

UNIVERSITY OF CALGARY

Assessing the Experiences of Immigrants Receiving Primary Care during COVID-19: A mixed-
methods study

by

Bishnu Bahadur Bajgain

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF SCIENCE

GRADUATE PROGRAM IN COMMUNITY HEALTH SCIENCES

CALGARY, ALBERTA

JANUARY, 2022

© Bishnu Bahadur Bajgain 2022

ABSTRACT

Background: The entire healthcare system, including primary healthcare (PHC) services, has been disrupted since the onset of the COVID-19 pandemic. As the crisis threatens all citizens significantly, further barriers to accessing care exist for those who are most vulnerable, experience marginalization, and have pre-existing challenges. We aimed to explore immigrants' lived experiences in accessing and receiving PHC services during the pandemic.

Methods: A multiphase mixed-methods study using a sequential explanatory design was employed. The first study includes a systematic review that synthesizes the evidence on the experiences that immigrant patients have receiving PHC. Study two provides insights from a recently employed "COVID-19 Experiences and Impacts Survey" data and compares the experiences of Albertans that were born in and outside Canada. Descriptive statistics and multivariable logistic regression were performed, using STATA. The third study is a qualitative inquiry that aims to gain a deeper understanding of the newcomers' (living in Canada ≤ 5 years) and providers' experiences in PHC during the pandemic. A thematic analysis was applied, using NVivo software.

Results: The literature review revealed four major concerns affecting healthcare experiences of immigrant patients: 1) cultural and linguistic difference; 2) socioeconomic challenges; 3) health system factors; and 4) patient-provider relationship. The quantitative analysis of survey data (N=10,175) showed Canadian-born respondents were more likely to report worsening mental health during the pandemic, as well as higher levels of perceived stress, anxiety, or depression compared to non-Canadian-born survey respondents. In addition, Canadian-born respondents were more likely to prefer virtual healthcare compared to those respondents born outside Canada. Both cohorts reported that delayed care during the pandemic negatively impacted their health,

and similar percentages in each cohort reported hesitancy getting the COVID-19 Vaccine. The qualitative inquiry included 23 interviews (15 newcomers, 8 providers) and revealed three aspects driving newcomers' and healthcare providers' experiences: overall experiences (doctor-patient relationship, care coordination, expectation on care), virtual care experience (accessibility, communication), challenges in accessing and receiving healthcare (language/cultural difference, care accessibility, health system literacy, competing priorities).

Conclusion: This thesis presents a comprehensive exploration and description of immigrants' lived experiences in accessing and receiving PHC during the pandemic. Immigrants reported many challenges in accessing and receiving PHC, and these challenges have been increased since the COVID-19 pandemic. The results of this thesis yielded six recommendations that can inform PHC quality improvement initiatives and PHC policy.

Keywords: *Primary Healthcare; COVID-19; Pandemic; Virtual Care, Newcomers; Healthcare Providers; Patient Experiences; Access to Healthcare; Access Barriers; Canada.*

PREFACE

This is a paper-based thesis that includes the following chapters. Chapter one includes the introduction of the thesis and chapter two describes the methods and approaches used throughout the thesis. The following three chapters, three, four, and five are manuscripts that have been published or submitted to peer-reviewed journals (as described below). Chapter six discusses, summarizes, and presents the thesis conclusion. This work was conducted with guidance from my thesis supervisor [Dr. Maria Santana (MS)], and thesis committee [Drs. Fariba Aghajafari (FA) and Jeanette Jackson (JJ)]. MS, FA, and JJ conceived and designed the study, with input from Bishnu Bajgain (BB). For each paper, BB led the study steps (conducting, analyzing, interpretation, manuscript writing, and journal submission) with guidance from MS, FA, and JJ. All other co-authors contributed important intellectual content and feedback to each manuscript.

Chapter 3 has been published in the *International Journal of Environmental Research and Public Health* as: Bajgain BB, Bajgain KT, Badal S, Aghajafari F, Jackson J, Santana MJ. Patient-Reported Experiences in Accessing Primary Healthcare among Immigrant Population in Canada: A Rapid Literature Review. *Int J Environ Res Public Health*. 2020;17(23):8724. Published 2020 Nov 24. doi:10.3390/ijerph17238724.

Chapter 4 has been submitted in the *Journal of Patient Experiences* as: Bajgain BB, Jackson J, Aghajafari F, Bolo C, Santana MJ. Immigrant Healthcare Experiences and Impacts during COVID-19: A cross-sectional study in Alberta, Canada.

Chapter 5 has been submitted to the *Health Expectations* journal as: Bajgain BB, Aghajafari F, Jackson J, Ahmed S, Santana MJ. Newcomers' Experience in Accessing Primary Healthcare Services during COVID-19: A qualitative inquiry.

ACKNOWLEDGEMENTS

I am grateful that there are several people I would like to thank for their supports and contributions throughout this adventure. Over the past two years, I have had the privilege of meeting and working with many wonderful people, and I am thrilled that they have been part of my life along this quest.

First, my deepest appreciation goes to my supervisor, Dr. Maria Santana for your incredible leadership, mentorship, support, tutelage, and kindness since I have met you. Dr. Santana, you have been continual support, have always encouraged me to pursue various opportunities, and constantly looked out for me. You have been an ideal teacher, mentor, and thesis supervisor, offering advice and encouragement with the perfect blend of insight and humor. I am proud of and grateful for, my time working with you Dr. Santana. Your prompt inspiration, timely advice, meticulous scrutiny, scholarly advice, and scientific approach have greatly benefited me on my professional and personal levels. Thank you for sharing your expertise and being a wonderful supervisor.

Dr. Fariba Aghajafari and Dr. Jeanette Jackson, I am grateful and delighted to have both of you on my supervisory committee, and I deeply wish to thank you for your continuous supports and guidance throughout this journey. I appreciate the lenses that you both have brought to this work, and I have enjoyed learning from you. Your encouraging words, thoughtful insights, and detailed feedback have been very important to me. Thank you for sharing your expertise.

Further, I would like to thank the Sunridge Family Medicine Centre, particularly doctors, nurses, pharmacists, and social workers for their support and participation in my research work. I also wish to thank the Health Quality Council of Alberta for their support in this work. I am

grateful to the Department of Community Health Sciences, the University of Calgary for providing funding support and such a welcoming and positive learning environment.

I wish to recognize the contributions of patients, families, and caregivers across Alberta, who have contributed to my work in providing their experiential knowledge in a survey, during an interview, or as part of your work, you are supporting to improve our healthcare system for future patients. I am grateful for having the opportunity to speak to the interviewees, who generously took time out of their schedules to participate in my research and shared their thoughtful and enriching experiences in this critical time, you are appreciated.

Thank you to Sadia Ahmed for your involvement in this research process, and for unconditionally supporting and motivating me to keep going. Thank you to Tiffany Barbosa for supporting this research. I am indebted to my lab teammates Dr. Kyle Kemp, Dr. Paul Fairie, Sumedh Bele, Brian Steele, and other members for their supports and encouragement. Thank you Sujan Badal, Kalpana Thapa, and Carmelle Bolo for your involvement in this research work.

Most importantly, none of this work would have been possible without the unconditional support of my wife, Kalpana. She sincerely supported and encouraged me, and always has had my back. Thanks to all my family members, my lovely and caring son Abik, daughter Aabya for your understanding of my busy schedule, I appreciate your unwavering support, patience, prayer, and love continuously.

Finally, I take this opportunity to thank Kimberly Manalili, who played a vital role to take the first step of this journey. Kim, you enlightened my path through support, guidance, connection, and encouragement. I really appreciate your unconditional supports.

Surely, I would like to thank God, for letting me through all the good vibrations, I have experienced throughout my life journey.

TABLE OF CONTENTS

ABSTRACT.....	II
PREFACE.....	IV
ACKNOWLEDGEMENTS.....	V
TABLE OF CONTENTS.....	VII
LIST OF TABLES	XII
LIST OF FIGURES.....	XIII
LIST OF APPENDICES.....	XIV
CHAPTER ONE: INTRODUCTION.....	1
1.1 Overview of the Thesis.....	1
1.1.1 Overview of the Topic.....	1
1.1.2 Research Objectives.....	4
1.2 Background.....	5
1.2.1 Patient Experience: Concept, Importance, and Context.....	5
1.2.2 Immigrants History and Canadian context.....	9
1.2.3 Primary Healthcare in the Canadian context.....	11
1.2.4 Primary Healthcare during COVID-19.....	12
1.3. Literature Review.....	13
1.4 Thesis Outline.....	14
CHAPTER TWO: METHODS.....	16

2.1 Study Design.....	16
2.2 Conceptual Framework.....	18
2.3. Study Phases.....	19
2.3.1 Phase One: A Systematic Review.....	20
2.3.2 Phase Two: A Secondary Quantitative Analysis.....	22
2.3.2.1 Study Design.....	22
2.3.2.2 Survey Tool.....	23
2.3.2.3 Study Population and Data Collection.....	24
2.3.2.4 Statistical Analysis.....	25
2.3.3 Phase Three: A Qualitative Enquiry.....	26
2.3.3.1 Study Design.....	26
2.3.3.2 Setting and Participants.....	28
2.3.3.3 Sampling and Recruitment.....	28
2.3.3.4 Interview Guide Development.....	30
2.3.3.5 Data Collection.....	32
2.3.3.6 Data Analysis.....	33
2.3.3.7 Trustworthiness.....	37
2.4 Ethical Considerations.....	38
2.5 Summary.....	39
CHAPTER THREE: Patient-Reported Experiences in Accessing Primary Healthcare among Immigrant Population in Canada: A Rapid Literature Review.....	40
3.1 Abstract.....	41
3.2 Introduction.....	42

3.3 Materials and Methods.....	44
3.3.1. Search Strategy and Study Selection.....	44
3.3.2. Inclusion and Exclusion Criteria.....	45
3.3.3. Data Extraction and Evaluation.....	45
3.3.4. Assessment of Quality and Risk of Bias.....	46
3.4. Results.....	46
3.4.1. Overview of the Selected Study.....	46
3.4.2. Summary of the Studies.....	57
3.4.2.1. Cultural and Linguistic Differences.....	57
3.4.2.2. Socioeconomic Challenges.....	59
3.4.2.3. Health System Structure Factors.....	61
3.4.2.4. Patient-Provider Relationship.....	62
3.5. Discussion.....	64
3.5.1 Overcoming Cultural and Linguistic Differences.....	64
3.5.2 Facing Socioeconomic and Structural Challenges.....	65
3.5.3 Improving Patient-Provider Relationship.....	66
3.6 Conclusions.....	67
Declaration.....	69
CHAPTER FOUR: Immigrant Healthcare Experiences and Impacts during COVID-19: A cross-sectional study in Alberta, Canada.....	72
4.1 Abstract.....	73
4.2 Introduction.....	74
4.3 Methods.....	75

4.3.1 Study Design and Setting.....	75
4.3.2 Survey Tool.....	75
4.3.3 Study Population and Data Collection.....	75
4.3.4 Statistical Analysis.....	76
4.4 Results.....	77
4.4.1 Survey Respondents’ Demographics Characteristics.....	77
4.4.2 Factors Influencing Patient’s Experiences in Receiving Care.....	79
4.5 Discussion.....	80
4.5.1 Strengths/Limitations.....	84
4.6 Conclusion.....	85
Declaration.....	86
CHAPTER FIVE: Newcomers Experience in Accessing Primary Healthcare Services	
during COVID-19: A qualitative inquiry.....	87
5.1 Abstract.....	88
5.2 Introduction.....	90
5.3 Methods and Materials.....	91
5.3.1 Study Design.....	91
5.3.2 Setting and Participants.....	91
5.3.3 Recruitment.....	92
5.3.4 Data Collection.....	92
5.3.5 Data Analysis.....	93
5.3.6 Trustworthiness.....	93
5.4 Results.....	94

5.4.1 Participant Characteristics.....	94
5.4.2 Newcomers’ Overall Experiences in Accessing Primary Healthcare.....	95
5.4.2.1 Doctor-Patient Relationship in Care.....	95
5.4.2.2 Care Coordination.....	96
5.4.2.3 Expectations on Care Access.....	96
5.4.3 Virtual Care Experiences (Newcomers’ and Primary Healthcare Providers’)	97
5.4.3.1 Accessibility of Virtual Care.....	97
5.4.3.2 Accessing Care.....	97
5.4.3.3 Communication during Virtual Care Visit.....	98
5.4.3.4 Ensuring Safety of Care and Enhancing Quality.....	99
5.4.4 Challenges in Accessing/Receiving and Delivering Primary Healthcare (Newcomers’ and Healthcare Providers’ Perspective) and Resources/Strategies used....	99
5.4.4.1 Language Barriers.....	100
5.4.4.2 Cultural Difference.....	100
5.4.4.3 Care Accessibility (System Level Barriers)	101
5.4.4.3.1 Availability (Timeliness) of Primary Healthcare.....	101
5.4.4.3.2 Long Wait Time.....	102
5.4.4.3.3 Healthcare Cost.....	102
5.4.4.3.4 Geographical and Transportation.....	103
5.4.4.4 Unfamiliar and Complex Healthcare System.....	104
5.4.4.5 Facing a New Life and Competing Priorities.....	105
5.5 Discussion.....	105
5.5.1 Building Trustworthy Relationship among Doctor-Patient.....	106

5.5.2 Enhancing Virtual Care Experiences.....	107
5.5.3 Overcoming Newcomers’ Challenges in Accessing Primary Healthcare.....	108
5.5.4 Strength and Limitation.....	111
5.6 Conclusion.....	112
Declaration.....	113
CHAPTER SIX: SUMMARY.....	146
6.1 Summary of Key Findings.....	147
6.1.1 The First Phase.....	148
6.1.2 The Second Phase.....	150
6.1.3 The Third Phase.....	151
6.2. Recommendations for Improving the Newcomer Patient Experience.....	157
6.2.1 Building Trustworthy Relationship among Doctor-Patient.....	158
6.2.2 Effective Care Coordination.....	161
6.2.3 Overcoming Language and Culture difference.....	162
6.2.4 Addressing Health System Structure Barriers.....	164
6.2.5 Enhancing Health System Literacy by focusing on Socioeconomic challenges....	165
6.2.6 Enhancing Virtual Care Experiences.....	166
6.3 Strengths.....	168
6.4 Limitations.....	170
6.5 Outcomes and Dissemination of this Research.....	172
6.6 Future Direction.....	173
6.7 Conclusion.....	174
References.....	211

LIST OF TABLES

Table 3.1: Characteristics of the studies included in the review.....	49
Table 3.2: Findings of the studies included in the review.....	52
Table 3.3: NEWCASTLE-OTTAWA quality assessment scale for cross-sectional studies.....	71
Table 4.1 Sociodemographic characteristics of the study population according to Canadian-born and born outside Canada.....	78
Table 4.2 Unadjusted and adjusted odds ratios [OR, AOR, 95% Confidence Interval (CI)] of self-reported health status, virtual care experiences, and willingness to get vaccinated against COVID-19 of Canadian-born and born outside Canada.....	80
Table 5.1 Demographic characteristics of the study participants.....	114
Table 5.2 Newcomer’s overall experiences in accessing and receiving Primary Healthcare	116
Table 5.3 Newcomer’s virtual care experiences in receiving primary care	121
Table 5.4 Primary healthcare providers’ virtual care experiences in caring newcomers during COVID-19	125
Table 5.5 Challenges in accessing Primary Care: from newcomers’ and primary healthcare providers’ perspective.....	133
Table 5.6 Recommendation/opportunity to improve care (From newcomers’ worldview)	144
Table 6.1 Summary of results from this thesis.....	156

LIST OF FIGURES

Figure 1.1 Methods used to measure patient experiences.....	9
Figure 2.1 Research questions, purpose, and methods used to address the program of study.....	17
Figure 3.1 PRISMA flow chart of the literature review and article identification process.....	47
Figure 5.1 Self-reported mental health impact; trustworthy sources of COVID-19 information; types of services received; and the level of comfort to get vaccinated against COVID-19	115
Figure 5.2 Challenges in accessing primary care: from newcomers’ and primary healthcare providers’ perspective.....	132

LIST OF APPENDICES

APPENDIX 1. A- Primary Health Care as the Centre of Alberta’s Health Care System.....	176
APPENDIX 2. A- CONCEPTUAL FRAMEWORK.....	177
APPENDIX 2. B- COVID-19 Experiences and Impacts Survey Questionnaire.....	178
APPENDIX 2. C EMAIL/TELEPHONE RECRUITMENT SCRIPT.....	195
APPENDIX 2.D- INTERVIEW GUIDE (patient and primary healthcare providers.....	199
APPENDIX 2. E- COREQ Checklist- COREQ (Consolidated criteria for Reporting Qualitative research) Checklist for Chapter 5.....	205
APPENDIX 2. F- Research Participant CONSENT FORM.....	208
APPENDIX 3. A- Literature search performed using various online scientific databases.....	70

CHAPTER ONE: INTRODUCTION

1.1. Overview of the thesis

1.1.1 *Overview of the Topic*

The healthcare system is the organization of people, institutions, and resources that delivers healthcare services to meet the healthcare needs of people in an equitable and inclusive environment [1]. The healthcare industry is becoming gradually more competitive as patients and families become increasingly engaged in steering their healthcare experiences. The future of global healthcare lies in delivering high-quality care that focuses on the patient experiences as patients and families progressively expect diagnostic procedures and treatment paths to be personalized to integrate their preferences and needs in a competitive environment (linguistically and culturally). As Berwick and colleagues theorized in 1998, the main goals of healthcare systems should focus on achieving three fundamental elements: Improve the care experience, improve the health of the population, and reduce per capita healthcare costs [2], and now a fourth aim has emerged (to improve the staff experience). The first objective of the Triple Aim framework is improving the patient experience [2], and many healthcare organizations have already progressed to refer to the updated framework (the Quadruple Aim). Enriching patients' healthcare experiences imply not only providing top-notch clinical care, but also addressing every aspect that patients encounter while accessing and receiving care; including their physical comfort, understanding their emotional needs and supports, and other socioeconomic aspects they may face. As outlined in the Triple Aim [2], many healthcare organizations and government institutes have already recognized the importance of improving patient experience, and as part of their core business, collect routine patient experiences surveys.

Understanding patient experiences is a key component of continuously improving the quality of care, which is moving towards a Patient-Centered Care (PCC) approach [3]. PCC not only benefits patients or enhances clinical and business outcomes, but also indicates whether healthcare providers deliver compassionate patient-centered care [3].

Worldwide, policymakers are steadily more fascinated in gathering and analyzing patient experience data to assess healthcare providers' performance to promote quality improvement [4]. Canada regularly captures patient experience data across the healthcare system. Notable examples are the Health Quality Council of Alberta surveys, which examine patient experiences in primary care, emergency services, and continuing care [5], the Ontario Ministry of Health and Long-Term Care (regular surveys as part of the Excellent Care for All Act, 2010) [6], and the British Columbia Office of Patient-Centered Measurement, Ministry of Health, and local health authorities who measure and report patient experiences in multiple care sectors [7]. Indeed, capturing patient voices is crucial, especially for marginalized groups. However, as most of these patient experience surveys are administered in English, a big chunk of the population might have missed the opportunity to share their experiences due to language barriers.

Canada has a long history of immigration which plays a vital role in shaping its demography and identity. The term immigrant refers to a person who is or has ever been a landed immigrant/permanent resident, who has been granted the right to live in Canada permanently by immigration authorities, who has settled permanently in another country. Most immigrants are born outside Canada [8]. Some immigrants have resided in Canada for several years, while others have arrived recently. In this thesis, we refer to the new immigrant (a newcomer to Canada) as an immigrant who has been living in Canada for five years or less. Additionally, a refugee is an individual who is forced to leave their home country because of serious human

rights abuses [9]. Refugees and newcomers are immigrants, and the only differences are the time they have been living in the country and their legal status. The healthy immigrant effect indicates that newcomers have better health status when they arrived in the country compared with the Canadian-born population. However, once they are exposed to the various physical, social, environmental, and cultural influences of the newly adopted country, the situation changes [10,11] exposing them to all possible adverse effects on health, leading to poor access to healthcare among newcomers.

Riedel [12] has highlighted the three types of barriers to health care access among immigrants: structural and institutional, financial, personal, and cultural. As a newcomer, adjusting to a new country is a stressful process. Particularly, understanding a new healthcare system with a different healthcare structure becomes an additional challenge. Moreover, economic stability and financial survivability could be the priority for newcomers, which may influence individuals' health-seeking behaviors. So, institutional, cultural, and financial barriers may directly impact the access to primary health care (PHC) among newcomers. Further, along with language, culture, and personal beliefs, a combination of those factors might hamper newcomers from poor experiences in accessing PHC [13]. A large number of immigrants choose Canada as their home every year, and their health is ascertained by various social determinants. Understanding the social determinants of health [14] of immigrants and the unique challenges they offer in the provision of health services would be helpful to care providers in reducing and overcoming these barriers, and in improving the overall quality of care for linguistically and culturally diverse populations. It also impacts the value of good patient experiences that support a goal of the Triple Aim (more recent, Quadruple Aim). Therefore, work needs to be done to design programs that address the needs and challenges of the immigrant population. Since the

onset of the COVID-19 pandemic, these challenges may have multiplied with limited access to in-person care, virtual delivery of care, most likely due to language barriers.

1.1.2 Research Objectives

The overarching goal of this study is to explore how the quality of care can be improved for immigrant patients accessing and receiving primary health care (PHC) services in Alberta, Canada during the COVID-19 pandemic. Specifically, this multiphase, mixed-methods research study aims to answer the following research questions:

1. What are the experiences of newcomer patients accessing and receiving PHC during the pandemic in Alberta?
2. What are the barriers and facilitators in accessing and receiving PHC during the pandemic?
3. What are the strategies and the opportunities to improve care delivery?

These objectives were addressed through three study phases:

1. A comprehensive literature review to synthesize the evidence of the experiences of immigrant patients with PHC, identifying areas for further research and improvement (Chapter 3);
2. A quantitative analysis of immigrants' healthcare experiences during COVID-19: comparing healthcare experiences of individuals born in Canada to those born outside of Canada (Chapter 4);

3. A qualitative inquiry, exploring new immigrants' lived experiences and challenges in accessing and receiving PHC, as well as capturing PHC providers' perspectives while caring for new immigrants during the COVID-19 pandemic (Chapter 5).

In the following pages of this chapter, several introductory concepts will be presented including PHC, patient experiences, history, and status of immigration in Canada, and services in PHC during the COVID-19.

1.2 Background

1.2.1 Patient Experience: concept, importance, and context

The term “patient experience” is often used interchangeably with patient perception, patient perspective, patient satisfaction, or patient report and evaluation. Patient experiences encompass a range of patient interactions with the healthcare system, including interacting with doctors, nurses, therapists, and other healthcare staff and facilities [15]. It is one of the fundamental determinants of healthcare quality, patient safety, well-being, and clinical effectiveness [15,16]. In the early 20th century, Ernest Codman (a surgeon) attributed the concept of inquiring patients about their healthcare experiences in a formalized way [17]. In 2011, the National Health Service (NHS) in the United Kingdom carefully outlined eight domains of a ‘good’ patient experience. These included respect, information and communication, physical comfort, emotional support, as well as continuity, and timely access to care [18]. In contrast, some health analysts focus on patient experience as patient feedback to care providers [19]. For instance, Dr. Foster specifies patient experience as “feedback from patients on ‘what actually happens’ during the course of receiving care or treatment, both the objective facts and their

subjective views of it” [19]. Patient experience is a multi-dimensional concept comprising various aspects of care. Mostly incorporated areas encompass the process of getting an appointment for medical consultation, waiting time, interaction with healthcare providers including receptionists, nurses, doctors, and other allied healthcare professionals, the information provided, and cleanliness of facilities. As Dr. Foster outlines, patient experiences or feedback questions focus on either what happens to patients (patient reports), or on how patients rate their experiences (patient evaluation) [19]. Improving patient experience has an inherent value to both patients and families and is associated with important clinical processes and outcomes. Equally, the quality of patients’ experiences is central to an organization’s reputation and productivity. Excellent feedback from patients and families is a good marketing tool that creates an opportunity for increasing choice and competition in the field. Indeed, understanding and improving patients’ experience should be part of the core business of the healthcare industry.

There are a wide variety of ways to gather patient experience data. Figure 1.1 represents different approaches to capture patient experience and feedback [20,21]. Each of these approaches, whether quantitative or qualitative, have their own strengths and limitations in terms of applicability, descriptiveness, and generalizability. A questionnaire survey is the most frequently and widely used method to assess patients’ views in routine clinical practice, mainly due to its ability to capture feedback from a large volume of the population in a short period of time [22,23].

Canada regularly surveys patients about their care experiences. For example, in Alberta, patient experience surveys are conducted in primary care, emergency departments, and continuing care by the Health Quality Council of Alberta (HQCA) [5]. The Ontario Ministry of Health and Long-Term Care does a regular survey as part of the Excellent Care initiative [6], and

the British Columbia Office of Patient-Centered Measurement, Ministry of Health, and local health authorities conduct surveys in multiple care sectors [7]. Another regional-level survey, that collects information related to health status, healthcare utilization, and health determinants of the Canadian population, is the Canadian Community Health Survey (CCHS), a cross-sectional survey that runs every two years [24]. Moreover, the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), is a widely used patient experience survey tool [25,26], which has been reviewed and adapted to the Canadian context as the recent Canadian Patient Experience Survey-Inpatient Care (CPES-IC) [27]. In Alberta, the HCAHPS was piloted in 2004 [28] and expanded in 2011 by Alberta Health Services (AHS), now encompassing 93 hospitals across the province [29]. The CPES-IC was developed, and pilot tested in 2013 in Canada. Since then, many patient experience surveys have been used in various clinical areas in Alberta. For example, Kemp et al. have reported on the patient experiences of various groups within the hospital setting including children living with medical complexity [30], adults who underwent cardiac surgery [31], women discharged from inpatient cardiology units [32], older adults [33], those hospitalized due to ischemic heart disease [34], and children's experiences from the mother's and father's point of view [35].

On the other hand, qualitative approaches [interview and focus group discussions (FGD)] are commonly used methods to assess patient experience in research. These approaches are becoming more common in healthcare research, which is used to discern complex social processes, understand how a particular phenomenon is perceived by the study participants, and explore beliefs, values, or motivations underlying their behaviors [36,37]. Over the past two decades, the methods have been expanded including ethnography, grounded theory, narrative research, participatory action research, case studies, phenomenological research, and disclosure

analysis, which can be employed when little knowledge exists in a particular research area, and it also can help to generate hypotheses for future research [37]. Additionally, in-depth interviews are useful when researchers are looking for detailed information about study participants' lived experiences including thoughts, behaviors, or to explore new issues in more detail. They help capture rich information and a picture of what matters to study participants (what happened and why). Further, qualitative inquiries cover a wider and rich aspect of stories from study participants. For instance, Ahmed et al. captured patient and caregiver experiences with advanced cancer care in Alberta via qualitative inquiry [38], Leung et al. did a qualitative inquiry about working with parents with complex mental health issues to improve care [39]. Equally, interviews and FGDs are common methods in measuring patient-centered care [3,40,41], the patient-provider relationship, as well as care continuity [42]. For instance, Manalili et al. recently co-designed person-centered quality indicators via participatory action research [43]. Other ways of getting patient feedback are complaints and compliments received from patients, patient groups, or medical staff. For example, a recent study (2020) was conducted by Fairie et al. [44] to better understand patient experiences via patient feedback.

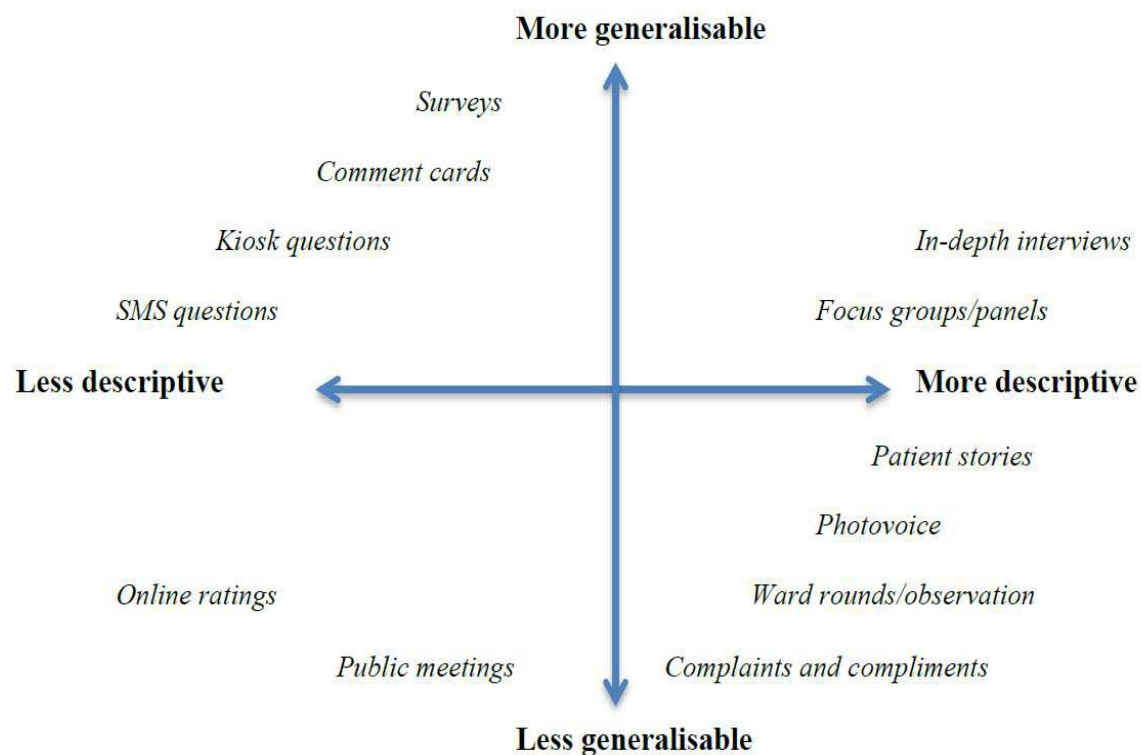


Figure 1.1 Methods used to measure patient experiences [20,21]

1.2.2 Immigrants History and Canadian Context

Migration is a global movement; Canada is well-known for its friendly immigration policy [45]. Since Confederation in 1867, over 17 million immigrants have landed in Canada. In the past, immigrants were mainly from European countries, but from the late 1960s and early 1970s onwards, the diversity has increased, and according to the 2011 National Household Survey, Asia (including the Middle East) is now the main continent of origin of the immigrant population [46]. Immigrants represent over 21.9% of the Canadian population, which is an increasing trend [47]. Yearly, Canada receives almost 300,000 immigrants [48], and their health needs vary because of many factors. Understanding their experiences while accessing primary healthcare is crucial. Generally, immigrants arrive in Canada with similar or better health status

than the general Canadian population. Because of the self-selection process for immigration, those who choose to migrate are usually healthier and had higher education [49,50]. However, reports also show that the health condition of immigrants, living in Canada for 10 years or more, was worse than for those who recently moved to Canada [51,52]. Various research has shown that several causal factors, including socioeconomic and cultural, environmental, healthcare system, and other social gradients are associated with this deterioration [53].

Moreover, the health characteristics of the immigrant population are a consequence of environmental, economic, genetic, and social-cultural factors of their original home country before they migrated to Canada. It is also influenced by post-immigration factors including new environment, employment, education and poverty, accessibility, and responsiveness of health care practitioners and the healthcare system of Canada [54]. A large body of research including our literature review [55] (Chapter 3) identifies various challenges that immigrants and newcomers to Canada report when accessing primary care, particularly factors related to culture and language, socioeconomic (societal influence and finance/cost), and health system structure [45,55]. Research also shows that immigrants make frequent and repeated visits to primary healthcare for the same health problem because of inadequate or lack of communication and understanding between the provider and the patient [56]. Though there are ample studies that have been done to explore patient experiences and barriers in accessing and receiving primary healthcare among the immigrant population, there are only limited studies that have been done in Alberta. Around 40,000 people from across the world choose Alberta as their new home every year, which comprises 1% of Alberta's population [57]. Therefore, there is a knowledge gap in understanding new immigrants' experiences in accessing high-quality primary healthcare in Alberta.

1.2.3 Primary Healthcare in the Canadian context

Worldwide, primary healthcare is considered the cornerstone of the healthcare system, and individual visits are approximately 30 times more than hospital admission in high-income countries [58]. In 1987, the World Health Organization (WHO) conceptualized PHC as a holistic approach to delivering healthcare in a comprehensive and multi-sectoral view [59]. PHC is the first point of contact when people have health concerns including routine care, care for minor or common health problems, maternity and childcare, mental health care, psychosocial services, health promotion and disease prevention, liaison with home care, nutrition, and end-of-life care. These services are often received from a general practitioner (GP), or family physician (FP) [60,61]. Further, Mable and Marriott comprehended PHC (2002) as recognizing “the broader determinants of health and includes coordinating, integrating, and expanding systems and services to provide more population health, sickness prevention, and health promotion.” It encourages the best use of all health providers to maximize the potential of all health resources. [62]. In Canada, PHC is the gateway to access healthcare services. It means that patients do not have direct access to a specialist or to diagnostic and therapeutic services, and everyday thousands of Canadians receive these services. PHC has a dual function in the healthcare system: 1) direct provision of first-contact services (by care providers such as family physicians, nurse practitioners, pharmacists, and telephone helplines) and 2) a coordination function to ensure care continuity and ease of movement across the system (integrated care: specialists or hospital). As such, PHC offers a sustainable approach to address the waiting time for specialized services and workload of hospitals [61].

Canadians identify the important features of PHC including comprehensiveness, continuity, coordination, interpersonal communication, patient-centered care, effectiveness and

safety, quality outcome, and satisfaction [60]. Recently, Canada has made a significant investment in PHC reform via provincial and territorial ministries to improve access, continuity of care and quality, good patient experience, and better population health outcomes. In Alberta, the majority of PHC is delivered via Primary Care Networks (PCNs) in a team-based approach, partnership between a group of family physicians and Alberta Health Services (AHS). The aim is to provide comprehensive, collaborative PHC services by teams of professionals including physicians, nurses, psychologists, pharmacists, dietitians, rehabilitation therapists, and social workers [63,64].

PHC is the “front door” of the healthcare system, and in general, the majority of the time, people receive healthcare services either from primary or secondary sources of care/facilities. From PHC, if an individual requires the next/higher level of care, the primary healthcare provider (family physician) refers the patient either to a secondary level of care, specialized care services/facilities, or tertiary level of care (Appendix 1. A). Once individuals receive care from different facilities or levels (e.g., secondary, specialist, or territory), they will be referred back to their family physician in PHC, and this is a continuous process of the healthcare system. [64]. Indeed, adequate access to high-quality care in PHC is crucial to everyone.

1.2.4 Primary Healthcare during COVID-19

Worldwide, the pandemic, caused by the severe acute respiratory syndrome coronavirus-2 (SARS-Cov-2), has had devastating consequences including a severe public health impact and disruption in the provision of healthcare [65]. The entire healthcare system, including PHC, has been disrupted in terms of organizing, mobilizing, and deploying extra resources to address the needs of the pandemic effectively, as well as non-COVID-19 cases safely and in a timely manner. Likewise, the pandemic has created a physical barrier between healthcare providers and

their patients, which makes many traditional ways of human connection impossible. Moreover, the COVID-19 pandemic altered the process of delivering PHC [66]. Canada implemented widespread uptake of virtual care, switching from in-person care into virtual care delivered by phone calls, videoconference, and secure messaging [66-68]. Due to this shift in the access and delivery of PHC, it is crucial to understand patients' experiences in accessing and receiving care, as well as the care providers' perspectives in delivering care. Canadians' mental health has been negatively impacted since the onset of the COVID-19 pandemic, as individuals struggled mainly with uncertainty, and worried about their own and loved ones' health, employment, and financial concerns [69-71]. Likewise, Canadians with chronic health conditions, including cancer, reported avoiding accessing healthcare (either canceled, postponed, or rescheduled their appointment) during the pandemic [72,73].

To prepare an effective and efficient response during a health crisis, a robust PHC system is crucial. Throughout the pandemic, Canada has mobilized resources to address the crisis [74]. As the crisis threatens all citizens significantly, further barriers to accessing healthcare exist for those who are most vulnerable, experience marginalization and have pre-existing challenges. Immigrants and newcomers have been affected during the pandemic, as there are many exacerbating factors that already hinder their access to care, such as lack of culturally and linguistically appropriate care, socioeconomic challenges, and health system structure (e.g., unfamiliar healthcare system and long waiting time) [55].

1.3 Literature Review

A systematic review of the literature, a logical first step in the development of the patient experience study, was conducted and published as part of this thesis.

Our literature review revealed four major themes:

- 1) Cultural and linguistic differences: highlighted several realities to cultural and linguistic difficulties in accessing and receiving PHC among the immigrant population;
- 2) Socioeconomic challenges: evidence suggests that new immigrants report financial barriers in accessing PHC, and social support was reported as a strong factor associated with accessing PHC;
- 3) Health system structure factors: new immigrants reported challenges in accessing PHC due to unfamiliar healthcare system (poor health system literacy), long waiting time, geographical distance, and transportation;
- 4) Patient-provider relationship: existing evidence revealed that new immigrants reported poor doctor-patient relationships due to various reasons including culture and language differences, poor interaction with doctors or communication gaps, providers' attitudes, and behaviors. Details of the literature review are presented in Chapter 3.

1.4. Thesis Outline

This manuscript-based thesis examines the experiences of immigrant patients, the barriers, and facilitators in accessing and receiving PHC services in Canada. This multiphase work applied a mixed-methods and sequential explanatory design [75,76]. Each phase sequentially complemented the next and included a comprehensive literature review, quantitative data analysis, and qualitative data collection and analysis.

Chapter two describes the methods and approaches of the study in a comprehensive way. The following three chapters (chapters three, four, and five) have been formatted for publication in various peer-reviewed journals. Chapter three provides a comprehensive literature review to

explore immigrant patient experiences with PHC and identifies areas for further research and improvement. This study highlighted the major challenges and barriers that immigrant patients encounter while accessing and receiving PHC in Canada. Chapter three is the foundational work to identify existing evidence that we used to contextualize the findings in the following chapters, in which we explore and describe the experiences of immigrants during the pandemic. Chapter four presents immigrants' healthcare experiences during the COVID-19 pandemic, by reporting on provincial survey data, the "*COVID-19 Experiences and Impact Survey*", conducted by the HQCA. This quantitative descriptive study compares experiences among individuals born in Canada and outside Canada. Specifically, it describes and compares physical and mental health status, delay in accessing care and its impact, virtual care experiences, and views on vaccination for COVID-19. Then, chapter five, a qualitative inquiry, presents an in-depth exploration of immigrants' experiences with PHC. This chapter provides not only newcomers (immigrants living in Canada for five years, or less) and care providers' experiences in receiving and delivering PHC during the pandemic, but also highlights the challenges and barriers that newcomers encounter. This chapter discusses opportunities to improve care delivery to new immigrants. Finally, chapter six summarizes and discusses the findings highlighting the strengths and limitations, as well as recommendations for PHC providers and health policy experts to improve care for new immigrants in Alberta.

CHAPTER TWO: METHODS

2.1 Study Design

This is a multiphase mixed-methods study using a sequential explanatory design [75,76] in which each phase complements the next. A mixed-methods approach is a suitable approach because it has great potential to strengthen the rigor and enrich the analysis and evaluation of findings. As such, we wanted to explore immigrants' lived experiences in PHC, mixed methods allow us to collect rich and comprehensive data in an integrated way (quantitative and qualitative). For example, quantitative data reveals patients' experiences in a frequency (number, or score), whereas further qualitative inquiry provides a descriptive image with complete experiences from the participants. Mixed methods are the best option that allows us to capture study participants' experiences, ensuring that the findings are grounded with their lived experiences. Similarly, the sequential explanatory design was selected in this study because the evidence identified in the literature review contextualized the findings in the next phases. Thus, the secondary data analysis shed light on the differences in experiences between born and non-born Canadians during the pandemic. Then, to further gain an understanding of immigrants' and providers' experiences during the pandemic, the qualitative inquiry was conducted, and its findings were contextualized using the evidence from the literature review, which also inform the development of the interview guide. This evidence-based work allowed us to expand the quantitative findings in more detail through the qualitative inquiry.

The study population included individuals born outside Canada (immigrants). In our first study (literature review), studies included immigrants in Canada. In the second study, the study population was people living in Alberta (individuals born in and outside Canada). Then in the third study, we narrowed down the study population to new immigrants, specifically newcomers

to Canada (individuals living in Canada for 5 years or less). The research concept is depicted in figure 2.1. The details of each study method are described in section 2.3.

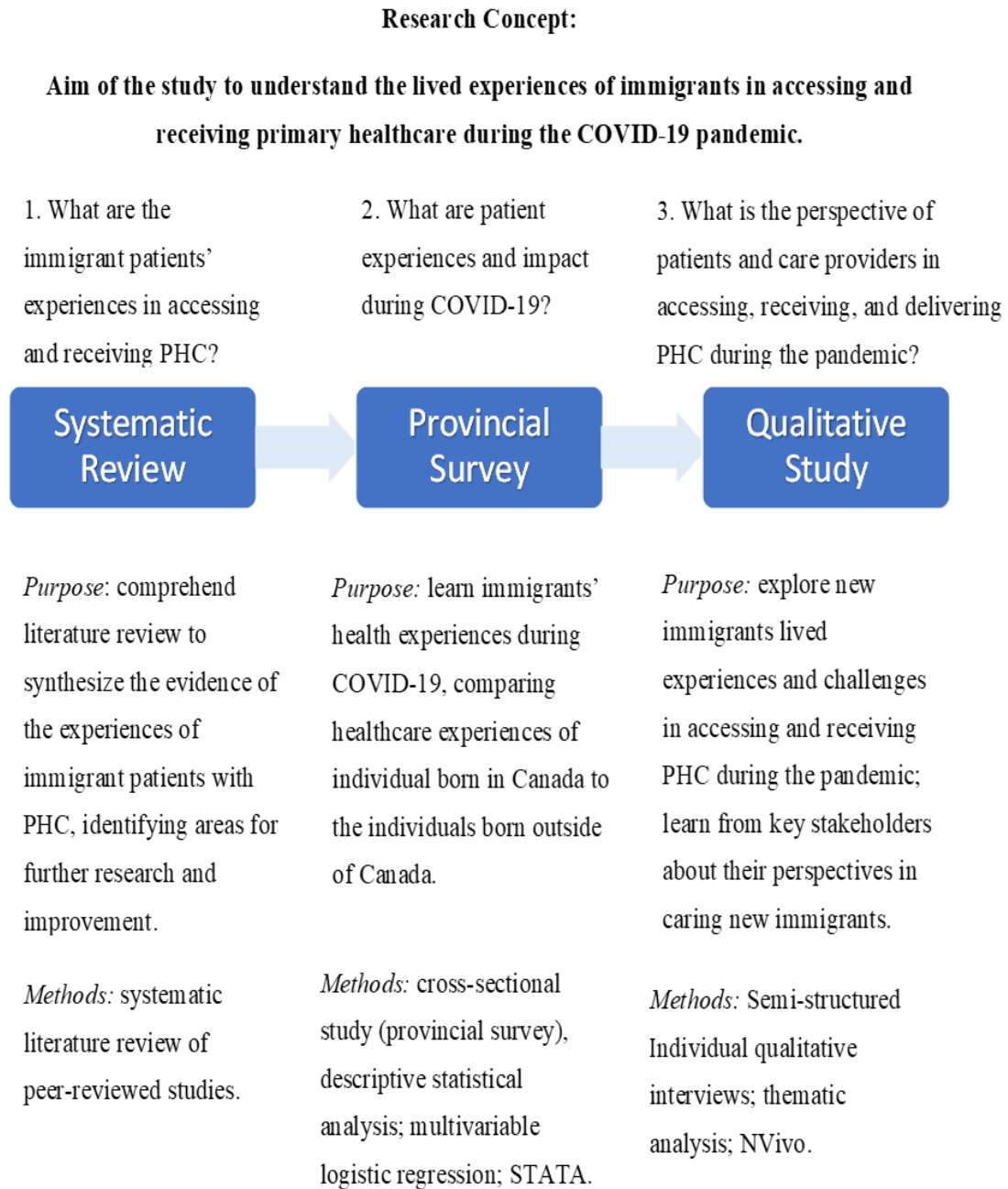


Figure 2.1 Research questions, purpose, and methods used to address the program of study.

2.2 Conceptual Framework

In this study, we used the patient-centered primary care lens. This model of care is oriented towards delivering care that is relationship-based while focusing on the whole person, as well as partnering with patients and families by understanding and respecting each patient's unique needs, culture, values, and preferences [77-79].

The Patient-Centered Care (PCC) Framework by Santana et al [3], was used to inform the qualitative inquiry of this project. Specifically, this framework supported the development of the interview guide and directed the analysis of the findings from interviews with patients and healthcare providers. The PCC framework provides a straightforward guideline for healthcare organizations, as it contextualizes the list of specific domains according to the Donabedian Model (structure, process, and outcome) [80], in delivering quality person-centered care to patients and families. As guided in the PCC framework, the structure is the backbone of the organization that needs to be integrated carefully in the healthcare system to lead the process and outcome of care [3]. The structure domains refer to the foundation of PCC: the organizational characteristics; healthcare resources; necessary materials, such as creating a PCC culture, co-designing, developing, and implementing educational programs [3]. The process domains include the interaction between patients and healthcare providers which comprises cultivating communication, creating respectful and compassionate care, care integration, and engaging patients in the care management process [3]. Lastly, the outcome domains refer to the outcome of care, basically the results of implementing the structures and the process of care. The outcome domain includes access to care and patient-reported outcomes [3]. The conceptual framework is included in Appendix 2. A.

In this study, the framework informed the foundation for interview guide questions, mostly related to the process and outcomes of care. For example, regarding the process, the interview questions asked about patient interaction with care providers, communication between patients and care providers and among the care providers (care coordination), patient-doctor relationships, and involvement of patients in their care. Further, interview questions related to the outcomes of care asked about patients accessing primary healthcare (barriers and challenges) and patients' overall experience receiving care. The structure questions were targeted to primary healthcare providers, addressing issues related to the team-based approach of care, cross-cultural training, quality improvement process (engaging patients and families), and the resources available to overcome barriers. All in all, the use of the PCC framework allowed us to explore how the care was provided and received from both parties (patients and healthcare providers), and if it was patient-centered.

