REFUGEE HEALTH PROMOTION IN CANADA

REFUGEE HEALTH PROMOTION IN CANADA: A SYSTEMATIC REVIEW OF THE EVIDENCE ON THE IMPLEMENTATION OF THE IHR IN CANADA REGARDING REFUGEE HEALTH PROMOTION WITHIN THE CONTEXT OF A PHEIC

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TITLE: Refugee Health Promotion in Canada: A systematic review of the evidence on the implementation of the IHR in Canada regarding refugee health promotion within the context of a PHEIC

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LAY ABSTRACT

Refugee populations are at increased risk for developing poor mental health outcomes and infectious diseases, that are exacerbated during Public Health Emergencies of International Concern (PHEICs). The purpose of this systematic review is to evaluate the reported implementation of the IHR in Canada, specifically in promoting the health of refugee populations, during PHEICs. Nine electronic databases were searched and thematic synthesis methodology was used to analyze the results. Findings demonstrate lack of effective policy/legislation translation as well as inappropriate applications of public health restrictions and safety protocols as barriers to promoting positive refugee health outcomes during a PHEIC. A lack of consistency in implementing some of the IHR core capacities and PHAC core competencies for refugee health promotion in Canada, was also observed. Future research should focus on improving needs-based assessment and applying equity-based frameworks for implementing the IHR in Canada for refugee health promotion during a PHEIC.

ABSTRACT

Refugees remain the most vulnerable members of society and face several health risks for adaptation to a host country. These include an increased risk of developing communicable diseases that are exacerbated during a PHEIC . The purpose of this systematic review is to evaluate the reported implementation of the IHR in Canada, specifically in refugee health promotion, during PHEICs. The chosen method is a systematic review which locates and synthesizes evidence from as many relevant studies as possible. 9 electronic databases were searched and screening was conducted on Covidence. Articles that were included contained IHR policies on PHEICs, quantitative and/or qualitative methodologies of analysis, systematic reviews, published in English, provided a Canadian context, involved at least 1 of the refugee health outcomes from the following: access to health services and quality health care provision, improved health security, improved health literacy and published between 2005 and 2022 Risk of Bias was assessed using the ROBIS tool. Thematic Synthesis was used to code textual data on MAXQDA to extract descriptive themes and analytical themes. 19 studies were selected for the systematic review. 10 descriptive themes were found and analyzed to determine 2 analytical themes. Findings exhibit lack of effective policy/legislation translation as well as inappropriate applications of public health restrictions and safety protocols as barriers to promoting positive refugee health outcomes during a PHEIC. The findings may also reflect a lack of consistency in implementing some of the IHR core capacities and PHAC core competencies for refugee health promotion in Canada. Thus, it is essential that future research focus on appropriate needs-assessment tools, the use of legal frameworks that can inform the capacity-building of health systems for refugee populations as well as ongoing consultation amongst governing entities, health care administration, health care providers and refugee populations for strengthening Canada's implementation of the IHR for refugee health promotion.

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LIST OF ABBREVIATIONS AND SYMBOLS

CBSA	Canada Border Services Agency
CIC	Citizenship and Immigration Canada
DCOs	Designated Countries of Origin
EHCC	Expanded Health Care Coverage
EMTs	Emergency Medical Technicians
GAP	Global Action Plan
GARs	Government-Assisted Refugees
GSRs	Government-Sponsored Refugees
HCC	Health Care Coverage
HIV	Human Immunodeficiency Virus
IFH	Interim Federal Health
IFHP	Interim Federal Health Program
IHR	International Health Regulations
IME	International Medical Examination
IPC	Infection Prevention and Control
IRCC	Immigration, Refugees and Citizenship Canada
OTHP	Ontario Temporary Health Program
OHIP	Ontario Health Insurance Plan
PHAC	Public Health Agency of Canada
PHEIC	Public Health Emergency of International Concern
PHPS	Public Health Public Safety
PoE	Points of Entry
PPE	Personal Protective Equipment
PPRA	Pre-Removal Risk Assessment
PSRs	Privately-Sponsored Refugees
RAP	Refugee Assistance Program
RCCE	Risk Communication and Community Engagement
TB	Tuberculousis
WHO	World Health Organization

DECLARATION OF ACADEMIC ACHIEVEMENT

The following is a declaration that the content of the research in this document has been completed by Aeda Bhagaloo and recognizes the contributions of Dr. Lydia Kapiriri and Dr. Gina Agarwal in both the research process and the completion of the thesis.

Chapter I-Introduction

1.1. Introduction and Study Purpose

1.1.1. Refugee populations and their health needs

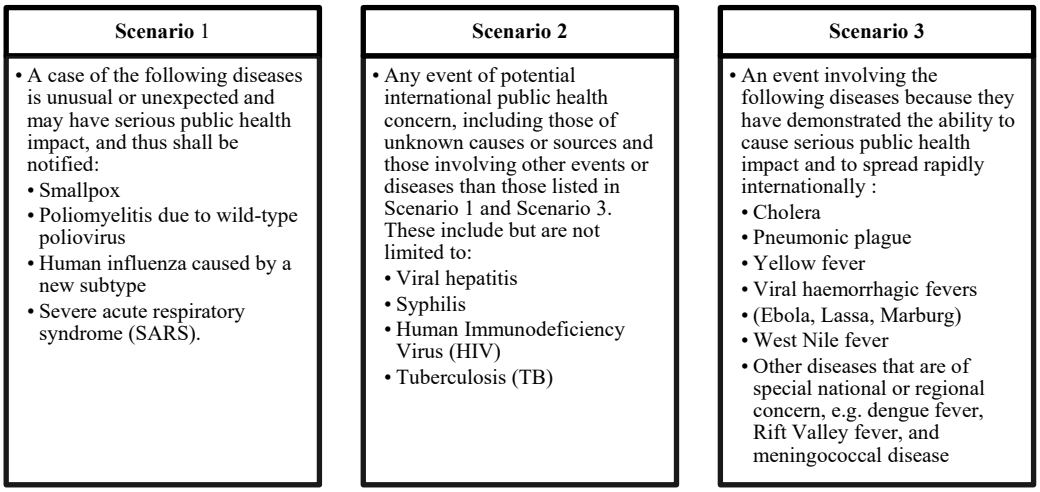
There are about 26.4 million refugees (WHO, 2021) who remain the most vulnerable members of society, often faced with direct and indirect forms of xenophobia, poor living and working conditions as well as inefficient access to several health services (WHO, 2021). For some, the migration trajectory to a host country comes with several socio-economic, cultural, and health challenges as well as a rapid resettlement timeline which presents several risks for adaptation to the host country (Wong, 2016). These risks include poor mental health outcomes as well as increased risk of developing communicable diseases, including infectious diseases such as COVID-19 that may pose a public health risk (WHO, 2022c). According to WHO, "refugee populations need to be in good health to protect both themselves and host populations. They have the human right to health, and countries have an obligation to provide refugee and migrant sensitive health care services" (WHO, 2022). In order to address the global refugee health crisis, WHO developed a Global Action Plan (GAP) with key priorities to address the health needs of refugee populations including but not limited to: 1) promote the health of refugees through a mix of short-term and long-term public health interventions, 2) promote continuity and quality of essential health care, while developing, reinforcing and implementing occupational health and safety measures for refugee populations ; 3) strengthen health monitoring and health information systems for refugee populations, 4) support

measures to improve evidence-based health communication and to counter misconceptions about refugee health and 5) advocate the mainstreaming of refugee health into global, regional and country agendas and the promotion of refugee-sensitive and migrant-sensitive health policies (WHO, 2022). The GAP was agreed upon by the World Health Assembly in 2019, which comprised of delegates from WHO member states, including Canada (WHO, 2022c).

1.1.2 The International Health Regulations (IHR) and Refugee Health

The IHR was unanimously signed in 2005 by 194 WHO Member States, including Canada (WHO, 2022b). According to WHO, the International Health Regulations (IHR) is an overarching legal framework that defines countries' rights and obligations in handling public health events and emergencies that have the potential to cross borders, ultimately resulting in public health emergencies of international concern (PHEIC) (WHO, 2022). Additionally, The 2005 IHR defines a PHEIC as "an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response" (WHO, 2005) .This definition can be further categorized into three main scenarios detected by national disease surveillance systems, which are listed in *Figure 1* below (WHO, 2005).

Figure 1. Scenarios detected by national disease surveillance systems that may constitute a PHEIC



According to the 2005 IHR, circumstances that contribute to a high public health impact mentioned in the above scenarios, include an instance where the population at risk is especially vulnerable, such as refugees (WHO, 2005). However previous research indicated that the methodologies by which these PHEICs are assessed have not been consistent in addressing how refugees are integrated into national health detection and response approaches, nor has it been consistent in implementing the WHO GAP for refugee health. This is due to insufficient health information systems, conflicting legal obligations of states, and unclear policies on which institutions are best designed to target refugees' health and wellbeing (Seifman, 2017). Seifman's (2017) commentary asserts that the WHO Joint External Evaluation (JEE) assessment methodology has not regularly included specialized experts on refugee and forced migration processes to effectively evaluate WHO member states' health system preparedness for PHEIC.

Additionally, the IHR is an instrument of international law designed to

establish and maintain core capacities for global health surveillance and response (WHO, 2022b). These core capacities include but are not limited to: 1) Policy, legal and normative instruments to implement IHR, 2) IHR Coordination and National IHR Focal Point functions and advocacy 3) Financing, 4) Surveillance, 5) Human resources, 6) Health emergency management, 7) Health services provision, 8) infection prevention and control (IPC), 9) Risk communication, and community engagement (RCCE) and 10) Points of Entry (PoEs) and border health (WHO, 2022a). Moreover, Canada's average implementation progress of core capacity 1) was 51% in 2021 and 5) was 90% in 2021, while the remaining core capacities listed were reported to have an average 100% implementation progress in 2021 (WHO, 2022a). Considering these core capacities, and Canada's implementation progress, the IHR's purpose to prevent, protect against, control the spread of infectious diseases while also avoiding interference with international traffic and trade (Seifman, 2017), is crucial when attending to health and wellbeing of vulnerable populations including refugees.

1.1.3 Canada's Implementation of the IHR and Refugee Health

The Public Health Agency of Canada (PHAC) is the lead organization for implementing the IHR through various departments such as Canada's Health Portfolio (PHAC, 2018). Canada's National IHR Focal Point Office is located within PHAC and specifically coordinates the implementation of the IHR (Canada, 2016) . Implementation of the IHR is supported by Canada's Health Portfolio and other federal departments, provincial and territorial governments. However, due to the differences in legislations under these various governments, Canada has enabled

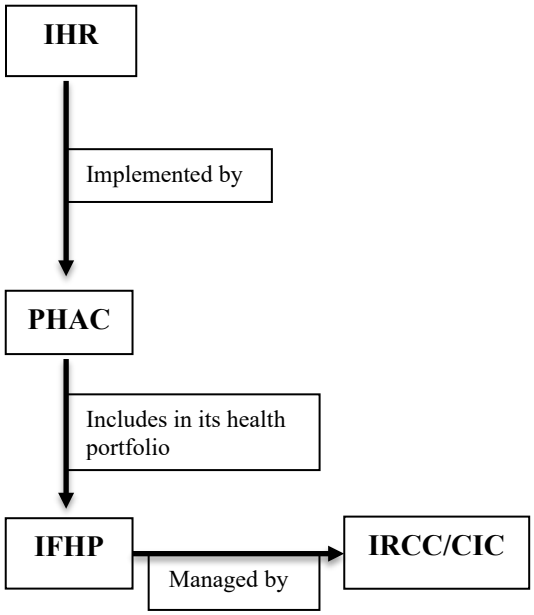
certain mechanisms, agreements, and plans to enable national coordination during a PHEIC or any other high public health impact event (Canada, 2016).

PHAC has developed core competencies for public health in Canada, that aim to achieve the core capacities of the IHR. These core competencies include but are not limited to 1) knowledge and critical thinking skills of the public health sciences such as the health status of populations, inequities in health, the determinants of health and illness, strategies for health promotion, disease and injury prevention and health protection, as well as the factors that influence the delivery and use of health services, 2) collect, assess, analyze and apply information to make evidence-based decisions, 3) plan, implement and evaluate policies and/or programs in public health, including the management of outbreaks and emergencies, 4) influence and work with others to improve the health and well-being of the public through the pursuit of a common goal such as to reduce inequities in health status or access to health services, 5) embody attitudes and practices that result in inclusive behaviors, practices, programs and policies, 6) effectively communicate appropriate information to different audiences and 7) enable organizations and communities to create, communicate and apply shared visions, missions and values (Canada, 2022). Moreover, these core competencies, like the IHR's core capacities, are crucial when attending to health and wellbeing of vulnerable populations including refugees.

Included in PHAC's health portfolio is the Interim Federal Health Program (IFHP) which is managed by Immigration, Refugees and Citizenship Canada (IRCC), formerly known as Citizenship and Immigration Canada (CIC) (PHAC, 2018). A

policy map depicted in *Figure 2* below shows the relationship between the IHR, PHAC, IFHP and IRCC/CIC.

Figure 2. Policy Map depicting the relationship between the IHR, PHAC, IFHP and IRCC



The IFHP provides limited, temporary coverage of health-care benefits in Canada to resettled refugees until they become eligible for provincial/territorial health-care coverage such as hospital, physician, vision, urgent dental, counselling, prescription drugs, and vaccination services (PHAC, 2018). In April 2017, the IFHP expanded its legislation to include pre-departure medical services' coverage such as pre-departure vaccines and services to manage communicable disease outbreaks in refugee camps (PHAC, 2018). However, despite these well-intentioned legislative measures, certain refugees do not receive these benefits for several weeks to months and tend to restrict on seeking primary healthcare until late into their disease (Pottie et al., 2018). At a provincial level, during the first wave of COVID-19, the Ontario Government lifted

its 3-month waiting period for healthcare insurance access for everyone, including refugees who have not yet qualified for the Ontario Health Insurance Plan (OHIP) (Edmonds & Flahault, 2021). Despite this, in March 2020, the United Nations High Commissioner for Refugees and the International Organization for Migration temporarily suspended resettlement movements and services for overseas refugees thereby seriously impacting the health of these refugees who were relying on health security supports from Canada (Edmonds & Flahault, 2021).

