# Vaccinations of Children from Im/migrant Families in Alberta: Equity-Oriented Critical Policy Analysis

by

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## Abstract

Immigrant and refugee (im/migrant) families settled in Alberta (AB) are often challenged to overcome structural barriers (i.e., accent discrimination, English as a foreign language, culture shock) in the way of navigating and actively utilizing vaccination services. Research is scarce on the impact of childhood vaccination policies on the vaccinations of children of im/migrants in Alberta. The objective of this study was to use an intersectionality-based evaluation framework, inclusive of health equity principles, to critically analyze and investigate current Alberta jurisdictional (AJ) childhood vaccination policies and policy guidance. More specifically, the focus of this research was to examine equity considerations in the policies as it relates to vaccinations of im/migrant children. This critical policy analysis inquired and sought to find out to what extent vaccination of children of im/migrants are equitably accounted for in the Alberta context. Relevant sources on Alberta childhood vaccination policies and policy guidance were retrieved from the Government of Alberta (GoA) and the Government of Canada (GoC) websites. Initial and retroactive searches, within a fifteen (15) year range, led to the content analysis of a total of twenty-five (25) eligible GoA and GoC-AJ document(s) using an intersectionality-based health equity lens (acknowledgment of impact of immigration status and race/ethnicity on health). Each of the documents were selected by systematically reviewing and assessing their content for the existence or absence of twelve (12) evidence-based policy determinants (criteria): nine (9) standard policy determinants (Mahimbo et al., 2017a) and three (3) health equity-oriented policy determinants (Douglas et al., 2019; Hankivsky et al., 2014). Drawing on the overall results of the twenty-five (25) critically analyzed policy document sources, it was found that only a few of the policies and policy guidance alluded to the existence

of children of im/migrants and only in the context of traveling and migration. All of the childhood vaccination policies and policy guidance were found to lack acknowledgement of the existence of structural factors (i.e., barriers to access) influencing access to vaccination services by children of im/migrants, with no detection of applied evidence from health equity and intersectionality scholars. Redesigned policy actions should consider the ethnocultural diversity of childhood vaccination needs in Alberta. Considering the insufficient promotion of vaccine equity, pragmatic suggestions for policy improvement may include streamlining the transition of policies from static to adaptive in design across all childhood vaccination policies. These policies need to inclusively and ongoingly adjust and transform to promote and serve the vaccination needs of new flows of children of im/migrants settling in Alberta. Further suggestions include increasing bipartisan community partnerships with im/migrant parent stakeholders, embedding contextually tailored care in the policy interventions to boost interprofessional collaborations on childhood vaccination of children of im/migrants, and weaving accountability-based anti-oppression allyship in and across policies. The findings of this study urge that this at-risk subgroup (children of im/migrants) become equitably prioritized and that their diverse cross-cultural needs be inclusively addressed in all Alberta childhood vaccination policies.

**Keywords:** childhood vaccination, vaccine-preventable diseases, vaccine equity, children of im/migrants, im/migrant parents, vaccination policy, policies, policy guidance, policy discourse, health equity, social determinants of health, policy determinants, critical policy analysis, intersectionality, evaluation, immigration status, ethnocultural diversity, population, adaptive policies, equity-oriented, evidence-based, government, jurisdiction, Alberta, Canada.

# Preface

This thesis is an original work completed by Samina Arif Sana. This thesis was co-supervised respectively by Dr. Bukola Salami from the University of Alberta Faculty of Nursing, and Dr. Michael Hawkes from the University of Alberta School of Public Health and the Department of Pediatrics.

I would also like to thank my thesis supervisory committee members, Dr. Stephanie Montesanti, Dr. Bukola Salami and Dr. Michael Hawkes for their careful review of drafts of my thesis.

No part of this thesis has been previously published.

# Dedication

This thesis research is dedicated to my mother and father who immigrated to Canada and settled in my birthplace of Edmonton, Alberta on a snowy winter day in December 1991 - 30 years ago now. This thesis is mainly dedicated to my mother, my Momma, an educated immigrant woman and homemaker who has devoted her life to her children (all eight of us), alongside working by running her own dayhome as a child caregiver for many years now. I can say without a doubt that my mother's healing, strength, friendship, sacrifices, and faith have helped develop me into the resilient, passionate, and independent Canadian woman I am today.

I also dedicate this thesis to the rest of my family, friends and loved ones, for their presence, patience, support, trust, encouragement, companionship, advice, feedback, communication, assistance, time, reliability, and understanding over the years. This all definitely took a village.

Last but not least, I dedicate this thesis to my past and present teachers, mentors, and colleagues for their care and support. Thank you for the positive affirmations and sharing of knowledge.

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On another note, thank you to my humble team of caring friends and family who maintained their trust in me, celebrated small victories with me, and stayed by my side through this journey.

Altogether, I am grateful that this learning journey towards completing my Master of Science in Health Promotion and Sociobehavioural Sciences has successfully reached a memorable ending.

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# List of Abbreviations

ABAlberta (Canadian Province of Alberta)
AHCIPAlberta Health Care Insurance Program
AHSAlberta Health Services
AIPAlberta Immunization Policy
ASHRAcute Age-Standardized Hospitalization Rates
AJAlberta Jurisdiction; Alberta Jurisdictional
CATMATCommittee to Advise on Tropical Medicine and Travel
CALDCulturally and Linguistically Diverse; Cultural and Linguistic Diversity
CICCanadian Immunization Committee
CICR(s)Childhood Immunization Coverage Rate(s)
CIGCanadian Immunization Guide
cNICSChildhood National Immunization Coverage Survey
CTCContextually-Tailored Care
D-( )Document-(Code/Label i.e., 1A); Document Number (i.e., D-1A)
EOHCEquity-Oriented Health Care
FNMIFirst Nations, Metis and Inuit; Indigenous Peoples of Canada
Go(_)GoA: Government of Alberta, GoC: Government of Canada
HiAPHealth in All Policies
IBPAIntersectionality-Based Policy Analysis
IFHPInterim Federal Health program
IHDAInteractive Health Data Application
IIPAlberta Influenza Immunization Policy
Im/migrant(s)Immigrant(s) and Migrant(s); Immigrant(s) and Refugee(s)
IRCCImmigration, Refugees and Citizenship Canada
NACINational Advisory Committee on Immunization
NCCIDNational Collaborating Centre (NCC) for Infectious Diseases
PLSTPrecarious Legal Status Trajectory/Trajectories
PHACPublic Health Agency of Canada
SDHSocial Determinants of Health
T#Table # (i.e., T3, T4)
VPDVaccine-Preventable Disease(s)

# **Chapter 1**

# 1.1 Contextual Background Evidence: Canadian Healthcare; National Vaccination Policies

# Immigrants in Canada: Immigration Status and Health

Ethnoculturally diverse immigrants and refugees settled in various provinces and territories across Canada are increasingly representing the overall Canadian population. In more recent years, upwards to 50% of the general population in some Canadian metropolitan areas consists of immigrants and refugees (Bolotin et al., 2019). By 2036, almost half of the Canadian population will likely either be first-generation or second-generation immigrants (Chan, 2020). The influx and settlement of migrants are continuously fueling the formation of a culturally plural society nationwide in Canada, leading to an ever-increasing complexity of intercultural relations and communication (Berry, 2011).

As a visibly minoritized and racialized subgroup (Bauer et al., 2020) in the Canadian population, immigrants and refugees ('im/migrants') are defined in Canada as foreign-born individuals, with some identifying as international students, undocumented migrants, and temporary foreign workers (Wilson et al., 2018; Pottie, 2011). Broadly speaking, im/migrants are distinguished further by specific generational waves: *1st generation*: people born outside of Canada who are permanently or temporarily living in Canada and individuals born outside Canada to Canadian citizens, *2nd generation*: people born in Canada with at least one parent born outside of Canada, and *3rd generation or more*: non-indigenous Canadian people born in Canada and/or several generations of ancestors born in Canada (Statistics Canada, 2018).

Generally, the ethnocultural traits of the Canadian population vary in accordance with the number of generations that an individual or their ancestors have lived in Canada, and the characteristics of each generation correlate with the origins of various waves of immigrants who have settled in Canada over time (Statistics Canada, 2018). It is important to note that a substantial component of the overall population of Canada (i.e., all the fully non-Indigenous

Canadian population) consists of people who are generationally colonized-im/migrant settlers or colonial-im/migrant settlers, given that the original inhabitants of this land were and are the First Nations Indigenous people of Canada whose vibrant communities and diverse presence continue to enrich Canada to this day (Troper, 2021).

Every year, an estimated 50,000+ children and youth younger than the age of 15 years old are accepted into Canada or are born in Canada to immigrant and refugee families during their first decade of settling into and living in this country (Barozzino and Hui, 2013). However, many immigrant visible minorities in Canada are still considered the least socially integrated (Na and Hample, 2016) in their surrounding Canadian society. Fortunately, ongoing efforts to promote the social integration of im/migrant visible minorities in Canada, especially whenever undertaken in a non-forceful manner, has the ability to positively affect and sustainably boost the im/migrant's health primarily through psychological functioning such as a sense of belonging, personal control and generalized trust (Na and Hample, 2016), correspondingly positively impacting the wellbeing of whole communities that the im/migrants are integrated into. Furthermore, im/migrants are key to the sustainability of Canada because they replenish the declining Canadian population, push forth the Canadian economy and contribute their hard work into the overarching Canadian labour market (Chan, 2020). Collectively, the health of im/migrants and their descendants are increasingly guiding, influencing and impacting the healthcare systems across Canada (Vang et al., 2017).

# 'Non-Citizen' Access to Healthcare in Canada: Precarious Immigration Status

A non-citizens' (new immigrants) access to healthcare in Canada is limited and contingent upon their immigration status, particularly if they belong to four specific classes of immigrants: refugees, asylum seekers, temporary foreign workers, and permanent residents (Naseem, 2016). Presently, Immigration, Refugees and Citizenship Canada (IRCC) does not provide non-citizens with precarious immigration status (i.e. people without Canadian citizenship or permanent residency: temporary workers unauthorized to stay, refugee claimants yet to be granted permanent residency and the undocumented) access to the same healthcare services that

are provided to Canadian citizens and permanent residents (Government of Alberta, 2021e; Government of Alberta, 2021f). One exception is that refugees and asylum seekers in Canada are eligible and have access to *limited* healthcare services without any repercussions such as deportation under the federal government's *Interim Federal Health Program* (IFHP), however, undocumented im/migrants are unfortunately not privy to such conditional access (Campbell, Klei, Hodges, Fisman, & Kitto, 2014; Naseem, 2016).

Im/migrants to Canada also include those with precarious status, who follow a *precarious legal status trajectory* (PLST) towards securing settlement here in Canada. PLSTs are periods of time [for im/migrants] when a person [foreign person i.e. landed im/migrant in Canada] is without state authorization and/or forms of temporary authorization [for the im/migrant(s) to be in Canada], and the period itself is often prolonged, directionally unpredictable (uncertain outcomes) and discontinuous with the im/migrants legal status intertwined with differential inclusion (Goldring and Landolt, 2021). Often stateless migrants in Canada apply for one or both of two humanitarian legal status adjustment mechanisms (trajectories) to obtain permanent residence and thereby become legal: late refugee claims and asylum on humanitarian and compassionate grounds (Goldring and Landolt, 2021). There is a consistent pattern of parents' im/migration status and legal residency in Canada, especially when precarious, being tied to and having a directly restrictive or precluding impact on their children's utilization of vital benefits including health services (Rahimian, 2020).

#### Interim Federal Health Program (2021): Pre-Departure Vaccination Coverage for Refugees

The Interim Federal Health Program (IFHP) includes 'overseas coverage' whereby if a person is chosen to resettle in Canada as a refugee, the IFHP will cover some of their 'pre-departure medical services' including vaccinations (Government of Canada, 2021b). The IFHP *"provides limited, temporary coverage of health-care benefits to people in the following groups who aren't eligible for provincial or territorial health insurance protected persons, including resettled refugees, refugee claimants, and certain other groups"* (Government of Canada, 2021b).

#### Contextual Evidence on General Access to Healthcare for Immigrants vs. Canadian-Born

In recent years, the factors behind the low vaccination of im/migrants settled in Canada have been well-studied (Bolotin et al., 2019; Wilson et al., 2018; Ng et al., 2016; Kowal et al., 2015). There are several barriers contributing to reluctance among im/migrants settled or settling in Canada from accessing and utilizing all vaccination services. According to Wilson et al (2018), some of the barriers to im/migrants of vaccinations include the following: 1) *cultural norm factors* (i.e. gender roles, negative influence by peers; anti-vaccine misinformation), 2) *knowledge gaps* (i.e. insufficient knowledge of vaccination and virus; lack of awareness about existence and purpose of vaccine, and 3) *insufficient access to healthcare* (i.e. language barriers, missed opportunities, trouble navigating, culturally appropriate accessibility).

On another note, immigrant individuals experience less positive health outcomes than Canadian-born individuals in Canada mainly due to access to healthcare (Salami, Mason, Salma, Yohani, Amin, Okeke-Ihejirika and Ladha, 2020). Previous research on access to healthcare for immigrants tends to mainly focus on the experience of immigrant adults and mainly specific ethnic groups: South Asians and Chinese (Salami et al., 2020; Mason, Salami, Salma, Yohani, Amin, Okeke-Ihejirika, and Ladha, 2020). Immigrants' challenges in accessing healthcare for their children in Alberta are attributed to a set of systemic barriers, specifically: 'system barriers, language and cultural barriers, connection with health professionals, and financial barriers' (Salami et al., 2020). The systemic barriers immigrants face in accessing healthcare services for their children can be addressed by policymakers and service providers by improving the diversity of the workforce, taking into account income as a social determinant of health, boosting access to language interpretation services (Salami et al., 2020), and increasing focus on supporting informal sources of acquiring accurate healthcare information among and between immigrants (Mason et al., 2021). However, barriers to im/migrants in Canada accessing and using preventative services are resolvable through policy-led strategies i.e., advocacy for an increase in knowledge-building, more implementation of peer-educator interventions, and more prominent incorporation of communication and cultural interactions in health promotion strategies aimed at im/migrant populations (Pottie et al., 2011).

#### Vaccination Services for Im/migrants in Canada: Variations in Vaccination Coverage

As is known, one key preventative component of the healthcare system in Canada is modern vaccination which has three distinct yet overlapping roles in serving and protecting population health: pharmaceutical products, personal healthcare intervention and a public health measure (Mah, 2009). The promotion and implementation of vaccination for the entire Canadian population are shaped by nation-wide federal decision-making structures including the *Public Health Agency of Canada* and the *Pan-Canadian Public Health Network*, as well as directive instruments including the National Immunization Strategy and targeted federal funding (Mah, 2009). The national vaccination strategy, in particular, promotes equitable access to vaccines and includes advocacy for the linking of national-level decisions on vaccination with financing and delivery (Mah, 2009). Unfortunately, the absence of standardized vaccination programs across Canada has led to variations in vaccination coverage across the nation, proliferating Canada-wide inequitable access to vaccines (Mahimbo et al., 2017a).

The presence of evidence-based vaccination policies in Canada requires complete and accurate vaccination data to assess vaccine coverage (Wilson et al., 2017). Methods and data sources used to assess vaccine coverage do exist in Canada but currently vary by region (Wilson et al., 2017; Wilson et al., 2016). However, some insight has been retrieved from comparing nationwide linked Canadian datasets monitoring and analyzing for acute hospitalization rates (Ng et al., 2016). These comparisons between national hospitalization datasets indicate that foreign-born immigrants and refugees settled in Canada have significantly higher patterns of acute age-standardized hospitalization rates (ASHR) due to vaccine-preventable diseases (VPD) than the Canadian-born population (Ng et al., 2016). Im/migrant's tendency to have lower immunity to VPDs in Canada may be associated with the fact that many im/migrants are from home countries where vaccine coverage is suboptimal or where there are inaccessible or non-existent vaccination programs (Ng et al., 2016). However, the higher rate of im/migrants in Canada hospitalized for vaccine-preventable diseases may be due to under vaccination, no vaccination or outdated vaccination, because the VPD-specific ASHRs seem to increase with years lived and/or settled in Canada (Ng et al., 2016). Economic class im/migrants settled in Canada seem to have significantly lower VPD-specific ASHR because they have dependents i.e.

children (Ng et al., 2016). Family and refugee class immigrants (i.e., refugees assisted by the government) tend to have significantly higher VPD-specific ASHRs (Ng et al., 2016). In any case, Canada currently does not have a centralized national database collecting and storing specific information on the long-term vaccination of im/migrants settled in Canada (Bolotin et al., 2019; Wilson et al., 2016).

### Canada's National Commitment to Strengthening Vaccination Policies Using Evidence

With the ongoing influx of im/migrants into the Canadian population, there are both longstanding (i.e., historical) and newly developed or developing (i.e., contemporary) health disparities and inequities present in society. Government intervention developments have been established to help circumvent the negative impacts of health inequities to Canadian society, including the establishment of NCCs (National Collaborating Centres) across Canada which have been federally assessed to demonstrate significant contributions to evidence-informed decision-making in public health in Canada (Dubois and Lévesque, 2020). NCCs are known and identified as key to bridging the gaps between evidence, policy, and practice; to facilitate the implementation of evidence in multiple and complex settings (Dubois and Lévesque, 2020). Within the context of addressing immunization health inequities, Canada has a National Collaborating Centre (NCC) for Infectious Diseases (NCCID), which is based at the University of Manitoba in Winnipeg, Manitoba (Dubois and Lévesque, 2020). From 2020 onwards, the NCCID has set three priorities: 1) "support public health responses to infectious diseases among migrants and mobile populations", 2) "address inequities in public health responses to communicable diseases in rural and remote communities", and 3) "support opportunities for using big data for infectious disease surveillance, prevention, control and monitoring" (Dubois and Lévesque, 2020). Broadly speaking, the NCCID supports relevant topic-specific networks alongside facilitating two or more national knowledge exchange gatherings every year (Dubois and Lévesque, 2020). The topics that the NCCID covers include 'locally and culturally appropriate interventions' and 'stigma' (Dubois and Lévesque, 2020). It is important to note that advances by the Canadian federal government in ongoingly improving Canadian immunization policies are mentioned in this background context given that such policies tend to influence or guide corresponding provincial jurisdictions (i.e. Alberta) and policies.

Canada is not immune to the rising growth of health inequities worldwide, despite the fact the Canadian nation has a publicly funded health care system well-known to provide good access to core medical and nursing care (Ford-Gilboe et al., 2018). On a national level, Canada is strongly contributing to the global response to health inequities; to *"the global objective of practical, evidence-informed immunization guidance"* (Ismail et al., 2020). Canada has been strengthening national capacity to develop immunization policies through improved use of evidence; *"through the expanded mandate of its national immunization technical advisory group (NITAG)"* (Ismail et al., 2020).

## National Advisory Committee on Immunization: Guiding the Growth of Vaccination Policies

The NACI (National Advisory Committee on Immunization), since its establishment in 1964, is an expert advisory group under the Public Health Agency of Canada (PHAC) which *"provides medical, scientific, and public health advice on the use of vaccines"* (Ismail et al., 2020). The national immunization recommendations from NACI are informed by an analytic framework created by Erickson, De Wals and Farand (2005) and in more recent years (as of 2019 onwards), NACI has updated and improved their mandate (Ismail et al., 2020). Originally, the Canadian Immunization Committee (CIC) used to produce separate recommendations building upon NACI's recommendations by applying the analytic framework from Erickson et al (2005), which was a two-step process in and by itself and led to extended timelines across Canada in vaccine authorization, program guidance and program implementation (Ismail et al., 2020). Moreover, the CIC was historically not often able to appropriately address factors in the analytic framework by Erickson et al (2005) that were most suitable being addressed at a local level i.e. political considerations (Ismail et al., 2020).

More recently (from 2019 onwards), NACI (National Advisory Committee on Immunization) and stakeholders have developed and implemented a critical analytical framework into their work called *EEFA*: *"Ethics, Equity, Feasibility, Acceptability"* (Ismail et al.,

2020). The *EEFA* framework helps provide decision-makers with evidence-informed tools 'in a systematic, comprehensive and transparent manner", "to systematically assess critical programmatic issues, thereby strengthening capacity for comprehensive, evidence-informed immunization program recommendations" (Ismail et al., 2020). *EEFA*'s evidence-informed tools, already in use here in Canada for timely and transparent vaccine guidance and applicable to the global context as a possible gold standard of sorts, are "based on five years of environmental scans, systematic reviews and surveys, and refined by expert and stakeholder consultations and feedback" and include "Ethics Integrated Filters, Equity Matrix, Feasibility Matrix, and an Acceptability Matrix" (Ismail et al., 2020).

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# Purpose of Evidence-Based Health Equity Principles in Canadian Vaccination Policies

Government vaccination policies are noted as most influential in providing clear intent and guidance, to encourage policy decisions oriented towards improving vaccination services and inadvertently, actualizing better health outcomes for all (Mahimbo et al., 2017a). Generally, health policies are known as a driving force in creating and perpetuating health disparities (preventable differences in burden of disease in the way of optimal health in disadvantaged segments of the overall population), but also play a double-sided role in eliminating health disparities (Douglas et al., 2019). Evidence-based health policies are most effective in advancing health equity (Pottie et al., 2011), fueled by research evidence and input from affected community-level stakeholders (Douglas et al., 2019).

More specifically, vaccination policies in the Canadian context are directly associated with public health decision-making and are considered optimal when scientifically evidence-based (Rosella et al., 2013). In terms of health equity associated with vaccination, evidence-based vaccination policies and programming can increase vaccination by boosting public confidence and advance health equity by promoting interventions aimed at reducing vaccine inequities (Gates et al., 2021). Within the context of future pandemic preparedness policies, incorporating evidence into vaccination policies allows for improved preparation of policies to withstand time constraints and uncertainty but there is a risk of policymakers respective ideological interpretations and perspectives on evidence shaping how information

(i.e., scientific evidence, contextual factors) is used in policy-making (Rosella et al., 2013). For example, when debate arises regarding some evidence, it is noted that some policymakers succumb to external pressures, veer on the side of caution and make policy decisions that go against prevailing evidence jeopardizing credibility and transparency (Rosella et al., 2013). As such, clarification and equitable reasoning in policies is key to maintaining or renewing public confidence in policies backed up by scientific evidence (Rosella et al., 2013).

#### 1.2 Knowledge Gaps

Despite growing research on the barriers to the vaccination of im/migrants in Canada as a whole, little is known about the vaccination among diverse im/migrants - particularly children of im/migrants - across the provinces and territories of Canada (Bolotin et al., 2019). Proper disease surveillance and serosurveillance of the vaccination coverage and status of im/migrants are yet to exist (Charania et al., 2019). Im/migrants are yet to be distinguished in Canadian vaccination coverage data or statistics (Johnson, 2014). Even though im/migrants birthplace and ancestry in relation to certain vaccinations have been pinpointed as very important information needed by vaccine providers working to reach all population subgroups (Li, Menzies, Landry, Benedetti and, Rousseau, 2014). Barriers are said to exist in distinguishing im/migrants by ethnocultural diversity in Canadian vaccination coverage data (Bolotin et al., 2019). Nation-wide federally-centralized acknowledgment of im/migrants as a diversely susceptible cohort in vaccination data is difficult because each of the 10 provinces and 3 territories in Canada have their own schedule for administering vaccinations (Bolotin et al., 2019) and assessing vaccination coverage varies by jurisdiction and age group (Wilson et al., 2017). The differing vaccination record systems across Canadian provinces and territories are also limited by age (i.e., predominantly focusing on school-aged children rather than all age groups in the corresponding jurisdictional population) (Bolotin et al., 2019). A national vaccine registry database is yet to be developed in Canada (Bolotin et al., 2019), however, a pan-Canadian mobile application tracking vaccination records (called Immunize CA) has been piloted on childbearing women across Canada in recent years (Atkinson et al., 2016). The pilot study on the use of the Immunize CA mobile application indicates that barriers are in the way of the general population collectively

adopting this app i.e. uncertainties around usability and accessibility of mobile solutions and individual technology readiness (Atkinson et al., 2016) *Immunize CA* has the potential to be integrated into a national vaccine registry database i.e. when such a database is developed and implemented nation-wide (Wilson et al., 2018). In a survey administered to newcomers in Ottawa, recent im/migrants settled in the Ottawa province of Canada indicated that they would use mobile technology to store and track their vaccination records if the application was available in their respective primary languages (Wilson et al., 2018). In short, im/migrants equitable access to vaccines across Canada currently can be viewed as a neglected topic.

Moreover, a centralized Canadian database summarizing data on childhood vaccination of im/migrants across Canada does not exist. One somewhat central source of national childhood vaccination monitoring in population (a source of data for determining vaccination rates) that does exist in Canada is sourced directly through a federal structure in the Canadian healthcare system called the Public Health Agency of Canada; PHAC (Public Health Agency of Canada, 2020b). The PHAC routinely monitors general childhood vaccination coverage in Canada through data collection from childhood national immunization coverage survey; cNICS (Public Health Agency of Canada, 2020b). cNICS has existed in Canada since 1994 and is conducted approximately every two years to estimate national uptake for publicly-funded routine childhood vaccinations recommended by the National Advisory Committee on Immunization; NACI (Public Health Agency of Canada, 2020b). However, comparisons of estimated cNICS data with varying estimated data from various provinces and territories across Canada continue to indicate uncertainty over the proportion of well-vaccinated children in Canada (Wilson et al., 2017). Additionally, it is unclear if the data present on national childhood vaccination takes into consideration the vaccination needs of children of im/migrants especially from recently settled im/migrant families.

Research gaps exist in general research conducted on the vaccination of Canadian children. The research evidence that does exist on the general childhood vaccination rates for the overall Canadian pediatric population remains suboptimal, with some Canadian children still considered under-immunized and sporadic outbreaks of vaccine-preventable diseases affecting

local children (Robinson, 2018; Gilbert et al. 2017). All children are at increased risk of transmission and complications from infectious diseases because their immune systems are not fully developed, therefore they are a very vulnerable demographic in need of vaccines scheduled on time and routinely to provide immunity to vaccine-preventable diseases as early as possible (Johnson, 2014). However, unfortunately research on the vaccination of children nationwide that takes im/migration status and/or race/ethnicity into consideration does not seem to be available on this topic at this time. Lack of childhood vaccination and incomplete childhood vaccination outcomes of children in Canada are influenced by various debilitating sociodemographic determinants (differing by region due to uncertain barriers), including low parental education, children from single-parent families, children born outside Canada, low household income (poverty), and low socioeconomic status (Gilbert et al., 2017).

Research has been particularly lacking on the vaccine-preventable disease rates and vaccination of young (i.e., school-aged) children of recent im/migrant parents in Canada (Salehi et al., 2015). Although there is remarkably universal access to publicly-funded childhood vaccines in Canada with key childhood vaccinations available nationally, provincially, territorially and locally, some regional variation and socioeconomic inequalities in vaccination rates are still noted (Wilson et al., 2017). For example, some children of im/migrants may not be fully vaccinated through the universal childhood immunization program of Canada especially if they were too young to be vaccinated or past the age of vaccination if they migrated to, arrived to, and settled in Canada along with their parents (Pottie, 2011).

### Limited Quantitative Data Detected on Vaccination of Im/migrants in Canada

Furthermore, Canadian quantitative research on the interconnection between vaccination and related social ecology of culturally and linguistically diverse (CALD) subgroups in the population is also very limited. A brief literature review indicates that there are only a few quantitative studies that directly or indirectly mention and provide quantitative evidence on the vaccination of ethnoculturally diverse people (i.e., im/migrants, indigenous peoples) in Canada. One Canadian quantitative study, Quach et al (2012) directly estimated influenza vaccination coverage rates for and across twelve (12) broad 'ethnic groups' in Canada using a socioeconomic status (SES) lens and searching for ethnic disparities. Quach et al (2012) pointed out that the success of influenza vaccination campaigns is likely suboptimal if subgroups of the population face unique barriers to accessing and/or utilizing vaccination.

Although the diversity and vaccination coverage disparities of twelve various ethnicities were present in the study by Quach et al (2012), health equity principles and the direct mention of children of im/migrants or im/migrants were missing. Responses were pooled from the Community Health Services Survey from 2003 to 2009 (n = 437,488), and weighted logistic regression models were used to analyze the association between ethnicity and influenza vaccination coverage while adjusting for the confounding factors of sociodemographic factors and health status (Quach et al., 2012). The Canadian Community Health Survey (CCHS) is a national initiative collecting health data on individuals 12 years of age and older, conducted every two years and in both official national languages of Canada: English and French across all ten Canadian provinces and three Canadian territories (Statistics Canada, 2020). Quach et al (2012) indicated that influenza vaccination coverage ranges from 25% to 41% across ethnic groups, and stated that both White and Black Canadians have the lowest of influenza vaccination coverage across ethnic groups which seems like a very strong over-generalization because there many different types (ethnicities, religions, social classes) of White and Black Canadians, respectively. As of the present year of 2021, this study by Quach et al (2012) is outdated so further research will be necessary to determine the real situation for ethnic people on the ground across Canada; to extract more substantial evidence from more studies with larger sample sizes and with more ethnoculturally and jurisdictionally diverse Canadian participants; for improved external validity.

Another quantitative Canadian study utilized vaccination data from Ontario, Canada to examine and determine whether there were ethnic disparities in members of the population (i.e. children) acquiring the 2009 pandemic H1N1, with the inclusion of both adult and pediatric cases (Navaranjan, Rosella, Kwong, Campitelli and Crowcroft., 2014). Ethnicity was viewed as

one of the novel risk factors and multivariate logistic regression calculations were used to distinguish the association or lack thereof between ethnicity and pH1N1 infection, adjusting for demographic, clinical and ecological covariates (Navaranjan et al., 2014). Pediatric cases with risk factors for severe influenza infection were more likely to be children who self-identified as Black. Furthermore, pediatric cases without risk factors for severe influenza infection had an increased chance of being children who were of South Asian descent, Black descent, West Asian/Arab descent, Latin American descent and/or Multi-racial groups (Navaranjan et al., 2014). This study by Navaranjan et al (2014) indicated that pH1N1 cases had an increased chance of coming from certain ethnic groups compared to test-negative controls. Furthermore, it was lamented that more insight was necessary to better determine whether these ethnic disparities were due to social and biological factors; to better understand what approaches are necessary to reduce the burden of contracting future vaccine-preventable infectious diseases (Navaranjan et al., 2014). In a more recent Canadian quantitative immunization study, the 'race/ethnicity' of a Manitoban subgroup of school-aged girls and women (specifically First Nations, Metis and Inuit or FNMI) was key in the study's mathematical model of analysis as one of the significant determinants of the of HPV vaccination coverage based on evidence that this particular race/ethnicity demographic - FNMI - are known to be at increased risk of infection, disease and cancer (Obidiya, 2020). The impact of inconsistent vaccination among Manitoban school girls by ethnicity/race was quantified using a dynamic transmission model, and it was determined that if vaccination coverage is not equalized among all school girls then that will require policymakers to prepare for elevated levels of negative health outcomes - especially amongst FNMI school girls - which would've been successfully avoided under equal vaccination coverage (Obidiya, 2020). Through this particular quantitative study, Obidiya (2020) acknowledged that ethnicity/race does directly influence and impact vaccination and immunization disparities. Research studies, such as the ones from Obidiya (2020) and Navaranjan et al (2014), that focus on the vaccination of Canadian children from racialized identities and ethnic roots (i.e. FNMI children) in a specific local region of Canada are to date still seem quite rare to come across.

#### **1.3. Introduction: Alberta Childhood Vaccination**

Alberta is considered to have one of the most comprehensive vaccination programs in Canada (Busby and Chesterley, 2015). Alberta's universal immunization coverage through the publicly-funded immunization schedule provides the Alberta population, including and especially children, immunity protection against possibly life-threatening VPDs and outbreaks (Government of Alberta, 2007). In 2005, Alberta was the only province rated highly for having an excellent immunization program by the Canadian Pediatric Society (Government of Alberta, 2007). Alberta's immunization program is promising but similar to any other province and territory in Canada, the vaccination coverage of children in Alberta can and should be optimized and advanced through improvements in corresponding policies (Busby and Chesterley, 2015).

# Alberta Immunization Schedule and Target Coverage for Childhood Vaccinations

The Alberta Ministry of Health (Alberta Health) has a well-functioning 'Analytics and Performance Reporting Branch' which maintains an interactive health data application (IHDA) that actively monitors childhood immunization coverage rates in Alberta (Alberta Health, 2021). Data from the IHDA are actively sourced from both the 'Alberta Health Care Insurance (AHCIP) Quarterly Population Registries' and 'Immunization and Adverse Reaction to Immunization (Imm/ARI)' records and documents (Alberta Health, 2021). The IHDA database is based on the postal code of residence in the Alberta Health Care Insurance Program (AHCIP) Stakeholder Registry and includes 5 'Alberta Zone' areas, 35 'subzones' of Alberta, and 132 'local areas' of Alberta. The rates of childhood vaccination coverage in Alberta featured in this IHDA data set represent "the probability a child will have received their age-appropriate immunization dose(s) by ages one, two, seven, twelve, seventeen" (Alberta Health, 2021). For children aged 1-17 in Alberta, there are approximately 11 childhood vaccines - between 1 to 4 doses per vaccine - that are strongly recommended (Figure 3), with a target coverage for each childhood vaccine varying from 80% to 95% (Alberta Health, 2021). Childhood Immunization Coverage Rates (CICR) "approach follows a birth cohort and applies time-to-immunization (survival analysis) methods to compute the probability of immunization over time" (Alberta Health, 2021). Moreover, CICRs are calculated using the "antigen proxy method where immunizations are for a particular

antigen are used as proxies for the vaccine", allowing for a "number of scenarios when certain vaccines are not available...but the component antigens can still be administered" (Alberta Health, 2021).

Vaccination coverage tends to often be categorized as "complete or incomplete", which can pose challenges in that it may ignore "the potentially important heterogeneity in children [in Alberta] whose vaccinations are not-complete" (Bell, Simmonds, and MacDonald, 2015). Based on the five routinely scheduled childhood vaccines in Alberta, children's vaccination coverage can be more specifically categorized as "complete, incomplete, selective, or non-vaccination status" (Bell, Simmonds, and MacDonald, 2015). Moreover, amongst children aged 2 who are not 'not-completely' vaccinated children (a common occurrence in the 2008 Alberta birth cohort), it has been determined that there are distinct differences present among these vaccination coverage category groups of children in Alberta "that require attention when addressing vaccine coverage" (Bell, Simmonds, and MacDonald, 2015). According to this data on partially vaccination children from the 2008 Alberta population-based birth cohort (retrieved from in administrative health databases), factors "strongly associated with incomplete vaccination status" were detected "that might pose barriers to vaccination, such as single marital status..., large number of household children..., and multiple household moves" (Bell, Simmonds, and MacDonald, 2015). However, it is important to note that determinants for immunization by age 2 in a population cohort in Alberta from 2008 (Zhang et al., 2008) and corresponding policies and programs have changed considerably fast forward a decade and more (i.e. Rafferty et al., 2019).

In any case, vaccination interventions aimed at boosting general childhood vaccination coverage in Alberta are often being reviewed, revised, evaluated, and improved by the Government of Alberta to help overcome coverage setbacks and/or maintain positive coverage outcomes. For example, in June 2015, Alberta "instituted a [restricted] universal publicly funded rotavirus vaccination programme (Rotarix, RV1), with vaccine doses scheduled for 2 and 4 months of age" (Rafferty et al., 2019). With this publicly funded rotavirus vaccinations are "restricted so that infants were only allowed to receive first dose between 6 and 20 weeks of age and second dose before eight calendar months of age".

Moreover, schedule noncompliance for one-dose vs. two-dose rotavirus vaccination is noted as very minimal. Socioeconomic disparities were identified as a factor in the uptake of the vaccine (specifically due to factors such as income, location of residence and number of children in household) all of which is noted to contribute to the odds of a child being vaccinated with rotavirus, particularly likely to affect groups "at highest risk of gastrointestinal illness [such as] low-income and rural populations...even with the "restrictive rotavirus vaccine schedule, the vaccine can be delivered on-time" (Rafferty et al., 2019). However, it is important to note that even with Alberta's publicly funded childhood vaccination system and high level of schedule compliance (i.e., to RV1), there are still "some populations (eg. preterm infants, low-income rural populations) that may remain under-vaccinated". For example, Southern Alberta "is home to" many "homogeneous cultural communities and their respective schools" which "do not promote immunization as a preventive public health measure" for varying reasons, leading to heterogeneous vaccination coverage of children (Matkins, Simmonds and Suttorp, 2014).

#### Childhood Vaccination Coverage in Alberta: General Population vs. Recent Im/migrants

It is important to note that no studies to date have indicated that any existing or rising deficiencies in Alberta's childhood vaccination are the sole fault of im/migrant parents settled in Alberta and their children born and/or settled in Alberta. Rather, nationally, it is recognized that Canadian im/migrants and their children are a marginalized subgroup in the overall Canadian population who have unique barriers to accessing and uptaking vaccination services that born Canadians may not or will not face and experience (Busby and Chesterley, 2015). Im/migrants have additional barriers in the way of their vaccination coverage (Wilson et al., 2018). In the general population, both im/migrants and non-immigrants collectively also experience large-scaled and societal (macro) barriers that exist in the way of childhood vaccination (a child receiving a vaccine), which includes socioeconomic status specifically the mother's education, income level, family size, ethnocultural diversity, access or lack thereof to vaccination services (i.e., lengthy clinic waits) and location (urban or rural) of vaccination services.

#### **Reliable Nurse-Led Facilitation of Childhood Vaccinations in Alberta**

The public health managers who facilitate, monitor and encourage the completeness of routine childhood vaccination of children in Alberta are nurses. Alberta has a strong and well-functioning nurse-led practice of administering and recording all infant vaccinations in over 100 community health organizations across the province operated by Alberta Health Services, tracking regional childhood vaccination coverage (Busby and Chesterley, 2015). Alberta's nurse-led approach involves *'healthy beginning [registered] nurses'* timely and effective engagement with parents right after childbirth to discuss the importance of childhood vaccination and to ensure vaccinations for the newborn are scheduled within the first 14 days of birth and children born in Alberta hospitals have a vaccination record created for them right at birth (Busby and Chesterley, 2015). Alberta has good success with early vaccination doses (Busby and Chesterley, 2015). For childhood vaccinations, Alberta does not require written consent or refusal from parents and does not enforce vaccination on the population as mandatory (Busby and Chesterley, 2015).

The Alberta jurisdiction's systemic approach to childhood vaccination coverage (similar to other provinces) of registered nurses carrying out (implementing) routine childhood vaccinations and disseminating policies and policy guidance is said to likely be the root cause of not being able to meet national target rates for vaccination coverage (Busby and Chesterley, 2015). National childhood vaccination targets are set to sustain herd immunity against most of the common childhood vaccine-preventable diseases (Johnson, 2014), however provincial and territorial differences exist in Canadian childhood vaccination policies and programming practices (Bandara, 2019). .Alberta's policy framework for childhood vaccinations focused on early interventions is said to be liberally lenient towards parents avoiding giving consent or refusing to vaccinate their children (Busby and Chesterley, 2015). However, the jurisdiction of Alberta does strongly recommend and promote that children from the age of two months onwards receive routine childhood vaccinations (Johnson, 2014).

#### Alberta's Vaccination Data Collection: Im/migrants and their Children

One interesting fact to consider is that Alberta's pediatric population includes many children from im/migrant families, and Alberta is well-known to have a high immigration rate (Busby and Chesterley, 2015). However, im/migrants from other provinces and from abroad are not always detected and entered into the [Alberta vaccination registry] system (Busby and Chesterley, 2015), even though Alberta has a high-quality vaccination data-collection process with an active registry preserving corresponding vaccination records. In any case, new im/migrants to Alberta are legally required to provide vaccination records prior to entering Canada after which point it is their responsibility to contact a community health center in Alberta, present their vaccination records, and participate in Alberta's vaccination schedules (Johnson, 2014). Vaccination data collection on more recent im/migrants to Alberta, specifically on their access to and use of vaccination services (i.e., needed for their children), seems limited.

#### Im/migrant families Understanding of Childhood Vaccinations: Barriers to Equity

Barriers to im/migrant families vaccinating their children in Alberta are said to correlate with language and cultural barriers that impact im/migrant families understanding of government-endorsed childhood vaccination campaigns or system inefficiencies in the way of im/migrant families seeking and obtaining accurate information on vaccination from healthcare professionals (Kowal et al., 2015). Limited access to prenatal and child health services for recent im/migrant parents are noted to reduce their access to vaccination information and communications, therefore, reducing the likelihood of such im/migrants participating in vaccination programs (Kowal et al., 2015).

On a similar note, im/migrants are also vulnerable to contemporary systemic barriers (e.g., socioeconomic status by neighborhood, home ownership rates, etc). Systemic barriers continue to spark inequities in childhood vaccination coverage rates in Alberta, inadvertently increasing the risk of vaccine-preventable disease (VPD) outbreaks among vulnerable populations (Bandara, 2019). While the jurisdiction of Alberta exhibits high coverage rates with fairly low inequities (except at a neighbourhood-coverage level), high-income neighbourhoods are said to receive intensive support efforts post-outbreaks compared to lower-income and

less-home-ownership neighbourhoods across Alberta (Bandara, 2019). Gaps in vaccination coverage due to health disparities (inequities) ideally should be readily detected by regional public health units and remedied with intentional evidence-based efforts to reduce the coverage inequities (Bandara, 2019).

# Alberta Health, Alberta Health Services, and the Provincial Promotion of Health Equity

Generally speaking, as of the last decade, health equity has been and is identified by Alberta Health (2008-Present) as a systems-based ideal; as a 'strategic priority... to improve equity in the province's population health outcomes' which has involved the establishment of province-wide social determinants of health and health equity approach (NCCDH, 2013). It is important to note that Alberta Health Services "promotes wellness and provides programs and services across the continuum of care to Albertans, as well as to many residents of southwestern Saskatchewan, southeastern British Columbia, and the Northwest Territories" (NCCDH, 2013). Promoting and implementing health equity practices and protocols in Alberta (Canada) is a work-in-progress for Alberta Health Services (NCCDH, 2013), and are associated with coalitions of intersectoral collaborations, developments, implementations and transparency in equity-oriented interventions to garner or maintain conditions conducive to health for all in and across Alberta.

However, the progress in health equity promotion by Alberta Health (in optimistically designing, systematically executing and actively mobilizing health equity interventions and metrics beyond idealization) has been hindered at times (NCCDH, 2013). Alberta Health has transparently noted in one of their equity-minded publications that their attempts to integrate health equity into the general Alberta Health Care System has been restricted by three distinct major challenges: "1) lack of region-wide consensus over a common understanding of 'health equity', 2) unfulfilled need for evidence-based population health data at the jurisdictional level during the planning stages, and 3) trouble integrating a health equity approach across diverse Alberta Health Service programs and service delivery locations" (NCCDH, 2013). It is unclear whether this long held promotion of health equity by Alberta Health Services is reflected openly in Alberta's present-day childhood vaccination policies and policy guidance.

#### Identified Knowledge Gap: Impact of the Vaccinations Policies on Children of Im/migrants

Contextual background information aside, this study essentially addresses a knowledge gap in the critical assessment of Alberta childhood vaccination policies in particular. A few general critical analyses and/or reviews of vaccination policies in Canada have been conducted in the past (i.e., Garst et al., 2021; Shapiro, Guichon and Kelaher, 2017; Rosella et al., 2013; Lomas and Brown, 2009). However, no known peer-reviewed and/or published studies to date have specifically conducted an intersectionality-based critical policy analysis evaluating childhood vaccination policies and policy guidance directly pertaining to the Alberta jurisdiction of Canada only or in comparison to another Canadian jurisdiction or jurisdictions. There are no Canadian national or local vaccination studies detected to date that are specifically inclusive of the vaccination needs of children from ethnoculturally diverse im/migrant families with varying immigration statuses. Therefore, this study is a critical policy analysis examining the childhood vaccination policies and policy guidance exclusively in Alberta, to determine whether or not the children of im/migrants settled in Alberta, Canada is inclusively and equitably accounted for throughout Alberta's childhood vaccination policies.

# Chapter 2

#### 2.1. Objectives and Research Question

This qualitative critical policy analysis study utilized an intersectionality-based (equity-oriented) evaluative framework (Mahimbo et al., 2017a) and secondary data to examine and explore vaccination policies and policy guidance primarily at the provincial level and regionally focused on Alberta; on urban cities, rural counties, townships and other such areas in and under the jurisdiction of the Province of Alberta (Canada) only. The vaccination policies and policy guidance in this study were those under Alberta jurisdiction currently in place, with a specific focus on the vaccination of children of all ages from im/migrant families settled in Alberta. The research question for this critical policy analysis study is as follows: to what extent are the current Alberta childhood vaccination policies attentive and responsive to the vaccination needs of children from im/migrant families. This study includes a thorough evidence-informed critical analysis of childhood vaccination policy and policy guidance, with the intent to examine: a) equity considerations in the policies as it relates to vaccine uptake among immigrant/migrant children; and b) how vaccination policies in Alberta were implemented and/or how decisions were made.

# 2.2. Study Design: Introduction to Intersectionality-Based Critical Policy Analysis

This study is oriented as intersectionality-based critical policy analysis, also referred to as an equity-based critical policy analysis. Intersectionality is a theoretical framework in public health for understanding and addressing health inequities, by allowing for exploration of the dynamic, macro-level and interconnected structures of power (and differential privileges and disadvantages) that create the inequities in [learning] health systems and that then differentially affect the health of people on a micro-level (Larson, George, Morgan and Poteat, 2016). The concept of intersectionality is increasingly utilized in the arena of public health in North America and is considered as offering great potential in advancing professional stakeholder understanding, perspectives and action on health inequities (Holman, Salway, Bell, Beach, Adebajo, Ali and Butt, 2021). Intersectionality is an underrated but key element of population health because it considers the interaction of various social stratifiers (i.e. ethnocultural diversity, migration status, socioeconomic status) and the various power structures that influence these social stratifiers at multiple levels (Larson et al., 2016). Intersectionality is defined as the interactivity of social positioning and identities such as ethnocultural diversity, social class, gender, and social disadvantages (i.e. low income, illness, immigration status) in shaping individual people's experiences in life (Corus and Saatcioglu, 2015). Intersectionality is considered an underdeveloped concept in policy discourse and application within the context of research practices, with the application and incorporation of the intersectionality framework into policy processes (development and analysis) still considered complex and in its premature stages (Hankivsky and Cormier, 2019). Overall, intersectionality in health policies works in tandem with ensuring the policies uphold key principles of health equity for improving population health (Douglas et al., 2019), regardless of how health equity is defined in a local context.

# Searching for the Awareness and Application of Intersectionality in the Health Policies

An intersectionality-based policy analysis (IBPA) framework is well-studied as a simple and flexible tool for pinpointing or incorporating the prioritization of health equity in policies (Hankivsky et al., 2014). The guiding principles of intersectionality-based policy analysis (to be applied to yield appropriate policy critiques) include "*equity, diverse knowledge, time and space, reflexivity, social justice, power, multilevel analysis and intersecting categories*" (Hankivsky et al., 2014). The perspective of intersectionality originates from the work of social scientists analyzing the overlapping and interacting influences of social location, identity and historical oppression and its application in public health remains underdeveloped (Kapilshrami, Hill and Meer, 2015). The intersectional perspective allows researchers to move past but not ignore class and socioeconomic position (and focus on social dynamics rather than social categories) in analyzing structural (macro-level rather than micro-level) determinants of health, given that human experiences of privilege and disadvantage do directly impact the exercise of power (or lack thereof) across social institutions (Kapilshrami, Hill and Meer, 2015).

The descriptive overarching questions of IBPA include the following key questions for

the critique: 'what is the policy problem under consideration?', 'how have representations of the problem come about?', 'how are groups differentially affected by this representation of the problem?', and 'what are the current policy responses to the problem?' (Hankivsky et al., 2014). Such IBPA questions intend to reveal critical background information and assumptions underpinning the processes and mechanisms of existing government priorities, the population(s) targeted for the policy intervention(s) and what inequities and privileges are naturally being developed under current policy responses to the 'policy problem' (Hankivsky et al., 2014). In the health services context, the intersectional framework applied to the critical analysis of health service policies works towards transforming service in ways that are more transparently inclusive of all regardless of the advantages or disadvantages of their social positioning (Corus and Saatcioglu, 2015).

The transformative overarching questions of IBPA include all of the following: "what inequities actually exist in relation to the problem?", "where and how can interventions be made to improve the problem?", "what are feasible short, medium and long-term solutions?", "how will proposed policy responses reduce inequities?", "how will implementation and uptake be assured?", "how will you know if inequities have been reduced?", "how has the process of engaging in an intersectionality-based policy transformed: your thinking about relations and structures of power and inequity, the ways in which you and others engage in the work of policy development, implementation and evaluation and broader conceptualizations, relations and effects of power asymmetry in the everyday world?" (Hankivsky et al., 2014). These transformative IBPA questions intend to assist practitioners with identifying alternative policy responses and solutions that then ideally bring about social and structural changes to reduce inequities, all of which aims to promote the meaningful uptake, measurement of impacts, and outcomes of equity-focused policy solutions (Hankivsky et al., 2014).

The process of implementing an intersectionality-based policy analysis (IBPA) approach may be resisted by policymakers who are not open to social justice-oriented change or to asking and answering difficult questions about power and structural asymmetries in policy (Hankivsky et al., 2014). The architects of the IBPA framework envision the application of this framework of interest (i.e. for exploring equity in vaccination policies) will result in a living document (i.e. this thesis manuscript) that will then need to be modified over time to incorporate input from end-users, pilot tests and feedback on how this IBPA framework should be improved to become more usable, helpful and accurate in revamping, re-developing, re-implementing and re-evaluating critically-reformed policy (Hankivsky et al., 2014).

There are both pros and cons to the IBPA framework, but the pros tend to prevail. This innovative IBPA framework (which expands on current less-critical paradigms of policy analysis in existence) and its expected result of new ways of thinking about a policy problem or issue is not deemed a final solution (Hankivsky et al., 2014). IBPA still faces the obstacle of translating the resulting knowledge into accessible and digestible messages for policy actors to understand and then act on (Hankivsky et al., 2014). There is also no guarantee that this critical research (IBPA) will lead to direct action (work of interventions), structural change (work of actions) and/or social transformation led by policy actors aka critical players (Hankivsky et al., 2014) and professional stakeholders. However, the IBPA framework is able to successfully analyze the operation of power and processes of stigmatization in policymaking. Furthermore, intersectionality is a reliable framework for analyzing health policies (IBPA) that then provides a reliable look at the collaboratively-created nature of health services (Corus and Saatcioglu, 2015). Taking intersectionality into consideration is instrumental for designing universally tailored, fair, ethical and transparent services to improve health on both a micro-level and macro-level (Corus and Saatcioglu, 2015), and it's implementation in health research to date has mainly been through qualitative research (Bauer, 2014).

Evidence-based efforts must include the prioritization of health equity in corresponding policies to ensure that the appropriate guidance is implemented early on in the midstream and downstream to advance vaccination equity (Douglas et al., 2019), such as through the use of this intersectional policy analysis framework. The comprehensive incorporation of intersectionality in health research has the ability to facilitate improved understanding of the varying needs of targeted and/or marginalized communities and may end up leading to more effective implementation of population-level interventions like policy changes (Bauer, 2014).

### 2.3. Study Methodology

This critical policy analysis study involved sourcing and reviewing online, publicly available and current childhood vaccination policies and policy guidance specific to the Alberta jurisdiction. All documents for consideration in this study were retrieved through purposive scanning and literature searching on the Government of Alberta and/or Government of Canada web pages and tabs. This critical policy analysis focused on policy and policy guidance relevant to im/migrants recently or long-settled in Alberta, not distinguishing between the various categories of im/migrants in Alberta and across Canada. The policy (legal-official guidance in complex government language) and policy guidance (simplified overviews of policies written in layperson language) documents were retrieved from a thorough critical screening of the initial compiled list of 'potentially-eligible' documents for use in this study. All detected policy and policy guidance documents were collected, extracted and listed into various spreadsheets on an online Google Sheet document. Then, the content of each 'potentially eligible' document was iteratively reviewed and analyzed using indicative coding to pinpoint key points (Table 1).

The eligibility criteria for this study (Chapter 3) were then applied to the data collected from each prospective document to determine eligible documents and sorted into the following initial 'eligibility' categories: '*included-primary'*, '*included-secondary'*, '*excluded-tertiary'*, and '*null-incompatible*' (Table 1). Selected eligible documents were then categorized into either primary (policies only) and secondary (policy guidance) document categories (Table 2) with tertiary documents removed set aside similar to the null-incompatible documents. Primary policy documents were then transferred to a table of their own and listed by year (chronologically in descending order) and cited accordingly (Table 3). Secondary policy guidance documents were then transferred to a table of their own and listed by year (chronologically in descending order) and cited accordingly (Table 4). Refer to the corresponding tables in the Appendix for collected data. The content of each final selected policy and policy guidance document were critically

reviewed and thematically coded (Table 3-4), guided by the standard and equity-oriented policy determinants (Mahimbo et al., 2017a; Douglas et al., 2019) of this study's evaluation framework.

#### 2.4. Search Strategy

Information was primarily retrieved through specific search terms entered into the search bars of the two major websites: Government of Alberta (https://www.alberta.ca) and Government of Canada (https://www.canada.ca), as well as through Google Scholar (https://scholar.google.ca) by entering in the same search terms (used in the search bars of the government websites) for more open-ended results. The following search terms were used: *Alberta, jurisdiction, immigrants, migrants, refugees, newcomers, childhood vaccination, childhood vaccination, policy, recommendations, legislation, policy guidance*. All initially detected .pdfs and/or webpages were also searched for the words *'immigrant', 'migrant', 'refugees'* and were included as proxy documents even if those terms didn't show up, as long as the focus of the document was on childhood vaccination policies and policy guidance for the Alberta region of Canada only.

Overall, the online government document search for this study was conducted from April 2020 to March 2021, focused on relevant Government of Alberta and Government of Canada childhood vaccination policy and policy guidance documents for the Alberta jurisdiction only. During this time, regular monthly updates (new government website and google searches) were conducted to seek and ensure acknowledgment and consideration of any new versions (government updates, modifications, new productions) of the selected relevant publications. For Google searches, the search results were individually rapidly screened and reviewed from page to page until the relevancy of the results to Alberta, childhood vaccination policy and children of im/migrants collectively ceased to exist. Searches for relevant Alberta childhood vaccination policies and policy guidance (via GoA or GoC) were re-run up to no further than March 2021.

# 2.5. Eligibility Criteria, Final Selections and Data Collection

In terms of the eligibility criteria, all prospective online government documents (aka government web pages and/or downloadable .pdfs detected through the search terms) were
singled out from the online search results and listed into an online Google Sheet table as 'maybes'. Data extractions highlighting the content of each prospective 'maybe' document were reviewed. This list of 'maybe' prospective documents (Table 1) was then considered and sorted into the following *eligibility categories*: excluded entirely (null), excluded after extensive consideration (tertiary), included (secondary) or included fully (primary).

## Screening Documents for Eligibility (Inclusion or Exclusion)

The initial searches for this critical policy analysis led to the identification of 45 potentially eligible "maybe" documents (Table 1), considered 'proxy' in nature (not directly on the vaccination of children of im/migrants settled in Alberta in particular but presumably generally applicable to this demographic). These 'proxy' documents were used in this review because no policy or policy guidance documents were found specifically on the childhood vaccination of children of im/migrants settled in Alberta. The eligibility criteria are below.

# Eligibility Criteria: Exclusion

Ineligible documents were excluded if they contained policies or policy guidance that did not align with the focus of this critical policy analysis. Policy and policy guidance documents were labelled as '*null*' and immediately excluded if the content contained no mention of or reference to Alberta childhood vaccination policies and that had no mention of federal childhood vaccination policies of direct influence and use in the Alberta jurisdiction (Table 1).

Documents referred to as '*tertiary*' and excluded after extensive consideration were split into two subcategories: e-Communication tools or research-based formal action, and were excluded due to having relevance to the childhood vaccination in Alberta but lacking the government-officiated policy or policy guidance component for use in this analysis (Table 1). Tertiary documents were deemed least relevant to this critical policy analysis i.e., non-profit communication tools, third-party non-government advocacy mandates.

#### Eligibility Criteria: Inclusion

Documents were selected for inclusion based on two simple conditions, only if they belong to the '*primary*' (core) *or* '*secondary*' (core-support) *eligibility categories* (see Table 2).

The core documents referred to as '*primary*' in this review were fully included because they contained specific content on Alberta childhood vaccination policies themselves (formal strategies, legislations) and were included based on the verifiable merit that they were credible government-ordained policies guiding childhood vaccination in Alberta (Table 1). Primary documents were recognized as those with government-official rules (guided limitations, restrictions, rules, mandates) for health professionals to follow in administering the vaccines, set childhood vaccination schedules to be distributed to parents to follow, directions vaccination stakeholders must follow in disseminating evidence-based advice on accessing vaccines.

The core-support documents referred to as 'secondary' in this review were fully included because they contained explicit guidance on childhood vaccination policies for the Alberta Jurisdiction (Table 1). Secondary documents contained specific content focused on Alberta-jurisdictional childhood vaccination policy guidance mostly for the general public. These secondary documents either supported the credibility of correlating policies by referring to explanatory evidence-based research or were informational publications directly referring to policies from the "primary" documents and supporting these policies by explaining the policies in layperson's terms (i.e., transcribing policy papers written for health professionals into visual and easily comprehensible summaries for easy understanding).

Overall, *primary* (core) and *secondary* (core-support) documents (Table 2) were the key sources for this analysis. The selection of these documents initiated the process of data analysis and critical policy evaluation using policy determinants as the evaluation criteria.

# Selected Documents: Primary Policy Documents and Secondary Policy Guidance Documents

Overall, twenty-five (25) policy framework documents were sourced and selected as most relevant for inclusion in this critical policy analysis. From the twenty-five (25) included

government document sources, eleven (11) were primary (policy) documents (Table 3) and fourteen (14) were secondary (policy guidance) documents (Table 4).

The eleven (11) primary documents (Table 3) consisted of the following relevant policies under review in this study: #1. Public Health Act: Part 3 - Communicable Diseases and Public Health Emergencies (2021), #2. Alberta Immunization Policy; AIP (2021), #3. Alberta Influenza Immunization Policy; IIP (2020), #4. Provincial and Territorial Routine and Catch-up Vaccination Schedule for Infants and Children in Canada (2020), #5. Alberta Immunization Policy: Routine Immunization Schedule for Alberta (2020), #6. Alberta Immunization Policy: Roles and Responsibilities (2019), #7. Alberta Immunization Policy: Eligibility Criteria for Provincially-Funded Vaccines in Alberta (2018), #8. Alberta Regulation 182/2018 Public Health Act - Immunization Regulation Extract (2018), and #9. Alberta Immunization Policy: Background (2018), #10. Immunization of travellers: Canadian Immunization Guide and #11. Canadian Immunization Guide: Immunization of Persons New to Canada (2015),

The fourteen (14) secondary (policy guidance) documents (**Table 4**) consisted of the following relevant policy guidance under review in this study: #1. Vaccines for Children: Deciding to Vaccinate (2021), #2. Alberta Health Services: Immunization (2021), #3. Immunization Program Standards Manual, #4. Influenza Immunization Program Update (2021), #5. Immunization and Routine Immunization Schedule (2021), #6. Health Information and Tools: Immunizations Topic Overview (2020), #7. Alberta Netcare Learning Center - Immunization Regulation Information (2020), #8. More Information about the Immunization Regulation - For Healthcare Professionals (2019), #9. Parent's Guide to Vaccination (2018), #10. Government of Canada: "Your Children's Vaccination Schedule", #11. National Immunization Strategy: Objectives 2016-2021 aka "Budget 2016", #12. Your Child's Best Shot : A Parent's Guide to Vaccination (2015), #13. CATMAT Statement: Pediatric Travellers (2010), and #14. Alberta Immunization Strategy (2007).

For the analysis of all twenty-five (25) selected documents containing either policies and policy guidance, a total of twelve (12) policy determinants were used, nine (9) standard policy determinants and three (3) equity-oriented policy determinants), to assess the policy implications of the content of these documents on children of im/migrants in the Alberta jurisdiction, by determining which policy determinants existed or did not exist in the each document's policies or policy guidance.

With evidence-based methodological rigor (Mahimbo et al., 2017a; Welch et al., 2019), relevant documents containing either policies and policy guidance were searched for all twelve (12) of the policy determinants through visual scanning. Specific word searches were also conducted on the documents (ctrl+f) of both policies and policy guidance, seeking the detection of any of the policy determinants. For example, with regard to equity-oriented policy determinants, all included documents in this analysis were interrogated for either the inclusionary mention or exclusionary lack of mention of key demographic-of-interest descriptive "immigrants", "migrants", "refugees", "special population", "subgroup", terms (i.e. "diversity", "ethnocultural", "culture", "language", "inclusion", "identity", "persons new to Canada") when assessing whether the equity-oriented policy determinants existed in the respective sources of policy or policy guidance. Policies and policy guidance are analyzed for any presence of equity-sensitive recommendations, explicit prompts vouching for the development of universal intervention guidelines where health inequity was stated as a concern, or guidelines on targeted or dedicated interventions seeking to protect and support the health of one or more disadvantaged populations experiencing health inequities (Welch et al., 2019). Policies and policy guidance were also analyzed for the existence of any direction or guidance raising awareness on childhood vaccination needs for children of im/migrants and/or outlining the value of equitable access to childhood vaccination needs as a public health priority. Similarly, the nine (9) standard policy determinants were searched for in the documents under review.

# 2.6. Policy Determinants: Standard and Equity-Oriented

Policy determinants, factors influencing the existence and purpose of a policy, contribute to the development of a reliable evidence base for improving the policy, by studying the policy content, implementation and outcomes (Douglas et al., 2019). These standard policy determinants were identified or detected as absent or present in this study's policy or policy guidance documents based on the definitions set by Mahimbo et al (2017a) for each of these high-quality yet standard policy determinants.

## **Standard Policy Determinants**

As a major part of the analysis of all policy and policy guidance documents (Table 3 and 4), a total of nine (9) standard policy determinants (Mahimbo et al., 2017a) were retrieved, utilized as a framework and applied as criteria for evaluating the quality of the policies (i.e. legislation) and/or policy guidance (i.e. regulations) all pertaining to the Jurisdiction of Alberta:

**1) Online Navigation and Accessibility:** "determinant or predictor of how easily [the documents] can be retrieved and be directly put into use by target audience" (verbatim from Mahimbo et al., 2017a).

**2) Policy Background:** transparent establishment of policy priority areas by policymakers and justification of policy problem(s) based on available (crucial) evidence required for policy evidence (paraphrased from Mahimbo et al., 2017a).

**3)** Goals and Aims: essential and effective goal setting to ensure better health policy outcomes i.e. precise, succinct and concrete goals explicitly stating the objective (modified from Mahimbo et al., 2017a).

**4) Public Opportunities for Consultations [or Community Engagements]:** this determinant highlights the important role and involvement of stakeholders or interest groups (members of the community) in providing technical advice and ensuring policies are responsive to their needs i.e. having community engagement influence the policy or policy guidance development or modification process through public input from the stakeholders or interest groups (i.e. family advocates, diverse im/migrant association directors) (modified from Mahimbo et al., 2017a).

**5) Insight into Funding Sources or Access:** open transparency on the allocation or presence of adequate funding to ensure public's access to public vaccines; funding directly or indirectly aimed at reducing health inequities and showing a sign of commitment by health policy planners (inspired by and modified from Mahimbo et al., 2017a).

6) Obligations: allocation of sufficient resources and commitment of relevant parties in its

execution; successful implementation of a policy by explicitly stating roles and responsibilities of implementers in vaccination service delivery (modified from Mahimbo et al., 2017a).

**7) Potential for Public Health Impact:** possible impact of [the] policy in addressing risk factors, quality of life, and health disparities/inequities with special consideration of the possible extent to which the policy, policies or policy guidance(s) have the potential to address vaccination issues/gaps (modified from Mahimbo et al., 2017a).

**8) Data Collection:** the collection of data from the population for assessing individuals' health service needs, for the purpose of improving the policy planning strategies and health service delivery itself (extracted from Mahimbo et al., 2017a).

**9)** Catch-Up Vaccines: implied or clearly outlined allocation of adequate funding of catch-up vaccines for individuals who have initially missed the vaccination (inspired by Mahimbo et al., 2017a).

#### **Equity-Oriented Policy Determinants**

As a continuation of the standard policy determinants, three (3) equity-oriented policy determinants were optimized and applied as additional criteria for evaluating the policy and/or policy guidance: 10) 'Vaccination of Children of Im/migrants', 11) 'Vaccination of Children of Precarious-Status Im/migrants' and 12) 'Data Collection Accounting for Ethnocultural Diversity and Immigration Statuses', all pertaining to the Jurisdiction of Alberta. As is known, there are specific individual and context-specific characteristics across which inequities in health are known to develop and proliferate, including but not limited to cultural and linguistic diversity (CALD), religion, socioeconomic status, social capital, personal capital, gender/sex (Welch et al., 2017). Health inequities are defined as differences in health amongst people in the population that are both unnecessary and unavoidable as well as unfair and unjustifiable (Welch et al., 2017; Canadian Public Health Agency of Canada, 2020). Health inequity has the ability to serve as a tool for change (Ottersen et al., 2014). Therefore, for the equity component of this critical policy analysis, the focus was on two major categories of health inequities/disparities (social determinants of health) in this study: immigration status and ethnocultural diversity. More specifically, policy determinant #10 focused on immigration status, #11 focused on precarious immigration status and #12 focused on data collection addressing ethnocultural diversity; all

three of these equity-oriented policy determinants linked back to characteristics of health disparity in relation to vaccination services. The "*Vaccination*" component of policy determinants #10 and #11 was included to explore whether the policies and/or policy guidance under review addressed and/or represented the vaccination needs of children of im/migrant (ethnoculturally diverse) families settled in Alberta. The addition of these three equity categories to the policy determinant categories created the capacity to analyze these policies for any acknowledgement of social determinants of health (i.e. racial or ethnic identity/identities or lack thereof and immigration status/statuses or lack thereof); for any descriptive factors that acknowledge the existence and varying vaccination needs of diverse im/migrants (children of im/migrants from various ethnicities and cultures) and/or awareness of health equity to boost the marginalized and diverse (CALD) population's overall health and liberation away from institutional microaggressions causing health disparities.

Overall, the nine (9) standard policy determinants and three (3) key equity-oriented policy determinants collectively applied an evaluative framework to this critical policy analysis, allowing for the necessary acknowledgment that multiple social categories (i.e. ethnocultural diversity, socioeconomic statuses, immigration statuses) intersect at the micro-level of individual experience to contribute to the multiple interlocking systems of privilege and oppression and subsequent varying health outcomes in the community and communities at the macro (social-structural) level i.e. racism (Bowleg, 2012) and xenophobia. The intersectional nature of this study's chosen policy determinants (standard combined with equity-oriented) had a direct focus on oppressed populations and as such, created capacity to determine whether the policies and policy guidance analyzed in this study need to be revamped to become more equitable in design and purpose (Bowleg, 2012). A total of twelve (12) interconnected policy determinants were utilized as evaluation criteria to assess the quality of both the current Alberta childhood vaccination policies and policy guidance documents critically reviewed in this study.

#### 2.7. Analytical Purpose of Equity-Oriented Policy Determinants

The equity-oriented policy determinants for this study were formed and derived from a consensus-based conceptual equity framework for how to consider health equity when rating the certainty of synthesized evidence (Welch et al., 2017; Douglas et al., 2019; Hankivsky et al., 2014). Specifically, these three equity-oriented policy determinants were used as prompts to search for any mention of health equity in the synthesized evidence (i.e. mentioned evidence informing current policies or policy guidance). The assessment of presence or absence of health equity were guided by five recommended methods for assessing health equity in synthesized evidence (Welch et al., 2019), paraphrased as follows: 1) inclusion of health equity as an outcome, 2) consideration of patient-based outcomes specific to health equity, 3) assessment of differences in relative effect between disadvantaged and more advantaged individuals or populations, 4) the assessment of differences in baseline risk and subsequently proportionally impactful effects such risks have on disadvantaged subgroups in the population.

## Evidence-Based Health Equity Assessments Incorporated into Equity-Oriented Determinants

For the sake of simplicity and to remain focused on this study's research question, the five recommended methods for assessing health equity (Welch et al., 2019) were summarized into three equity-oriented policy determinants for the purpose of this study. The consideration of health equity in rating the certainty in synthesized evidence has three purposes: it necessitates an acknowledgment of existing disadvantaged sub-populations and settings of interest, it necessitates methods to assess relative and absolute effects of the disadvantaged sub-populations in relation to the greater population, and it necessitates the pinpointing of any transparent reporting of how judgments are made (Welch et al., 2017). The health equity policy determinants in this analysis initiated a further inquiry into what the implications are for each respective policy and what should change in those policies for the sake of accountability, fairness, and truly upholding universal health access for all (Welch et al., 2017).

# **Chapter 3**

#### 3.1. Overview of Results

This study critically reviewed current, publicly available, and official government-sourced online policy and policy guidance, all focused on general Alberta-Jurisdictional childhood vaccination, using nine (9) pre-established standard policy determinants (Mahimbo et al., 2017a) and three (3) evidence-informed equity-based policy determinants as the evaluative criteria for analysis (Douglas et al., 2019). Almost all of the twenty-five (25) eligible online policies and policy guidance retrieved and reviewed for this study pertaining to childhood vaccination in Alberta were confirmed to be 'proxy', generally focused on the childhood vaccination of the overall Alberta population but not overtly addressing vaccine equity. Out of the twenty-five (25) sources identified as eligible for inclusion in this critical policy analysis study, eleven (11) contained relevant policies (government-official guidelines and strategies to adhere to) that were then categorized accordingly (Table 3). The other fourteen (14) sources were categorized as policy guidance serving to explain, supplement and/or inform the policies (Table 4).

This study found that only a few statements from two GoA and GoC policies and/or policy guidance documents on childhood vaccinations in the Alberta Jurisdiction contained policy implications that specifically addressed children of im/migrants' access and im/migrant parents' consent to Alberta childhood vaccinations. Most policies and policy guidance evidence contained indirect (or difficult to pinpoint) policy implications for im/migrant parents and the children of the im/migrants.

#### **3.2. Results on Standard Policy Determinants**

The following results were retrieved from utilizing and applying a pre-established set framework for evaluating vaccination policies which consisted of standard policy determinants (Mahimbo et al., 2017a). The results below indicate that most of the policy and policy guidance reviewed in this study were predominantly designed blandly as 'one size fits all', indicating a reasonable likelihood of unacknowledged differential impacts on the system-wide vaccination by children of im/migrants.

#### 1. Online Navigation and Accessibility

The accessibility of policy documents serves as a determinant and predictor of how easily the document can be retrieved and put into direct use by the targeted audience (Mahimbo et al., 2017a). In this study, eight (8) of the eleven (11) policy documents (Table 3; T3) and ten (10) of the fourteen (14) of the policy guidance documents (Table 4; T4) for Alberta jurisdictional childhood vaccinations were found to be easy to retrieve from jurisdictional government (GoA or GoC-AJ) websites implying they were easy to put into direct use by the correspondingly intended audience, fulfilling the standard policy determinant requirements of the target audience being able to easily access the policy and policy guidance when needed.

Most documents (sources) reviewed in this study were retrieved from the Government of Alberta's open-access government library/archive program (Government of Alberta, 2021d); the GoA *Open Government Program* bilaterally guided through principles by the GoA *Open Information and Information Data Policy* that is said to be applicable to all GoA ministries (Open Government Program, 2021). However, the handful of sources that were difficult to retrieve and/or public access were primarily Alberta policies and policy guidance written in government jargon by government officials (vaccination policymakers, policy analysts) and targeted towards service providers (general family practitioners, public health nurses, community health service providers; knowledge brokers).

# 2. Policy Background

The process of setting up policy agendas necessitates that policymakers establish clear priority areas and justify the policy problem(s) utilizing available evidence (Mahimbo et al., 2017a) forming the basis of the 'policy background' information in the content. In this study, eight (8) of the eleven (11) of the policy sources (T3) and six (6) of the fourteen (14) of the policy guidance sources (T4) clearly set a policy agenda in their introductory background information/content.

#### 3. Goals and Aims

Good health policy outcomes require effective goal setting which needs to be precise, succinct and concrete, therefore the 'goals/aims' policy determinant in this study sought policy and policy guidance sources that have explicitly stated its goals, objectives and strategies (Mahimbo et al., 2017a) at specifically addressing the vaccination needs of children of im/migrants. In this study, ten (10) of the eleven (11) of the Alberta childhood vaccination policy documents (T3) and all fourteen (14) of these Alberta Jurisdictional policy guidance documents (T4) clearly stated their objectives, goals and aims for the purpose of the selected policy guidance document, generally addressing the vaccination needs of children residing in and/or from Alberta. However, most of the policies and policy guidance reviewed in this critical policy analysis did not actively mention children of im/migrants or im/migrants in general in the policy discourse, aside from three policies and policy guidance (T3: D-7G, D-8H and T4: D-4D). Overall, almost all of the sources under review in this study fulfilled the goals and aims of the policy determinants aside from one, a GoA policy source (T3: D-5E).

One good example of a policy guidance source in this review that clearly outlined the policy guidance goals and aims as well as mentioned children of im/migrants was: *'Immunization of travellers: Canadian Immunization Guide'* (T4, D-2), openly stating that this chapter is meant to be up-to-date on CATMAT statements i.e. updates on the use of booster doses of yellow fever vaccine, tips for the prevention of Japanese Encephalitis. This *'Immunization of travellers'* chapter of the Canadian Immunization Guide (T4, D-2; Government of Canada, 2017) also indicates that this policy guidance aims to be readily available to all in real-time and with the latest evidence-based guidance, by indicating that the target audience (members of the general public) have the option to subscribe to this source's mailing list to receive a notification when this chapter is updated (Government of Canada, 2017).

# 4. Public Opportunities for Consultations [or Community Engagement]

Policies are enriched by stakeholders and interest groups who play a key role in not only providing technical advice but also ensuring policies are responsive to their needs, therefore the involvement of im/migrant communities during the policy-making process is assessed by checking whether im/migrant stakeholders and interest groups are acknowledged in the policy [or policy guidance] documents (Mahimbo et al., 2017a). This critical policy analysis checked for any direct acknowledgment of im/migrant or grown children of im/migrants' stakeholders and/or interest groups in the policy and policy guidance content; any evidence supporting room for im/migrants or grown children of im/migrants in influential positions to publicly share their recommendations. This study could not determine for certain whether consultations were made, only detect where the possibility of consultation (or community engagement) was indicated in the content of the policy/policies or policy guidance.

None of the policies and policy guidance under review in this study openly expressed the contributions and involvement of im/migrant or children of im/migrant stakeholders. However, more generally speaking, eight (8) of the eleven (11) Alberta Jurisdictional childhood vaccination policy documents did transparently disclose the contributions and involvement of a wide range of stakeholders collaboratively participating in the development or maintenance of the document's policy, policies or policy guidance itself, presumably (but not always overtly) inclusive of the voice of parents (caregivers and guardians of children). For example, policies in '*Provincial and territorial routine and catch-up vaccination schedule for infants and children in Canada*' (T3: D-2B) openly expressed the following which inadvertently indicated the existence of general collaborative consultations: "changes to the [Canada-wide routine and catch-up immunization] schedule are updated regularly in collaboration with the Canadian Nursing Coalition for Immunization (CNCI) and the Canadian Immunization Committee (CIC)".

On the other hand, four (4) of the fourteen (14) policy guidance documents (published by the Government of Alberta) openly acknowledged and endorsed active contributions and collaborations (bilateral/multilateral communications) or the open possibility of intersectional and multi-sectoral interactions from a wide range of stakeholders/target audience in the social ecology, presumably including parents and the general public. For example, Alberta Health Service's policy guidance document: *'Influenza Immunization Program Update - March 2021'* (T4, D-X4) identified key stakeholders: *Alberta Health Service Public Health Sites (i.e. Public Health Nurses), Community Pharmacists, Other Providers (Long Term Care sites, Community Pharmacists, Other Providers (Long Term Care sites, Community Pharmacists)* 

Physicians, Covenant Health Occupational Health and Safety, First Nation Inuit Health Branch) and this policy guidance also includes information on 'zone contacts' (i.e. North Zone email address, Edmonton Zone Contact Person and Contact Details, South Zone Public Health Nursing Team Contact Information). Furthermore, the policy guidance document 'Alberta Health Services: Immunization Program Standards Manual (updated March 10, 2021)' (T4, D-X3) contains a 'please provide your feedback to..." section, which implied the possibility of community engagement and potential consultations. Furthermore, the interactive policy guidance document 'Alberta Health Services: Immunization of (T4, D-X2) included a section in its content which provided contact information guidance to readers (presumably parents and guardians) if they had questions [about their] child's health pertaining to immunizations, and also provided an option for parents/guardians/readers of this policy guidance site to share their thoughts through a short online survey.

## 5. Insight into Funding Sources

The allocation of sustainable funding resources facilitates the implementation of strategies (i.e., guidelines aimed at reducing health inequities) from the policy and/or policy guidance and is essentially a sign of commitment by health policy planners and makers (Mahimbo et al., 2017a). Policies and policy guidance, under review in this study, were examined and assessed to determine whether funding for childhood vaccines was clearly outlined in the content. Results were contingent on statements extracted from policy and policy guidance documents mentioning funding of vaccines in relation to routine, catch-up, missed or overdue vaccines. Overall, three (3) of the 14 policy guidance documents (T4: D-X4, D-2B and D-5E) expressed open transparency on the allocation or presence of adequate funding to ensure public's access to public vaccines, and five (5) of the 11 policy documents (T3: D-1A, D-1X, D-2B, D-3C, and D-4D) expressed open transparency on the allocation or presence of adequate funding to ensure public's access to public vaccines to public access to public. The general public's access to public access. The general phrase found regarding funding in the policy and policy guidance was 'publicly-funded' with no further details. For example, "*Alberta's Influenza Immunization Program provides publicly funded influenza vaccine for all individuals 6 months and older who live, work or attend school in Alberta''* (T4, D-X4).

Overall, all of the policies and policy guidance that did notably provide insight (however briefly) into cost and/or funding sources concurrently mentioned that basic childhood vaccinations are all publicly funded here in Alberta, with the exception being travel vaccinations for children which require from-pocket payment and/or third-party family insurance.

# 6. Obligations:

The successful implementation of a policy [or policy guidance] requires a commitment of relevant parties in its execution (Mahimbo et al., 2017a). This criterion (obligations) is assessed in the policies and policy guidance by determining whether the roles and responsibilities of the providers in vaccination service delivery are clearly and transparently stated or not (Mahimbo et al., 2017a). For this criterion, all eleven (11) of the policy documents (Table 3) and all fourteen (14) policy guidance documents (Table 4) directly or indirectly expressed clear details on the roles and duties of various involved stakeholders in the implementation of the policy and policy guidance, to coordinate and administer childhood vaccination Alberta's pediatric population. Facilitative stakeholders included Alberta Health Services Public Health Units (i.e., public health nurses), primary healthcare practitioners, community pharmacists, the Alberta chief medical officer, bureaucrats (policymakers, policy analysts), inter-sectoral partners (other provincial ministries), and the parents and guardians (whose consent and compliance is recommended for the timely and complete vaccination of their under-aged children). Further stakeholders at times include Alberta Health Services Non-Public Health sites, Long Term Care sites, Covenant Health, First Nation Inuit Health Branch (T4, D-X4).

Altogether, it is important to note that this specific policy determinant was not and did not need to be oriented specifically towards the vaccination needs of children from im/migrant families. Most implementers (i.e., family doctors, pediatricians, and vaccination clinic nurses) are presumably under professional oath to ensure all patients (i.e. parents) who visit them and consent to vaccinations are supportively facilitated access to the publicly-funded vaccination(s) (i.e. for children) without hesitation. Therefore, the policy implications of this criterion and policy determinant (obligations) on children of im/migrants are existent in an assumptive manner. The clear communication in the policies and policy guidance on who implements the vaccination service delivery and how it is implemented may serve as moral reassurance and trust-building assurance for im/migrant parents. All of the policies and policy guidance under review in this study need to be amended to mention diverse im/migrants (recently landed, permanent resident) in the discourse, to acknowledge the existence of im/migrant parents and the nuanced disadvantages im/migrant parents face in utilizing services unique to their immigration status; to better support im/migrant parents vaccination needs (i.e. ethnocultural hesitations) and that of other marginalized Albertans for the sake of more actively practicing health equity throughout Alberta. All of the policies and policy guidance reviewed in this study were noted as available for public access.

## 7. Potential for Public Health Impact:

As part of the analysis, it was important to determine what kind of impact these policies and policy guidance have in addressing risk factors: quality of life and health disparities (Mahimbo et al., 2017a). Unfortunately, most of these policies and policy guidance did not acknowledge the children of im/migrants or im/migrants in general as an at-risk population in Alberta. However, this criterion was still important in generally assessing the extent to which these policies and policy guidance addresses vaccination issues and gaps in the general population (Mahimbo et al., 2017a). For this criterion, these policies and policy guidance were assessed to determine if they each contributed to protecting the herd immunity of the population - either directly or through proposed actions or predicted outcomes. All of the policies and policy guidance directly or indirectly indicated that the main objective for each one was to strategically and systematically work on improving Alberta's overall childhood vaccination rate and boost population herd immunity; utilize mechanisms/strategies to ensure the policies would impact and improve vaccination disparities in general.

All of the twenty-five (25) policy and policy guidance sources were designed for positive public health impact on the overall general pediatric and/or general population of Alberta. However, only two (2) of the eleven (11) policy documents directly included im/migrants in its policy discourse (T3: D-7G, D-8H) and only one (1) of the fourteen (14) policy guidance

documents directly included im/migrants in the details of its policy guidance (T4: D-4D). Overall, three (3) policy and policy guidance sources under review in this study identified im/migrants (particularly children of im/migrants who immigrated to Canada with their parents) as a target population at risk of under-vaccination, over-vaccination, or incomplete vaccination. These three sources included strategies in its content to ensure this vulnerable demographic (im/migrants and their offsprings) is protected and benefits equitably from publicly-funded vaccinations. Furthermore, two of three documents mentioning im/migrants in detail (meant for health professionals) provided transparent insight to health professionals on privately-funded but life-saving travel vaccines and vaccination services (i.e. for pediatric travellers) available at a personal cost in Alberta. The two policy documents (T3: D-7G and D-8H) identified im/migrants and travelling im/migrants (respectively) as a vulnerable target population at risk of not being fully vaccinated and provided specific advice on how im/migrants and their children can protect themselves with better vaccination coverage.

#### 8. Data Collection:

The collection of data on im/migrant populations is crucial for the assessment of their health service needs, planning strategies and health service delivery (Mahimbo et al., 2017a). Unfortunately, none of the twenty-five (25) policy or policy guidance documents reviewed in this study highlighted the importance of ethnoculturally diverse data collection. In other words, none of the policies and policy guidance included data collection reflective of ethnocultural diversity, to realistically portray the ongoingly structurally stratified nature of the present-day diverse society. None of the policies and policy guidance contained data collection specifically on the vaccination of im/migrant populations.

Therefore, given that most of the documents in this review were proxy in nature, this criterion was assessed in this study with regard to whether the policies or policy guidance included any general mention of data collection on the vaccination of the overall general population. Two (2) of the eleven (11) policy documents and six (6) of the fourteen (14) policy

guidance documents clearly highlighted the general importance of data collection for vaccination of children in Alberta in its guidance content.

For example, the GoA "Alberta Influenza Immunization Policy" (T3: D-1X) brought up the importance of data collection as a strategy-building technique in need of being actualized so that information is more easily captured and sustainably stored. Moreover, the GoA "Alberta Influenza Immunization Policy" (T3: D-1X) stated that following regarding the reporting of immunizations: "as of January 1, 2021, this Regulation will require health practitioners to ensure a report respecting immunizations and assessments is electronically submitted to the Provincial Immunization Repository (Imm/ARI) within 7 days in accordance with the Immunization Data Submission and Response Guidelines" and "for the 2020-2021 influenza season, reporting capabilities will vary as health practitioners are in the process of moving to electronic reporting to meet the reporting requirements outlined in the Immunization Regulation" (T3: D-1X). Furthermore, "all doses administered to children nine years of age and under that cannot be reported electronically to Imm/ARI must be submitted to AHS for data entry using the Influenza/Pneumococcal Immunization Record" (T3: D-1X).

The GoA "Health Information and Tools: Immunizations Topic Overview" (T4: D-1X) policy guidance included access to the Alberta childhood vaccination data collection model-platform called IHDA (Interactive Health Data Application) and health analytics interactive data platform, which "provides information in [the] data table and interactive map formats on [the] health status and determinants of health of Albertans, .....[with] many health statistics (indicators) on a variety of health-related topics such as demographics, mortality, chronic and infectious disease and children's health... based on geographic locations across Alberta" (T4: D-1X). To a lesser extent, the GoA "Public Health Act: Part 3 - Communicable Diseases and Public Health Emergencies" policy document briefly and vaguely mentioned data collection through the following clauses: "sections or Clauses 52.98: Collection, use and disclosure of traveller information" (T3, D-X) however the relevance of such 'collection... of ...information' to the vaccination of the overall population, let alone im/migrants, is unclear.

#### 9. Catch-Up Vaccines:

The redistribution and allocation of resources to meet the health needs of all is a sign of commitment by health policymakers and helps facilitate the implementation of strategies specifically designed to reduce health inequities (Mahimbo et al., 2017a). This study sought to assess whether funding for catch-up vaccines for im/migrants (i..e newly arrived; landed; settled) was clearly outlined in the policy or policy guidance documents (Mahimbo et al., 2017a). In and for this study, it is presumed that any mention of catch-up vaccines in the documents refers to the vaccination catch-up of newly arrived, newly settled and acclimatizing im/migrants.

Brief statements mentioning catch-up vaccines did crop up in some of the documents under review in this study. One (1) of the eleven (11) policy documents briefly mentioned details on specific eligibility criteria for accessing funded catch-up vaccines (T3: D-2B). Specifically, the GoC "*Provincial and territorial routine and catch-up vaccination schedule for infants and children in Canada*" policy document (T3: D-2B) stated the following in its policy content: "*A specific catch-up program is currently underway. A catch-up program is defined as a time-limited measure to implement a new vaccine program to a certain age cohort (e.g. an additional dose of a vaccine is recommended and a targeted program is put in place)"* 

Two (2) of the fourteen (14) policy guidance documents contained advice on catch-up vaccines or funding of the catch-up vaccines (T4: D-2, D-4D). For example, in "Government of Canada: "Your Child's Vaccination Schedule" (T4: D-2), the following policy guidance statement was found once the tool in this document was used to create an individualized vaccination schedule: "If your child has missed a vaccine, please contact your health care professional." Moreover, in the GoC "CATMAT Statement: Pediatric Travellers" policy guidance (T4, D-4D) the following statement relevant to catch-up vaccines was also found: "given the complexities of travel medicine for a broad age spectrum across family members, it is not surprising that a centralized expert care delivery model has been shown to be more cost-effective than generalist–provided travel advice".

The GoA '*Alberta Immunization Strategy 2007-2017*' policy guidance document (T4: D-5E) states the following with regard to catch-up vaccines (initially missed vaccines): "*a number of interventions have been shown to be effective in improving immunization rates in under-immunized populations...changing provider behaviour to address missed immunization opportunities have accounted for increases in immunization rates; reminder systems for clients are highly efficient and cost-effective mechanisms to improve immunization rates. The parents of under-immunized children are receptive to receiving overdue immunization reminders and will book and keep appointments if a system is in place". Moreover, 'Alberta Immunization Strategy 2007-2017' (T4: D-5E) was found to contain no direct mention of im/migrants or children of im/migrants to help guide the behaviour of healthcare professionals towards including this demographic in their target subgroups to actively follow up with and provide more nuanced information about childhood vaccinations.* 

Overall, none (0) of the four (4) policy or policy guidance documents mentioning catch-up vaccines for childhood vaccinations contained policy information directly incorporating children of im/migrants in the dialogue as one of the priority subgroups in the population. None of the policy and policy guidance documents reviewed in this study discussed the actual specific details on the public funding for catch-up vaccines (i.e. how public-funded vaccines works, whether parents need to advocate for their children to receive catch-up vaccines at no cost or whether catch-up vaccines are available at no cost).

# 3.3. Results on Equity-Oriented Policy Determinants

Findings were also retrieved from an additional set of evidence-based and equity-oriented policy determinants (Douglas et al., 2019; Hankivsky et al., 2014, Pottie et al., 2011). The equity-oriented policy determinants were developed based on health equity in policy evidence and following guidance from IBPA research. These equity-oriented policy determinants enable insight into the presence or absence of equity mechanisms in the content of policies and policy guidance and furthermore pinpoints where children of im/migrants and im/migrant parents need to be mentioned in the policy discourse to better promote health equity.

#### 10. Vaccination of Children of Im/migrants:

One (1) of the fourteen (14) policy guidance documents provided transparent support on the vaccination of children of im/migrants (T4: D-4D) settled in Alberta. Two (2) of the eleven (11) policy documents transparently included vaccination of children of im/migrants (T3: D-7G; D-8H) in the policy discourse. An overwhelming amount of Alberta-Jurisdiction childhood vaccination policy and/or policy guidance documents failed to address the special vaccination needs or concerns of im/migrants.

Unfortunately, most of the policy discourse on im/migrants throughout all the documents in this study was limited to the GoC (AJ) 'Canadian Immunization Guide' policy guidance document only, specifically the 'New Persons to Canada' (T3: D-8H) and 'Immunizations of Travellers' (T3: D-7G) chapters in particular. The GoC "Immunization of New Persons to Canada" policy document (T3: D-8H) stated the following transparent policy statement: "the immunization of persons new to Canada is often challenging" because "a high proportion of individuals newly arrived in Canada may be susceptible to vaccine-preventable diseases (VPDs) because of a lack of effective immunization programs in their country of origin", acknowledging that the vaccination of im/migrants newly settling in Canada is important to the Government of Canada. Factors complicating access to vaccination by new persons to Canada included but were not limited to: 'immunization records may not exist; records may be difficult to interpret because of language barriers, immunization schedules and vaccines may differ from those used in Canada, and there may be doubt about the authenticity of the records and vaccines used. Judgment should be used when assessing the reliability or authenticity of immunization records of people new to Canada' (T3: D-8H). Also, in this "Immunization of New Persons to Canada" policy document (T3: D-8H), almost every mention of 'children' in this set of policies was directly or indirectly tied to the adoption of children, with no inclusion of the vaccination needs of children of im/migrants; no inclusion of the vaccination needs of Canadian-born or foreign-born posterity of the im/migrants settled in Alberta. While the focus of the documents mentioning persons new to Canada focused primarily on adopted children (rather than the biological children of im/migrants) it did however at one point broadly refer to children (within

the context of immunizations of persons new to Canada) in the following policy statement: "*HIV* testing is performed as part of the IME only for those 15 years of age and older and some children identified as at increased risk (those who have received blood and blood products, those whose mother is known to be HIV positive and all potential adoptees)" which is relatively self-explanatory. The other GoC policy guidance document, the 'Immunizations of Travellers' policy guidance document (T3: D-7G), that broadly mentioned im/migrants stated the following: "adolescent and adult immigrants born in tropical countries, therefore, are more likely to be susceptible to varicella as compared to the Canadian population" (GoC, 2017), thereby (in other words) acknowledging the existence of foreign-born children of im/migrant parents.

Three (3) of the twenty-five (25) sources of relevant GoC and GoA-AJ policies and policy guidance under review in this study acknowledged that there are differences in the types of infectious diseases im/migrants are at high risk of contracting, especially while migrating, travelling or living transnationally, ensuring im/migrants of all ages seek out appropriate vaccination (T3: D-8H, D-7G and T4: D-4D). The special vaccination needs of children of im/migrants and im/migrant parents were explicitly stated, albeit briefly, in these select three travel-oriented GoC-AJ childhood vaccination documents. However, travel vaccines for children of travelling im/migrants and/or trans-nationals were not listed as privately available-at-cost (i.e. only available at extensive cost through private travel medicine clinics) in the routine immunization schedules (i.e. T4: D-1X, D-2). Furthermore, the private costs for travel vaccines were not mentioned at all (not even as an advisory reminder) in any of the sources of childhood vaccination policy and policy guidance under review in this study. A complete absence of policies and policy guidance from Alberta (GoC) on travel vaccines for im/migrants (persons new to Canada) was noted. Furthermore, this study finds that the vaccination (immunization) schedules (i.e. T4: D-1X, D-2) showed little to no option or room in its policies and/or policy guidance for the transparent mentioning of Japanese encephalitis, typhoid, hepatitis A, yellow fever vaccines and specific details on these travel vaccines corresponding to out-of-pocket costs.

Two of the three policies and policy guidance on travel vaccines under review in this study (T3: D-7G and T4: D-4D) did include transparent policy statements advising 'persons new to Canada' and 'travelling persons' to take varicella (chickenpox) vaccine which is universally available in Canada. The varicella vaccine is an important one for children of im/migrants and their im/migrant parents to be caught up on because the varicella infectious disease is more common and prevalent in Canada as a childhood infection and im/migrants are at risk of being infected by varicella in Canada if they do not obtain vaccination for it beforehand. More specifically, the GoC 'Immunization of Travellers' policies stated that "it is important that people travelling or living abroad be immune to varicella. In tropical climates, varicella tends to occur at older ages and at any time of the year. Adolescent and adult immigrants born in tropical countries, therefore, are more likely to be susceptible to varicella as compared to the Canadian population" (T3: D-7G). The policy guidance through the GoC 'CATMAT Statement for Pediatric Travellers' also provided sound advice on better risk management for im/migrants travelling or living abroad who are considered high-risk travellers: "presumably, the greater the risk profile of the adult traveller, the higher the risk for the child. Hence, the risk profile for children born abroad or those born in Canada to immigrant parents and who return to their country of origin to visit friends and relatives (VFR), is thought to be higher than that of children who are not from immigrant families. Reasons for this include the observations that VFR travellers tend to travel longer, go to higher risk destinations, stay in rural areas, live with local people, and are less likely to seek pre-travel advice and vaccination, or to use malaria chemoprophylaxis".

The GoC and GoA-AJ policies and policy guidance pertaining to travel vaccines (T3: D-8H, D-7G and T4: D-4D) did not transparently state that the travel vaccines must be obtained privately (at personal cost) by everyone including children of im/migrants and im/migrant parents in the population. Some policy and policy guidance (T4: D-2; T3: D-4D) did briefly mention basic details about the existence of travel vaccines, i.e. *"Travel vaccines are not covered as part of the provincially funded program [such as yellow fever vaccine]"* (T3, D-4D), but

further details (i.e. navigational support for marginalized citizens living under various systems of oppression) was not provided.

Overall, the Alberta-Jurisdiction (GoC) policy and policy guidance under review in this study did not transparently provide support on or for the vaccination of children of im/migrant and their im/migrant parents settled in the Alberta jurisdiction. Twenty-two (22) of the twenty-five (25) sources of relevant policies and policy guidance reviewed in this study did not include im/migrant parents in the dialogue at all; none of the GoA policies and policy guidance acknowledged the living existence of children of im/migrants and im/migrant parents in the policy discourse.

# 11. Vaccination of Children of Im/migrants with Precarious Status:

The GoC 'Immunization of New Persons to Canada' policy document (T3: D-8H) briefly mentioned the existence of 'foreign nationals' prior to arrival and settlement in Canada: "Citizenship and Immigration Canada generally conduct Immigration Medical Examinations (IME) before foreign nationals (non-Canadian citizens) arrive in Canada", with 'foreign nationals' referring to individuals 'seeking to work.... or.... seeking temporary residence in Canada for 6 months or more'. However, im/migrants with precarious immigration status (i.e. recently landed or long-time undocumented im/migrants or illegal im/migrants who have overstayed their temporary residence permits) were not explicitly mentioned in any of the Alberta childhood vaccination GoA or GoC-AJ policies and policy guidance. All the policies and policy guidance were largely silent on this subgroup of im/migrants; im/migrants with precarious im/migrant status.

# 12. Data Collection accounting for Ethnocultural Diversity and Immigration Status:

None of the Alberta-Jurisdictional childhood vaccination GoC or GoA sources of policy or policy guidance mentioned the existence and/or importance of data collection on the childhood vaccination of ethnoculturally diverse children of im/migrants. The sources of policy or policy guidance that did include static or active data collection (T4: D-X3, D-X4, D-1X, D-1-2X, D-1-3X, D-5E; T3: D-X, D-1X) did not include any mention of CALD (culturally and linguistically diverse) persons or communities (i.e. children of im/migrants and im/migrant parents) within the population accounted for; none of the data collection that did exist made any note or mention of cultural, ethnic or linguistic markers within the population receiving or not receiving vaccinations or account for any such identity markers (vulnerable to experiencing health disparities due to oppression, biases) that could then have a hindering impact on the rates of childhood vaccinations.

With regards to immigration status, this equity-oriented critical policy analysis sought out any inclusion and/or recognition of im/migrants diversity and their diverse vaccination needs in the policy and policy guidance under review and tried to locate im/migrants in the context of systems of power, but unfortunately, any attempts to seek out any distinguishing of im/migrants from the overall population (for the purpose of equitable vaccination access) were only somewhat successful in the GoC-AJ context and not successful just yet in the GoA context.

#### Key Findings of this Research Study

None of the documents in this study transparently expressed acknowledgment of the highly diverse composition of im/migrant sub-group in the population or the need to monitor for structural disparities in the vaccination of children of im/migrants in the Alberta Jurisdiction (or the rest of Canada). The synthesized results of this analysis revealed a trend (pattern) of lack of recognition of diverse im/migrants and their diverse vaccination needs in most of the AB childhood vaccination policies and policy guidance documents. Of the eleven (11) primary policy documents (Table 3) and fourteen (14) secondary policy guidance documents (Table 4) on Alberta-jurisdiction childhood vaccination, only three (3) of the twenty-five (25) documents directly or indirectly mentioned children of im/migrants and/or im/migrants in the policy discourse. These policy and policy guidance sources did not bear any resemblance to acknowledging and/or transparently expressing consideration for the impact of various social determinants of health prevalent in the Canadian context (i.e., race/ethnicity, immmigrants.

# **Chapter 4**

#### 4.1 Discussion

For Alberta, this equity-oriented critical policy analysis is a pioneering study attempting to use a health equity lens to evaluate and critically analyze an array of policy and policy guidance documents governing childhood vaccination service provision. In accordance with the developed evaluation framework (Mahimbo et al., 2017a) and extended critical analysis components (equity-based policy determinants), this study found that there are some deficiencies in the childhood vaccination policies and policy guidance. For example, there is a lack of consistent acknowledgment of children of im/migrants and their diverse vaccination needs across the policy discourse. Furthermore, most of the policies and policy guidance reviewed and critically assessed in this study have been found to consistently not incorporate children of im/migrants and their im/migrant parents as a demographic of equitable value and worthy of distinction and representation in policy discourse. However, policies and policy guidance on travel vaccinations for children did briefly hint at diversity in vaccination needs (i.e. im/migrants, children of im/migrants) but mostly in the context of living transnationally and excluding any direct mention of high-risk population subgroups.

Moreover, all of the policies and policy guidance selected and reviewed in this study were available online but not all were easily accessible by the target audience (i.e., vaccination service providers, parents/guardians). Additionally, it was noted that there were different policy determinants in existence in each set of policies and/or policy guidance, indicating different policy making approaches. None of the policies or policy guidance was specifically made for im/migrant parents and/or children of im/migrants, therefore this study focused on whether any of policies or policy guidance included discourse (i.e. guidelines and advice) for the vaccination of children of im/migrants.

Unfortunately, the policies and policy guidance on childhood vaccinations in Alberta were not often found to include discourse on the unique vaccination needs of children of im/migrants and/or im/migrant parents; not many Alberta vaccination policies or policy guidance was found to actively include this subgroup (or any marginalized sub-group in the Alberta population) as a high-risk priority worthy of equitable consideration to other subgroups in the population. This study has identified a need for vaccination policymakers to bridge communication divides and build a much-needed healthy bilateral (reciprocated) communication bridge between government and marginalized subgroups in the population. Im/migrants were very briefly and broadly mentioned in GoC-AJ policy and policy guidance but in those cases, it was only in Government of Canada (GoC) policy and policy guidance sources that focused directly on persons new to Canada and moreover, restrictively in the travelling context only. Im/migrants were not consistently acknowledged as a high-risk subgroup throughout and across all the Alberta Jurisdictional (AJ) childhood vaccination policy and policy guidance sources reviewed in this study.

This study's analysis also shows that the input from community members on the policymaking process appeared to be minimal and lacking transparency if existent. The policies all indicated a lack of fully incorporating a variety of policy making approaches that anticipate and respect diverse values, beliefs and cultures in the community; there was a lack of prioritizing diversity and multiple perspectives to help garner maximum enhancement of the surrounding physical environment and social community planning, to boost public trust, maintain fiduciary duties and avoid conflict of interests. This study pinpoints a gap in the policymaking process, at least not transparent in the policies and policy guidance themselves, which was a lack of implied cultural safety and competency and a lack of input on policy priorities from equity-focused diverse representation and experience. Moreover, the policies and policy guidance collectively do not appear to be streamlined to serve to promote the development of evidence-based educational materials for the im/migrant community. There is a lack of transparency evident on the behind-the-scene process of policy planning and policymaking, especially regarding whether the policies are and are not taking into account the need for the corresponding policy-led practices to involve serving the im/migrant subgroup in a culturally and linguistically appropriate manner and in ensuring the policies promote equitable assurance practice.

This study discovered that what is needed is not for children of im/migrants to necessarily take over the entire conversation on childhood vaccination policy locally in Alberta and nationally but rather, for diverse children of im/migrants and their im/migrant parents to be given a safe and universally-inclusive place in the policy discourse where their distinct voice, consultation, feedback and input is requested and valued. Evidence indicates that there is an unmet need for all of the policies and policy guidance to recognize and distinguish the vaccination needs of children of im/migrants, on par with children of local Canadians whose ancestors were im/migrants many generations back, as well as on par with original inhabitants, FNMI: First Nations, Métis, Inuit; all Aboriginal Peoples of Canada (Obidiya, 2020).

## 4.2. Recommendations

Recommendations have been extracted from current and previous literature on this topic, and derived from the results extracted from this study's critical policy analysis. The noted actionable policy recommendations (below) are practical evidence-based suggestions (a-g):

#### a) Include Children of Im/migrants in Policy Discourse: Address Xenophobia

There is an urgent need for the children of im/migrants to be included consistently throughout all of the childhood vaccination policy discourse to help dismantle and curb xenophobia (anti-im/migrant, anti-foreigner and pro-assimilation sentiments); to help ensure the culturally diverse existences, voices and vaccinations concerns of these children's im/migrant parents are valued, to ensure the equitable access to childhood vaccinations by children of im/migrants includes cultural sensitivity and cultural responsiveness. The findings of this study indicate that there is a longstanding need to develop a larger strategy (i.e. in the policies and/or policy guidance) to educate against and prevent prejudice, bias, and cultural insensitivities. Moreover, creating space for Albertan children of im/migrants in the policy guidance and policy discourse may very likely encourage space to be created in the policies for the indigenous people of Alberta as well, given that both marginalized subgroups of Alberta often experience similar intersectional systems of oppression.

In the Canadian context, issues of power and social justice have constructed immigrant health and how immigrant health is handled in Canada's health policies; the health of immigrants in Canada is seen through the racializing lens in many discourses that have studied where the immigrant body is considered both a disease breeder and irresponsible health fraudster (Reitmanova, Gustafson and Ahmed, 2015). Deracialization of immigrant health is needed (Reitmanova, Gustafson and Ahmed, 2015). For example, xenophobia is a crucial social determinant of health that should be given much more consideration from a public health perspective (Suleman, Garber and Rutkow, 2018). Xenophobia (a strong fear of, dislike of and/or prejudice against people of other countries) has a really negative impact on the health of individuals and their respective communities (Suleman, Garber and Rutkow, 2018), especially marginalized and racialized people in the population. Xenophobia surfaces in health policies (i.e., vaccination policies) in various ways. To this day, im/migrants are still portrayed as carriers of disease, as difficult healthcare users, poorly compliant and a burden to [learning] health systems and society at large (Roura, Dias, LeMaster and MacFarlane, 2021). Collectively, emphasizing the factors that lead to healthier im/migrant populations may help break down the harmful stereotypes about im/migrants and also provide clues into how to preserve the entire population as a whole in an equitable manner (Roura, Dias, LeMaster and MacFarlane, 2021).

# b) Adopt and Utilize or Maintain Adaptive Vaccination Policies: From 'Static' to 'Adaptive'

This qualitative critical policy analysis indicates that there is a longstanding need to amend current Alberta childhood vaccination policies and policy guidance to transform from static to adopting a more adaptive approach. There is a need for these policies and policy guidance to be influenced by the bipartisan input of open-minded people of diverse backgrounds who are able to understand the policy problem(s) from multiple perspectives. The importance and use of adaptive policies in tackling the issues of inequalities in social determinants of health was developed by Carey, Crammond, Malbon and Carey (2015), through the reviewing of literature dating back to the 1980s on learning and adaptive policies related to education and poverty alleviation. Traditional policies are defined as what governments choose to do and not to

do therefore founded on government action and inaction (Carey et al., 2015). Meanwhile, adaptive policies add to the original definition of policies, incorporating strategic instruments in the policies for ongoing and sustainable monitoring and evaluation (Carey et al., 2015). The adaptive policy approach is noted as more suitable for the management of longstanding inequities in both long-known and newly emerging social determinants of health. Policies that can be altered, adjusted and updated in a faster but still appropriate manner are better positioned than traditional policy making approaches in handling future uncertainties and in progressing policy action on social determinants of health (Carey et al., 2015). The sources reviewed in this study do not contain any policies and/or policy guidance that is transparently labeled, defined or categorized as adaptive in nature.

In other words, adaptive policies for health equity are a proposed step towards reducing inequalities in the distribution of the SDH (Carey et al., 2015). The adaptive policy design structure and approach, progressing policy action on SDH through a dynamically self-adjusting feedback system over time, is better-suited than traditional policy approaches in managing inequalities in SDH (Carey et al., 2015). The adaptive policy approach generates adaptive policies that when implemented helps decision-makers handle the complexities and uncertainties involved in governing 'wicked problems' and unintended consequences; the uncertainties driving the creation of new expected or unexpected social inequalities and subsequently poor health inequalities in the human population (Carey et al., 2015). Adaptive policies are positively impactful to its target audience(s) and cost-efficient in the long-term by staying flexible across a range of anticipated scenarios (Carey et al., 2015). Adaptive policies have the ability to function in 'learning' mode and responsively shift according to the state of the system i.e. swiftly handle the inherent risk of auctioning within a complex system by quickly adapting to unanticipated changes in predicted trends of outcomes (Carey et al., 2015).

Moreover, the adaptive policy approach relies on strategic planning, administrative procedures that facilitate innovation, responsiveness, experimentation and decision-making processes that join learning with action (Carey et al., 2015). Adaptive policies perform well

under a range of anticipated conditions with little or no alteration, include monitoring processes to identify when changes in context are significant to affect the impact of the policy, have built-in triggers for adjustments (i.e. embedded deliberations for determining policy adjustments, a review process) to then either maintain the performance or terminate the policy when no longer needed and furthermore, accommodates unforeseen changes in context even if the policy was not originally designed to do so to ensure policy goals are achieved despite the serendipitous nature of sporadic policy problems (Carey et al., 2015). Whereas static policies may drift substantially from their original mandate, adaptive policies are self-adjusting once care is taken by the decision-makers to change the policies i.e. to more actively promote health equity, execute evidence-based decision-making and mobilize community engagement (Carey et al., 2015).

More recently, a study was conducted by Pageud, Deslandres, Lehoux and Hassas (2017) proposing the co-construction of adaptive public policies using an artificial intelligence program called 'SmartGov'. The design of public policies by itself - in its non-adaptive or static state - is known to be a demanding process necessitating the allocation of time and money with no guarantee that the policies will turn out efficiently (Pageaud et al., 2017). It is predicted that in the near future, policymakers will have to react and more often adapt public policies based on incoming available data (i.e. community data from specialized databases) and feedback from both target users and professional stakeholders (Pageaud et al., 2017). Two generic agent-based architectures are proposed to be coupled together in a micromacro dynamic loop, to model and simulate public policies and to facilitate the co-design approach between policymaker and system and the assessment of the public policies in a specialized environment that is as close to real-world as possible (Pageaud et al., 2017). The goal would be to either adapt these architectures by the system using reinforcement learning and by stakeholders utilizing simulation results, with the use of generic formalism to represent public policies and experimentation through realistically envisioning and altering the target audience's behaviours and environment as necessary (Pageaud et al., 2017). Scenario-making using such a proposed adaptive policy modelling technology would then allow for such a system to learn post policy behaviours and propose adjustments in actions to then better meet the objectives of the policies stakeholders, ultimately leading to the policymaker either choose to validate the suggested policies and modify them for additional simulations until the appropriate outcome is artificially yet realistically produced (Pageaud et al., 2017). The safe and efficient conversion of current childhood vaccination policies from static mode to adaptive mode, to account for changes in population health and growth, is not impossible.

#### c) Acknowledge Im/migration as a Key Social Determinant of Health in the Policy Discourse

Intersectoral action is needed in order to actively implement the inclusion of im/mmigrants in the written content of the policy discourse on Alberta childhood vaccinations. One key social determinant of health relevant to the context of this study, profoundly correlating with xenophobia yet not elaborated on in the policy guidance reviewed in this study, is immigration. In the past, immigration through a social determinant of health approach has rarely been applied to the public health policy work, even though immigration and im/migrant populations have become an increasingly important focus in public health research and practice (Castaneda et al., 2015). Given that immigration requires global movement and resettlement, the inequities rooted in the social structures, policies and institutions of the im/migrants country of origin (Castaneda et al., 2015) tend to follow the im/migrant to their new host country where similar inequities exist but expressed in different ways. Immigration is both socially determined and a social determinant of health (Castaneda et al., 2015). As such, health policies and policy guidance need to be monitored and evaluated ongoingly to ensure they are working to overcome social determinants of health such as xenophobia and immigration. Ultimately, what improves community health are policies that promote cultural integration and understanding (Suleman, Garber and Rutkow, 2018).

There is a need for these childhood vaccination policies to prioritize immigration as a social determinant of health (albeit global in nature) that directly affects and will always affect a growing segment of the overall Albertan population. The policies in this study lack meaningful, respectful and thorough engagement with diverse im/migrant communities in Alberta; bilateral community engagement that truly addresses the histories of harm (i.e. harm audit) and risks to health due to policies in the diverse im/migrant population by building supports into new drafts of policies that then actively uplift the diverse people the policy differentially impacts. Alberta

health policymakers need to work on building bilateral respect and trust with diverse communities from the ground up (i.e. with ethnoculturally diverse im/migrant community members) before rolling out any plans, requests or orders. It is important that these childhood vaccination policies - in their current and/or future forms - avoid confusing, restricting, stonewalling or preventing im/migrant families from accessing childhood vaccination services.

## d) Support Vaccination Needs of Children from Im/migrant Families with Precarious Status

This study found that the childhood vaccination policies and policy guidance all lacked transparency on vaccination of children with parents who have precarious immigration status or families with mixed status. Moreover, no coalition advocacy efforts or initiatives were found in these policies and policy guidance on promoting inclusionary vaccination services for this legally vulnerable segment of the im/migrant subgroup. Particularly concerning is that none of the policies and policy guidance reviewed in this study made any mention of im/migrants with precarious immigration status or PLSTs (Goldring and Landolt, 2021). All of the childhood vaccination policies and policy guidance in this review make no mention of PLSTs, variable PLSTs and/or precarious im/migrant's children's childhood vaccination need and/or does not acknowledge how PLSTs are assembled through colonial legacies, histories of migration contributing to racialized humanitarian deservingness, state policies and humanitarian adjudication procedures and real-time encounters between migrants and the new host country's social and institutional actors all of which surely has some impact on the more complex trajectories (i.e. bureaucratically-controlled pathway) such im/migrants need to follow to ensure access to safe childhood vaccinations for their children (Goldring and Landolt, 2021). The policies in this study do not acknowledge 'multi-dimensional differential inclusion' (Goldring and Landolt, 2021) with regard to immigration status.

#### e) Improve Accountability Towards Sustainably Promoting Health Equity in these Policies

The policies and policy guidance are missing equitable accountability or in other words, accountability towards acknowledging the importance of and upholding health equity principles through action. There is a need to make a query into ensuring these policies and policy guidance are culturally informed, culturally responsive, culturally sensitive and culturally aware; that the impact of the policies does not lead to insensitive and/or overgeneralized handling of im/migrant parents and children of im/migrants. These policies and policy guidance do not appear to be pluralistic in nature (i.e., do not acknowledge the existence of diverse children of im/migrants settling or settled in the Alberta population and their specific vaccination needs). The Alberta vaccination policies and policy guidance would become much more equitable in nature if they included guidance informed by evidence from the active monitoring and evaluation of the vaccination needs of children of im/migrants settled in and coexisting in both urban and rural areas of Alberta. The childhood vaccination policies in this study suggest a limited implementation of evidence-informed vaccination policymaking (i.e., limited applied knowledge on the ethnocultural diversity of Alberta's pediatric population, limited collected data on the corresponding trends or patterns in childhood vaccination according to race and/or ethnicity).

It is important to consider that strategic intervention development - utilizing the most current existing and incoming research evidence - is required to produce healthy policies (Douglas et al., 2019) to facilitate positive health outcomes for all. The addition of community engagement and accountability in the policies are imperatives for evaluative reporting of better outcomes and systemic impact, which will require committed health system transformation leaders looking beyond standard care delivery to the social determinants and systemic impacts of the [vaccination] industry itself on vulnerable communities in particular (Berland, 2019). It is important to note that the process of reforming policies and policy guidance, involving efforts to boost translation of evidence into the policy (i.e. knowledge translation), only works under certain circumstances (Greer et al., 2017). Moreover, it is well-known that public health is intrinsically an interdisciplinary field requiring intersectoral collaboration (Greer, Bekker, Azzopardi-Muscat and McKee, 2018). Therefore, it is important that public health policies (i.e. vaccination policies) and policy-led programming work towards achieving health equity by following evidence-based procedures and processes that ensure all members of society are valued equally (Douglas et al., 2019). Focused efforts must be made to advance policies that create healthy, empowered communities that have access to independently using immediate resources supporting health and wellness (Douglas et al., 2019).

Moreover, health equity mechanisms are needed in policy to help develop and nurture conditions necessary for people (whose lives these policies impact) to achieve and maintain their most optimal health potential (Douglas et al., 2019). As such, policymakers have the power and control to remove systemic barriers and prioritize health equity yet a disconnect arises when policy solutions fail to do the following: 1) allocate necessary resources to those at the greatest disadvantage, 2) give vulnerable communities decision-making power, and 3) hold policymakers and other decision-makers accountable for prioritizing health equity. Moreover, health equity as a concept may be well-suited as an interpretative tool to use in reviewing and analyzing drafts of both general guidelines as well as guidelines focused specifically on disadvantaged populations to assess for impact, to judge and determine where modifications are needed to better ensure the active promotion of health equity in policy-based recommendations (Pottie et al., 2017).

This study provides evidence-based reasons to call upon the Government of Alberta to recommend that they review their childhood vaccination policies to ensure these policies avoid over-generalizing and avoid promoting indifference to the vaccination needs of children from diverse im/migrant families. Alberta's childhood vaccination policies would benefit from more transparently evident adaptiveness to encourage continual learning and adjustments and more specifically, to better include and value the voice and needs of children from im/migrant parents in the policy discourse. Moreover, there is a need for top-down and grassroots health management to ethically educate stakeholders towards influencing public health policy discourse and development in a way that is grounded in and well-informed by the most recently published research evidence on social determinants of health inequities, anti-oppression allyship, intersectionality, health equity.

Health equity, in accordance with policy determinants (guided by research from Douglas et al., 2019 and Hankivsky et al., 2014) was not overtly or transparently detected in any of the policies or even in the policy guidance reviewed in this study. The results of the document analyses of childhood vaccination policies in the Alberta jurisdiction have exposed or perhaps re-exposed a systemic problem that is ongoingly pervasive throughout the health care system: the silent absence of health equity in the vaccination policy discourse. There is a need to circumvent

the absence of health disparities in these vaccination policies. The struggle to incorporate health equity in the health sector (i.e. through policies and policy guidance) is identified as a systemic problem that involves the need to further study and overcome complex challenges currently in the way of successfully implementing, actualizing and monitoring health equity in the Alberta health care system; challenges that are not only endemic to Alberta but also acknowledged as a Canada-wide issue (Martin et al., 2018).

In the specific context of the vaccination of children of im/migrants in Alberta, the lack of health equity embedded in the Alberta childhood vaccination policy framework poses an ongoing unaddressed lack of transparency in need of remediation, proactive action and pragmatic improvements. Canada does have a national commitment to health equity (Nixon, Lee, Bhutta, Blanchard, Haddad, Hoffman, and Tugwell, 2018), however these childhood vaccination policies impacting the Alberta jurisdiction are yet to directly express commitment to and promotion of health equity (i.e., the importance of equitable access to childhood vaccinations for children of im/migrants amongst other underrepresented and at-risk pediatric groups in Alberta). There is a need to translate aspirations for health equity and inclusion into concrete action (Nixon et al., 2018); concrete policy actions. Also, these Alberta vaccination policies and policy guidance should be modified to ensure im/migrants are not disabled and blocked from participating in the process of Alberta creating a tailored version of their childhood vaccination policies and/or policy guidance for this subgroup. In Australia, vaccination policies and policy guidance exist that are specifically tailored to and for the health and wellbeing of im/migrants settling in and across all regions of that country (Mahimo et al., 2017a). There is a need for Alberta's childhood vaccination policies to become more informed by the aforementioned health research (i.e. on health equity) and to become more compatible with the on-the-ground experiences of children of im/migrants in Alberta who are directly impacted by and live in compliance to these authority-wielding policies.

# f) Collaborate Interprofessionally on Updating and Re-Implementing the Long-Term Vision of Alberta's 'Provincial Immunization Strategy'

The content from the GoA '*Alberta Immunization Strategy 2007-2017*' (T4: D-5E) policy guidance document should remain in existence but also be updated for the upcoming decade (i.e. 2022-2032) and should include an expansive strategy on health equity (aligned with national priorities). It is worth noting that the strategic directions included in this original GoA '*Alberta Immunization Strategy*' (2007-2017) document (albeit not all confirmably applied and adhered to) are very compatible with the findings from this study. The policy guidance in the GoA '*Alberta Immunization Strategy 2007-2017*' (T4: D-5E) and the GoC "*National Immunization Strategy 2007-2017*' (T4: D-5E) and the GoC "*National Immunization Strategy: Objectives 2016 – 2021 - "Budget 2016*" (T4: D-2B) would benefit from being updated with the addition and incorporation of a set of strategies focused specifically on increasing health equity in the context of immunization of all in Alberta. There is plenty of room in the "*Alberta Immunization Strategy 2007-2017*" policy guidance document (T4: D-5E) to include mention of im/migrant parents and the specific needs they may have (i.e. expressed through community engagement and consultations) around having their children receive catch-up vaccinations.

The GoA "*Alberta Immunization Strategy 2007-2017*" policy guidance (T4: D-5E) on missed/catch-up/overdue vaccinations (if acted on) directly affects im/migrant parents in Alberta, including im/migrant parents who have recently landed and settled in Alberta in their first three months since arrival. Also, im/migrant parents who may be restricted by the eligibility criteria on accessing publicly-funded vaccines (i.e. may be forced to wait for three months to pass post-arrival to have their children vaccinated; see T3: D-4D), and im/migrant parents who may have missed opportunities to vaccinate their children due to possible misunderstandings or communication breakdowns with healthcare professionals and therefore may need a safe space to ask questions to appropriate professionals regarding vaccinations and to then be recognized and supported by policy and legislation to then take reign on navigating their way through the system to properly vaccinate their children.

One health policy development and management strategy that may be worth considering during the revision process of these policies and policy guidance is the *"Health in All Policies*"
*(HiAP)*" approach to improving population health and health equity that systematically takes into consideration the health implications of policy decisions (regulations), seeks synergies, and avoids harmful health impacts (Tonelli, Tang and Forest, 2020; Guglielmin et al., 2018). HiAP implementation requires funding, shared vision, national leadership, ownership and accountability, leadership with dedicated staff, health impact assessment(s) and clearly defined evaluative indicators (Guglielmin et al., 2018).

# g) Promote Anti-Oppression Allyship by Streamlining the Application of 'Contextually Tailored Care' Principles Across All of the Policies and Policy guidance

Equity-oriented health care (EOHC) caters to an increasingly common public consensus that is arising to orient [learning] health systems to address inequities, with a specific focus on targeting population health interventions and indicators to shift inequities in health outcomes for those with the greatest need (Ford-Gilboe et al., 2018). The implementation of EOHC in primary health care involves ensuring the care provided is trauma-and violence-informed, culturally safe and contextually tailored so that the care ensures improved health outcomes across time for all people living in marginalized conditions (Ford-Gilboe et al., 2018). EOHC is achieved by implementing policy focused on boosting patient's comfort and trust in the care provided to them and also boosting the patient's own autonomy and confidence in preventing and managing their health problems (Ford-Gilboe et al., 2018).

The policies and policy guidance in this study would benefit from modifications inspired by equity-oriented health care (EOHC). Through EOHC, the incorporation of *'contextually tailored care'* (CTC) in health policies allows marginalized people in the population to thrive (Ford-Gilboe et al., 2018). CTC looks beyond the concept of individually focused patient care and instead focuses on the routine offering of healthcare service tailored specifically to a set population's most vulnerable demographics and with full consideration of individual and wider social contexts i.e. social determinants of health (Ford-Gilboe et al., 2018). CTC requires that facilitative tools (i.e. policies) offer practical health-promoting assistance (recommendations, strategies and community-engaging programming) appropriate to the social contexts of the specific population's diverse patients, in an affordable and feasible manner, in order to reduce all possible barriers to accessing health services (Ford-Gilboe et al., 2018). Collectively, EOHC embedded and incorporated into health policies enables and empowers individual health care providers and their affiliate organizations to work together to create safe and respectful environments (i.e. through policies) for members of the specific population, to then be able to responsibly tailor the health care provided to be flexibly adaptable; to enact various functional strategies for adapting to the varying needs, priorities, histories and contexts of individual patients at the point of care.

Without interventions such as EOHC in policies, inequalities in the social determinants of health (SDH) proliferate avoidable health disparities between different individuals and groups in society i.e. amongst and between members of the highly diverse subgroup of im/migrants and diasporas (children of im/migrants) in the human population (Carey et al., 2015). The pathways to change the inequalities pervasive in the SDH remain difficult to pinpoint, actualize and implement. The lack of transparency and accountability detected in any health policies and policy guidance is the legal premise on which a human rights call is necessary to advocate for the non-discriminatory provision of health services and the development of progressively adaptive health policies (Jackman, 2016). The policies and policy guidance in this study would benefit from equity-oriented revisions to policy guidance and adaptive policy improvements, to help the system move towards anticipating rather than reacting to new changes to population health.

#### 4.3. Limitations

This critical policy analysis study does have certain limitations worth noting. The searching of documents for this study was independently conducted using the same online search engine and search results accessible to any Alberta im/migrant parent or healthcare professional navigating online information on childhood vaccinations. During the very late stages of revising this manuscript, the *Alberta Hansards* were suggested as a potential source to have explored for more evidence but was not used as a data source due to a lack of time and familiarity. Moreover, this review was restricted to childhood vaccination policies and policy guidance in the Alberta

jurisdiction only, and focused solely on documents publicly available at the time of this thesis publication. One very key limitation that this study has is that it only analyzed policies/policy guidance and as such, does not include interview insight from policy stakeholders to uncover information that may have been fulfilled but is missing in written document (i.e., stakeholder consultation(s) may have occurred but not acknowledged in written document).

On the same note, the results of this study may not be easily applicable to other Canadian provinces and territories due to assumed differences in childhood vaccination systems. Furthermore, the most current and publicly available Alberta childhood vaccination policies (high-level; government-language) and policy guidance (layperson-level; simplified-language) were thoroughly reviewed. However, there was no public access detected or obtained to internal government documents on the Alberta childhood vaccination policies and policy guidance that may currently be in a draft format or preliminary revision stages and yet to be published online which if accessible would have further influenced and potentially altered the results of this study.

Furthermore, the policies and/or policy guidance were all mostly general vaccination strategy documents, with none overtly or even vaguely im/migrant-specific or im/migrant inclusive aside from one policy guidance source on 'persons new to Canada' and travellers. In other words, general vaccination strategy documents were used as necessary proxies in lieu of im/migrant specific vaccination strategy documents which limited the results of this study. Similarly, the policy and policy guidance sources analyzed in this study were generally assessed to determine if their contents satisfied the criteria in this study's evaluative framework by determining if the criteria (policy determinants) were stated in the content, which may have led to potentially over-generalizing and over-simplifying the overall policymaking process. Variations were noted in the date of publication for each relevant policy data and policy guidance data reviewed in this study, with some documents (sources) recently updated and others less current. Although retroactive searches were conducted throughout the duration of analysis and results of this study to ensure that more recently updated policies and policy guidance were not overlooked, there is still a chance that some of the policies and policy guidance were more recently updated but were not yet publicly available at the time that this review was conducted and the corresponding results were finalized.

## 4.4. Implications for Future Research

#### General Reflections on Study Findings

This critical policy analysis provides evidence-based recommendations for childhood vaccination policymakers to take children of im/migrants, im/migrant families, health equity and equitable access to vaccination services into more consideration when drafting, revising and/or implementing policies. This research may also help policy makers take initiative to delve deeper into exploring the links between immigration policies and health policies (i.e., childhood vaccination policies) when improving their policies, given that there are often silos in policymaking.

On another note, the findings from this study may inspire other jurisdictions in Canada (i.e. other provinces and territories) and perhaps even other pluralist-society countries to ensure that the im/migrants in their population(s) are well represented in their policies and systemically granted the right to equitably access and use childhood vaccination services amongst other healthcare available for the entire population. The findings of this study may also provide reliable evidence for community-based advocacy on health service access for children of im/migrants or im/migrants in Alberta and/or across Canada. Alongside providing practical policy-based steps towards advancing the equitability of childhood vaccination in Alberta, this research also references evidence-based equity-oriented metrics (policy determinants) to refer to as examples when assessing the effectiveness of revised and/or newer Alberta childhood vaccination policies. Last but not least, the findings of this study focused on children of im/migrants may also help spark advocacy for the overt inclusion of Alberta's indigenous children in the policies as well, given that both marginalized subgroups of children in Alberta are known to experience similar intersectional systems of oppression in society.

#### **Contextualizing Study Findings Within Recent Discussions on COVID 19**

This critical policy analysis on childhood vaccination of im/migrants in Alberta was completed during the time of COVID-19 during which research discussions arose through other studies about immunizing children in Canada for COVID-19 (i.e., Humble et al., 2021; Goldman et al., 2021). The results of this concurrent study may be very useful in providing well-informed evidence on the necessity for future pandemic preparedness policies to have vaccine equity (acknowledging the heterogeneity of races/ethnicities and im/migration statuses) thoroughly built throughout it's framework.

The COVID-19 pandemic, deemed 'arguably the most devastating infectious illness' (Allen, 2020), has revealed the potential impact of factors (i.e., lower income) that may be enhancing disparities in health outcomes due to COVID-19 in 'presumably at risk' racialized population groups in Canada (Allen, 2020). Racialized communities in Toronto, for example, are found to be more likely overrepresented among COVID-19 cases in relation to their share of the population (Allen, 2020). The results of this critical policy analysis study may help pinpoint where, in traditional Alberta childhood vaccination policies, revisions are needed to ensure racialized communities are proactively accounted for and provided ample information and careful messaging to avoid misconceptions and/or stigmatization (Allen, 2020), especially during a pandemic.

There is a need for new knowledge translation strategies (post-COVID) geared towards generating information that is of value to the community and that is shared in appropriate ways (Allen, 2020), which the findings of this critical policy analysis may also help inform.

The findings of this critical policy analysis study may also help inform the creation, development and/or advancement of what Eissa et al (2021) refers to as tailored (i.e., afrocentric) health promotion and counselling approaches... centered on respecting patient values and perspectives to improve COVID-19 vaccination (i.e., in Black populations in Canada). Moreover, the findings of this critical policy analysis study (particularly the findings on where the childhood vaccination policies are lacking inclusion of health equity principles) may help, within the context of black racialized people in Canada but also relevant to all racialized groups, spark *"black-led*"

partnerships between healthcare professionals and stakeholders with existing trusted relationships in the community... [to] confront anti-Black racism and improve outreach to increase confidence in... [COVID-19] vaccination in Black communities" (Eissa et al., 2021).

Furthermore, this critical policy analysis in and by itself may serve as an evidence-based example of the need to embed "equity-centered planning, decision-making and [health-promoting] action" throughout all childhood vaccination policies (as well as in future pandemic preparedness policies). Moreover, this study may help shift and redirect the attention of vaccination policymakers from not only meeting the minimum basic requirements of standard childhood vaccination policies but also learning when and where to incorporate health equity components to the policies that will then hold account and directly address "attentiveness to power and the relationship between political economy and health...central to identifying and examining issues of equity" (Plamondon, 2021).

This critical policy analysis may contribute to emphasizing the importance of taking social inequalities (race/ethnicity, income level, etc) into full consideration when drafting and/or implementing vaccination policies that promote and establish more equity in vaccination. For example, marked social inequalities in COVID-19 vaccine acceptance by children and adolescents have been noted, with racialized parents reporting greater unwillingness to vaccinate compared to White parents (McKinnon et al., 2021). This critical policy analysis may help contribute to the rising call amid the COVID-19 pandemic for vaccine campaign efforts, towards what McKinnon et al (2021) refers to as a need "to reach disadvantaged and marginalized populations with tailored strategies that promote informed decision making and facilitate access to vaccination". This critical policy analysis goes a step further in promoting the need to distinguish and specify immigration status as one of the social inequalities; as a social determinant of health in im/migrant children's access to childhood vaccinations.

The findings of this critical policy analysis indicates that the promotion of health equity principles (to tackle health inequities) are missing throughout most (if not all) of the policies and policy guidance, suggesting a need for equity in vaccine access to be taken more seriously for the sake of improving the vaccination rates of the overall population. In the COVID context, recent research has found that "*differences in rates of vaccination between groups [have] been driven by inequities in access*" and encourage vaccination through equitable strategies (Rosenberg, Cheff and Amberber, 2021). More specifically, it is known that areas in Ontario with higher rates of COVID-19 have more limited access to vaccines and sufficient resources (i.e., easy and fast use of online booking system) to actively override systemic barriers (i.e., limited languages - only english and french, internet access, digital literacy, health card number) and ensure equitable access (Rosenberg et al., 2021). Furthermore, delivery of COVID vaccines have been noted to occur mostly in large hospitals and mass immunization clinics with only a minority of vaccine deliveries occurring in more local and trusted settings for members of the public (Rosenberg et al., 2021).

On another note, public health officials and researchers believe that vaccine equity is key to the end of the COVID-19 pandemic (Choi, Denice and Ramaj, 2021). The findings of this critical policy analysis rely on and promote the correlation between equity and vaccination rates (vaccine equity), as well as the fact that there are lower vaccination rates in immigrant and refugee groups. This intersectional (equity-oriented) critical policy analysis furthermore promotes the need for more active measuring of health inequities among vulnerable populations in Alberta to strengthen jurisdictional childhood vaccination policies; to ensure our current childhood vaccination policies are modified to become better equipped to handle future pandemics. A recently-published study by Antequera et al (2021), referred to as "improving social justice in COVID-19 health research: interim guidelines for reporting health equity in observational studies", recently reviewed a checklist called STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) for deficient areas where additional details and guidance are needed to encourage transparent analysis and reporting of health equity (using various social determinants of health) in COVID-19 observational studies. Such observational studies are deemed a valuable source of evidence and are able to critically analyze the impact of implementing COVID-19 policies on the redistribution of inequities (Antequera et al., 2021).

The findings of this study may serve as an excellent template for guidelines/guidance on ways to improve transparent reporting of health equity measures in Alberta childhood vaccination policies. Antequera et al (2021) engaged with various stakeholders experiencing health inequities (i.e. indigenous people) to co-produce guidance using an intersectional lens (taking into consideration both health equity and social determinants of health), to then apply to policies and future research to further efforts towards closing in on inequitable gaps in health outcomes.

One last implication is that this study's finding on the lack of race-based vaccination data is a good step forward in promoting the need for race-based data in Alberta, to feature in policy guidance and used in informing policy; to pave the way to improved equity in vaccination service access for racialized people (i.e., im/migrants, indigenous peoples). Within the context of COVID-19, there is growing evidence that the risk and burden of COVID-19 infections across population subgroups and racialized communities in Canada (Ontario) are well-known to be disproportionately higher in terms of morbidity and mortality rates (Etowa et al., 2021). Yet, there is presently a strong absence of large-scale race-based data on COVID-19 infections and vaccination rates throughout Canada, making it difficult to measure the extent to which racialized communities (i.e. im/migrants) are experiencing COVID-19 and the impact(s) of the measure(s) and lack of measures taken to mitigate these impacts at a local level (Etowa et al., 2021). This study may help inspire policymakers to create sustainable long-term capacity for race-based data, to then be very well-informed of various race-based patterns in vaccination when drafting policies on future pandemic preparedness policies or even when revising basic childhood vaccination policies to ensure all needs are accounted for. Policies promoting data collection strategies would require the incorporation of community engagement to the process of collecting disaggregated data on immigrants and racialized groups (Etowa et al., 2021).

Overall, further research is recommended including research incorporating the perspectives of policymakers in addressing issues related to health equity (i.e., vaccine equity). Additionally, it may be worthwhile to initiate and conduct comparative research on evidence-based knowledge gaps in vaccination policies across all jurisdictions of Canada.

## 4.5. Conclusion

The findings from this study indicate a lack of active equity-oriented mechanisms and adaptiveness in place in the childhood vaccination policies and policy guidance to help reduce structural inequities (i.e. ethnocultural diversity and status disparities) impacting children of im/migrants and more directly on their behalf, impacting their im/migrant parents. Through the use of the evaluation framework, it is clear that most of the sources of policies and policy guidance are missing the presence of equity-oriented policy determinants suggesting the policies and policy guidance have plenty of room for improvement and growth. The predominant absence of health equity as a policy determinant across all reviewed sources suggests that advancing these policies and policy guidance may very well require the adaptive incorporation and adaptation of health equity mechanisms in and across all of the policies. Since the childhood vaccination policies directly impact the nature of the childhood policy guidance, the upgrading of the policies by incorporating adaptive strategies for achieving policy objectives (i.e. through the advent or use of adaptive policy technology) may create substantial improvements in the necessity, promotion and application of health equity principles in strengthening vaccination coverage across the juridication. Acknowledging the importance of health equity (i.e., vaccine equity) in the policies and policy guidance is a practical and implementable system-wide action indicating the government is holding itself accountable to ensure fair access of childhood vaccination services for the entire population with full consideration of the nuances present in vaccination access by im/migration status or race/ethnicity. Ensuring updated childhood vaccination policies and policy guidance are all equity-oriented will ensure the promotion of vaccine equity is viewed as one of the major keys to improving childhood vaccination coverage, as opposed to an assumption or unattainable ideal to deprioritize, devalue or disbelieve in. There is a need for children of racialized im/migrants to be openly acknowledged and advocated for in the policies and policy guidance that do impact them.

More specifically, there is an identified need for government to work towards developing and advancing the promotion of equity-oriented race-based vaccination coverage data collection, to ensure that these policies are better informed on the vaccination needs of the most vulnerable of the target audiences, of culturally and linguistically diverse (CALD) children of im/migrants and their im/migrant parents. The findings from this study suggest the need for the advancement of generalized but accurate race-based vaccination coverage data to then actively and adaptively inform the development and updating of policies and policy guidance in a manner that ensures all categories of im/migrants across the population of Albertans are being included, represented, and equitably served with intersectional, foreign-language-friendly, and culturally-responsive vaccination services. Future or updated childhood vaccination policies would benefit from incorporating the standard and equity-oriented policy determinants and approaches explored in this study. To reiterate, the application of intersectionality in analyzing vaccination policies may prove to be very helpful in advancing health equity so that educational communication on vaccines and vaccination services are accessed, explored and tapped into by all, fully inclusive of the most vulnerable groups in society (i.e., im/migrants) and regardless of social positioning and status (i.e. personal or parental immigration status, ethnocultural diversity, ethnicity, class).

In conclusion, this study emphasizes the need for vaccination policymakers to incorporate equity-oriented policy determinants in the policies and policy guidance they create, to help ensure various interacting structural determinants (i.e. ethnocultural diversity and immigration status) are accounted for in population-wide access to childhood vaccinations. The findings of this study may also provide reliable evidence for community-based advocacy on improving the quality of support provided (i.e. cultural responsiveness) to im/migrant parents regarding the sustainable and trustworthy access to public health services available for their children. Overall, conclusively, the findings of this study urge that this at-risk subgroup (children of im/migrants) become equitably prioritized and that their diverse cross-cultural needs be inclusively addressed in all Alberta childhood vaccination policies.

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TABLE 1: List of Pote	entially-Eligible Do	cuments (Policies AND Policy Guidance)						
ARCHIVED:	Year of Publication	Online Location (URL)	Publication Source	Critical Descriptions (i.e. Detected Terminology of Interest) This document docut) eluborate on childbood succinations in the Alberta. There was indirect mention	Predicted Audience	Eligibility Status	Relevance of Policy or	Reasons for Inclusion or Exclusion (Eligibility Criteria) i.e. included fullybecause!
ARCHIVED: National I Immunization Strategy (NIS): Final Report 2003	2004	https://www.canada.ca/en/public- bealth/services/reports-publications/national- immensionations/strategy-final-project_2003.html	Advisory Committee on Population Health and Health Security to Denoty Ministers of	This document dock where the challenge of the challenge o	Deputy Ministers of Health, Government of Canada (Internal)	Excluded	Null	Excluded entirely because the document in this source is archived and also quite outdated (2003). A much more recent version of the National Immunization Strategy for Canada was detected (c. 2016).
Strategy (ND): Final Report 2003		immunication-strategy-linal-report-2005.html	Security to Deputy Ministers of Health)	status, and the edderly, will also require specific program altention as part of the NIX* But otherwise, no further elaborations were made.	Alberta Health Alberta Health			
Alberta Innunization Strategy 2007-2017 (effective Feb 2007)	2007	http://incom.al/entr.ex/datast/2711e646-e572. <u>Attp://incom.al/entr.ex/datast/2711e646-e572.</u> <u>272s-456-e516</u> <u>272s-456-e516</u> <u>272s-456-e516</u> <u>272s-456-e516</u> <u>272s-456-e516</u> <u>272s-456-e516</u> <u>272s-456-e516</u> <u>272s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516</u> <u>275s-456-e516 <u>275s-556-e5</u></u>	Govennent of Alberta (open. alberta ca)	Descente means (Malloud, Tan Bratzy, downest over to gala for secure of momentation lange in Margin, downey were robustly downest over to gala for secure of momentation proport inship (Sourge), Stronghen Paralla Baaran and Comenting, 4. Sourghen Paranahys, S. Soughen Reserva and Estation, S. Soughen Pable Eduction and Americes, and T. Soughen Reserva and Fosturion.	Services and ether provincial ministris, including. Advanced Education and Technology. Education: Children's Services, and partners including. Regional Beathh Authorises (RHAs), the First Nations and Insit Health Branch, Health Canada Alberta Registr, professional associations, and national erganizations	Included Fully	Secondary	behalds fully because the stronging galaxies decrement (gashi) provides contextual evolvace on the storage's used in the lot for syntax is increases the summarization use of the gamma Abottus populations as been as workly. This document may be useful for documining whether current policies have been (2007-2017) and cell are (2018-sourceds) adhering to this storage draction.
3 CATMAT Statement: Pediatric Travellers	2010	htte: Verse mende av in tudslig: http://www.executoretic.en/forumerics.com/ enromentals/sincercorport.com/ enromentals/sincercorport.com/ enromentals/sincercorport.com/ enromentals/sincercorport. text	Public Health Agency of Canada (Government of Canada)	In the decrement, two antions of periods in superiors (detected at first glasses) is "determine Prostance: Devices," Prod. of the Device State (Device) and the Device (Device) and the Device) and the Device (Device) and the Device) an	Public Health Agency of Canada (for discrimation to 'traveller and the molecul commuty coming for traveller)	Included Fully	Secondary	Ischald fifty as a secondary policy guidance document because this document was refirred in by the accumptung GoC policy document an immunition of twochen extrated from the Canadan humanization Guida, and contrain by information deeply of the comparison of two contraction of the contraction of the comparison of the comparison of the comparison of the contraction of the co
Your Child's Beat Shar: A parent's guide to succisation, 4th edition	2015	http://webstore.gover/strack/datale/yope datable best die a aarook professionen datablese	Constra Poliatie Society via ImmaniaeConsta	"Tope Child's Best Shot: A proved spelde to succitation is the only comprehensive Canadian informers returning anglicably for persons of particular and an approximation of the app child and all the applications of the strength of the application of the strength of the strength of the strength of the strength of the common quantum and memory. A new ideaped distribute for the strength of the stren	New Parents, Polific Health Unite, Physiciane Office, Cernmanity Health Centres and Local Libraries	Included Fully	Secondary	Solidad difty as a secondary gallery guidance decomert given the wide and/ones it is designed for, the questions it attach a second second second sequent and second secon
Canadian Insunctation Guide: Insunatization of Canade (tast modified in 2016; but complete chapter revision: July 2013; modified June 2020)	2015	https://www.armala.co/enjublice. health-partices-publications-healthea- thraing-consultation-publications-public-publications- public areas of the public of the public of the public public of the public of the public of the public of the public public of the public of	canada est. Public Health, Agreey of Crandu (Crandu est Health > Healthy Living > Vaccines and Immanization > Crandian Immanization of Crandian Emplations)	Comprehensive and Creckel Explanations and Protocols Informal Policies Research web immunication for protocols and an explanation of this descupables immunication status, liab to WBD website on vacculation schedules for other controls is implied locations of the antisigness, assessment after annual to Canada, etc.	for "health professionals, vaccine program decision makers and other Canadian stakeholders"	Included Fully	Secondary	This source is crecial for the ordical policy analysis because its contains the information that reach to be relayed from the growment to immigrate and ordigency (data instruments) is C made. Exact table, the policies and/or galaxing documents (leng and/ord g hand for this ordical analysis are being exclused explanal approach hand in how effective the policies are in and/ord g hand for this ordical analysis are being exclused explanal approach hand in how effective the policies are in methods and the structure of the policy
Pan-Canadian 6 Public Health Network (os. 2005)	2016	http://www.pha-nep.ca/index-eng.php	<u>phn-up ur public health.</u> actuarth	2018-2022 strategic priorities include 4. National Immunisation Strategy/Veccine preventable disease	Public Health Professionals Aeross Canada (aeross all provinces and territories of Canada)	Escluded With Condition (Research Based Formal Action). In other words, excluded due to not aligning well with research objectives but still deemed more basadly.	Tertiary	In shaded on the condition to research-based prior of generation of the condition of the condition to research-based prior of the condition of
Immunication of Immunication Gaude	2017	http://www.com/un/within/ http://www.indokation.backge and and an and an and an and an and an an and an an an and an	Government of Canada	The document creation the follow subjections all perturbing to preventions of a perturbing the subjective of the subjective subject	Healthcare Porfessionals	Included Fully	Primey	Schalzd fifty as a primery priory document because for information is first suscence directly impacts invitigation and studied the match of the process, the control as generational and developed as providences of the afford personnel contralay. The studied of the process of the control as generational and developed as providences of the studied personnel contralay. The studied control control control are personal to and personally interest by the first studied person of the studied control control first studied control control control control control control control control control control for a studied control control control control control control control control control control for a studied control control control control control control control control control control for a studied control control control control control control control control control control for a studied control control control control control control control control control control for a studied control control for a studied control control control control control control control control control control for a studied control control control control control control control control control for a studied control control for a studied control control for a studied control contr
Renearch Article via Canadian Joarnal of Public Heatth: "Timeliness and completeness of rostive childbood ractinations in children by two years of age to Alberia, Canada"	2017	htten://www.nebi.nlm.nih. gen-ipmeintieles/PMC6972322/	CIPH (Canadian Journal of Public Health)	The intellines and completeness of rotation childheod succitation in proceeded children in this community based programmery valued in larger than provided largers. <i>Data on intelliness of neuroimation can play the determined the play in the determined and play and the play and the determined and the one and the determined of the dete</i>	To include as background information in int-CPA	Excluded	Nall	Eached statisty because the index ablends and any event provider to the CPA and proceeding to utility counts anging to any appropriate state human states, a state states in a proper produce document with the procession of states are providered in the states and by not for states any states are the state of the states are and the states are states and the state of states are stated and the states are also been discussed and states are any states of the states and the states are stated and the states are also been discussed and states are also been also been also and the states are stated and the state of the state and the states are also been any different and the states are also been any different and the states are also been and also been any different and the states are also been as a state are also b
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Alberta Regulation 1822018 Public O Haubk et - Immunization Regulation Extract	2018	http://www.masheria.co/70.cfm? fm_ide=27077950648.seeds.tw-left.	Alberta Queen's Printer, Government of Alberta Ministry of Health	All persons making on of this decounter on remarked that it has no legislation assume. The official functions, it is not possible in the second transfer of the second second second second functions, it is not possible for a decounter of the decounter of the second second second second second second second second second second second second second second functions. The the maximum second second second second second second second second functions and the second	Geventment of Alberta Officials, Alberta Health Service, Alberta Chief Medical Officer	Included Fully	Primary	helided fifty as a princy pflety document because this Regulation document in Alberts-specific and refers to the Immunitation Regulation priority of the Model Regulation in the composition physics. Albength immunity and the second second additional and any site of the the policy second in the Crit sharp of the second solution of the same insecond the additional additional additional to the policy second in the Crit sharp of the second solution of the same insecond policy and a math, and/second segments and dolders sufflag or solid ad Alberts do not have access to immunitation.
College of Licensed Practical Nurses of Shorts - Fact Short: Ionumitation Regulation Duties (updated Dec 2018)	2018	https://www.elyma.com/2018/12/fact-short- immunization-cognitation	College of Licensed Practical Narses of Alberta	<sup>1</sup> N. November, 2016, the Generation of different animonical charges in the Public Haelsh Act, annul at increasing meanimistion ratios, represent operating the manage and health and additional at increasing and the different animation research. Table and additional and increases. 2014. As Generating of the different animation of the different animation 1822/81. The fermination legislation neurone responsibilities for leadin professionals, industry 1822/81. The fermination of generation neurone responsibilities for leadin professionals, industry 1822/81. The fermination of generation neurone responsibilities for leadin professionals, industry 1822/81. The fermination of generation neurone responsibilities of the different leadin responsibilities under the regulation. <sup>4</sup>	Licensed Practical Nurses in Alberta	Excluded	Nall	Excluded entirely because this link although accomingly relevant to the vaccination of surtiligents in Alberts (via search term meth) is far too broad, beert, beeft, and does not monitor in infragment or provide any links to the vaccination/immutation weeks of networks and the momentation of minipart families
Alberta Insunization Policy: Background (revised Sept 2018)	2018	<u>ktres (heren alberta)</u> es <mark>tétute (heren (46251d), 556-4365</mark> 255-be567731236en (hold/AIE) httodacion: Nuckground adf	Government of Alberta (open. alberta.ca)	Decenter bielly introducing the Alberta Immunization Melcy. "The Alberta Immunization Policy (AD) entities opticalizes and recommendations for the provises of mutantization services in Alberta Decentration of the Alberta Immunization and the Alberta Immunization Immunization primitics: anguing). National Albertary Committee on Immunization (NCC) patiented (special primitics: anguing). National Albertary Committee on Immunization (NCC) patiented (special anguing) and anguing and anguing and anguing and anguing and anguing and anguing description of the Albertary Committee on Immunization and anguing and anguing description of the Albertary Structure and and anguing description of the Albertary and anguing and anguing and anguing and anguing description of the Albertary and anguing and anguing and anguing and anguing anguing and anguing and anguing ang	Alberta Immunization Providers; Stakeholders; Professionals and General Public	Included Fully	Primary	Included homes that despines operatingly describes the Obert International Poly (spee degrading the source) have a factor of the source of th
Government of Canada: "Foor Child's faccination 3. Schedule" (modified - presumably also published - Jamaary 2018)	2018	ktrachwei heidhearadion an eilepichachniter scholidender engelg	Government of Canada	Abice is given to provid (alongsite giving parents viewing flat, -the target adjaces. An Ability to create a province in a distribution of the standard based of of fair fairly and the standard standard ability of the standard standard based of the standard standard standard which structures prove child will stard. Researcher: your haddbarr provider a dway your bott manner are strained discusses. Structures are most officiate when they are given by your child or the right state. *	General Public: Parents; Guaodians	Included Fully	Secondary	behaled rifly as a secondary policy guidence document because this simple seconce is descript designed for use by parents, very much of importance is invitigated parents and because or this CPA study.
Alberta Innunization Policy: Eligibility Criteria (4) for Provincially- Funded Vaccines in Alberta (svised Sept 2018)	2018	https://open.al/borts.ca/alasset/Std11614-6149, 470k14051c71147190973/summarce/c14detbla fund-104c461k211/borts/d1/download.up; introduction-clup/bility.pdf	Government of Alberta (open. alberta.ca)	Eighting Oriento for provincial coverage of munorization totales the Abevin humanization Policy) studies or multitum in Abevin for them entitles or large Leftmann Versier only. In Marchinalis who with the large studies and an analysis of the Abevin humanization of the Abevin human for provincing in Abevin waves. And 3. Other coversations when provincing final data thereas waves and an analysis of the Abevin humanization of the Abevin human data the Abevin Abevin Abevin Abevin Abevin Abevin Abevin Abevin Abevin Abevin Abevin Munitory of Policy (Horization and Abevin Abevin Abevin Abevin Abevin Abevin Abevin Abevin Abevin Abevin expenses prophylamical (Horization Abevin Abevin Abevin Munitory of Policy (Horization Abevin A	General Public, Alberta Immunization Providers; Stakeholders; Professionals	Included Fully	Primary	Scholad because this document operationally describes who is eligible for minimum outer on energy by the prevince under the Alberta Materialization of the entrances describes and the state of the state of the entrance of t
A Parent's Guide to S Viccination (published Jan 2018)	2018	https://www.canada.cs/mijublica health/service/publications/healthea historypurnet-gather-sections/hmm2 parents_anake_vace/keim_mediame/harmer_em_ &utm_campaign=hapic_feeder	canala co: Public Heath, Agency of Canada	This guide in a information resource for parents going into intrinsic detail shout the importance of challshood one-mation, all the signs and programs for various backets Preventable Medicines and the second state of the should my child be vaccinated, what to do if a notice immunication hot is mixed and exploration of various other such scenarios, and a check fit for your child's vaccination?	Parents of all origins and life pathways living in Canada	Included Fully	Secondary	behade because although this researce in our largeted to the invirging population, it is nill very relevant to immigrant and ther dubles. The advantation declocal in the solution is constantly what reads to be because as in although the solution whether any policies on a policy of the solution of the

TABLE 1: List of Pote	entially-Eligible Do	cuments (Policies AND Policy Guidance)						
# Document or	Year of Publication	a Online Location (URL)	Publication Source	Critical Descriptions (i.e. Detected Terminology of Interest)	Predicted Audience	Eligibility Status	Relevance of Policy or	Reasons for lackasion or Exclusion (Eighbility Criteria) i.e. 'included fully_because' Included because this Alberta-specific directive/gailing document, as an additional offichest of the introduction section of the
Alberta Innumization Policy: 16 Robert and Reporterbiditar (published Sept 2019)	2019	Hites: Foren alberts exclutated: SNU1634-6149. 40542475171147140972a: memories bits 87202; 4773-466424912 articles for 14 dwardwall sig- responsibilities-ray class providers and responsibilities-ray class providers and	Government of Alberta (open. alberta ca)	To num hading: Nahory of Chikhon dimministion in Abrit and Responsibilities of all historic productions, "The Mark Isolat of and the Mark Resolution Resolutions and the shared or protonics when based with a calcular or production of the Mark Isolator resolution of the shared or with a calcular or production of the Mark Isolator resolution of the shared or with a calcular or production of the shared or com- genetic solution of the shared or with a calcular or production of the shared or proton of the shared or with a shared or production of the shared or com- parison of the shared or production of the shared or shared or shared or shared instance." "Scale or or gate with a facility providence or an expressing or more for and shaked I manufacture shared."	Alberta Healthcare Practitioners, Alberta Health Services Public Health and General Public	Included Fully	Primary	Notical because this Albesta-specific directive galaring accounts, as an Aldenian diffusion of the transduction section of the intermediate provides of the section of the intermediate provides of the section of the section of the section of the section of the section of the section of the section of the section of the section of the and development and section of the section of and development and section of the section of and development of the section of section of the section of section of the section of section of the section of section of the section of section of the section of section of the section of the
17 Internetical Consults: Information for New Canadians (last updated Apr 2019)	2019	https://immunize.ca/new-canadiana		Webpage mentions 'for the public' and 'now canadians'	Public; Newly settled Canadians	Excluded	Null	This link is excluded because it's a platform mostly just focused on fortuning the link to the 'A Parent's Guide to Vaccination' document produced and published by the Government of Canada Public Health Agency. As such, whereas the document featured will be included in this study, this link will not a schat would just be redundant.
Alberta Immunization Policy: 18 Immunization Reporting for Electronic Means	2019	https://www.alberts.ca/dataset/35431634-6149- 4694495567142199923e/resource/fob8e079- d899-8646-ad33- 79866284c724/dsw.nload.health-aip-imm-rep- electories.rdf	Government of Alberta (open. alberta.ca)	Transmission Reporting Specified by the CAM Medical Gillour To support heads processions are set of the set o	Alberta Immunization Providers; Stakeholders; Professionals and General Public	Excluded	Nall	The content of the document is not early relevant to the vaccination access or uptake of minimparts and hour dollars. This section exists in the full Terminization Regulation's document. It is recommended that readors refer to the effective Queers's Protor Terminization Regulation's document for the more schedure distribution of the site of the effective of the effective of the site of the effective of the site of the effective of the site of the effective of
More Information about the Immunication Regulation - For Professional (published October 2019)	2019	Mign Lingu albert var danset Ura Alber Alb Alb 2014 - Martin Martina and The Albert Albert 2014 - Martin Martin and Albert Albert 2014 - 2014 - 2014 Albert Albert Albert Albert 2014 -	Government of Alberta (open. alberta.ca)	The document provides from gardness on a correlating highlight document on this section (Human static document) of the Albert Aber (Julia Mar, The Repulsion models of the Albert Aber (Human static document) and the Albert Abert (Human static document) and the Albert (Human static document) and the Albert (Human Human Human Human static document) and the Albert (Human H	Alberts Healthcare Professionals and General Public	Excluded	Nali	Excluded fully because of a two bandly focused on manufaction in general in the Alberta context, with an specific or detected matrices of all the regulations associated with oblideed vaccination in Alberta.
20 Comole Health Act (v. 2020)	2020	taga-linea anada a sin babbi. engela escandar de ante a parte la randa babi escan a parte mala ar canal a babba at bab	Government of Canada	The Gaude Highls Art (CH4 or the Joy to Gaude's fidered legislation for pathots) based builds over neuroness. The Arrive neuron the preserve optimate field and the leading and the preserve definition remediate accurs that any ensure that any ensure of the Arrive's T-AC (41) and the preserve and arrives are also preserve and are the Arrive's T-AC (41) and the preserve and arrives are also preserve and are the Arrive's T-AC (41) and the preserve and arrives are also preserve and are the Arrive's T-AC (41) and the preserve and arrives are also preserve and are also preserve and arrives are also arrive and arrives are also preserve and are also preserve and arrives are also preserve for such arrives. <sup>45</sup>	General Canadian Pablic	Excluded	Nall	Eachded eatiely because this because is two generalized and an directly located an advanced systemation is the Aberts matter. The wave we focus here generalizing on Aberts (in a status) first, of a status because the forther advanced and the status of th
Cartia: Childhood Innunitation 21 Renatudor Project (CARP) - Jal 2018 - Mar 2021	2020	http://www.commen.co/affects_boahh	THE STORE OF	The information-bit called CANNs is an other database of correct economy with the mandate of superturbit generation in purpose planning and generation data below its supersystem as a protect the supersystem of the supers	: Public Health Professionals in Canada	Excluded		Excluded unitedly because they project is not one of india for a presenteer gality and neurons. It was the last priority families for the program of the state of
Interim guidance on continuity of instantization program during the COVID-19 parabonic (updated May 2020)	2020	https://www.eenals.aci/with/fici halfs/with/signals/aci/with/fici adv/with/signals/aci/with/signals/ adv/min/signals/aci/with/signals/ adv/min/signals/ during-covid-10-parafemic Mintl	Goverment of Canada	Intrine pailure document from Government of Canada (prepared by the Pable HaahA Agency of Canada as consultations with the National Advancy Charanters an International the Canadana Maring on access to and artification of Canadam immunities programs by the goveral population access Canada.	Public, Healthcare Professionals	Excluded With Condition (eCommunication Tool)	Tertiary	Included profile because of the personnear methods pairsec because does not service in twingent at any point, does not determine the profile of the personnear pairsec because does not service the profiles does not method on and the near service of any personnear photos does by focused on the continuous of memoration personnear does not personnear does not be the service method on the personnear particle service because the service of the personnear does not personnear does not because the method on the personnear does not personnear does not personnear does not personnear does not be an interactival CVA has more because the research. Therefore, mentioning this does not a does not does not personnear does not be an interactival CVA has not be being the another the not personnear does not does not personnear does not personnear does not personnear does not personnear does not does not personnear does not personnear does not personnear does not personnear does not does not personnear does not personnear does not personnear does not personnear does not does not personnear does not personnear does not personnear does not personnear does not personnear does not personnear does not does not personnear does not personnear does not personnear does not personnear does not personnear does not personnear does not person and does not per
Alberta Intronuciation Policy: 23 Schedule for Alberta Schedule for Alberta	2020	httes litera allerna calarant SMUA144384 Arhafel (2017) 1999 (2017) sessana allerna Haller der Garl (2017) 1999 (2017) Haller der Garl (2017) Halter challer der Schalt (2017)	Government of Alberta	Freque pel facomente visito en visito Novembra 2007, palebido Ducanho 2007 and Vificiaria Marco VIII Core de las les visitos de aprecia departe dans en de las de	Heilth Parcisioner and General Public	Included Fully	Primary	helveled fifty as a privacy (core) document because the content directly impacts intringent parents and parallanes (amongs bear of other eitime statuses) and moreover, is developed for health practitioner to they gold, and/or advice parents with.
24 Invasization Resources	2020	http://ipac.canade.org/instrumization. caseseco.2.php	insecuted or Effective. Presention and Control Canada	Immutation Research fields in Vational Advance Consults on Immutation Materials, CDC- ACP Materials, Immuno: Casada, Padre Halle Mayney of Canada, Canada Santani, Takobara Kento, Tak- tani and Santa Santani and	Infection Control Professionals	Excluded	Nall	Exclude activity because the titles of all of the informational links in this document, secretaryly relevant to the vaccination of documents of the secretary of the document of the secretary of the secretary property of the secretary of the secretary of the secretary of the secretary of the secretary of the secretary property of the secretary of the secretar
Alberta College of Pharmacy: Seasonal Information > 2020- 21 Information vaccination information	2020	https://shybermacy.ca/seasonal-influenza- information	Alberta College of Pharmacy (abpharmacy.ca)	The 2020-2021 Influenza Immunication Program will continue to be offered universally. Influenza ammunication service delivery will be foreast on increasing the immunication rates for <b>hybrid</b> , <b>papeliden</b> , who are most or rely for morbidly and morthly doe to reflected detect. <sup>2</sup>	Pharmacists working in Alberta	Excluded	Nall	Excluded strictly between which down is reactions of "high risk periodicitys" it more the broadly, targeted and associated with the separation for diplocids more how "are also for markedge and monotopic data to influence decards and not in temperate." While monotopic of and applications are not relevant to this study. There is advalately NO mention of "maniputed", "integrand", "temperat" or an experientee.
Provincial and territorial routine and catch-up traccination schedule for nightst and (but updated December 2020)	2020	httm://www.canada.ca/en/au/bis- bard/barvices/terminiaid-learnineide- mannaization-activation-programs- terminiaid-ensities-vascitation-programs- infants-children.html	canada en Canada en > Health > Healthy Living > Vacence and immunation > Vacence for childras. Decific to vacence >Provincial and Territorial. Immunization Information	The resource is on a second stable which "commercian the current matter association as checked for- index and a field in a set of matters and association of matters in the stable dependence of the set of the s	f. Public, Healthcare Professionals	Included Fully	Primary	Indeed because this Concentration Canada publication is on the provincial and territorial notice and each-op vaccination. of action and indiation in Canada, Albhaugh into accumus it, of for criterial place, on teap-op-op-place immegants is understand to the concentration of the operation of the concentration of the descence in the optical concentration of the conc
Alberts Netcore Learning Contor- 14 Annual Contor- 27 Annual Contor Regulation Lyformation	2020	terre a secondaria de la constante de la const	Government of Alberta - Alberta Netzere Learning Centre (albertanetcare.ca)	<sup>1</sup> In glassary 1, 2021. Handle prostements will be required as more a report experimg immension and associations in all strength and the field will be a field of the prostements of the strength and the strength and the strength and the complexity of the strength and produced as only provided interpretation from 5 detection to the strength and the strength a	Alberta Healthcare Practitioners	Included Fully	Secondary	Included fully as a soundary palsey galaxies factomet bactome for measure provides actual video discribing the Immunitients Regulation section of the Actuan (AID) Malls (Initial) Acta is part chief in additioned by hardbace positioners), and furthermore - Regulation actions of the Actuan (AID) Malls (Initial). Acta is part chief in additioned by the Actual
Vaccination Coverage Goals and 28 Vaccine Proventible Disease Reduction Targets by 2025	2020	htter flower ennels en insblie- heith service innumization-secine- proving source innumization- statege vorsion-severage gale vereine- recentable-disease cohetter-targets-2025, http://d	canada ca: Canada ca > Health > Healthy Living > Vaccines and Immunization > Immunization and Vaccine Priorities in Canada > National Immunization Strategy	As gas of the Notional Internationals Storage objectives for 2016 AU21, vaccination oversage gada and a scritter preventable disease reduction targets were set based on non-maximal standards and best practices.	General Public	Excluded	Nali	Excluded onlinely because this source is an extension of the above selected sources. Including this source in this Critical Policy Analysis (CPA) andly would be spectricee and net lead to any further modification or addition in related policies to reverse.
Alberta Influenza Innunziation Policy (upd. Jal 2020, effective September 2020)	2020	http://www.alberta.cs/ataset/alberta-influenza immunization-policy/resource/3042/9a0-bb10- 4770-809-681de416c1e8	Government of Alberta (open. alberta.ca)	Decentert mentions that and whither and high-risk populations <sup>2</sup> . The 2020-2021 Influenza Immunizations Program will continue to be offered universally. Influenza immunizations service deferrys will be focused an increasting the transmission rates for high-risk populations, who are most at risk for mobiolary and metality due to influenza disease. <sup>2</sup>	Alberta Healthcare practitioners and General Public	Included Fully	Primary	Included fully because this key document provides a necessary general software in the vaccination landscape of Alberta, in terms of explainton, policies and procedures in place by the Alb Haahleare System.
Immunization and roative intensication schedule (effective January 1, 2021)	2021	https://www.affects.co/interaction-contine- schedule.appx	Government of Alberta (alberta ca); Manage your health > Disease prevention and surveillance	The proof revenue entries which and thicker and thickness of "Immuning on schedule entries your field gets the entries pushly protection from vacation-preventiable diseases and gives your child the best immunity possible."	General Public; Parents; Guandians	Included Fully	Primary	Nobald fally or a prime prefex document because this converse provides answerd pricey on succinations to all provide its Aborts, way much applicable and its focus to intrograms to the populations. Madage there is on mession during and and edges provides a Abort to the source of provide and the provide an extensively detailed and applical source measuration whether problems on the face and face 20(1).
Alberts Health 31 Services: Inmanization	2021	http://immoizeaberta.co/	Immurize Alberta; Alberta Health Services	rotine immuization schedul; basic information sheets, news, common quotions va Alberta Health Strong (Overament of Alberta). Storag emphasis on public safety from vaccine-preventable infections diseases.	General Public	Excluded With Condition (cCommunication Tool)	Tertiary	Exhaled with condition (Commutation Tool) because while it does contain policy galabace an immutation in the Alberta ments to growth, functionality does in the contained on the Alberta Contained in Marcine, Con However, on the Rady, the ments and appendix contained and appendix of the alberta contained in Marcine, Con However, on the Rady, the ments and appendix contained growth with Marcine and Internating the proper of immutations and surrounding questions around its Marcine 4 of a excluder with condition.
32 Alberta Health Services: Information For Influenza Immunization	2021	https://www.albertalicalitiservices, calinifacturalinifactura.aepo/	Alberta Health Services	"All Alberture, six months of age and older, are eligible to be immunized, fore of charge: bowever, this year, ALIG is working with pharmaciets and physicians to offic immunization to different age groups and demographics."	Parents with children between 6 months and under 5 years of age residing in Alberta	Included Fully	Secondary	Ischoled fully as a secondary policy guidance document because this is an updated policy resource featuring the 2005-2021 Alberta Immunitation Program, and while it is doce not necessarily lower detect of immigratis at a different semistimities of all is very detected to immigrating profine that includes the different generations the different semistimities of policy and are detected as a different semistimistic of the different semistimistic different semistimities and are added from 410% and loghteres dates of national effective different semistimities and logger available from 410% and loghteres dates of national effective different semistimities of the different dates of an attribute of the different dates of an attribute of the different dates of an attribute of the different dates of of the dates of the different dates of the da
Alberta Health Servica: Ionumization Program Sandarde Marual (spSatul March 10, 2021)	2021	https://www.afbetishestituervices. existicspage10802.appx	Alberta Health Services	All formation for gate should be determined by Perstern and the measurement problem Reads (All formation of the perstern and the perstern and the perstern and the person Reads (All formation of the person of the person of the person of the person person of the person of the person of the person of the person of the person person of the person of the person of the person of the person of the person person of the person of the person of the person of the person person of the person of the person of the person of the person person of the person of the person of the person of the person person of the person of the person of the person of the person function of the person of the person of the person function to a short the person function to a short the person of the person function to a short the person func	Health Professionals	Included Fully	Secondary	Solubil fully as a secondary pairty galaxies documents because while this document docum? Energy memory memory memory and a secondary document and

	TABLE 1: List of Pot Document or	tentially-Eligible Doc Year of Publication	cuments (Policies AND Policy Guidance) Online Location (URL)	Publication Source	Critical Descriptions (i.e. Detected Terminology of Interest)	Predicted Audience	Eligibility Status	Relevance of Policy or	Reasons for Inclusion or Exclusion (Eligibility Criteria) i.e. 'included fullybecause'
34	National Advisory Committee on Immunization (NACI): Statements and publications	2021	Muse flower create extentionables bathbarrices formanzation training, generaccommittee-on-immunication-meci fam	canada.ca: Canada.ca > Health > Healthy Living > Vaccines and Immunization	"MCI notes recommendations for the size of succises correctly or nextly approval for nat in human in Constant we shall be to detection with of groups or risk for succises preventible diseases for whom succisation shall be targeted."	General Public	Excluded With Condition (eCommunication Tool)	Tertiary	Tachaked with standing (Communication) and Japanese in the communications ensure interingents are sensered to impaire 3 and a standing of the first standi
35	Canadian Innumization Research Network (CIRN)	2021	http://cimetwork.ca/	The Canadian Center for Vaccinology, sponsored by Canadian Institutes of Health Research and Public Health Agency of Canada	Evolving from the PHAC-CHIB Influenza Research Network (PCIRN), CIRN (Carnalian Immunization Research Network) is a collaboration of leading vaccine researchers and moltutions, representing over 100 investigators access 40 Canadian institutions, involving experts in vaccine- related evaluative research.	General Public	Excluded	Nall	Excluded entirely because the context in this source is exclusive of invirgents in the general population. There are no mention of manigrants, decody or indirectly, in the text of this source.
36	C4Mmmanize	2021	Mps. Prove animanias a in inhos	UOttawa, Carasia mHealth Lab (Stars-Up Company)	Tended of using paper results in truth suscitations for any bosons that or fungation, this tage above transfer of the structure of	General Canadian Public; All Communities	Excluded	Nall	Noticed enables the same all sharph the same of forms to a neutral information of provident of any provident of the same of th
37	Immunization Partnership Fund (2016-2021)	2021	http://www.canada.ca/on/aublice bealth-services/immunization-succine- priorities/immunization-partnership-final.html	canada ca: Canada ca > Health > Healthy, Living > Veccines and Immerization > Immerization and Vaccine Priorities in Canada	The Immunization Partnership Fand (IPF) receives approximately S1 million each year over five years (2016-2021) forough hadged 2016. The final is a doinged to improve vaccination coverage by appearing on leading the stress provide spectra canding shallnear provides in append bear for halthener provides to increase systematic canding shallnear provides in append bear for halthener provides to increase systematic canding shallnear provides and appendix and appendix and a shall provide the stress and appendix appendix and appendix appe	General Canadian Public, Canadian Population Health / Immunization Stakeholders	Excluded With Condition (Research-Based Formal Actions)	Tertiary	Tabled prime the second
38	Immunization: Childbood Immunization (Adaptation Date: March 2021)	2021	httpe://im/heith/alberts. ga/alberts/Papes/Childhood-Invanizations. augs	mbalfuibeta ea	Health Information and Teols > Immunitations. Topics highlighted in this source include: "What are memorations", "What are some exactors to get immunitations." What immunitations are recommended for children and addressenti?" and "How safe are vaccines". At the bottom of the vedpage there is a drop-door tab and link to <u>"Immunitation"</u> ("Schland Immunitations").	General Public Parents	Included Fully	Secondary	behada faliy a nasodar policy policy adaena doname locane (albende veg provident olid ne oročna of "anningen", videgat esta da na produ genedi taljeta demonitore or vecketomi ne special and abdited vecketomi ne instructure adaename shat if talana do nasodanog na oprograma se veli vanda tere filo resource into one da is taliy technor and day aktorichiges for succession such or compares.
-	Alberta Health Services: Investation Program Slandardt March 10, 2021)	2021	http://www.albestabestabestabestabestabestabestabesta	albertahealthaervices.ea	All Immunicipies Program Standards Manuel is written by Province weld Immunicipies Program TRADE (VII) Immunicipies Profession of an episotean profession of the profession procession of the profession profession of the profession of the profession of the profession profession of the profession profession of the profession of the profession of the profession profession of the profession Profession of the profession of the profession of the profession profession of the profession profession of the profession of the profession of the profession of the profession of the profession profession of the profession of the profession of the profession of the profession profession of the profession of the profession of the profession of the profession fundaments to Ald Static the Advent Immuno (AUI) Sprame.	Health Professionals	Included Fully	Secondary	Scholds fully as a soundary policy policy policy document because which this document docum? docum? motive in histogenetic por set formations for Abity (1/R) and does provide contential information on how to improve that the motive for ADP and the provide motive and on the provide contential information on how to improve the branch of the ADP and the provide motive and on the provide contential information on the provide set of the ADP and the provide the ADP and the provide set of the ADP and the provide set of the ADP and the provide the ADP and the ADP and ADP and the ADP and the ADP and the ADP and the ADP and the ADP and the ADP and the ADP and the ADP and the ADP and the ADP and the ADP
40	Alberta Health Services: When To Immunize	2021	http://imminosheta.cu/wast. immunos/whee-immuniz	imminalbeta ca	Abota Health Service website indicating "solar to instances". "Alloves ) reastive assumations reduchts' in designed with you and you child an most. By following this reducht, you and your child wild be instanced anguated assists and an edited one anguate the first The meansy anguated and the second anguated and the second and the second anguated the second anguated of one experimental variation children through complete at each developmental age, adults, pregnant women and senses. The usefuely of each variative in palls instand to the name of the vaccines.	General Public	Excluded With Condition (eCommunication Tool)	Tertiary	Exhibit petitish beame inferitually for source does not include police or guideline petitising the section of in- many period and the section of the sec- tion of the section of the secti
41	Influenza Innunization Program Update (March 2021)	2021	https://www.alloctabealfracevices. ex/usets.healthinfolis.flas.godate.2021.01.pdf	AHS Province Wide Immunization Program Team	The following excepts only bed function in matinging in the COV . "More it hybridizes a submatrix of hypothesis is a submatrix of the submatrix of hypothesis is a subhar hypothesis is a submatrix of hypothesis is a subhar hypothesis is a subhar hypothesis in the angle and the subhar hypothesis is a subhar hypothesis in the submatrix of hypothesis is a subhar hypothesis is a subhar hypothesis in the submatrix of hypothesis is a subhar hypothesis in the submatrix of hypothesis is a subhar hypothesis in the submatrix of hypothesis is a subhar hypothesis in the subhar hypothesis is a subhar hypothesis in the submatrix of hypothesis is a subhar hypothesis in the submatrix of hypothesis is a subhar hypothesis in the submatrix of hypothesis is a subhar hypothesis in the subhar hypothesis is a subhar hypothesis in the submatrix of hypothesis is a subhar hypothesis in the subhar hypothesis in the subhar hypothesis is a subhar hypothesis in the subhar hypothesis in the subhar hypothesis is a subhar hypothesis in the subhar hypothesis is a subhar hypothesis in the subhar hypothesis in the subhar hypothesis is a subhar hypothesis in the subhar hypothesis is a subhar hypothesis in the subhar hypothesis in the subhar hypothesis is a subhar hypothesis in the subhar hypothesis in the subhar hypothesis in the subhar hypothesis is a subhar hypothesis in the subhar hypothesis in thypothesis in the subhar hypothesis in the subhar hypot	Healthcare Practitioners	Included Fully	Secondary	behade fails as a scenary policy galaxies document because the document provides support for the primery policy discussed Xhetra influenza humanization Policy. The document, which or a standarding minipation and discribution is particular, dail whet and the main standard and the standard scenario and the standard scenario and scenario and and the main standard and a standard and the standard scenario and scenario and scenario and applicable and scenario and scenario and the space of the population. This document work-own, applicable and scenario and the standard scenario and the scenario and scenario and scenario and and the scenario and a scenario and the scenario and scenario and scenario and scenario and scenario and applicable and scenario and
42	Vecciner for Children: Deciding to Veccinate	2021	tites deve const convertis. South arrece vacuum children ten	Gevensment of Canada	The paper is very easily arriganable, with links the faller stag mans sections laber of the stag regress of the paper sector of the stage of the stage of the stage of the stage of the stage of the stage of the stage of the stage of the stage of the stage of the stage with the stage of the s	Canadian Parents and Gaardians	Included Fully	Secondary	Included fails as a secondary document because this resource provide participation information very model for in integrant parents without Address, as a simplified meaner. While these is on detert section of integrants detected in the decrement per e.g., et with the secondary applied on participation is a simplify and accounting of the secondary per experiment and the secondary per experiment of the secondary of the secondary of the secondary means and a Advent.
43	Public Health Act (updated February 1, 2621)	2021	https://open.alberta.ca/publicationa/p32	Government of Alberta (open. alberta ca)	This Act addresses matters relating to public health issues. The Act addresses the duties of the Chaef Modeled Officer of Health, deptys and medical officers of health, endines the nopombilities of regrants health addresses, addre with the restorest of communicative dheatore, addresses epidemics; and deals with public health emergencies. <sup>4</sup>	Chief, deputy and other medical officers of health, regional health authorities, healthcare services, media outreach and programs, general public	Excluded	Nall	The general Lock: information model/Boost speciations at both the extent required for its be of direct relevance to speciations of challen of an imaginary <u>structures are also as or 100 of the generation</u> and the direct relevance to challengy special-induction (2007)/021203
44	Alberia Inmanization Policy (updated February 25, 2021)	2021	<u>https://spen.alberts.ca/sol-lications/sig</u>	Government of Alberta (open. alberta.ca)	General reversives. Links are generalized and there is a brief mention of the AIP itself. In this source, the most recent version of the AIP in ecommonical for reference.	Alberta Healthcare Professionals and General Public	Included Fully	Primary	Included felty as a primary policy decenter because while there is no detect metrics of an import yee as, the andates of the because the second seco
45	Alberta Pablic Heado Act: Part 3 (Cospter F-3) - Consensi cable Diseases and Pablic Headok Emergencies	2023	like over a shera se 196 de bage 201 de angelet a statue e 2007 (1972 de agelet in	Gevenment of Alberta - Laws Ondess Catalogue	Guarment of Allerg In Nation That the Adjourness secretaristics of spaces have a section part of public backing much hand parts of subscriptions (parts ) assessments the forward and public backing more pro- financies of section of section spaces of public section and public backing public public of public dispersions and entry spaces. Section of public backing public section of public backing public sections of public sections	Alberta Jarifiction Government of Alberta Manizey of Halby Mherni Jeath, Regneal Heath Autority (Alberta Heath Sorries), Clark Model of Officer Officer of Halba, Leatmat Officer of Halba, Leatmat Heath Appeal Based, Saff Heath Appeal Based, Saff Heath, Heath Practisioner	Included Fully	Primary	Included fully as a princy policy document beause for control is specifically on summarized do document alluding to inferiories discussion and securations. Moreover, dure are variant appeted of the policy document that exertion relate and regulations around the inferiors advances exercisely, infections document reporting and securities optical of the docknown proved theory making the document optical for the cludies of transports:



TABLE 2: List of Chosen Primary	and Secondary Dat:	a Sources (All Policy AND Policy (	Guidance)					
# Document or Webpage Title	Year of Publication (split, ascending order)	Ouline Location (URL)	Publication Source	Details (i.e. Detected Terminology of Interest)	Targeted Audience	Type of Document: 1) Policy or 2) Policy Guidance; Policy Support	Eligibility Status	Reason for Inclusion or Exclusion (Assessment for Eligibility Criteria)
Canadian Inmanization Gaide: Inmanization of parawa new to 1 Canado (lust medified in 2016) last complete chapter revision: July 2015)	2015	https://www.canada. catanipublic: bathivervice/publications/bath http://singicationalian. immunization-publications/bath reconstitute-specific reconstruction-positive reconst	canada es: Pablic Health Agency of Canada (Canada ea 2 Health 2 Healthy Living 2 Vaccines and Immediation 2 2 anaton Immediation 2 Part 3. Weccinstion of Specific Populations)	Comprehensive and Crucial Explorations and Perioxols Informal Polykics: Reasons solvy immunization of persons new to classila is challenging, exclusion of the descographese immunization rains. Eds. In WHD website as wareastion achieved for other countries and the exploration of the exclusion of the exclusion of the descographese in a required for this demographic, details on an assessment after antival to Canada, etc.	fre "health professionals, vaccine program decision makers and other Caradian stakeholders"		Primary (Core)	Included fully as a secondary policy guidance document because it contains the information that such to be added from the generaters to immegate and orders of the source and the source of added the backware and memory of the source of the source of the source of the source of a source of advects in the source of a source of a source of the source of a source of the source of the source of the source of a source of the source of a source of the so
2 Immeriation of investors: Constant Immeriation Guide	2017	https://www.comails. exemptions. bathhtware.com/initiation/bath html://www.com/initiation/bath html://www.com/initiation/bath html://www.comails. environments.com/initiation/bath environments.com/in	Government of Canada	The document constant de follow advections all perturbing to investigation of transform form Canada. These dash performances "documentation of transform "and "and transform the second	Halbar Polaimh		Primary (Core)	Included fully as primary policy document because the information is that scenare functly toppen instiguents and antials the context of this resource, the context is government-instead and accluded in containing and an effect in the strength scenario of the strength scenario in the property of an effect in the strength scenario of the strength scenario in the property of an effect in the strength scenario in the strength scenario in the strength scenario method on the strength scenario in the strength scenario in the strength scenario in the next scenario is not office accession in the strength scenario in the strength scenario in the scenario is not office accession in the strength scenario in the strength scenario in the scenario is not office in the strength scenario is not in the strength scenario in the scenario is not office in the strength scenario is not integrate scenario in the scenario is not office in the strength scenario is not integrate scenario in the scenario is not office in the strength scenario is not integrate scenario is not accessing the scenario is not integrate scenario is not integrate scenario is not accessing the scenario is not integrate scenario is not integrate scenario is not accessing the scenario is not integrate scenario is not accessing the scenario is not integrate scenario is not integrate scenario is not accessing the scenario is not integrate scenario is not integrate scenario is not accessing the scenario is not integrate
3 Alberta Instanciation Paley: Background (revised Sept 2018)	2018	http://foren.alberta. cs/dataet/ap/resource/44a25/d/ 560/cs/1052/dom/and/AIP; lefe/72/a1732/dom/and/AIP; lateedactive-Background.edf	Government of Alberta (open alberta ca)	Decrement body introducing the Marcin Immunitation Policy "The Alverts Immunitation Policy (14) Policy and Alverts Immunitation of the province of the manufactures and the second second second second second second second second Factorizations are available at a second second second second second second factorizations are available at a second second second second second factorizations are available at a second second second second second second march second second second second second second second second factorizations are available at a second second second second second march second primary second primary second se	Alberta Immanization Providers; Stakeholders; Polessionals and General Public		Primary (Core)	Included fully up primery (core) document because this document specifically docubes the Above memoration Policy Book for policy was extended book functions, (Frapance, C) push (ed.). This policy doc memorations, it is Above-policit and (e.g. policy watched and second and the docu- ber of the empirication serving as primery sources of summarization information for this policy, in link).
Alborate Dependences (32/2018 Public 4 Houlds for Ammenication Regulation Extract	2018	<u>Jmm://www.op.albeta.cs/520</u> cfm2 fm_ubm/7307700066008com ch.ltychin.	Alberta Quest's Printer, Giovernment of Alberta Ministry of Health	"In process makes now of the discovers are remained in the fract in term in produced materials of the discovers are remained in the fract in terms of the discovers of the disc	Individual Allowa Heath Provinceser, Immunication New York, Allowa Heath Service, Allowa Chief Madical Officer		Primary (Core)	Included fully as a primary (core) document because this Regulation document is Alberts-specific and series to the Public Habit Art in relation to Alberts immunication Regulation. Albergain immungation area structured as a structure of the public structure of the structure of the structure of the public structure of the fully and the specific structure area from exclude a spectroscoling where structures and a structure structure of fully and the specific structure area from exclude a spectroscoling where structures and a structure structure of the structure of the structure of the structure of the structure of the fully and the structure of the structure of the structure of the
Alberta Immunization Paley: Eligibility Criteria for Provincially- funded licecines in Alberta (revised Sept 2018)	2018	htter://iceen.alberta. ex/dama/Sfd/1634-6149-4694- 9052 [14]19922.icreasuredic144eeb [14]1644:eb032 al.fibebadia/Usuraland/inja; antroduction-ediphility.pdf	Government of Alberta (open alberta ca)	Explainly Control for provincial energy of memorylation (speed do Marco Instantiation Policy) I. Lindonianis shown resulting of Advance, 2. Includates shown word the long, provide gauging a charter of the results of the strength of the strength of the strength of the strength of the provide strength of the strength o	General Public, Alberta lumunization Providers, Stakeholders, Professionals		Primary (Core)	hadrad dity or a primery (corp) become because the downerst possibility of body to the indigities on a downerst possibility of the province students for Administration Policy and administration of the elitism of the
Alberta Innovatization Policy: Roler 6 and Reprovskilditor (published Sept 2019)	2019	https://open.aberta. caldanae/S5111634-6162-6964- 7144719691/2000 2-072-600-86014 67444552;10440mhattup: reserveshinine-vaccine- reserveshinine-vaccine- reserveshinine-vaccine-	Government of Alberta (open alberta ca)	The mean the solution of the SA	Albeta Healthcare Practisioners, Alberta Health Services Public Public		Primary (Core)	Addated Life as a principal years in decrement theorem while others by our in point or point decrements as an additional addates of the constraints of the Addates to theorem where they constraints and the c
Alberta Influenza Innuestication 7 Policy (upd. Jane 2020), effective September 2020)	2020	https://epon.alberta. exiditaset/ulberta-influenza; immutration; polocy/resource/3042/9a0-8639; 4770-8994-681de43fe1c8	Government of Alberta (open. alberta ca)	Document meetisons i chief and i chiefwar and high-risk populations? "The 2003-2001 Influenza Immunization Program will constinue to be efford antiversally. Influenza immunization nervice delivery will be focused on increasing the immunization rates for high-risk populations, who are not at risk for morbidity and meritality due to influenza disease."	Alberta Healthcare Practitioners and General Public		Primary (Core)	lackaded failty as a primary (core) document businer this key document pervides a necessary general endook on Realthcare System.
Provincial and territorial routine and catch-up succination nebudal for infants and children in Canada (updated Dec 2020)	2020	https://www.canada. easternablice healthyternablice information-provinciale entriesta-immunitation; information-provinciale programs-inform-schilden html	canada en Canada en > Health > Healthy Living > Maceiner, and annunitation > Vacciner, for children: Deciding to yaccinet > Provincial and Territorial Immeniation Information	This sensers is an a <u>surface state</u> which "assume too the server regime reaction in solution for objects and chains as all private and neutrons as some Cauda. Chaing to the problem and chains as all private private the server of the server of the problem of the server of the server of the server of the server of the server private server of the serv	Public, Healtheare Professionals		Primary (Core)	Noticely data was proven young account forcement of Caraba pallocation to miles provincial and sensitive investments of parks and experiments of the sensitive of the sensitive of the sensitive of the provincial of the provinci of the provincial of the provincial of the provincial
Alberts Immunistation Policy: 9 Restrice Immunistation Schedule for Alberta	2020	intentingen allerna en der einer Statt ist 44.09-4094. (1471) Statt für statt and statt 1974 (1471) Statt Forestenen Kink (107 1471) Statt Statt aller der einer Statt (1974) (1471) Statt Statt aller der einer Statt (1974) (1471) Statt Statt aller der einer Statt (1974) (1471) Statt Statt (1974) Statt (1974) (1471) Statt	Government of Alberta	Fegg pilotsomere reket var Venar Venerk 2007 pilotsatt Tourish's 2007 att Fegg pilotsomere reket var Venar Venerk 2007 pilotsatt Tourish's 2007 att of more than 2008 att 1000 att	Health Practitioner and General Public		Primary (Core)	Included fully as primey (over) document because the constat directly impacts increasing any prosts and guardiants (stronged for leading participants of the calcuss statuses) and mesower, is developed for heading participants to then guide active advect protects web.
10 Alberta Invessitation Policy (oplated February 25, 2021)	2021	Mins form alberta, cateshirationship	Government of Alberta (open alberta ca)	General reservices. Links are generalized and here is a boof mostion of the XIP and its that assume, the most recent variant of the AIP is recommended for reference.	Alberta Healthcare Professionals		Primary (Core)	lacked fifty as a primary policy decount because while fore is no direct section of tenningunity per st, the section of a section of the section of the section of applicable and relevant to intringunst. Therefore this document is of lary redunce to this CNA and
Alberta Public Health Act: Part 3 (Chapter P-37) - Communicable Ducance and Public Health Emergencies	2021	https://www.op.il/setia.co/1266. cfm?upgreP17. cfm?upgreP17. 180779818426&display=html	Government of Alberta - Laws Online Catalogue		Alberta Queen's Printer, Government of Alberta Ministry of Health, Alberta Health		Primary (Core)	Included failing on primary pelety descented between the evolution is specifically one communicable diseases adulating to infections durations and securitations. Moreover, there are various aspects of this pelety document that mories aches and regulations mound the infections aduces control, effective docume specific and the infection optical of disability to a general disability of the document opticable is the children of moving and security optical activity and and the infection of the specific security optical activity and security optical of disability optical activity and activity optical
12 Alberta Immunization Strategy 2007-2017 (effective Feb 2007)	2007	https://spen.alberta. existinaetic/771edd4-c677-45a2- 9bff- 1224711d0x15/resourceic/761d47 122541900255440ex/biol/immun ization-strategy-07.pdf	Government of Alberta (open. alberta ca)	Decement mentions visiblessed. This strategic document serves to good the increase of mean strategic servers. A Money of the increase of the strategic servers in Hadrance Accounting 2. Improve Linablage Tochnology 3. Strategicture Parenell Factorians and Concounting. 4. Strategic Proceedings 5. Strategicture Parenell Factorians and Researching Proceedings Strategic Processing Strategic Particle Strategics Particle Strategies Particle Stra	Alberta Health Service Staff and General Public		Secondary	Included fully as a scondary polycy guidance document because this strategic guidance document (guide) provides contextual or dokance on the intralegic quida the lad for system to increase the immutation and of the guided document of the strategic quida the lad of system of the strategic document of the policies have been (2017) and all are (2014-source) a document of the strategic document policies have been (2017) and all are (2014-source) a document of the strategic document.
13 CATMAT Statement: Pediatric Travellers	2010	http://www.cenada. exitin/tolice beath/www.centoperts. politicationer/conada- communicative-disease-report- col/interthic-disease-report. htmase-report-anada- communicative-disease-report. html	Public Health Agency of Canada (Government of Canada)	In this decrement, two workson of periodic transportance (detected as first gluces) in "Decrement presentation (Parameter Research and Parameter Research and Parameter Research Parameter Research Resea	Public Health Agency of Canada for dissemination to investigation of the medical community covering for travellers')		Secondary	Included fully as a soundary policy gadance decounts because this document was referred to by the accompany of Cr. Poly document on momentation of avoid on extraction to the the Crandual homestation of the document of the soundary of the soundary of the soundary of the soundary of the soundary and the document of the soundary of the soundary of the soundary of the soundary of the soundary because of the soundary soundary of the soundary of the soundary of the soundary because of the soundary soundary of the soundary of the soundary of the soundary because of the soundary soundary of the soundary of the soundary and the soundary of the soundary of the soundary and the soundary of the soundary of the soundary attempt of the soundary soundary of the soundary attempt of the soundary because the soundary attempt of
14 Fase Child's Best Short A parent's guide to vaccination, 4th edition	2015	htm://bookstor.ens. extended.ensility.voor.eksility.boor. heide-apeure-milectur. xaccimation-tile-offician	Canadian Pediatric Society via ImmunizeCanada	Theor Chief Reer Shot, a provert gende in securitorias in the only comprehensive Genation replement writes applicable for parsons, it assures a positions such as these my shift and all and the second second second second second second second second second second remain and applicable field and finite figures. The applicable for the second seco	New Parents, Public Health Units, Physician' Offices, Coremonity Health Contros and Local Libraries		Secondary	Included fully as a semanlary poly guidence decommer given the wide and/out it is domped for the spectrum it states it effects anyoned for second-solution points, information above seconds for fining two real controlling interpretent frequencies and anyone of and even seconds of the second second second second second second second and the second seco

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Government of Canada: "lisar Child J Faccination Schuhle" (medified - presumitiky also published - January 2018)	2018	https://www.healthycanadians. ps:calarpst/ascintism: scholule/index-cng.php	Government of Canada	Advice is given to presents (Alwayska giving guestion schwing this - the target induces - the advice - given that - gives a schward - give	General Public; Parents; Guardians	Secondary	Redulad fally as a sensalary pilety politime: document because this simple resource in directly designed for use by parents, very much of importance to investigator parents and therefore of part reference to this CPA andy
17 <i>A Parent's Guide to Faccination</i> (published Jun 2018)	2018	https://www.canada. ca/co/publics health service/publications/healt he_living/publications/healt he_living/publications/health parents_public vace/health_living_ parents_public vace/health_living_ parents_public vace/health_canpulger/ epik_footg	canada.cs: Public Health, Agency of Canada,	The paids in an information resource for parent going into intricate deal short the importance of childhood vaccination, il the space and programs for various Vaccine Preventable ender the standard state of the second state of the state of the state of the state stards are based and public Vaccinated, what to do if a ranner immunization short is manifered and explorations of various other mark scenarios, and a deckbin for your child's vaccination.	Parents of all origins and life pathways living in Canada	Secondary	Included fully as a secondary policy galaxies downest because allowaph for revuew is not targeted to the invitagent population, it is out very retreast in mitigrams and host chalkes. The attenuation followed with a structure of the second
More Information about the International Department - For Headbarr Processionals (published October 2019)	2019	https://www.alketa. methanov/10.alketa/1.4645 4844 https://doi.org/10.4645 https://doi.org/10.4645 https://doi.org/10.4645 totts/10.46455totts/10.4645 totts/10.4645 totts/10.46455tot	Government of Alberta (open alberta ca)	This document needed along philoson on a second sing begin the document on their mediate frammatisms lengthening of a Abren Marko Hank to C. The Regulation consideration momentum sequences and the second second second second second second second second second second second second second second second design of the second dimension of factors (164) and (164) and (164). The second seco	Albeta Healthcare Practitioners, Healthcare Professionals	Secondary	Included fully as a scendary policy galaxie document berma it explains the Immutation Regulation section of the Abben Palaci Halla Act as good deall speechadly with hashner producionals as the man togen palacies on the scala legislative (bench Police document on the and Immutation Regulation-poline of the Alben Palaci Halla Act.
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Health Information and Teals - 20 Immunization: California Immunization	2020	<u>hyn inskriði aðura.</u> náðarir Þar Califordi henrifsfriði syn	https://to-beakhuithetta.eg/	Children Insensions: "Fast association for a piloff and", "insension help", "engle, foll at the pilot of the pilot and pilot	Parents or Guardians in Alberta	Secondary	Included fully as a secondary pilety patience decouses because the source part into explicit deal about challends executions, personance comprisely on and impacting memory and person and four oblics. This document replicitly and person physical personance with the physical about replicit to the source and the physical person and the physical personance and the physical about person of the physical person person information for present with mercure to userias quotient the present data and . This document may provide metging in which of the charge participants in the data physical person of the information person of the information of the informati
Alberts Health Services: 21 Intensistation Program Standards Manuel Ispikost March 10, 3027	2021	<u>https://www.</u> albestalbaarliservices, gwinfolange/10002.app	alteratualitaerrices.ca	All International Popular Mondold Menal Is writes by Previous of the International Popular Mondol and Quelty and approach A vHS Madro (Oscinov of Isakh *** 1 a Nande An Aberr Hanh) (All Jonanization Policy for the use of providing Vision Theory and the State (State 1) and the State (State 1) and the Isakh and and "When Aberry and the State (State 1) and the Isakh and the Isakh and the Isakh and "When Aberry and the State (State 1) and the Isakh and the Isakh and Constants, the State 1 and the Isakh and the Isakh and the Isakh and the Constant Constant and the Isakh Aberry and Aberry (State 1) and the Isakh and Isakh and Isakh and Isakh Aberry (State 1) and the Isakh Aberry (State 1) and the Isakh and Isakh and Isakh Aberry (State 1) and Isakh Aberry (State 1) and Isakh Aberry (State 1) and and Isakh and Isakh Aberry (State 1) and Isakh Aberry (State 1) and Isakh Aberry (State 1) and and Isakh and Isakh Aberry (State 1) and Is	Health Professionals	Secondary	Included fully as a secondary pulse galaxie discounts because while this descents chards density matrix manipumb por at a dill as good enforcer relevance in intergrant access to secondaria in density matrix etc. This second with the Alexa Intermediate May (VLP) and descents and antimeters and any device discourse of the Alexa Intermediate May (VLP) and descents and antimeters are deviced descents of the Alexa Intermediate May (VLP) and the Alexa Intermediate and the Alexa Intermediate Intermediate May (VLP) and the Alexa Intermediate Intermediat
Alberta Health Services: 22 Information For Influenza Innuovization	2021	ht <u>p://www.</u> altertaballiservices. calisficenzalisficenza.sepc/	Government of Alberta Albert Health Services (AHS; albertahealthservices.ca)	"All Albertam, six months of age and older, are eligible to be immunized, fore of charge; however, this year, AISS is working with pharmacian and physicians to offer immunization to different age groups and decomprophys."	Parents with children between 6 morths and under 5 years of age residing in Alberta	Secondary	Included fully as a scendary policy galaxie descents because this is an updated policy resource featuring the 2025/2017 Alone International Program, and while it does not necessarily how durit of immegrants and for the state of the federate galaxies. The adjuncts international policy of the state of the state of the state of the state of the federate galaxies. The adjuncts internation plot for the state of the state of the state of the state of the federate galaxies. The state of the state of the state of the state of the state of the product of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of
Journation and running     Journation and running     December 2020, effective January 1,     2021)	2021	https://www.afbetts. existences/afbetts. exhedule.aex	Georement of Allorita (alberta ca), Manage your health > Discase prevention and surveillance	The general resource motions 'shift and 'shiftson' and 'shiftsond'. "Summaring an achedate ensures you shift go the measurum possible protection from vacates percentable diseases and grees your shift for the meaning possible."	General Public; Parente; Guardians	Secondary	lackaded dog as a primary policy document bocases for resource provide general policy on vaccinetors to all metrics of managent and effager parent in Advents this document policy, the policy document dees possible are extensively durind and updated vortice minimization schedule pflicative as Advents as (Jan 2021).
24 Apharese Instantiation Program	2021	<u>Mins Paron</u> albertale Marrises, cutarers be Almine Ins. aptare 2014 (19 pdf	AHS Province Wide Immunization Program Team	The following excepts may be of interest in maximizing in the CPA. "Adversa's Influenza Interactions: the Party proposed on plotticly defined regiments are used prof. In the function of the advectory of the Party provides of the Party and Party and Party and the Party and the Party and the Party and	Healthcare Practitioners	Secondary	helded fdly as a sundarp påley galvanc Assessed bezue flu doment provides support for for prinary påley dansester Malten influenza summannen Poly. This doesnest, skilt as strontining mengensas at here children in principle, all skores (see generet) formal officers are hildre taken to ASS andardine to children and the strong strong strong strong strong strong strong strong strong strong statistical strong strong strong strong strong strong strong strong provides strong strong strong strong stron
25 Harrison for Children: Deciding to Herritonic	2021	https://www.canala. categitudate. categitudate. cataloca.text	Government of Canada	The page is very early serigitable, with licks to the following main sections that of the up with a section of the section of	Canadian Peretts and Guardians	Secondary	Solubil d $\beta_{1}$ or a country phonon it bound for resource periodic periodic defension way would be including any process which it is associated associated by the second secon

			Note: The li	aks in this table are active [as of 03/2021], however the links current functionality may change	in the future.												
	TABLE 3: Evaluation Table for Primary Documents (Policies AND Policy Guidance)						STANDARD POLICY DETERMINANTS								EQUITY-BASED POLICY DETERMINANTS		
						1	2	3	4	\$	6	7		,	10	11	12
	Primary Selection Jocument Code	Alberta-Jurisdictional Policy Document Title	Publication Source	Citations	Publication Year (Descending: Recent to Past)	Online Navigation and Accessibility	Policy Background	Goals and Aims	Public Opportunities for Consultations or Community Engagement	Insight into Funding Sources or Access	Obligations	Potential for Public Health Impact	Data Collection	Catch-Up Faccinations	Vaccination of Children of Invirignants	Vaccination of Children of Precarious-Status Im/migrants	Data Collection Accounting for Ethnocultural Diversity and Immigration Statuses
1	x	Public Health Act: Part 3 - Communicable Diseases and Public Health Emergencies	Greenment of Alberta - Lawe Online Catalogue	Generations of Alberta (2021c). Public Health Act: Part I - Communicable Diseases and Public Health Europeacies: Databash Printer, Reviewed from https://www.ea.alberta.col/201c.clm2 page=P21.clm2king_treps=Actakubackwe22027791114226dataphy=heal_	2021	N	¥	Y	N	N	¥	¥	Y	N	N	N	N
2	IA	Alberts Immunitation Parkey (AIP) - "Updated February 25, 2021" but each separate component of this AIP decument has different revision dates franging from, 2014 to 2021)	Gevenament of Alberta (open alberta ca)	Government of Alberta (2021a). Alberta Jonnaetzetion Policy (AIP), open alberta ca. Retrieved, from https://open.alberta.ca/albaset2aja.	2021	Y	Y	Y	¥	¥	¥	¥	N	N	N	N	N
з	IX	Alberta Influenza Immunization Policy (IIP) - Updated June 12, 2020	Government of Alberta (open alberta Cal	Generations of Alberta (2020b). Alberta Informac Innovations Policy (IIP), open alberta ex- Entereval from Propositional alberta existence alberta informationation: patheolike	2020	N	N	Y	¥	¥	¥	¥	Y	N	N	N	N
4	28	Provincial and territorial matter and catchap. reactination echanicle for referent and children in Canada - Updated December 2020	Government of Canada	Debic Health Assesses of Canada (2020a). Provincial and servineral results and canadage, parcetantian schedule for informational children in Consults. Canada can Astronomburght the new or canada canadage instelle children in the canada Canada canada and anno information prevancial continent in southing succession any approximation for the children bend information prevancial continent in southing succession any approximation for the children bend	2020	Y	N	Y	Y	Y	¥	Y	N	¥	N	N	N
5	2X	Albertis Immunization Parley: Routine Immunization Schwide for Alberts - Revised November 2020, Published December 2020. Effective January 2021,	Gevenament of Alberta (open alberta Etil	Geostment of Alberts (2020a). Alberts Jonas Station Paller: Router Childrood Annual estimation Scheduler, open alberts of Retrieved from http://pen.ilberts.cs.datase/2021154-0189-0002- 000511111100020000000000000000000000000	2020	Y	Y	Y	¥	N	Y	¥	N	N	N	N	N
6	3С	diberts Immutization Policy: Roles and Responsibilities - Published Soptember 2019	Government of Alberta (open alberta, ca)	Government of Alberta (2019). Alberta Jonawisation Policy Atomaction: Role and Economications Retrieved from Itera Contra alberta calatases/214110424-109-40924955 (117111995) (accounted biol/22020-271-46co-16o1-47144553/2144/occoledata programbilitare vascing consider and	2019	Y	Y	Y	Y	¥	Y	¥	N	N	N	N	N
7	4D	Alberta Immunization Policy: Elizibility Criteria for Prostecuity Fundal Viccines in Alberta - Revised September 2018	Government of Alberta (open alberta <u>GD</u>	Geventment of Alberts (2015a). Alberts Jonas Station Public Jonabarian - Kliphilly, Betrieved Feet Jonas Jonas and Anton (1511) 10-14-149-1403-0505 11/11/19/21 (2016). Albert Johns - Bile-India - Gli Indender Johnson Jaip - strendartion- etaphilizzaki,	2018	Y	Y	Y	¥	¥	Y	¥	N	N	N	N	N
8	5E	diberta Regulation 182/2018 Public Health Act - Immunization Regulation Extract_	Government of Alberta (open alberta Cal	Government of Alberta (2015b). diberta Repulsion 1822/018 Public Houlds Act - Immunitation Repulsion Tomers County Primar Retrieved Ioan Miteranana alberta cardinanat2018 (152):europeables Ioan - 2002–2029-2016-2016/12206622	2018	N	N	N	¥	N	¥	¥	N	N	N	N	N
,	6F	diberts Immunication Policy: Background - Revised September 2018	Government of Alberta (open alberta <u>GD</u>	Government of Alberta (2018c). Alberta Januarization Policy Antiodection: Reckground appr. alberts ca. Kettiged fram: https://www.alberts.calaraction/incourse/do/2111/5646-4332; 2528-bei/cf/220172-forming/AlP-articlection-Inclusional pdf.	2018	Y	Y	Y	Y	N	¥	¥	N	N	N	N	N
10	76	Immunitation of travellers: Canadian Immunitation Guide - flast complete chapter revision: April 2017)	Government of Canada	Government of Canada (2017). Journalization of preveilers: Canadian Journalizations Gaide. Part 2: Vaccion of Special Populations. Canada ca. Editional from: https://www.canada.ca.in/publics handle.cancer.org/and/canada-and/can and/canada-and/canada-and/canada-and/canada-and/canada-and/canada-and/canada-and/canada-and/canada-and/canada-an	2017	Y	Y	Y	N	N	¥	¥	N	N	¥	N	N
11	8H	Immunization of persons new to Canada: Canadian Immunization Guide (Iast complete chapter revision: Isby 2015)	<u>Government of</u>	Government of Canada (2015). Journalization of periods new an Canada: Ganadian Journation Gaide 2015. Vaccine of Special Papulations. Crank on: Retrieved France. https:// comm.crankia.com/article-bables-incom/philosombathes-bables-forma-common-incomentation- gaide-part-1-succession-specific-population-page-10-internationation-persons-new-canada.html.	2015	Y	Y	Y	N	N	¥	Y	N	N	¥	Y	N

				aks in this table are active [as of 03/2021], however the links current functionality may chang	ity may change in the future. STANDARD POLICY DETERMINANTS							Y = Policy Determinant Fulfilled, N = Policy Determinant Not Fulfilled EQUITY-BASED POLICY DETERMINANTS						
	TABLE 4: Eva	luation Table for Secondary Documents (Policies AND	Policy Guidance)				2		Y DETERMINAN 4	15 5		7		,	EQUITY-E	IASED POLICY DI	TERMINANTS 12	
	Secondary Selection Document Code	Alberta-Jurisdictional <u>Policy Guidance</u> Document Title	Publication Source	: Citations	Publication Year (Descending: Recent to Past)	Online Navigation and Accessibility		3 Goals and Ains	Public Onnortunities for	Insight into		Potential for	Bata Collection	Catch-Up Vaccines	Vaccination of Children of Im/migrants	Vaccination of Children of Precarious-Status	Data Collection Accounting for Ethnocultural Diversity and Immigration Statuses	
1	x	Enceines for Children: Deciding to Enceinate	<u>Government of</u> <u>Canada</u>	Generation of Counds (201a). Excision for Children: Deviling to Excision: Retrieved, form, https://www.canada.co/wipebic-beth/carvicer/sec/indexine-children.html,	2021	¥	N	¥	N	Ν	¥	Y	N	N	N	N	N	
2	X2	diberta Health Services: Information For Influenza, Immunization	<u>Alberta Health.</u> Services.	Alberta Health Services (2021a). Jeformation for Johnson Jonussituation. Betrieved from, https://www.alberthealtheoryices.ex/influenza.influenza.appi.	2021	¥	Ν	¥	Y	Ν	¥	Y	N	N	N	N	N	
3	Х3	Alberta Health Services: Immunitation Program, Standards Manual (updated March 10, 2021)	Alberta Health Services	Alberts Health Services (2021b): Amountainties Program Standards Manual: Reviewed free- https://www.albertshrakharvices.ca.info/pape10002.apx,	2021	¥	Y	Ŷ	Y	N	¥	Y	Y	N	N	N	N	
4	X4	Influence: Immunication Program Update (March 2021)	<u>Alberta Health</u>	Aberts Health Services (2016). Johnson Annuationson Program Update - March 2021. Abertshalthursten of Removed Iron. 1910 - