the physician's time, but they significantly underestimated the time the physician would actually spend with them. Consultation length influences the continuity of care by the quality of record keeping and patient enablement.<sup>35</sup> Physician supply and consultation length also influence the range of services provided in primary care.<sup>36</sup> There is a clear relationship between patient satisfaction, consultation length and organization of access. Physician workload and stress are also influenced by the organization of access, workload and consultation length.<sup>37</sup> This study sought to explore current access to primary care clinics in Brooks, Alberta and consider ways to improve accommodation of access in primary care clinics in the area.

#### **AIM AND OBJECTIVES:**

The **aim** was to evaluate the patient experience and the accommodation of accessibility to four primary care clinics in the town of Brooks, Alberta.

The **objectives** were to:

- measure and compare the actual versus expected waiting times in the physician's office.
- assess patient satisfaction with the current organization of access and quality of care.
- elicit ideas from patients on how to improve the accommodation of access.
- elicit feedback from patients regarding the employment of alternative practitioners in the clinics.

## **METHODS**

### **Study design**

A clinic- based descriptive survey of patient satisfaction and accommodation of accessibility using a questionnaire with a quantitative and qualitative component.

### **Setting**

The study was conducted at the 4 different primary care clinics in the town of Brooks. Brooks, a town of about 15,000 people, is situated in South Eastern Alberta and is a community that consists mainly of farmers, ranchers, oil field workers, and immigrant meat processing plant workers.

Fourteen family physicians serve a regional population of about 23,000 people with some specialists visiting weekly from Calgary and Medicine Hat.

### **Study population**

The study population included all registered patients at the 4 clinics in the town of Brooks, Alberta. This included emergency walk-in consultations, consultations for office procedures (e.g. intra-uterine device insertion), short visits for prescription refills as well as annual physical examinations.

### **Sampling**

Sampling was systematic and stratified according to the practice population size. Each physician's panel size determined their respective sample size in the study. According to Alberta Health Services the 2010 population statistics for Brooks and surrounding area (excluding Bassano) is approximately 23,000. The Alberta Health Services 4-cut panel numbers (this ensures patients are only counted once) for the 14 family physicians in Brooks is approximately 21,500 as of October 2011. Approximately 1,500 patients (6.5%) were not on a physician panel. A sample size of 385 patients was required to estimate the overall accessibility of clinics to patients to within 5% precision if a 95% confidence interval is calculated to estimate the population accessibility. To give us a true reflection of our practice population, sampling frame boundaries consisted of sampling a given number of consultations for a period of time.

Starting with the first patient of each day, all patients were handed a recruitment document and asked if they were willing to participate in the survey. Patients were offered recruitment documents until the required sample size was reached for each physician.

After obtaining written notice of approval from the Health Research Ethics Committee validation for the survey, a pilot study was carried out over 2 days using 10 patients to test the questions asked.

### Data collection

A research assistant was used to help with data collection and the distribution of the questionnaire. To reduce potential recruitment bias from clinic staff, staff was not involved with administering, handling, linking or the collection of the completed questionnaires. The research assistant distributed and explained the questionnaire to the selected patients. Starting with the first patient of each day every patient was asked if he or she was willing to participate in the survey and handed a recruitment document. The process repeated itself until the required sample size was reached for each physician. If a patient declined to be part of the study the following patient was approached.

**Table 1: Physician panel and sample size**

<b>Physician</b>	<b>Size</b>	<b>Sample</b>
Dr. Gr	2093	41
Dr. Mo	1876	37
Dr. va	1177	23
Dr. El	1566	31
Dr. Bo	1424	28
Dr. De	1912	38
Dr. Co	1731	34
Dr. Ha	1541	30
Dr. He	1909	38
Dr. Pr	787	16
Dr. Sn	532	11
Dr. Mu	1677	33
Dr. Fo	1564	31
<b>Total</b>	<b>19789</b>	<b>391</b>
Total Sample Size =	385	

Patients were asked to complete the questionnaire in their own time and in privacy at the clinic. Patients then placed the completed document in a sealed envelope and into a secure document response box at the reception area when they left the clinic. Should a patient wish to withdraw from the study prior to submitting the survey, they were instructed to write VOID across the front page of the survey and place their survey in the document response box. No VOID surveys were received. To minimize any bias in consultation length or quality of care, patients were asked not to make the physician aware that they were part of the study.

Expected waiting times collected with the questionnaire was compared to actual waiting times in the clinic. The actual waiting times were measured by the patients with the use of a stopwatch.

A questionnaire was developed to measure the different aspects of primary care accessibility identified in the literature. The questionnaire was modified in terms of its validity by feedback from the local physicians and office staff. Patients were asked to rate office staff, the reception area, telephone systems, waiting times, cycle times, quality of care, infrastructure and if adding alternative health practitioners (e.g. nurses) would be acceptable and beneficial.