Considering the information provided above, the aim of this systematic review is to evaluate the reported implementation of the IHR in Canada, specifically in promoting the health of refugee populations, during PHEICs or any other high public health impact event. Additionally, this study aims to fill the gap of evaluating the reported translation of IHR's core capacities and PHAC's core competencies, as it pertains to promoting the health of refugee populations in Canada during a PHEIC or any other high public health impact event.

1.2. Research Question

This study aims to answer the following research question:

What is known about the implementation of the IHR in Canada, specifically in promoting the health of refugee populations during a PHEIC or any other high public health impact event?

The research question for this systematic review consists of two main components:

(1) What is known about the promotion of key health outcomes for refugee populations e.g. access to health services and quality health care provision

(preventive, diagnostic and treatment), improved health security (monitoring and surveillance), improved health literacy, during a PHEIC or any other high public health impact event?

(2) What is known about the translation of IHR's core capacities and PHAC's core competencies regarding the promotion of refugee health in Canada?

1.3. Study Objectives

By addressing the primary research question, this systematic review aims to achieve the following objectives:

i. Assess the reported translation of PHAC's core competencies regarding the following refugee health outcomes: access to health services and quality health care provision (preventive, diagnostic and treatment), improved health security (monitoring and surveillance) and improved health literacy.

ii. Assess existing knowledge of Canadian federal and provincial policies in promoting the health of refugee populations, within the broader context of PHEICs and any other high public health impact event.

iii. Assess the reported translation of the IHR's core capacities within a Canadian context in promoting the health of refugee populations under the refugee health outcomes listed in i. above

Chapter II: Methodology

The method chosen for the purpose of this thesis is a systematic review which locates, appraises and synthesizes evidence from as many relevant studies as possible, pertinent to a specified research question (Library, M. U. H. S., 2022). This method was chosen to summarize conclusions about reported effectiveness of a particular intervention, the implementation of the IHR in Canada, for a particular problem in health care, refugee health promotion during a PHEIC. It was also chosen to provide a unique assessment of the known evidence on this intervention, so that others can easily review the primary studies for application to any future interventions (Library, M. U. H. S., 2022) .Prior to starting the search, various questions were generated using the Problem Intervention Outcome (PIO) format using various keywords and concepts related to the research question (Library, M. U. H. S., 2022). Following this, several search terms were generated and search strategies. Resources and databases were then selected based on where the search terms would be primarily located and searched according to the search terms and strategies created. Results of the search strategies were then managed on EndNote, a reference manager, and Covidence, a software used to screen and extract references for the systematic review. On Covidence a set of inclusion and exclusion criteria, developed in accordance with the scope of the research question and study objectives, were used to screen results at different stages for inclusion in the systematic review. These criteria were developed so that the most relevant studies were extracted for

use in the systematic review. Alongside this, a Risk of Bias Assessment Tool for Systematic Reviews (ROBIS) was used to assess the risk of bias throughout the screening process on Covidence. The studies included after data extraction consisted of qualitative methodologies, whose textual data was analyzed via thematic analysis on a qualitative coding software, MAXQDA, into descriptive and analytical themes.

2.1 Search Protocol

The McMaster University Health Sciences library's guide on literature searches was used to establish a search protocol for this study[1]. The Supervisory Committee[2] reviewed the search protocol to ensure that the selection of search terms, databases, and search strategy were appropriately aligned with the study's objectives.

The systematic review included searches of nine electronic databases, inclusive of a limited search of grey literature with the purpose of finding supporting information related to promoting the health of refugee populations during a PHEIC or any other high public health impact event within Canada. As the federal government maintains primary responsibility for governing (chiefly through policies) and funding health care services for refugees, the grey literature search was confined to government sites and published

[1] Library, M. U. H. S. (2022, Jun 27, 2022). How to Search the Literature (Advanced). McMaster University. https://hslmcmaster.libguides.com/srm

[2] The 'Supervisory Committee' consisted of the author's thesis supervisor, an expert in the field of global refugee health policy, and thesis committee member, another expert in the field of improving health systems for vulnerable populations

documents within two grey literature databases; Policy Commons and Open Access Theses and Dissertations (OATD). As mentioned earlier, in 2005, the International Health Regulations (IHR) were unanimously signed by 194 World Health Organization (WHO) Member States, including Canada. The regulations consist of an array of responsibilities to report on events that can result in public health emergencies of international concern (PHEIC) (Seifman, 2017). For this reason, 2005 was determined to be the appropriate starting point for the literature search to understand disease surveillance and addressing how refugee health is integrated into national health detection and response approaches during PHEICs declared on or after 2005.

2.2 Electronic Database Search

2.2.1 Overview of Database Search

Nine databases were used to search for articles to be included in the systematic review. Each database was selected based on subject matter and suitability for the research topic and many of the databases used share a focus on health policy and health services. Approximately ten databases were considered for use as a part of the search strategy, nine of which were deemed suitable for this study: Embase, MEDLINE, PsycInfo, ProQuest, JSTOR, Scopus, Scholars Portal, Open Access Theses and Dissertations (OATD) and Policy Commons. The latter two databases were used to conduct the grey literature search and each database was selected based on its fit with the

research topic.

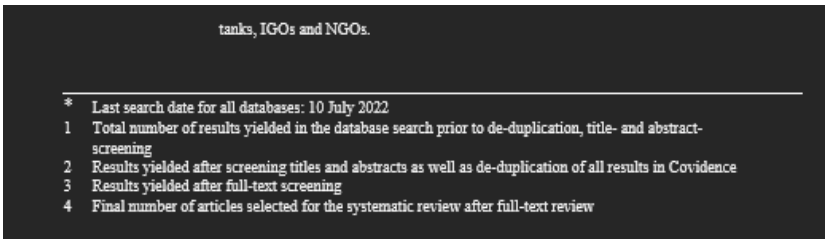
Embase was selected as it provides access to comprehensive research and development for systematic reviews related to medical sciences, especially in the form of evidence-based practices in patient care (Elsevier, 2022). MEDLINE's database, which is the primary component of PubMed, was chosen due to its focus on healthcare, although it spans across multiple fields related to health care that can overlap with the social determinants of refugee health (National Library of Medicine, 2022). PsycInfo was chosen as it provides access to literature in the field of psychology, including health policy from the behavioral and social sciences. ProQuest, JSTOR, Scopus and Scholars Portal were chosen due to their expansive collection of databases across all major disciplines related to the research topic including healthcare, medicine, public policy and healthcare humanities. Policy Commons was selected due to its focus on ongoing publications from non-governmental organizations and non-partisan think-tanks in the form of policy reports, working papers, case studies and datasets (Policy Commons, 2022) especially related to responses to recent PHEICs, such as the COVID-19 pandemic and refugee health policy. Finally, OATD was selected for its centralization on original, advanced research and scholarship on the research topic from a network of 3.5 million up-to-date electronic theses and dissertations across 1100 colleges and universities (OATD, 2022).

Additional information can be found in *Table 1*. As noted earlier, 2005

was selected as the start date for the literature search and 2022 as the end date. The last rerunning of the searches occurred on July 10th 2022, thus all searches are current 2005 to July 10th 2022 inclusive.

Table 1: Electronic Databases Selected for the Systematic Review Search Protocol

Database Name	General Information*	Initial Results[1]	Post de-duplication[2]	Post title and abstract screening[3]	Articles Selected
Scholars Portal	Contains over 53 million scholarly articles drawn from journals covering every academic discipline	64	54	1	0
ProQuest	Provides access to databases across all major subject areas, including business, health and medical, social sciences, arts and humanities.	105	95	4	3
MEDLINE	Primary component of PubMed that covers a large amount of literature on biomedicine and health	46	26	4	2
Embase	Comprehensive biomedical research database	2	2	1	0
JSTOR	Contains more than 12 million academic journal articles, 100,000 books, and millions of images and primary source materials in 75 disciplines	135	96	5	1
PsycInfo	Resource for behavioural and social science research	75	65	0	0
Scopus	Provides comprehensive research output in the fields of science, technology, medicine, social science, and arts and humanities.	336	311	20	7
OATD	Resource for finding open access graduate theses and dissertations published around the world, from over 1100 colleges, universities and academic institutions	169	168	8	5
Policy Commons	Platform for objective, fact-based research from the world's leading policy experts, nonpartisan think	460	359	2	1


tanks, IGOs and NGOs.

* Last search date for all databases: 10 July 2022
1 Total number of results yielded in the database search prior to de-duplication, title- and abstract-screening
2 Results yielded after screening titles and abstracts as well as de-duplication of all results in Covidence
3 Results yielded after full-text screening
4 Final number of articles selected for the systematic review after full-text review

2.2.2 Search Terms

The terms chosen for the search strategy were selected based on how strongly they captured the key concepts outlined by the research question and background. Searches used a combination of keywords, subject headings, and descriptors as appropriate for each individual database, ensuring a parallel search structure when using each one. The following key terms were used: International Health Regulations, Refugee, Canada, Refugee Health, Canad* Law, International Law, Canad*, Health access*, Health service*, Refugee law, International Health Policy, Health, Social det* of health, Public Health Canada, Public Health Law, Public Health Security, Global Health Security, Health Secur*, Pandemic*, Public Health Emergency*, Public Health Emergency of International Concern, Displaced person*, Asylum Seek*. The asterisk is used to represent any number of unknown characters that can replace where it is placed in the search term. *Table 2* displays the full search strategy used in PsycInfo; additional details for the search strategies used in each individual database, including modifications, can be found in *Appendix A.*

Table 2. Sample Search Strategy: PsycInfo

#	**Search Term**

APA PsycInfo <2005 to June Week 2 2022>

1	(International Health Regulations and Refugee and Canada).af.	2
2	(Public Health Security and Canada and Refugee).af.	0
3	(Health Secur* and Refugee and Canada).af.	17
4	(Asylum Seek* and Canada and Public Health Secur*).af.	0
5	(Public Health Canada and Refugee).af.	1
6	(Refugee Health and Canadian Law).af.	0
7	(Displaced Persons and Canada and Public Health Law).af.	0
8	from 5 keep 1	1
9	(Health Law and Canada and Refugee).af.	46

2.3 Study Selection & Eligibility Criteria

Although the initial searches resulted in 1392 articles, only 19 met the inclusion and exclusion criteria and were selected to be a part of the systematic review:

Articles that were included met the following inclusion criteria:

i. IHR policies on PHEICs

ii. Quantitative and/or Qualitative Methodologies of Analysis

iii. Systematic Reviews

iv. Published in English

v. Provides a Canadian context or is a Canadian study

vi. Involves at least 1 of the refugee health outcomes from the following: access to health services and quality health care provision (preventive, diagnostic and treatment), improved health security (monitoring and surveillance) and improved health literacy.

vii. Published between 2005 and 2022

Articles that were excluded met the following exclusion criteria:

i. Does not specify any of the refugee health outcomes

ii. No information on the Canadian context of the topic

iii. Studies not published in English

iv. Studies published prior to 2005

v. Conference Abstracts

vi. Focused solely on refugee law apart from IHR

vii. Does not include IHR policies within a Canadian context

viii. Does not include IHR policies on PHEICs or any other high public health impact event

2.3.1 Screening Protocol

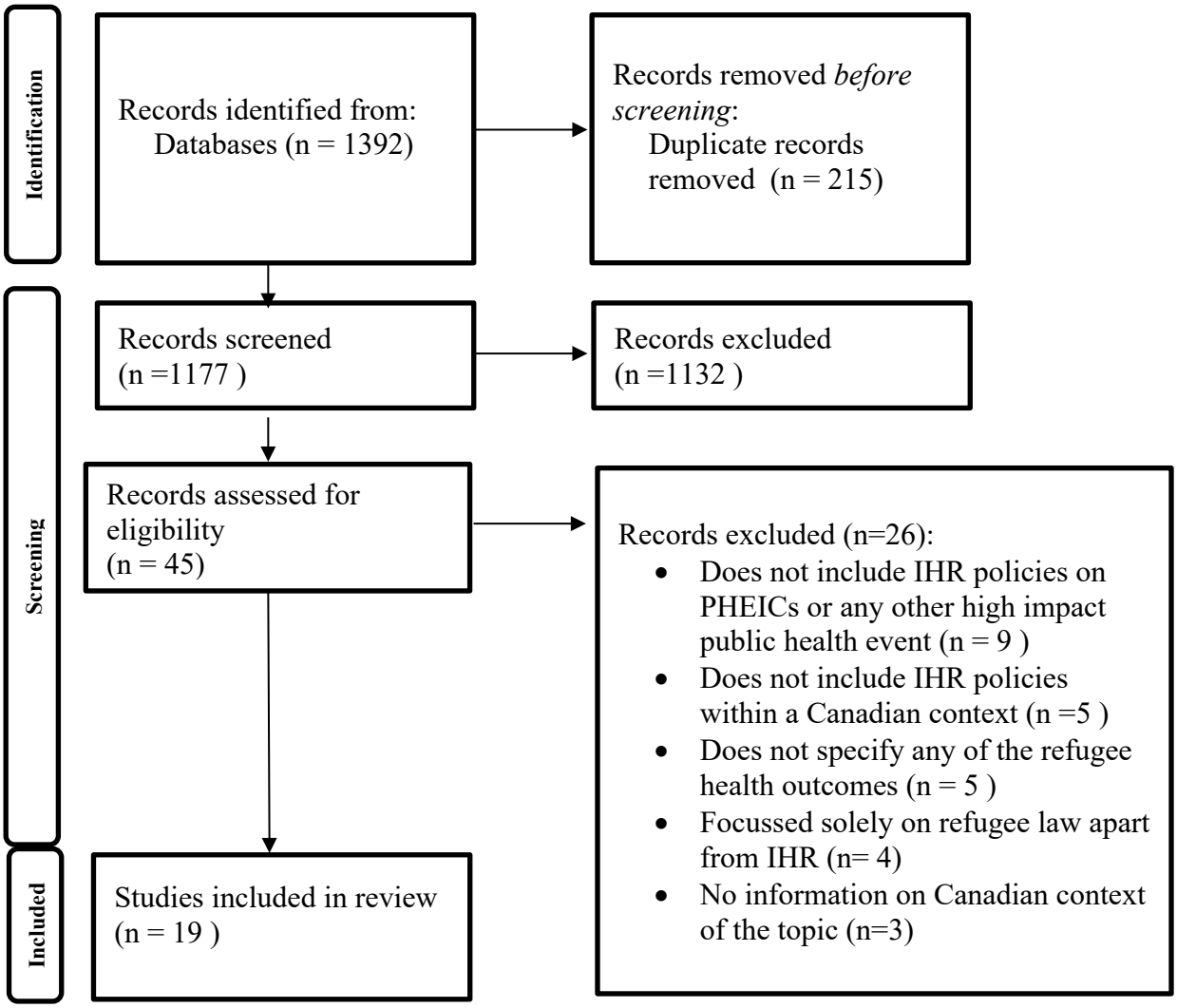
A screening protocol was created for the articles found in the databases, and its process is outlined in the PRISMA Flow Diagram (*Figure 1*). Search results of each database were exported to EndNote, an online software program that is used to manage references. Initial search results provided a total of 1392 articles. Screening occurred within Covidence by one independent reviewer, beginning with de-duplication of results across all databases, after which, titles

and abstracts were screened to determine compatibility with the study's inclusion and exclusion criteria. Any titles and abstracts that appeared to address the research topic and objectives, or that were vague were retained for the next screening stage while others deemed not relevant were removed. After de-duplication, 1177 articles were screened by title and abstract, resulting in 46 articles. This was followed by a final full-text review, which left 19 articles to include in the study.

2.3.2 PRISMA Flow Diagram

The Preferred Reporting Items of Systematic reviews and Meta-Analyses (PRISMA) is a practical guideline for authors to ensure the transparent and complete reporting of systematic reviews. *Figure 3* features the PRISMA Flow Diagram, which outlines the protocol followed for the selection of literature for this systematic review. The diagram provides an overview of the literature found in each of the four stages of the selection process (identification of articles, screening of the articles found, determining eligibility, selecting articles to be included). At each stage, the number of articles found is listed. A checklist of the 2020 PRISMA guideline for the reporting of systematic reviews and meta- analyses can be found in *Appendix B*.

Figure 3. PRISMA Flow Diagram



2.3.3 Risk of Bias Assessment

A Risk of Bias Assessment Tool for Systematic Reviews (ROBIS) used in this study, is designed to critically assess the risk of bias in systematic reviews under three phases: 1) assessing relevance (optional); 2) identifying concerns with the review process; 3) judging the risk of bias (National Collaborating Centre for

Methods and Tools, 2022). Each study was assessed by 1 independent reviewer using ROBIS. Phase two covers four domains through which bias may be introduced into systematic reviews including study eligibility criteria, identification and selection of studies, data collection and study appraisal , synthesis and findings. Phase three assesses the overall risk of bias in interpreting new findings and whether this considered any limitations identified in any of the Phase two domains listed. Signaling questions were used for Phase two and Phase three to assist in judging concerns related to the review process and overall risk of bias. A detailed ROBIS checklist for this systematic review inclusive of signaling questions for Phase one, Phase two and Phase three is located in *Appendix C.*

2.4 Data Extraction

Overall, 19 articles were deemed eligible for the systematic review, from the searches of 9 databases . Additionally, articles selected for this systematic review use qualitative methodologies. Textual data was extracted from various parts of the articles, including, but not limited to: study purpose, methodology, findings/results, discussion, and conclusions/recommendations. All data was gathered from articles systematically and coded under themes using the MAXQDA software program by one independent reviewer.

2.5 Data Analysis

Barnett- Page and Thomas (2009) identified nine distinct methods for qualitative synthesis: Critical Interpretive Synthesis, Ecological Triangulation, Framework Synthesis, Grounded Formal Theory, Meta-Ethnography, Meta-

Narrative Synthesis, Meta-Study, Thematic Synthesis, and Textual Narrative Synthesis. Thematic Synthesis, developed by Thomas and Harden (2008), provides a distinctive methodological approach to qualitative synthesis, as it uses software to code study results while also addressing questions related to appropriateness and effectiveness of a particular intervention. Thematic Synthesis amalgamates and adjusts procedures from both meta-ethnography and grounded theory, providing a meticulous methodological framework that yields high-quality results (Barnett-Page & Thomas, 2009). Using this approach, study findings were coded in two stages. Firstly, line-by-line coding of all studies was done in MAXQDA and organized into descriptive themes. The descriptive themes were then further interpreted to yield analytical themes in the second phase.

Chapter III: Findings

3.1 Search Results

The PRISMA Flow Diagram (Figure 3) in *Chapter II* provides a thorough overview of the study selection process and results for this systematic review. Of the initial 1392 studies found, a large majority (n=1132) focused solely on general healthcare accessibility for refugees that were not specific to PHEICs and IHR policies within a Canadian context, while others focused on broad analyses of social determinants of health for refugee populations. While interactions between IHR policies within a Canadian context and PHEICs were sometimes reported; however, as refugees were not the target population for these studies/reports, they did not meet the eligibility criteria. While general analysis of these policies and their engagement with PHEICs is certainly of great importance, they simply did not fall within the scope of this study.

Of the 45 studies assessed for eligibility for full-text review, 26 studies were excluded (See the PRISMA Flow Diagram [Figure 3] in *Chapter II).* These 26 studies appeared to meet the inclusion criteria, but were excluded from the systematic review as they did not include IHR policies on PHEICs [(Huang, 2014), (Siddiqui, 2017), (Rousseau et al., 2008), (Silva, 2015), (Gagnon et al., 2021), (Chase et al., 2017), (Pottie et al., 2018), (Ali-Hassan et al., 2021), (Shahban, 2019)] , did not include IHR policies within a Canadian context [(Anderson et al., 2010), (Benjamen et al., 2021), (Banerjee et al.,

2022), (Stirling Cameron et al., 2021), (WHO, 2020)] , did not specify any of the refugee health outcomes [(Tejpar & Hoffman, 2017), (Zencovich et al., 2006), (Bisaillon, 2013), (Bissonnette & Vallet, 2021), (Olsen et al., 2016)], focused solely on refugee law apart from IHR [(Arbel & Joeck, 2021), (Shachar & Mahmood, 2021), (Alrob & Shields, 2022), (Cleveland, 2008)], contained no information on Canadian context of the topic [(Legido-Quigley et al., 2019), (Kristine Husøy & Danielle Hanna, 2020), (EmİNoĞLu et al., 2020)].

It should be noted that much of the available research focuses on refugee and service provider perspectives, such as perceptions of accessibility and quality of healthcare received. The importance of understanding these subjective perspectives, particularly if they are the dominant view, cannot be undermined. These perspectives provide a thorough understanding of the issues faced by organizations and services providers in implementing IHR policies in Canada during a PHEIC or any other high public health impact event and provide an opportunity to hear from populations that are often underrepresented in the literature. However, the focus on qualitative research has resulted in limited objective analysis of the perceived effectiveness of these policies. Quantitative evaluation of these specific policies, their effectiveness from financial or program objective perspectives and so forth were not accessible or in short supply, making it difficult to fully address the research question. This represents a critical gap in the literature and highlights a significant problem with the system: it is difficult to provide efficient and

appropriate policies to meet the needs of refugees if these policies are not evaluated. A search of grey literature revealed government documents and graduate theses with a limited number of case studies used to illustrate 'best practices' in the implementation of IHR policies during a PHEIC or any other high public health impact event for refugee health promotion. Unfortunately, the reports on best practices are not comprehensive, and do not provide information that is actionable.

Despite the limited availability of literature on the topic, the studies found were generally of high quality. *Table 3* gives an overview of the studies included in this systematic review and presents information on study purpose, population, methodology and quality score based on the Standard Quality Assessment Criteria developed by Kmet, Lee, and Cook (2004). The manual for quality scoring of qualitative studies developed by Kmet, Lee, and Cook (2004) can be found in *Appendix D*. Of the 19 studies, 18 were qualitative, and 1 was a report by a contractor for PHAC, soliciting feedback from Canadian Civil Society Organizations on responses to the HIV epidemic. The latter was not assessed based on the Standard Quality Assessment Criteria, as it did not fit into the two study categories. This was reviewed independently to assess suitability for inclusion in the systematic review, and was deemed acceptable. Furthermore, the majority of studies were based on research conducted in Ontario, and more specifically, the more densely populated areas of the Greater Toronto Area. Some of the studies were based in other provinces covering the following areas: Calgary, Edmonton, Alberta; Montreal, Quebec and certain parts of Manitoba.

Table 3. Overview of studies used in the systematic review

(Article) [Score]	Study Purpose	Study Population	Methodology
(Abbas, 2022) [0.95]	Exploring the impact COVID-19 has had on the initial resettlement services provided for government-assisted refugees (GARs) and on frontline workers in the field.	Government-assisted refugees (GARs)	Literature review and semi-structured interviews
(Antonipillai, 2015) [0.95]	Examining the perception of key stakeholders regarding the impact of the 2014 IFHP reforms on the policy's intermediary goals: access and provision of healthcare.	Refugee health policy stakeholders, refugees and refugee claimants, policy-makers and government officials, civil society organizations, professionals and practitioners	Semi-structured key informant interviews
(Antonipillai et al., 2018) [0.95]	Review the IFHP, in conjunction with other immigration policies, to explore the issues associated with providing inequitable access to healthcare for	Refugees and refugee claimants	Literature review

	refugee populations.		
(Antonipillai et al., 2017) [0.95]	Exploring barriers occurring during the time period of the IFHP reforms to health care access and provision for refugees.	Refugee health policy stakeholders, refugees and refugee claimants, policy-makers and government officials, civil society organizations, professionals and practitioners	Semi-structured interviews
(Arya et al., 2021) [0.90]	To provide an evidence review and guide for clinicians working in a range of primary care clinical settings on how to provide effective care and support for refugees and newcomers during and after the COVID-19 pandemic.	Refugees, refugee claimants, asylum seekers, undocumented migrants, temporary foreign workers	Literature review and semi-structured interviews
(Bartel, 2018) [0.95]	Examining the success of organizations in assisting refugee newcomers, especially refugee focused	Refugee newcomers, key informants from the refugee resettlement sector, and representatives from refugee-	Semi-structured interviews

	primary health clinics	focused health clinics across Southern Ontario	
(Beatson, 2016) [0.95]	Exploring the experiences of refugee claimants in regards to the healthcare access barriers that they faced following IFHP cuts	Refugee claimants	Semi-structured interviews
(Bisaillon & Ells, 2014) [0.90]	Exploring the observed and potential burdens and harms of the immigrant medical examination for immigrant and refugee applicants with HIV, and critically assess the possibilities for transforming immigration medical practices and policy to reduce inequities.	Refugee applicants and immigrants	Literature review of institutional ethnographic research
(Connoy, 2019) [0.95]	To analyze the experiences of refugee claimants in Toronto's	Refugee claimants	Literature review and semi-structured interviews

	everyday healthcare places, like walk-in clinics, doctor's offices, and hospitals, in the aftermath of the 2012 IFHP revisions		
(Edmonds & Flahault, 2021) [0.90]	Contextualize the experience of resettled refugees in Canada during the COVID-19 pandemic, framing the issue for further study as the situation evolves	Resettled refugees	Scoping review of peer-reviewed and grey literature
(Emslie, 2015) [0.90]	Following IFHP 2014 reforms, this paper explores the various perspectives, outlines policy implications and analyzes what changes still need to be made from both federal and provincial governments	Refugee populations, Refugee advocates, policy-makers, news outlets	Literature Review using critical discourse and critical frame analysis

(Esses et al., 2021) [0.90]	To provide an overview of Canada's immigration system prior to the pandemic, discuss the system's weaknesses and vulnerabilities revealed by the pandemic, and explore a post-COVID-19 immigration vision.	Refugee populations, immigrants	Literature Review
(Evans et al., 2014) [0.90]	Examining the impact of the funding changes to the IFHP at the Hospital for Sick Children (SickKids)	Refugee children	One-year retrospective chart review
(Hansen & Huston, 2016) [0.90]	To describe the plan for the identification, screening and resettlement of Syrian refugees immigrating to Canada, with a specific focus on known and anticipated health needs. To identify some known challenges to health service provision to	Syrian refugees	Literature Review

	refugees, and strategies for how to address them.		
(Harris & Zuberi, 2015) [0.90]	To provide a comprehensive analysis of predicted social and economic consequences that the reform will have on refugee claimants	Refugee populations	Literature Review
(ICAD, 2021)	To solicit feedback from Canadian civil society organizations about the status of, and response to, Canada's HIV epidemic in the past two years to inform Canada's submission of the 2020 Global AIDS Monitoring Report (GAM)	Civil Society Organizations, Marginalized, most at-risk and key populations including refugee populations	Qualitative surveys
(Isse, 2019) [0.95]	To inquire about each Somali woman's experiences accessing and utilizing health care services in Canada	Female Somali GARs, Privately-Sponsored Refugees (PSRs), Refugee Claimants	Semi-Structured Interviews