2.3. Study Phases

The study approach uses the PCC lenses and is evidence-based and informed by patients and healthcare providers. To support and guide the PCC approach, we used the conceptual framework previously described [3] in section 2.2. In addition, a study that is based on evidence requires a review of the literature. Therefore, we conducted a systematic review. To understand the experiences of patients accessing and receiving PHC during the COVID-19 pandemic, survey data from Albertans were analyzed. More so, this study is informed by patients and healthcare providers. These three aspects are addressed in the three phases of this study and described in the next sections.

2.3.1 Phase One: A Systematic Review

We conducted a systematic review to learn about the experiences of immigrants accessing and receiving primary healthcare. This review is considered as a rapid review, which is a form of knowledge synthesis in which components of the systematic review process are simplified to produce information in a timely manner [81], by following a structured, explicit, and pre-defined process of knowledge synthesis. Before reviewing the literature, we carefully considered the types and scope of each review (e.g., systematic review, scoping review, or narrative review), and the advantages and disadvantages of one review over another as per our research questions.

A systematic review is a research synthesis conducted by following a structured, explicit, and pre-defined process that requires rigorous methods, selected with a view to minimizing bias, to ensure reliable and meaningful results to end-users [82,83]. In contrast, scoping reviews are an ideal tool to determine the scope of coverage of a body of literature that clearly indicates the volume of the literature available in a focus research area. Scoping reviews do not aim to produce critically appraised and synthesized findings of answers to a particular question. They rather aim to overview or map the evidence [84,85]. On the other hand, the purpose of the narrative review is to explore a few studies, which do not have predetermined research questions to address a problem of interest and do not follow a specified search strategy or standard protocol to review. Narrative reviews can be an expert's written views or intuitive, experimental, and explicit perspectives in certain research topics/areas, while a systematic review is based on the findings of comprehensive and systematic literature searches in all available resources, with minimization of selection bias (avoiding subjective selection bias) [86].

There are advantages and disadvantages to using one type of review over another. Our decision was based on the ideal choice to address our research questions, methodological limitations, and risk of bias of the evidence in scoping review and narrative review. As such, a scoping review presents several limitations, which include: the process does not formally evaluate the quality of evidence and gather information from a wide range of study designs and methods; the requirement of a substantial amount of time and a large study team to complete, because of its design (by nature) and wide coverage of the search implicit. Since critical appraisal of the risk of bias is not considered mandatory in a scoping review, an additional limitation is that selection bias (subjective) may occur in the process [87].

The systematic review that is part of this multi-phase study was conducted according to the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) methodological framework [88]. A comprehensive search strategy was performed by using large scientific databases including PubMed, MEDLINE, Embase, and SCOPUS. To avoid missing any further relevant articles, we additionally searched in Google Scholar and the reference lists of the included articles. Studies published between 2010 and 2020 were included in this review so that we could present the latest literature in the subject areas. Before finalizing the search keywords, we consulted with a librarian, who was an expert in the field. The search of keywords in various combinations included: “Primary Care” or “Primary Healthcare” or “Primary Health Care” or “Health Care Delivery” or “Primary Medical Care” and “Immigrant” or “Newcomer” and “Patient Experiences” or “Patient Satisfaction” or “Patient-Centered Care” or “Quality of Health Care”.

The included studies for the review were peer-reviewed, contained information about immigrant healthcare experiences with PHC services in Canada, and were limited to the English

language. Of 1,566 possibly relevant articles from the database search, a total of 19 peer-reviewed studies were included in the review. The review was conducted by three researchers reviewing titles and abstracts in pairs. Any disagreement between the authors regarding data identification and collection was resolved via thorough discussion and mutual agreement. After the 19 studies to be included were identified, the reviewers independently extracted the relevant data into a preapproved worksheet and evaluated the studies accordingly. The quality of included articles was assessed by using the Newcastle-Ottawa Scale (NOS) [89], with a rating range from 1 to 10 stars (*). Out of 10 stars, at least six were considered as a high-quality study, and all included articles had a score of six stars or greater. Assessment of bias in selection, comparison, and outcomes was conducted as described, using the NOS with high-quality studies having a low risk of bias. The details of the study method are presented in chapter three.

2.3.2 Phase Two: A Secondary Quantitative Analysis

2.3.2.1 *Study design*

In 2020, the Health Quality Council of Alberta (HQCA) launched a cross-sectional provincial survey, “*COVID-19 Experiences and Impact Survey*” to understand the experiences and impact on Albertans’ health since the onset of the COVID-19 pandemic. This phase of the study uses data collected in this survey. Specifically, survey respondents identified as Canadian-born or non-Canadian born, which allowed us to compare the two cohorts’ experiences during the COVID-19 pandemic. Additional selected data from the survey was used to better understand differences in experiences and impact between the two cohorts and during the COVID-19 pandemic. In the next section, we describe the study population and survey data selected to enhance our understanding.

2.3.2.2 *Survey tool*

The survey tool was developed based on a national and international environmental scan to understand what experience survey work was being done or planned about COVID-19. The survey content was informed by work done at the Ministry of Health in British Columbia as well as The EuroQol Group. The survey questionnaire was discussed, tested, and refined by twelve members of the HQCA's Patient and Family Advisory Committee, who advise the HQCA on patient safety, person-centered care, and quality issues from citizens, patients, and families' perspectives.

The survey comprised over seventy-one questions to capture the various aspect of experiences and impact on Albertans' health since the onset of the pandemic. In this secondary analysis, based on our research question (immigrants' healthcare experiences during the pandemic), we analyzed selected questions and compared the results between individuals born in Canada and those born outside of Canada. Survey questions included in this quantitative analysis are:

1. Physical and mental health status and experiences about stress, anxiety, or depression during COVID-19;
2. Virtual care experiences: the types of virtual care visits (telephone, videoconferencing, email, text, etc.), if this is first virtual care visit, easy or difficult to participate in virtual care, technical problems, privacy concerns in virtual visits, as well as if the virtual care visit was helpful;
3. Delay in care and impact on health, as well as;
4. Albertans' views on vaccination for COVID-19.

The responses to each question were either on a Likert-type scale (ranging from 1 to 5), binary (yes/no), or on an overall rating scale from 0 to 10. The survey also assessed participants' socio-demographic information, including the number of years living in Canada for those who identified as non-Canadian-born. The complete list of survey questionnaires and their response options is provided in Appendix 2. B.

2.3.2.3 Study population and data collection

The study population included in this study were adults living in Alberta, both Canadian-born and born outside of Canada [90], who have experienced care and/or who experienced an impact on their health during the pandemic. Recruitment was undertaken via email invitation to over 15,000 Albertans, social media (Facebook, Twitter, and LinkedIn), the HQCA website, as well as advertising in the daily COVID-19 news updates by the Chief Medical Officer of Health in Alberta. The online data collection occurred between April and October 2020. Data presented in this study are based on the second wave of data collection at the height of the pandemic in Alberta. The participants' informed consent was implied by contacted Albertans who previously consented to engage in further activities with the HQCA. The survey preamble clarified the objectives of the survey, expected time to complete it, privacy and confidentiality of the information, and voluntary participation in the survey. Moreover, participants were made aware that any question can be skipped throughout the survey if there is any discomfort to answer. In total, 10,175 surveys were collected, and nearly 10% (1,042) survey respondents reported their status as born outside Canada.

2.3.2.4 *Statistical analysis*

The statistical analysis aimed to better understand experiences and health outcomes between the two defined cohorts while adjusting for differences in sociodemographic characteristics. The analysis included descriptive and multivariable logistic analyses.

The following demographic variables were stratified for analysis: age (16-34, 35-64, and 65+ years); gender (male and female); education (high school, college, and university); language spoken at home (English and other); and financial situation (comfortable and tight). Changes in self-reported physical and mental health status were measured on a 5-item Likert scale from much worse to much better and dichotomized to worse (slightly worse, much worse) and better or same (about the same, slightly better, and much better) health.

Descriptive statistical analysis was performed on the categorical data and presented as frequencies and percentages. The chi-squared test was applied to test for significant differences in sociodemographic characteristics between the two groups of interest: 1) Canadian-born individuals and 2) Individuals born outside Canada.

Multivariable logistic regression was employed to estimate the adjusted odds ratios (AOR) and 95% confidence intervals (95% CI) of the predictors (self-reported experience and health outcome) associated with both cohorts, Canadian-born or non-Canadian born. All health outcome variables were dichotomized. Self-reported physical and mental health status was measured on a 5-item Likert scale from much worse to much better and dichotomized to worse (slightly worse, much worse) and better or same (about the same, slightly better, and much better) health. The analyses were performed using STATA Version 14.2 [91], and p-values <0.05 were considered statistically significant. The details of the method are discussed in chapter 4. This phase informed Albertan's healthcare experiences during the COVID-19 pandemic and

compared experiences among individuals born inside and outside Canada. As such, the study revealed Albertans' experiences related to care access, virtual care, delays in seeking care and its impact, and Albertans' opinion for COVID-19 vaccination in frequency (number or score). These quantitative findings further informed our qualitative inquiry (to develop interview guidelines), where we were able to capture a comprehensive image and rich stories from newcomers' lived experiences.

2.3.3 Phase Three: A Qualitative Enquiry

2.3.3.1 Study Design

A qualitative research design was employed to explore the rich and comprehensive experiences of immigrant people and healthcare providers while accessing and receiving or delivering PHC services during the pandemic.

A qualitative study design was chosen to gain an in-depth understanding of individuals' experiences, as the design is useful for exploring "why" rather than "how many". This design was appropriate, as, in this phase, our objectives of the project were exploratory, rather than explanatory. Likewise, the paradigm applied in this study was interpretive [89], as priority was given to participants' subjective experiences and understanding of their world. The interpretivist paradigm believes that reality is *multi-layered and complex*, and a single phenomenon can have multiple interpretations. In the study phenomenon, research techniques are used that will help us understand how people interpret and interact within their social life and environment. Further, interpretivists argue that in order to understand human action, we need to achieve 'verstehen' or empathetic to see the world through the eyes of the actors doing the acting [92]. In contrast, positivism adheres to the view that only gain *factual* knowledge via observation and measurement. Society consists of 'social facts', and individuals' actions can generally be

explained by the social norms that they have been exposed via their socialization process. Here, the role of the researcher is limited to data collection and interpretation in an objective way and research detaches from the study participants [92]. As such, in this study, we explored individuals' lived experiences to understand the subject's reality and build knowledge. For instance, we were interested in newcomers' interpretation of their worldview regarding their experiences with PHC and care providers' perspectives while delivering primary healthcare to a new immigrant population during the pandemic. Among the many approaches, focus group discussion (FGD) and in-depth interviews are the most commonly used approaches to collect data.

FGD implies a group discussion with the aim of generating/identifying valuable information with the perceptions, thoughts, and impressions of a selected group of individuals regarding a specific topic of research. An in-depth interview is a technique designed to elicit a vivid picture of individual participants' perspectives on the research topic [93,94]. Further, the in-depth interview would be an effective method of data collection for getting individuals' personal feelings, opinions, and experiences, as well as an opportunity to gain insight into how people interpret their worldview. There are pros and cons of each approach; for example, in FGD, participants may not be comfortable sharing their experiences in front of other people (the expected socially desirable bias), or there is a risk that participants will just follow the lead of individuals with a strong personality. On the other hand, by conducting in-depth interviews, the participants might be more relaxed, confident, or more encouraged to express their deepest opinions/thoughts in the subject matters with a longer speaking time (compared to FGD). Further, our decision to do a one-on-one interview was also affected by COVID-19 restrictions - limitations to get people together, for patient-participants. Similarly, for primary healthcare

providers, interviews were preferred due to their busy schedules during the pandemic. Therefore, we conducted the one-on-one in-depth interviews using a semi-structured guide to explore individuals' worldviews in PHC services.

2.3.3.2 Setting and participants

The study setting was the Sunridge Family Medicine Teaching Centre, North-East Calgary, Alberta, which is also a University Teaching Centre for Family Practitioners, providing training to the future generation of health care providers. We purposefully selected the clinic, as the center was one of the busiest clinics in the city, offering primary healthcare services including family medicine, prescription, referral, tests, and vaccinations to a diverse population. Over 8,000 patients were being cared for by multidisciplinary professionals in this clinic, comprising 14 part-time family physicians and 9 multidisciplinary professionals (chronic disease nurse, certified diabetes educators, dietitian, pharmacist, social worker, and psychologist) within the context of the medical home model. The center is also geographically situated within the highest density of urban immigrant communities in Calgary, Alberta. The patient population included Albertans aged 18 and over years, who were newcomers to Canada (living in Canada ≤ 5 years), accessing and receiving primary care across Calgary, who were able to communicate in English.

2.3.3.3 Sampling and Recruitment

The sampling frame was a combination of purposive, convenience, and snowball approaches to ensure the representation of participants based on different ethnic backgrounds. Purposeful sampling is a widely used technique in qualitative research for the identification and selection of study participants for the effective use of limited resources [95]. It involves identifying and selecting individuals or groups of study participants who have knowledge or

experience with a phenomenon of interest [96]. Apart from knowledge and experience, participants' availability, willingness, and ability to communicate opinions and experiences in an expressive, articulative, and reflective manner is also pivotal [97,98]. In this study, we aimed to explore newcomers' (living in Canada ≤ 5 years) experiences in PHC services, and the purposive sampling was ideal. Additionally, the sampling was purposive because we wanted to ensure the representation of participants based on the different ethnic backgrounds. The sampling technique was also convenient (non-probability) because we selected study participants in an ad hoc fashion based on their accessibility or/and our proximity [99]. For instance, we recruited individuals who were fluent in English, who had access and were familiar with using technology (phone/computer, or internet/Zoom), as well as those who had access to our recruitment poster (social media). Also, because of low cost, more effectiveness, and ease in executing, we applied convenience sampling in this project. Snowball sampling is a popular method of sampling which has the characteristics of networking and referral of potential study participants from other study participants upon request from the researcher [100]. We applied the snowball technique to support the recruitment. For example, study participants were asked (after the interview) to recommend individuals (who met the research criteria) and who might be interested and willing to participate in the present research.

The recruitment process of the study participants (healthcare providers and patients) was supported by the Sunridge Family Medicine Teaching Centre leadership. After acquiring permission from the Sunridge clinics' authority, we approached potential participants via email and telephone and asked if they were interested to take part in a virtual interview. Healthcare provider participants were approached via email [by a physician working in the clinic and also a committee member (FA)] and then interested healthcare providers were further followed up by

the student (BB) to take part in the virtual interview. These care providers had diverse specialties including family physicians, primary healthcare nurses, diabetic care nurses, pharmacists, and social workers. In parallel, patient-participants were recruited across Calgary using a combination of approaches, via telephone, at the clinics, supported by non-profit organizations (shared recruitment poster), and via social media (Facebook, Twitter, and LinkedIn), or approached individually by the research team members. All the potential individuals were informed via email/telephone about the objectives of the study and the method of conducting a virtual interview (Appendix 2. C). Potential participants who showed their interest in the study were approached via email (BB) for the scheduling of the interview and were provided our email address for further information about the study if interested. All the study participants were offered a \$20 e-gift card as a token of appreciation for their time and expertise.

2.3.3.4 Interview Guide Development

The semi-structured interview guide was developed using the PCC framework (described in section 2.2) and focused on the study objectives for this phase. This guide was tested by members of the research team (MS, FA, JJ). The interview questions were guided by the PCC framework [3] and informed by findings from our earlier quantitative study about immigrant healthcare experiences and impact during COVID-19. For example, questions related to the process and outcomes informed the patients' interview guide, whereas questions related to structures were included in the interview guide for care providers. In addition, findings from phase 2 informed questions related to care access, virtual care experiences, delays in care, and opinion on the COVID-19 vaccine. Moreover, the interview questions were piloted by three newcomer individuals who experienced receiving PHC during the pandemic and refined by the research team prior to conducting the virtual interviews.

The virtual interview session began with an explanation of the study, acquiring verbal consent to participate, and then an introductory question followed by open-ended questions along with probing questions on the following topics for patient participants and for care providers:

1) for patient participants- types of services received; type of access (in-person or virtual); virtual care experiences (timeliness, interaction, technology); relationship with PHC providers (trust, respect, preference, involvement); communication; care coordination; challenges/barriers in accessing PHC (cultural, language, socioeconomic, and health system structure); impact on mental health and strategies to cope with; and opinion on COVID-19 vaccination.

2) for care providers- mode of delivering PHC (in-person or virtual); virtual care experiences (communication with the patient, technology); challenges in delivering quality care to a new immigrant (individual patient, and organizational levels); strategies/resources used to accommodate new immigrants' needs in PHC; cross-cultural training and its importance in caring for diverse population; the impact of COVID-19 on delivering quality care (quality improvement process and involving and engaging patient in care management).

Additionally, demographic data on participants' characteristics were collected at the time of the virtual interview. The demographic data included participant age, gender, family size, level of education, language spoken at home, country of origin, employment status, and the number of years living in Canada. Additional data collected from healthcare providers included the role of the individual (e.g., physician), age, gender, years of practice, first language, year of practice, country of birth, medical education from, ethnic background. Both interview guides are presented in Appendix 2.D.

2.3.3.5 Data collection

Participants were offered virtual or telephone interviews. Virtual interviews were conducted using Zoom, which is a collaborative, cloud-based videoconferencing service offering features including online meetings, group messaging services, and secure recording of sessions [101]. Like other comparable platforms (Skype, Microsoft Teams), Zoom offers the ability to communicate in real-time with geographically dispersed individuals via any electronic device including a computer, tablet, or mobile phone. Zoom possesses several additional advantages that enhance its potential utility in research. For instance, its ability to securely record and store sessions without recourse to third-party software, which is particularly important in research where the protection of highly sensitive data is required. In addition, Zoom offers other security features included user-specific authentication, real-time encryption of meetings, and an ability to backup recordings to online remote serve networks, or local drives that can be shared securely for the purpose of collaboration [101]. A study by Archibald et al. [102] revealed that for qualitative interviews, virtual Zoom meetings are useful in forming and building rapport between the researcher and study participant compared to telephone interviews, especially for “nonvisual/nonverbal” communication such as facial expression, gestures, body language, as well as building trust, engaging participants, and promoting natural, relaxed conversation which allows for rich data collection. There is also evidence that Zoom is convenient, simple, and user-friendly to both the researcher and study participant [102]. All the interviews were conducted in English, digitally recorded, transcribed verbatim, and the field notes were recorded after each interview to capture the interview context (e.g., the physical environment and individuals’ non-verbal communication by a qualitative researcher (BB)). Each interview was scheduled for 45-90 minutes and included obtaining informed consent and demographic information. Further, at the

end of each interview, a conversation was followed with debriefing to address if participants might have any further questions.

2.3.3.6 Data analysis

A thematic analysis (TA) of the transcripts was conducted with the support of the qualitative analysis software, NVivo [103]. TA is a systematic method of analyzing qualitative data in identifying, organizing, and offering insight into forms of meaning across a data set. It is usually applied to a set of texts, such as interview transcripts. The researcher closely examines the data to identify common themes- topics, ideas, and patterns of meaning that come up repeatedly. [104]. On the other hand, content analysis can be used as a quantitative or qualitative method of data analysis, mostly quantification of data can apply textual data not only interviews but also visual images (pictures or videos). Further, the presentation of findings between TA (themes along with supporting excerpts from the data are presented) and content analysis (conceptual maps or models are presented) is different. TA is a widely used method because of its several advantages, such as it can be easily accessible and theoretically flexible, it offers a more accessible form of analysis, provided conducting it in a rigorous manner [104]. Equally, TA is a useful method for examining the perspectives of different study participants, focusing on similarities and differences, and generating unanticipated viewpoints [104,105]. It is also useful for summarizing key features of a large data set, as it forces researchers to take a well-structured approach in handling data, helping to produce clear and organized results [105]. Additionally, in qualitative research, the process of data collection, analysis, and report writing are often interrelated. This means that they occur simultaneously throughout the research process, as data analysis may happen concurrently [106]. A rigorous thematic analysis was conducted to produce

a trustworthy and insightful finding as described by Braun & Clarke, the data analysis was performed in a stepwise process that involved the following six steps [104]:

Step 1: Familiarizing with data

Regardless of the sources of data (interview, focus group, text, observation, documents, or multimedia) and its documentation (audio recording, transcriptions, documents, or field notes), it is crucial that researchers immerse themselves with the data to familiarize with its depth and breadth content [104]. During this first step, we become familiar with the data by reading and re-reading the transcripts and noting down the initial ideas as key messages, which allowed visualizing the conversation with each participant and identifying key codes for analysis. In this phase, we transcribed the audio and converted the raw data into text (Word document). All files (raw data from individual participants) were named with a unique identifier (e.g., participant code/number). We then transferred the Word document into NVivo (version 12), which allowed coding interview transcripts and field notes easily.

Step 2: Generating initial code

Once researchers read and are familiarized themselves with the data, and they will have ideas about what is in the data and what is interesting about it. The second step involves generating initial codes by fully coding and collating the data in a relevant and systematic way [104]. We applied a mix of deductive, inductive, and iterative strategies in the coding process. As a deductive coding process, some of the codes were pre-identified from the interview guide/questions. Researchers (BB, SA) identified some of the codes and established them in a coding book, as a reference. Moreover, an inductive coding strategy was also employed to label new codes while interpreting the data as a circular process that moves back and forth between smaller parts of the transcript to the whole text, which was not captured beforehand. As well,

within the inductive coding process, we used some other strategies such as, we looked the most frequently emerged or/and emphasizing concepts, or topics that participants shared. The iterative coding process was also applied as new themes emerged and the transcripts were re-read to verify the codes and themes were not missed. The transcripts were read back and forth to produce relevant codes and the differences in coding were resolved via discussion between two coders (BB, SA). Throughout the coding process, biweekly research meetings were held, which allowed time for peer debriefing as well as helped the research team to examine various new thoughts and ideas to better understand the data.

Step 3: Searching for Themes

The third step begins when all the data have been initially coded and collated, and a list of potential codes were identified across the data set. This phase involves searching and identifying themes by sorting and collating the initial codes into potential themes and subthemes, as well as exploring the relationship between themes [104]. We covered a wide variety of concepts in our interviews, so to help organize the data, we utilized the conceptual framework to develop broad, higher-order codes. We clustered codes together to shape preliminary themes (some of which matched an interview question) and subthemes if required. To organize the codes in a coding tree visually, the NVivo software was used. Subthemes were formed inductively without trying to fit them into a pre-existing coding framework, usually signified as child nodes in NVivo.

Step 4: Reviewing Themes

Once a set of themes was devised, the fourth step began to inform refinements. In this phase, identified themes were reviewed by checking if they seem to form a coherent pattern and by validating whether individual themes accurately reflected the meaning evident to the coded

extracts and the entire data set [104]. In this step, we reviewed the themes and ensured that they represented the coded data, were consistent, or/and distinct from each other. The formulated themes and subthemes were discussed with the research team, who were experts in the field (health services research, qualitative research, and primary healthcare).

Step 5: Defining and Naming Themes

In the fifth phase, the aim was to determine the importance of each theme and the data covers in each of them, as such, we can do a detailed analysis and write a good story from each theme. Moreover, how each identified theme fits into the overall story in relation to the research questions needs to be considered [104]. During this phase, we captured detailed analysis for each theme, identified the narrative that each theme covers and how it fits into the overall story in relation to the research questions. Regular team meetings were held to discuss each of the themes and ensure the theme held true across individual participants. During the peer debriefing, team members provided their insights into the research findings to ensure the data were thoroughly analyzed in all aspects. Each of the themes was organized, reorganized, and refined until consensus was reached among the research team and content experts.

Step 6: Producing the Report

The final step of this process begins once the research team has developed the themes and is ready to start the final analysis and write-up of the results [104]. During this phase, we started writing a report in comprehensive dissemination, and we drafted a manuscript for publication in a peer-reviewed journal. The manuscript was formatted in accordance with the consolidated criteria for reporting qualitative research (COREQ) (Appendix 2. E) [107] to ensure that we were transparent in reporting detailed methods. Further, we included relevant quotes within the narrative, and all quotes were accompanied by a unique identifier (e.g., patient or care provider

number) to establish various representations of the participants in the results. Also, the themes, subthemes, descriptions, and exemplar quotes were presented in a table, which helped us in keeping the manuscript within journal word limits.

2.3.3.7 Trustworthiness

Following the recommendation by Creswell & Poth [108], we followed the four strategies to enhance the trustworthiness of the qualitative data within this study, including; credibility, transferability, dependability, and confirmability. To enhance study credibility, all the interviews were digitally recorded either by the Zoom meeting recording tool or phone recording application. Further, we employed member checking to validate the interpretation of findings to establish credibility in the audit trail, which included asking participants to clarify responses during the interview and to verify the final transcription from the participants to ensure the accuracy of documenting the participants' perspectives. Moreover, frequent peer debriefing was employed between my supervisor and me, and among the research committee members about the representation of the study population, recruitment strategies, and thematic saturation to enhance the study's credibility. To heighten the dependability in the audit trail, from the coding process to the emerged themes, regular peer debriefing and discussion took place with my supervisor and committee members, which allowed for us to further validate the relevance of codes and accuracy of themes and subthemes. Further, we maintained an audit trail (documented each step of the research process) of the research project from the initial to end-stage, to ensure transparency and to enhance research dependability. As well, by providing a detailed description of the research process, the transferability of the study data has been enhanced. All the documents including qualitative data will be kept confidential for a minimum of five years after the work is completed and manuscripts are published.

2.4 Ethical Considerations

This study was approved by the University of Calgary Conjoint Health Research Ethics Board (CHREB), project number REB20-1015). The “COVID-19 Experiences and Impact Survey” data were obtained from the Health Quality Council of Alberta (HQCA) as per the approval from the HQCA. Prior to beginning the study, we sought permission from the Sunridge Family Medicine Teaching Centre to access the Centre and for support in identifying potential study participants and the recruitment process.

Before each interview took place, we sought informed consent from all participants. The written consent form contained information about the objectives of the study, process of data collection, confidentiality and privacy, and voluntary involvement in the study (informed consent form is presented in Appendix 2. H). The informed consent form was sent to all participants via email and briefly discussed with participants at the beginning of the interview. Participants were informed that they had the choice of not answering any questions they felt uncomfortable with, as well as the choice to withdraw from the study at any time (between two months to the time point data was collected). Though, in our interviews, participants answered all the questions asked during the interviews, and no one withdrew their consent from the study. The results from each interview were coded to protect the participants’ identities. The information (transcripts) was not physically attached to the results and the statement (quote) only identified the participant as ‘patient x’ and ‘care provider x’ in the final research output. All identifiers (surname, first name, email address, and code) were kept separately apart from other research data. All the electronic versions of recordings and transcripts were stored on a password-protected computer of the principal investigator and the student. Equally, the paper documents (e.g., consent form) were stored in a locked file cabinet, where there is a high restriction to access by unauthorized

personnel, in the Department of Health Sciences at the University of Calgary. The study transcripts and paper documents will be kept for a minimum of five years after the manuscript has been published.

2.5 Summary

As described above, we used a variety of research methods (multi-phases sequential study design) to address three main research questions (figure 2.1). Firstly, we systematically reviewed the scientific literature to explore immigrants' experiences and barriers in accessing PHC in Canada with the objectives of identifying problems, gaps, and further research areas. This systematic review was conducted in a timely manner, and we referred to it as a rapid review. In the next phase, we analyzed secondary data from the HQCA "COVID-19 Experiences and Impact Survey" to better understand immigrants' health experiences and impact during the pandemic by comparing two cohorts (Canadian born vs. non-Canadian born individuals). In the final phase, we interviewed newcomers and primary healthcare providers to explore their experiences and perspective in accessing/receiving and delivering PHC services since the onset of the COVID-19 pandemic. The next three chapters (chapters three, four, and five) are formatted for publication in various peer-reviewed journals. The last chapter includes the discussion and dissemination strategies of the present work.

CHAPTER THREE

Patient-Reported Experiences in Accessing Primary Healthcare among Immigrant Population in Canada: A Rapid Literature Review

This chapter is published as:

Bishnu Bahadur Bajgain, Kalpana Thapa Bajgain, Sujan Badal, Fariba Aghajafari, Jeanette Jackson, Maria-Jose Santana. Patient-Reported Experiences in Accessing Primary Healthcare among Immigrant Population in Canada: A Rapid Literature Review. *Int J Environ Res Public Health*. 2020;17(23):8724. Published 2020 Nov 24. doi:10.3390/ijerph17238724.

3.1 Abstract

Background: Immigrants represent around 21.9% of the total population in Canada and encounter multifaceted obstacles in accessing and receiving primary healthcare. This literature review explores patient experiences in primary care from the perspective of immigrants and identifies areas for further research and improvement.

Methods: A comprehensive search was performed on PubMed, MEDLINE, Embase, SCOPUS, and Google scholar to identify studies published from 2010 to July 2020. Relevant articles were peer-reviewed, in English language, and reported patient experiences in primary healthcare in Canada.

Results: Of the 1566 searched articles, 19 articles were included in this review. Overall, the findings from articles were summarized into four major themes: cultural and linguistic differences; socioeconomic challenges; health system factors; patient–provider relationship.

Conclusion: Understanding the gaps to accessing and receiving appropriate healthcare is important to shape policies, enhance the quality of services, and deliver more equitable healthcare services. It is therefore pertinent that primary healthcare providers play an active role in bridging these gaps with strong support from policymakers. Understanding and respecting diversity in culture, language, experiences, and systems is crucial in reducing health inequalities and improving access to quality care in a respectful and responsive manner.

Keywords: access barriers; access facilitators; immigrant; patient experiences; primary healthcare; Canada

3.2 Introduction

Patient experience comprises a range of interactions with the healthcare system, including interacting with doctors, nurses, therapists, and other healthcare staff and facilities [15]. It is one of the fundamental determinants of healthcare quality, patient well-being, and clinical effectiveness [15,4]. A good patient experience broadly encompasses respect, effective communication, shared decision-making, physical comfort, emotional support, and continuity/timely access to care [18]. Primary Health Care (PHC) is the first point of contact for patients to experience a healthcare system where patients initiate their access to medical care with a general practitioner (GP) or family physician (FP) [60]. Per WHO, the three pillars of PHC—meeting people’s lifelong healthcare needs, addressing broader determinants of health, and empowering patients and communities to take charge of their own health—are the foundations as well as major challenges to any healthcare system. Thus, the right to equal and equitable care is the fundamental premise of PHC. Accordingly, access to primary care services is a right for all individuals and communities. Under Canada’s publicly funded universal healthcare system, PHC is the everyday gateway for the majority of Canadians seeking medical services.

Canada is a multicultural society with a diverse ethnocultural landscape shaped by years of immigration. Canada is well-known for its friendly immigration policies and for being a welcoming place for immigrants from all over the world [45]. Immigrants represent over one-fifth (21.9%) of the Canadian population, which is an increasing trend [47]. Yearly, Canada receives almost 300,000 immigrants [48], with individual or communal healthcare needs varying across all groups. Health status is varied across the subgroups of immigrations (immigrants, labor migrants, refugee, undocumented migrants) because the health of immigrants’ is a

consequence of various sociodemographic factors including economic, environment, social-cultural, healthcare delivery system of their home country before they migrate, as well as the postmigration factors, such as new environment, employment, education, economic status, and accessibility and responsiveness of healthcare system. This is also true that the health status is not equivalent with migrants arriving from different parts of the world, such as Asia, Africa, and Middle East. The access of healthcare, education, social services, and other legal right might be varied across the migrants because of their migration status (e.g., labor migrants undocumented migrants). Generally, immigrants arrive in Canada with similar or better health status than the general Canadian population because of the self-selection process for immigration, i.e., those who choose to migrate are usually healthier and have had higher education [109,110]. However, reports also show that the health condition of immigrants, living in Canada for 10 years or more, is worse than those who recently moved to Canada [45,111]. Various research has shown that several causative elements, including socioeconomic, cultural, environmental, systemic, and other social gradients are associated with this deterioration [53]. Adjusting in a new country can be an extremely stressful process. Moreover, understanding a new healthcare system, particularly, for those who have come from vastly different healthcare structures can be even more challenging. Likewise, economic stability could be the priority for newcomers, which may influence individual healthcare seeking behaviors. Therefore, institutional, cultural, and financial barriers may directly impact overall access to PHC for many new immigrants. Barriers in healthcare are anything that restricts or makes it more difficult for individuals in accessing, using, or benefitting from healthcare services. On the other hand, facilitators are factors that support access and continuity of care. Understanding social determinants of health, (such as income and social status/support; education and health literacy; employment/working condition;

social and physical environment; personal health practices, beliefs, culture, and coping strategies), barriers in accessing healthcare, and facilitating factors are important to care providers and healthcare systems to reduce/overcome these barriers and improving the access of care and quality of care [112]. Worldwide, policymakers are steadily interested in gathering and analyzing patient experience data to assess these barriers and determinants in an effort to improve and promote quality of care for all individuals [4].

Evidence shows that newcomers to Canada report challenges in accessing and receiving PHC. Known challenges and facilitators include factors such as culture, language, societal influence, politics, gender expectations, communication, cost, schedule, and the current structure of the healthcare system [45,113]. Adequate access to quality care in PHC is crucial to everyone, but it is still unclear if this goal is being achieved. This rapid literature review is intended to explore patient experiences with PHC from the perspective of immigrant populations in Canada and identify areas for further research and improvement.

3.3 Materials and Methods

3.3.1. Search Strategy and Study Selection

Study selection and screening was performed according to the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) methodological framework [88]. A comprehensive search strategy was developed to identify relevant articles to be included in our literature review. Using large scientific databases including PubMed, MEDLINE, Embase, and SCOPUS, studies that were published between 2010 and 2020 were collected. Additional search in Google Scholar was conducted to avoid missing any further relevant articles. The search of keywords in various combinations included: “Primary Care” or “Primary Healthcare” or

“Primary health care” or “health care delivery” or Primary Medical Care” and “Immigrant” or “Newcomer” and “Patient Experiences” or “Patient satisfaction” or “Patient-Centered Care” or “Quality of Health Care” (Appendix 3.A). Further, to avoid missing any relevant literature, the reference lists of the included articles were searched. The literature search was restricted to the English language.

3.3.2. Inclusion and Exclusion Criteria

The inclusion and exclusion criteria were based on the study objective. The inclusion criteria were primary peer-reviewed articles within the last 10 years that provided information on the immigrant healthcare experience with PHC service in Canada. Studies providing qualitative or quantitative data on patient experiences in the form of discussions, or one or more outcome measures were selected for further screening. The exclusion criteria were studies performed outside of Canada, studies that did not cover relevant information about immigrant patient experiences with PHC, studies that focused only on refugee status population, temporary foreign workers, and/or undocumented immigrant, non-English articles, summaries, systematic reviews, abstracts, policy papers, case studies, editorials, and letters.

3.3.3. Data Extraction and Evaluation

All relevant data from finalized articles were extracted by three authors (BBB, SB, and KTB) into a preapproved worksheet. The following information were extracted from each study for collective evaluation: author, year of publication, province/city, study design, participant demographics, study focus, and outcome (experiences/barriers). All authors evaluated the data independently and then reached a consensus on final findings through detailed discussions. Any disagreement between the authors regarding data identification and collection were resolved via thorough discussion and mutual agreement.

3.3.4. Assessment of Quality and Risk of Bias

Two authors (BBB and KTB) independently assessed the quality of included studies by using the Newcastle-Ottawa Scale (NOS) [89], with a rating range from 1 to 10 stars (*). Out of 10 stars, at least six were considered as a high-quality study. The details of the results are presented in Table 3.3 Assessment of bias in selection, comparison, and outcome was conducted as described using the NOS with high quality studies having low risk of bias. Further, publication bias was not quantitatively assessed, however, was addressed by using a broad search strategy and a number of scientific and other databases to capture all relevant published and unpublished articles.

3.4. Results

3.4.1. Overview of the Selected Study

Database and other source (Google Scholar) search resulted in a total of 1566 possibly relevant articles. After removing duplicates and studies outside of the Canada (883), 683 articles were selected for further screening. Based on the inclusion and exclusion criteria described above, 613 studies were removed in this process, and 70 articles were eligible for further full-text screening. Additional 51 articles were eliminated based on lack-of or limited data and information availability, and a total of 19 peer-reviewed papers were finalized for this review (Figure 3.1).

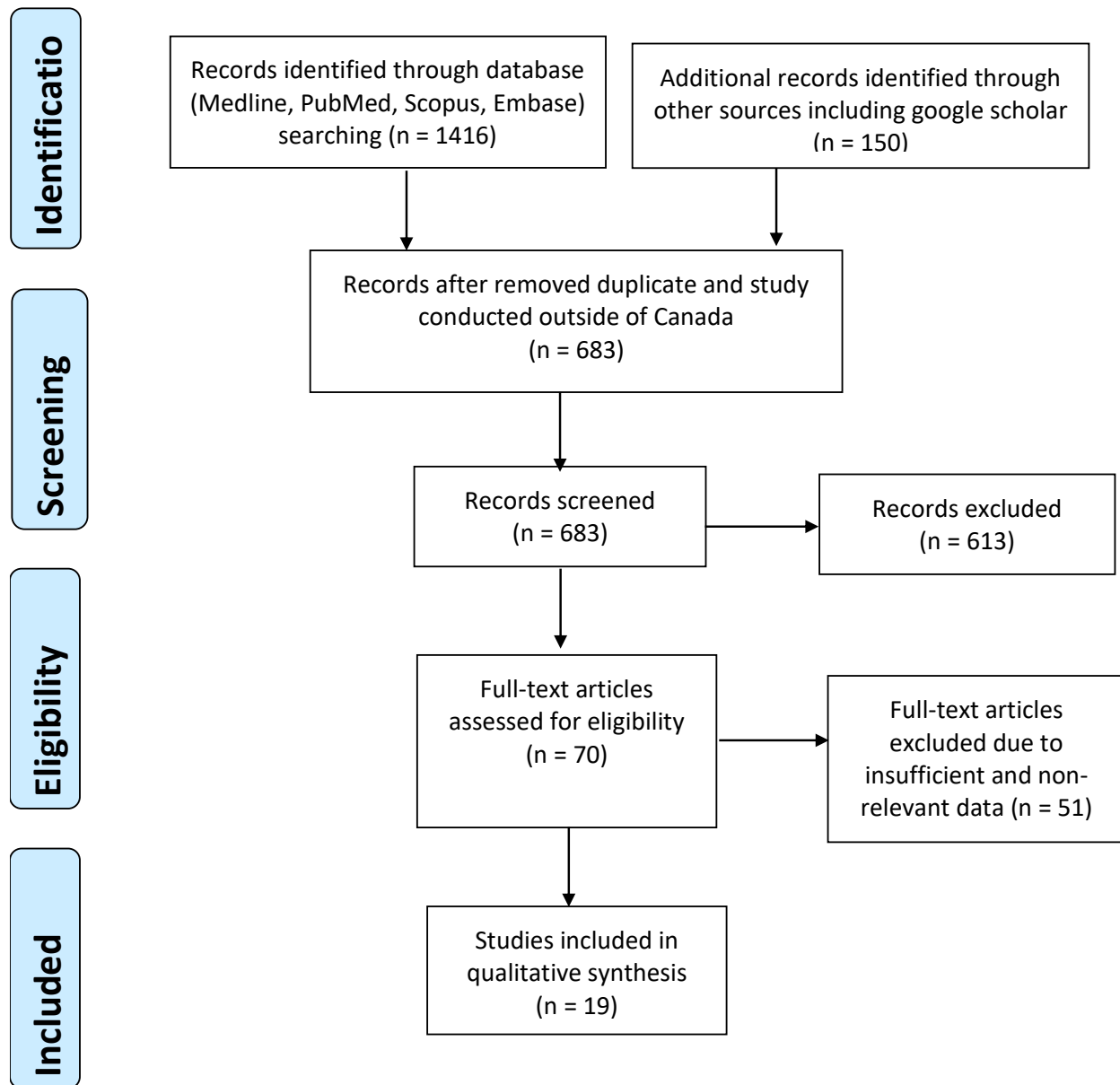


Figure 3.1 PRISMA flow chart of the literature review and article identification process. PRISMA: Preferred Reporting Items for Systematic Review and Meta-Analysis.

Of the 19 studies included in the review (Table 1), six were conducted in Ontario [114-119], one [116] comparing urban and rural areas, five of the studies [120-124] were done in Alberta and two [121,123] studies conducted in Western Canada. Other study settings included three studies across Canada [125-127], two in British Columbia [128,129], one in Manitoba [130], one in Montreal [131], and one in Ottawa [132]. Of the 19 studies, over two-thirds (approx. 68%) of studies employed qualitative methodology, five (n = 5) were quantitative design, and one (n = 1) was mixed method approach (Table 1). Regarding the study population, over one-third of the studies (37%) covered various ethnic groups from South Asia, China, Europe, Latin America, Middle East, Africa, America, Belarus, Colombia, Iraq, Caribbean, Tajikistan. Five of the studies (26%) focused on Chinese and South Asian populations, and two focused only on Chinese populations [127,129]. Other ethnic groups included were from African countries (n = 2), Korean (n = 1), Francophone (n = 1), Iranian (n = 1), Muslim community (n = 1), and Brazilian (n = 1). Over half of the studies (53%) were focused on overall primary healthcare experiences [114,118,119,123,124,126-131]. Four of the studies (21%) were focused on maternity and reproductive health in relation to PHC [121,122,127,132], and other studies focused on cancer [117,125] (n = 2), dental [115,120] (n = 2), and specialist (n = 1) care experiences [116] (Table 2). Among the studies, nearly one-third (32%) focused on women, more than half (63%) on women and men, and one study did not mention the gender of the study population. The range of sample size was from 8 to 7060, and the majority of studies (95%) collected primary data from interviews, focus group discussions, or questionnaires, and one study reported secondary data from the Canadian Community Health Survey (CCHS) [116]. The quality of all selected studies ranged from 7 to 9 in the NOS representing high-quality studies and suggesting a low risk of biases (Table 3.3).

Table 3.1: Characteristics of the studies included in the review.

Author and Year	Study Population	Sample Size (N)	Length of Stay in Canada (N)	Location	Methodology
Lum, I.D et al. (2016)	<i>Ethnicity/origin:</i> Belarus, China, Colombia, Iraq	13: Male = 4, Female = 9	Average 9 years	Ontario	Method: qualitative study Design: cross-sectional, semi-structure interview Analysis: Thematic analysis
Woodgate, R. L. et al. (2017)	<i>Ethnicity/origin:</i> 15 African countries	108: Male = 70, Female = 38	≤6 years	Manitoba	<i>Method:</i> qualitative study <i>Design:</i> cross-sectional, open-ended interview <i>Analysis:</i> Thematic analysis
Gulati, S. et al. (2012)	<i>Ethnicity/origin:</i> Chinese & South Asian	50: Male = 13, Female = 37	<4 years (7) 4-10 years (18) >10 years (25)	Canada	<i>Method:</i> Grounded theory <i>Design:</i> cross-sectional, semi-structure interview <i>Analysis:</i> Thematic analysis Theory building
Amin, M. et al. (2012)	<i>Ethnicity/origin:</i> Ethiopian, Eritrean, & Somali	48 Mom of 3-years children	<5 years	Edmonton, Alberta	<i>Method:</i> qualitative study <i>Design:</i> cross-sectional, focus group discussion <i>Analysis:</i> Thematic analysis Health behavior theory
Calvasina, P. et al. (2016)	<i>Ethnicity/origin:</i> Brazilian	101: Male = 27, Female = 74	<5 years (80) >5 years (21)	Toronto, Ontario	<i>Method:</i> quantitative study <i>Design:</i> cross-sectional, self-administered survey <i>Analysis:</i> Logistic regression
Cloos, P. et al. (2020)	<i>Ethnicity/origin:</i> Asia, Caribbean, Europe, Latin America, Middle East, Africa, & United States	806: Male = 283, Female = 495	<5 years (593) ≥5 years (178)	Montreal	<i>Method:</i> quantitative study <i>Design:</i> cross-sectional, questionnaire <i>Analysis:</i> Multivariable logistic regression
Harrington, D. et al. (2013)	<i>Ethnicity/origin:</i> Immigrants & Born in Canada	7060: Male = 3460, Female = 3600	<10 years (1765) >10 years (5295)	Urban/Rural, Ontario	<i>Method:</i> quantitative study <i>Design:</i> cross-sectional, CCHS: telephone survey

Author and Year	Study Population	Sample Size (N)	Length of Stay in Canada (N)	Location	Methodology
					<i>Analysis:</i> Multivariable logistic regression
Hulme, J et al. (2016)	<i>Ethnicity/origin:</i> Chinese & South-Asian (Bangali)	23 Women	<5 years (7) >5 years (10) N/A (6)	Ontario	<i>Method:</i> qualitative study <i>Design:</i> cross-sectional, semi-structure interview & focus group discussion <i>Analysis:</i> Thematic analysis
Mumtaz, Z et al. (2014)	<i>Ethnicity/origin:</i> Asia, Africa, Europe, America	140 women	Since 1996	Alberta, Saskatchewan, Manitoba	<i>Method:</i> quantitative study <i>Design:</i> cross-sectional, structure CATI <i>Analysis:</i> Pearson's Chi Square test
Corscadden, L et al. (2018)	<i>Ethnicity/origin:</i> Immigrants	18 people	NA	Canada	<i>Method:</i> quantitative study <i>Design:</i> cross-sectional, survey <i>Analysis:</i> Logistic regression
Marshall E. G et al. (2010)	<i>Ethnicity/origin:</i> Chinese & Punjabi	78: Male = 46, Female = 32	<10 years (52) ≥10 years (26)	British Columbia	<i>Method:</i> qualitative study <i>Design:</i> cross-sectional, focus group discussion <i>Analysis:</i> Thematic analysis
Ou, C.H.K et al. (2017)	<i>Ethnicity/origin:</i> Chinese	8 Adult	5-19 years (average 14 years)	Vancouver	<i>Method:</i> qualitative study <i>Design:</i> cross-sectional, structure interview: In-person & telephone <i>Analysis:</i> Deductive content/themes analysis
George, P et al. (2014)	<i>Ethnicity/origin:</i> Muslim-Arab & South Asian countries	22 women	1-25 years	Ottawa	<i>Method:</i> qualitative study <i>Design:</i> cross-sectional, focus group discussion <i>Analysis:</i> Thematic analysis

Author and Year	Study Population	Sample Size (N)	Length of Stay in Canada (N)	Location	Methodology
Higginbottom, G. M. et al. (2016)	<i>Ethnicity/origin:</i> Sudan, Philippines, China, Columbia, Tajikistan, India, Mauritania, Pakistan, Eritrea	34 women	NA	Rural/Urban, Alberta	Method: qualitative study Design: ethnographic research, semi-structure interview Analysis: Roper & Shapira's framework analysis
Lee, T.Y. et al. (2014)	<i>Ethnicity/origin:</i> Chinese (China, Hong Kong, Taiwan)	15 women	<10 years	Canada	<i>Method:</i> qualitative- descriptive phenomenology <i>Design:</i> cross-sectional, semi-structure interview <i>Analysis:</i> Thematic analysis
Dastjerdi, M. et al. (2012)	<i>Ethnicity/origin:</i> Iranian community)	17: Male = 6, Female = 11	2-15 years	Western Canada	<i>Method:</i> qualitative study <i>Design:</i> constructive grounded theory interview <i>Analysis:</i> Thematic analysis Theory building
Ngwakongnwi E. et al. (2012)	<i>Ethnicity/origin:</i> Francophone Immigrant	26: Male = 11, Female = 5	<10 years (16) >10 years (6)	Calgary, Alberta	<i>Method:</i> qualitative descriptive study <i>Design:</i> cross-sectional, semi-structure telephone interview <i>Analysis:</i> Thematic analysis Theory building
Wang, L. et al. (2015)	<i>Ethnicity/origin:</i> Korean community	351: Male = 173, Female = 178	<5 years (17) 5-9 years (6) 10-19 years (14) >20 years (16)	Toronto	<i>Method:</i> Mixed methods <i>Design:</i> cross-sectional, CCHS survey & focus group discussion <i>Analysis:</i> Z-test, Thematic analysis
Pollock, Grace et al. (2012)	<i>Ethnicity/origin:</i> Middle Eastern, African, Latin American, South Asian, eastern European, Caribbean	26: Male = 7, Female = 19	NA	Ontario	<i>Method:</i> qualitative study <i>Design:</i> cross-sectional, semi-structure interview <i>Analysis:</i> Thematic analysis

Note: CATI: Computer-Assisted Telephone Interviewing; CCHS: Canadian Community Health Survey; NA: Not Available.

Table 3.2. Findings of the studies included in the review.

Author and Year	Study Focus	Patient Experiences/Barriers Mentioned
Lum, I.D et al. (2016)	Examining the experiences of immigrants living in a small urban centre - primary healthcare system.	Factors impacting access to primary care: <ol style="list-style-type: none"> 1. Lack of social contacts 2. Lack of universal healthcare coverage during their initial arrival 3. Language as a barrier 4. Treatment preferences 5. Geographic distance to primary care.
Woodgate, R. L. et al. (2017)	Examining the experiences of access to PHC by African immigrant and refugee families.	Major barriers to primary care services: <ol style="list-style-type: none"> 1. Expectation not quite met: accessibility, promptness of services, availability, affordability and acceptable of services 2. Facing a new life in unfamiliar environment 3. Linguistic and cultural differences, lack of social support/network
Gulati, S. et al. (2012)	Exploring the role of communication & language in the healthcare experiences of immigrant parents of children with cancer living.	Barriers to care: <ol style="list-style-type: none"> 1. Language/communication challenges influenced parents' role in caring child 2. Health literacy - difficulty to understand medical terminology, inadequate interpretation services, occasionally missed resources, reported limited availability of linguistically and culturally appropriate information 3. Lack of social integration in the healthcare process and competence.
Amin, M. et al. (2012)	Identifying psychosocial barriers to providing and obtaining preventive dental care for preschool children among African recent immigrants.	Barriers were associated with: <ol style="list-style-type: none"> 1. Home-based prevention: health beliefs, knowledge, oral health approach, skills. 2. Perceived role of caregivers and dentists 3. Role of parental knowledge in access to professional care and preventive services, attitudes toward dentists & services, English skills, and external constraints concerned dental insurance, social support, time, & transportation.
Calvasina, P. et al. (2016)	Investigating the association between oral (dental) health literacy (OHL) and participation in oral health care among Brazilian immigrants.	83.1% had adequate OHL; low OHL & access of care was associated with: <ol style="list-style-type: none"> 1. Not visiting a dentist or having a dentist as the primary source of information

Author and Year	Study Focus	Patient Experiences/Barriers Mentioned
Cloos, P. et al. (2020)	Examining the social determinants of self-perceived health of Migrants with precarious status (MPS).	<ul style="list-style-type: none"> 2. Not participating in shared dental treatment decision making: language barrier 3. Low average annual income of household.
Harrington, D. et al. (2013)	Barriers in accessing to specialty care for all populations including subgroup of immigrant populations.	<p>Almost half 44.8% perceived their health as negative. Barriers were reported as:</p> <ul style="list-style-type: none"> 1. Having no diploma/primary/secondary education 2. Unmet needs due to low family income 3. No financial backup or assistance resources 4. Perception of racism 5. Feeling of psychological distress 6. Unmet health care needs; having one or more health issue in past 12 months <ul style="list-style-type: none"> 1. Newcomers (69.2%) and longer-term immigrants (72.1%) were more likely to report difficulties with wait times compared to Canadian-born (64.3%). 2. 14.2% newcomers experienced difficulties: transportation, cost, or language. 3. Newcomers reported due to personal or family responsibilities they experience difficulties (23.3%) compared to Canadian-born (9.8%) and longer-term immigrant respondents (10.5%).
Hulme, J et al. (2016)	Exploring perception of Chinese and South-Asian immigrants regarding breast and cervical cancer screening.	<p>Major themes reported were:</p> <ul style="list-style-type: none"> 1. Risk perception & concepts of preventative health and screening - "painful or traumatic encounters" 2. Health system engagement & the embedded experience with screening: Female provider vital 3. Fear of cancer and procedural pain 4. Self-efficacy, obligation, willingness to be screened 5. Newcomer barriers and competing priorities: New healthcare system, Language, transportation, childcare, work, limited social network, and cultural.
Mumtaz, Z et al. (2014)	Exploring newcomer women's experiences in Canada regarding pregnancy, delivery, and postpartum care.	<ul style="list-style-type: none"> 1. Financial - Newcomers were more likely to be university graduates but had lower incomes than Canadian-born women.

Author and Year	Study Focus	Patient Experiences/Barriers Mentioned
Corscadden, L et al. (2018)	Assessing the factors associated with multiple barriers in accessing and care-seeking process in different healthcare systems.	<p>2. Information- No differences found-newcomer's ability to access acceptable prenatal care, but fewer received information: emotional/physical changes during pregnancy.</p>
Marshall E. G et al. (2010)	Conceptualizing unmet healthcare needs and primary healthcare experiences among Chinese- and Punjabi-speaking immigrants.	<p>Barriers to accessing primary care clinic:</p> <ol style="list-style-type: none"> 1. After-hours access very difficult 2. Over five days to get appointment; No timely response to call 3. Cost for medicines, clinic visit 4. Care not coordinated 5. GP did not spend enough time/unclear explanation <p>Experiences and Barriers to accessing care:</p> <ol style="list-style-type: none"> 1. Costly dental & speech therapy (trade-off between service and paying out-of-pocket) 2. Lack of choice in the gender of a provider 3. Lack of Primary care provider accepting new patient and speaking the patient's language 4. Lack of health system literacy: limited knowledge; not enough information provided by service providers; less responsive health care system 5. Language is a noticeably big barrier to understand medical terminology, information about health.
Ou, C.H.K et al. (2017)	Examining the health beliefs, health behaviors, primary care access, and perceived unmet healthcare needs of Chinese young adults.	<p>Barriers experienced:</p> <ol style="list-style-type: none"> 1. Inaccessibility to primary care provider and preventive services. 2. Influence of cultural factors such as strong family ties, filial piety, and practice of Traditional Chinese Medicine on healthcare behaviors & access. 3. Long waiting for specialist 4. Low literacy about healthcare system (Dental)
George, P et al. (2014)	Understanding health behaviours of the minority population & identifying barriers to accessing reproductive health.	<p>Health seeking behaviour Barriers identified:</p> <ol style="list-style-type: none"> 1. Gender of Physician for reproductive health 2. Preference of family physician from same ethnic and cultural background 3. Language barrier while communicating with care providers

Author and Year	Study Focus	Patient Experiences/Barriers Mentioned
Higginbottom, G. M. et al. (2016)	Understanding immigrant women's experiences in maternity healthcare and devising potential intervention that might improve the experiences and outcomes.	Barriers reported in accessing care: <ol style="list-style-type: none"> 1. Communication difficulties 2. Lack of Information 3. Lack of social support 4. Cultural belief 5. Inadequate health care services 6. Cost of medicine/services
Lee, T.Y. et al. (2014)	Exploring immigrant Chinese women's experiences in accessing maternity care, the utilization of maternity health services, and the obstacles they perceived.	Patient preference/experiences: <ol style="list-style-type: none"> 1. Preference of having linguistically and culturally competent healthcare providers 2. Dealing with different healthcare system- felt complex 3. Having information in different language felt convenient, but insufficient 4. Satisfied with Canadian Healthcare system, but long wait time long transportation (distance) 5. Felt lacking alternative support
Dastjerdi, M. et al. (2012)	Exploring and understanding the experience of Iranian immigrants who accessed Canadian health care services.	Barrier facing in accessing health care: <ol style="list-style-type: none"> 1. Language barriers (missed appointment, could not trust healthcare providers & services) 2. Financial barriers 3. Cultural difference: felt discrimination & unvalued: <i>help was not seek and waiting to be asked</i> 4. Felt marginalized, humiliation- interpretation services process 5. New Healthcare system: felt overwhelmed, exhausted, and burned out 6. Hard to understand health Information- available only in English
Ngwakongnwi E. et al. (2012)	Examining health care access experiences of immigrants and non-immigrants, French speakers in a mainly English-speaking province of Canada.	Barrier reported in accessing care: <ol style="list-style-type: none"> 1. Difficulty finding family doctor 2. Language barrier: difficulty to explain, emotional distress prior to visit doctor, feelings disconnected, delay in seeking care 3. Complexity of language Interpreter service 4. Preference of having culturally and linguistically competent providers 5. knowledge of healthcare system, transportation barriers, and cost of drugs for recent immigrant

Author and Year	Study Focus	Patient Experiences/Barriers Mentioned
Wang, L. et al. (2015)	Capturing health status and experiences in accessing local and transnational healthcare among South Korean immigrants.	<p>Preference and barriers expressed:</p> <ol style="list-style-type: none"> 1. Social cultural & language barriers: preference of Korean-speaking physician, not understanding medical terms, hard to express medical symptoms 2. Lack of social network & support felt left behind. 3. Geographic barriers: long distance to see doctor 4. Economic barrier: lack of extended health insurance for drugs, dental, vision, and other essential care, using traditional Chinese medicine 5. Seeking transnational healthcare: accessing healthcare from Korea physically/online/telephone 6. Waiting time: nearly half participants expressed long wait for diagnosis & treatment 7. Overall, favorable healthcare system, but expected to have comprehensive annual health checkup
Pollock, Grace et al. (2012)	Capturing the perceptions of discrimination from a service user perspective in five small and medium-sized Ontario cities.	<p>Participant-reported experiences:</p> <ol style="list-style-type: none"> 1. Refusal to provide Health Care as an immigrant 2. Staff acting as a gatekeeper: refused patient from the reception 3. Communication/language barriers and culturally insensitivity 4. Perceived discrimination: compromised the quality of care, doctor's inattentiveness about health concerns

3.4.2. Summary of the Studies

Overall, the findings from the 19 identified studies (Table 2) revealed four major themes of immigrant patient experiences in accessing and receiving PHC in Canada. These included (1) cultural and linguistic differences—encompassing the relationship between culture and language and how different ethnic groups perceive the world accordingly; (2) socioeconomic challenges—describing social and financial standing of an individual or community and its interplay; (3) health system factors—describing elements related to healthcare organization and policies; (4) patient–provider relationship—representing a fiduciary relationship between a patient and a physician comprising of respect, autonomy, and pledge of highest quality of care. These themes are discussed in further detail below.

3.4.2.1. Cultural and Linguistic Differences

The review highlighted several realities related to cultural and linguistic difficulties in accessing and receiving PHC. Physician gender as a cultural barrier in accessing care was prevalent, particularly among South Asian women, as they preferred to have female doctors, especially for reproductive health and physical exams [132]. These preferences not only played a major role in healthcare seeking behaviors among these patients, but also impacted the long-term healthcare decisions for their families and children [132]. Similarly, preference for culturally and linguistically competent care providers was found in the studies conducted by Lee, T.Y. et al., Ngwakongnwi, E. et al., and Wang, L. et al. [118,124,127]. Marshal et al. reported immigrants from South Asian and Chinese backgrounds had an inclination towards evaluating the Canadian healthcare system against that of their own home country, particularly in regard to the availability and choice of provider gender, treatment and diagnostic preference, and access to specialists [128]. Another study by Hulme, J. et al. reported challenges with health screening

among Chinese and Bengali immigrant women due to beliefs that symptoms must be present to justify a screening test (Pap, mammography) [117]. Similarly, access to care in these cases was found to be further complicated by preconceived notions of embarrassment and procedural pain [117]. Mental illness or stress was another major cultural barrier observed in immigrant communities as they were considered a matter of disgrace to individuals and the family leading to concealment of problems and underutilization of available resources [117,124]. Further, one study found that immigrants would evade utilizing the services and will place their health at risk if healthcare professionals were not sensitive to their cultural beliefs and values, and if they perceived discrimination and being unvalued [123]. For example, influences from strong family ties to traditional medicine, and a negative perception towards adaptation and acculturation were common themes in many communities [129]. The authors also reported that with such social and cultural stigmas, many immigrants believed that reaching out for their healthcare needs might negatively impact their daily lives and reduce social support from work, family, and community [129]. Language competency was another widely prevalent barrier among immigrant populations with English as their second language. Its impact is not only restricted to the encounter with primary care providers and acute care, but also towards long-term health promotion and disease prevention. Research shows that language is a noticeably big barrier, as identified in a number of studies exploring newcomer experiences, such as difficulties in understanding medical terminology, expressing medical symptoms, missing appointments, feeling disconnected from care, distrust in care providers, services, as well as health information [123,124,127,128]. Immigrants from various communities reported that language barriers lead to anxiety, emotional distress about miscommunication with physicians, and fear of misinterpretation. For example, in one study, language was a common barrier to accessing healthcare among newcomers,

immigrants, francophone seniors and the low-German speaking communities, which not only influenced their self-esteem, but led to a feeling of humiliation affecting their continuity of participation in healthcare [133]. As such, immigrant patients strongly desired to have a provider who can communicate with them in their own language and were knowledgeable about their culture [114,118,124,127]. African immigrant and refugee families in particular reported considerable difficulties in communication with the Canadian healthcare system, leading to misunderstandings in diagnosis and treatment plans [130]. Additionally, Harrington et al. found language barriers in accessing healthcare to be common among new Canadians living in rural areas [116]. Here, because of low health/language literacy, lack of linguistically appropriate information, and an inadequate as well as complex process of interpretation services, immigrants reported not only having difficulty understanding medical terminology but also missing appointments, underutilizing available resources, and disgruntlement with the care received [123-125]. Limited language proficiency and lack of provider's training in dealing with immigrant patients led to perceptions of discrimination and exclusion. In one study, immigrant parents reported feelings of loneliness and neglect from primary care providers due to repeated miscommunications and unproductive interactions [120,125]. Overall, differences in culture and language created substantial barriers in accessing and receiving primary healthcare across the majority of immigrant communities. These challenges mainly arose from beliefs and perceptions created by miscommunication and subsequent frustrations [122].

3.4.2.2. Socioeconomic Challenges

Canada has a universal healthcare system and individuals' socioeconomic status should not impact access to physicians and/or the healthcare system, However, evidence suggests that new immigrants nevertheless report financial barriers in accessing primary healthcare [132].

These barriers include struggle in finding a meaningful job, working more than one job, increased working hours, low pay, and an overall struggle to maintain their day-to-day financial needs [121,128,131]. Therefore, financial problem was a big deciding factor for many immigrants in whether or not to seek healthcare at all [114]. Lack of social/family support, lack of insurance coverage, transportation costs, and time were additional barriers in accessing routine care among immigrant parents [120,122]. This was also true in regard to accessing specialized care as well as mental health consultations through a PHC setting [116,126]. Across the majority of immigrant populations, access to primary healthcare was complicated by extra costs (out of pocket) for services such as dental, vision, speech therapy, etc., and thus compromised due to affordability of care for newcomers [118,128,130].

Similarly, social support was reported to have a strong association with accessibility to primary healthcare among the immigrant population in general [120,131,134]. As a new immigrant, patients reported feeling comfortable in accessing care providers when they have family/friends already living in the area [114]. On the other hand, a study among African families stated that due to the lack of social support and networking, they faced challenges in accessing primary healthcare [130]. These families expressed feelings of isolation, neglect, and loneliness voicing emotions such as “you are on your own”. Similarly, a study among Chinese immigrants reported that due to a lack of family, social, or any alternative support system they ended up using expensive private services [127]. These difficulties were further complicated by factors involving adjustment to a new life with changes in employment, schooling, and overall social dynamics [127]. Similarly, difficulties in accessing care were reported due to changes in personal, family, and social responsibilities [116,133]. Cloose et al. reported that immigrant

families spend most of their time focusing on basic needs such as food and housing, taking away time for social and healthcare interactions [131].

3.4.2.3. Health System Structure Factors

Every country has a different primary healthcare system. In Canada, primary healthcare is the gateway to accessing the healthcare system, meaning patients do not have direct access to specialists or other therapy or diagnostic and therapeutic services. Numerous studies attested to the barriers faced in accessing PHC by newcomers who are coming to a new and unfamiliar healthcare system. Research illustrated that immigrant especially from South Asia, Chinese, the Middle East, as well as francophone migrants expressed limited knowledge about the healthcare system. They often felt overwhelmed, exhausted, fearful, and helpless while interacting with the Canadian healthcare system [123,124,127,128], and even believed that the Canadian healthcare system was less responsive to them [128].

One of the most frequently reported challenges in accessing primary healthcare is the long waiting time to get service and promptness of care [116,118,120,124,127,129]. In a study, families from Africa reported disappointment in the healthcare system, as families expected similar or even better access to care compared to their home country, but were dissatisfied in terms of promptness, availability, and care coordination [130]. Furthermore, Harrington et al. stated that difficulty in accessing specialist care through the PHC system was reported much higher (almost three times) among new immigrants as compared to Canadian-born population resulting in longer wait times and negative perceptions among the immigrant groups [116]. Further, long wait time in diagnosis and treatment, is also reported in a mixed methods study among Korean immigrants, which led them to seek transnational healthcare [118]. Another systemic challenge frequently reported was physical distance to a healthcare establishment.

Primary healthcare access was reduced in minority communities and providers with linguistic capabilities were rarely found in geographical approximation of the immigrant groups. These challenges are further escalated when lack of public transportation options and costs for long distance travel are taken into account [114,118,124,127]. Additionally, a study conducted among various immigrants reported that immigrants felt discriminated while accessing PHC. For example, patients reported being refused as a new patient with immigrant status. Participants explained that they were refused to be booked for an appointment from the clinical staff (reception) when their immigration status was known or revealed [119].

Apart from systemic deficits in meeting the immigrant population needs, the majority of these difficulties in dealing with a new healthcare system seems to arise from patient's lack of information and communication regarding available support systems and resources [122,129]. Lower health literacy in the immigrant population as well as inadequate training of healthcare providers was reported to be amongst the main perceptions for creating these challenges [120,125]. Various studies showed the immigrant narration of difficulties in navigating with the new healthcare system, including challenges in finding healthcare providers and lack of availability of health information in different languages [119,123,124,135].

3.4.2.4. Patient-Provider Relationship

The patient-provider relationship is a unique connection between patient and provider that is built via mutual trust, respect, and collaborative understanding of patients' needs and expectations for improved health outcomes. Openness in communication, accepting patients without any discrimination, involving patient in the decision-making process, understanding patient values, beliefs, and culture, and respecting patients' preferences are some examples of establishing a trusting patient-provider relationship [136].

This review revealed various factors that influenced the patient–provider relationship in immigrant populations. A study within African families reported poor interaction with the provider due to lack of communication regarding medication prescriptions, resulting in negative perception of services and ultimately change in service providers [130]. Moreover, due to healthcare providers’ attitudes and behaviors, immigrants felt intimidated and threatened which led them to stop seeking healthcare services at all. For example, immigrant patients felt that their quality of care was compromised because of the doctor’s inadequate communication and inattentiveness towards their health concern [119]. Similar incidents in other studies have led to perceived discrimination and racism culminating into negative self-perception of health and unmet healthcare needs [119,131]. One study found that doctors showed less empathy towards immigrant patients and the gap in communication led to misunderstandings [123]. Majority of immigrant patients reported lack of shared decision making as a principal component of dissatisfaction in their interaction with healthcare services [114,120,125,137]. For instance, a study of Brazilian immigrant women reported poor perception of behavior/professionalism from their care providers as a result of being excluded from the decision-making process [115]. On the other hand, studies reported having same gender care providers, building trustworthy environments in care, involving patients in the decision-making process, providing complete information fostered good patient experiences and strengthened patient–provider relationships [118,127,132]. Similarly, immigrant patients in another study reported positive perception of the provider if they were receptive towards their views on alternative medicine/therapy (herbal, other supplementary vitamin instead of antibiotic) and discussed these options with their patients [114].

3.5. Discussion

Canada has a publicly funded healthcare system aimed at ensuring equitable care regardless of one's age, gender, socioeconomic standing, or immigration status [138]. Nevertheless, immigrants face significant barriers to healthcare access in Canada [45,110]. This review presents the broad assessment of the current literature on patient reported experience in accessing and receiving primary healthcare among the immigrant population in Canada. The present review highlighted major themes encompassing these experiences including cultural and linguistic differences, socioeconomic challenges, health system structure factors, and patient-provider relationship in accessing and receiving PHC. Among the four major concerns of immigrant patient experience, cultural and linguistic difference was the most prevalent and challenging aspect that needed to be addressed.

3.5.1 Overcoming Cultural and Linguistic Differences

As Canada has diverse communities that are ethnically heterogenous, it is essential to give special consideration to all cultural dimensions. To provide culturally competent healthcare, care providers need to understand in-depth the cultural distinction of their patient and realize the considerable evidence that show cultural and linguistic barriers are among the major hurdle to proper healthcare access. Canada is not only the country facing this problem, but several European countries and the United States are struggling with similar issues [139,140]. Physician gender (preference of having a female doctor) is one of the highest focused cultural barriers among immigrant population especially South Asian, Chinese, and Muslim women, particularly in regard to reproductive health and physical checkup [118,127,128,132]. This review also highlighted language barriers as a significant challenge to accessing quality care among the immigrant population [114,117-120,122-125,127,128,130,132], which was an equal challenge

among primary healthcare providers in delivering quality care to immigrant patients [137,141]. In one study, immigrants experienced medication errors, frequent hospitalization, or emergency care visits, as well as dissatisfaction with care due to cultural and linguistic differences [142]. In tackling the cultural and linguistic factors, development, and implementation of sensitivity and competency training practices should be promoted across all healthcare professions and facilitators, including clinicians, nurses, allied healthcare professionals, and interpreters. Addition of a more diverse healthcare workforce in terms of race and gender will be a much-needed development in tackling these barriers. Further, to nurture more profound and efficient cross-cultural relationships, incorporating effective health communication training for both care providers and recipients will be beneficial [143].

3.5.2 Facing Socioeconomic and Structural Challenges

Similarly, various socioeconomic challenges in adjusting to a new life, environment, and social structure created major barriers to accessing primary healthcare across immigrant populations. Better understanding of social dynamics in the immigrant population and services aimed at facilitating mutual acculturation can help reduce socioeconomic stressors and improve accessibility to quality care. Furthermore, systemic challenges in the healthcare system create multiple barriers to accessing primary healthcare such as longer wait times, geographical inaccessibility, uncoordinated service, poor response times, and deficient provider to patient ratio, which poses an acute and long-term threat to immigrant health. Integrated and coordinated care, proper transportation facilities, having appropriate patient provider ratio in place are some examples of facilitators that might address the barriers in accessing primary care among immigrant patients. Policies and structural changes geared towards meeting the challenges faced

by immigrant communities are needed in this regard for efficient utilization of the PHC services available under the universal healthcare system in Canada.

3.5.3 Improving Patient–Provider Relationship

Development of a positive attitude towards the healthcare system and its providers requires mutual understanding, respect, and acceptance. Forming a respectful and welcoming patient–provider relationship can help overcome the majority of the challenges faced by immigrants, while also prospering the goals of universal healthcare for all. Based on our review, understanding the importance of gender roles specially for female patients and having appropriate staff available; having bilingual service providers and/or interpretation services; paying special attention to new immigrants in understanding their fears and challenges; providing different cultural and language competence training to care providers; most importantly focusing on social and economic contexts of individual patients and approaching those issues early are some important facilitators and strategies to address the significant barriers and to accessing healthcare of immigrants.

The findings of this review can help inform clinicians, healthcare professionals, healthcare administrations, policymakers, and researchers in designing programs specific to the needs and challenges of the immigrant population. Some of the findings from this review include improving interpretation services, increasing number of culturally competent care providers, improving health literacy among immigrant population about the importance of PHC, expanding comprehensive healthcare coverage for dental, eye, and other essential care. The findings of this review also suggest the importance of having patient friendly health information, enhancing social and community supports for newcomers, and promotion of mental health as crucial elements to ensuring long-term success to immigrant health.

This review had several limitations. Included articles were published in English, which could have resulted in missing relevant studies published in a different language, particularly given Canada's majority English–French bilingualism. Further, we did not include studies that only focused on refugees, temporary foreign workers, and undocumented immigrants, which might have resulted in omission of some relevant population groups. The majority of the studies included for the review were primary data sources and qualitative in terms of study design and analysis. Moreover, only studies focusing on primary healthcare experiences from the patient perspective were included, but not from the provider point of view, who might have similar or/and different challenges while providing care to immigrants. Most of the studies were geographically restricted to Ontario and Alberta which limited inclusion of data from other possibly relevant rural and urban locations. However, in this review, the studies included participants with large ethnic diversity comprising a sizeable composite immigrant population from various social, and cultural backgrounds, that allows the findings to be generalized.

From this literature review, several directions for future research can be pinpointed: qualitative research from care providers and immigrant patients' perspective; research focusing on immigrant men (majority of studies were conducted among women); research on availability and utilization of interpretation services and its outcome; research on culturally and linguistically competent care providers and immigrant patient experiences; research on newcomers from diverse groups; health system literacy among newcomers.

3.6 Conclusions

The health characteristics of the immigrant population is a consequence of environmental, economic, genetic, and social-cultural factors of their home country before they

migrate to Canada. Post-immigration factors include a new environment, employment, education, poverty, accessibility, and responsiveness of healthcare practitioners and of the healthcare system of Canada [144]. An individual patient's background and perceptions may influence their interpretation of health and symptoms, coping strategies, healthcare seeking behaviors, decision-making process, preference, and acceptance of treatment within the new healthcare system. Canada is a multicultural country with a diverse ethnocultural landscape. As such, these diversities of patients face a variety of challenges related to accessing the PHC service. In our study, four major themes including culture and linguistic, socioeconomic, healthcare structure, and patient-provider relationship was ubiquitous among the diversity of these immigrant populations. Among these, we identified that culture/linguistic competency, for both patient and physician, played a highly prevalent and crucial role in determining accessibility to the Canadian healthcare system. Similarly, other major themes were also equally important in determining one's ability and responsiveness in accessing primary care. Together, these factors comprised a common theme in the immigrant healthcare experience and challenges with the PHC system of Canada. It is therefore pertinent that primary care providers play an active role in bridging these gaps for their immigrant patients with strong support from policy level. Development of a positive attitude towards the healthcare system and its providers requires mutual understanding, respect, and acceptance. As immigrants encounter various challenges in accessing and receiving PHC, these challenges need to be addressed both at a systemic level and through efforts from local health organizations to better respond to the needs of immigrant communities. Thus, understanding and respecting diversity in culture, language, experiences, and systems is crucial in reducing health inequalities and improving access to quality care in a respectful and responsive manner.

Declaration

Author Contributions: Conceptualization, M.-J.S. and B.B.B.; B.B.B., S.B., and K.T.B.

searched the database and extracted the data; quality assessment of the papers B.B.B. and

K.T.B.; writing—original manuscript B.B.B. with a contribution of S.B. and K.T.B.; M.-J.S.,

F.A., and J.J. provided guidance in refining and revision of the manuscript. All authors have read

and agreed to the published version of the manuscript.

Funding: This research received funding from the Cumming School of Medicine, the University of Calgary to provide support to the graduate student.

Conflicts of Interest: The authors declared that there is no conflict of interest.

APPENDIX 3.A: Literature search performed using various online scientific databases between July 05-10.

Literatures found from publications between 2010 upto July 10, 2020 in a variety of databases Medline (N=508), Embase (N=121), PubMed (N=680), Scopus (107), Google Scholar (N=150) resulted in a total of 1,566 hits. After proper screening process, 19 articles were selected for final review. Overall screening process and results can be found in Figure 1. (PRISMA flowsheet).

Medline search July 10, 2020

No.	Search terms/limits	Result
1	Primary Care.mp. or exp Primary Health Care/	229630
2	exp Primary Health Care/ or exp Patient Satisfaction/ or exp "Quality of Health Care"/ or Patient Experience.mp. or exp Patient-Centered Care/	7026134
3	1 and 2	197116
4	Immigrant.mp. or exp "Emigrants and Immigrants"/	21250
5	3 and 4	727
6	limit 5 to english language	659
7	limit 6 to yr="2010 -Current"	523
8	limit 7 to journal article	508

Embase search July 10, 2020

No.	Search terms/limits	Result
1	primary health care/ or exp health care delivery/	3300025
2	Experiences.mp.	237561
3	1 and 2	45464
4	exp immigrant/	16428
5	3 and 4	171
6	limit 5 to english language	169
7	limit 6 to yr="2010 -Current"	121

PubMed, Scopus & Google Scholar search between July 5-July 10, 2020:

PubMed search using [((((((Primary Care[Title]) OR (Primary Healthcare[Title])) AND (Immigrant[Title])) OR (Immigrant population[Title])) OR (New comer[Title])) AND (Patient Experiences[Title])) OR (Immigrant Patient Experiences[Title]) with language (English), timeframe (2010-202), Full text Journal Article restriction yielded 680 results.

Scopus search using (TITLE-ABS-KEY(Primary Care) OR TITLE-ABS-KEY(Primary Healthcare) OR TITLE-ABS-KEY(Primary Medical Care) AND TITLE-ABS-KEY(Immigrant) AND TITLE-ABS-KEY(Experience)) AND PUBYEAR > 2009 AND (LIMIT-TO (DOCTYPE,"ar")) AND (LIMIT-TO (LANGUAGE,"English")) AND (LIMIT-TO (SRCTYPE,"j")) yielded 107 results.

Google Scholar search using key words ["Primary Care" "Immigrant population" "Patient experience"] with language (English) and timeframe (2010-2020) restrictions yielded 150 results.

Table 3.3: NEWCASTLE-OTTAWA quality assessment scale for cross sectional studies.

Author(s) & Year	Selection	Comparability	Exposure/Outcome	Total Score
Lum, I.D et al., 2016	***	**	***	8
Woodgate, R. L. et al., 2017	***	**	***	8
Gulati, S. et al., 2011	****	**	***	9
Amin, M. et al., 2012	***	*	***	7
Calvasina, P. et al., 2016	***	**	***	8
Cloos, P. et al., 2020	***	**	***	8
Harrington, D. et al., 2013	***	**	***	8
Hulme, J et al., 2016	***	**	***	8
Mumtaz, Z et al., 2014	***	*	***	7
Corcadden, L et al., 2018	***	*	***	7
Marshall E. G et al., 2010	***	**	***	8
Ou, C.H.K et al., 2017	***	*	***	7
George, P et al., 2014	***	*	***	7
Higginbottom,G. M. et al., 2016	****	**	***	9
Lee, T.Y. et al., 2014	***	**	***	8
Dastjerdi, M. et al., 2012	***	**	***	8
Ngwakongnwi E. et al., 2012	****	**	***	9
Wang, L. et al., 2015	***	*	***	7
Pollock, Grace et al., 2012	***	*	***	7

CHAPTER FOUR

Immigrant healthcare experiences and impacts during COVID-19: A cross-sectional study in Alberta, Canada.

This chapter has been submitted as:

Bajgain BB, Jackson J, Aghajafari F, Bolo C, Santana MJ. Immigrant healthcare experiences and impacts during COVID-19: A cross-sectional study in Alberta, Canada. *Journal of Patient Experiences*. Under review process.

4.1 Abstract

Primary Health Care is a gateway to healthcare services. The COVID-19 pandemic has modified the process of delivering care. We aimed to assess Albertans' healthcare experiences during the pandemic and compared experiences between Albertans that were born in and outside Canada. A cross-sectional online survey (experiences and impacts of COVID-19) was conducted in October 2020, 16 years, and older Albertans. Descriptive statistics and multivariable logistic regression were performed using STATA. Of 10,175 study participants, 10% were born outside Canada. Demographics were significantly different between the two groups ($p < 0.05$). Results revealed that Canadian-born was more likely to report worse mental and physical health status (AOR= 1.36; 95% CI: 1.17-1.56), and higher stress, anxiety, and depression during the pandemic (AOR= 1.37; 95% CI: 1.16-1.60) than those born outside Canada. However, Canadian-born reported a trend toward a better virtual care experience (AOR= 1.16; 95% CI: 0.94-1.44). Albertans reported negative health impact due to delay in care during the pandemic and vaccine hesitancy for COVID-19, which was not significantly difference among the cohorts ($p > 0.05$). The study findings can inform primary healthcare providers and policymakers that could be used to develop quality improvement strategies.

Keywords: Cross-sectional study; COVID-19; Pandemic; Primary Health Care; Mental Health; Virtual Care; Vaccine; Immigrants.

4.2 Introduction

For most healthcare systems, Primary Health Care (PHC) offers patients the first contact to access medical care [60]. In Canada, PHC is the gateway of healthcare services, which coordinates patients' health care services to ensure continuity of care and ease of movement across the healthcare system when more specialized services are needed [60]. PHC is linked with improved access to care, reduction in health inequalities, and better outcomes at lower cost [145]. PHC is the foundation of effective health systems providing continuous quality healthcare to patients.

The COVID-19 pandemic modified the process of delivering PHC [66]. As of August 5, 2021, Canada reported over 1.4 million (1,436,641) cases including 26,637 life losses due to COVID-19. Alberta has the third-most cases of COVID-19 in Canada, with 235,641 confirmed cases and 2,329 deaths [146,147]. Thus, in order to ensure safety and quality service delivery during the pandemic, PHC needed to strategize and reorganize services including allocation of resources (e.g., manpower, infrastructure, technology and supplies, financial support); providing up to date knowledge about technology/virtual care process to healthcare providers to meet the demand of care; implementing appropriate protocols and appropriate communication channels while strengthening care delivery processes in a timely manner [74,148]. One of the adaptations was the uptake of virtual care, switching in-person care into virtual visits such as phone calls, videoconferences, and secure messages. [66-68].

Due to these adaptations in care, it is crucial to understand patients' experiences in accessing and receiving care during the pandemic. In this paper, we describe and compare the experiences of Canadian-born and individuals born outside Canada (e.g., first-generation

immigrants, refugees, and newcomers) [90]. This work has been done in partnership with the Health Quality Council of Alberta (HQCA).

4.3 Methods

4.3.1 Study design and setting

This is a cross-sectional study using a provincial survey, “COVID-19 Experiences, and Impact Survey”. Albertans were surveyed to share their experiences with the healthcare system and the impact of the pandemic on accessing and receiving PHC. The survey also included questions on self-reported physical and mental health status, accessing and receiving virtual care experiences, and people’s views on vaccination.

4.3.2 Survey tool

The survey tool was developed based on a national and international environmental scan conducted by the HQCA in April 2020. The survey questionnaire was discussed, tested, and refined by twelve members of the HQCA’s Patient and Family Advisory Committee. These advisors work with HQCA on issues related to patient safety, person-centered care, and quality issues from patients, and family’s perspectives.

4.3.3 Study population and data collection

The study population included adults living in Alberta, Canadian-born and born outside Canada [90], who have experienced care for COVID-19, or other illnesses during the pandemic. Individuals born outside Canada include first-generation immigrants, refugees, and newcomers [90]. As the survey was in English and administered online, those who were able to read and write in English and had the means to access the survey participated in this study. The study sample was quite representative from both cohorts, as around one-fifth of Albertans [21.2%,

(29.4% Calgarians)] were born outside Canada [149], and so with 21.9% of the Canadian population [150].

Recruitment was undertaken via email invitation to over 15,000 Albertans, social media (Facebook, Twitter, and LinkedIn), the HQCA website, as well as advertising in the daily COVID-19 news updates by the Chief Medical Officer of Health in Alberta. The data collection occurred from April to October 2020, at the height of the pandemic (second wave) in Alberta. The participants' informed consent was obtained via online at the start of the survey. The consent form clarified the objectives of the survey, the expected time takes to complete it, the privacy and confidentiality of the information, and the voluntary participation in the survey. The survey also included participants' socio-demographic information (including country of birth), self-reported physical and mental health status, and questions related to vaccine hesitancy.

4.3.4 Statistical analysis

Descriptive statistical analysis was performed on the categorical data and presented as frequencies and percentages. Sample weight was calculated and applied to represent Albertans on age, gender, and five Alberta Health Services Zones. The chi-squared test was applied to observe the sociodemographic characteristics and the relationship between the two groups of interest: 1) Canadian-born individuals and 2) Individuals born outside Canada.

Multivariable logistic regression was employed to establish the adjusted odds ratios (AOR) and 95% confidence intervals (95% CI) of the predictors of the relationship between 'Canadian-born' or 'born outside Canadian' and outcomes. Analysis was adjusted for age, gender, education, language, income, and financial situation. All outcome variables were dichotomized. Self-reported physical and mental health status was measured on a 5-item Likert scale from much worse to much better and dichotomized to worse (slightly worse, much worse) and better or same

(about the same, slightly better, and much better) health. All the analyses were performed using STATA Version 14.2, and p-values <0.05 were considered statistically significant. The cohort of individuals born outside Canada was used as a reference group for the logistic regression analysis. The outcomes of interest include self-reported health status; impact on health due to care delay, virtual care experiences, virtual care as a good alternative for future healthcare, and vaccination hesitancy for COVID-19.

4.4 Results

4.4.1 Survey Respondents' Demographics Characteristics

In total, 10,175 surveys were collected during October 2020. Nearly 10% (1,042) survey respondents reported their status as born outside Canada. Table 4.1 represents the sociodemographic characteristics of the survey participants. Two-third (66.75%) of the participants were between 35-64 years old. Similarly, most participants (72.14%) were female and had at least a “college” or “university” degree (86.82%). Of 10,008 who shared information about their financial situation, 6,896 (68.90%) reported a comfortable financial situation. Over three-quarters of participants reported their yearly household income as \$150,000 or lower (n= 7,033; 76.77%). Most of the survey respondents (98.28%) spoke English at home (Table 1). All survey respondent characteristics, with exception to gender, showed a significant difference between Canadian-born and those born outside Canada ($p<0.05$).

Table 4.1. Sociodemographic characteristics of the study population according to Canadian-born and born outside Canada.

Characteristics		Canadian-born	Born outside Canada	P-value
	Total N (%)	n (%)	n (%)	
Age	10,175	9,133 (89.76)	1042 (10.24)	0.0001
16-34 Years	1,473 (14.48)	1,341 (14.68)	132 (12.67)	
35-64 Years	6,792 (66.75)	6,124 (67.05)	668 (64.11)	
65+ Years	1,910 (18.77)	1,668 (18.26)	242 (23.22)	
Gender	10,077	9,043	1,034	0.057
Female	7,270 (72.14)	6,550 (72.40)	720 (69.60)	
Male	2,807 (27.86)	2,493 (27.60)	314 (30.4)	
Educational Attainment	10,159	9,120	1,039	0.0001
High school	1,339 (13.18)	1,224 (13.40)	115 (11.10)	
College	4,483 (44.13)	4,103 (45.00)	380 (36.60)	
University	4,337 (42.69)	3,793 (41.60)	544 (52.40)	
Language spoken at home	10,234	9,185	1,049	0.0001
English	10,058 (98.28)	9,140 (99.50)	918 (87.50)	
Other	176 (1.72)	45 (0.50)	131 (12.50)	
Yearly household income	9,161	6,225	936	0.031
\$150,000 and below	7,033 (76.77)	6,288 (68.88)	745 (79.60)	
Above \$150,000	2,128 (23.23)	1,937 (31.12)	191 (20.40)	
Financial Situation	10,008	8,982	1,026	0.0001
Comfortable	6,896 (68.90)	6,129 (68.24)	767 (74.76)	
Tight	3,112 (31.10)	2,853 (31.76)	259 (25.24)	

4.4.2 Factors Influencing Patient's Experiences in Receiving Care

Table 4.2 shows both, unadjusted and adjusted odds ratios (OR vs AOR) for the factors that influence patient experiences in receiving care using multivariable logistic regression analysis. After adjustment for age, gender, education, language, income, and financial situation. Overall, Canadian-born individuals were more likely to report their mental and physical health status as “worse” or “much worse” during COVID-19 compared to individuals born outside of Canada (65% vs 56%; AOR= 1.36; 95% CI: 1.17-1.56). Similarly, the survey findings also showed a higher likelihood of perceived stress, anxiety, or depression among individuals born in Canada (75% vs 66%; AOR= 1.37; 95% CI: 1.16-1.60). Albertans (both born in Canada and outside) reported their health was negatively impacted due to delay in care (27% vs 27%; AOR= 0.89; 95% CI: 0.75-1.06) since the onset of the pandemic, which was not significantly difference among the cohorts ($p>0.05$).

Equally, vaccine hesitancy for COVID-19 was presented in both cohorts (29% vs 29%; AOR= 0.91; 95% CI:0.69-1.21), and it was not statistically difference between individuals born in Canadian and those born outside Canada ($p>0.05$). Similarly, there was a trend toward better overall virtual care experiences among Canadian-born individuals (61% vs 58%; AOR= 1.16; 95% CI: 0.94-1.44). Interestingly, Canadian-born slightly favored virtual healthcare visits over in-person visits as a resulting adoption from the pandemic (58% vs 52%; AOR= 1.22; 95% CI: 1.06-1.42).

Table 4.2 Unadjusted and adjusted odds ratios [OR, AOR, 95% Confidence Interval (CI)] of self-reported health status, virtual care experiences, and willingness to get vaccinated against COVID-19 of Canadian-born and born outside Canada.

Outcomes	OR (95% CI)	AOR (95% CI)*
Mental health worsened (worse or much worse)	1.45 (1.27-1.65)**	1.36 (1.17-1.56)**
Increased stress, anxiety, depression, and difficulty to cope with it	2.13 (1.87-2.43)**	1.37 (1.16-1.60)**
Physical health worsened (worse or much worse)	1.45 (1.27-1.65)**	1.36 (1.17-1.58)**
Impacted due to delay in healthcare	1.02 (0.79-1.30)	0.91 (0.68-1.21)
Rating of Virtual care experiences (top of scale 8-10)	1.13 (0.93-1.36)	1.16 (0.94-1.44)
Virtual healthcare visits as a good alternative to in-person for future healthcare	1.25 (1.10-1.42)**	1.22 (1.06-1.42)**
Would not choose to get vaccinated for COVID-19	1.01 (0.87-1.16)	0.89 (0.75-1.06)

*OR adjusted for age, gender, education, language, income, and financial situation, as well as displayed for those who were born in Canada (reference category) compared to those who born outside Canada; **Significantly different from individuals born outside Canada (p<0.05).

4.5 Discussion

This study reports the experiences of Albertans during COVID-19. When comparing health status and experiences of Canadian-born with those born outside Canada, there were differences specifically related to mental and physical health and perceptions on receiving virtual care, vaccine hesitancy, and health impact due to delay in care during the pandemic. Mental health has been adversely impacted since the onset of COVID-19; increased stress, anxiety,

depression was observed, specifically higher among Canadian-born. Likewise, Canadian-born reported better virtual care experience and believed that it could be an alternative to in-person care compared to individuals born outside Canada. Moreover, since the onset of the COVID-19, Albertan's health was negatively impacted due to delay in care, and no difference was presented between individuals born in Canada and those born outside Canada. Likely, vaccine hesitancy for COVID-19 was no difference in both cohorts.

Globally, as COVID-19 affected healthcare access/delivery, Canada adopted a highly intensive intervention with the aim of reducing the severity of the pandemic (lockdown, social distancing, substantially ramp down all elective surgeries and nonessential health services) and promoted virtual care visits [151]. An ongoing COVID-19 related survey among primary care providers in Canada and United States revealed a widespread uptake of virtual care: phone calls, video conferences, and secure text messages [152,153]. Canada widely switched in-person care into virtual visits for individuals who frequently needed care and in-person care was not essential: people living with chronic physical and mental health conditions [66-68]. Despite some disadvantages of virtual care visits, for example, the inability to perform medical procedures/physical examination, missing visual clues, difficulty establishing therapeutic relationships, a study found that Canadians seem to be highly satisfied with virtual, and over one-third (38%) would choose virtual care to be the first point of contact post COVID-19 [154], our results partly corroborated this finding specifically for people born in Canada. However, people born outside Canada did not favor virtual care and coped with it as a temporarily solution, and this could be due to proficiency in speaking the English.

Our findings aligned with the previous study [69,70] that found Canadian's mental health has been negatively impacted since the onset of the COVID-19, and individuals struggled with

uncertainty, fear about own/loved one's health, employment/financial concerns, and public health guidelines [69,70] however, in our study this is different for individuals born outside of Canada. Our findings also corroborate the previous poll [155] that 50% of Canadian stated worsened mental health since the pandemic started, feeling worried (44%), and anxious (41%), included women, young, and families with small children, who lost jobs, worried about the financial situation [71].

Delay in seeking care might be due to the combination of availability of services and fearing exposure to COVID-19, which might lead towards increasing the risk of morbidity and mortality associated with a preventable/treatable health condition. Our results (33%) coincide with previous research that found almost four in ten Canadians with chronic health conditions (38%), reported avoiding accessing healthcare [72]. Chen-See showed that 54% of patients with cancer either canceled, postponed, or rescheduled their appointment during the pandemic [73], which was also reported (41%) in a study among adults in the United States [156], and 74% of those with delayed care had a major impact on their mental and emotional wellbeing [73].

Mass vaccination for COVID-19 is crucial. A result from the Canadian Community Health Survey (CCHS), revealed that 76.9% of Canadians were either very or somewhat willing to get vaccinated against COVID-19 [157]. Our result also supports the sequence of earlier findings regarding vaccine hesitancy for COVID-19 (29%), as the previous study also found that 14% of Canadians indicated they would not get vaccinated [158]. A recent study conducted based on twitter respondents reported that vaccine hesitancy stemmed from safety concerns, suspicion of political or economic force during the pandemic, lack of knowledge about vaccines, antivaccine or confusing messages from an authority, and lack legal liability from vaccine companies [159].

Equity in healthcare in an inclusive environment that responds to diversity in a population, is a challenge that needs a big commitment and is only achieved when everyone has the opportunity to access and receive healthcare with their own identity, culture, and characteristics without discrimination or barriers [160,161]. Evidence shows that underrepresented populations including Indigenous, immigrants, refugees, visible minorities, French-speaking Albertans, and people experiencing homelessness reported poor health and barriers in accessing healthcare services [161]. Healthcare organizations are facing challenges to approach vulnerable individuals and address those issues [161]. Thus, identifying individuals at high risk, barriers they might be facing, and providing evidence-based support and treatment would be beneficial for promoting/preventing declines in an individuals' health status.

A recent review showed that immigrants encountered various challenges including language, culture, socioeconomic, and healthcare structure in accessing PHC [55]. However, an earlier study revealed that immigrants reported equal access to primary care compared to Canadian-born, but their primary care visits were 5.3 time more frequent than Canadian-born [162]. Our study reveals Canadian-born experienced higher rates of mental and physical health issues since the onset of the pandemic compared to individuals born outside Canada, whereas impact on health due to delay in care was reported among both cohorts. People might be nervous and avoid seeking care during the pandemic because they do not want to be exposed to COVID-19 in medical facilities. Establishing strong communication strategies about the safety protocol between patient and care providers and offering virtual care options might be the key to encourage patients to seek out care and combat negative impacts of delayed care.

4.5.1 Strengths/Limitations

The strength of this cross-sectional study is the representative sample of Albertans providing their healthcare experiences and the timing of data collection.

This study also has some constraints. We acknowledge that the study population ratio between the two cohorts was different, but the sample was quite representative, as around one-fifth of Albertans [21.2%), (29.4% Calgarians)] were born outside Canada [149], and as with 21.9% of the Canadian population [150]. As well, we also admit that the survey may have captured a select group of individuals (the survey was offered in English solely and in an online version) that likely introduces selection bias and limits the generalizability, but a wider representation of the population (such as non-English speaking individuals, or/and English speaking but did not have the means to access the survey, not quite settled to understand how to access the survey, people working more than one job (or longer shift) and did not have time to participate in the survey, and individuals in working-class including meat plants) would have provided added evidence. We also concede that self-reported measures are subject to recall bias and bias of past experiences. For example, individuals who had mental health issues prior to COVID-19, or had past experiences with virtual care visits, or had a delay in care in the past due to some reasons other than fearing from COVID-19 are some examples that could have informed their present experiences, which could influence their responses. Additionally, the survey only captured delayed care and its impact on someone's health, and detailed survey information related to types of delayed care (e.g., urgent or routine) was not included.

4.6 Conclusion

The study provides important insights from Albertan's healthcare experiences during COVID-19. The pandemic has increased the level of mental health issues, which was higher among Canadian-born individuals. Albertans reported an impact on their health due to delays in receiving care during the pandemic. A clear cost-effective community-based intervention, including better mental health care for everyone, is crucial to promote and enhance access to healthcare services. Virtual care is of growing interest, an expansion of investment in technology, training for the workforce in primary care settings, and educating patients about the virtual care process are unique opportunities to enhance the quality of care and improve care access.

The learning from this study would be a great opportunity for primary healthcare providers and policymakers to improve care quality and equitable access in PHC by better understanding diversity in populations. Vaccine hesitancy could be addressed by establishing strong communication strategies, implementing a mass vaccination campaign by involving key stakeholders, and mobilizing community leaders, which are crucial factors for consideration in successfully responding to the ongoing pandemic.

This study has informed the next research steps including an in-depth exploration of the experiences of individuals born outside of Canada and healthcare providers that will describe and identify gaps in accessing/delivering primary healthcare during COVID-19 from both patients' and care providers' perspectives.

Declaration:

Acknowledgments: The authors are grateful to the Albertans who contributed their time to complete this survey. We would like to acknowledge the Health Quality Council of Alberta (HQCA) for conducting the survey and for the support of this work.

Author's contributions: MS conceived the research project; MS, JJ, FA, and BB worked on data analysis concept; CB and JJ did statistical analysis; BB drafted the manuscript; MS, JJ provided guidance in refining the manuscript; MS, JJ, FA, and CB critically reviewed the manuscript. All authors approved the final version of the manuscript to be published.

Funding: This study received funding from the Cumming School of Medicine, the University of Calgary to provide support to the graduate student.

Competing interest: All authors declared that they have no conflict of interests.

Ethics Approval: The study received approval from the Conjoint Health Research Ethics Board of the University of Calgary (Ethics ID: REB20-1015).

CHAPTER FIVE

Newcomers Experience in Accessing and Receiving Primary Healthcare Services during the COVID-19 Pandemic: A Qualitative Inquiry

This chapter has been submitted as:

Bajgain BB, Aghajafari F, Jackson J, Ahmed S, Santana MJ. Newcomers' Experience in Accessing and Receiving Primary Healthcare Services during the COVID-19 Pandemic: A qualitative inquiry. The *Health Expectations* journal. Under review process.

5.1 Abstract

Background: The entire healthcare system, including primary healthcare (PHC) services, has been disrupted since the onset of the COVID-19 pandemic. As the crisis threatens all citizens significantly, further barriers to accessing care exist for those who are most vulnerable, experience marginalization, and have pre-existing challenges. We aimed to explore newcomers patients' and primary healthcare providers' lived experiences in accessing and receiving and delivering PHC services during the pandemic.

Methods: A qualitative research: Individual semi-structured virtual interviews were conducted with newcomers (living in Canada ≤ 5 years) and primary healthcare providers. Interviews were digitally recorded and transcribed. The data were thematically analyzed, using the NVivo Software.

Results: We interviewed 23 participants (15 newcomers: diverse ethnic backgrounds, 8 primary care providers: doctors, nurses, pharmacists, social workers) from February-June 2021. The data were categorized in three sections: (1) newcomers' overall experiences (doctor-patient relationship, care coordination, expectation on care), (2) virtual care experience (accessibility, accessing care, communication, care safety and quality), (3) newcomers' challenges in accessing primary care [language and cultural difference, care accessibility (availability, waiting time, cost, distance, transportation), unfamiliar healthcare system, facing new life and competing priorities]. Our interviews revealed that participants had comprehensive experiences with primary care included what matters to newcomers, what works well, and the important areas that need to be improved.

Conclusion: Newcomers to Canada reported many challenges in accessing and receiving primary healthcare and the challenges as such magnified since the onset of the COVID-19

pandemic. The results clarified that additional targeted supports need to be in place in a timely manner to improve primary healthcare access for newcomers.

Keywords: *Primary Healthcare; COVID-19; Pandemic; Virtual Care, Newcomers; Healthcare Providers; Patient Experiences; Access to Healthcare; Access Barriers; Canada.*

5.2 Introduction

Canada is well-known for its long history as one of the most desirable and attractive countries in the world for immigration. According to the 2016 Census, over 7.5 million Canadian (nearly 22% of the total population) were foreign-born, almost the same in Alberta, (21.2%) [149,150]. Yearly, Canada receives almost 300,000 immigrants [48], and around 40,000 people from across the world choose Alberta as their new home [57]. Immigrants represent heterogeneous populations, and their health needs vary. Understanding the social determinants of the health of immigrants and the unique challenges they offer in the provision of health services would be helpful to care providers in delivering primary healthcare for culturally diverse populations. Immigrants tend to use fewer healthcare services compared to Canadian-born individuals [163,164], and the most commonly reported reasons for under-utilization of healthcare by immigrants is language and cultural difference [163].

Worldwide, Primary Health Care (PHC) is considered the cornerstone of the healthcare system, and individual visits are approximately 30 times more frequent than hospital admission in high income countries [58]. PHC is the gateway of the Canadian healthcare system that facilitates access, comprehensive care, continuity, coordination, effective communication, patient-centered care, effectiveness and safety, quality outcome, and patients' satisfaction [60].

The COVID-19 pandemic has severely impacted public health and disrupted in the provision of healthcare [65], including PHC, in terms of organizing, mobilizing, and deploying extra resources to address the needs of the pandemic effectively, as well as attending to non-COVID-19 cases in a safe and timely manner. Preparing for a response to the health crisis, a robust PHC system is crucial. As the crises threaten all citizens significantly, further barriers to accessing care exist for those who are most vulnerable, experience marginalization, and have

pre-existing challenges. Newcomers to Canada (living in Canada ≤ 5 years) have been affected during the pandemic as there are many exacerbating factors that already hinder their access to care, such as lack of culturally and linguistically appropriate care, facing a socioeconomic challenge as a newcomer, and health system structure (e.g., unfamiliar healthcare system and long waiting time) [55].

Moreover, the COVID-19 pandemic altered the process of delivering PHC [66], and Canada implemented widespread uptake of virtual care: switching in-person care into virtual visits includes phone calls, videoconferences, and secure messages [66-68]. Due to shifts in the access and delivery of primary care, it is crucial to understand patients' experiences in accessing and receiving care, as well as care providers' perspectives in delivering care. We aimed to explore newcomer patients' and care providers' lived experiences in accessing, receiving, and delivering PHC during the pandemic.

5.3 Methods and Materials

5.3.1 Study Design

A qualitative research design was employed to explore the rich and comprehensive experiences from newcomers' and primary healthcare providers' perspectives of accessing and delivering PHC services, which allowed them to present their lived experiences. In-depth one-on-one interviews were conducted using semi-structured questions, that allowed having deeper insights from individuals.

5.3.2 Setting and participants

The source of the study population for care providers was from a family medicine center, Calgary, Alberta, which was also a University Teaching Centre for Family Practitioners. We

purposefully selected the clinic, as the center was one of the busiest clinics in the city, offering primary care services by multidisciplinary professionals. The center is also geographically situated within the highest density of urban immigrant communities in Calgary. The patient population for this study was individuals aged 18 and over years Albertans, who were a newcomer to Canada (living in Canada ≤ 5 years), accessing and receiving primary care across Calgary, and was able to communicate in English. The purposive, convenience, and snowball sampling method was used in this study to ensure the representation of participants based on different ethnic backgrounds.

5.3.3 Recruitment

To recruit potential participants (care providers and patients), we sought permission from the clinic authority. After getting consent to contact, we approached the potential participants via email and telephone and asked if they are interested to take part in the virtual interview by addressing the objectives of the study. Further, the patient recruitment was undertaken via various ethnic organizations: shared recruitment posters, social media (Facebook, Twitter, and LinkedIn), or approached individually by the research team members. All the study participants were offered a \$20 e-gift card as a token of appreciation for their time.

5.3.4 Data collection

The semi-structured interview guide was developed focusing on the objectives of the study with feedback from a team of health services researchers (MS, FA, JJ) and other experts in the field. We conducted 23 in-depth one-on-one interviews (15 newcomers and 8 primary care providers) using Zoom [101] at participants' convenient time from February – June 2021 (BB). All the interviews were conducted in English, digitally recorded, transcribed verbatim, and the field notes were recorded after each interview to capture the interview context (e.g., the physical

environment and individuals' non-verbal communication by a qualitative researcher (BB). Each interview lasted between 45-90 minutes, which included obtaining informed consent and demographic information.

5.3.5 Data analysis

We conducted a thematic analysis of the transcripts with the support of qualitative analysis software, NVivo [103]. Thematic analysis is a systematic process of data analysis in identifying, organizing, and offering insight into forms of meaning across a data set, described by Braun & Clarke [104]. The data analysis was conducted in a six-stepwise process [104]. A mix of deductive, inductive, and iterative strategies was applied in the coding process. As a deductive coding process, some of the codes were pre-identified from the interview guide. Researchers (BB, SA) identified some of the codes and established them in a coding book, as a reference. Moreover, an inductive coding strategy was also employed to label new codes whilst interpreting the data as a circular process that moves back and forth between smaller parts of the transcript to the whole text, which was not captured beforehand. The iterative coding process also applied as new themes emerged and the transcripts were re-read to verify the codes and themes were not missed. After organizing codes into themes/subthemes, they were discussed among the research team. The manuscript is formatted in accordance with the consolidated criteria for reporting qualitative research (COREQ) (Appendix 2. E) [107].

5.3.6 Trustworthiness

We employed the following four strategies to enhance the trustworthiness of the qualitative data within this study: credibility, transferability, dependability, and confirmability as recommended by Creswell & Poth [108]. To enhance study credibility, all the interviews were digitally recorded by the Zoom meeting recording tool. Further, we employed member checking

to validate the interpretation of findings to establish credibility in the audit trail, which included asking participants to clarify responses during the interview and verifying the final transcription from the participants to ensure the accuracy of participants' perspectives. Moreover, frequent peer debriefing between researchers about the representation of the study population, recruitment strategies, and thematic saturation was employed to enhance the study's credibility. To heighten the dependability in the audit trail, from the coding process to the emerged themes, regular peer debriefing and discussion took place between researchers, which allowed increasing the relevance of codes and accuracy to themes and subthemes. Further, we maintained an audit trail of the research project from the initial stage to the end stage to be transparent and to enhance research dependability. As well, by providing a detailed description of the research process, the transferability of the study data has been enhanced.

5.4 Results

5.4.1 Participant characteristics

A total of 23 participants were interviewed, of which 15 were newcomers, accessing PHC across Calgary and 8 were care providers in Sunridge Family Medicine Center, Calgary, Alberta. Among the patient participants, 46.7% were female, aged between 25 and 45 years old, and had diverse ethnic backgrounds. Nearly half of the participants (46.7%) reported they were originally from south Asia (Nepal-3, India-3, Bangladesh-1), and over half (60%) reported their length of stay in Canada was between 3 to 5 years and the rest were below 3 years. Of 8 care providers, 75% were female, included multidisciplinary teams (doctors, nurses, pharmacists, social workers). Participant's demography information is detailed in Table 5.1 Moreover, participants received various healthcare services during COVID-19, largely from family physicians (87%)

and Health link (73%) and a significant number of participants (87%) perceived that their mental health was impacted since the onset of the pandemic. Interestingly, one-fifth of the participants (20%) reported their hesitancy for COVID-19 vaccination, and most of them believed that Alberta Health Services (AHS) was a trustworthy source of information. The details are presented in Figure 5.1.

The analysis of the interview was categorized into three major sections included newcomers' overall experiences; virtual care experiences; and challenges in accessing and receiving primary care. Within these groups, various themes/subthemes were identified as follow:

5.4.2 Newcomers' overall experiences in accessing primary care

5.4.2.1 Doctor-patient relationship in care

Within this theme, most patients emphasized having a trustworthy relationship with their family physician that was respectful to patients' preferences, cultural values and involved the patients in the care management process, and communication. There were few patients who mentioned having a poor relationship with their doctor, such as feeling disrespected and discriminated and having not enough time to share their concerns at appointments. Most of the patient participants emphasized these key characteristics of their family physician in building a trustworthy relationship: good communicator/listener, supportive, respecting patient preferences, values/culture, and involving the patient in the care management process. While the majority of the participants highlighted that their preferences were accommodated, and they were involved in care management processes, few participants were dissatisfied with the way doctors interacted and responded during the medical consultation. They perceived that their medical concerns were not taken seriously, and therefore some patients had to change their family doctor. For example,

a participant with multiple health issues highlighted that her doctor did not pay attention to her several requests of referral for her hematological issues and dietary concern, which led her health condition to worsen. At the end, the participant decided to change her family doctor and had received better support healthcare somewhere else. Similarly, a female participant indicated that she had a poor relationship with her family doctor, as the doctor was dismissal from her medical concerns, and she experienced discrimination due to her skin color (Table 5.2).

5.4.2.2 Care coordination

Most of the patient participants expressed that their care was well-coordinated within the clinic and among family doctors, diagnostic centers, and specialists, and everyone worked together in their care management. However, there were few participants who voiced their frustrations, as they were left to coordinate their care by themselves (e.g., booking appointments), lack of follow up from care providers (patient expected a follow-up appointment/call about test results), no test reports were available (test result was not sent to family doctor from diagnostic centers), and they felt that doctor was not paying attention in their health issues (Table 5.2).

5.4.2.3 Expectations on care access

Most of the participants presented higher expectations than they experienced while receiving primary care, as they compared healthcare services with their home country and expected at least similar, or even better healthcare services. For instance, newcomers expected that doctor provides enough time for medical interaction, well explanation of disease through information sharing/receiving, emotional support from care providers, expected to have a prescription (test/medicine) when they visit a doctor with medical concern(s), timely diagnosis and treatment, easy access to specialist, etc. (Table 5.2).

5.4.3 Virtual Care experiences (Newcomers' and Primary Care Providers')

5.4.3.1 *Accessibility of virtual care*

Participants, both patient and care providers, expressed mixed responses about the virtual healthcare visit. The patient participants emphasized that virtual care was convenient (not needing time off from work or other responsibilities), faster, saved travel time and transportation cost, and supported care continuity during the pandemic, specifically in relation to follow-up, minor ailments, and renewal of prescription. Few participants also clearly stated they would prefer to keep virtual care visits if they would have a choice. However, participants also highlighted that virtual visit was not enough for all levels of care (e.g., newborn, needing physical examination and visual cues, and those who has language barrier and hard to express their medical concerns virtually), in these cases participants preferred in-person medical consultation (Table 5.3).

Care providers also emphasized that virtual care visits played a vital role in care continuity during the pandemic. However, most of the care providers also highlighted that they were struggling to implement the virtual care visit in the beginning phase of the pandemic due to some protocol-driven issues (e.g., understanding the needs and legal process, an adaptation of virtual care modalities, technology, and associated cost) and individuals' readiness for virtual care such as training, documentation, payment (limited time per patient), and resource management (working from home). Few care providers expressed their frustration that shifting primary care from in-person to virtual was not an easy task at the beginning phase (Table 5.4).

5.4.3.2 *Accessing care*

Accessing healthcare is crucial to address medical needs in preventing sickness and deaths either due to COVID-19 or in general. Most patient-participants expressed that they

accessed primary care services either from Health Link (811), family physicians, diagnostic centers, emergency, or specialists since the onset of the pandemic (figure 5.1). Participants shared their mixed experiences while interacting with healthcare services. While a majority of patients had good interaction with 811 and the instruction/information provided was helpful and supportive, however, participants also expressed their frustration that the waiting time to connect with facilities was longer including 811, and family physician offices during the pandemic (Table 5.3).

5.4.3.3 Communication during the virtual care visit

The majority of participants highlighted that despite their level of English, due to the lack of medical vocabulary, they had challenges to express their medical concern(s) and understanding care instructions, and this affected their experience receiving healthcare via virtual visit, resulting in care delays and worsening of health conditions (Table 5.3). Similar experiences were reported by care providers in caring for patients with the language barrier, experienced difficulties in navigating with the healthcare system, as not every healthcare establishment offered interpretation services or language lines. As such this problem more increased since the onset of the pandemic, as Centers did not allow family members to accompany patients due to COVID-19 restriction. Further, most healthcare providers emphasized that the use of language lines was helpful for newcomer and refugee patients who had language barriers for in-person visits, however harder for virtual visits during the pandemic. For example, technical challenges arose in connecting patients, language line consultants, and care providers at the same time over the phone. Another issue was the accuracy of translation via language line, without visual cue and body language, during the virtual visit. (Table 5.4).

5.4.3.4 Ensuring the safety of care and enhancing the quality

Most primary care providers expressed concern about the quality and safety of care provided via virtual consultation, as they wondered if patients were able to express their health concerns properly, or/and understand the medical instruction via virtual visit because of language and cultural differences. For instance, healthcare providers questioned whether the patient understood the diagnosis as there was no physical examination, nor visual clue to understanding the patient's medical need precisely. However, physicians highlighted that a pre-existing doctor-patient relationship was helpful in ensuring this aspect of care practices (Table 5.4). To support these issues, most healthcare providers used some supportive strategies such as modifying care modality (bringing patient to the clinic (in-person)), repeated follow-up care, team approach in care and teaching patients how to use technology (digital care).

Further, most of the healthcare providers emphasized that involving patients in their care management process; receiving regular feedback from patients, families, and the public via survey; and continuous clinical quality improvement process played a crucial role in enhancing care quality. However, healthcare providers experienced that this process was interpreted since the onset of COVID-19, as they perceived it was hard to engage patient/family via virtual visit, which they thought was crucial for the quality improvement process (Table 5.4).

5.4.4 Challenges in accessing/receiving and delivering primary care (Newcomers' and Healthcare providers' perspective) and resources/strategies used

Figure 5.2 features the lists of challenges that newcomers faced in accessing and receiving primary healthcare, which has grouped into three categories (challenges mentioned

only patient, providers, or both). Also, the list of representative quotes is presented in table 5.5. The challenges and the resources/strategies used are summarized below:

5.4.4.1 Language barriers

Languages are also one of the primary obstacles in receiving and delivering primary healthcare services among newcomers and care providers. While many participants reported their English level is sufficient, few also indicated that their access to healthcare was impacted because of their limited English proficiency. Interestingly, healthcare providers also presented similar problems while caring for newcomer and refugee families. To address these issues, healthcare providers used various resources and strategies including language line (third party interpreter via phone), ad hoc translators such as family members, other healthcare team members who speak the same language. Some providers questioned about risks of using ad hoc translators includes communication accuracy, patient safety, and privacy, which may alter the quality of care provided (diagnosis and treatment). They were also concerned about the relationship of patients and translators at home and whether family members accurately translate the way patients wanted to share their health problems, or patients might feel pressured to follow instructions that they are not ready for (Table 5.4). Further, the clinic also used printed brochures in multilingual, extended appointment duration, and multiple follow-up visits to accommodate newcomer and refugee patients.

5.4.4.2 Cultural difference

Most of the participants (both care providers and patients) indicated that cultural differences between doctor-patient were a common challenge in receiving and providing primary healthcare. Most of the patient participants also mentioned that cultural differences created a big barrier to receiving primary care leading to poor experiences, thus newcomers always tended to

look for family physicians with a similar background, or at least understanding patients' culture. Newcomers also stated their gender preference in care, particularly female participants, as they preferred to have female doctors, especially for physical exams and reproductive health concerns (Table 5.5). Similarly, care providers experienced a lack of understanding of the cultural expectations of immigrant patients. For instance, few providers highlighted that immigrant patients tend to participate passively in their care and were not fully open in sharing their health concerns and tended to seek healthcare only when they're really sick. About the question related to resources and strategies used to address culture-related issues, most of the primary care providers highlighted that they received cross-cultural training during their medical education and careers and conceded that it improves their interaction with immigrant patients. Likewise, the clinic uses a multidisciplinary team approach (physician, dieticians, social workers, primary healthcare nurse, pharmacist) in caring for diverse populations.

5.4.4.3 Care accessibility (System-level barriers)

In regard to care accessibility, the following issues were originated as a barrier in accessing, receiving, and delivering primary care services.

5.4.4.3.1 Availability (*timeliness*) of primary care

Most of the participants voiced that they had a negative impression while accessing primary care at the beginning of their healthcare journey to Canada. They further emphasized that the system is complex, and they were not able to access care when they actually needed it, such as they were not able to choose a family doctor, make an appointment with a family physician when they required immediate care (doctors not working evenings/weekend, or full time in the location), or they were not able to find a family doctor in their location (doctor not accepting new patient) (Table 5.5). Most of the participants also felt that Canada lacked

resources (family physicians) and it's a real challenge for newcomers to access/connect with PHC on a timely manner.

5.4.4.3.2 Long wait time

Most of the patient participants expressed their frustration due to long waiting times in appointments, lengthy diagnosis, and treatment processes through primary healthcare settings. They compared better access to care with their home country and were disappointed with the process of getting in and the promptness of care such as finding a family doctor, diagnosis process, and referral to a specialist. The disappointment was much higher in accessing specialist care via primary care setting, as most of the participants indicated that getting an appointment with a specialist was a nightmare. Since the onset of the pandemic, this problem has been raised across the healthcare system not only accessing care with a family physician but also connecting with 811, diagnosis, emergency services, and specialist care, and newcomers indicated much more frustration due to delay in care. However, newcomers expressed their satisfaction with the interaction and support they received from the facilities (health link and doctors' office).

5.4.4.3.3 Healthcare cost

Canada has a universal healthcare system and individuals' financial status should not impact accessing healthcare services, however, most of the study participants reported that access to primary healthcare was complexed and challenged because of the extra cost (out of pocket) for services, especially dental, vision, medicines, medical supplies, mental health, and other therapeutic services, that caused newcomers delayed seeking care, or overlooked accessing care. Conversely, healthcare providers also agreed that newcomers struggled in accessing these basic healthcare needs due to financial hardship, and this problem was raised since the onset of the pandemic. This was also true in terms of accessing mental health consultation via primary

healthcare setting, as such newcomers compromised their health and quality of life due to expensive mental health consultation. For example, a female participant waited for 2 years to access affordable consultation, and a young female participant highlighted that she has been receiving mental health consultation from her home country for a year, as she was not able to afford the services here. Some participants even expressed that they were planning to visit back home to receive care (dental and vision), and some of them expressed their frustration as they were compromising their quality of life because of these basic needs (Table 5.5). In supporting newcomer patients' socioeconomic challenges, various resources were used at the clinic level. For instance, the clinic expanded support and played a bridging role connecting with resources including financial supports, coverage of medical supplies, dental and vision care, social connection (connecting newcomers with immigrants' services agencies), transportation, housing, and food via social workers.

5.4.4.3.4 Geographical and transportation

Another systemic challenge that newcomers reported in accessing PHC was the physical distance to healthcare establishments. Most of the participants stated that primary healthcare access was reduced when they first moved to Canada, as they rarely found it in geographical proximity. These challenges were further escalated by when lacking public transportation options and the cost associated with long-distance travel. Many participants added transportation as a big challenge causing delays in care because they were new to the area and did not have a private car and had to rely on public transportation (which operated on specific routes with certain schedules).

5.4.4.4 Unfamiliar and complex healthcare system

The unfamiliarity of the Canadian healthcare system and lack of information about the health services and resources was reported as one of the prominent challenges in accessing healthcare among newcomers. Most of the participants (newcomers) emphasized that they lacked Canadian healthcare information and struggled in accessing care, as they did not know what to do in the very beginning. For example, participants stated that they were unaware if they were supposed to have a regular family physician; or need a referral from a physician for specialist care; few participants reported they even did not visit a doctor for 2 years when they first moved to Canada due to unknown healthcare system and they were confused whether to visit the clinic or emergency room. Moreover, participants were surprised that not a single newcomer support center talked about how to navigate the healthcare services, rather newcomers relied on information from friends and family members. Some participants expressed the need for health system literacy centers for newcomers. Likewise, some care providers also agreed that newcomers lacked knowledge of the Canadian health system, which negatively impacted in accessing and utilization of care, and eventually lacked trust towards the healthcare system (Table 5.5). Additionally, newcomers showed their frustration with the lengthy and complex healthcare process in Canada, however, they also appreciated the universal coverage of healthcare and the quality of care they received. Participants perceived that instead of multiple visits for the same health concern, the physician could have done a single appointment. Most of the participants compared quicker access, diagnosis, and treatment process with their home country.

5.4.4.5 Facing a new life and competing priorities

Newcomers voiced difficulties of getting used to their new and unfamiliar environment when they first moved to Canada, and that directly impacted their journey of healthcare services. For instance, newcomers highlighted challenges related to transportation, weather, lacking social network, unfamiliar healthcare system, financial difficulties, employment, language, cultural differences, and fear of discrimination (stressful life as a newcomer), when they first moved to Canada. Interestingly, healthcare providers also agreed/experienced that newcomer struggled with various priorities, such as financial needs (finding a meaningful job, working odds hours, low pay) when they first moved to Canada, which influenced their quest to access healthcare services. As such, they could not get time off from work that led towards missing clinics' appointments. Newcomers expressed "you are on your own" in dealing abovementioned challenges due to the lack of social networks and supports at the beginning of their journey to a new country.

Likewise, newcomers presented competing priorities as one of the barriers they encountered in accessing care, as newcomers stressed that they had other responsibilities (jobs, study, childcare) to deal with before considering their own health. Conversely, healthcare providers also accentuated the similar experienced while caring for newcomers and refugee families, that newcomers did not consider their health unless there was an emergency because of other obligations.

5.5 Discussion

This study features newcomers' experiences in receiving primary healthcare and care providers' perspectives while caring for newcomers during the pandemic. It also highlights the

challenges newcomers encountered while accessing/receiving primary care. Overall, three aspects of newcomers' experiences emerged from this study: 1) newcomers' overall experiences include doctor-patient relationship in care, care coordination, and expectation on care access; 2) virtual care experiences contain accessibility of virtual care, accessing care, communication, ensuring safety and enhancing quality; and 3) challenges in accessing and receiving primary healthcare comprises language and cultural barriers, system-level barriers, unfamiliar and complex healthcare system, and facing new life and competing priorities.

5.5.1 Building Trustworthy Relationship among Doctor-Patient

The doctor-patient relationship is built with communal trust and confidence, respect, clear communication, confidentiality, and a mutual understanding of both the doctor and the patients' sides [165]. While participants highlighted that they had a good relationship with their physician, few participants presented their dissatisfaction with the way the doctor interacted and responded to them during the medical consultation, this poor experience led to changing the family doctor. These findings aligned with previous research [55,114,120,123,125,130] that highlighted deficiencies in physician-immigrant patients' relationships due to various challenges. In good medical practice, effective communication plays a central role in building therapeutic relationships between doctor and patient. As such, participants revealed that their quality of care was compromised because of doctors' poor communication/interaction and behaviors towards their health concern(s), which is aligned with Pollock G. et al study (2012) [119]. Equally, newcomers presented higher expectations than they experienced while receiving primary care, as they compared healthcare services with their home country and expected to receive at least similar, or even better healthcare services, and this result is supported in the previous study (2017) of Woodgate R.L. et al [130].

Forming a respectful and welcoming doctor-patient relationship requires mutual understanding, respect, and acceptance, that can help overcome the majority of the challenges faced by newcomers to Canada while prospering the goals of universal healthcare for all. Based on our findings, some possible strategies to build a good doctor-patient relationship would be taking time to get to know the patient's needs, preferences, and expectations while maximizing the patients' comfort and ensuring the patient that the physician is doing everything possible for their prognosis and treatment without abandoning the patient, which aligns with patient-centered care as defined by Institute of Medicine [166]. Some of the additional considerations to improve doctor-patient relationships include evaluating patient health literacy, educating patients about the medical condition with effective communication, involving them in the care management process, establishing a team (multidisciplinary team) inpatient care, well care coordination, regular following up, and care continuity. As non-verbal communication plays a crucial role in understanding and building a good doctor-patient relationship, this has largely impacted during the pandemic due to virtual care or masking, and the negative effect could be far greater in the context of newcomers. To address this effect, an awareness of healthcare providers, policymakers, and patients is helpful to theorize appropriate strategies.

5.5.2 Enhancing Virtual Care Experiences

The pandemic has created a physical barrier between healthcare providers and their patients, which creates many challenges in traditional ways of human connection. Many people struggle accessing healthcare, and virtual care allows patients and healthcare providers to interact via technology largely in PHC. In this study, virtual healthcare experience was well taken from both newcomers and primary healthcare providers. However, few participants revealed that

virtual care visit was not much helpful due to the language barrier (hard to express medical concern(s) and understand doctors' advice/instruction virtually).

Further, even though virtual care visits had some glitches in implementation at the beginning, most of the care providers emphasized that virtual care played a crucial role in care continuity. However, our results sustain the earlier findings, a study conducted by Verhoeven V. et al (2020) [167] that switching telephone consultations created more difficulties for most of the healthcare providers, as they lost non-verbal interaction, reduced ability to articulate patients' needs due to language barriers and intercultural communication. As the COVID-19 pandemic continues, the relevance of digital health literacy has increased to support virtual healthcare, and digital health literacy remains a challenge, especially for the marginalized population including those who have language barriers and/or are unfamiliar with digital technology. To support the delivery of virtual healthcare services, there needs to be equitable access to technology across the healthcare centers, orientation for healthcare providers, and continuous digital literacy among a diverse range of populations including marginalized communities.

5.5.3 Overcoming Newcomers' Challenges in Accessing and Receiving Primary Healthcare

Immigrants reported various challenges in accessing healthcare services [45,55]. This study features that newcomer faces various challenges, largely languages and cultural differences; socioeconomic and system-level barriers comprise facing new life and competing priorities, timeliness of care, healthcare cost, waiting time, transportation, and geographical distance; and the unfamiliar and complex healthcare system. The results from this study strongly aligned with our precious literature review [55]. These challenges are more magnified since the onset of the COVID-19.

Canada presents diverse and ethnically heterogeneous communities, it is crucial and challenging in providing culturally and linguistically competent healthcare services. Our findings corroborated with previous studies [55] that language and cultural differences were reported as one of the significant barriers not only in accessing healthcare services to newcomer population but equally challenges delivering care by healthcare providers. This is an international problem that affects not only immigrants in Canada but also many European countries and the United States [139,140]. This study also revealed that healthcare providers who had cross-cultural training and used interpretation services (both language line and ad hoc translators) created a positive environment in tackling some of the language and cultural challenges in caring for newcomers, but it was more difficult in navigating care across extra-organization, as not every center offered these facilities and family members (for translation) were not allowed to go along with patient due to the COVID-19 restriction. In tackling cultural and linguistic differences in care, promoting cultural competence training (cultivation cross-cultural awareness and communication); maintaining diverse workforce (multilingual staff); introducing interpretation services (language line, interpreters, or ad hoc translator) across healthcare establishments; and ensuring linguistically diverse materials and information would be some of the strategies to enhance equitable access to care in an inclusive environment for a diverse population including newcomers.

Likewise, the results from this study aligned with an earlier study [130] that new immigrant and refugee families encountered various challenges, when they first moved to Canada, including transportation, weather, employment, language and culture difference, and lack of social support in their quest to access health care. Social support plays a crucial role in healthcare, particularly for newcomers [55], and our results closely aligned with the earlier study

that newcomers who had good social networks/supports experienced an easy and comfortable way of connecting with the healthcare system, whereas it was opposite to those who lacked friends, family, or social connection when they moved to the new country [55]. Long waiting time for treatment can result in increased suffering for patients, lost productivity at work, lower quality of life, or ultimately disability and death. Newcomers reported their frustration due to the long waiting time in accessing PHC, which was much more during the pandemic, our results lined up with previous studies [55,120,124,127,130] that revealed long waiting time and promptness of care was the most constant reported challenge in accessing PHC among newcomer population. Our findings also support the sequences of earlier studies [55,118,128,130], that newcomers experienced barriers in accessing and receiving PHC because of extra (uncover) healthcare costs including drugs/medical supplies, dental and vision care, and other therapeutic services, and they compromised their health due to affordability of care.

Timeliness in healthcare is the capacity to provide medical care quickly after a need is identified, which can prevent health and help to reduce illness and death. The newcomer had a negative impression in their quest to access healthcare, as they perceived that the system is complex: could not choose family physicians or/and access to care when it was required immediately; were not able to find a family physician in their geographic location (doctor not accepting new patients); and presented unmet healthcare needs or delayed in care. Our study revealed that unfamiliar, or lack of Canadian healthcare system literacy was a big obstacle in accessing PHC in a timely manner among newcomers, and this finding closely aligned with earlier studies [55,129,130,168] that showed new immigrants lack Canadian healthcare system knowledge and available resources impacted their timely access of PHC.

A strategic plan needs to be placed to address those challenges and enhance equitable access to primary care. A careful collaboration among stakeholders [public health agencies, local organizations (ethnic and settlement agencies)] to develop and implement health system literacy programs would be helpful to newcomers for navigating healthcare services in a timely manner. Further, expanding the coverage of healthcare cost either fully, or partly for the basic healthcare needs (e.g., dental and eye care, medicine, and medical supplies, and other healthcare costs), regulating dental care prices, supporting newcomers in social connecting would be some of the strategic steps to improve equitable access of PHC.

5.5.4 Strength and Limitation

There are various methodological strengths of this study including its qualitative design. Via in-depth interviews, we were able to comprehend newcomers' lived experiences in accessing and receiving primary healthcare as well as the experiences of healthcare providers' providing care to newcomers during the pandemic. We explored individuals' perspectives and the one-on-one interview allowed an individual to share their stories who were not comfortable sharing it in a group setting (the expected socially desirable bias). Another strength of this study includes the comprehensive representation of the study participants from different ethnic backgrounds, who shared their stories from different standpoints. Equally, along with newcomers, we interviewed not only family physicians, but also multidisciplinary professionals (primary healthcare nurses, pharmacists, and social workers) to understand their lived experiences during their medical interaction with newcomer patients, which has strengthened to comprehend a complete story from the patient-provider viewpoint. The interviews were conducted one time via a virtual platform (Zoom), which limited the rapport-building with all participants and reduced the capacity to capture participants' body language. However, all the participants were comfortable

sharing their experiences and agreed to keep their cameras on during the interview, we were able to maintain field notes about their tone, expression, and body language. As we did this study during the pandemic, the virtual interview was the most convenient interviewing. Similarly, the interviews were conducted in English, given this, anyone unable to communicate in English was excluded from participating in the study, limiting the relevance to non-English speaking populations.

5.6 Conclusion

This study presents a comprehensive aspect of newcomers' and primary healthcare providers' lived experiences in accessing/delivering care during the pandemic. Newcomers to Canada presented many challenges in accessing and receiving primary healthcare, and the challenges as such more increased since the onset of the COVID-19 pandemic due to the impact on social life, job loss/financial constant, and care digitalization (virtual care). The results clarified that additional targeted supports need to be placed in a timely manner to improve primary care access of marginalized groups including newcomers. The findings of this study present a great opportunity for clinicians, healthcare professionals, healthcare administrations, policymakers, and health researchers in designing specific programs that address the challenges of the newcomers to Canada.

Declaration

Author's contributions: MS, FA, and JJ conceived and designed the study with input from BB; BB conducted interviews. BB and SA worked on analyzing the data. BB interpreted the findings and drafted the manuscript, and all authors FA, JJ, SA, and MS critically reviewed, provided feedback, and approved the final version of the manuscript to be published.

Funding: This study received funding from the Cumming School of Medicine, the University of Calgary to provide support to the graduate student.

Competing interest: All authors declared that they have no conflict of interests.

Ethics Approval: The study received approval from the Conjoint Health Research Ethics Board of the University of Calgary (Ethics ID: REB20-1015).

Data management and sharing: This study analyzes qualitative data, and the participants did not consent to have their full transcripts made publicly available. No additional data.

Acknowledgments: The authors are grateful to all the research participants for their valuable time and for sharing their lived experiences with us. We would like to acknowledge the Sunridge Family Medicine Clinic for authorizing us to do this research at the Centre and supporting the recruitment of the study participants. We also would like to acknowledge all the healthcare providers at the Clinic, who participated in this research and supported the recruitment of study participants.

Table 5.1 Demographic characteristics of the study participants.

Demographic Characteristics of Patient		Demographic Characteristics of Care Providers	
Variables	Study Population, N=15 (%)	Variables	Study Population, N=8 (%)
Age in years		Age in years	
25-35	9 (60%)	25-35	2 (25%)
36-45	6 (40%)	36-45	1 (12.5%)
Gender		46-55	3 (37.5%)
Female	7 (46.7%)	56-65	2 (25%)
Male	8 (53.3%)	Gender	
Level of Education		Female	6 (75%)
High school and below	1 (6.7%)	Male	2 (25%)
College diploma	2 (13.3%)	Healthcare Provider Type	
University Degree	12 (80%)	Family Physician	4 (50%)
Country of origin		Primary Care Nurse	2 (25%)
South Asia	7 (46.7%)	Social Worker	1 (12.5%)
African	4 (26.6%)	Pharmacist	1 (12.5%)
Middle East	1 (6.7%)	Country of graduation	
South America	3 (20%)	Canada	6 (75%)
Language spoken at home		Outside of Canada	2 (25%)
Nepali	3 (20%)	Years of Practices	
Hindi	1 (6.7%)	<5 years	2 (25%)
Punjabi	2 (13.3%)	6-10 Years	2 (25%)
Bangla	1 (6.7%)	10 Years and Over	4 (50%)
Yoruba	1 (6.7%)		
Tigrinya	2 (13.3%)		
Spanish	3 (20%)		
English	2 (13.3%)		
Family Size range			
<3 members	4 (26.6%)		
3-5 members	11 (73.3%)		
Employment status			
Employment (FT-8 & PT-3)	11 (73.3%)		
Unemployed	3 (20%)		
Student	1 (6.7%)		
Length of stay in Canada			
<3 Years	6 (40%)		
3-5 Years	9 (60%)		

Figure 5.1. Self-reported mental health impact; trustworthy sources of COVID-19 information; types of services received; and the level of comfort to get vaccinated against COVID-19 (N=15).

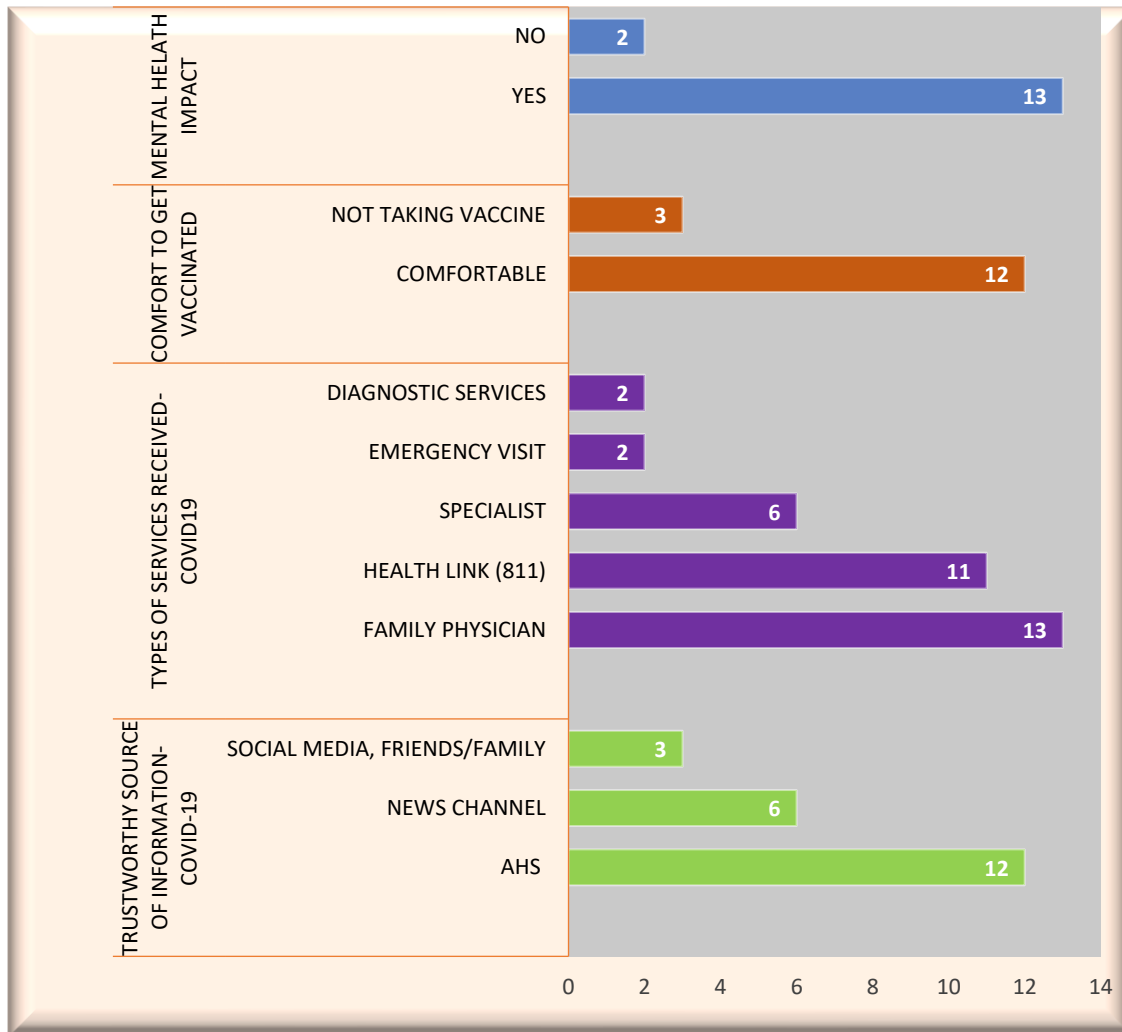


Table 5.2 Newcomer’s overall experiences in accessing and receiving Primary Healthcare (N=15).

Theme/subtheme	Description	Representative Quotes
Relationship with Family Physician	Trustworthy relationship: good listener, trusted and connected, supportive, like a family member.	“I had good experiences with my family doctor. He really helped me with my problem. I'm going to stay with this family doctor and he's an excellent doctor, he understands the problem, he described for the patient, he is very cooperative, and I really felt very safe with him” (Patient G).
		“The best thing was that both doctors were amazing listeners, so that the doctors should be, right, firstly, he never said anything very quickly before taking my information... they understand my concerns and asked me so many things (about my health) ... Then I feel so good that he understands my issues and he listened” (Patient E)
		“When I got COVID-19 positive, my family doctor called me every day, checking if I am doing ok or not. I am so happy and proud. My family is in another country, when I was sick, I felt my doctor as a family, and I got hope when he listens, talks, and advise me properly. I trust my doctor that if something happens to me, my family doctor is going to take care of me” (Patient. M).
		“I had a great family doctor; we are beyond a doctor and patient relationship we are also friends. So, we have a good trust in between us even, you know, we had a very connected as also my background is a medical doctor from back home, so it's easy to interact, but it doesn't mean that this happens to everyone especially in immigrants” (Patient. N).
		“He's (my family doctor) so responsible person he called us and said, okay, the referral was no accepted, but I phone another program so, he said, I can't do it for you, the parents have to do it. So, this is the information (provided all the required information) ... we are going to have a follow up for my daughter.” (Patient A).
		“I felt more comfortable with my family physician than my OBGYN... I just felt like she understands me she gets me, she knows my needs. Like she's willing to look at me. I just felt rushed with my specialist and when I had my baby, I couldn't wait to get back to my family physician, frankly speaking” (Patient 0).

Theme/subtheme	Description	Representative Quotes
	Respectful of patients' preferences and involved in care decision-making process	<p data-bbox="743 237 1955 342">“My family doctor is more open to listen to you and what you want...he offered me two treatments; I choose one. And he was okay I respect but he gives me the option at least he listens to, respecting my preference and involving what I want, yes, exactly” (Patient A).</p> <p data-bbox="743 383 1955 488">“Yes, they do respect my preference...I mean it's a very healthy discussion with my doctors... Yes, they do involve me in care management, they're very much like aware of my concerns and they include that” (Patient F).</p> <p data-bbox="743 529 1955 634">“My family doctor respected my opinions, and I trust him. He like yeah, he asked like what you took before, what do you prefer, what do you want with me and he's just like really transparent when he speaks. He really wants to help his patient” (Patient G).</p> <p data-bbox="743 675 1955 894">“I felt my family doctor always involved me in his decisions like, give me time, providing options like this is what you want to do. You know, I felt carried along, actually. For example, I wanted to try a vaginal birth, and my doctor said yes, you could go along and do that. They were very helpful, and when I changed my mind to go for an elective cesarean section, they were very supportive as well. I didn't feel like anybody was trying to force a choice on me or anything” (Patient O).</p>
	Respectful of patients' culture and values/culturally appropriate care	<p data-bbox="743 938 1955 1076">“They're (doctors) always kind, listen my problem and responding it with respect, they did not alter my daily habits altogether, rather suggested alternatives...they (dietitians) did not try to impose me with local cuisine rather they tried to modify my diet with my existing culture” (Patient J).</p> <p data-bbox="743 1084 1955 1222">“They (family doctors) do respect patients' culture because whatever I say they would appreciate it, rather than having an argument or they would say oh this is not what happens here, but they would say oh yeah, we do understand you're from a different part. So, whatever your belief is, we respect... which I really liked” (Patient I).</p>
	Discrimination /Disrespectful: Patient concerns were not taken	<p data-bbox="743 1268 1955 1408">“The doctor directly referred me to the physiotherapist without doing X-ray and providing much information. I was really disappointed at that time... I requested many times for x-ray or MRI as my pain was sever and I could not sleep but that did not happen... I was sent for USG, resulted muscle infection... I think, the doctor was not giving much time, not listening my</p>

Theme/subtheme	Description	Representative Quotes
	seriously, negligence in care	concern, and not providing enough information regarding the care I am receiving. I felt discrimination because of my skin color, and after that I changed my family doctor” (Patient H).
Communication between patient and care providers	Good interaction with care providers, well explained medical information, the treatment process	“Of course, doctors interact with me... they are open, there was a good communication. It makes me feel comfortable to ask them more questions and they would never hesitate to answer, and they shared all the information. They explain everything without hiding anything; the prognosis and the treatment plan in a very good way which made me feel more comfortable” (Patient I).
		“I have visited 3 doctors, all of them are very good on that point I mean, they discuss everything with you.... I get good response on that side. The healthcare center is very good, and I believe that they are capable to deal with any kind of patient, any kind of language” (Patient K).
	Lacking communication, less interaction between patient and doctor: cultural difference, felt a gap in information as a doctor is always in a rush	“It's obviously not the same as you experienced back home... I had difficulty to understand what they're actually trying to say, like, it was always not an easy, you know, trying to talk to the healthcare provider... maybe it could be the language thing or, you know, sometimes, because they're not from the same background, it was a little uncomfortable in the beginning” (Patient I).
		“The doctor (family doctor) did not do any physical examination, “even did not touch me or look at me, she just prescribed a painkiller... the doctor was not paying attention and did not explain to me at all what is the next step. When I asked more questions regarding my health, the doctor was not giving more information, rather referred to other doctors without providing sufficient information, “that was the very bad incidents during my life” (Patient H).
Care coordination	Good care coordination within the clinic, diagnostic centers,	“My doctor sent requestion for lab test, I want to the lab for blood work, they sent the lab result to my doctor. My [family] doctor coordinated with my specialist, who has access of my results and also referred for further diagnosis. The doctor office booked an appointment for me, and the result was sent back to my doctor.” (Patient G).

Theme/subtheme	Description	Representative Quotes
	and specialist, patient follow-up	<p data-bbox="743 233 1955 375">“After changing my family doctor, I got a very good coordination; my doctor frequently giving me a phone call, how are you, how is going on? your lab report is here, I just want to see you, can you please book the appointment? Yeah, the coordination is very good. Yes, they are doing teamwork in timely manner” (Patient H).</p> <p data-bbox="743 418 1955 560">“It was a very good experience for me and the coordination between the Inter Department and intra Department... I'm kind of impressed with all these health care services/facilities and the coordination between each and every branch of health care services. I think they have done pretty good work around managing my health” (Patient J).</p> <p data-bbox="743 604 1955 777">I had the most engagement with the healthcare system during my pregnancy... I would say that the care continuity was good. The referrals were timely and was good....No time did I feel like someone dropped the ball...everyone coordinated the information they needed to manage me...Most of my health care services were around me in terms of the urgent care services, ultrasound, or vaccinations...” (Patient O).</p>
	Lacking care coordination: Left patient for self-coordination, no report available, no follow up from care providers	<p data-bbox="743 823 1948 1040">“Absolutely, there is communication gap between professional... a doctor is like oh my god, I don't have the report of June last appointment with your hematologist, or I don't have here the last report of your baby pediatrician. So, there's a lack of information and lack of communication between them and that's a challenge for a newcomer because if they don't communicate between them, they don't communicate to you. So, you're the one that is lacking information, and there is lacking good attention and quality healthcare” (Patient C).</p> <p data-bbox="743 1084 1948 1297">“No, it is below... My family doctor never calls me or wants to know, how I am doing until I inform him... my family doctor referred me to the diabetes specialist and the specialist suggested me to maintain a food chart. She also said she will see me after a month, but it's been over two months there is no follow-up from her side that what is going on to me, neither my family doctor did any follow-up. I feel it depends on person to person, as my previous family doctor used to do a regular follow up, what's going on, right” (Patient K).</p>
Expectation in care access	Compared healthcare with	“My expectation is not quite meet with the treatment process here. If I compared my home country, when I first visit to a doctor with some health complain, they have tendency to

Theme/subtheme	Description	Representative Quotes
	<p>home country; Expected prescription (medicine, test, referral), fast process, follow up, choose of Family Physician and specialist, uncover healthcare cost, less interaction</p>	<p>prescribe some test and medicine, but here they just suggest changing food habit or exercise... you need to wait for some days until the situation is worse. I feel, what is the meaning to visit to doctor, or why do not they prescribe medicine same time? The care process does not match with my expectation, and I am disappointed... I used to with this kind of practices that if I go to the doctor that has to have a quick-relief of my pain” (Patient K).</p> <p>“I don't know, my family doctor always being so rush, she just gives me 4-5 minutes and move to another room, no real physical examination or understanding where the patient is suffering more and interaction with patients. Even no prescription for test or medication and no referral. If I compare back home, I get enough time to interact with my doctor, within 24 hours all the diagnosis are done, I get to choose my specialist and I will be mentally clear about my diagnosis and disease, but here I am waiting for worse without knowing my health condition” (Patient H).</p>

Table 5.3 Newcomer’s virtual care experiences in receiving primary care (N=15).

Theme/Subtheme	Description	Representative Quotes
Accessible Care	Virtual care is convenient and comfortable in accessing care	<p>“I prefer because I am experiencing anxiety during the pandemic. So, virtual care is comfortable, is a relief for me, but I think that some things must be in person, virtual care is not enough. For example, a follow-up could be virtual without problem, but emergency or walking attention must be in person because it is kind of a priority” (Patient C).</p>
		<p>” Virtual care visit is actually convenient in number of times; you don't have to go into anywhere and we are doing person to person consultation. To be honest, it's a new experience, doing all these consultations over the phone, there wasn't a big difference apart from the face-to-face conversation, but I was able to explain my queries... if they didn't, they asked me to come in person and get myself examined” (Patient D).</p>
		<p>“I haven't noticed any difference between virtual and in-person care. I mean, virtual care is pretty efficient... it's pretty convenient like this morning. I had to take consultation with my family physician... I was not very interested in the fact that I be going there and spend waiting there in a lounge with full of patients... That was pretty much easy and convenient as I got a consultation and prescription without the trouble of going to the clinic for minor ailments” (Patient F).</p>
Faster and save travel time: You are on your place		<p>“Of course, the virtual is always faster because you're in your home and then you connect, you talk about your problem. There’s always that issue of travel time and then wait time in the clinic and then you get in, you know, when you are going physically, but I still prefer that physical connection” (Patient O).</p>
		<p>“Exactly, virtual care visit saves time. The thing is that my doctor didn't need to see me physically anymore like so why should I go there. It was fine, it was safe, it was better. My experience with the family doctor was very good actually. He was very comfortable with virtual care visits” (Patient G).</p>
		<p>“Saving time on transportation and doing everything on the comfort zone of your home I think the virtual or the telephone conversation are also good” (Patient J).</p>

Theme/Subtheme	Description	Representative Quotes
	Preference to keep virtual care visit	“I prefer to have virtual care visits instead of in-person, but they do not accept over the phone... they are not offering virtual care. Waiting a long time for an appointment and long travel time, I am more comfortable with virtual care visit” (Patient G).
	Preference to have in-person visit rather than virtual visit: Not enough for baby, hard to express medical problem: no visual clue/physical examination)	“With my baby... the appointment with the pediatrician was virtual, and I think assessing a child through virtual call is almost impossible... So, virtual care is comfortable for me, but I think that some things must be in person, virtual care is not enough...” (Patient C).
		“I think if you are in a one-on-one consultation (in-person) with your primary physician, that is obviously better because you can feel the body language and you can feel reassurance in his eyes. So, when you go to the mental health issues, I think a one-on-one consultation would definitely be a better alternative” (Patient F).
		“Well, I would always prefer the in-person service, but this pandemic has taught us more about this virtual thing also. I had a problem with my ankle, it's swelling, and I can't move. My doctor determined that she needs to see that herself and she need to touch the area to determine what the problem was and then she called me over to the clinic, and I liked it” (Patient J).
Communication challenges/difficulties in expressing medical concerns in virtual visit	Language barriers including medical terminology: Hard to express the medical problem or/and understand the instruction/medical advice: dissatisfied, not much benefit	“Exactly, I had an appointment with my doctor over the phone, it was hard for me to explain. I couldn't picturize how exactly the situation is. So, if it was in-person appointment... I would get a better chance to explain what exactly has happened... I knew what I wanted to say, but it was hard for me to explain to her... It was kind of hard to explain like I was trying to say something, and she would understand something else, so that was difficult” (Patient I).
		“Interacting with the health care provider via virtual care, I think it's quite tough, and it's very hard to understand what the doctor is saying and its hard to express my health problem as well. I think, its bored and English is not my first language and also not understanding medical terminology; repeating many times what I am trying to say and asking doctor many times for the same question, its more triggering. We did a lot of virtual

Theme/Subtheme	Description	Representative Quotes
		health checkups, and it's not too much benefit. I would say, as a patient I suffer more for the virtual care visit" (Patient H).
Timeliness of care/accessing care		
Accessing health advice over the phone	Long waiting time in connecting with 811	"I stopped calling 811 because it doesn't make sense to be like two hours in the phone waiting for someone to respond, just to ask something" (Patient C).
		"Reaching 811, it was a problem, and we could understand because everybody was facing the same problem or had a concern that's why, but it took me around an hour or so to talk to the representative over there. It was little bit longer but given the situation of the whole country I could understand why it took some time to pick my call" (Patient J).
	Well communication and instruction, information, supportive (811)	"I used to call 811 and they were pretty nice with the COVID: taking all the queries... they give you a guideline and the direct you in a manner, which can solve your queries you do not need to go Emergency Room or scared what's going on. So, yeah, that helps" (Patient D).
		"I got a very good response from 811, I think she is a RN, she explained very well. Though the waiting time was long, maybe due to this pandemic, but she responded very nicely at that time, she explains a lot of things. It was about my son, and I felt comfortable" (Patient H).
Care accessibility	Long waiting time to connect with family doctor office and receive call from doctor for care	"Connecting with family doctors, during pandemic, is nightmare... I usually try two days continuously to connect with doctor's office, it's a terrible experience... So, after waiting one and a half hour... I get an appointment for after one month later. I was suffering with serious joint pain that there was not solution and was confused what do I do after one month appointment, it is unacceptable in country like Canada. it is really disappointed" (Patient K).
		"My virtual appointment with family doctor was 10 AM, I was expecting at least the doctor would call me at 11 AM, but I received call at 4 PM. I was waiting whole day for doctor's call for my appointment. I called them back and they said doctor is busy. This had

Theme/Subtheme	Description	Representative Quotes
		happened many times. So, I was little disappointed, but once I connected with doctor it was good experiences” (Patient I).
	Long waiting time for an appointment diagnosis	“Wait time for diagnostic services is long. My family doctor prescribed me X-Ray and ultrasound of my ankle, it took two weeks and by the time my pain was gone. Similarly for the blood work it takes around two to three weeks. Maybe because of this current pandemic... but still it was a long wait” (Patient J).
		“I received a call two weeks ago for an exam that the doctor prescribed me more than a year ago. I just forgot about it. When the lady of the X rays place called, I didn't know about what she was talking. So, wait times are really long” (Patient A).

Table 5.4 Primary healthcare providers’ virtual care experiences in caring for newcomers during COVID-19 (N=8).

Theme/Subtheme	Description	Representative Quotes
Accessible Care	Easy and straightforward over the phone, care continuity, save time and transportation cost	“Virtual care visit... it helped a lot of patients not to come here for instance for renewal of medications and for rotations for common elements and now we're using it for most everything except those that need to come into the clinic for some specific reason that cannot be dealt with as far away virtual” (Provider B).
		“We’ve embraced technology to support care and probably take the pressure off of patients to actually physically come into the clinic all the time... So, there's more opportunities with technology just support patient care and stay connected... we need to see how we can support the patients in different ways and more timely care” (Provider G).
Protocol-driven to adapt: process to implement/provide virtual care	Care delivery from home; needs assessment to adopt virtual care; training to adopt virtual modality in care delivery; the cost associated with virtual care	“They (government) said 10 minutes were supposed to provide physicians with the time to see a patient on a new system (virtual) where the patient is struggling with gadgets for virtual care which is not even sure how to go with it and no patient at the beginning could be seen in less than 20 minutes. It was frustrating and also made it very difficult for the physicians... these doctors’ offices are supposed to survive and continue...” (Provider B).
		“Well, it's definitely caused much more frustration. it's made much more difficult, and you have to be creative with what you're doing here, it's not been like the best, of course, it's not like so the easiest way to help patients having this all the virtual care and stuff just saying it's a learning and adapting continuously” (Provider A).
	Readiness for virtual care: Understanding the need, resources arrangement	“Initially there were the issues that the system had to agree to change yourself and accept that virtual care had to be given legal issues and they were as system issues and fears and lack of understanding and even the system was not ready to let go on until we saw that we had to do this everything now quite quickly started to change” (Provider B).
	Adopting new process and	“Barriers from us the caregivers ourselves who had to learn new ways of doing things and people said no it's not possible to give care like and it’s going to be horrible, patient and

Theme/Subtheme	Description	Representative Quotes
	technology: Learning technology, documentation	I'm going to suffer...but some care would be giving well with this format and with some care would be poorly given with this format and we have to make a balance where we need to see somebody in person where we have no choice but to just do video conference” (Provider B).
		“With COVID it's more challenging, there may be more requirements to be able to find out if the person can't print the form, did they have somebody to fill it in for them, so that's been more of a challenge... a challenge I think forms and paperwork” (Provider C).
	Navigating healthcare system for newcomers: Lack of time to explain to patients, Lack of resources (Language line not available in all centers)	“Another problem I see is, how they (immigrants) navigate, I use the language line... but this service is not available when they go for the lab or X-Ray or for some specialty..., they have to bring a family member or friends, that's the challenges for them and especially if things are going more difficult to have to go for MRI or CT and they have to write something there and they cannot understand that is very complicated within the system... I know my patient I can handle them if they are new to some other people that will be really big problem” (Provider E).
Challenges in ensuring the safety of care provided	Unsure if patient able to express their medical problem or/and understand the medical	“They don't use language line even though they have limited English just because they say yes and shake their head doesn't mean they understand what you're asking them... I think, they're trying to please us, even if they don't understand, even if you try to explain it, they will nod their head... it's easy for us to assume that they understand, and they try to make it easy on you like because you're really trying to explain something, and they

Theme/Subtheme	Description	Representative Quotes
	advice/instruction, concerned about patient safety	<p>don't quite get it even with language line...everything is complicated and then you don't know the stressors they're living with mental health and the other support systems and, it's very complicated" (Provider G).</p> <p>That's for sure that is a big problem... I don't know what the language line interpreter will tell and what exactly the response is. So, I just need to rely and but the service I have both, number one I cannot get the information I believe and also I am not sure if the information I provided really is understood which is challenge. (Provider E).</p>
	Not all care can be virtual: Care needed visual clue or/and physical examination: skin rash, difficult to assess via phone and ensuring that their advice and prescriptions are well understood to prevent undesirable results	<p>"It makes me worried that we're missing a lot of things, because it's just virtual care. I don't hate virtual care... It's a better option than nothing, there are some things that are fine for virtual care. But there are a lot of things that just aren't... I really worry that people having cancers that aren't being detected because they're not having a physical exam. I worry that people have injuries or arthritis that's getting worse. And they've just got so much else going on... I feel like we're playing catch up instead of doing preventative medicine" (Provider C).</p> <p>"There are lots of little things that does affect your ability to practice and be comfortable of providing safe diagnosis and management via virtual care. It's just harder of course again we are human, face to face explanation is always good now sometimes... they (patients) don't understand 100 percent, so its impacted, I mean the virtual care is not like a real exam" (Provider E).</p> <p>"I always feel like there's a gap when there's some cultural differences even if I specifically ask a patient if there's something that I'm missing in terms of their language or their culture... when they speak English little bit easier because then I can understand what they're telling me but when they don't speak English I find that a bit more difficult because we're going through translator, so sometimes I feel like even though I'm asking the questions that I'm not necessarily getting their perspective" (Provider F).</p>

Theme/Subtheme	Description	Representative Quotes
Delivery of quality care impacted	Involving patient/family in care delivery process; felt a gap in delivering care: (physical health/examine)	<p>“So, I find it super valuable to involve patients in quality improvement... I think getting the patient's voice is really important... making sure they understand what the pros and cons are to their selection of treatment plan or whatever that may be whether it's like investigations or treatment medications there are people whatever the case may be understanding what their options are what their barriers might be and if there's something I'm missing culturally that might be appropriate for them in terms of next steps” (Provider F).</p>
		<p>“It was becoming really difficult like a patient with in ear pain or some skin rash or something like you just can't look inside a person's ear if they're not here and even pictures further skin rusher video you can't really see it very well so and it really depends on the doctor's comfort too but most of them were OK to see the patients if we triage them in the in a way that was like requiring them to come in” (Provider A).</p>
		<p>“There's a lot of factors affecting their care and then we just assume that, well, we just order it and it's done and everybody's good but that doesn't always happen because you need to have that like, they need to be part of the care plan like what do you want for your care what are you willing to accept and where do you want to start and when you don't want to overwhelm them” (Provider G).</p>
	Not able to involve patient/family in quality improvement process (survey, feedback)	<p>“Before COVID-19, there was pen and paper available and everyone will comes and after done we asked just to gives us a feedback which is good which is bad and but because of the COVID...that is not being done as much as before, because before they could actually write themselves and then put everything in the box but we cannot just do it anymore with exchanging items” (Provider E).</p>
<p>“Yeah, because it makes more difficult to gather information when you're not seeing the patients here you don't have them physically in person to have them fill something out like in the past, we've had different quality improvement things where we ask the patient</p>		

Theme/Subtheme	Description	Representative Quotes
		to like can you fill this quick thing out here while you're in the room waiting for the doctor” (Provider A).
Communication challenges	Challenges of using Language line: Accuracy of translation, complex process	<p data-bbox="768 337 1923 651">“Language line which is works pretty well in-person but over the phone it's more challenging because you have to phone the language line 1st and then they phoned the patient and then you're like on a 3 way call but if the patient doesn't pick up then you have to leave a message saying please call back but when they call back you have to say please hang up we're going to call you back with the language line cause you can't link them in once you've already got them on and then it's really hard to give directions and instructions with language line it's a lot of it takes a lot more time... It makes a lot more challenging” (Provider A).</p> <p data-bbox="768 691 1923 959">“We booked a bit longer just because of the language barrier and having to use language line encrypted connect with this population, I find virtually very difficult to help them cause you miss a few of the aspects they would normally get in-person like body language sometimes the interpreters don't necessarily tell you everything that you asked and everything that they've told them... so I always feel like I'm missing something CAUSE dialogue back and forth that they don't necessarily share in person and I could read body language... ” (Provider F).</p> <p data-bbox="768 1000 1923 1154">“With the language line on the phone, there has been challenges with you are never quite sure what they're talking about... I asked a very direct question and like 2 minutes later, they are still talking... I have no idea like if the person is offering their opinion or trying to clarify it” (Provider G).</p>
	Pros and Cons of using Language line and Family member in translation services	“The family members are excellent resource, and they help you understand the patient's worldview and complaints ... In some other cases, you also find that some family members being the translators might obstruct the consultation. They might be a barrier to information exchange ...might try to interpret the patients complain rather than give you exactly what the patient said” (Provider B).

Theme/Subtheme	Description	Representative Quotes
		<p>“It's not always the same sometimes is with the translator you don't know what they (family members) are translating and sometimes it's there what they want to happen for the patient so I don't know their relationship with the family members, like if it's a worried sister or mother then that's biased, a little bit biased and then, and then you don't know if the patient is feeling pressured to do stuff that they're not ready for or not” (Provider G).</p>
	<p>Communication complexity: Process of communication to non-English speakers</p>	<p>“After the COVID, it's like a conference call we used and again the challenges come number one is a translation issue and you cannot see the patients if they say stomach pain for example but... language line actually do a great job they need to but there are lots of little things that does affect your ability to practice and be comfortable of providing safe diagnosis and management” (Provider E).</p>
	<p>Difficulties to patients in expressing medical concerns, understanding instruction and advice from care providers</p>	<p>“One patient ended up having a miscarriage, she was in hospital in the waiting room and didn't get the help she needed before miscarrying and losing her baby, because she was unable to make herself heard and fully explain what was happening to her, so I think it would be the cultural barrier and also the difficulty in being able to make your needs heard you know express yourself in a way that that gets the attention so that would be a concern” (Provider D).</p>
	<p>No visual clues: Body languages</p>	<p>“New immigrants who is still struggling with the language discussing directly with you... though we had language line, with teleconference we lost the visual cues if the patient happy or not-happy, agreeing or not -agreeing. we are doing blank, you cannot see the nuances and you know the facial expressions or the movements that patients make that tells you something is not right, we had to be imagining things and imagining things doesn't work with medicine... it was extra challenging to do virtual care” (Provider B).</p>
	<p>Understand Patients' Cultural/preferences:</p>	<p>“They (newcomers) think the doctors have a really higher rank and whatever they say is really true and they don't have any chance to objected... even after a few years I still feel</p>

Theme/Subtheme	Description	Representative Quotes
	Culturally appropriate care	some people feel like this. Although, we actually want to make sure that we have a mutual conversation that's mutual decision and decisions are informed and understood. So, there's one thing is that they feel if they are patients, they cannot just contradict doctors' opinions..." (Provider E).
	Challenges in connecting with the patient including, availability and familiarity with technology.	"So, some people don't have access to video and internet and computers. So, in general for folks, it's been if we wanted to provide a resource..., Sometimes phones may have been disconnected because folks have lost their job and they're in a tough way for finances...that would be a potential barrier during COVID" (Provider H).
		<p>"Not every patient has with same availability for resources to do virtual care it is not a good phone and that video was not possible for most people because it meant Internet... and of course the learning curve for the patients suddenly to teach them how to do video conferencing and these were challenges we had to face there especially with certain population groups like elderly people... but the elder patients had lots of difficulty coping with that..." (Provider B).</p> <p>"The challenge is trying to connect at the right time with the right person. I've had a situation where I was trying to call the patients daughter regarding the patient cause the patients didn't speak English and I called the one daughter but she actually the daughter in law and she said oh I'm not with the patient this other daughters there but the one I was speaking to is the one trying to make the appointment and an make like get information but it was difficult to do any sort of assessment on the patient if she's not even with him so..." (Provider A).</p>
	Missing a follow-up or no show-up.	"Oh, that happens all the time actually majority of time and when I guess sometimes the phone is not in service anymore when they registered or that they're not at the same address anymore and then you just really cannot if even you want to chase them it's not possible because they are just not there and that's all the time happens" (Provider E).
		"We had a lot of no shows even for the virtual things right and those who had to come in person we had to juggle out to help them come in..." (Provider B).

Figure 5.2 Challenges in accessing primary care: from newcomers' and primary healthcare providers' perspectives.

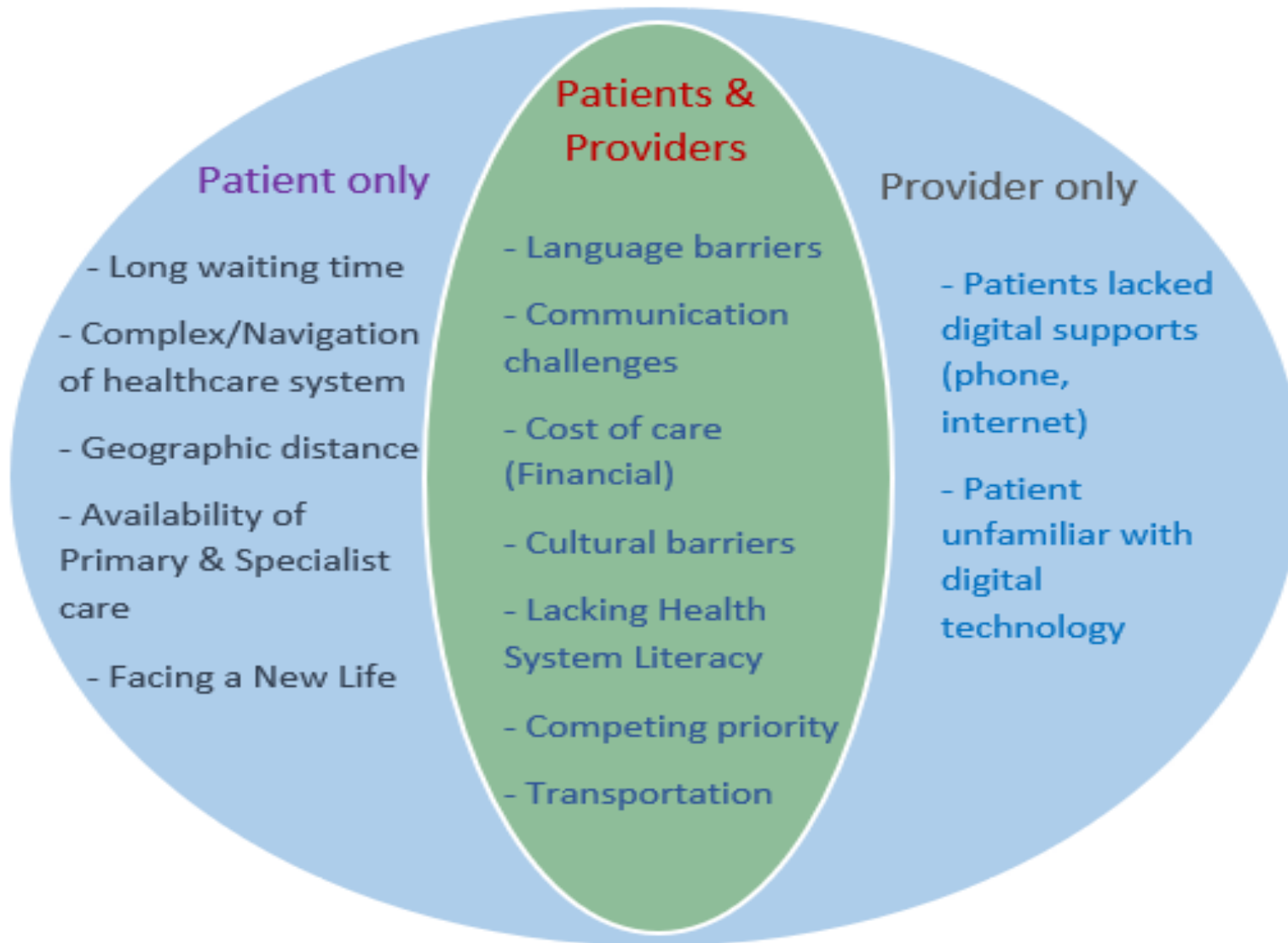


Table 5.5 Challenges in accessing Primary Care: from newcomers’ and primary healthcare providers’ perspectives.

Theme/Subtheme	Description	Representative Quotes
Long waiting time	Long waiting time connecting with 811, family physician, accessing diagnostic services, and specialist (waiting for a worse health condition)	“It’s really terrible...I have to wait one month before they solved my problem or take any medicine... they considered me a priority and gave me an early appointment for the X-Ray and for the specialist, why should I wait a month just to know if I suffer from anything... This thing made me afraid to get sick, really...” (Patient G).
		“I took antibiotics for seven days and then after a few months, again seven days of antibiotic like three courses of antibiotics. then she (family doctor) would refer me to the specialist, and it took me like seven months...either I have to be like the doctor really see me or I have to pretend that I'm going to pass out because there was no other option... you never know what's going on with you and then you just pray...so, waiting time has always been my enemy” (Patient I).
		“It makes me more pain, seeing my son suffering day by day... we both husband and wife at the time trouble lots, for waiting, waiting, and even one day, I met my child specialist in my dream at the four-month period” (Patient H).
	Diagnosis services	“Waiting times are very very longer, and in the pandemic are worst... we received a call, two weeks ago for exam that the doctor prescribed more than a year ago. We just forgot about it. When the lady of the X-rays place called, we didn't know about what she was talking about. So yes, wait times are really really long” (Patient C).
		“The day I got my ankle examination and the day I got the actual ultrasound/ and video X- Ray, there is a quite a timing gap... by the time my pain was almost gone, so after I got the X-Ray my family physician recommended me to see physiotherapist, but I don't think it was necessary because I was already in the recovery process...” (Patient J).
Cost of care	Medicine, dental, vision, cosmetic surgery, other	“I have never gone here in Canada (for dental and vision), it's expensive... we don't have money to go because just for the basic appointment will have to pay for both of us more than 300, or more...so, these one it's hard... Regarding to my leg, my family doctor said okay, I'm

Theme/Subtheme	Description	Representative Quotes
	therapeutic services; Not accessing care, delayed in accessing or avoiding care, seeking care from home country	<p data-bbox="741 237 1957 305">going to give you the referral but keep in mind that you have to pay for. So, its a huge cost, it's so expensive...more than 100. So, I can not afford these amounts” (Patient A).</p> <p data-bbox="741 345 1919 451">“I didn't take them (dental or vision care) because I don't have the coverage and I inquired about them but, and they were quite costly. So, due to the cost or financial barriers, I am not visiting dental or eye care” (Patient D).</p> <p data-bbox="741 492 1940 670">“During the pregnancy, I needed to go to acupuncture and to relieve anti-vomiting, it is out of pocket, so you just need to cover those costs, and it is very expensive...I think that buying medicine is very expensive thing here... is very scary to receive medication or to receive a prescription for a medication, without knowing how it will cost, and if you will be able to buy or not” (Patient C).</p> <p data-bbox="741 711 1940 857">“Yeah, it's a bigger challenge because it's so expensive... I'm wearing the glasses and my glasses broken and without glasses, I can't see, and I can't read and when I go to buy the class...it was so expensive. So, I wait for the two months and then I got the glasses from back home country one of my friends brought” (Patient H).</p> <p data-bbox="741 898 1957 1044">“I've gotten an initial referral from the family doctors in 2019, but whether they're referring me to I couldn't afford it. So, I had been looking for mental health care support since 2019 and I could not find since 2019 August, and I couldn't find access, I mean, affordable, mental health support until January 2021. It took me almost two years” (Patient L).</p> <p data-bbox="741 1084 1927 1336">“Those (uncover healthcare cost) are huge barriers I'd say are huge struggles for them (newcomers)... one of our patients needs diabetic testing supplies for his glucometer, he's on financial assistance with the government, but there's only a certain amount of money allotted for those supplies an if you exceed it then you just have to wait till next year or whatever or you need to apply for a different more financing... he was coming back here to get like samples or whatever... then we had to set him up with the social worker to apply for to help him... the challenge” (Provider A).</p>

Theme/Subtheme	Description	Representative Quotes
		<p>“I think a big one, I've had several patients (newcomers) they got laid off from their jobs, they suddenly lost their drug plan coverage... they can't afford their diabetes or their blood pressure medication, and they're sometimes like they're either embarrassed to tell you, or they are so busy looking for a job or doing odd jobs and whatever they can't make money that they don't have time to make an appointment and tell you and then by the time they do things have gotten, like, way out of control and we have to figure something out. And it's like we cannot get medication samples to sort of tied people over” (Provider C).</p>
<p>Delay in seeking care (Competing priorities)</p>	<p>Health is not a priority: Job, childcare, family, school responsibilities, lacking health awareness and urgency</p>	<p>“Being a student... taking care of the child. yeah, there's not much more time to provide to look for our health, and to take the health facility. Yes, it's literally challenging in Canada, coz we are alone, and husband need to work...” (Patient H).</p> <p>“Actually, I have been going to the dentist this year. And I was supposed to be in January, but I haven't been able to do my appointment because I had a lot of commitments. So, yes, that has happened to me a lot” (Patient B).</p> <p>“So, it's very challenging because you have to work full time and other having family a big challenge to get or to seek medical help at the right time... Sometimes you don't get the right date on your appointment, you might be feeling occupied already I think this happens with many people, I can say” (Patient N).</p> <p>“I remember one time when my family physician she told me to visit physiotherapist when I had a problem in my ankle and the first thing she asked me was do we have health insurance and I said no...and then she immediately told me that you could avoid the physiotherapist then you take this medicine, you do this test and don't stress out too much. So, in that sense yes there is a problem economically as well because if you don't have health insurance you need to pay much more than what you are earning here right, so you want to see the dentists it's quite costly over here so to get it...” (Patient J).</p> <p>“Recently, we had a lady in her pregnancy, she's supposed to go for her prenatal ultrasound urgently and do lab work also tat the same time... she had gone to the lab and then there was a wait and she had to go to work so she just left but so then we had to call her back and say you</p>

Theme/Subtheme	Description	Representative Quotes
		<p>need to go back... so good thing we kind of had caught it and were able to tell her to go back for ultrasound” (Provider A).</p> <p>“I think, newcomers to Canada are more likely to have lower paying jobs with terrible hours, regardless of their education level... they end up working in a low paying job that has really bad hours and doesn’t have time off that they can request or at least doesn't have paid time off. So, there's pressure for them to come into work, even when they're sick, and it's really hard for them to get time off to go to a doctor's appointment... so it's just really hard for them to even get the time to have a doctor's appointment” (Provider C).</p>
Geographic distance	Hard to find FP nearby, long travel for specialist and diagnosis services	<p>“Well, I think distance plays a role there. We were able to get access to a car so we're able to go to in that case to the out there (health center) ... But if we weren't able to have a car, it will cost like around, maybe \$40 for an hour, because we don't have something smaller close to our community or inside our community, we don't have anything, not even the family doctor that family doctor is not even in our communities, its farther. So, I think the distance is something that is a challenge...” (Patient B)</p> <p>Yes, distance and the transportation are also... we don't have a vehicle when we have to do our son hearing test, this is so far. Oh, my goodness. So far from where I leave, and it's so challenging. Yes, everything is so challenging in here” (Patient H).</p> <p>“It was like the distance thing... they (AHS) would ask me to go to this place (from family doctor) ... I had to travel, which was challenging. It was transportation distance, as well as the services that's like not close to my place, it's in some other place and then it's like obviously not easy to get there by you know myself because I wouldn't drive” (Patient I).</p>
Transportation	Not easily access throughout the city: no vehicles, costly	<p>“When I came first in Canada, I use the transit and it was very difficult... there is only one bus which comes in this area... it took me like two hours just to go to downtown from my area, and right now if I commute with my car, the same distance takes 20 minutes. So, yeah...transportation is barrier to access healthcare” (Patient D).</p>

Theme/Subtheme	Description	Representative Quotes
	transportation (Taxi)	<p data-bbox="737 237 1965 415">“Yes, transportation is also a challenge... We have to go to the GPs and we have to wait for the transit bus, and we have to stay in the cold in there... At that time (when we first move to Canada) we have to wait for the transit too. The train is fast, but the train is in the certain area, not for everywhere. We have to have definitely we have to take for the bus, transit, Calgary transit service, so it's very hard” (Patient H)</p> <p data-bbox="737 456 1965 667">“Transportation is a major challenge when you don't know the route and to reach on time and to the clinic and that is also one major hassle. I remember the first time I went to visit my family doctor so I went through the public transportation so it was kind of overwhelming., and same time I was also concerned that I might not reach there on time... It's a barrier because and if you go by bus you will need to change two or three buses that's again, if you do not know the roots as a newcomer that's always a problem if you do not have your own vehicle” (Patient J).</p> <p data-bbox="737 708 1965 854">“A lot of my new immigrant and refugee patients don't have access to transportation outside of Calgary transit. So, when there were transit shutdowns, you know, or if they're a higher risk patient and they don't want to be on a crowded see train with people. It makes it really hard for them to come in person” (Provider C).</p> <p data-bbox="737 894 1965 1073">“A lot of our newcomer patients are elderly, and they can't move from one place to the other and most of them are brought in here by someone else. During this period, the drivers who had to bring them also had to cope with this whole COVID things... and they don't come to work and then there's no transport. So, we had a lot of no-shows... transportation was one other major thing” (Provider B).</p>
Availability of Primary care/Specialist care	Hard time to get a doctor, Not accepting new patients, Limited supply of FP	<p data-bbox="737 1122 1965 1300">“I came in 2019, and for one and a half years I couldn't find any family doctor for myself I only used to do visits to a clinic which is close to my house. And every time I used to see a different doctor because all the doctors in that clinic were like locums. And the ones who were present they had their number of patients kept up. The AHS did provide me with the list of doctors who are taking new patients, but they were pretty far away...” (Patient D).</p> <p data-bbox="737 1341 1965 1406">“Doctors are never accepting new patients for example, in our case we started looking for a new physician... I visited a lot of times in emergency room or other facility, a friend of mine</p>

Theme/Subtheme	Description	Representative Quotes
		<p>advocated for me as a favor to my family doctor to include as new patient... My friend just told my doctor that I really need attention that I was really alone, I was really sick, and they did it as a favor..." (Patient C).</p>
		<p>"I know that getting a doctor is a quite a challenge for newcomers because there is lack of family physicians, I'm very aware. I haven't tried to get family physician now, I think that if I try, where I leave, right now, that would be a bit of a challenge, getting one" (Patient O).</p>
	<p>Limited availability of working hours (Family doctor)</p>	<p>"Whenever I call to appointment for my family doctor, I cannot, I mean, I saw that the family doctor doesn't come to that my neighborhood everyday... He has a particular day to visit. I mean, not every day... He is available for next two or three days..." (Patient K).</p>
<p>Navigation of healthcare system</p>	<p>Complex healthcare process: FP as an entry process in care, slow process in care, ER triage process, different HC practices (Compared with back home)</p>	<p>"It's really different here than in my home country... (back home) You have the right to access to the specialist by your own, you don't need a referral... Here you just need to wait, you need to ask if your physician wants to do the referral or not... the health system itself is not this segment for you to be in charge. You just put the power in physicians' hands or in health team hands... But, yes, I think that it's really different, and is a process to adapt yourself to a new country and to a new health care system" (Patient C)</p>
		<p>Yes, it's a lot of process, it's complicated. Back in my home country...I can choose my doctor and even the process is fast. The doctor will communicate immediately, will do anything the patients' needs actually...Here, no, like there's a sequence: first choose family doctor, then this... I feel worried...maybe my problem will increase until I see a doctor. Everything takes time; like this is the person's health it shouldn't be like less or should be solved quickly because it's the health. (Patient G)</p>
		<p>"Yes, like back home... I see a doctor they give me a requisition or if I need to have some blood work done, it's done like then and there, but then here is like you book an appointment to see the doctor, and then you book for another appointment for your blood work and you don't know when it is going to be. So, it's a lot of transactions... So, due to unfamiliar and complex healthcare system in Canada, I feel barrier" (Patient I)</p>

Theme/Subtheme	Description	Representative Quotes
		<p data-bbox="741 233 1940 415">The doctor did a good job... but if you think about the time they consume, I will say, it will lengthy, it can be done maybe in one first visit as well, giving you a medicine, changing your food habits and giving you a chart...there is no need two doctor and three meetings for that, I guess. So, yeah, total process takes me, getting the appointment visiting the doctor take me around one month...which can be done I believe in first visit... it's a challenging" (Patient K)</p> <p data-bbox="741 456 1940 521">"For immigrants, especially at the very beginning, it's very difficult to understand the healthcare system in Canada, and until someone is familiar with healthcare system" (Patient N)</p>
Lacking Health System Literacy	Do not know where & how to access care: does FP require? No info. Available; process, no promotion, trust towards the healthcare system	<p data-bbox="741 566 1940 745">"If newcomer gets sick or need any medical health, they didn't know what the next step is, and they asked someone who do not have much information about that they might not tell them the right information, instead of reaching out to their family doctor or receiving medical help timely manner, they spend time here and there... they've been here like years, even two years because they never get sick. They didn't have family doctor..." (Patient N).</p> <p data-bbox="741 786 1940 964">"A lot of people don't know that... It was never included in any of the Welcome to Canada documents we received that you needed to find a family doctor. You can't assume that people will not fall sick. Actually, people should be sensitized about the importance of finding a family doctor, not waiting until when they're sick. So, unfamiliar healthcare system itself is a challenge for the newcomer" (Patient L).</p> <p data-bbox="741 1005 1940 1110">"Yes, unknown healthcare system is a barrier. I would say so because most of the programs which I attended for the newcomer integration programs and they were telling, and none of those like health care was actually explained in any at any time..." (Patient D).</p> <p data-bbox="741 1151 1940 1297">"Exactly we (newcomer) will not see any kind of banner leaflet no places, nowhere. Yeah, as a newcomer you should go to the health care center for your health card. That is the steps you have to follow, that is the documents you have to take. There is no guideline for that..." (Patient K).</p>

Theme/Subtheme	Description	Representative Quotes
		<p data-bbox="741 233 1919 337">“I could see that the healthcare system in general and folks coming from a different culture from a different country, and even Canadians are struggling with, who to ask, how to access specific care for themselves” (Provider H).</p> <p data-bbox="741 380 1955 597">“I had a patient with very very high random glucose, a critical result, a diabetic patient...we called and told him you need to go to the hospital cause the doctor wanted him to go have treatment at the hospital and he said Oh no I was feeling very cold this morning like hyperglycemia... it's super dangerous for him to be so high with his blood sugar but he never end up going to emergency and then it was resolved eventually he came here, it is like “he only trusts to see the doctor here he doesn't trust to see the hospital or whatever” (Provider A).</p>
Language barriers	English as a second language, medical terminology: hard to express medical concern(s) and understanding instruction and advice	<p data-bbox="741 639 1940 781">“The language barrier like because I can talk to you...but when it's, in terms of medical terminology. I'm started to struggle... definitely the language it's a huge barrier... they try to explain to something, or you don't understand that happened to me a lot of time. So that's why when my wife come with me because she can understand and explain me” (Patient A).</p> <p data-bbox="741 823 1961 927">“Yes, it's a kind of problem (language)... English is not my first language so I don't know what my body parts are called so I cannot explain that to my physician over the phone... I really have some problem while communicating my problem (Patient J).</p> <p data-bbox="741 969 1934 1040">“I would say that's (language) the major problem. So, in terms of language barrier and maybe orientation for newcomers would be much helpful” (Patient N).</p> <p data-bbox="741 1083 1934 1370">“A patient who needed to have a hip X-Ray she had the requisition in her hands for months... she does not speak English and use language line... and she finally showed up here for a visit recently and I guess the doctor said oh you need to do that X-Ray still because she has continuing hip pain... so we told her you need to go to the X-Ray and actually we have an X-Ray place just basically down from us a couple doors down... I kind of showed her, I walked all the way... and so I think the patient was going to leave and then again would not have got the X-Ray done, so there's like you know comprehension and language and cultural there's so many issues going on there” (Provider A).</p>

Theme/Subtheme	Description	Representative Quotes
		<p>“A family who speaks little or no English, one of the children who is in high school had stopped going to school... she still did not have hearing aids, that she was recommended quite a long time previously... over a year later nothing had been done to follow up to get those for her... she needed another hearing test, who can I speak to that was a big issue because the person who books appointments for me had a hard time booking with dad...you would have to have somebody in the family (speak English) going with her to multiple appointments needing to get her ears retested...” (Provider D).</p>
Cultural barriers	<p>Not open to sharing medical problems, different care practices and expectations, family members going together in care, felt rude (body language)</p>	<p>“It's a sometimes because you are familiar with your culture, you want the way that you know. So, when it is different, the way that people do it here it's kind of impact you... you have to be open mind a little bit...” (Patient A).</p> <p>I think they forget that most of the people here are immigrants, so is not only that we are sick, and we are just alone here...so, you are counting with them that they will be a supportive with you, but sometimes you just are facing like a lot of barriers in terms of cultural practices and understanding that you're in a different country... if you read Alberta healthcare materials all this is a multicultural system is a multicultural nation, but the real-life that's not happening. (Patient C).</p> <p>“Culture is one of the barriers in here have been different cultures, some people. Maybe they don't want to mention clearly their problem is in terms of when they reach their family doctor.... they are not open to their family doctors, so if a patient they didn't tell or patient didn't tell their problem to Doctor, Doctor cannot guess or estimate that problem” (Patient N).</p>
	<p>A passive participation in care, lacking to understand each other's expectations, seeking care only when really sick, hard to make your needs to be heard</p>	<p>“The patient's background and the physician's background are completely different, and the patient expected something that the doctor never know or expect, you know, so that if the doctor didn't know patient's expectation. That's how the gap would be created... There's a very big gap in terms of culture and the doctors... Maybe doctors may not understand or realize the culture of the patient...” (Patient N).</p> <p>So, I have to watch my language, they're very passive participants in a conversation yes or no... they are afraid to ask for things, their cultural beliefs and just like timely follow up, like depending on our conversation, like if they see the not the urgency but the importance, if they may not understand the importance of the conversation and just allowing them to not it always be directed by me... (Provider G).</p>

Theme/Subtheme	Description	Representative Quotes
		<p>“You had to spend a lot of time to talk with them to understand where they're coming from how they perceive things. And even simple issues as how to address them. If you don't address them properly you run the risk of being misunderstood, they also will misunderstand you, and there were all cultural issues about female patients and their needs special area we had to quickly arrange at any time once we saw that cultural block was there and that it was difficult to communicate with them or call up colleagues to appropriately tackle their problems and even males sometimes refuse to see female doctors” (Provider B).</p>
		<p>“they (newcomers) think the doctors a good doctor needs to write the prescription to take the pain away or something reassurance doesn't actually fit very well they don't they don't I saw my doctor that you just told me something everything is fine it's not about they expect they won't actually doctor send them for X-Ray to send them for blood work or give some to good medication that really take the pain away so the expectation is a bit different and that they have this similar to one of the challenges” (Provider E).</p>
	<p>Preferences to have similar culture care providers</p>	<p>“We want to change that (family doctor). And probably someone that speaks our language or at least they know our culture that maybe know where I'm come from and kind of have an idea, like maybe has really doing some practitioner in our country or in our continent, or our part. So, that will be helpful for them to understand what I'm trying to explain better. I prefer to have my family doctor who understands my values, culture while providing treatment, which is very important” (Patient B).</p> <p>“Firstly, I'm going to be checking the name of the doctors. So, if there is an English name, then maybe I will little bit hesitate that I'll talk to myself that how I'm going to be explaining my problem, or maybe if there is no other doctor who can understand my regional language that is Punjabi, so maybe I need an interpreter, it's a translator. So, that kind of stuff, always comes into mind, because it's going to be tough, that, how I can explain way deeply to the doctor... So, that is why that matters” (Patient E).</p> <p>“I selected my family Doctor who is aware of my culture my beliefs and the dietary habits of my religion... That was my preference because I would always be comfortable around the people</p>

Theme/Subtheme	Description	Representative Quotes
		who understand my cultural belief, dietary habit, my everyday lifestyle, and the things that I want to do, and I don't want to do..." (Patient J).
	Gender preference in care: Female wants to have female care providers: maternity and gynecology	"Naturally, I would like to see a female doctor because I'm a woman. I feel like she might be able to relate more to my issues, as a person be in that gender class who might have experienced the same thing possibly... I would like to see a female doctor when it comes to my personal health care, but when it comes to things like oh, I need to get a specific instruction and I need to get new glasses, it doesn't matter. So, I think it depends on the, on the situation also" (Patient L).
		"I'm comfortable with a male doctor as well, but you asked, there are some generation gaps and especially or ladies who come from South Asia, and obviously for obvious reasons they want the gynecologist who's a female they are not really comfortable with male. So, according to my opinion, I just think a doctor is a doctor, not as a male or female, but yeah, a lot of immigrant population have those concerns" (Patient F).
Facilitator to primary care access		
Social Networks and support in connecting with the healthcare system	Feel easy and comfortable in accessing healthcare with good social support vs not having social support (friends, family, and ethnic organizations)	"A friend of us was the one that gave us the contact for our new family doctor, but in general terms, I think that you just need to find out how it works. I am in a lot of support groups (.....) and I found better information from local, not from other immigrants. All the immigrants are as lost as you like, oh my god I don't understand anything. So, I think that it's quite difficult to understand the health and navigate" (Patient C).
		"So, I was able to basically dependent on my family, friends who were already here, and they told me oh, you need to go see doctor, you need to go do all of that, but someone who doesn't have family and friends here... a lot of newcomers would really fall through the cracks and would only come when there are emergencies and things like that people don't have family physicians..." (Patient O).
		"I was lucky because the moment I landed in my uncle's house, he says, you need to have a family doctor and find one that is close to where you're living for, so reason accessibility, ease of reaching the doctor, oh well, there's this person, she's a great doctor... So, within a week of me landing in Canada with my family, I already had a family doctor. A lot of people don't know that..." (Patient L).

Table 5.6 Recommendation/opportunity to improve care (From newcomers’ worldview).

Theme/Subtheme	Description	Representative Quotes
Cross-cultural training of Care providers	Having cross-cultural trained care providers help to fill the gap in care because of cultural differences	“I think If a doctor has at least some training about the diverse cultural background that would be very beneficial to patient, understand patient point of views” (Patient B).
		“To have someone from your cultural background that would be a great solution too, to solve the gap in terms of culture between a physician and the patient, some cross-cultural training would be a great idea” (Patient N).
Improving Access to Care	Faster, reducing lengthy process, availability of doctors, option to choose specialist, access of healthcare information, reduce wait time	“Yes, I really need to have a choice, the doctor needs to communicate more, the process needs to be faster, doesn't have to be that slow; maybe do something regarding the keys seeing the dentist, reduce cost or something... the main issue is communication. I need like, my lab results, I did them and they were over, and nothing happened” (Patient G).
		“We should have in choice, where we might be able to select the family doctor and the specialist... They are not able to spend that amount of time with the patients. If that can be taken care of, would be helpful” (Patient D).
Expanding coverage of healthcare	Coverage of dental, vision, medicine, and other care costs	“There should be a kind of slab, that if the medicine is under \$50 or under \$60 it's free. So, this will help millions of immigrants. And the second thing, the dental... at least some percentage should come under health card... new immigrant definitely thinks about a cost in his country. So, he might not go to the doctor. Just thinking about that he will go to his country, and he will get all the stuff in a very cheap price in his country so they will try to avoid it but still they will be in the pain... (Patient E).
		“Another thing is the medicines, about the eye check-up, and a dental checkup is also too expensive so most of the people didn't get proper health eye check-up and dental checkup and medications due to their economic condition, so government and the AHS service should be also look there too...” (Patient H).

Theme/Subtheme	Description	Representative Quotes
	<p data-bbox="468 342 800 488">Regulate dental care services: Price, Cost coverage, Unnecessary selling products</p>	<p data-bbox="821 237 1944 337">Dental treatments are an issue, and a lot of people go to Mexico or to some other countries for that. So, I think that is the one we have to focus on now, so that everybody gets dental care you know whenever and however needed” (Patient F).</p> <p data-bbox="821 342 1944 524">“I talked about dental extraction or root canal treatment, different clinics have different rates, right, and that is not acceptable... I don't justify it being so much out of your pocket for basic thing, which is the necessity. So, I think the dental services should be centralized, or at least they should have some capping like they should have certain prices fixed for the procedure so that nobody can be exploited” (Patient F)</p> <p data-bbox="821 565 1944 711">“If the government could take control of that would be great, in terms of the charge, imagine one low-income people cannot afford that. I don't think because of that, I am willing to get for dental clinic or for any examination or any kind of services, but it's expensive...” (Patient N).</p>
<p data-bbox="201 751 447 852">Opportunities to build health literacy</p>	<p data-bbox="468 751 800 852">Information about healthcare system to newcomer</p>	<p data-bbox="821 751 1944 927">“A communication about how the system (healthcare) works, what are benefits, what are not the benefits and not just communication in one way, but different channels of communication like videos, visuals courses and presentations... having some helps to understand at least the fundamentals, the basics will be very helpful for people for newcomers” (Patient B).</p> <p data-bbox="821 932 1944 1078">“Orientation would be a great for newcomers about how to look for a family doctor or in general about healthcare system in Canada. Education, education, education, and immigrant engagement, or involvement in healthcare service... they (newcomers) should be part of this service. That's what I wish” (Patient N).</p>
<p data-bbox="201 1122 447 1154">Respectful Care</p>	<p data-bbox="468 1122 800 1252">Respectful care, involving patient in care, respecting culture, and values, communication</p>	<p data-bbox="821 1122 1944 1222">“The physician, the specialist, try to be more friendly, if you're more friendly with your patient, then you are making money from those people, this is your business, like, if you don't have patient, you don't have money” (Patient A).</p>
<p data-bbox="201 1268 447 1369">Tapping foreign-trained physicians (short training)</p>	<p data-bbox="468 1268 800 1398">Mobilize skilled healthcare workers in reducing wait time and equitable access of care</p>	<p data-bbox="821 1268 1944 1398">I think AHS could be more responsive in tapping the detail of foreign-trained physicians... A lot of foreign-trained physicians who come to Alberta, go out of province to all the other provinces in there practicing, so huge plus thing that is where Alberta is really lacking...” (Patient O).</p>

CHAPTER SIX: SUMMARY

CHAPTER SIX: SUMMARY

6.1 Summary of Key Findings

Globally, delivering high-value healthcare remains possible if there is a focus on the patient experience. This is because progressively engaged patients expect diagnostic procedures and treatments to be personalized integrating their preferences and needs. Understanding patient experiences is a key component to continuously enhance healthcare services and quality of care and nurture a patient-centered care approach [3]. Patients' experiences can be assessed in a wide variety of ways, most frequently using surveys and qualitative interviews or focus groups. Some of the fundamental methods of capturing the patients' worldview address what is working well, where there are gaps, and the areas for improvement from the patients' perspective. [20,21] Each of these approaches, whether quantitative or qualitative have their own strengths and limitations and choosing an appropriate method(s) and instrument(s) is crucial in understanding the patient experience. Traditionally, surveys are the most common approach to capture patient experiences, however, the data collected via surveys is often limited to a specific health sector, the national language, or specific health conditions. These limitations result in the exclusion of individuals such as immigrants.

Every year, many immigrants choose Canada as their home, and their health is ascertained by various social determinants. Understanding new immigrants' perspectives, their healthcare needs, and the unique challenges they offer in the provision of health services present a great opportunity to enhance healthcare services for linguistically and culturally diverse populations.

This multiphase, mixed-methods thesis offers an in-depth exploration of the experiences of new immigrants accessing and receiving primary care during the COVID-19 pandemic in

Alberta, Canada. This three-phase study also informs the challenges and the areas for improvement, from both patients' and primary care providers' perspectives. We highlighted the following key findings of each study of this thesis work. The main findings are summarized in Table 6.1.

6.1.1 The first phase

The first phase is a study [55] synthesizing the literature on the immigrant patient population accessing and receiving primary health care (PHC) in Canada. This study [55] revealed four major concerns affecting the experience of immigrant patients, including:

1) Cultural and linguistic differences, encompassing the relationship between culture and language and how different ethnic groups perceive the world accordingly.

2) Socioeconomic challenges, describing the social and financial standing of an individual or community and its interplay.

3) Health system factors, describing elements related to healthcare organization and policies.

4) Patient-provider relationship, representing a fiduciary relationship between a patient and a physician comprising of respect, autonomy, and pledge of the highest quality of care.

Among the four major concerns of immigrant patient experience, the cultural and linguistic difference was the most prevalent and challenging aspect that needed attention. Moreover, the review highlighted several realities related to cultural and linguistic difficulties in accessing and receiving PHC. For example, *preference of physician gender* not only played a major role in healthcare-seeking behaviors among the patients but also impacted the long-term healthcare decisions for their families. Equally, *language competency* was another widely prevalent barrier among immigrant populations in accessing PHC that not only restricted

interactions with primary care providers and acute care but also impacted long-term health promotion and disease prevention. For instance, due to the language barriers, newcomers experience difficulties including the understanding of medical terminology, health information, and services availability. Language barriers are also experienced when expressing medical symptoms, as well as missing appointments, feeling disconnected from care, and distrust in care providers [55].

Furthermore, this review revealed that *socioeconomic factors* presented challenges to new immigrants in accessing PHC. These factors include financial difficulties for day-to-day needs (e.g., struggle in finding a meaningful job, working more than one job, increasing working hours, low pay, etc.) and social support that was strongly associated with accessibility to PHC among the immigrant population. Additionally, immigrants highlighted that affordability of care related to out-of-pocket payments for services such as dental, vision, and speech therapy compromised their health.

This study revealed that *systemic challenges* in healthcare created multiple barriers to accessing PHC including long waiting time and timeliness of care (most frequently reported challenges), geographical inaccessibility, uncoordinated services, and poor response times. Equally, lack of Canadian healthcare system literacy, unfamiliar healthcare system, or lack of information and communication regarding available support systems and resources were reported as the main challenges in accessing PHC among new immigrants. Often new immigrants felt overwhelmed, exhausted, fearful, and helpless while interacting with the healthcare system.

This review also revealed factors that influenced the *patient-provider relationship*. For instance, the patient-doctor relationship was compromised due to communication gaps and inattentiveness towards patients' health concerns that ultimately resulted in distrusting the

healthcare provider, and compromised patient health needs. On the other hand, studies also reported that having same-gender care providers, building trustworthy environments in care, involving patients in the decision-making process, and providing complete information fostered good patient experiences and strengthened patient-provider relationships.

Overall, the literature review synthesized evidence on immigrant experiences accessing and receiving primary care. As such, the findings informed us for further study design, and we conducted a sequential mixed-methods study. The results further guided us in selecting variables (e.g., care access, virtual care experiences, delay in care, and opinion about COVID-19 vaccination) for our next phase quantitative analysis: Albertans' healthcare experiences and impact during the COVID-19 by comparing Albertans born in Canada and outside Canada. The synthesis also guided us to develop interview guidelines for our third phase study.

6.1.2 The second phase

In the second phase, we undertook a quantitative study assessing Albertans' healthcare experiences during the pandemic and compared the experiences of Albertans that were born-in versus those who were born outside of Canada. This study is a secondary data analysis, using provincial data from the "COVID-19 Experiences and Impact Survey" conducted by the Health Quality Council of Alberta in October 2020. This study revealed that in general, over two-thirds (64%) of Albertans reported their mental and physical health status as "worse" or "much worse" since the onset of the pandemic and that the numbers were higher for Canadian-born respondents. Equally, Canadian-born respondents reported a higher level of perceived stress, anxiety, or depression than non-Canadian-born ones. These findings aligned with the previous studies [69,70,155] that found Canadians stated worsened mental health since the start of the pandemic. The results also revealed that one-third (33%) of Albertans (both Canadian and non-

Canadian born) experienced a delay in seeking care during the pandemic, and of those who reported delay in seeking care, over one-quarter (27%) stated their health was negatively impacted due to delays in care. Our findings coincide with previous research conducted in Canada among patients with a chronic health condition [72], patients with cancer [73], and a study conducted in the United States among adult patients [156].

Likewise, around 61% of Albertans reported excellent virtual care visit experiences during the pandemic, specifically the Canadian-born individuals. Interestingly, the result also featured that more Canadian-born respondents favored virtual healthcare visits over in-person visits, compared to individuals born outside Canada. Our findings partly corroborated with previous research [154] that Canadian-born individuals prefer virtual care to be the first point of contact post-COVID-19. Non-Canadian-born respondents did not favor virtual care and coped with it as a temporary solution. Notably, vaccine hesitancy was similar between both groups (30% of participants).

The findings from this study further informed our qualitative inquiry in developing interview guidelines where we were able to capture a comprehensive image and rich stories from newcomers' lived experiences. As such, our qualitative inquiry was built directly on the results from this quantitative phase. For instance, questions related to care accessibility, virtual care experiences, delay in seeking care, and impact on physical and mental health, newcomers' views about COVID-19 vaccination were further detailed via their lived experiences.

6.1.3 The third phase

The final phase of this study is a qualitative project, where the objective was to gain a deeper understanding of the experience of newcomers in Canada accessing and receiving PHC during the COVID-19 pandemic. To achieve this objective, we interviewed newcomers and

primary healthcare providers (doctors, pharmacists, nurses, social workers). Overall, this study revealed three aspects driving newcomers' and healthcare providers' experiences:

1) Newcomers' overall experience receiving primary healthcare services was affected by doctor-patient relationships, care coordination, and expectations of access to care.

2) Newcomers' and healthcare providers' virtual care experiences were captured in terms of accessibility of virtual care, timeliness of care, communication, ensuring the safety of care, and enhancing quality.

3) Newcomers' challenges in accessing primary healthcare hindered their care. These include language and cultural barriers, system-level barriers (e.g., timeliness of care, waiting time, cost of care, geographical distance, and transportation), and unfamiliar and complex healthcare system, and facing a new life and competing priorities.

Participants highlighted that they had a good relationship with their family physician, as they emphasized that a trustworthy relationship starts when a doctor is a good communicator/listener, is supportive, respects patients' preferences and values/culture, and involves patients in their care management process. Conversely, few participants presented their dissatisfaction with the way their doctor interacted and responded to them during the medical consultation. They perceived that their medical concerns were not taken seriously. This disrespectful care often led them to change their family doctor. These findings are aligned with previous research [55,114,120,123,125,130] that highlighted deficiencies in physician-immigrant patients' relationships due to various challenges. Regarding care coordination, while the majority of participants expressed that their care was well coordinated among care providers and centers, a few voiced their frustration, as they were left to coordinate their care by themselves. Equally, newcomers presented higher expectations than they experienced while receiving primary

healthcare. They compared healthcare services with their home country and expected to receive at least similar, or even better healthcare services. For instance, newcomers expected that doctors will provide enough time for medical interaction, a good explanation of disease through information sharing/receiving, emotional support, to receive prescriptions (test/medicine) when visiting the doctor with medical concern(s), timely diagnosis and treatment, and easy access to a specialist. These findings corroborated a previous study finding [130].

Overall, similar to the findings from our phase two study (where 61% of study participants reported excellent virtual care experiences, which was slightly lower among non-born Canadian), the virtual healthcare experience was well taken from both patients and primary care providers in this study. Participants stated that their virtual care visit was convenient, easy and fast, saved travel time, and supported care continuity during the pandemic, specifically in relation to follow-up visits, minor illnesses, and renewal of prescriptions. However, participants also highlighted that virtual care is not enough for all levels of care (e.g., newborns, needing physical examination and visual clues, and those who have language barriers and difficulties expressing their medical concern via phone). In these cases, participants preferred in-person medical consultations. This finding aligned with our phase two study where non-born Canadians did favor virtual care slightly less than Canadian-born, as well as viewed virtual visits as a temporary solution. Further, participants stressed communication was harder during the virtual care visit, as they had a hard time expressing their medical concerns and understanding the doctor's instructions virtually, mainly due to language barriers or/and limited medical vocabulary. On the other hand, PHC providers experienced struggles in implementing the virtual care visit at the beginning stages of the pandemic due to various protocol/guidelines issues, individuals' readiness, and resources.

This qualitative inquiry revealed that linguistic challenges and cultural differences impacted communication, healthcare navigation, service utilization, and the doctor-patient relationship. Communication was one of the primary obstacles in accessing and receiving primary care services among newcomers. Further, newcomers highlighted that despite their level of English, due to the lack of medical vocabulary, they had challenges to express their medical concern(s), and this affected their experience receiving virtual care. Equally, cultural differences presented additional barriers to receiving primary care leading to poor experiences, thus newcomers always tended to look for a family physician with a similar background, or at least one that understands the patient's culture. Interestingly, PHC providers also presented similar problems. Moreover, providing and ensuring safe care was an additional challenge of virtual care, especially for patients with linguistic challenges and cultural differences. In some instances, healthcare providers questioned whether the patient understood the medical instruction or the accuracy of the diagnosis as there was no physical examination, as well as no visual clues to understand the patient's medical needs precisely. The findings from this study aligned with the findings in the literature review, phase one of this thesis [55], describing language and cultural differences as significant barriers not only to accessing healthcare services but also in delivering primary healthcare. This is an international problem that affects not only immigrants in Canada but also in many European countries and the United States [139,140].

Likewise, this study revealed additional barriers to newcomers in Canada including employment status, transportation, weather, and lack of social support; all of these barriers hindered their quest to access healthcare. It is important to note that newcomers have competing priorities (jobs, study, childcare) that limit their time available to seek care. Delay in seeking care was experienced more frequently since the onset of the pandemic, and this finding tightly aligned

with our earlier quantitative study (chapter four), where nearly 34% of participants (individuals born outside of Canada) reported delay in seeking care during the pandemic. Likewise, waiting time for appointments, lengthy processes in diagnosis and treatment were factors that affected their experiences with primary healthcare; and these factors worsened since the onset of the pandemic.

This study revealed that a significant number of study participants (87%) reported their mental health was impacted since the onset of the pandemic. This finding is supported with our earlier quantitative study (phase two), where around 56% of individuals born outside Canada reported their mental status as “worse” or “much worse” since the onset of the pandemic, and they also reported a higher level of perceived stress, anxiety, or depression during that time. Equally, one-fifth of study participants (newcomers) reported their vaccine hesitancy for COVID-19, and this finding aligned with our phase two results, where nearly 30% non-Canadian-born reported vaccine hesitancy.

These findings lined up with our earlier study [55]. The results also highlighted that due to extra (uncovered) healthcare costs including covering drugs/medical supplies, dental and vision care, and other therapeutic services, newcomers experienced barriers in accessing PHC and they compromised their health due to affordability of care, which is supported by a sequence of earlier studies [55,118,128,130]. Similarly, transportation and geographical distance, timeliness of care, as well as complex and unfamiliar healthcare systems presented barriers in accessing PHC. Participants had a negative impression in their quest to access healthcare as they perceived that the system is complex and unfamiliar, and they voiced that the lack of information about the Canadian healthcare system was a major obstacle in timely accessing primary care, which aligned with previous research [55,129,130,168].

Table 6.1 Summary of results from this thesis.

Study	Results
<p>Phase 1 (Systematic Review)</p>	<ul style="list-style-type: none"> ❖ 19 peer-reviewed studies included for review ❖ Immigrants experienced various challenges/barriers while accessing PHC ❖ <u>Four major themes emerged from the review:</u> <ul style="list-style-type: none"> - <i>Cultural and linguistic differences</i>, encompassing the relationship between culture and language and how different ethnic groups perceive the world accordingly - <i>Socioeconomic challenges</i>, describing social and financial standing of an individual or community and its interplay - <i>Health system factors</i>, describing elements related to healthcare organization and policies - <i>Patient-provider relationship</i>, representing a fiduciary relationship between a patient and a physician comprising of respect, autonomy, and pledge of the highest quality of care.
<p>Phase 2 (Quantitative)</p>	<ul style="list-style-type: none"> ❖ 10,175 participants “COVID-19 Experiences and Impact Survey” conducted in October 2020. Secondary data analysis, cross-sectional. ❖ Assessed Albertans’ healthcare experiences during the pandemic and compared experiences between born and non-born Canadians. ❖ <u>Major findings:</u> <ul style="list-style-type: none"> - Impacted in physical and mental health status (64% participants; higher in Canadian-born) - Increased stress, anxiety, or depression (75% participants: higher in Canadian-born) - Delayed seeking healthcare (33% participants: no difference in both cohorts) - Perceived adverse impact on health due to delay in care (27% of reported delayed: no difference in both cohorts) - Overall virtual healthcare experiences (61% who received virtual care: lower in non-Canadian-born) - Virtual care visit as an alternative to in-person consultation (57% participants: lower in non-Canadian-born)

	<ul style="list-style-type: none"> - Peoples’ view about COVID-19 vaccination (30% participants: no difference in both cohorts)
<p>Phase 3 (Qualitative)</p>	<ul style="list-style-type: none"> ❖ Twenty-three individuals (15 new immigrants and 8 primary care providers): semi-structured interviews ❖ <u>The emergence of four key themes and several subthemes:</u> <ol style="list-style-type: none"> 1. Newcomers’ overall experiences <ul style="list-style-type: none"> - Doctor-patient relationship in care - Care coordination - Expectation on care access 2. Virtual care experiences from patient and care providers viewpoint <ul style="list-style-type: none"> - Accessibility of virtual care - Accessing care - Communication - Ensuring the safety of care - Quality improvement 3. Newcomers’ challenges in accessing primary healthcare <ul style="list-style-type: none"> - Language and cultural barriers - System-level barriers (e.g., timeliness of care, waiting time, cost of care, geographical, and transportation) - Unfamiliar and complex healthcare system, and - Facing new life and competing priorities 4. Opportunities for improvement <ul style="list-style-type: none"> - Cross-cultural training - Interpretation services and multidisciplinary collaboration approach in care - Expanding cost coverage of healthcare - Opportunity to build health literacy - Tapping foreign-trained healthcare specialist

6.2. Recommendations for improving the newcomer patient experience

Assessing and understanding patient experiences is a highly contested concept. Patient experiences can be conceived as how patients perceived the care they received. Generally, the

care received has a functional aspect including timely management of symptoms, effective diagnosis and treatment, and well-coordinated care; and also includes a relational aspect that assesses dignity, respect, involvement, honesty, and patient-provider communication.

Understanding patient experience is integral to improving patient-centered care, and evidence shows that patient experiences are positively associated with clinical outcomes, patient safety, and overall care quality [15,16]. Broadly, patient experience provides the context of “what matters to patients” and informs about patients’ needs, preferences, expectations, and how to meet them. Positive patient experience can be linked to improved clinical outcomes, such as better adherence to medication and reduced use of healthcare resources.

Based on our findings from this thesis, we are proposing the following important recommendations, comprising 1) building trustworthy relationships among doctor-patient, 2) effective care coordination, 3) overcoming language challenges and cultural differences, 4) addressing health system structure barriers, 5) enhancing health system literacy by focusing on socioeconomic challenges, and 6) enhancing virtual care experiences to improve equitable access to primary healthcare. With further elaboration, these recommendations are mostly guided by our qualitative inquiry (Table 6.1).

6.2.1 Building Trustworthy Relationship among Doctor-Patient

A doctor-patient relationship is a unique connection between a patient and a doctor that is built via mutual trust, respect, and collaborative understanding of patients’ needs and expectations. It is a fiduciary relationship in which the physician agrees to respect the patients’ autonomy, maintain confidentiality, obtain informed consent, explain treatment options, provide the highest standard of care, and commit to not abandon the patient without giving the patient

adequate time to find a new doctor [119]. This unique relationship constitutes four fundamental elements:

1) *mutual knowledge*: doctor's knowledge of the patient and patient's knowledge of the doctor.

2) *trust*: the patient's faith in the doctor's competency and caring, and the doctor's trust in the patient and their beliefs and report of symptoms.

3) *loyalty*: patient's willingness to forgive a doctor for any inconvenience or mistake and the doctor's commitment to not abandon patient-care continuity.

4) *regard*: patients feel that the doctor likes them and is on their side-friendliness, warmth, emotional support, caring. [169].

Overall, to establish a trusting doctor-patient relationship the key ingredients are openness in communication, accepting patients without any discrimination, involving the patient in the decision-making process, understanding the patient's values, beliefs, and culture, and respecting patient's preferences [119,136].

The doctor-patient relationship was one of the main themes that emerged in our research (chapters three and five), as a relational aspect of care in patient experiences. Our qualitative study (chapter five) revealed that most of the participants experienced a trustworthy relationship with their family physician, as they were involved in care management processes and received respectful care that addressed patient preferences and cultural values. However, a few patients had a poor experience due to various reasons including poor interaction with their doctor, patient's medical concerns were not taken seriously, experienced discrimination, and disrespectful doctor behavior. These results are closely aligned with the evidence derived from our literature review (chapter three) [55], where new immigrants reported compromised quality

of care due to doctors' inadequate interaction or communication, and inattentiveness towards their health concerns [55].

The development of a positive attitude towards the healthcare system and its providers requires mutual understanding, respect, and acceptance. Forming a respectful and welcoming patient-provider relationship can help overcome the majority of the challenges faced by immigrants, while also prospering the goals of universal healthcare for all. Some of the possible strategies to build a good patient-doctor relationship would be taking time to get to know the patient's needs, preferences, and expectations while maximizing the patients' comfort, and ensuring the patient that the physician is doing everything possible for their prognosis and treatment without abandoning them. Some of the additional considerations to improve the patient-doctor relationship include evaluating patient health literacy, educating about the medical condition with effective communication, involving them in the care management process, establishing a care team (multidisciplinary team) that includes the patient, well-coordinating care, regular follow-up and ensuring care continuity.

The doctor-patient relationship is largely guided by non-verbal communication that both need to recognize and explore each other's non-verbal cues [170]. During the pandemic, this non-verbal communication was affected since both patient and doctor wore masks during the in-person encounters, and that plausibly impacted non-verbal cues like facial expression, tone, and voice modulation. Negative effects on the overall doctor-patient relationship could be far greater in the context of the marginalized community including newcomers. A randomized controlled trial, conducted in Hong Kong revealed that doctors wearing masks had negative influences on the patients' perception of the doctors' empathy, which in turn impacted the doctor-patient relationship [171]. Additionally, physical distancing either during the clinic visit (2-3 meters

distance) or via virtual consultations (distancing as well as availability and adaptation to digital health literacy), impacted the doctor-patient relationship. Awareness of the impact of physical distancing on the doctor-patient relationship by healthcare providers and policymakers is very important.

6.2.2 Effective Care Coordination

Care coordination synchronizes the delivery of a patient's healthcare from multiple care providers including specialists. The keystone of care coordination is to meet patients' needs and preferences in the provision of healthcare. It involves deliberately organizing patient care activities and communicating at the right time among the right individuals involved in a patient's care to deliver safe, appropriate, and effective care [172]. The five crucial elements of care coordination include:

- 1) Involvement of various healthcare providers in patient care;
- 2) Providers rely on each other to carry out different activities in a patients' care;
- 3) Providers' understanding of their own and the other team members' role and required resources;
- 4) Providers rely on each other's provided information;
- 5) Integration of care activities with the goal of facilitating appropriate delivery of healthcare services [173].

The purposes of care coordination in primary care are to improve health outcomes by ensuring and delivering care from trusted providers and to help reducing healthcare costs by removing redundant tests and procedures. Effective care coordination and communication is the fundamental component of primary healthcare services to address the healthcare needs in a

timely manner. It is also essential in the delivery of patient-centered care [3], all in all ultimately ensures a good patient experience.

In paper three, participants expressed that their care was well coordinated within and between care providers, however, a few participants also voiced their frustration as they were left behind without proper care coordination. Proper and timely care coordination is one of the vital elements in improving care quality, patient and provider experiences, and outcomes, reducing medical errors and unnecessary use of healthcare resources. Establishing and developing accountable relationships with multidisciplinary teams, supporting patients as they receive care outside of the Centre, ensuring the timely flow of patients' key information, effective communication with patient and family, regular follow up with patient/family, coordinating necessary resources to support the patient (e.g., interpretation services) are some of the options to establish effective care coordination in primary healthcare.

6.2.3 Overcoming Language and Culture difference

Compromising patients' ability to engage and understand fully, healthcare interaction can be stressful, particularly for patients who have limited-English proficiency (LEP) or for patients who cannot understand enough to ensure successful communication while receiving care. Equally, cultural beliefs around health and illness among immigrant contributes to their ability to comprehend and act on doctors' instructions, when care providers and patients are from different cultures, their understandings of illness or/and treatment may vary significantly. Canada has diverse communities that are ethnically heterogeneous, and it is essential to give special consideration to all cultural dimensions. To provide culturally competent healthcare, care providers need to understand the cultural differences of their patients. This is important because

among the immigrant population cultural differences and linguistic challenges are barriers to accessing and receiving primary healthcare [55]. Our qualitative study (paper three) revealed that this was even more challenging during the COVID-19 pandemic. As such, newcomers to Canada always tend to be looking for family physicians who have a similar cultural background or at least understand the patient's culture. The barriers to accessing and receiving care due to language challenges and cultural differences identified in phase three of this study are aligned with our earlier study (paper one) [55]. Based on the findings from this thesis, it is crucial that healthcare systems address these barriers faced by an increasing number of LEP patients in Canada.

In tackling the cultural and linguistic factors, the development and implementation of sensitivity and competency training practices should be promoted across the healthcare professions including clinicians, nurses, and allied healthcare professionals. Promoting cultural competency training (cultivating cross-cultural awareness and communication) to care providers, maintaining a diverse workforce (diverse staff recruitment programs), as well as ensuring linguistically diverse materials and interpretation services are available in each health Centre present opportunities to improve newcomer patients' care accessibility in primary care. Similarly, to create an opportunity for everyone in accessing and receiving PHC, several considerations could be taken into account: ensuring language interpretation or communication supports across the care establishment; using ad hoc translators; extending consultation time; hiring multilingual staff; contracting qualified interpreters; and creating interpreter pools. Implementing these considerations ensures equity in healthcare and creates an inclusive environment for diverse populations including newcomers.

Similarly, Canada already possesses a significant number of educated, qualified, experienced, and internationally trained medical professionals, and many of them might be culturally diverse, linguistically skilled, and have cross-cultural talents. Newcomers expressed their frustration because of the long waiting time in accessing and receiving primary healthcare, and they also voiced their preference to receive care from a doctor who shares a similar linguistic and cultural background. As such, during the healthcare crisis and in normal situations, tapping internationally trained medical graduates (physicians, who are in process of, or preparing for their medical license), and including them in various levels of healthcare such as patient care, health education, management, health research, etc. would benefit Canada's healthcare system by not only fostering diversity and equity in healthcare, but also positively impacting on society by reducing wait time, improving access in care, and ensuring a better quality of life. The government has the opportunity to develop some types of strategies, for instance bridging programs, or training that would allow foreign-trained physicians to work in a certain capacity providing healthcare.

6.2.4 Addressing Health System Structure Barriers

Regardless of the universal healthcare system in Canada, considerable hurdles in accessing primary healthcare are presented among newcomers to Canada. Specifically, health system structural barriers such as geographical distance and transportation, timeliness of care (limited access to primary care and specialist care), and additional uncovered healthcare cost. The COVID-19 pandemic has further heightened these barriers among the newcomer population.

Careful consideration needs to be given to develop and implement strategic planning addressing those challenges. In phase three of our work, participants emphasized that the

government should expand the coverage of healthcare costs to either fully cover or partly cover basic healthcare needs such as dental and eye care, medicine and medical supplies, and other healthcare costs. They further stressed that the price of dental care should be regulated, as newcomers perceived that the Centre always try to endorse services that were not necessary. Equally, participants revealed that people looked for low-cost dental care outside of Canada.

6.2.5 Enhancing Health System Literacy by focusing on Socioeconomic challenges

Unfamiliarity with the Canadian healthcare system and the lack of information about health services and resources hinder newcomers to access primary healthcare. Newcomers may be unfamiliar or unaware of the Canadian healthcare system and they seek care when they are really sick, visiting walk-in clinics, or emergency rooms. Our papers (chapters three and five) stated that newcomers lacked knowledge of the Canadian healthcare system, and they struggled in accessing primary healthcare. Newcomers reported that they did not know what to do when they first moved to Canada. For instance, they were not sure whether they needed to have a family physician, whether to visit walk-in clinics or emergency rooms, and some even did not visit a family doctor for two years since their arrival in Canada. Our study three revealed that these experiences were due to the poor understanding of the Canadian healthcare system (chapter five).

Advocating for improved access to primary healthcare services by understanding social determinants of health for newcomers' families is crucial. Socioeconomic factors are one of the biggest barriers to accessing primary care among newcomers to Canada. Further, our papers (chapters three and five) revealed that newcomers struggle in finding a meaningful job, working more than one job, increased working hours, low pay, and battle to continue their day-to-day

financial needs, and the fact that financial problem was a big deciding factor for many newcomers in seeking healthcare. They also presented competing priorities (other responsibilities to deal with before considering their own health) as barriers in accessing primary healthcare and many times they had to delay seeking care. These problems heightened since the onset of the pandemic due to the impact on social life, job loss, and financial constraints.

Social networks and support play a crucial role in healthcare, particularly for new immigrants [68]. In paper three, participants who had good social networks and supports, experienced easy and comfortable access to healthcare, opposite to those who lacked friends, family, or social connection. Expanding support to newcomers, including but not limited to financial supports, coverage of medical supplies, dental and vision care, social connection (connecting newcomers with immigrants' services agencies), transportation, housing, and food via social workers would be strategic steps to improve equitable access to primary care.

Collaborative development of education and health system literacy programs by involving various health professionals, local health agencies, public health units, government and non-government organizations including ethnic organizations and settlement agencies could help newcomers to access information on navigating the Canadian healthcare system, that ultimately improves access to appropriate PHC in a timely manner.

6.2.6 Enhancing Virtual Care Experiences

Virtual care is defined as “any interaction between patients and/or members of their circle of care occurring remotely, using any forms of communication or information technology with the aim of facilitating or maximizing the quality of patient care” [174]. Evidence showed that virtual care offers a variety of potential benefits including reduced wait time, improved clinical

outcomes, saved cost, increased efficiency, and expanded access to care (e.g., timely care, enhanced access to primary healthcare and specialist services in rural and remote areas) [175]. Since the onset of the COVID-19 pandemic, Canada switched in-person care to virtual care visits for individuals who frequently needed care and where in-person care was not essential, such as people living with chronic physical and mental health conditions [66-68]. Despite the myriad of benefits of virtual care, it is unsure if it is accessible to diverse ranges of populations (e.g., age, gender, geography, language, race/culture, income, and education). Inequality in accessing and receiving healthcare is reported among racialized communities and ethnic minorities due to multidimensional causes [55], compromising but not limited to health system factors (patient having difficulty navigating the healthcare system), provider factors (challenging doctor-patient communication due to language and cultural differences, provider stereotyping of patients), and patient factors (trust and literacy), which could be worsened in the context of virtual healthcare delivery.

In paper two (chapter four), around 61% of Albertans reported excellent virtual care visit experiences during the pandemic, which was higher among Canadian-born individuals. Results also featured that Canadian-born slightly favored virtual healthcare visits over in-person visits compared to non-born Canadians. Equally, in paper three, virtual healthcare experience was well taken from both newcomers and primary care providers. However, few participants revealed that their virtual care visit was not very helpful due to language barriers (hard to express medical concern and understand doctors' advice/instruction virtually). Conversely, primary care providers highlighted that they struggled in implementing virtual care at the beginning stage due to protocol-driven and individuals' readiness. Further, concerns about connecting with patients virtually included the patients' ability to use technology, as well as communication difficulties

for patients with limited language proficiency. All of these were frequently present while caring for newcomers during the virtual care visits.

As digital health literacy remains a challenge in accessing virtual healthcare, especially for marginalized populations (e.g., those with language barriers or/and unfamiliar with digital technology), a strategic structural measure needs to be developed to promote digital literacy. Equitable patient-centered virtual healthcare is crucial. As the COVID-19 pandemic continues, the relevance of digital health literacy has increased to support virtual healthcare. To enhance and support and/or make virtual healthcare services impactful, timely developed and activated legislation, policy, and regulation are vital (such as rapid development of virtual care services across the domains of care, appropriate compensation to physicians for virtual care delivery, etc.). Further, equitable access to digital technology across healthcare centers, training for care providers, digital health literacy to diverse ranges of populations including racialized communities and ethnic minorities, providing orientation/training to patients on how to use technology are critical strategies to enhance quality healthcare via virtual care visit.

6.3 Strengths

A methodological strength of this study is in its mixed-methods design, which has a great potential to strengthen the rigor and enrich the analysis and evaluation of the findings. The mixed methods further allowed us to collect rich and comprehensive data in an integrated way (quantitative and qualitative). This study has the following further strengths:

a) Multiphase approach of the study using mixed methods sequential explanatory design [75,76]. As such, this thesis includes three studies in which each phase complements the next. Our literature review (phase one) informed us for further study design, and guidance in selecting

variables of our next phase quantitative analysis (phase two): Albertan's healthcare experiences and impact during the COVID-19 by comparing Albertans- born in Canada and outside Canada. Similarly, the evidence from phases one and two informed the development of an interview guide for our third phase study. For instance, in phase two, questions related to care accessibility, virtual care experiences, delay in seeking care, and impact on health, newcomers' views about COVID-19 vaccination were further detailed in the interview guide.

b) Unique collaboration with health system stakeholders including the Health Quality Council of Alberta, the Sunridge Family Medicine Clinic, and the University of Calgary to conduct and complete this research work during the challenging situation of the COVID-19 pandemic. Further, this work has a specific focus on primary healthcare. Primary healthcare is the door to the healthcare system in Canada, where the majority of healthcare needs are encountered. Every year, the immigrant population is growing, and to improve their health, we need to understand their experiences in accessing and receiving primary healthcare services. This comprehensive thesis study presents the immigrants' experiences, the experiences of the care providers, and describes experiences during the pandemic in comparison to patients born in Canada. The findings from this thesis work can inform health policy, education strategies for immigrants and healthcare providers including assessing the health literacy of newcomers and implementing strategies to ensure equitable care.

Our first study [55] played a vital role in this thesis work, as we conducted a systematic review, following a PRISMA methodological framework, to identify existing evidence about the experiences of immigrants accessing and receiving primary healthcare. The study identified the challenges immigrants faced while interacting with PHC, shaping the next phases and design of this thesis work.

In the second study, we analyzed provincial data from the HQCA's "*COVID-19 Experiences and Impact Survey*", which was developed based on the national and international environmental scan (section 2.3.2.2 provides details about the survey tool). The strength of this cross-sectional study involves a representative sample of Albertans receiving their care during the COVID-19 pandemic. This study collected their experiences to identify gaps in care to ultimately inform health policy at the provincial level. The secondary data analysis compared the experiences of two distinctive cohorts, Canadian-born to non-Canadian born.

In the third study, using a qualitative study design via in-depth interview, we were able to comprehend newcomers' lived experiences in accessing primary healthcare as well as the experiences of care providers' providing care to newcomers during the pandemic. This phase of the thesis work includes a comprehensive representation of the study participants. Participants had different ethnic backgrounds and lengths of stay in Canada (e.g., <3 years and 3-5 years), who shared their experiences. Some of these findings may apply to other marginalized groups. The findings from this qualitative inquiry can inform health policy focusing on equitable care.

6.4 Limitations

This work presents several limitations. First, the articles included in the literature review (chapter three) were published only in English, which could have resulted in missing relevant studies published in a different language, particularly given Canada's majority English-French bilingualism. Further, the review included immigrant patients' perspectives only, but not from the providers' viewpoint, who might have similar or/and different challenges while caring for the immigrant population. However, the participants in the included studies were ethnically diverse,

comprising a sizeable composite immigrant population from various social, and cultural backgrounds, which allows the findings to be generalized.

Secondly, the survey (chapter four) was offered in English only and in an online version, as such, the survey may have captured only a selected group of individuals. For instance, non-English speaking individuals, or/and those where language was not a barrier but did not have means to access the survey including time and technology, and those who lacked literacy about the survey, could have missed the opportunity to share their experiences. This likely introduces selection bias and limits the generalizability of results. We also concede that self-reported measures are subject to recall bias [176]. Such as, individuals who had physical and mental health issues prior to COVID-19, had experience with virtual healthcare consultation, or experienced a delay in seeking care in the past due to some other reasons, that could have influenced/informed their present experiences.

Thirdly, the interviews (chapter five) were conducted one time via a virtual platform (Zoom), which may limit the rapport-building with all participants and reduce the capacity to capture participants' body language. However, since all the participants were comfortable sharing their experiences and agreed on keeping their cameras on during the interview, we were able to maintain a field note about their tone, expression, and body language. As we did this study during the pandemic, virtual interviews were most convenient at this time. Similarly, the interviews were conducted in English. Given this, anyone unable to communicate in English (especially in the case of newcomers) was excluded from participating in the study, limiting the relevance to non-English speaking populations. Finally, all the participants of this study lived in Calgary. As such, it is plausible that our results may not apply to those accessing and receiving

primary care in community-based health centers, smaller towns, or other rural areas. Further research needs to be done to address such possible limitations.

6.5 Outcomes and Dissemination of this Research

This thesis work is novel in Alberta as it has explored and described the experiences of immigrants and primary care providers in primary care during the COVID-19 pandemic. The three-phased study presents a comprehensive view of primary healthcare settings from the newcomers' worldview. The study has highlighted what matters to immigrants, what is working well, and the areas of improvement to enhance equitable access to high-quality PHC. First, the findings from all three phases of this master's thesis work were reviewed by the committee members, submitted to peer-reviewed journals (study one and study two), and presented at various conferences. The first study, a literature review about immigrants' experiences in accessing PHC, was published in the *International Journal of Environmental Research and Public Health* [55]. The second project, describing immigrant healthcare experiences during COVID-19, has been submitted to the *Journal of Patient Experience*, and is currently under peer-review. The third manuscript for this thesis work, exploring new immigrants (newcomers) and primary care providers' perspectives in accessing and receiving, and delivering primary healthcare during the pandemic, has been submitted to the *Health Expectations Journal*.

Further, the knowledge dissemination of this thesis work aimed to inform immigrants, clinicians, healthcare administrators, policymakers, and healthcare researchers via various avenues while increasing awareness about immigrants' perspectives in primary healthcare. The findings have been presented to various health system stakeholders including healthcare providers at the academic Department of Family Medicine (University of Calgary), the

provincial governmental organization, Health Quality Council of Alberta (HQCA), the provincial council of people living in Alberta that supports patient and community engagement, Albertans4HealthResearch (AB4HR) Council, and at a provincial meeting led by United Way, United Voices-Immigrant Youth Wellness Summit. Further, the study findings from papers two and three will be shared among different stakeholders, including but not limited to immigrant patients and their families, physicians, Primary Care Networks, academic partners, researchers, community organizations/partners, and the Strategic Clinical Networks, Alberta Health Services. Additionally, we will keep sharing these findings at national conferences (e.g., Canadian Association for Health Services and Policy Research), with researchers at local seminars (e.g., O'Brien Institute for Public Health), and immigrant research networks.

6.6 Future Direction

Equitable access to healthcare in an inclusive environment that responds to diversity in a population is crucial. The future of healthcare needs to be focused on a person-centered approach that everyone must have an opportunity to access and receive healthcare with their own identity, culture, and characteristics without discrimination. Thus, identifying individuals who might be facing challenges and providing evidence-based support and treatment would be beneficial for promoting and preventing declines in an individuals' health status.

There are several new and innovative research opportunities that can be pinpointed from this project. This study highlighted that mental health has been negatively impacted since the onset of the pandemic, further research opportunities are presented about how immigrants cope with their mental health issues if services are accessible, as well as any barriers and facilitators. Similarly, our findings present that newcomers delay in seeking care, but it's unclear on the

types of care (e.g., urgent care or routine care). As such, further exploration about the delay in care and its impact would be important. Likewise, the doctor-patient relationship plays a vital role in patient experience and the pandemic plausibly impacted it. Further qualitative research to understand and theorize the effect of COVID-19 on the doctor-patient relationships, focusing on cross-cultural would be interesting to explain this complex phenomenon.

Additionally, further exploration of how different subgroups of a vulnerable population (cross-cultural), inclining but not limited to newcomers and refugee families [who have language barriers (cannot read or write)], temporary foreign workers, undocumented people, international students, and senior immigrants' experiences (comprising barriers and facilitators) in primary healthcare, during the pandemic, would be imperative to present a comprehensive scenario.

6.7 Conclusion

Understanding and improving patient experiences is a key element to enhancing care quality, which is one of the objectives of the Triple Aim [2]. It has an inherent value to both patients and care providers, which is also associated with important clinical processes and outcomes. Further, capturing patient voices is crucial, especially from marginalized groups that include immigrants. This study presents a comprehensive exploration and description of immigrants' and primary healthcare providers' lived experiences in accessing and delivering primary healthcare during the pandemic. This study yielded knowledge on what matters to the patient, barriers to accessing care, respecting cultural diversity; all in all, crucial factors in reducing health inequalities and improving care access in a respectful and responsive manner. Newcomers to Canada reported many challenges in accessing and receiving primary healthcare, and the challenges as such increased since the onset of the COVID-19 pandemic due to the

impact on social life, job loss/financial situation, and virtual care. The results clarified that additional targeted supports need to be in place in a timely manner to improve primary healthcare access of newcomers.

The findings of this study present a great opportunity for immigrants, clinicians, healthcare administrators, policymakers, and health researchers in designing specific programs that address the challenges of the newcomers to Canada. For instance, some of the findings of this study suggested, including but not limited to improving interpretation services; an increasing number of culturally competent care providers; improving health literacy among newcomers about the importance of primary healthcare; expanding comprehensive healthcare coverage for dental, eye, and other essential care; improving patient-friendly health information, enhancing social and community supports for newcomers, and promotion of mental health as crucial elements to ensuring long-term success to immigrant health. Likewise, the findings of this thesis will inform health policy aiming towards enhancing equitable access to primary healthcare to diverse populations, including racialized communities and ethnic minorities.

APPENDIX 1. A: Primary Health Care as the Centre of Alberta's Health Care System.

Integrating Services to Support Health

Primary Health Care as the Centre of Alberta's Health Care System

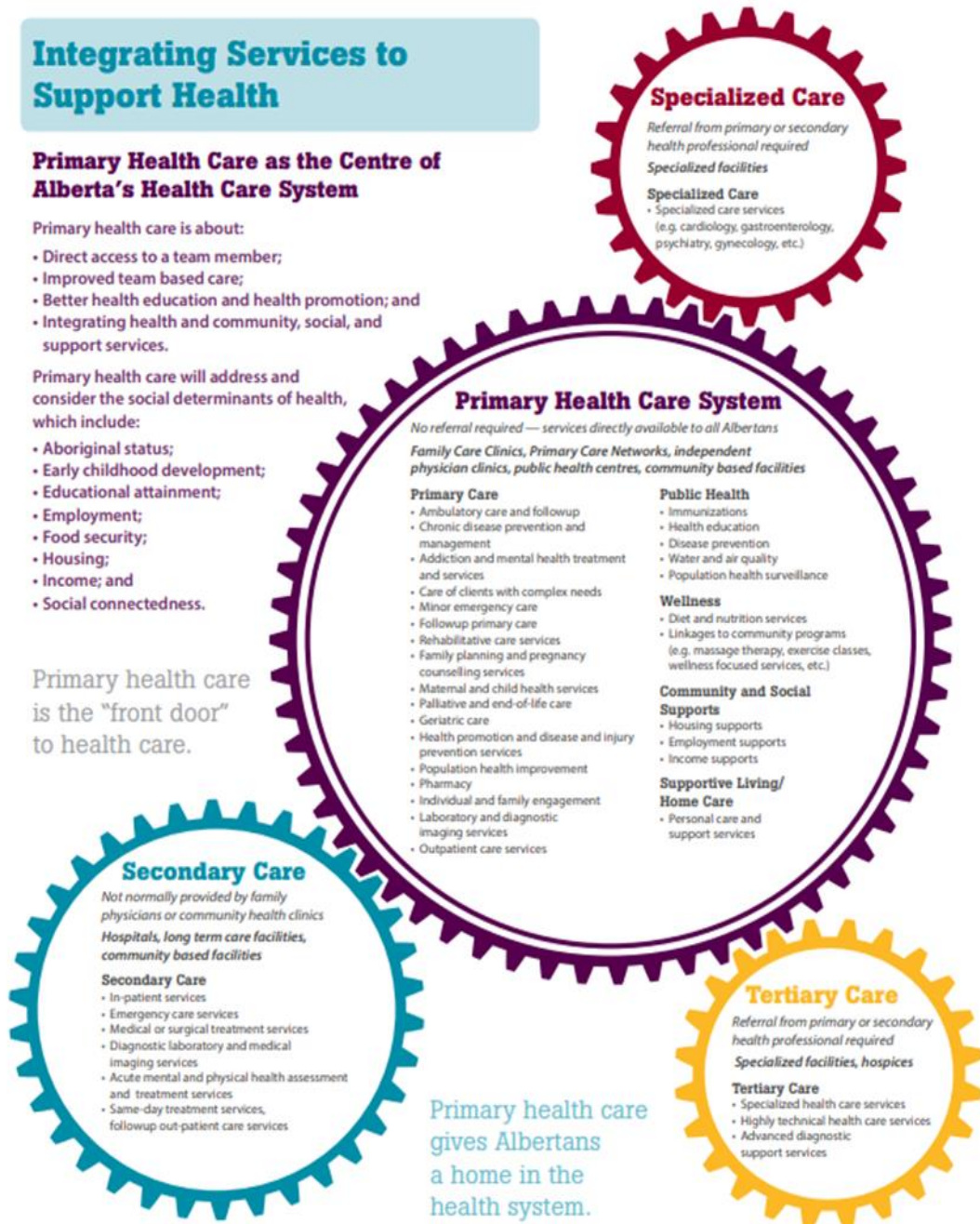
Primary health care is about:

- Direct access to a team member;
- Improved team based care;
- Better health education and health promotion; and
- Integrating health and community, social, and support services.

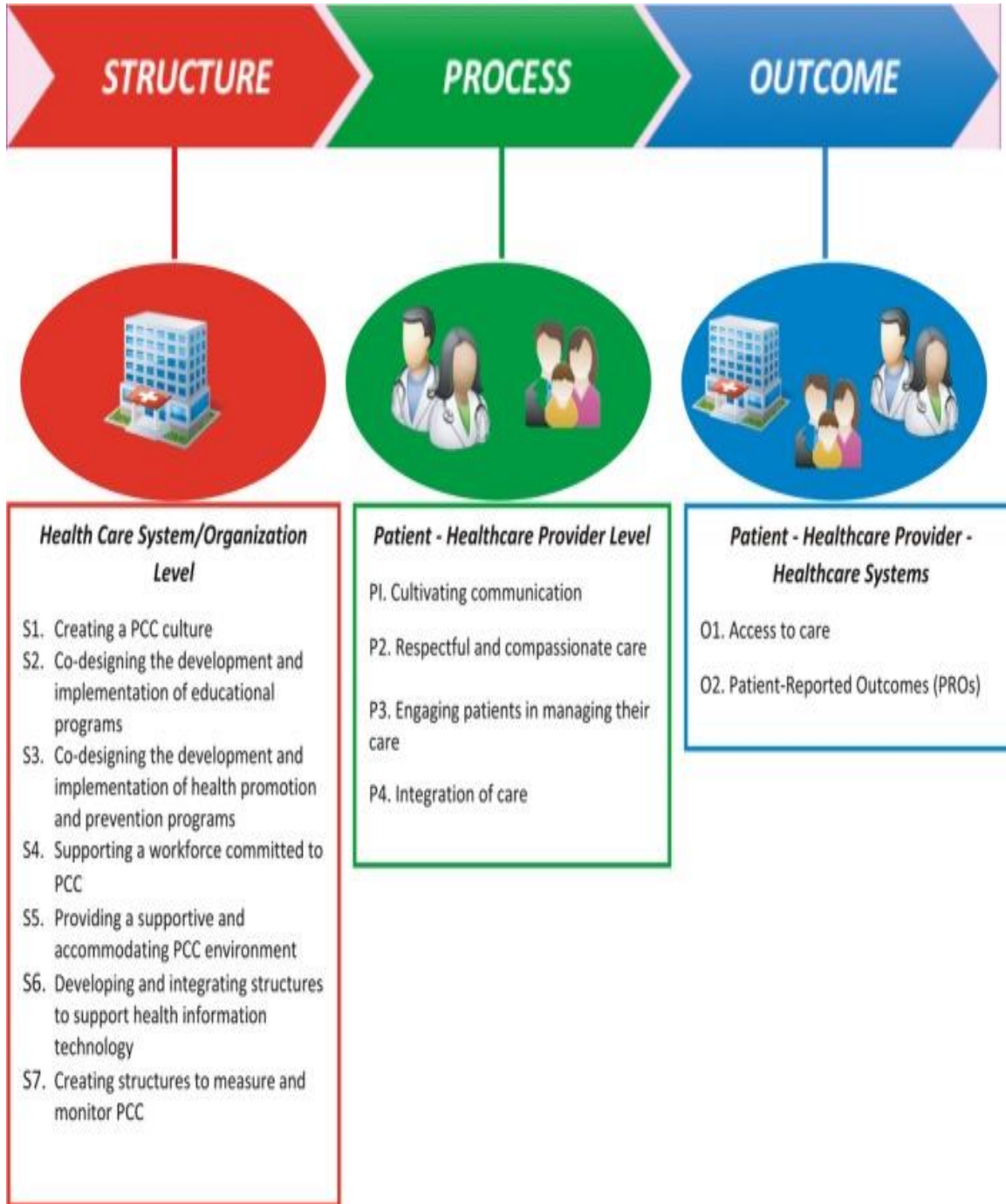
Primary health care will address and consider the social determinants of health, which include:

- Aboriginal status;
- Early childhood development;
- Educational attainment;
- Employment;
- Food security;
- Housing;
- Income; and
- Social connectedness.

Primary health care is the "front door" to health care.



APPENDIX 2. A: CONCEPTUAL FRAMEWORK.



Santana MJ, Manalili K, Jolley RJ, Zelinsky S, Quan H, Lu M. How to practice person-centered care: A conceptual framework. *Health Expectations*. 2018;21(2):429-40.

COVID-19 Experiences and Impacts

A survey by the Health Quality Council of Alberta

The COVID-19 pandemic has significantly changed the way people live, work, and access health care, as well as how healthcare is delivered.

This survey asks questions about your experiences during the pandemic. The Health Quality Council of Alberta (HQCA) aims to understand what Albertans think about changes to family physician care, social distancing measures, health system access as well as the support available to stay informed, well and protected during the pandemic.

The survey is open to all Albertans over the age of 16, including those who may have experienced care for COVID-19, other illnesses, or have had no medical attention during the pandemic.

The HQCA is an independent organization that monitors and reports on the quality and safety of the healthcare system.

Your anonymous input provides important information about the experiences and impact to Albertans during the COVID-19 pandemic.

Your privacy is protected. Your responses to this survey are completely confidential, and it will not be possible to identify you in any report.

Your participation is voluntary. It is your choice whether or not to participate, and your decision will not impact the healthcare you receive.

If you want to know more about this survey, please call the HQCA at 1-855-508-8162 or reach us by email at Info@hqca.ca

Thank you!

First, we'd like to ask you a few questions about your personal situation regarding COVID-19:

euroqol1: Which of the options below reflects your current situation best?

I do not have COVID-19, I do not have a fever or cough, and I have not been in contact with anyone with COVID-19

I tested negative for COVID-19

I may have been infected with COVID-19 because I had or have a slight fever or cough. I have not been tested and am not receiving any special care

I may have been infected with COVID-19 because I have been in contact with someone who has or had COVID-19

I have been infected with COVID-19, have had a positive test for it, and am almost or completely recovered

I have been infected with COVID-19, have had a positive test for it, and am still experiencing moderate to severe health problems from the virus

euroqol2: If you were to get COVID-19, do you think you are at extra risk of having severe complications, regardless of your age? Please choose all that apply

Yes, I have diabetes

Yes, I have heart disease or vascular disease

Yes, I have liver or kidney disease

Yes, I have or have had cancer

Yes, I have lung disease (e.g., bronchitis or asthma or emphysema)

Yes, I have an autoimmune disease

Yes, because I smoke

Yes, for another reason, specify: _____

No, I don't think so

Euroqol3: To what degree do you feel well protected from being infected by COVID-19?

Very well protected

Well protected

Reasonably well protected

Insufficiently well protected

[IF euroqol3 ANSWER IS 1 OR 2 THEN euroqol4a:]

euroqol4a: Why do you feel well protected? Please choose all that apply

I follow the public health guidelines (e.g., social distancing, self-isolation or quarantine), and my environment (e.g., my home, neighborhood, or workplace) is safe

I follow the public health guidelines, even if my environment is not always completely safe

I do not always follow the public health guidelines, but my environment is safe
COVID-19 hardly occurs here

I don't think I will get COVID-19, even if there is a chance of infection

[IF euroqol3 ANSWER IS 3 OR 4 THEN euroqol4b:]

euroqol4b: Why don't you feel completely protected? *Please choose all that apply*

I don't always follow the public health guidelines, for instance keeping my distance from other people

My care worker (e.g., nurse, physician, home care provider) does not always follow the public health guidelines

My close friends or family do not always follow the public health guidelines

I live in a location where COVID-19 is common or where risk of infection is greater

My environment (e.g., my home, neighbourhood, or workplace) is not safe, making it hard to follow public health guidelines.

CVRESTRICT: In the past few weeks many restrictions have been placed on what Albertans may do, where they may go, and with whom they can interact / interact with during the COVID-19 pandemic.

Do you think the restrictions in place prior to May 1, 2020 went too far, not far enough, or struck a good balance?

The restrictions went much too far

The restrictions went a bit too far

The restrictions struck a good balance

The restrictions didn't go quite far enough

The restrictions should have gone much further

CVRESTEND A phased approach to lifting of restrictions has been announced by the Alberta government starting May 1, 2020. To what extent do you feel they move too quickly, not quickly enough, or strikes a good balance?

The phased approach moves much too fast

The phased approach moves a bit too fast

The phased approach strikes a good balance

The phased approach doesn't go quite fast enough

The phased approach doesn't go nearly fast enough

CVSCHOOL Beginning in September, 2020 many Alberta children returned to in-school classrooms, with various measures in place to help prevent the spread of COVID-19. To what extent do you think these health and safety measures go too far, not far enough, or strike a good balance?

The measures go much too far

The measures go a bit too far

The measures strike a good balance

The measures don't go quite far enough

The measures should go much further

[IF 1 or 2 at CVSCHOOL]:

SCHOOLRIGHT: Do you believe it was the correct choice to have children return to in-school classrooms?

Yes
No

CVMASK: Wearing of non-medical masks and face coverings is promoted as a way to help prevent the spread of COVID-19 at times when it is difficult to remain physically distant from others. Based on everything you've seen and heard, do you think people are wearing masks more often than they need to, not often enough, or about the right amount?

People aren't wearing masks nearly enough
People aren't wearing masks quite enough
People are wearing masks about the right amount
People are wearing masks a bit more often than they need to
People are wearing masks much more often than they need to

CVMASK2: How often would you say you personally wear a mask when in public and unable to remain physically distant from others?

Always
Usually
Sometimes
Never

CVVAC: Researchers are working to create vaccines for COVID-19. If a vaccine becomes available in Canada, what is your personal comfort level with getting vaccinated for COVID-19?

I would choose to get vaccinated as soon as it is available to me
I would choose to wait a little while to make sure it is safe and effective
I might get vaccinated against COVID-19
I would choose to not get vaccinated against COVID-19

HQCASEHCSB1 Do you currently have a regular family doctor you usually see if you need a check-up, want advice about a health problem, or get sick or hurt?

Yes
No

VH_INTRO: During the COVID-19 pandemic many doctors, nurses, and other care providers avoid seeing patients in their office or clinic. Instead, virtual appointments are by phone, video, email or text message. The next questions ask about appointments with a healthcare provider that are virtual (i.e., not in-person). These questions do NOT refer to calls made to help lines like Health Link (811).

VH1A: Since March, 2020 have you had a virtual healthcare visit with a healthcare provider for any health concern?

Yes
No

IF YES AT VH1A:

VH1 Which of the following virtual healthcare visit types did you have since March, 2020? (Please choose all that apply).

Yes, I had a telephone visit

Yes, I had a video call from home

Yes, I had a video call while I was at a hospital/health centre

Yes, I had email, text message, or secure message contact with my healthcare provider

VH1 Why didn't you have a virtual healthcare visit? (Please choose all that apply).

No, I haven't had any recent communication with a healthcare provider for a health concern

No, I saw my healthcare provider in their office

No, I did not have the equipment for a video call (e.g., computer, tablet, phone, poor cell phone service or internet coverage)

No, I did not know how to use the technology needed for video visits.

No, I was not offered a telephone call

No, I was not offered a video visit

No, I was not aware of video visits

No, I went to the Emergency Department because my health concern was an emergency

[IF any YES at VH1]

VHDATE

When was your most recent virtual healthcare visit?

Month [DROP DOWN LIST]

Year [1900-2020]_____

[IF any YES at VH1]VH2 Was your most recent virtual healthcare visit with

Your regular doctor

A doctor through an application on your phone or computer, such as Babylon by Telus Health

A registered nurse or nurse practitioner

A psychiatrist or a psychologist

Another care provider (such as a social worker, occupational therapist, etc.)

Other, please specify:_____

[IF any YES at VH1]VHFIRST Was this the first time you received care advice through a virtual healthcare visit?

Yes

No

[IF any YES at VH1]VH4 Did you have any technical problems during your virtual healthcare visit? (Don't include the health problem you were seeking advice about) Please choose all that apply

No, I did not have any problems

Yes, I had equipment problems (such as computer glitches)

Yes, I had connectivity problems (such as poor cell phone service or internet coverage)

Yes, I was not familiar using the technology
Yes, there were not many virtual visit options available
Other: _____

[IF any YES at VH1]

VHPRIVACY Did you have any privacy concerns related to your virtual healthcare visit?

Yes, definitely
Yes, somewhat
No

[IF any YES at VH1] **VH5 Was the care advice you received during your recent virtual healthcare visit helpful to you?**

Very unhelpful
Unhelpful
Somewhat helpful
Helpful
Very helpful

[IF any YES at VH1]

VH6 Using any number from 0 to 10, where 0 is the worst experience possible and 10 is the best experience possible, overall, how would you rate your experience with your most recent virtual healthcare visit?

0 Worst experience possible
1
2
:
8
9
10 Best experience possible

VH8 Due to the COVID-19 pandemic more appointments with care providers ((e.g., doctors, nurse practitioners, and other care providers) are being conducted by virtual healthcare visits over the phone, by video, by email, or by text message).

Do you think virtual healthcare visits could be a good alternative to in-person visits for you personally in the future?

Definitely no
Probably no
Probably yes
Definitely yes

COVID13_INTRO The next few questions will help us to better understand the experiences of Albertans during the COVID-19 pandemic.

COVID17 We can all play a part in slowing the spread of COVID-19 by keeping a physical distance of 6 feet or 2 metres between each other. At this time when we cannot visit with people who do not live with us, have you been able to stay socially connected with your family and friends as much as you did before the COVID-19 pandemic?

- I have not been able to stay connected at all
- Much less than before
- Almost as much as before
- The same as before
- More than before

COVID18 How are you staying socially connected with family and friends not living in your own home during the COVID-19 pandemic? *Please choose all that apply*

- By phone calls
- By text messaging
- By video calls (e.g., Facetime, Skype, Zoom)
- By email
- By online chat
- Using social media
- Visits that maintain physical distancing (e.g., visits from the sidewalk)
- Visits that do not maintain physical distancing
- Other: _____
- I am not staying socially connected with family and friends

COVID13_INTRO2 This next series of questions is about news and information about the spread of COVID-19.

COVID13 What have been your sources of information about COVID-19? *Please choose all that apply*

- TV/radio
- News websites/apps
- Newspapers
- Social media (such as Facebook, YouTube, Reddit, Twitter, Instagram, LinkedIn, etc.)
- Alberta Health Services website
- HealthLink Alberta (8-1-1) or Alberta COVID-19 Symptom Self-Assessment Tool
- Daily updates by Alberta's Chief Medical Officer of Health, Dr. Deena Hinshaw
- Other government sources (such as websites and other communications)
- Your primary healthcare provider (such as your family doctor or a nurse practitioner)
- Your pharmacist
- Information you were given at the hospital
- Your workplace
- Talking with your family and/or friends
- Other: _____

For each of the following sources of information on COVID-19 please indicate how trustworthy you think they are, using a scale from 1 to 5, where 1 is “Not at all trustworthy”, and 5 is “Completely trustworthy”

	Not at all trustworthy 1	A little bit trustworthy 2	Somewhat trustworthy 3	Very trustworthy 4	Completely trustworthy 5	DK/NS
TV/radio						
News websites/apps						
Newspapers						
Social media (such as Facebook, YouTube, Reddit, Twitter, Instagram, LinkedIn, etc.)						
Alberta Health Services website						
HealthLink Alberta (8-1-1) or Alberta COVID-19 Symptom Self-Assessment Tool						
Daily updates by Alberta’s Chief Medical Officer of Health, Dr. Deena Hinshaw						
Other government sources (such as websites and other communications)						
Your primary healthcare provider (such as my family doctor or a nurse practitioner)						
Your pharmacist						
Information you were given at the hospital						

Your workplace						
Talking with your family and/or friends						
[OTHERINFOSP EC]						

COVID14 In the past week, how often did you check for news about the COVID-19 pandemic?

- Not at all
- Less than once a day
- Once a day
- Several times a day
- Almost constantly

Some people may experience stress, anxiety, or depression during the COVID-19 pandemic. These next questions will ask about your experiences with these types of concerns.

COVIDMH1 Have you felt stress, anxiety, or depression related to the COVID-19 pandemic which you found difficult to cope with?

- Yes, definitely
- Yes, somewhat
- No

MHSAT How satisfied people are feeling during the pandemic helps us improve services for all Albertans. Using any number from 0 to 10, where 0 is not at all satisfied and 10 is completely satisfied, how satisfied with are you with your life today?

0 ... Not at all

- 1
- 2
- :
- 8
- 9
- 10 ... Completely satisfied

The pandemic has impacted the way Albertans receive healthcare. The next few questions will ask about how it has impacted you personally.

CVDELAY: There has been a lot of discussion about healthcare providers, hospitals, and emergency departments being overwhelmed dealing with COVID-19.

Have you delayed seeking help for a medical problem because you thought the healthcare system was overwhelmed?

- Yes
- No

[IF YES at CVDELAY]:

DELAYIMPACT How much has delaying your healthcare affected your health?

- It has not affected my health at all
- A little bit
- Quite a bit
- It has greatly affected my health

COVID11_INTRO Hospitals and continuing care facilities, such as long term care or supportive living facilities, are working to prevent the spread of COVID-19. This has resulted in limiting visits by family members and friends.

CVFACEFFECT Have the restrictions on visiting family members and friends impacted you negatively?

- Yes, definitely
- Yes, somewhat
- No

It has been challenging to find the right balance between protecting patients, residents, and staff, and addressing the need to visit and care for loved ones isolated in a healthcare facility (e.g., hospitals, hospices, continuing care, and residential addiction treatment facilities).

To what extent do you think the visitation restrictions for people in healthcare facilities strike a good balance?

- The restrictions go much too far
- The restrictions go a bit too far
- The restrictions strike a good balance
- The restrictions don't go quite far enough
- The restrictions should go much further

This next set of questions asks for your views about your health and challenging situations you might have faced since the pandemic. How people view their health and how it relates to their health care experiences helps us improve the quality of care for all Albertans. If you are unsure how to answer a question, please give the best answer you can. Remember that you may skip any questions that you'd prefer not to answer.

CVSAFEA: Have you used any healthcare services in-person since the start of the COVID-19 pandemic (e.g., an in-person visit to a family doctor, public health clinic, emergency department, or a hospital stay. Do not include virtual healthcare visits)

- YES**
- NO**

[IF YES AT CVSAFE]:

COVID1 CVSAFEA Using any number from 0 to 10, where 0 is not confident at all and 10 is completely confident, how confident were you that your healthcare providers were taking steps to keep people from contracting COVID-19 during your most recent use of the healthcare system (visit to a family doctor, public health clinic, an emergency department, hospital stay, or any other similar encounter)?

0 Not confident at all

1

2

:

8

9

10 Completely confident

CVCHALLA Below are some challenges and struggles someone might face during the COVID-19 pandemic. Which, if any, of these situations have you personally faced? (Please select all that apply)

Job loss

Reduction in work hours, without job loss

Reduction in income, not due to reduced work hours or job loss

Difficulty balancing work and family obligations

Difficulty helping children with their schoolwork

Difficulty affording or accessing housing

Difficulty doing tasks such as banking or taxes

Difficulty affording or accessing food

CVCHALLB Below are some more challenges and struggles someone might face during the COVID-19 pandemic. Which, if any, of these situations have you personally faced? (Please select all that apply)

Feeling more stressed out

Difficulty sleeping

Loneliness

Inability to exercise as normal

Increased use of cigarettes, alcohol, cannabis, or over-the-counter or prescription drugs

Increased use of other drugs

Struggles with daily self-care such as showering or dressing myself

Difficulty accessing health support services (e.g., home care services, physiotherapy, etc.)

CVCHALLC Here are some more challenges and struggles someone might face during the COVID-19 pandemic. Which, if any, of these situations have you personally faced? (Please select all that apply)

Inability to properly grieve for a family member or friend who died

Inability to visit a family member living in a care facility
Relationship issues in the home
Domestic violence
Difficulty maintaining relationships with family and friends
Difficulty understanding information about COVID-19
Difficulty accessing legal resources
Suicidal thoughts

RF06. Have you used cannabis in the past 12 months?

Yes
No

RF07. [IF YES] In the past 12 months, have you used cannabis for any of the following?

For non-medical purposes only
For medical purposes only, either with or without a medical document
For both medical and non-medical purposes

RF09. Has your use of cannabis changed since March 2020?

Yes, I'm using it more often than before
Yes, I'm using it less often than before
No

RF10. On average, over the last year, how often did you drink alcohol?

6 to 7 times a week
4 to 5 times a week
2 to 3 times a week
Once a week
2 to 3 times a month
About once a month
Less than once a month
Never

RF11. [IF RF10=any option other than 0 and 9) Has your alcohol consumption changed since March 2020?

Yes, I'm drinking alcohol more often than before
Yes, I'm drinking alcohol less often than before
No

Under each heading, please tick the ONE box that best describes your health TODAY

Mobility

I have no problems in walking
I have slight problems in walking
I have moderate problems in walking
I have severe problems in walking
I am unable to walk

Self Care

- I have no problems washing or dressing myself
- I have slight problems washing or dressing myself
- I have moderate problems washing or dressing myself
- I have severe problems washing or dressing myself
- I am unable to wash or dressing myself

Usual Activities (e.g., work, study, housework, family or leisure activities)

- I have no problems doing my usual activities
- I have slight problems doing my usual activities
- I have moderate problems doing my usual activities
- I have severe problems doing my usual activities
- I am unable to do my usual activities

Pain/Discomfort

- I have no pain or discomfort
- I have slight pain or discomfort
- I have moderate pain or discomfort
- I have severe pain or discomfort
- I have extreme pain or discomfort

Anxiety/Depression

- I am not anxious or depressed
- I am slightly anxious or depressed
- I am moderately anxious or depressed
- I am severely anxious or depressed
- I am extremely anxious or depressed

We would like to know how good or bad your health is TODAY

- This scale is numbered from 0 to 100. 100 means the best health you can imagine. 0 means the worst health you can imagine. Mark an X on the scale to indicate how your health is TODAY.
- Now, please write the number you marked on the scale in the box below.

VR12_13 Compared to before the COVID-19 pandemic, how would you rate your physical health in general now?

- Much better
- Slightly better
- About the same
- Slightly worse

Much worse

VR12_14 **Compared to before the COVID-19 pandemic, how would you rate your mental health (such as feeling anxious, depressed, or irritable) now?**

Much better

Slightly better

About the same

Slightly worse

Much worse

The next few questions ask about you. Remember that you may skip any questions that you'd prefer not to answer.

What is your age?

Under 16

16 to 24

25 to 34

35 to 44

45 to 54

55 to 64

65 to 74

75 or older

Which of the following best describes your gender identity?

Man

Woman

Non-binary

Transgender

I prefer to describe

Please tell us how you self-describe _____

What is the highest level of education that you have completed?

Grade school or some high school

Completed high school

Post-secondary technical school (including Trade School)

Some university or college

Completed college diploma

Completed university degree

Post-grad degree (Masters or PhD)

What language do you mainly speak at home?

English

French

Other:

Were you born in Canada?

Yes

No

[IF NO:]

How many years have you lived in Canada?

Years: _____

How many years have you lived in Alberta?

Years: _____

People living in Canada come from many different cultural and racial backgrounds. Are you ...? Please choose all that apply

Arab

Black (e.g., African, Haitian, Caribbean)

Chinese

Filipino

Indigenous (e.g., First Nations, Metis, Inuit)

Latin American

South Asian (e.g., Indian, Pakistani, Sri Lankan)

Southeast Asian (e.g., Indonesian, Vietnamese)

White (e.g., United Kingdom, European)

Other: _____

In what sector do you work?

Retired

Unemployed

Student

Agriculture

Education

Healthcare

Social Services

Service / Hospitality

Construction / Manufacturing

Industry / Engineering / Technology

Other

Which one of the following categories best describes the total annual income, before taxes, of all members of your household?

Less than \$25,000

\$25,000 to just under \$50,000

\$50,000 to just under \$75,000

\$75,000 to just under \$100,000

\$100,000 to just under \$150,000

\$150,000 to just under \$200,000

\$200,000 or more

Which of the following best describes your financial situation?

- Very comfortable
- Comfortable
- Modestly comfortable
- Tight
- Very tight
- Poor

**[ON OPEN LINK VERSION ONLY]:
Please provide us with your postal code**

[AMA & OPEN LINK ONLY]

HQCASEHCSQ103 Before today, had you ever heard of the Health Quality Council of Alberta?

- Yes
- No

IF YES:

HQCASEHCSQ104 How did you hear about the Health Quality Council of Alberta? Please select all that apply.

- News story in a newspaper, radio, tv, or online.
- Social media (Facebook, Twitter, LinkedIn, etc.)
- Health Quality Council of Alberta website – that is, www.hqca.ca
- A Health Quality Council of Alberta publication or document
- Other (Specify):_____

[ALL RESPONDENTS:]

Over the next two years, the Health Quality Council of Alberta will be conducting other patient engagement activities related to health care quality and safety. This may involve, for instance, focus groups, interviews, or other patient experience surveys.

Would you be interested in participating in such activities?

Yes

No

[If YES, EMAIL VERSION:]

Is [pt_email] the best email address to reach you at?

YES

NO

[if NO:]

Please provide an email address we can reach you at: _____

[if YES, OPEN LINK:]

Please provide an email address we can reach you at:

[CLOSING PAGE] REDIRECT TO HQCA.CA RESOURCE AND THANK YOU PAGE

APPENDIX 2. C: EMAIL/TELEPHONE RECRUITMENT SCRIPT.

Email Recruitment Script:

(Date)

Dear.....

I, Bishnu Bajgain and my research team led by Dr. Maria Jose Santana are doing a study on Assessing the experiences of Immigrants receiving primary care during COVID-19. I am getting in touch today to know whether you would be interested in participating in an interview of this study. If you are living in Canada for ≤ 5 years and accessing primary healthcare in Alberta, you are eligible to participate in this study.

Study Background: Canada receives almost 300,000 immigrants yearly. Nearly 40,000 people choose Alberta as their home to live in, and their health needs vary because of many factors, including culture and language differences, and other social determinants of health including socioeconomic factors. These factors affect their experiences with care received in primary healthcare. We would like to hear about your experiences in accessing primary care as a newcomer to Canada. Understanding and Capturing your voice/experiences is important that helps to highlight the areas of improvement and recommend to design strategies, which can be addressed by the quality improvement experts to optimize the care delivery process in primary care.

We will coordinate with you to schedule an interview according to a time that you like and email the consent form of the research participants before starting the interview. The interview will take no more than 60-90 minutes, which will take place virtually, either on skype, zoom, telephone, or other virtual platforms that you are comfortable with. The interview session will be

audio-recorded and all the data and recording will be kept in a password-protected computer that will be accessible only to the core research team of this study.

We will not collect any of your personal health information or file during this interview.

Participation in this study is completely VOLUNTARY. You are free to choose not to participate in the study. Also, you may decide to withdraw from the study at any time. This research does not have any more risk than what you have in everyday life. Your personal information will not be attached to any results of this study without your permission. As per the University of Calgary policy, information in this study will be kept for 5 years after the study ends.

As a small token of our appreciation, you will be given a \$20 voucher/gift card.

This study has been approved by the University of Calgary Conjoint Health Research Ethics Board (REB20-1015). If you have any questions about your rights as a possible participant in this research, or research in general, please contact the Chair of the Conjoint Health Research Ethics Board, the University of Calgary at (403) 220-7990.

Thank you for your time considering this invitation to participate in our research. My phone number is (...), and my email is (...). Please do not hesitate to contact me if you have any more questions or would like more information about the study.

Please let me know if you are interested and we can set up a time.

Sincerely,

.....

Telephone Recruitment Script:

Hello, may I please speak with **(Name of the potential participant)**.

“If the potential participant is not home, ask if there is a better time to call. Do not leave a message”. If the potential participant is home, continue with the conversation

Hi, **(Name of the potential participant)** this is Bishnu calling from the office of Dr. Maria J. Santana, Department of Community Health Sciences, University of Calgary.

Today, I am reaching out to you because you mentioned that you are ok to be contacted for further research activities during the COVID-19 Experiences and Impacts survey conducted by the Health Quality Council of Alberta (HQCA) recently.

“I am calling today to ask if you are interested in a research study that we are conducting. The study is being conducted by Dr. Maria J. Santana and will look at patient experiences in accessing primary healthcare during COVID-19. Would you be interested in hearing more about this study? *“If the person says “No”, thank them for their time and say good-bye”. If the person says “Yes”:*

We would like to hear about your experiences in accessing primary care as a newcomer to Canada during COVID-19. Understanding and Capturing your voice/experiences is important that helps to highlight the areas of improvement and recommend to design strategies, which can be addressed by the quality improvement experts to optimize the care delivery process in primary care. Are you considering participating in this study?

“If the person says “No”, thank them for their time and say good-bye”.

If the person says “yes”:

I will ask you a question, how long have you been living in Canada? If ≤ 5 years, the person is eligible to participate in the study. *Now, I am going to tell you the next step:*

The study coordinator will call you and schedule an interview with you according to a time that you like, and coordinate with you how to complete the consent form for the research participation. The interview will take no more than 60-90 minutes via telephone or zoom or other virtual means that are convenient to you. Please note that the interview session will be audio-recorded and all the data and recording will be kept in a password-protected computer that will be accessible only to the core research team of this study.

We will not collect any of your personal health information or file during this interview. Participation in this study is completely VOLUNTARY. You are free to choose not to participate in the study. Also, you may decide to withdraw from the study at any time. This research does not have any more risk than what you have in everyday life. Your personal information will not be attached to any results of this study without your permission. As per the University of Calgary policy, information in this study will be kept for 5 years after the study ends.

As a small token of our appreciation, and to honour your personal time of participation, you will be given a \$20 voucher/gift card. This study has been approved by the University of Calgary Conjoint Health Research Ethics Board (REB20-1015). If you have any questions about your rights as a possible participant in this research, or research in general, please contact the Chair of the Conjoint Health Research Ethics Board, the University of Calgary at (403) 220-7990. Thank you for speaking with me today. My phone number is (...), and my email is (...). Please contact me if you have any more questions or would like more information about the study.

APPENDIX 2. D: INTERVIEW GUIDE (patient and primary healthcare providers.

Patient Interview Guide:

Name of interviewer:

Date:

Name of Interviewee:

Location:

Introductory script and Consent

Good morning/afternoon!

First, I would like to thank you so much for your time today.

The purpose of this interview is to talk with you about your experiences in accessing primary healthcare during this COVID-19 while using a variety of services and interacting with a variety of healthcare professionals. Check/Complete the consent form and I'll also go over it with you before we start the interview.

We are hoping this study will create an opportunity for the immigrant population to add their voice in improving health care quality. As well, by understanding experiences, the finding of this study will be useful to decision-makers to improve quality and equitable access to health care.

We are recording this interview so that we accurately capture your experiences in your own words. This interview will be transcribed and coded without any personal identifiers to protect your identity and privacy. Are there any questions, or do you need more clarification about the process of the interview?

Now, with your permission, I am starting the record and beginning this interview.

Introduction

Thank you for your participation in this interview. My name is Bishnu Bajgain and I am a graduate student at the University of Calgary, this interview is part of my MSc. Thesis.

1. Tell us about your day-to-day life (warm-up question) since March 2020.
2. Since March 2020, have you ever called/reached out to any of the following services? If yes, could you please describe your experiences while interacting with them?
3. Since March 2020, have you received care during the COVID-19 pandemic? If "Yes", could you please briefly tell us about the kind of care you have received during COVID-19?
4. Since March 2020, how have you been accessing primary care: in-person or virtual healthcare or both? If virtual, how are you receiving care (e.g. phone, video, email, or text message)?

5. If you are receiving healthcare via virtual, could you please briefly share your experiences.

Possible probes: Time management (no travel time/cost, wait time); comfort to express medical problem; understanding the instruction/advice; availability of equipment for video call; familiarity of using the technology; connectivity (internet); privacy concerns.

Open Ended questions:

6. Since March 2020, could you please describe your experiences with the care you received from different health services and health professional in this pandemic situation?

- a. *The quality of relationship with various professionals?*

Possible probes: Support/help/navigation received; trust; respect; preference; made time availability; discrimination; understanding patient values, beliefs, and culture etc.

- b. *Respect of your preference and share decision making process in managing your care?*

Possible probes: Involving patient/family in decision-making process; Collaborate to understand patient's needs and expectation etc.

- c. *Communication between you and various care providers?*

Possible probes: Open communication: sharing of relevant medical information; patient's health condition/symptoms, treatment process; continuity of information; available time for discussion etc.

- d. *Coordination of your care?*

Possible probes: Management of your care: appointment; referrals; care coordination with other providers/teamwork; involving family/caregivers in care pathway etc.

7. What are the difficulties (challenges/barriers) you have faced while accessing primary care services during this COVID-19 pandemic situation?

- a. *Cultural and language differences*

Possible probes: Language and cultural competency of professional; stigma; social deprivation; cultural factors (gender preference); health literacy of patient (medical terminology) and English competency etc.

- b. *Socio-Economic challenges*

Possible probes: Social support/connection/network; Inflexibility of Job and family obligation; poverty; healthcare cost etc.

- c. *Health System Structure factors*

Possible probes: Waiting time; distance of facilities; transportation limitation; unfamiliar/complex healthcare system; healthcare system literacy; uncoordinated services; acceptance of new patient etc.

8. Some people may experience stress, anxiety, or depression during the COVID-19 pandemic, have you felt any of those which you also found difficulty to cope with?
9. What are the strategies or way you have been using to cope with this kind of situation? (Visiting specialist, counsellor, online resources, mindfulness activities etc.)
10. In your opinion, what is the trustworthy sources of information about COVID-19 (social media, AHS website, your family doctor, family/friends? Why?
11. As we know vaccination for COVID-19 has started, once vaccine is available to everyone, what is your personal level of comfort getting vaccinated for COVID-19? Why do you think that way? What are the reasons?
12. What would you wish/recommend for future effort in healthcare to ensure high quality services that meet the needs of Albertans/patients?
13. Is there anything more you wanted to add (that we have not had a chance to talk about yet)?
14. Do you have any question for us?

Finally, let me summarize this conversation (main points).

About You:

1. Your DOB..... (X years)
2. Your gender
3. You family (family size: spouse/children, parents etc.)
4. Your highest level of education you completed.....
5. Language you mainly speak at home.....
6. People living in Canada come from many different cultural and racial backgrounds. Are you? (E.g., East Asian, West Asian, Black, Latin American)
7. Your Employment status (E.g., FT, PT, at Study, Retired, unemployed)
8. Length of stay in Canada since immigration-----year(s)

Lastly, thank you so much for your time and sharing your experiences in this important topic. I greatly appreciate your willingness to talk with me today.

Primary healthcare provider Interview Guide:

Name of interviewer:

Date:

Name of Interviewee:

Location:

Introductory script

Good morning/afternoon!

First, I would like to thank you so much for your time today.

The purpose of this interview is to obtain your valuable ideas, perspective, and experiences while interacting with diverse immigrant patients and providing primary care during this COVID-19.

We are hoping the information obtained via this interview will inform the feasibility and the areas of improvement and recommend to design strategies, which can be addressed to optimize the quality care delivery process in primary care.

We are recording this interview so that we accurately capture all the information in your own words. This interview will be transcribed and coded without any personal identifiers to protect your identity and privacy. Are there any questions, or do you need more clarification about the process of the interview?

Now, with your permission, I am starting the record and beginning this interview.

Introduction

Thank you for your participation in this interview. My name is Bishnu Bajgain, and I am a graduate student at the University of Calgary, this interview is part of my MSc thesis.

1. Tell us about your work/role(s) as a _____. (warm-up question).
 - a. What are most of your patient population?

2. Since March 2020, how have you been delivering care: in-person or virtual health care or both (e.g. phone, video, email, or text message)?

3. If you are delivering care via virtual means, what has your experience been with involving new immigrant patients, or what are the challenges you experience from patients' side (e.g. expressing medical problems; understanding the instruction/advice; familiarity of using the technology; connectivity (internet); using language line, privacy concerns).

4. From your perspective, what are the barriers or challenges in delivering quality healthcare services to the diverse immigrant population?
 - a. From your level factors?

Specific probes: Linguistic and Cultural difference/competency, Motivations - interest in Quality Improvement, ownership, interest in learning diverse cultures, patient engagement, teamwork, capacity/knowledge/skills, etc.
 - b. From patient-level factors?

Specific probes: Accessing, Communication/languages, follow-up, inappropriate use of health services (use of traditional medicine, bringing their family in an appointment), financial etc.
 - c. Organizational level factors?

Specific probes: Resources (interpretation services, multicultural team members), motivations - interest in Quality Improvement, leadership engagement, capacity, existing Quality Improvement processes and data collection (PREMs practices), teamwork, workflow implications, patient engagement, the culture of learning and innovation, etc.
5. What are the resources and strategies you have used or/and are using to accommodate immigrants' patients' needs in PHC?

Possible probes:

 - Language interpreters, ad hoc translators (use of family members or other care team members who speak the same language), use of printed brochures in various languages, extended appointment time, teamwork (involving multicultural team members),
6. Have you had any cross-cultural training in immigrant care? Where did you receive the training (e.g., medical residency program, continuing medical education workshop, etc.)? Do you wish to receive more cross-cultural training that benefits to providing quality care to the immigrant population?
7. How has COVID-19 affected your/organization's capacity in delivering quality care to the immigrant population?

8. From your experience, how does your clinic decide what to measure in terms of quality improvement?
 - a. How are patients and the public (families, communities) engaged/involved in healthcare measurement/improvement?
 - b. How has COVID-19 influenced decisions around measurement?
Probes: What has your experience been with involving patients? Has COVID-19 impacted the extent to which they can be involved?
9. Is there anything you would like to add that we have not had a chance to talk about yet?

About you:

1. You are -----(physician/nurse/therapist/pharmacist/other specify)
2. Your gender -----
3. Your age range (25-35, 35-45, 45-55, 55-65)-----
4. Years of practice -----
5. First language -----
6. Country of birth -----
7. Country you received majority of your medical education -----
8. Approximate proportion of immigrants in your practice -----
9. Your ethnic background -----

Lastly, thank you so much for your time and for sharing your experiences in this important topic. I greatly appreciate your willingness to talk with me today.

APPENDIX 2. E COREQ Checklist- COREQ (Consolidated criteria for Reporting Qualitative research) Checklist for Chapter 5.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
<i>Personal characteristics</i>			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	Page 92
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	Page 92
Occupation	3	What was their occupation at the time of the study?	Page 92
Gender	4	Was the researcher male or female?	Page 92
Experience and training	5	What experience or training did the researcher have?	Page 92
<i>Relationship with participants</i>			
Relationship established	6	Was a relationship established prior to study commencement?	Page 92
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	Page 92
Interviewer characteristics	8	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	Page 92-93
Domain 2: Study design			
<i>Theoretical framework</i>			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	Page 91

Topic	Item No.	Guide Questions/Description	Reported on Page No.
<i>Participant selection</i>			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Page 91-92
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	Page 92
Sample size	12	How many participants were in the study?	Page 92
Non-participation	13	How many people refused to participate or dropped out? Reasons?	N/A
<i>Setting</i>			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	Page 92
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	N/A
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	Page 94
<i>Data collection</i>			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Page 92
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	N/A
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	Page 92
Field notes	20	Were field notes made during and/or after the inter view or focus group?	Page 92-93
Duration	21	What was the duration of the inter views or focus group?	Page 93
Data saturation	22	Was data saturation discussed?	Page 92-93
Transcripts returned	23	Were transcripts returned to participants for comment and/or correction?	N/A
Domain 3: analysis and findings			
<i>Data analysis</i>			

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Number of data coders	24	How many data coders coded the data?	Page 93
Description of the coding tree	25	Did authors provide a description of the coding tree?	Page 93-95
Derivation of themes	26	Were themes identified in advance or derived from the data?	Page 93-94
Software	27	What software, if applicable, was used to manage the data?	Page 93
Participant checking	28	Did participants provide feedback on the findings?	Page 93-94
<i>Reporting</i>			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	Page 94-105 Page 116-145
Data and findings consistent	30	Was there consistency between the data presented and the findings?	Page 94-105
Clarity of major themes	31	Were major themes clearly presented in the findings?	Page 94-105
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	Page 94-105

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357.

APPENDIX 2. F: CONSENT FORM

PARTICIPANTS' ORAL CONSENT FORM

Good morning/afternoon/evening Mr./Ms./Dr..... First, I would like to thank you so much for your time today.

My name is Bishnu Bajgain, and I am a graduate student at the University of Calgary, this interview is part of my MSc thesis. This is an oral consent form, and I am going to read this for you. Once I complete reading this consent form, you have a right to accept or reject to participate in this study. This consent form is only part of the process of informed consent. It should give you a basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, please ask.

TITLE: Assessing the experiences of Immigrants receiving primary care during COVID-19: A mixed-methods study.

PRINCIPAL INVESTIGATORS: Dr. Maria Jose Santana

Dr. Santana, and associates from the Department of Community Health Sciences, Cumming School of Medicine at the University of Calgary are conducting a research study.

BACKGROUND: Canada receives almost 300,000 immigrants yearly. Nearly 40,000 people choose Alberta as their home to live in, and their health needs vary because of many factors, including culture and language differences, and other social determinants of health including socioeconomic factors. These factors affect their experiences with care received in primary healthcare. The overarching goal of this study is to explore what matters most to immigrant/newcomer patients by exploring their experiences while receiving care in Primary Health Care (PHC).

STUDY PURPOSE: We would like to hear your experiences in accessing primary care as a newcomer to Canada during this pandemic situation. Understanding and Capturing your voice/experiences is important because helps to highlight the areas of improvement and recommend designing strategies, which can be addressed by the quality improvement experts to optimize the care delivery process in primary care.

WHAT ARE THE PROCEDURES INVOLVED IN THIS STUDY?

WHAT WOULD I HAVE TO DO?: If you decide to take part in this study, you will be asked to attend to a one-on-one telephone or online interview, share your experiences (barriers and

facilitators) in accessing primary healthcare as a newcomer to Canada during COVID-19. We anticipate that the interview will take approximately 60 minutes of your time. Due to the current COVID-19 situation, the interview will be conducted using remote means including telephone or/and online Zoom as convenient to you. For the online zoom platform, we will be using the University of Calgary's zoom account which is a secured (licensed) account, and the meeting will be protected by a password. The interview will be recorded in audio form.

DO I HAVE TO PARTICIPATE? Participation in this study is completely VOLUNTARY. You are free to choose not to participate in the study. Also, you may decide to withdraw from the study at any time.

CAN I WITHDRAW MY DATA? You can withdraw your data consent for up to 2 months after the interview. Once the data is consolidated, it will be impossible to exclude data from specific participants.

WILL I BENEFIT IF I TAKE PART? There will be no direct benefit to you from participating in this study. However, this study may help the researchers learn more about your experiences (barriers and facilitators) in accessing primary healthcare that might provide the direction towards the mitigation process. As a small token of our appreciation, and to honour your personal time of participation, you will be given a \$20 voucher/gift card.

WHAT ARE THE RISKS? There are minimal or no risks in participating in this study, and it will not affect the care that you receive in Canada. We will not collect any of your personal information or personal health information. By participating in a one-on-one interview, you will simply share your experiences/feelings about the barriers and facilitators in accessing primary healthcare during COVID-19. Further, the interview will be conducted via telephone or/and zoom as convenient to you, and we will be using the University of Calgary's zoom account and the meeting will be protected by a password. However, during the interview, a participant may experience excessive discomfort/emotional, the individual will ask to stop the interview if needed to do so.

WILL MY INFORMATION AND PARTICIPATION BE KEPT CONFIDENTIAL?

We will respect your privacy. Any personal identification information collected from you will be kept confidential and will not be shared with anyone, outside the core team of this study, without your permission. The data from this study will be stored in a secure, locked location at the University of Calgary. Only core research team of this study will have an access of the data.

DATA WITHDRAW MECHANISM: WHO CAN I CONTACT IF I HAVE QUESTIONS ABOUT THIS STUDY?

The Research Team:

You may contact Dr. Maria Jose Santana at phone: (...), Email: (...) with any questions or concerns about the research or your participation in this study.

Conjoint Health Research Ethics Board (CHREB):

If you have any questions concerning your rights as a possible participant in this research, please contact the Chair, Conjoint Health Research Ethics Board, the University of Calgary at 403-220-7990.

HOW DO I INDICATE MY AGREEMENT TO PARTICIPATE?

Your oral consent on this form indicates that 1) you have understood to your satisfaction the information regarding your participation in the research project, and 2) agree to participate in the study. In no way does your agreement to take part in this study waive your legal rights nor release the investigators or involved institutions from their legal and professional responsibilities. You are free to withdraw from this study at any time. You should feel free to ask for any clarification or/and new information throughout your participation.

Do you agree to participate in this study? Yes No

If answered yes, begin an interview. If answered no, thank you for your time, Mr./Ms./Dr....

Name of Participant (Please print)

Date

Name of Researcher (Please print)

Date

REFERENCES

1. World Health Organization. (2007). "Everybody's business. Strengthening health system to improve health outcomes: WHO's framework for action". Available at: https://www.who.int/healthsystems/strategy/everybodys_business.pdf. Retrieved on September 28, 2021.
2. Berwick DM, Nolan TW, Whittington J. The triple aim: care, health, and cost. *Health Aff (Millwood)*. 2008;27(3):759-69.
3. Santana MJ, Manalili K, Jolley RJ, Zelinsky S, Lu M. How to practice person-centred care: A conceptual framework. *Health Expect*. 2017;00:1–12. <https://doi.org/10.1111/hex.12640>.
4. F. Ahmed, J. Burt, and M. Roland, "Measuring patient experience: concepts and methods," (in eng), *Patient*, vol. 7, no. 3, pp. 235-41, 2014, doi: 10.1007/s40271-014-0060-5.
5. Health Quality Council of Alberta. Surveys. Available at: <https://hqca.ca/surveys/>. Accessed on: September 29, 2021.
6. Government of Ontario. About the Excellent Care for All Act. Available at: <http://www.health.gov.on.ca/en/pro/programs/ecfa/legislation/act.aspx>. Accessed on: September 29, 2021.
7. British Columbia Office of Patient-Centred Measurement. Who We Are. Available at: <https://www.bcpcm.ca/who-we-are>. Accessed on September 29, 2021.
8. Statistic Canada. (2016). Immigrant: definition - 2019. Retrived from: <https://www23.statcan.gc.ca/imdb/p3Var.pl?Function=UnitI&Id=117213>. Accessed on December 18, 2021.
9. Canadian Council for Refugees. About refugees and Canada's response. Who is a refugee? Retrived from: https://ccrweb.ca/en/refugee-facts?gclid=CjwKCAiAh_GNBhAHEiwAjOh3ZNgTMLW1dlqA5rrG5I-Xc7sx5ouC8FwOBLjbLU6_VEjTuGblZmlE5xoC2fYQAvD_BwE. Accessed on December 18, 2021.
10. Newbold KB. Self-rated health within the Canadian immigrant population: risk and the healthy immigrant effect. *Social Science and Medicine* 2005; 60: 1359-70.

11. Hyman I. Immigration and health. Health policy working paper, series, vol 01–05. 2001.
12. Riedel RL. Access to Health Care. Handbook of immigrant Health-page 101-Google Books. Available at:
https://books.google.ca/books?id=ghL3BwAAQBAJ&pg=PA101&lpg=PA101&dq=riedel+discussed+about+healthcare+access+among+immigrants&source=bl&ots=Nr0IJ_CScA&sig=ACfU3U2NpvLaKifvw1NGunCUk_4Hy2jyUA&hl=en&sa=X&ved=2ahUKEwjEobeNlt3oAhUTCjQIHSRwBSwQ6AEwDHoECA0QLg#v=onepage&q=riedel%20discussed%20about%20healthcare%20access%20among%20immigrants&f=false
13. Quesnel- Vallee et al. 2011. Access to Health Care in Canadian Immigrants: A Longitudinal Study of the National Population Health Survey. Health Soc Care Community. 2011 January; 19(1): 70–79. doi:10.1111/j.1365-2524.2010.00950.x.
14. Government of Canada. (2020). Social determinants of health and health inequalities. Available at: <https://www.canada.ca/en/public-health/services/health-promotion/population-health/what-determines-health.html>. Retrieved on: September 28, 2021.
15. "What is patient Experience?" Agency for Healthcare Research and Quality. <https://www.ahrq.gov/cahps/about-cahps/patient-experience/index.html> (accessed.
16. F. Ahmed, J. Burt, and M. Roland, "Measuring patient experience: concepts and methods," (in eng), *Patient*, vol. 7, no. 3, pp. 235-41, 2014, doi: 10.1007/s40271-014-0060-5.
17. Rozario D. How well do we do what we do, and how do we know it? The importance of patient-reported experience measures in accessing our patients' experience of care. *Can J Surg*. 2019;62(1):E7-E9.
18. "NHS Patient Experience Framework," National Quality Board, NHS, 2018. [Online]. Available:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/215159/dh_132788.pdf
19. Dr Foster. Intelligent board: patient experience. London; 2010. Available at:
<http://www.healthcaregovernance.org.au/docs/the-intelligent-board-patient-experience-2010.pdf>. Accessed on: 29 September 2021.

20. de Silva D. (2013). Evidence Scan: Measuring Patient Experience. Available at: <https://www.health.org.uk/sites/default/files/MeasuringPatientExperience.pdf>. Accessed on: 29 September, 2021.
21. Edwards K, Walker K, Duff J. Instruments to measure the inpatient hospital experience: A literature review. *PXJ*. 2015;2(2):77-85.
22. LaVela SL, Gallan AS. Evaluation and measurement of patient experience. *PXJ*. 2014;1(1):Article 5.
23. Beattie M, Murphy DJ, Atherton I, Lauder W. Instruments to measure patient experience of healthcare quality in hospitals: a systematic review. *Syst Rev*. 2015;4:97.
24. Statistics Canada. (2021). Canadian Community Health Survey – Annual component (CCHS) – 2021. Retrived from: https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assembleInstr&a=1&&lang=en&Item_Id=1293153#qb1293156. Accessed on October 12, 2021.
25. Giordano LA, Elliott MN, Goldstein E, Lehrman WG, Spencer PA. Development, implementation, and public reporting of the HCAHPS survey. *Med Care Res Rev*. 2010;67(1):27-37.
26. Goldstein E, Farquar M, Crofton C, Darby C, Garfinkel S. Measuring hospital care from the patients' perspective: an overview of the CAHPS hospital survey development process. *Health Serv Res*. 2005;40(6 Pt 2):1977-1995.
27. Canadian Institute for Health Information. About the Canadian Patient Experiences Survey on Inpatient Care. Available at: <https://www.cihi.ca/en/patient-experience/about-the-canadian-patient-experiences-survey-on-inpatient-care>. Accessed October 12, 2021.
28. Cooke T, Liu M, Hays RD, Elliott M, Hepner K, Edwards C. HCAHPS Pilot Study: January to March 2004. Calgary Health Region. Calgary, Canada. 2005.
29. Alberta Health Services. About AHS. 2020. Available at: <https://www.albertahealthservices.ca/about/about.aspx>. Accessed October 12, 2021.
30. Kemp K, Steele B, Fairie P, McNeil D, Kromm S, Johnson D, Santana MJ. The Experience of Hospitalized Children Living with Medical Complexity. *Hosp Pediatrics*, 2021. HOSPPEDS/2020/003038

31. Kemp KA*, Naqvi FS*, Quan H, Knudtson M, Oddone Paolucci E, Santana MJ. Eliciting Patient Experiences about their Care After Cardiac Surgery. *Can J Cardiol Open*. Jan 2021.
32. K Kemp, C Norris, H Quan, M Santana. Women discharged from inpatient cardiology units report a worse experience: results from four years of survey data. *Canadian Journal of Cardiology*, 2021.
33. Kemp KA*, Steele B, Fairie PM, Santana MJ. Patient Reports of Night Noise in Hospitals are Associated with Unplanned Readmissions among Older Adults. *Patient Experience Journal* Apr 2020.
34. Kyle A. Kemp, Colleen M. Norris, Brian Steele, Paul Fairie, Maria J. Santana, Sex Differences in the Experiences of Patients Hospitalized due to Ischaemic Heart Disease in Alberta, Canada, *CJC Open*, 2021.
35. Fairie P, Steele B, Kemp K, Santana M. Mothers and fathers provide different reports on aspects of the pediatric patient experience. In *QUALITY OF LIFE RESEARCH 2020* Oct 1 (Vol. 29, No. SUPPL 1, pp. S51-S52). VAN GODEWIJCKSTRAAT 30, 3311 GZ DORDRECHT, NETHERLANDS: SPRINGER.
36. Fitzpatrick R, Boulton M. Qualitative methods for assessing health care. *Qual Health Care*. 1994;3:107–113.
37. Curry LA, Nembhard IM, Bradley EH. Qualitative and mixed methods provide unique contributions to outcomes research. *Circulation*. 2009;119:1442–1452.
38. Ahmed S*, Naqvi SF, Sinnarajah A, McGhan G, Simon J, Santana MJ. Patient and caregiver experiences with advanced cancer care in Alberta: A qualitative study informing the development of an early palliative care pathway. *BMJ Palliative Care*. PMJ-20-0526. Oct 2020.
39. Leung B MY, Wandler C**, Pringsheim T, Santana MJ. Working with parents of children with complex mental health issues to improve care: a qualitative inquiry. *Journal of Child Health Care*, 2021.

40. Manalili K, Siad F, Lantion V, Santana MJ. Developing person-centred quality indicators informed by the patient voice. In *QUALITY OF LIFE RESEARCH* 2017 Oct 1 (Vol. 26, No. 1, pp. 106-107). VAN GODEWIJCKSTRAAT 30, 3311 GZ DORDRECHT, NETHERLANDS: SPRINGER.
41. Ahmed S, Djurkovic A, Manalili K, Sahota B, Santana MJ. A qualitative study on measuring patient-centered care: Perspectives from clinician-scientists and quality improvement experts. *Health Sci Rep.* 2019;e140. <https://doi.org/10.1002/hsr2.140>.
42. Jackson, Jeanette; MacKean, Gail; Cooke, Tim; and Lahtinen, Markus (2017) "Patient and provider experiences with relationship, information, and management continuity," *Patient Experience Journal*: Vol. 4 : Iss. 3 , Article 8. Available at: <https://pxjournal.org/journal/vol4/iss3/8>.
43. Manalili K, Siad FM, Antonio M, Lashewicz B, Santana MJ. Co-designing person-centred quality indicators with diverse communities: a qualitative patient engagement study. 2021. *Health Expectations* (in press).
44. Fairie P, Zhang Z, D'Souza AG, Walsh T, Quan H, Santana MJ. Categorizing patient concerns using natural language processing techniques. *BMJ Health & Care Informatic.*
45. S. Ahmed, N. S. Shommu, N. Rumana, G. R. Barron, S. Wicklum, and T. C. Turin, "Barriers to Access of Primary Healthcare by Immigrant Populations in Canada: A Literature Review," (in eng), *J Immigr Minor Health*, vol. 18, no. 6, pp. 1522-1540, Dec 2016, doi: 10.1007/s10903-015-0276-z.
46. Statistic Canada. Released on June 29, 2016. 150 years of immigration in Canada. Available: <https://www150.statcan.gc.ca/n1/pub/11-630-x/11-630-x2016006-eng.htm>
47. "Immigration and ethnocultural diversity: Key results from the 2016 Census," in "Census Report 2016," Government of Canada, Statistic Canada, 2017. [Online]. Available: <https://www150.statcan.gc.ca/n1/daily-quotidien/171025/dq171025b-eng.htm?indid=14428-1&indgeo=0#data>
48. "2018 Annual Report to Parliament on Immigration," Government of Canada, Statistic Canada, 2019. [Online]. Available: <https://www.canada.ca/en/immigration-refugees->

[citizenship/corporate/publications-manuals/annual-report-parliament-immigration-2018/report.html](https://www150.statcan.gc.ca/n1/pub/82-625-x/2018001/article/00001-eng.htm)

49. Newbold KB. Self-rated health within the Canadian immigrant population: risk and the healthy immigrant effect. *Social Science and Medicine* 2005; 60: 1359-70.
50. Hyman I. Immigration and health. Health policy working paper, series, vol 01–05. 2001.
51. Dunn JR, Dyck I. Social determinants of health in Canada’s immigrant population: results from the national population health survey. *Soc Sci Med*. 2000; 51:1573–93.5.
52. Laroche M. Health status and health services utilization of Canada’s immigrant and non-immigrant populations. *Can Public Policy*. 2000; 26:51–75.
53. Asanin J, Wilson K. “I spent nine years looking for a doctor’’: exploring access to health care among immigrants in Mississauga, Ontario, Canada. *Soc Sci Med*. 2008; 66:1271–83.
54. Brian DG, Kevin P, Janet HR, Sara T, Marie D. Migration and health in Canada: health in the global village, *CMAJ*, September 6, 2011. 183(12). DOI:10.1503/cmaj.090287.
55. Bajgain, B.B.; Bajgain, K.T.; Badal, S et al., Patient-Reported Experiences in Accessing Primary Healthcare among Immigrant Population in Canada: A Rapid Literature Review. *Int. J. Environ. Res. Public Health* 2020, 17, 8724.
<https://doi.org/10.3390/ijerph17238724>.
56. Leduc N, Proulx M: Patterns of health services utilization by recent immigrants. *J Immigr Health* 2004, 6(1):15–27.
57. Erin D. [November 1, 2019. Number of recent immigrants in Alberta 2000-2019.](https://www150.statcan.gc.ca/n1/pub/82-625-x/2019001/article/00001-eng.htm)
[Available: https://www.statista.com/statistics/609181/number-of-immigrants-in-alberta/](https://www.statista.com/statistics/609181/number-of-immigrants-in-alberta/)
58. Stewart M, Ryan B. Ecology of health care in Canada. *Can Fam Physician* 2015;61:449–53
59. World Health Organization. The Declaration of Alma-Ata. Geneva: International Conference on PHC, Alma-Ata, USSR; 1978. Available:
http://www.who.int/publications/almaata_declaration_en.pdf. Accessed on September 30, 2021.

60. "Experiences With Primary Health Care in Canada," Canadian Institute of Health Information, Analysis In Brief, 2009. [Online]. Available: https://secure.cihi.ca/free_products/cse_phc_aib_en.pdf
61. Government of Canada. (2012). Primary health care: About primary health care. Available from: <https://www.canada.ca/en/health-canada/services/primary-health-care/about-primary-health-care.html>. Accessed on September 30, 2021.
62. Mable AL, Marriott J. Sharing the Learning—The Health Transition Fund Synthesis Series: Primary health care. Ottawa: Health Canada, Minister of Public Works and Government Services Canada; 2002. Available: <https://www.canada.ca/en/health-canada/services/health-care-system/reports-publications/health-care-accessibility/sharing-learning-health-transition-fund-synthesis-series-primary-health-care.html#a1>. Accessed on September 30, 2021.
63. Government of Alberta. (2021). Primary Health Care: Primary Care Networks. Available at: <https://www.alberta.ca/primary-health-care.aspx>. Accessed on September 30, 2021.
64. Government of Alberta. (2014). Alberta Primary Health Care Strategy: Alberta Health. Available at: <https://open.alberta.ca/dataset/1cac62b5-a383-4959-8187-1b2a6798d0ac/resource/2ff5246a-bdd9-428a-ab04-62e5475c90ed/download/6849603-2014-albertas-primary-health-care-strategy-2014-01.pdf>. Accessed on September 30, 2021.
65. WHO characterizes COVID-19 as a pandemic [news released]. 2020 Mar. 11. Geneva: The World Health Organization; 2020. Retrieved from: <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>. (Accessed on July 1, 2021).
66. Canadian Broadcasting Corporation. "Many Canadians used virtual medical care during COVID-19, poll suggests". June 8, 2020. Retrieved from: <https://www.cbc.ca/news/health/virtual-care-cma-survey-1.5603713>. (Accessed on July 1, 2021).
67. Elicare Medical. "Virtual Healthcare in Canada". Retrieve from: <https://www.elicare.ca/virtual-healthcare>. (Accessed on July 1, 2021).

68. Justin Trudeau, Prime Minister of Canada. "Prime Minister announces virtual care and mental health tools for Canadians". May 3, 2020. Retrieved from: <https://pm.gc.ca/en/news/news-releases/2020/05/03/prime-minister-announces-virtual-care-and-mental-health-tools>. (Accessed on July 1, 2021).
69. Canadian Mental Health Association. (CMHA). (2020a). New data shows majority of Ontarians believe mental health crisis will follow COVID-19 impact. Retrieved from: <https://ontario.cmha.ca/news/new-data-showsmajority-of-ontarians-believe-mental-health-crisis-will-follow-covid-19-impact/> [Accessed 2021-06-30].
70. Morneau Shepell. (2020). Canadians are feeling unprecedented levels of anxiety, according to Mental Health Index. Retrieved from: <http://morneaushepell.mediaroom.com/2020-04-02-Canadians-are-feelingunprecedented-levels-of-anxiety-according-to-Mental-Health-Index> [Accessed on June 30, 2021].
71. Centre for Addiction and Mental Health. (CAMH). (2020a). Women, parents and younger adults more likely to feel anxious and depressed during COVID-19. New national survey series by CAMH and Delvinia tracks pandemic mental health and substance use. Retrieved from: <https://www.camh.ca/en/camh-news-and-stories/womenparents-and-younger-adults-more-likely-to-feel-anxious-and-depressed-during-covid-19> [Accessed on June 30, 2021].
72. Novo Nordisk Canada Inc. Canadian with chronic conditions are reluctant to seek proactive healthcare during COVID-19. (CNW Group/Novo Nordisk Canada Inc.). 2021 April 21. Retrieved from: <https://www.newswire.ca/news-releases/canadians-with-chronic-health-conditions-reluctant-to-seek-care-during-pandemic-survey-finds-823254991.html> [Accessed on July 1, 2021].
73. Chen-See S. Disruption of cancer care in Canada during COVID-19. *Lancet Oncol.* 2020;21(8):e374. doi:10.1016/S1470-2045(20)30397-1.
74. Government of Canada. 2020. Government of Canada's Research Response to COVID-19. Retrieved from: <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/covid-19-government-canada-research-response.html>. (Accessed on July 1, 2021).

75. Creswell JW, Goodchild LF, Turner PP. Integrated qualitative and quantitative research: epistemology, history, and designs. In: Smart JC, editor. Higher education: Handbook of theory and research. New York: Agathon Press. 1996. p. 90–136.
76. Ivankova AV, Creswell JW, Stick SL. Using mixed-methods sequential explanatory design: from theory to practice. *Field Methods*. 2006;18(1):3-20.
77. Santana MJ & Feeny DH. Framework to assess the effects of using patient-reported outcome measures in chronic care management. *Quality Life Research*. 2013); 9(3): 371–379.
78. Agency for Healthcare Research and Quality. Defining the CMH; <http://pcmh.ahrq.gov/page/defining-pcmh>.
79. Epstein RM, Street RL. The values and value of patient-centered care. *Ann Fam Med* 2011; 9(2):100-103.
80. Donabedian A. The quality of care. How can it be assessed? *Jama*. 1988;260(12):1743-8.
81. Khangura, S., Konnyu, K., Cushman, R. et al. Evidence summaries: the evolution of a rapid review approach. *Syst Rev* 1, 10 (2012). <https://doi.org/10.1186/2046-4053-1-10>.
82. Higgins J, Green S, eds. *Cochrane handbook for systematic reviews of interventions*. Version 5.1.0 [updated March 2011]. ed: The Cochrane Collaboration 2011.
83. Munn Z, Porritt K, Lockwood C, Aromataris E, Pearson A. Establishing confidence in the output of qualitative research synthesis: the ConQual approach. *BMC Med Res Methodol*. 2014;14:108.
84. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol*. 2005;8(1):19–32.
85. Anderson S, Allen P, Peckham S, Goodwin N. Asking the right questions: scoping studies in the commissioning of research on the organisation and delivery of health services. *Health Research Policy and Systems*. 2008;6(1):1.
86. Huw TO, Crombie DI. What is a systematic review? *Evidence-based medicine*. April 2009. [Accessed July 3, 2014]. Available on <http://www.medicine.ox.ac.uk>.

87. Sucharew H, Maurizio Macaluso, MD, DrPH, Methods for Research Evidence Synthesis: The Scoping Review Approach. *J. Hosp. Med* 2019;7;416-418. Published online first June 12, 2019.. doi:10.12788/jhm.3248.
88. Moher, D.; Liberati, A.; Tetzla_, J.; Altman, D.G. Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Med.* 2009, 6, e1000097.
89. Margulis, A.V.; Pladevall, M.; Riera-Guardia, N.; Varas-Lorenzo, C.; Hazell, L.; Berkman, N.D.; Viswanathan, M.; Perez-Gutthann, S. Quality assessment of observational studies in a drug-safety systematic review, comparison of two tools: The Newcastle-Ottawa Scale and the RTI item bank. *Clin. Epidemiol.* 2014, 6, 359–368.
90. Government of Canada. (2020). Who is Canadian Citizen? 2020-07-15. Retrieved from: <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/operational-bulletins-manuals/canadian-citizenship/overview/who-canadian-citizen.html>. [Accessed on July 6, 2021].
91. StataCorp. 2015. Stata Statistical Software: Release 14. College Station, TX: StataCorp LP.
92. Guba EG, Lincoln YS. Fourth generation evaluation. London: Sage Publications; 1989. 79-90 p.
93. Flick, U (2002), An introduction to Qualitative research, SAGE Publication, London 1283 4.
94. Kairuz, T, Crump K, and O'Brien, A. (2007), "Tools for data collection and analysis", *The Pharmaceutical Journal*, Vol. 278, pp. 371-377, (referred on 02/04/2008), available from www.pjonline.com
95. Patton MQ. Qualitative research and evaluation methods. 3rd Sage Publications; Thousand Oaks, CA: 2002.
96. Cresswell JW, Plano Clark VL. Designing and conducting mixed method research. 2nd Sage; Thousand Oaks, CA: 2011.

97. Bernard HR. Research methods in anthropology: Qualitative and quantitative approaches. 3rd Alta Mira Press; Walnut Creek, CA: 2002.
98. Spradley JP. The ethnographic interview. Holt, Rinehart & Winston; New York: 1979.
99. Sampling in Developmental Science: Situations, Shortcomings, Solutions, and Standards. Bornstein MH, Jager J, Putnick DL Dev Rev. 2013 Dec; 33(4):357-370.
100. Parker, C., Scott, S., & Geddes, A. (2019). Snowball Sampling. In P. Atkinson, S. Delamont, A. Cernat, J.W. Sakshaug, & R.A. Williams (Eds.), SAGE Research Methods Foundations. <https://www.doi.org/10.4135/9781526421036831710>.
101. Zoom Video Communications Inc . (2016). Security guide. Zoom Video Communications Inc. Retrieved from <https://d24cgw3uvb9a9h.cloudfront.net/static/81625/doc/Zoom-Security-White-Paper.pdf>
102. Archibald MM, Ambagtsheer RC, Casey MG, Lawless M. Using Zoom Videoconferencing for Qualitative Data Collection: Perceptions and Experiences of Researchers and Participants. International Journal of Qualitative Methods. January 2019. doi:[10.1177/1609406919874596](https://doi.org/10.1177/1609406919874596)
103. QSR International Pty Ltd. (2018) NVivo (Version 12), <https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home>
104. Braun, V., & Clarke, V. (2013). Thematic analysis. In H. Cooper (Ed.), APA handbook of research methods in psychology: Research design (Vol. 2, pp. 57-71).
105. King, N. (2004). Using templates in the thematic analysis of text. In Cassell, C., Symon, G. (Eds.), Essential guide to qualitative methods in organizational research (pp. 257–270). London, UK: Sage.
106. Creswell, J. (2007). Data analysis and representation. In Creswell, J. (Ed.), Qualitative inquiry and research design: Choosing among five approaches (2nd ed., pp. 179–212). Thousand Oaks, CA: Sage.

107. Booth A, Hannes K, Harden A, Noyes J, Harris J, Tong A. COREQ (consolidated criteria for reporting qualitative studies). *Guidelines for reporting health research: a user's manual*. 2014:214-26.
108. Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Thousand Oaks: SAGE Publications Inc.
109. Vang, Z.; Sigouin, J.; Flenon, A.; Gagnon, A. The healthy immigrant effect in Canada: A systematic review. *Population Change and Lifecourse Strategic Knowledge Cluster Discussion Paper Series/Un Réseau Stratégique de Connaissances Changements de Population et Parcours de Vie Document de Travail*. 2015, Volume 3, p. 4. Available online: <https://ir.lib.uwo.ca/pclc/vol3/iss1/4> (accessed on 24 November 2020).
110. Gushulak, B.D.; Pottie, K.; Hatcher Roberts, J.; Torres, S.; DesMeules, M. Migration and health in Canada: Health in the global village. *CMAJ* **2011**, 183, E952–E958.
111. De Maio, F.G.; Kemp, E. The deterioration of health status among immigrants to Canada. *Glob. Public Health* 2010, 5, 462–478.
112. Setia, M.S.; Quesnel-Vallee, A.; Abrahamowicz, M.; Tousignant, P.; Lynch, J. Access to health-care in Canadian immigrants: A longitudinal study of the National Population Health Survey. *Health Soc. Care Community* 2011, 19, 70–79.
113. Salami, B.; Salma, J.; Hegadoren, K. Access and utilization of mental health services for immigrants and refugees: Perspectives of immigrant service providers. *Int. J. Ment. Health Nurs.* **2019**, 28, 152–161.
114. Lum, I.D.; Swartz, R.H.; Kwan, M.Y.W. Accessibility and use of primary healthcare for immigrants living in the Niagara Region. *Soc. Sci. Med.* **2016**, 156, 73–79.
115. Calvasina, P.; Lawrence, H.P.; Hoeman-Goetz, L.; Norman, C.D. Brazilian immigrants' oral health literacy and participation in oral health care in Canada. *BMC Oral. Health* **2016**, 16, 18.
116. Harrington, D.W.; Wilson, K.; Rosenberg, M.; Bell, S. Access granted! Barriers endure: Determinants of difficulties accessing specialist care when required in Ontario, Canada. *BMC Health Serv. Res.* 2013, 13, 146.

117. Hulme, J.; Moravac, C.; Ahmad, F.; Cleverly, S.; Lofters, A.; Ginsburg, O.; Dunn, S. “I want to save my life”: Conceptions of cervical and breast cancer screening among urban immigrant women of South Asian and Chinese origin. *BMC Public Health* **2016**, *16*, 1–12.
118. Wang, L.; Kwak, M.J. Immigration, barriers to healthcare and transnational ties: A case study of South Korean immigrants in Toronto, Canada. *Soc. Sci. Med.* **2015**.
119. Pollock, G.; Newbold, K.B.; Lafrenière, G.; Edge, S. Discrimination in the Doctor’s Office: Immigrants and Refugee Experiences. *Crit. Soc. Work* **2012**, *13*.
120. Amin, M.; Perez, A. Is the wait-for-patient-to-come approach suitable for African newcomers to Alberta, Canada? *Community Dent. Oral Epidemiol.* **2012**, *40*, 523–531.
121. Mumtaz, Z.; O’Brien, B.; Higginbottom, G. Navigating maternity health care: A survey of the Canadian prairie newcomer experience. *BMC Pregnancy Childbirth* **2014**, *14*, 4.
122. Higginbottom, G.M.; Safipour, J.; Yohani, S.; O’Brien, B.; Mumtaz, Z.; Paton, P.; Chiu, Y.; Barolia, R. An ethnographic investigation of the maternity healthcare experience of immigrants in rural and urban Alberta, Canada. *BMC Pregnancy Childbirth* **2016**, *16*, 20.
123. Dastjerdi, M.; Olson, K.; Ogilvie, L. A study of Iranian immigrants’ experiences of accessing Canadian health care services: A grounded theory. *Int. J. Equity Health* **2012**, *11*, 55.
124. Ngwakongwi, E.; Hemmelgarn, B.R.; Musto, R.; Quan, H.; King-Shier, K.M. Experiences of French speaking immigrants and non-immigrants accessing health care services in a large Canadian city. *Int. J. Environ. Res. Public Health* **2012**, *9*, 3755–3768.
125. Gulati, S.; Watt, L.; Shaw, N.; Sung, L.; Poureslami, I.M.; Klaassen, R.; Dix, D.; Klassen, A.F. Communication and language challenges experienced by Chinese and South Asian immigrant parents of children with cancer in Canada: Implications for health services delivery. *Pediatric Blood Cancer* **2012**, *58*, 572–578.
126. Corscadden, L.; Levesque, J.F.; Lewis, V.; Strumpf, E.; Breton, M.; Russell, G. Factors associated with multiple barriers to access to primary care: An international analysis. *Int. J. Equity Health* **2018**, *17*.

- 127.Lee, T.Y.; Landy, C.K.; Wahoush, O.; Khanlou, N.; Liu, Y.C.; Li, C.C. A descriptive phenomenology study of newcomers' experience of maternity care services: Chinese women's perspectives. *BMC Health Serv. Res.* **2014**, *14*, 114.
- 128.Marshall, E.G.;Wong, S.T.; Haggerty, J.L.; Levesque, J.F. Perceptions of unmet healthcare needs: What do Punjabi and Chinese-speaking immigrants think? A qualitative study. *BMC Health Serv. Res.* **2010**, *10*.
- 129.Ou, C.H.K.;Wong, S.T.; Levesque, J.-F.; Saewyc, E. Healthcare needs and access in a sample of Chinese young adults in Vancouver, British Columbia: A qualitative analysis. *Int. J. Nurs. Sci.* **2017**, *4*, 173–178.
- 130.Woodgate, R.L.; Busolo, D.S.; Crockett, M.; Dean, R.A.; Amaladas, M.R.; Plourde, P.J. A qualitative study on African immigrant and refugee families' experiences of accessing primary health care services in Manitoba, Canada: It's not easy! *Int. J. Equity Health* **2017**, *16*, 5.
- 131.Cloos, P.; Ndao, E.M.; Aho, J.; Benoît, M.; Fillol, A.; Munoz-Bertrand, M.; Ouimet, M.J.; Hanley, J.; Ridde, V. The negative self-perceived health of migrants with precarious status in Montreal, Canada: A cross-sectional study. *PLoS ONE* **2020**, *15*, e0231327.
- 132.George, P.; Terrion, J.; Ahmed, R. Reproductive health behaviour of Muslim immigrant women in Canada. *Int. J. Migr.* **2014**, *10*.
- 133.Montesanti, S.R.; Abelson, J.; Lavis, J.N.; Dunn, J.R. Enabling the participation of marginalized populations: Case studies from a health service organization in Ontario, Canada. *Health Promot. Int.* **2017**, *32*, 636–649.
- 134.Kim, K.; Kim, B.; Choi, E.; Song, Y.; Han, H.R. Knowledge, perceptions, and decision making about human papillomavirus vaccination among Korean American women: A focus group study. *Womens Health Issues* **2015**, *25*, 112–119.
- 135.Chan, M.; Johnston, C.; Bever, A. Exploring Health Service Underutilization: A Process Evaluation of the Newcomer Women's Health Clinic. *J. Immigr. Minor. Health* **2018**, *20*, 920–925.

136. College of Physicians and Surgeons of Saskatchewan. Patient-Physician Relationships. 2020. Available online: <https://www.cps.sk.ca/imis/Documents/Legislation/Policies/GUIDELINE%20-%20Patient%20Physician%20Relationships.pdf> (accessed on 10 July 2020).
137. Kirmayer, L.J.; Narasiah, L.; Munoz, M.; Rashid, M.; Ryder, A.G.; Guzder, J.; Hassan, G.; Rousseau, C.; Pottie, K.; CCIRH. Common mental health problems in immigrants and refugees: General approach in primary care. *CMAJ* **2011**, 183, E959–E967.
138. Government of Canada. Canada's Health Care System. 2019. Available online: <https://www.canada.ca/en/health-canada/services/health-care-system/reports-publications/health-care-system/canada.html> (accessed on 24 November 2020).
139. Chiarenza, A.; Dauvrin, M.; Chiesa, V.; Baatout, S.; Verrept, H. Supporting access to healthcare for refugees and migrants in European countries under particular migratory pressure. *BMC Health Serv. Res.* 2019, 19, 513.
140. Kathryn Pitkin, D.; Escarce, J.J.; Lurie, N. Immigrants And Health Care: Sources Of Vulnerability. *Health Aff.* 2007, 26, 1258–1268.
141. Gilliland, J.A.; Shah, T.I.; Clark, A.; Sibbald, S.; Seabrook, J.A. A geospatial approach to understanding inequalities in accessibility to primary care among vulnerable populations. *PLoS ONE* 2019, 14, e0210113.
142. Bowen, S. The Impact of Language Barriers on Patient Safety and Quality of Care. 2015. Available online: <http://www.santefrancais.ca/wp-content/uploads/2018/11/SSF-Bowen-S.-Language-Barriers-Study-1.pdf> (accessed on 24 November 2020).
143. Kreps, G.L.; Sparks, L. Meeting the health literacy needs of immigrant populations. *Patient Educ. Couns.* 2008, 71, 328–332.
144. Macpherson, D.W.; Gushulak, B.D.; Macdonald, L. Health and foreign policy: Influences of migration and population mobility. *Bull. World Health Organ.* 2007, 85, 200–206.
145. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q.* 2005;83(3):457-502. doi: 10.1111/j.1468-0009.2005.00409.x. PMID: 16202000; PMCID: PMC2690145.

146. Government of Canada. 2021. COVID-19 daily epidemiology update. Retrieved from: <https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html> [Accessed on August 6, 2021].
147. Government of Canada. 2021. COVID-19 daily epidemiology update. COVID-19 case in Alberta. Retrieved from: <https://www.alberta.ca/coronavirus-info-for-albertans.aspx> [Accessed on August 6, 2021].
148. McMahon M, Nadigel J, Thompson E, Glazier RH. Informing Canada's Health System Response to COVID-19: Priorities for Health Services and Policy Research. *Healthc Policy*. 2020;16(1):112-124. doi:10.12927/hcpol.2020.26249.
149. Statistics Canada. (2016). Focus on Geography Series, 2016 Census. Province of Alberta. Immigrant and ethnocultural diversity: Immigrant population. 2019-04-10. Retrieved from: <https://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/Facts-pr-eng.cfm?Lang=Eng&GK=PR&GC=48&TOPIC=7> [Accessed on July, 21].
150. Statistics Canada. (2016). Immigrant and ethnocultural diversity: immigrant population. 2019-04-18. Retrieved from: <https://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/Facts-can-eng.cfm?Lang=Eng&GK=CAN&GC=01&TOPIC=7> [Accessed on July, 6 2021].
151. Ottawa: Canadian Institute for Health Information. "COVID-19 intervention timeline in Canada". March 19, 2020. Retrieved from: <https://www.cihi.ca/en/covid-19-intervention-timeline-in-canada> (Accessed on July 1, 2021).
152. Larry Green Center and Primary Care Collaborative. "COVID-19 Collection: Primary Care Covid-19 Survey". *Annal Fam ed* 2020. Retrieved from: <https://www.annfammed.org/content/covid-19-collection-primary-care-covid-19-survey-larry-green-center-and-primary-care> (Accessed on July 1, 2021).
153. Ontario Demographic Quarterly: highlights of first quarter 2020. Toronto: Government of Ontario; 2020. Retrieved from: <https://www.ontario.ca/page/ontario-demographic-quarterly-highlights-first-quarter> (Accessed on July 1, 2021).

154. Canadian Medical Association. What Canadians think about virtual health care? Abacus Data/Canadian. May 2020. Retrieved from: <https://www.cma.ca/sites/default/files/pdf/virtual-care/cma-virtual-care-public-poll-june-2020-e.pdf> [Accessed on July 1, 2021].
155. Angus Reid Institute. (2020). Worry, gratitude & boredom: As COVID-19 affects mental, financial health, who fares better; who is worse? Retrieved from: <http://angusreid.org/covid19-mental-health/> [Accessed on June 30, 2021].
156. Czeisler MÉ, Marynak K, Clarke KE, et al. Delay or Avoidance of Medical Care Because of COVID-19–Related Concerns — United States, June 2020. *MMWR Morb Mortal Wkly Rep* 2020;69:1250–1257.
157. Statistic Canada. 2021. COVID-19 vaccine willingness Canadian population groups. March 26, 2021. Retrieved from: <https://www150.statcan.gc.ca/n1/pub/45-28-0001/2021001/article/00011-eng.htm> [Accessed on July 1, 2021].
158. Angus RI. More Canadians willing to roll up their sleeves right away as national COVID-19 vaccine rollout begins. Angus Reid Institute. 2020 Dec 14. Retrieved from: <https://angusreid.org/canada-covid-vaccine-december/> [accessed on July 1, 2021].
159. Griffith J, Marani H, Monkman H. COVID-19 Vaccine Hesitancy in Canada: Content Analysis of Tweets Using the Theoretical Domains Framework *J Med Internet Res* 2021;23(4):e26874.
160. Canadian Medical Association. (2021). Equity and diversity in medicine. Retrieved from: <https://www.cma.ca/physician-wellness-hub/topics/equity-and-diversity-in-medicine> [Accessed on July 6, 2021].
161. Diversity for Social Impact. (2021). Alberta Health Services (AHS), Canada. Retrieved from: <https://diversity.social/top-diversity-employers/alberta-health-service-ahs-canada/> [Accessed on July 6, 2021].
162. Muggah, E., Dahrouge, S. & Hogg, W. Access to primary health care for immigrants: results of a patient survey conducted in 137 primary care practices in Ontario, Canada. *BMC Fam Pract* **13**, 128 (2012). <https://doi.org/10.1186/1471-2296-13-128>.

163. Fenta H, Hyman I, Noh S. Health services utilization by Ethiopian immigrants and refugees in Toronto. *J Immigr Minor Health* 2007;9:349–57.
164. Kinnon D. Canadian research on immigration and health – an overview. Ottawa, ON: Health Canada; 1999.
165. QT, Inc v. Mayo Clinic Jacksonville, 2006 US Dist. LEXIS 33668, at *10 (ND Ill May 15, 2006).
166. Institute of Medicine Committee on Quality of Health Care in America. Crossing the Quality Chasm: A New Health System for the 21st Century. 2001. Washington, DC: National Academies Press.
167. Verhoeven V, Tsakitzidis G, Philips H, et al. Impact of the COVID-19 pandemic on the core functions of primary care: will the cure be worse than the disease? A qualitative interview study in Flemish GPs. *BMJ Open* 2020;10:e039674. doi:10.1136/bmjopen-2020-039674.
168. Turin TC, Rashid R, Ferdous M, et al. Perceived barriers and primary care access experiences among immigrant Bangladeshi men in Canada. *Fam Med Com Health* 2020;8:e000453. doi:10.1136/fmch-2020-000453.
169. The patient-doctor relationship: a synthesis of the qualitative literature on patients' perspectives. Ridd M, Shaw A, Lewis G, Salisbury C *Br J Gen Pract.* 2009 Apr; 59(561):e116–33.
170. Silverman, J., & Kinnersley, P. (2010). Doctors' non-verbal behaviour in consultations: look at the patient before you look at the computer. *The British journal of general practice : the journal of the Royal College of General Practitioners*, 60(571), 76–78. <https://doi.org/10.3399/bjgp10X482293>.
171. Wong CK, Yip BH, Mercer S, Griffiths S, Kung K, Wong MC, Chor J, Wong SY. Effect of facemasks on empathy and relational continuity: a randomised controlled trial in primary care. *BMC Fam Pract.* 2013 Dec 24;14:200. doi: 10.1186/1471-2296-14-200. PMID: 24364989; PMCID: PMC3879648.

172. Care Coordination. Content last reviewed August 2018. Agency for Healthcare Research and Quality, Rockville, MD. <https://www.ahrq.gov/ncepcr/care/coordination.html>
173. McDonald KM, Sundaram V, Bravata DM, Lewis R, Lin N, Kraft SA, et al. Definitions of care coordination and related terms. Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies (Vol 7: Care Coordination): Agency for Healthcare Research and Quality (US); 2007.
174. Shaw. J., Jamieson. T., Agarwal. P., et al. 2018. Virtual care policy recommendations for patient-centred primary care: findings of a consensus policy dialogue using a nominal group technique. J Telemed Telecare 2018;24(9):608–15.
175. Canada Health Infoway. 2020. Analysis of the current and potential benefits of virtual care in Canada. <https://infowayinforoute.ca/en/component/edocman/3819-analysis-of-the-current-and-potential-benefits-of-virtual-care-in-canada/viewdocument?Itemid=101>
176. Green J, Thorogood N. Qualitative Methods for Health Research. 3rd Edition. Los Angeles: Sage. 2014.