To place data into a simple and useable format the researcher used a matrix built into a spreadsheet format. The response for each answer was coded into the spreadsheet by the researcher.

### **Data analysis**

Data analysis was done with help from the Centre for Statistical Consultation at the University of Stellenbosch and members of the research HUB in the Department of Family Medicine, University of Calgary.

Simple descriptive statistics was used to describe some of the data and inferential statistics was used to indicate the extent to which findings in the sample also applied to the population from which the sample was drawn. Data was grouped together in categories and correlations and comparisons were made in terms of age groups, gender, ethnicity, waiting times, and patient satisfaction.

Data was screened for themes that can be compared. The spread of the results was determined by the standard deviation. Confidence intervals were used to determine the standard errors on either side of the mean. Standardized t-tests were used for comparing interval data between groups to show whether the distributions were significantly different. Categorical data was presented as frequency, relative frequency,

and confidence intervals. Numerical data that was normally distributed was presented as means, standard deviation, range and confidence intervals. Numerical data that was not normally distributed was presented as median, quartile ranges and range scores.

Logistic regression was used to measure the relationship between a categorical dependent variable and one or more independent variables. The Pearson chi-squared test was used to assess the test of independence, thus assessed whether paired observations on two variables, expressed in a contingency table, were independent of each other.

## RESULTS

Analysis indicates that minutes spent in waiting room was significantly higher than minutes spent in exam room and minutes spend with physician ( $p = 0.012$ ). The trend was as follows: Minutes in waiting room exceeded minutes with physician which in turn exceeded minutes in exam room. The broad conclusion here was that people spent more time in waiting room than any other part of the clinic.

There was no major difference between perceived versus actual waiting times in the Physician's office. Mean perceived waiting room time was 12.35 minutes versus 5-15 minutes actual waiting room time for 66.7% of the participants. Mean perceived exam room waiting time was 10.58 minutes versus 5-15 minutes actual exam room waiting times for 92.2 % of the participants. Mean perceived time spent with the physician was 11.65 minutes versus 5-15 minutes actual time spent with the physician for 79.7 % of the participants. A total of 63,5% were female. A total of 21,7% of participants visited the clinic for a new health problem (21.7%), test results (18.6%), yearly exam (10.5%) or a prescription refill (11.2%).

More than 22.7% of participants reported 1-3 days since the appointment were booked. Same day access was reported by 14%. A total of 11.2% still reported 15-21 day waiting times and 3.8% a 22-28 day waiting time. More than a third of patients (38.7%) waited longer than 7 days for an appointment in Brooks.

The majority of participants (61.5%) reported that they had to phone just once to get help, with 27.8% of participants walking in to make a booking. More than half (57%) of the participants reported that they had not used the ER during the past 12 months.

More than 90% of participants were happy with the location, clinic hours of operation, automated telephone system and felt that they could get a timely appointment. Only 65.7% of participants felt that waiting times for a specialist referral was acceptable. A total of 98% of participants had a favorable opinion about the facilities at the clinics. A total of 99% of participants were happy with the clinic's office staff. The majority of participants felt that adding other health care practitioners to the clinics would improve their access to care.

The majority (93%) of participants were satisfied with Primary care clinics in Brooks; reported between 5 to 15 minutes for waiting times and 83.4% of participants reported that their physician was not interrupted during their visit. Only 3.1% of consultations lasted more than 30 minutes with 11.2% lasting less than 5 minutes.

### Qualitative data in questionnaire

The analysis was done from recorded data that was transcribed and coded, and central themes were developed. Open ended questions were asked to the patients participating.

When asked on how we could improve access to primary care clinics in our community different responses were obtained (Table 6) and four important themes emerged from the data analysis and are briefly discussed below.

**Table 6:** Responses to question: **How can we improve your access to primary care clinics?**

How can we improve your access to primary care clinics?	Frequency (155)	%
Have Extended after hours	17	10.96%
Have Drop in visits	4	2.58%
Have more Physicians	47	30.32%
Have More clinics	3	1.94%
Have a Walk in clinic	34	21.94%
Content with current level of service	31	20.00%
MRI's needed locally	4	2.58%
Full time specialists locally	4	2.58%
Other	11	7%

### **“More doctors”**

Participants felt that access can be improved by recruiting more physicians:

- “More doctors, existing doctors cannot take new patients”
- “More doctors! It was 2 years before we were able to find a family doctor accepting patients in Brooks “
- “A doctor to see when mine is away “
- “More doctors! Time spent waiting at emergency is way too long! “

### **“Create walk in clinics”**

Some participants felt strongly about creating a Walk in Clinic:

- “We need a walk-in clinic because our emergency dept. is overused “
- “I strongly suggest a walk in clinic in Brooks, the waiting time at the hospital is ridiculous”

### **“Have extended hours”**

Some participants were keen to see extended after hours visit times at the clinics.

- “Have them open after hours e.g. 5 – 8”
- “ Have evening clinics for working families to avoid taxing hospital staff.”
- “An after-hours clinic. I personally waited 4 1/2 hours at the emergency room that a clinic doctor could have looked after in 20 minutes”
- “Maybe we could have one clinic open on weekends to take load off Hospital Emergency Dept. – so that it can function as an Emergency & not a health clinic “

### **“Satisfaction with current status”**

The majority of the participants was happy with their visit experience, the current level of service at the clinics and did not feel that it needed to be improved.

- “I'm wholly satisfied with my access! Leave my clinic alone - they know what they are doing.”
- “We are extremely pleased with the primary care clinic that we go to. We can't say enough about the doctors at the clinic.”
- “It is already very accessible”
- “I have had no problems. I think access to primary care clinics is good.”

## DISCUSSION

The results show that the vast majority (93 %) of patients were satisfied with the primary care clinics in Brooks. More than a third of patients (36.7%) were seen within 3 days of making an appointment. These findings are in contrast with an earlier study done by Money Sense in 2012 that ranked Brooks, Alberta 190th out of 190 cities for having the fewest physicians, with less than 1 per 1000 residents and thus poor access to care.

Brooks still needs to work towards decreasing waiting times for a scheduled appointment. This research study shows that more than a third of patients (38.7%) waited more than 7 days still for an appointment in Brooks with only 14 % reporting same day access. A previous study done by D McMurchy in Canada found that 22% reported that they booked an appointment to see their regular physician on the same day, the lowest rate among the seven countries studied. Three in 10 people waited six days or more-10% more than the next closest countries, the U.S. and Germany.<sup>11</sup>

For the majority of patients (60.5%) waiting time in the waiting room was 5-15 minutes, 81% of patients waited 5-15 minutes in the exam room and for 67.1% of patients a consultation was between 5-15 minutes. However a study led by W Stunder found that only about one-third of patients could accurately gauge ahead of time how long the consultation was going to take.<sup>34</sup> This is in contrast to our findings which did not show any major differences between perceived and actual waiting times

The longer patients wait in the exam room the less likely they will indicate that they can get a timely appointment, that waiting time in the waiting room and exam room are acceptable and that they are happy with their level of access to primary care clinics.

Patients who felt that they received a timely appointment were 8.4 times more likely to be happy with the quality of care that they receive. Patients who got prompt return of their calls were 10.4 times more likely to be happy with their level of access to primary care clinics. Patients who felt that the clinic hours of operation were acceptable were 15.6 times more likely to agree that they received adequate health care through the primary care clinics. Patients who felt that the waiting time for an appointment at the clinic was acceptable to them were 8.1 times happier with the quality of care received.

Patients who felt that waiting times for an appointment at the clinic are acceptable to them were likely to agree that they were happy with their level of access to primary care clinics and that they received adequate healthcare through their primary care clinics. Furthermore, participants were more likely to



agree that a Dietician will improve access to care when minutes in the waiting room is between 5 -15 minutes.

The shorter the time before the physician enters the exam room the more likely that the patient will be happier with the clinic hours of operation and whether the patient can get a timely appointment. The same for waiting time for an appointment, waiting in the waiting room and waiting in the exam room.

The more time patients spent with the physician the more likely that waiting times in the exam room is acceptable to them and that they are happier with the level of access to primary care clinics.

### **LIMITATIONS OF STUDY**

The study only included patients attached to the Primary care clinics in Brooks and was conducted during the summer school vacation months and that could have an influence on the data.

### **RECOMMENDATIONS**

The research highlighted the problem areas in the current accommodation of accessibility to Primary care clinics in Brooks, Alberta and it is hoped that the ensuing recommendations will assist in improving access to care in the community.

- That extended after hours visits for patients at the 4 clinics in town to accommodate working families and school age children be established.
- That a “Walk in” clinic in the community for after hours and weekend consultations be established.
- That more primary care physicians be recruited to the community of Brooks.
- That the additional allied health practitioners to clinics would improve Primary care access.
- That all clinic staff be aware of the 5-15 rule: a happy patient waits no more than 5-15 minutes in the waiting and then 5-15 minutes in the exam room for a 5-15 minute consultation.

## CONCLUSION

No major differences exist between perceived and actual waiting times in the physician's offices. The waiting time for scheduled appointments is generally too long. The most satisfied patient appears to be someone whom waits no longer than 5-15 minutes in the waiting room and then no longer than 5-15 minutes in exam room for a 5 -15 minute consultation. The shorter the waiting times for an appointment and the shorter the different waiting times during a consultation in the clinic the more satisfied the patient. The majority of patients in Brooks, Alberta were satisfied with the level of access and quality of care that they receive at the 4 primary care clinics in town.

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