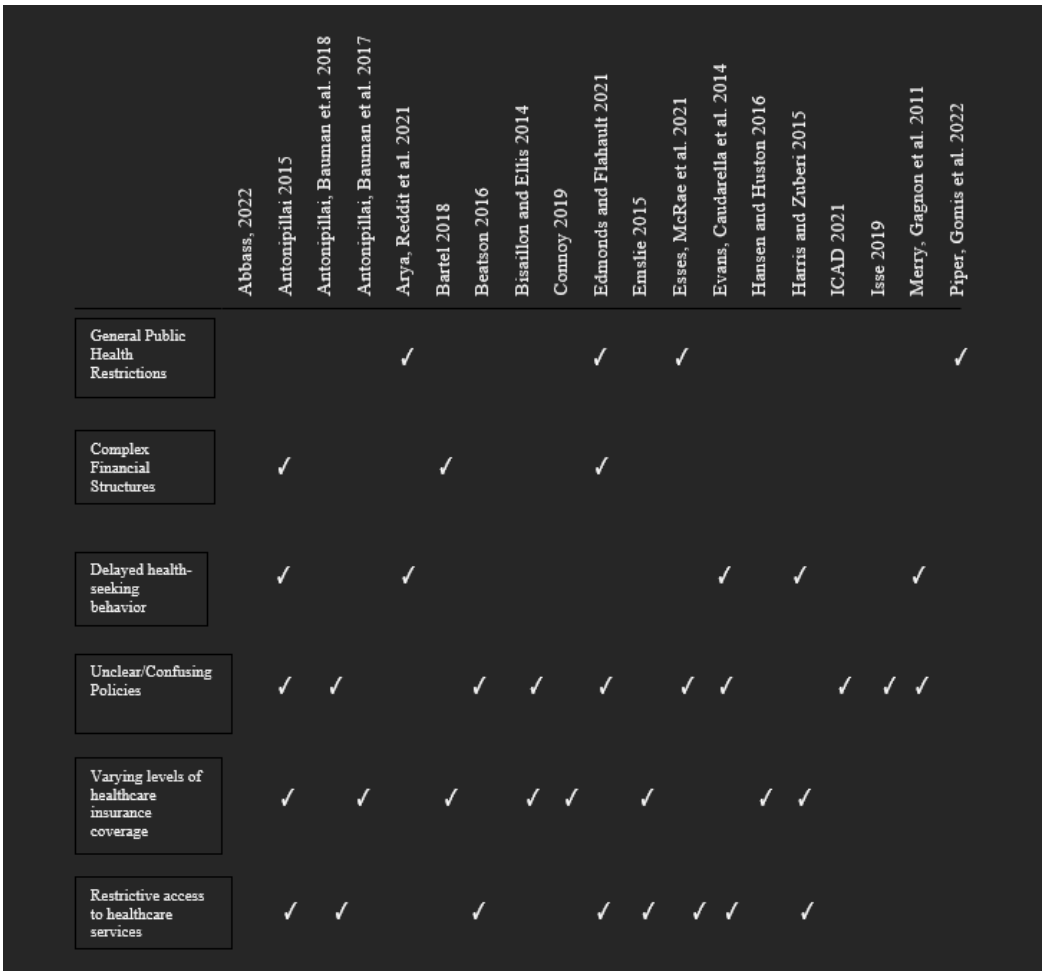
	following changes to the IFHP		
(Merry et al., 2011) [0.90]	To gain a greater understanding of the barriers vulnerable refugee claimant women face in accessing health and social services postpartum.	Refugee claimant women	Qualitative text data analysis
(Piper et al., 2022) [0.90]	To conduct a case study of Canada's use of travel measures during the COVID-19 pandemic between January 2020 and September 2021. To understand the effectiveness of specific measures, in reducing importation and onward spread of SARS-CoV-2, or needed efforts to strengthen compliance with the IHR.	Immigrants, refugee populations, policy-makers	Systematic Review

3.2 Descriptive Themes

During the initial analysis phase, descriptive themes were selected and sorted into three major categories – those pertaining to legislative PHEIC policy impacts on refugee populations, those pertaining to impacts of PHEIC safety protocols for refugee populations and those pertaining to perceived access to PHEIC Arrival/Pre-Arrival Services for refugee populations. Under these three categories, ten descriptive themes were identified: (1) General public health restrictions, (2) Complex financial structures, (3) Delayed health-seeking behavior (4) Unclear/Confusing policies, (5) Varying levels of healthcare insurance coverage (6) Restrictive access to healthcare services, (7) General limitations of PHEIC safety protocols, (8) Limited quality of needs-based health care, (9) Pre-Arrival healthcare services and (10) Pre-Arrival and arrival healthcare screening . The first six themes fall under the category of those pertaining to legislative PHEIC policy impacts on refugee populations. Additionally, the seventh and eighth themes fall under the category of those pertaining to impacts of PHEIC safety protocols for refugee populations. Finally, the ninth and tenth themes fall under the category of those pertaining to perceived access to PHEIC Arrival/Pre-Arrival healthcare services for refugee populations. *Table 4* lists the descriptive themes reported in each of the systematic review studies. Each theme discussed has an important role to play in implementing IHR policies in Canada during a PHEIC or any other high public health impact event for refugee health promotion; therefore, the themes are not listed in any order. This section discusses the findings of the analysis of each study to identify descriptive themes, grouped into the three major categories

mentioned.

Table 4. Descriptive themes reported in the systematic review studiies



<u>3.2.1</u> Legislative PHEIC policy impacts on refugee populations

This category was one of the most explored themes in the literature, with 18 of the 19 (95%) studies reporting on it. In most of the studies reporting on this theme, policy changes to the federally legislated IFHP during 2012 , 2014 and 2016, created a cascade of negative impacts on the accessibility and quality of healthcare received by refugees, refugee claimants and asylum seekers during a PHEIC, or any other high public health impact event. The literature reporting on these changes to the IFHP and described its subsequent impacts as being due to poor policy implementation (Antonipillai, 2015) which ultimately led to bureaucratic strains, overburdened administration (Antonipillai et al., 2017), erroneous billing (Beatson, 2016), provincial legislative intervention to fill in gaps in healthcare coverage under the IFHP [(Harris and Zuberi 2015), (Antonipillai 2015)] as well as complicated and limited care (Antonipillai 2015). More recently, during the COVID-19 pandemic, the literature describes how general public health restrictions for

refugees, refugee claimants and asylum seekers in detention facilities have created , “a cause for concern given the high risk of being exposed to COVID-19 in crowded detention facilities” (Edmonds and Flahault 2021). Regarding border management of refugee entry under public health restrictions during the COVID-19 pandemic, Piper, Gomis et. al (2022) describes a “lack of risk assessment methodologies upon which to base border management decisions” as well as a report that “PHAC had not tested or updated its pandemic readiness plan…had failed to address previous shortcomings in disease surveillance”, whose impacts increased the susceptibility of refugee/refugee claimants’ exposure to COVID-19, and restricted their access to healthcare services to treat its symptoms. Considering these findings under this category, sub-categories were identified: (3.2.1.1) Unclear/Confusing policies, (3.2.1.2) Varying levels of healthcare insurance coverage, (3.2.1.3) Restrictive access to healthcare services, (3.2.1.4) Complex financial structures, (3.2.1.5) Delayed health-seeking behavior, (3.2.1.6) General public health restrictions, , to further elaborate on these negative impacts, which will be discussed below.

3.2.1.1 Unclear/Confusing policies

This sub-category was the most reported of all the themes under this major category (53%), and the literature provides several instances where unclear/confusing policies had subsequent negative impacts on either accessibility to health care for refugee populations or the quality of care received was not up to

par with their expectations or fully-addressed their health care needs. The confusion surrounding IFHP changes in 2012 and subsequent reforms in 2014 discussed by Antonipillai (2015) and Antonipillai, Bauman et al. (2017) illustrates these negative impacts on refugee claimants where policies and legislations surrounding the different coverage plans under the 2012 IFHP reforms for protection of public health and safety were very unclear. Antonipillai (2015) relates that, "the Canadian government had not clearly defined such criteria such as clinical presentations or symptoms, with which physicians could rule out a disease potentially threatening to the health and safety of the public", such as for PHEIC-classified diseases. Due to this lack of defined criteria, Antonipillai (2015) and Antonipillai, Bauman et al. (2017) stipulated that certain refugees were denied preventative and diagnostic care for PHEIC-classified diseases, or symptoms that could create a high public health impact event, even though they did in fact qualify for these benefits under the IFHP.

While certain advocacy groups attempted to address this confusion leading to the 2014 IFHP reforms, Antonipillai (2015), Antonipillai, Bauman et al. (2017) and Edmonds and Flahault (2021) noted a lack of clear communication on the reforms to health care providers and healthcare administration, who denied care to refugee populations on the basis that there were no implementation tools or methods to facilitate the translation of the 2014 reforms to health care providers regarding eligibility for IFHP benefits or eligibility for provincial health care benefits that the IFHP did not provide. This lack of clear communication was

further described by Evans, Caudarella et al. (2014) where the authors found "unspecified definitions of 'essential' and 'urgent' leaving many clinicians, administration and patients confused". Moreover, refugee populations themselves also did not receive clear communication on the reforms, leading to confusion and were deterred from seeking care due to fear, shame and embarrassment of their lack of efficient knowledge on the IFHP (Antonipillai, 2015). The importance of this becomes apparent where refugee claimants become unaware on how to renew their IFH coverage which is further complicated by the inefficient and unclear application form, the details surrounding the application process, the expiry date of their IFH or even more alarmingly, the existence of the IFH itself, leaving them without access to care between their expiry and renewal dates (Antonipillai, 2015, Beatson 2013, Isse 2019). Very little public information was provided on the 2014 IFHP reforms, which further complicated the understanding of the IFHP by both healthcare providers and refugee populations, as one health care provider commented "when they say basic coverage, we don't really know what it is" (Antonipillai, 2015). This lack of public information was also echoed during the COVID-19 pandemic, where Esses, McRae et al. (2021) reported that there was no centralized source of information on the IFHP in multiple languages and accessible formats on up-to-date health advisories and other pertinent health information regarding IFHP use during the COVID-19 pandemic. Due to this confusion, health care providers misinformed refugee populations on the IFHP and its various reforms which complicated their access to preventative and diagnostic care leading

to traumatic emergency cases of infectious disease prevalence amongst certain refugee populations (Antonipillai, 2015, Antonipillai, Bauman et al. 2017, Merry, Gagnon et al. 2011).

These unclear/confusing policies were not solely restricted to the IFHP, but also to refugee claimants subjected to the IME and assessments by immigration panel physicians upon arrival to Canada. ICAD (2021) reported that there were "different understandings on the scope of the IME" as well as the processes involving HIV screening. Moreover, Bisaillon and Ellis (2014) observed that refugee claimants were confused about the role and function of the panel physicians, which were not chiefly or necessarily conducive to their general well-being of health. This is so since CIC does not explicitly define the role of 'doctor' or 'physician' in the IME context, which is primarily focused on disease detecting and reporting. Therefore, this lack of thorough definition by the CIC discourages any likelihood of quality preventative care/ treatment provision by the immigration panel physician (Bisaillon and Ellis 2014).

3.2.1.2 Varying levels of healthcare insurance coverage

About 42% of the studies in the systematic review reported on this sub-category describing the varying categories of healthcare insurance coverages under the IFHP and its impacts (pre-2012, 2012 and 2014 reforms) (See *Appendix D* for a full descriptive table of each coverage category), as well as those under provincial healthcare policies that were initiated to fill in coverage gaps under the IFHP (Bartel 2018, Antonipillai 2015, Antonipillai, Bauman et al. 2017, Bisaillon and

Ellis 2014, Connoy 2019, Emslie 2015, Hansen and Huston 2016, Harris and Zuberi 2015). Due to these varying levels of IFHP healthcare coverage initiated under different time periods as well as a lack of clear implementation protocols for each time period, the literature reports that, "some healthcare providers were disinclined to accept refugee patients as they are alleged to be challenging to care for due to their complex needs and uncertain IFHP coverage" (Antonipillai 2015). The importance of this becomes apparent where a study conducted in Ottawa, Ontario, under the 2012 IFHP reforms, stated that only 9 out of 33 clinics provided care to refugees and would still charge a fee regardless of their coverage category (Antonipillai 2015). Additionally, while the 2012 reforms did provide coverage for diagnostic care for populations under Tier 2 (See *Appendix D*), these populations did not receive coverage for medications to treat their diagnosed illnesses, thus leading to the development of poor health outcomes, such as developing symptoms of PHEIC-classifed diseases or any other high public health impact event, for these populations and beyond (Antonipillai 2015, Connoy 2019, Harris and Zuberi 2015). Similarly, for populations under Tier 3 (See *Appendix D*), these individuals presenting symptoms of fever and cough were still denied access to diagnostic care, such as a chest X-ray, to rule out life-threatening diseases such as pneumonia, even though theoretically they are covered for such procedures under Tier 3 (Antonipillai 2015, Connoy 2019).

Under the 2014 reforms, refugee populations, including children, under Type 4 (See *Appendix D*), were not covered for any healthcare services unless it

posed a threat to public health and public safety, whose criteria was not clearly defined in the IFHP according to health care providers (Antonipillai 2015). It is only where instances such as a positive diagnosis for HIV, a disease classified as a PHPS under the context of Canadian immigration, did refugee populations receive coverage for medication for this diagnosis (Bisaillon and Ellis 2014). Not only did these various categories and levels of coverage add unnecessary complexity, but the literature reports that this subsequently resulted in certain providers not providing any care to refugee populations (Antonipillai 2015, Bartel 2018). The importance of this becomes apparent where Emslie (2015) reported that under the 2014 reforms, approximately 86% of refugee populations did not have adequate access to health care and suffered poor health outcomes, as the early screening and diagnosis for effective management of communicable diseases such as PHEIC-classified diseases or those that could create a high public health impact event, were not covered (Harris and Zuberi 2015).

Moreover, the literature examines the efforts made by provinces attempting to fill gaps in insurance coverage by the IFHP. Antonpillai (2015) noted that Manitoba, Saskatchewan, Quebec, Nova Scotia, Alberta and Ontario via the Ontario Temporary Health Program (OTHP) have attempted to provide “essential and urgent”healthcare, as well as medication coverage” (Antonipillai 2015) to refugees and refugee claimants residing in these provinces. However, not all of these provinces provided the same levels of coverage, thereby still restricting refugee populations’ reliance on the IFHP (Antonipillai 2015). Notably, however, a

study on the Operation Syrian Refugee initiative in 2016, found that Syrian refugees arriving in Canada as 'permanent residents' under this initiative were immediately eligible for provincial coverage, including supplementary coverage, as most of these provinces waived their waiting periods for this population (Hansen and Huston 2016). However, information did not go beyond reporting this to mention the justification and methodology behind this coverage difference for this specific initiative. Moreover, it must also be noted that after 2016, the pre-2012 reforms were reinstated due to the global refugee crisis at the time as well as several court cases by health care providers, refugee populations and civil society groups advocating strongly against the 2012 and 2014 IFHP reforms, due to its negative cataclysmic effects on health outcomes for refugee populations (Antonipillai, Bauman et al. 2017). As such, many of the complexities associated with the varying levels of health care insurance observed within the 2012 and 2014 IFHP reforms, were removed after 2016 (Antonipillai, Bauman et al. 2017).

3.2.1.3 Restrictive access to healthcare services

The studies in this review draw attention to the accessibility of essential preventive and diagnostic healthcare services for refugee populations, as an indicator of health security for these populations during a PHEIC or to reduce the prevalence of a PHEIC-classified disease or symptoms of such a disease (Antonipillai 2015, Antonipillai, Bauman et.al. 2018, Beatson 2016, Edmonds and Flahault 2021, Emslie 2015, Esses, McRae et al. 2021, Evans, Caudarella et al. 2014, Harris and Zuberi 2015). Considering this observation amongst the studies in

this review, many of the policies surrounding the IFHP reforms in 2012 and 2014 have been called into question by several authors as to their effectiveness in promoting the health security of refugees during a PHEIC or to reduce the prevalence of a PHEIC-classified disease or symptoms of a disease that can cause a high public health impact event . According to Antonipillai (2015), the reforms "resulted in the loss of medical care and hospital services for many claimants who had previously been covered. It also denied them access to medication drugs and supplementary coverage…Thus it promoted poor health outcomes for refugee claimants". These poor health outcomes included higher rates of TB and HIV as well as increased risk of developing several vaccine-preventable communicable diseases (Antonipillai, Bauman et.al. 2018, Harris and Zuberi 2015). Moreover, the spread of PHEIC-classified diseases amongst refugee children was prevalent under these reforms, as the reforms denied these children access to immunizations, preventative care and early diagnosis of chronic infectious conditions (Harris and Zuberi 2015). The literature reports on the prevalence of these poor health outcomes even as legal entitlement shifted under the 2014 reforms, as Beatson (2016) noted that refugee claimants in major cities such as Toronto and Montreal were still denied access to health care in clinics despite being lawfully entitled to request health services under the 2014 IFHP reforms.

Furthermore, the PHPS coverage under the 2012 and 2014 IFHP reforms was especially contentious in the literature regarding its effectiveness in promoting

access to preventive, diagnostic and treatment health care services to refugee populations (Emslie 2015, Antonipillai 2015, Antonipillai, Bauman et.al. 2018, Harris and Zuberi 2015). While the theoretical definition of the PHPS coverage referred to “conditions deemed of to be of an "urgent and essential nature," posed a threat to public health or became a concern of public safety” (Antonipillai, 2015), the actual practice of this was limited to a “focus on emergency treatment and aggressive infectious conditions” (Antonipillai, Bauman et.al. 2018). The importance of this becomes apparent where several health care providers in a study conducted by Harris and Zuberi (2015) note that “with many communicable diseases, early identification and treatment are vital… although services and treatments for such diseases theoretically remain covered for all refugee claimants, the reform, in practice, will prevent the early screening and diagnosis needed for effective management”. Due to this significant difference between the theoretical and practical definitions of the PHPS coverage as well as a lack of clearly defined PHPS criteria examined by the literature, several communicable diseases and symptoms of diseases that could lead to a high public health impact event, such as conjunctivitis, head lice, scabies and diarrhea, were not listed for treatment under the PHPS coverage (Emslie 2015). Therefore, refugee children and adults possessing these symptoms/diseases were unable to access health care services to treat these as they were deemed ineligible under the PHPS (Emslie 2015).

3.2.1.4 Complex financial structures

Studies in this systematic review commented significantly on the

complicated and bureaucratic financial structures embedded in the IFHP during the 2012 and 2014 reforms, as well as more recently during the COVID-19 pandemic. Due to this complex and complicated nature resulting in untimely reimbursements and lack of effective protocols to assess IFH eligibility, many health care providers were discouraged and even refused to provide health care to deserving refugee populations (Antonipillai, 2015, Bartel 2018). To illustrate this further, Bartel (2018) referenced a study from the Wellesley Institute which reported that the IFHP changes from 2012 to 2017 created a complicated reimbursement scheme which created an administrative barrier for health care providers as they have to "become registered with the insurance company tasked with managing IFH, and then must ensure that their patients are eligible each and every time they seeks care", which created a financial "hassle" for clinics who denied care to refugee patients covered under the IFH plan (Bartel 2018). Due to this denial of care, the study from the Wellesley Institute noted that there was a significant increase in emergency room usage, increased health care complications, and delayed care for refugee patients with chronic infectious disease symptoms (Bartel 2018). Moreover, due to the lack of thorough understanding of the billing structure under the IFHP, many health care providers continued to bill refugee populations for diagnostic care services even though they were in fact covered under the IFH for these services (Antonipillai 2015).

Even as certain provincial health care policies intervened to fill gaps within the IFHP billing structure, the literature notes that the federal government refused

to share important information on its billing structure for provincial health care structures to improve, thereby creating a "tremendous burden on keeping track of paper" (Antonipillai 2015) which is exacerbated by rejected claims for reimbursement by the federal government when provincial health care providers submit their claims. This complicated, multi-step billing process under the IFHP and IFH was not communicated effectively to health care providers working with provincial health care policies, who often ask for direct payment from refugee populations who are unable to afford services out of pocket (Antonipillai 2015). During the COVID-19 pandemic, some provincial health care policies waived their waiting times for insurance coverage for refugee populations, however, similar challenges to that of those mentioned in Antonipillai (2015) and Bartel (2018) were echoed. Edmonds and Flahault (2021) notes that many refugee populations were unaware of this waiver due to existing low health literacy rates amongst this group, coupled with bureaucratic challenges in applying for provincial and federal health care insurance. However, information did not go beyond reporting this due to the lack of accessible information on provincial health care financial structures related to health care coverage for refugee populations during the COVID-19 pandemic.

3.2.1.5 Delayed health-seeking behavior

The literature examines this sub-category in relation to the confusing and restrictive nature of the IFHP, as well as the public health restrictions surrounding the COVID-19 pandemic. During the execution of the 2012 and 2014 IFHP reforms, many refugee populations were discouraged from seeking preventative

and diagnostic care for PHEIC-classified diseases and symptoms of these, which led them to developing ineffective management of their acute and chronic illnesses, leading to increased rates of disability and morbidity amongst this vulnerable population (Antonipillai 2015,Harris and Zuberi 2015). According to Evans, Caudarella et al. (2014), this delayed health-seeking behaviour amongst refugee populations is due to their "low socio-economic status and limited health care coverage and fear of the impact of medical bills". Merry, Gagnon et al. (2011) also comments that this delayed health-seeking behaviour amongst refugee population is also due to their "precarious migration status". Public health restrictions during the COVID-19 pandemic also facilitated delayed health-seeking behaviour as refugee populations had significantly lower testing and vaccination rates, thereby leading to disproportionately higher COVID-19 infection rates amongst this vulnerable population (Arya, Reddit et al. 2021).

3.2.1.6 General Public Health restrictions

This sub-category was particularly highlighted in four studies (21%) surrounding the COVID-19 pandemic where public health restrictions such as border closures, created barriers for refugee populations in accessing quality preventative and diagnostic health care (screening, immunizations) for infectious diseases, including PHEIC-classified diseases such as COVID-19 and TB (Arya, Reddit et al. 2021). These barriers are specifically created through border closures where Edmonds and Flahault (2021) as well as Piper, Gomis et al. (2022) note that Canada violated the IHR through its border closures, even though WHO continued

to strongly advise against travel restrictions due to the lack of scientific evidence supporting these restrictions. Additionally, Esses, McRae et al. (2021) mention that on March 20 2020, Prime Minister Justin Trudeau announced that all refugee claimants, regardless of entry route would be denied access to Canada. This announcement, according to Piper, Gomis et al. (2022), was issued despite WHO advising strongly against travel bans and that public health restrictions that any country, including Canada, takes should not be out of proportion to the risk of infection and must not inappropriately impact travel and trade. Due to the lack of literature surrounding Canada's justification from barring refugee populations from entering during a PHEIC such as COVID-19, despite WHO's warning under the IHR, the Canadian criteria surrounding impacts of travel and trade and health risk assessments of the border closures could not be explored more deeply.

3.2.2 Impacts of PHEIC safety protocols on refugee populations

While the discussion of this category was less common than that of legislative PHEIC policy impacts on refugee populations, it was still an important theme explored the studies. These studies describe the methods by which safety protocols were implemented during a PHEIC or for those refugee populations possessing symptoms of a PHEIC-classified disease or symptoms that could lead to a high public health impact event, in addition to the varying accessibility to quality health care services during the execution of these protocols. These impacts, both negative and positive, mostly pertained to quarantine protocols, access to PPE and disinfection protocols administered by the collaborative efforts of PHAC, IRCC,

provincial health authorities and several civil society organizations (Abbass, 2022,Hansen and Huston 2016,Edmonds and Flahault 2021,Esses, McRae et al. 2021). To further illustrate these impacts, sub-categories were formed pertaining to general limitations of PHEIC safety protocols and limited quality of needs-based health care services which will be discussed below.

3.2.2.1 General limitations of PHEIC safety protocols

According to two studies assessed assessed, the quarantine protocols established for the PHEIC mentioned failed to address the nuanced mental and physical health requirements by several refugee populations (Abbass, 2022,Mary, Gagnon et.al 2011) . For instance, one study mentioned that the 14-day quarantine protocol enforced due to COVID-19, further increased anxiety levels and facilitated several traumatic triggers for GARs, who were unable to receive quality primary mental health care services during quarantine, to address these mental health concerns (Abbass, 2022). Notably, this was observed even as PHAC and IRCC "formed a RAP COVID-19 taskforce to streamline best practices" (Abbass, 2022) for refugee populations under quarantine protocols. Moreover, this study reported that these 'best practices' were vaguely comprised of "delivering necessities to rooms… completing regular disinfection… using plexiglass barriers…providing arrivals and workers with PPE…advising GARs to not step outside except for necessities" (Abbas, 2022). Due to the lack of literature illustrating the details and impacts of the 'necessities' mentioned as well as the framework surrounding the development and implementation of 'best practices', this theme could not be

explored more deeply.

3.2.2.2 Varying quality of needs-based healthcare services

According to the literature assessed, needs-based healthcare services provided during the execution of PHEIC safety protocols consisted of a fair quality of evidence-based practices and routine surveillance procedures were noted (Hansen and Huston 2016,Edmonds and Flahault 2021,Esses, McRae et al. 2021,Isse 2019). For instance, both Isse (2019) and Hansen and Huston (2016) reported that local and regional health authorities had enhanced routine PHEIC surveillance processes and catch-up vaccinations for certain Syrian and Somalian refugees entering Canada, in addition to meeting their needs for urgent dental care and prescribed medication access to treat infectious symptoms. Additionally, where certain refugee populations required a highly individualized approach to health care, some RAP and quarantine service deliveries were customized according to different timelines and quality (Abbass, 2022). For instance, Abbass (2022) reported that one female GAR was quarantined on-site as opposed to an off-site location such as a hotel, due to her complex medical needs. Moreover, this female GAR received in-person services during quarantine, as opposed to remote services that other GARs were subjected to (Abbass, 2022).

Despite these positive observations, the literature also examined several limitations to the needs-based healthcare services provided during the execution of PHEIC safety protocols. For example Abbass (2022) reported that some GARs did not receive adequate remote health care services e.g. virtual mental health counselling to meet their unique digital health literacy and complex medical needs which exacerbated the

"isolating, mobile-restricting and triggering effects of quarantine" for these GARs (Abbass, 2022). These described 'isolating' effects were also observed amongst new refugee mothers, entering Canada in 2011 experiencing symptoms of PHEIC-classified diseases, who were unable to access public health nurses for essential follow-up care within their postpartum periods (Merry, Gagnon et al. 2011). During the start of the COVID-19 pandemic, some provinces reported limited testing capacities for certain refugee populations (Edmonds and Flahault 2021) as these populations faced significant challenges in accessing testing facilities due to a lack of specialized disability support and home care services (Esses, McRae et al. 2021). The importance of this becomes apparent where Esses, McRae et al. (2021) explicitly noted that "the IFH program is not meeting new and expanding GAR needs…and the IRCC special case consideration process does not adequately address the situation".

3.2.3 Varying access to PHEIC arrival/pre-arrival healthcare services for refugee populations

While discussion of this category was the least common than that of the previous major categories mentioned, it was still an important theme explored in 37% of the studies. These studies demonstrated a comparable access to arrival health care services for refugee populations, upon being diagnosed with a disease classified as a PHEIC, during a PHEIC, possessing symptoms of a PHEIC-classified disease or symptoms that could lead to a high public health impact event. Some studies examined the lack of ability to refer refugee populations to follow-up care services following the diagnosis of a disease classified as a PHEIC or one that could lead to high public health impact event, either upon arrival or during pre-

arrival screening (Bisaillon and Ellis 2014). Other studies illustrated both the positive and negative impacts of robust measures implemented upon arrival including medical assessments under the Quarantine Act enforced by PHAC, and the subsequent reporting and referrals to EMTs and interim lodging sites where refugee populations received transitional health care services such as dental clinic access and catch-up vaccination programs (Hansen and Huston 2016, Isse 2019, Mary, Gagnon et. al 2011).. To further explain these heterogeneous findings, two sub-categories were derived to account for healthcare screening pre-arrival and upon arrival as well as pre-arrival and arrival follow-up care access, which will be discussed below.

3.2.3.1 Pre-Arrival and Arrival healthcare screening

As per the accessibility to pre-arrival medical screening assessments, Bisaillon and Ellis (2014) describe the methodology used to regulate public health and control PHEICs by IRCC, CIC and PHAC. Following the processing of the IME near the end of the refugee claimant's applicant process, immigration panel physicians create a medical file for each applicant, and three mandatory communicable disease screening assessments are procured; HIV, syphilis and TB, while additional tests are procured at the physicians' discretion (Bisaillon and Ellis 2014). Notably, the authors in this study did not comment on the extent to which this 'discretion' was executed nor the impacts of this on assessing the health needs of refugee claimants. Following this, a comprehensive medical file for each claimant is sent to the federal government, and sometimes, provincial governments where medical officers regulated by CIC assess files with problematic public health

concerns, including high public health impact classified- diseases such as HIV (Bisaillon and Ellis 2014). For HIV positive claimants, immune system health testing is a rigorous process and panel physicians produce more than health status reports on these individuals as "they bring into view specific medical conditions and create the conceptual boundaries of an acceptable immigrant to Canada" (Bisaillon and Ellis 2014), making them important decision-makers on a claimant's medical admissibility to Canada.

Moreover, the literature reports on the varying experiences of refugee claimants undergoing the rigorous medical screening process outlined by Bisaillon and Ellis (2014). For instance, the Operation Syrian Refugee initiative in 2016 used the IME as the primary screening tool and underwent a 'fitness to fly' test just before travel to Canada in order to account for any emergent health issues and subsequent arrangement of any appropriate care (Hansen and Huston 2016). Refugees under this initiative reported that they received copies of their test results with instructions for follow-up care if required, even if they were diagnosed with HIV, TB or syphilis (Hansen and Huston 2016). However, Isse (2019) reports that while Somali refugee claimant women did receive an IME upon arrival to Canada, they did not receive their test results and did not have access to a family care practitioner for additional screening for an LTBI outside of the IME setting, as the IME only screens for active TB. Where the IME identified a positive active TB result, these women were prescribed the relevant follow-up care to treat the infection (Isse 2019).

3.2.3.2 Pre-Arrival and Arrival follow-up care access

The literature reports on the varying quality of follow-up care services received

by certain refugee populations depending on their physical and mental health as well as health literacy needs. Some positive experiences were noted by Antonipillai (2015), where certain refugee women were referred to family doctors upon arrival for follow-up care related to infectious disease complications post-hysterectomy. These women reported that their experiences were beyond satisfactory and were impressed with the quality of care received (Antonipillai, 2015). However, most of the refugee populations in this study by Antonipillai (2015) reported that continuous and comprehensive follow-up care upon arrival was significantly delayed due to long refugee claim processing and interview scheduling times by CBSA at the border to determine eligibility for IFH benefits. Many of these populations include pregnant women, who were denied follow-up care primary services due to these long processing times (Antonipillai, 2015). The negative impacts of the delayed refugee claim processing becomes apparent where Antonipillai (2015) reports that one male refugee claimant has an appointment with IRCC within two days of arrival, but became seriously ill with symptoms of a PHEIC-classified disease within one day of arrival, and was hospitalized for a week. However, he received limited quality of follow-up care due to not being eligible for any IFH benefits, as he missed his appointment with IRCC due to falling ill (Antonipillai, 2015). Similarly, Bartel (2018) examines the convoluted access to follow-up care services upon arrival where some GSRs and PSRs receive a pre-arrival refugee determination and are granted IFH benefits and provincial health benefits upon arrival, while others who make refugee claims in Canada are subjected to prolonged scheduling times for an IRCC hearing to determine eligibility for IFH benefits for access to follow-up care services. If these

claimants receive a negative decision at an IRCC hearing, they will be granted IFH benefits on the condition that they appeal the decision or apply for residence in Canada through alternate channels (Bartel, 2018). Due to the lack of literature exploring the details and impacts of processing times for appeals and residence applications through alternate channels for denied refugee claimants, the topic of follow-up care accessibility for these individuals could not be explored more deeply.

As per pre-arrival follow-up care services, Bisaillon and Ellis (2014) report on certain approaches taken by IRCC immigration doctors which disadvantaged certain refugee claimants from receiving quality post-test counselling for HIV, which is an essential part of follow-up care for an HIV diagnosis. The refugee claimants, "report feeling bound to sign 'Acknowledgment of post-test counselling' form as part of their efforts to immigrate" (Bisaillon and Ellis 2014) while not receiving any type of post-test counselling, nor being granted a copy of the consent form that they signed to effectively challenge these approaches .

3.3 Analytical themes

The second phase of the thematic synthesis methodology is analysis of the descriptive themes. This analytical process revealed two major analytical themes: (1) Poor translation of health care policies/legislations is a key deterrent for the promotion of refugee health during a PHEIC or any other high public health impact event (2) General public health restrictions and safety protocols implemented for a PHEIC or any other high public health impact event can lead to poor refugee health outcomes, if not applied appropriately.

3.3.1 Policy/Legislation Translation: An Essential Component of Refugee Health Promotion

Around (89%) of the studies in the systematic review cited instances of a lack of effective policy/legislation translation as a barrier to promoting refugee health (Antonipillai 2015, Antonipillai, Bauman et al. 2017, Edmonds and Flahault 2021, Evans, Caudarella et al. 2014, Beatson 2016, Isse 2019, Esses, McRae et al. 2021, Merry, Gagnon et al. 2011, ICAD 2021, Bisaillon and Ellis 2014, Bartel 2018, Connoy 2019, Emslie 2015, Hansen and Huston 2016, Harris and Zuberi 2015, Antonipillai, Bauman et.al. 2018, Arya, Reddit et al. 2021). While this would suggest that the topic is a key descriptive theme, policy/legislative translation was not deeply explored as a concept in and of itself; rather it was usually discussed in relation to other concepts such as 'Unclear/Confusing Policies', 'Complex Financial Structures', 'Varying levels of health care insurance coverage', 'Restrictive access to health care services' and 'Delayed-health seeking behavior'. Moreover, the literature understood these concepts as indicators of a lack of effective policy/legislation translation. Several other indicators understood within the literature also include a lack of efficient verification protocols for coverage options, a lack of thoroughly defined criteria for services and coverage options as well as a lack of accessible formats of the IFHP and relevant health advisories surrounding PHEICs or any other high public health impact event (Antonipillai, Bauman et al. 2017, Edmonds and Flahault 2021, Evans, Caudarella et al. 2014, Beatson 2016, Isse 2019, Esses, McRae et al. 2021, Merry, Gagnon et al. 2011, ICAD 2021, Bisaillon and Ellis 2014, Bartel 2018, Emslie 2015, Hansen and Huston 2016, Harris and Zuberi 2015) .

Through a synthesis of these indicators, broader patterns of delayed health-

seeking behavior and the occurrence of restrictive access to quality preventive, diagnostic and treatment health care services amongst refugee populations, were observed in the literature. These patterns were especially noted where changes to the IFHP, within different time periods, were not communicated or implemented in an appropriate and time-sensitive manner to health care administration, health care providers and refugee populations themselves (Antonipillai 2015, Antonipillai, Bauman et al. 2017, Antonipillai, Bauman et.al. 2018, Evans, Caudarella et al. 2014, Beatson 2016, Bisaillon and Ellis 2014, Bartel 2018, Emslie 2015, Hansen and Huston 2016, Harris and Zuberi 2015). Due to this lack of clear communication and implementation, refugee populations were unfairly billed for health care services that were theoretically covered, denied care or access to medication that they were theoretically entitled to, or were deterred from seeking diagnostic and preventive care due to fear of not having a comprehensive understanding of the IFHP. According to the literature assessed, this led to the development of poor health outcomes for refugee populations such as developing symptoms of infectious and other communicable diseases that can cause a high public health impact or a PHEIC.

Moreover, a stronger focus on the lack of effective health care policy/legislation translation as a barrier to refugee health promotion may reflect a lack of consistency in implementing some of the IHR core capacities for global health surveillance and response such as 1) Policy, legal and normative instruments to implement IHR, 5) Human resources, 6) Health emergency management, 7) Health services provision, 8) IPC and 9) RCCE (WHO, 2022a). Through a synthesis of the

literature, it can be observed that several PHAC core competencies, designed to implement the IHR core capacities, were not appropriately achieved. Effective communication of appropriate information to different audiences was not appropriately achieved via human resources or instruments to implement the IHR, nor was evidence-based public health knowledge mobilized effectively to improve strategies for refugee health promotion, IPC, RCCE, health emergency management and health services provision for refugee populations (Canada, 2022). It is uncertain whether policy/legislation translation discussed in the studies explicitly considered the IHR core capacities and PHAC core competencies. Despite this uncertainty and considering the WHO GAP for refugee health, broader patterns of the lack of continuity and quality of essential health care for refugee populations, and a lack of support measures to improve evidence-based health communication and health monitoring of refugee populations, were observed in the literature in accordance with the analytical theme of policy/legislation translation.

3.3.2 Appropriate Application of Public Health Restrictions and Safety Protocols: An Indicator of Refugee Health Outcomes

Around (58%) of the studies in this systematic review cited instances of both appropriate and inappropriate applications of public health restrictions and safety protocols during a PHEIC or any other high impact public health event, as indicators of positive/poor refugee health outcomes (Bisaillon and Ellis 2014, Bartel 2018, Antonipillai, 2015, Isse 2019, Hansen and Huston 2016, Esses, McRae et al. 2021, Merry, Gagnon et al. 2011, Abbass 2022, Edmonds and Flahault 2021, Piper, Gomis et al. 2022,

Arya, Reddit et al. 2021). While this would suggest that the topic is a key descriptive theme, appropriate application of public health restrictions and safety protocols was not deeply explored as a concept in and of itself; rather it was usually discussed in relation to other concepts such as 'General limitations of PHEIC safety protocols', 'Varying-quality of needs-based healthcare services', 'Pre-arrival and arrival health care screening', 'Pre-arrival and arrival follow-up care access'. Moreover, the literature understood these concepts as indicators of appropriate application of public health restrictions and safety protocols during a PHEIC or any other high public health impact event. Several other indicators understood within the literature also include the appropriate execution of Canadian border management, quarantine protocols and PHEIC surveillance procedures (Bisaillon and Ellis 2014, Bartel 2018, Antonipillai, 2015, Isse 2019, Hansen and Huston 2016, Esses, McRae et al. 2021, Merry, Gagnon et al. 2011, Abbass, 2022, Edmonds and Flahault 2021, Piper, Gomis et al. 2022, Arya, Reddit et al. 2021).

Through a deeper synthesis of these indicators, broader patterns of accessibility to needs-based health care services, follow-up care services upon arrival and pre-arrival, as well as effective disease surveillance protocols through proper monitoring and evaluation with refugee populations, were revealed in the literature. While the studies in the systematic review did not explicitly define what is considered 'appropriate', the idea of 'appropriateness' in the application of public health restrictions and safety protocols during a PHEIC in these studies may be understood through positive/poor health outcomes of refugee populations interacting with these public health restrictions and safety protocols. While these are no way absolute indicators of 'appropriateness', they do

provide valuable insight into how standardized public health restrictions and safety protocols consider the sensitive health care needs of refugee populations. For instance, studies noted that border closures and travel bans, as part of Canada's public health restrictions during COVID-19, created barriers for refugee populations in accessing quality preventative and diagnostic health care, thereby leading to poorer health outcomes for these populations such as developing communicable/infectious disease symptoms that can lead to a high public health impact event (Arya, Reddit et al. 2021, Edmonds and Flahault 2021, Piper, Gomis et al. 2022, Esses, McRae et al. 2021). Moreover, this understanding of 'appropriateness' in the application of public health restrictions and safety protocols during a PHEIC may also be supported by the WHO GAP description of refugee health promotion within certain public health interventions, "To promote the physical and mental health of refugees and migrants by strengthening health care services, as appropriate and acceptable to country contexts … ensuring that essential components, such as vaccination of children and adults and the provision of health promotion, disease prevention, timely diagnosis and treatment, rehabilitation and palliative services for acute, chronic and infectious diseases, injuries, mental and behavioural disorders, and sexual and reproductive health care services for women, are addressed" (WHO 2022).

Additionally, standardized quarantine protocols for refugee populations, created barriers for refugee populations in addressing their mental and primary health concerns as they did not take into consideration their unique health literacy and complex medical needs (e.g. disability support and home care services) that are exacerbated by isolation

under quarantine, thereby leading to poorer health outcomes for these populations (Abbass 2022, Merry, Gagnon et al. 2011). However, quarantine protocols that did take into consideration the sensitive health care needs of certain refugee populations, were reported to have developed positive refugee health outcomes.These quarantine protocols included the delivery of RAP services under different timelines and quality of care that considered an individualized approach (Isse 2019, Hansen and Huston 2016, Abbass 2022). For PHEIC surveillance processes such as pre-arrival and arrival screening/medical assessments and the provision of follow-up care as needed, poorer health outcomes among refugee populations were reported when these populations did not receive results for their medical assessments, did not receive appropriate post-screening counselling, not given access to a family practitioner for additional testing, nor given timely care due to longer processing times of their tests or refugee claim applications (Bisaillon and Ellis 2014, Bartel 2018, Antonipillai, 2015, Isse 2019). These poorer health outcomes observed included higher rates of TB and HIV as well as increased risk of developing several vaccine-preventable communicable diseases (Antonipillai, Bauman et.al. 2018, Harris and Zuberi 2015).

Moreover, a stronger focus on the lack of consistency in the appropriate application of public health restrictions and safety protocols during a PHEIC or any other high impact public health event, may reflect a lack of consistency in implementing some of the IHR core capacities for global health surveillance and response such as 1) Policy, legal and normative instruments to implement IHR, 4) Surveillance, 5) Human resources, 6) Health emergency management, 7) Health services provision, 8) IPC and 10) Points of

Entry (PoEs) and border health (WHO, 2022a). Through a synthesis of the literature, it can be observed that several PHAC core competencies, designed to implement the IHR core capacities, were not entirely achieved. Evidence-based public health knowledge was not mobilized effectively to improve strategies for refugee health promotion, or the factors that influence the delivery and use of health services at PoEs or during surveillance processes (Canada 2022). Additionally, best practices that result in inclusive behaviors, programs and policies during the management of PHEICs through safety protocols and public health restrictions, were not applied (Canada, 2022). It is uncertain whether the appropriate application of public health restrictions and safety protocols during a PHEIC or any other high impact public health event, discussed in the studies, explicitly considered the IHR core capacities and PHAC core competencies. Despite this uncertainty and considering the WHO GAP for refugee health, broader patterns of the lack of continuity and quality of essential health care for refugee populations, a lack of consistent health monitoring and a lack of inclusivity of refugee-sensitive health policies in surveillance measures, were observed in the literature, in accordance with this analytical theme

Chapter IV: Discussion

4.1 General Interpretation of Results

This section provides a summary of the key findings in relation to the two components of the following research question: What is known about the promotion of key health outcomes for refugee populations during a PHEIC, and what is known about the implementation of the IHR's core capacities and PHAC's core competencies regarding the promotion of refugee health in Canada?

4.1.1. Promotion of key health outcomes for refugee populations during a PHEIC

According to the literature assessed, two distinct barriers to promoting key health outcomes for refugee populations during a PHEIC or any other high public health impact event were identified, namely; poor translation of health care policies/legislation and the inappropriate application of public health restrictions and safety protocols (Antonipillai 2015, Antonipillai, Bauman et al. 2017, Edmonds and Flahault 2021, Evans, Caudarella et al. 2014, Beatson 2016, Isse 2019, Esses, McRae et al. 2021, Merry, Gagnon et al. 2011, ICAD 2021, Bisaillon and Ellis 2014, Bartel 2018, Connoy 2019, Emslie 2015, Hansen and Huston 2016, Harris and Zuberi 2015, Antonipillai, Bauman et.al. 2018, Arya, Reddit et al. 2021). As identified in Chapter III, poor policy/legislation translation was indicated via complex financial structures, unclear language used in policies, a lack of efficient verification protocols for

refugee health care insurance coverage options, a lack of thoroughly defined criteria for services and coverage options available under the IFHP, as well as a lack of accessible formats of the IFHP and relevant health advisories surrounding PHEICs or any other high impact public health event. Due to these indicators, broader patterns of delayed health-seeking behavior and the occurrence of restrictive access to quality preventive, diagnostic and treatment health care services amongst refugee populations, were observed in the literature (Antonipillai 2015, Antonipillai, Bauman et al. 2017, Edmonds and Flahault 2021, Evans, Caudarella et al. 2014, Beatson 2016, Isse 2019, Esses, McRae et al. 2021, Merry, Gagnon et al. 2011, ICAD 2021, Bisaillon and Ellis 2014, Bartel 2018, Connoy 2019, Emslie 2015, Hansen and Huston 2016, Harris and Zuberi 2015, Antonipillai, Bauman et.al. 2018, Arya, Reddit et al. 2021).

Additionally, where inappropriate applications of public health restrictions and safety protocols during a PHEIC were observed in the literature, broader patterns of inaccessibility to quality preventative and diagnostic health care as well as a lack of consideration of unique health literacy and complex medical needs of refugee populations, were recognized. (Bisaillon and Ellis 2014, Bartel 2018, Antonipillai, 2015, Isse 2019, Hansen and Huston 2016, Esses, McRae et al. 2021, Merry, Gagnon et al. 2011, Abbass 2022, Edmonds and Flahault 2021, Piper, Gomis et al. 2022, Arya, Reddit et al. 2021). The studies in the systematic review understood the

inappropriate applications of public health restrictions and safety protocols during a PHEIC through several indicators. These indicators include ineffective border management through border closures and travel bans that were not supported by WHO evidence-based policies, quarantine protocols that did not take into consideration the sensitive health care needs of refugee populations as well as not receiving timely and quality follow-up care/counselling after completing arrival/pre-arrival medical assessments/ screening outcomes (Bisaillon and Ellis 2014, Bartel 2018, Antonipillai, 2015, Isse 2019, Hansen and Huston 2016, Esses, McRae et al. 2021, Merry, Gagnon et al. 2011, Abbass 2022, Edmonds and Flahault 2021, Piper, Gomis et al. 2022, Arya, Reddit et al. 2021).

Considering these observations in the literature, it is apparent that key refugee health outcomes such as access to health services and quality health care provision (preventive, diagnostic and treatment), improved health security (monitoring and surveillance) and improved health literacy, were not fully achieved due to these two distinct barriers. Therefore, the findings of this study do appear to be compatible with the first component of the research question.

4.1.2 *Implementation of IHR core capacities and PHAC core competencies regarding refugee health promotion in Canada*

It becomes apparent that this component of the research question is more difficult to answer than the first, as there is limited evidence and clarity on the

direct implementation of the IHR core capacities and PHAC core competencies regarding refugee health promotion in Canada. It is uncertain whether policy/legislation translation and the appropriate application of public health restriction and safety protocols discussed in the studies, explicitly considered the IHR core capacities and PHAC core competencies. Despite this uncertainty, a stronger focus on the two barriers identified in 4.1.1 above regarding refugee health promotion in Canada, may reflect a lack of consistency in implementing some of the core capacities and competencies mentioned in Chapter I. Effective communication of appropriate information to different audiences was not appropriately achieved via human resources or instruments to implement the IHR, nor was evidence-based public health knowledge mobilized effectively to improve strategies for refugee health promotion, IPC, RCCE, health emergency management and health services provision for refugee populations (Canada, 2022). Additionally, best practices that result in inclusive behaviors, programs and policies during the management of PHEICs through safety protocols and public health restrictions, were not applied (Canada, 2022). As a result of these, broader patterns of the lack of continuity and quality of essential health care for refugee populations, and a lack of support measures to improve evidence-based health communication and health monitoring of refugee populations, were observed in the literature.

4.2 Limitations of Evidence and Review Process

There are a number of key limitations in this study. One of the most

identifiable limitations is that the majority of studies were based on research conducted in Ontario, and more specifically, the more densely populated areas of the Greater Toronto Area. Some of the studies were based in other provinces covering the following areas: Calgary, Edmonton, Alberta; Montreal, Quebec and certain parts of Manitoba. Geographically, the studies only cover a small number of places, therefore limiting generalizability across Canada. The literature is also limited to certain types of geography, as they all focus on urban settings and urban environments. None of the studies examined rural areas, which may be able to provide more diverse contexts of how public health restrictions, safety protocols and policy translation are applied. Generalizability is further limited as the studies included in this systematic review are qualitative studies, which by their nature are not generalizable. Evidently, this study would have benefitted from an empirical and quantitative approach to support the qualitative findings. However, as many of the studies reported similar findings, this provides significant strength to the qualitative results collected. Additionally, this provides researchers with opportunities to investigate further into certain concepts, such as policy/legislation translation, and gain a more nuanced understanding of this subject as it pertains to its features and perceived impacts on vulnerable populations such as refugee populations. Ultimately, the biggest limitation of this study is that literature on the explicit consideration of the implementation of the IHR core capacities and PHAC core competencies, is limited and as a result, it cannot fully address the research question, or the research objectives outlined.

4.3. Implications of Results for Practice, Policy and Future Research

Based on the findings of this systematic review, three key recommendations are being made. Firstly, several studies suggested that federal government, more specifically, the Ministry of Citizenship and Immigration, should engage more directly and consistently with each provincial health care ministry, medical professionals, other health care administration officials and representatives from refugee populations in a thorough, ongoing process of consultation and dialogue in order to align strategies aimed at effective policy/legislation translation, while maintaining high standards of care (Harris and Zuberi 2015, Arya, Reddit et al. 2021, Abbass 2022, Antonipillai, 2015, Isse 2019) . This is also to ensure that important principles of health equity outlined in the IHR core capacities and PHAC core competencies for refugee health promotion during a PHEIC, are upheld and promoted. By engaging in more open, direct, and ongoing consultation, evidence-based communication and implementation protocols can be established to fulfil a greater implementation progress of the IHR core capacities and PHAC core competencies with greater agility.

Secondly, needs-assessment tools need to be revised with an intersectional lens that identifies the nuances and particularities of health literacy and complex medical needs of certain refugee populations during a PHEIC (Arya, Reddit et al. 2021, Abbass 2022). These tools are important when applying public health restrictions and safety protocols such as remote

health care service delivery, which presents certain limitations for refugee populations who have complex health literacy and medical needs (Abbass 2022, Arya, Reddit et al. 2021).

Thirdly, the implementation of the IHR core capacities and PHAC core competencies can be further strengthened through legal frameworks that consider the principles of refugee health promotion and health equity. Few scholars have suggested the use of global legal epidemiology as a method to produce impactful research on the international laws, policies and norms that can inform the capacity- building of collective health, equity and well-being of vulnerable populations such as refugee populations (Poirier et al., 2022). By employing global legal epidemiology, questions pertaining to the factors associated with Canada's decisions to close national borders in response to the COVID-19 pandemic and whether international health treaties and laws have greater impacts through the incorporation of transparency, complaint, oversight or enforcement mechanisms, can be answered with regard to assessing legal interventions on refugee health outcomes (Poirier et al., 2022). Moreover, scholars at the Global Strategy Lab, based in Toronto, Ontario have suggested the need for more WHO instruments, such as a pandemic treaty, to strengthen the IHR in implementing its objectives and core capacities (Burci et al., 2022). These WHO instruments should include more state involvement in the managerial and risk assessment capacity of the IHR in order to validate its technical credibility and epistemic authority in securing the health of refugee

populations and other equity-based groups (Burci et al., 2022)

OTHER INFORMATION

This review was not registered and a review protocol was not prepared. There was no financial support for this review. There are no competing interests of the author of this review. Template data collection forms; data extracted from included studies; data used for all analyses; analytic code used for this review is not publicly available. To access these, please contact the author via email: aedabhagaloo17@gmail.com

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Appendix A. Search Strategy Applied in Electronic Databases

Table 5. Search Strategy 1: Embase

#	Search Term
Embase <2005 to June 16 2022>	
1	(International Health Regulations and Refugee Health and Canada).af. 0
2	(Displaced Persons and Health and Canada Law).af. 0
3	limit 2 to (english language and yr="2005 -Current")0
4	(Public Health Canada and Refugee Policy).af. 0
5	(International Health Policy and Canada and Asylum Seeker).af. 1
6	limit 5 to english language 1
7	(Public Health Canada and Asylum Seek* and Pandemic).af. 0
8	limit 7 to english language 0
9	(Public Health Canada and Asylum Seek* and Pandemic).af. 0
10	limit 9 to english language 0
11	(Health Access* and Refugee and Public Health Canada).af.0
12	(Health Service and Public Health Canada and Refugee).af. 1
13	limit 12 to (english language and yr="2005 -Current") 1
14	(Public Health Emergency of International Concern and Canada and Asylum Seek*).af. 0
15	limit 14 to (english language and yr="2005 -Current") 0
16	(International Law and Refugee Health and Canada).af. 0
17	limit 16 to (english language and yr="2005 -Current") 0
18	(Refugee and Public Health Canada and Pandemic).af. 0
19	limit 18 to (english language and yr="2005 -Current") 0
20	exp International Health Regulations/ 219
21	7 and 19 and 20 0
22	(Refugee Policy and Canada).af. 2
23	limit 22 to (english language and yr="2005 -Current") 2
24	20 and 22 0

Table 6. Search Strategy 2: PSYCINFO

#	Search Term
APA PsycInfo <2005 to June 20 2022>	

1 (International Health Regulations and Refugee and Canada).af. 2

2 (Public Health Security and Canada and Refugee).af. 0

3 (Health Secur* and Refugee and Canada).af. 17

4 (Asylum Seek* and Canada and Public Health Secur*).af. 0

5 (Public Health Canada and Refugee).af. 1

6 (Refugee Health and Canadian Law).af. 0

7 (Displaced Persons and Canada and Public Health Law).af. 0

8 from 5 keep 1 1

9 (Health Law and Canada and Refugee).af. 46

Table 7. Search Strategy 3: Scholars Portal;

#	Search Term

Scholars Portal <2005 to 2nd July 2022>

1 (International Health Regulations and Refugee and Canada).af. Keyword Limit: COVID-19 19

2 (Public Health Security and Canada and Refugee).af. Keyword Limit: COVID-19 41

3 (Health Secur* and Refugee and Canada).af. Keyword Limit: COVID-19 52

9 (Health Law and Canada and Refugee).af. Keyword Limit: COVID-19 24

Search Strategy 4: Scopus

Scopus <2005 to 20th June, 2022>

1) international AND health AND regulations AND refugee AND canada AND (LIMIT-TO (AFFILCOUNTRY , "Canada")) AND (LIMIT-TO (EXACTKEYWORD , "Refugee")) AND (LIMIT-TO (LANGUAGE , "English"))

   Number of Results: 82

2) public AND health AND security AND canada AND refugee AND pandemic AND (LIMIT-TO (AFFILCOUNTRY , "Canada")) AND (LIMIT-TO (LANGUAGE , "English"))

   Number of Results: 146

3) global AND health AND security AND canada AND refugee AND (LIMIT-TO (AFFILCOUNTRY , "Canada")) AND (LIMIT-TO (EXACTKEYWORD , "Refugees")) AND (LIMIT-TO (LANGUAGE , "English"))

   Number of Results: 74

4) public AND health AND canada AND refugee AND pandemic AND (LIMIT-TO (EXACTKEYWORD , "Refugees")) AND (LIMIT-TO (AFFILCOUNTRY , "Canada")) AND (LIMIT-TO (LANGUAGE , "English"))

   Number of Results: 34

Search Strategy 5: ProQuest

<2005 to 2nd July, 2022>

(International Health Regulations) AND (Public Health Canada) AND Refugee AND at.exact("Financial Materials" OR "Industry Report" OR "Literature Review" OR "Editorial" OR "Conference Paper" OR "Book" OR "Interview" OR "Conference" OR "Technical Report" OR "News" OR "Panel Discussion" OR "Case Study" OR "Essay" OR "Business Case" OR "Article" OR "Book Chapter" OR "Letter To The Editor" OR "Annual Report" OR "Dissertation/Thesis" OR "Government & Official Document" OR "Market Report" OR "Legal Materials" OR "Evidence Based Healthcare" OR "Legal Notice" OR "Website/Webcast" OR "Report" OR "Statistics/Data Report" OR "Market Research" OR "Review" OR "Country Report" OR "Business Plan" OR "Commentary") AND la.exact("English") AND

(subt.exact(("displaced persons" OR "health care" OR "health care access") AND "refugees") AND PEER (yes))

Number of Results: 105

Search Strategy 6: Open Access Theses and Dissertations

<2005 to 10th July 2022>

(International Health Regulations) AND (Refugee) AND (Canada) (LIMIT-TO (LANGUAGE , "English"))

Number of Results: 168

Search Strategy 7: Policy Commons

<2005 to 10th July, 2022>

(International Health Regulations) AND (Refugee) AND (Canada) AND (LIMIT-TO (PUBLISHERCOUNTRY , "Canada")) AND (LIMIT-TO (LANGUAGE , "English")) (LIMIT-TO (YEARSPUBLISHED , "2005-2022"))

Number of Results: 460

Search Strategy 8: Medline
<2005 to June 9th, 2022>
TS= (Public Health Canada AND Refugee AND Health Access)
TS= (Canada Law AND Refugee Health)
TS= (Refugee AND Public Health Canada AND Pandemic)
TS= (Refugee AND International Health Policy AND Canada)

Number of Results: 46

Search Strategy 9: JSTOR
<2005 to July 7th, 2022>

TS= (International Health Regulations AND Refugee AND Canada AND COVID-19) (LIMIT-TO (LANGUAGE , "English")) LIMIT-TO (YEARSPUBLISHED , "2005-2022"))

TS= (Public Health Canada AND Refugee AND COVID-19) (LIMIT-TO (LANGUAGE , "English")) LIMIT-TO (YEARSPUBLISHED , "2005-2022"))

Number of Results: 135

Appendix B: PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	i.
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	iv.
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	10-15
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	15-16
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	21-22
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	18-22
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	75-78
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	22-25
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	22-25
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	22-25
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	22-25
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	25
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	N/A
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	25-26
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	N/A
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	N/A
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	25-26
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	N/A
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	N/A
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	25
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	N/A

Section and Topic	Item #	Checklist item	Location where item is reported
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	27-34
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	27-28
Study characteristics	17	Cite each included study and present its characteristics.	29-34
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	29-34
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	N/A
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	34-58
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	34-58
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	24-58
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	N/A
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	N/A
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	N/A
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	59-62
	23b	Discuss any limitations of the evidence included in the review.	62
	23c	Discuss any limitations of the review processes used.	62
	23d	Discuss implications of the results for practice, policy, and future research.	63-64
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	65
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	65
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	N/A
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	65
Competing interests	26	Declare any competing interests of review authors.	65
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	65

Appendix C: Manual for Quality Scoring of Qualitative Studies

Definitions and Instructions for Quality Assessment Scoring

How to calculate the summary score:
Total sum = (number of "yes" * 2) + (number of "partials" * 1) 18+1= 19
Total possible sum = 20
Summary score: total sum / total possible sum
Quality assessment

1. *Question / objective clearly described?*
Yes: Research question or objective is clear by the end of the research process (if not at the outset).
Partial: Research question or objective is vaguely/incompletely reported.
No: Question or objective is not reported, or is incomprehensible.

2. *Design evident and appropriate to answer study question?*
(If the study question is not clearly identified, infer appropriateness from results/conclusions.)
Yes: Design is easily identified and is appropriate to address the study question.
Partial: Design is not clearly identified, but gross inappropriateness is not evident; *or* design is easily identified but a different method would have been more appropriate.
No: Design used is not appropriate to the study question (e.g. a causal hypothesis is tested using qualitative methods); *or* design cannot be identified.

3. *Context for the study is clear?*
Yes: The context/setting is adequately described, permitting the reader to relate the findings to other settings.
Partial: The context/setting is partially described.
No: The context/setting is not described.

4. *Connection to a theoretical framework / wider body of knowledge?*
Yes: The theoretical framework/wider body of knowledge informing the study and the methods used is sufficiently described and justified.
Partial: The theoretical framework/wider body of knowledge is not well described or justified; link to the study methods is not clear.
No: Theoretical framework/wider body of knowledge is not discussed.

5. *Sampling strategy described, relevant and justified?*
Yes: The sampling strategy is clearly described and justified. The sample includes the full range of relevant, possible cases/settings (i.e., more than simple convenience sampling), permitting conceptual (rather than statistical) generalizations.

Partial: The sampling strategy is not completely described, or is not fully justified. Or the sample does not include the full range of relevant, possible cases/settings (i.e., includes a convenience sample only).
No: Sampling strategy is not described.

6. D*ata collection methods clearly described and systematic?*
Yes: The data collection procedures are systematic, and clearly described, permitting an "audit trail" such that the procedures could be replicated.
Partial: Data collection procedures are not clearly described; difficult to determine if systematic or replicable.
No: Data collection procedures are not described.

7. *Data analysis clearly described, complete and systematic?*
Yes: Systematic analytic methods are clearly described, permitting an "audit trail" such that the procedures could be replicated. The iteration between the data and the explanations for the data (i.e., the theory) is clear – it is apparent how early, simple classifications evolved into more sophisticated coding structures which then evolved into clearly defined concepts/explanations for the data). Sufficient data is provided to allow the reader to judge whether the interpretation offered is adequately supported by the data.
Partial: Analytic methods are not fully described. *Or* the iterative link between data and theory is not clear.
No: The analytic methods are not described. *Or* it is not apparent that a link to theory informs the analysis.

8. *Use of verification procedure(s) to establish credibility of the study?*
Yes: One or more verification procedures were used to help establish credibility/ trustworthiness of the study (e.g., prolonged engagement in the field, triangulation, peer review or debriefing, negative case analysis, member checks, external audits/inter-rater reliability, "batch" analysis).
No: Verification procedure(s) not evident.

9. *Conclusions supported by the results?*
Yes: Sufficient original evidence supports the conclusions. A link to theory informs any claims of generalizability.
Partial: The conclusions are only partly supported by the data. *Or* claims of generalizability are not supported.
No: The conclusions are not supported by the data. *Or* conclusions are absent.

10. *Reflexivity of the account?*
Yes: The researcher explicitly assessed the likely impact of their own personal characteristics (such as age, sex and professional status) and the methods used on the data obtained.
Partial: Possible sources of influence on the data obtained were mentioned, but the

likely impact of the influence or influences was not discussed.
No: There is no evidence of reflexivity in the study report.

Appendix D: Descriptive Table of the IFHP coverage categories (Pre-2012 Reforms, 2012 reforms and 2014 Reforms)

Table 8: Descriptive Table of the IFHP coverage categories (Pre-2012 Reforms, 2012 reforms and 2014 Reforms

Time Period	***Type of Coverage***	***Population Receiving Coverage***	***Description of Coverage***
Pre-2012 Reforms	Identical IFHP Coverage (Antonipillai 2015, p. 33)	GARs, PSRs, protected persons, refugee claimants, and refused refugee claimants who's negative decisions were under appeal, review or who were awaiting deportation (Antonipillai 2015, p. 33)	Each individual, regardless of claim approval or country of origin, was provided with complete healthcare coverage, including supplementary and drug coverage (Antonipillai 2015, p. 33)
2012 Reforms	Tier 1: Expanded Health Care Coverage (EHCC) (Antonipillai 2015, p. 33)	Primarily available solely to GARs (Antonipillai 2015, p. 33)	Provided health care coverage equivalent to the pre-2012 IFHP coverage, in which hospital and physician services, dental and vision care as well as vaccinations and medications were covered (Antonipillai 2015, p. 33)
	Tier 2: Health Care Coverage (HCC) (Antonipillai 2015, p. 33)	Available for PSRs and refugee claimants who did not enter Canada from a Designated Country of Origin (DCO) (Antonipillai 2015, p. 33)	• Delivers basic healthcare coverage of physician, nurse and hospital services as well as laboratory and diagnostic care.

		• Medication and vaccines are only covered if there is a requirement to treat the disease if it poses a risk to public health or a condition of public safety concern (Antonipillai 2015, p. 33)
Tier 3: Public Health or Public Safety Health Care Coverage (PHPS) (Antonipillai 2015, p. 33)	Provided to failed refugee claimants and claimants from DCOs (Antonipillai 2015, p. 34)	• Limits healthcare coverage to the provision of all care and services, medication and immunization, if and only if, it is required "to diagnose, prevent or treat a disease posing a risk to public health or,… a condition of public safety concern" (Antonipillai 2015, p. 34) • Apart from the treatment for certain communicable diseases such as HIV or active pulmonary tuberculosis, no other procedures to treat, prevent or diagnose illnesses are covered. (Antonipillai 2015, p. 34)

2014 Reforms	Type 1: Basic, supplementary, and prescription drug coverage (Antonipillai 2017, p. 2)	• Government assisted refugees: Resettled refugees who are or were receiving monthly income support through the Resettlement Assistance Program • Children (below 19 years of age) • Victims of human trafficking • Individuals who resettle in Canada under the Citizenship and Immigration Minister's humanitarian and compassionate considerations (Antonipillai 2017, p. 2)	All health coverage benefits provided (Antonipillai 2017, p. 2)
	Type 2: Basic and prescription drug coverage (Antonipillai 2017, p. 2)	• Pregnant women • Rejected refugee claimants from non-deportable countries (Iraq, Afghanistan, Congo, South Sudan, Gaza, Somalia and Syria) (Antonipillai 2017, p. 2)	Lack of supplementary coverage (vision and dental care) (Antonipillai 2017, p. 2)
	Type 3: Basic and Public Health and Public Safety (PHPS) prescription drug coverage (Antonipillai 2017, p. 2)	• Privately sponsored refugees • Active refugee claimants currently awaiting a claim decision • Protected persons (Antonipillai 2017, p. 2)	Lack of supplementary coverage and limited drug coverage (Antonipillai 2017, p. 2)

Type 4: PHPS basic coverage and PHPS prescription drug coverage (Antonipillai 2017, p. 2)	• Ineligible refugee claimants • Suspended refugee claimants • Rejected refugee claimants who can be deported to country of origin • Refugee claimants eligible to apply for Pre-Removal Risk Assessment (PRRA) (Antonipillai 2017, p. 2)	Lack of supplementary coverage, limited drug coverage and limited basic coverage (Antonipillai 2017, p. 2)
Type 5: Coverage for persons detained under the Immigration and Refugee Protection Act (Antonipillai 2017, p. 2)	• Individual detained by the Canadian Border Services Agency (Antonipillai 2017, p. 2)	Not specified (Antonipillai 2017, p. 2)
Type 6: Coverage for the immigration medical examination (Antonipillai 2017, p. 2)	• All individuals who enter the country without permanent resident status and are provided with temporary or no immigration status (Antonipillai 2017, p. 2)	Only immigration medical examination is covered (Antonipillai 2017, p. 2)

1 This checklist was developed for use in quantitative systematic reviews, generally focusing on healthcare interventions. As such, many of the items listed in the checklist cannot be addressed in this systematic review, or are addressed in a manner that differs from quantitative systematic review designs.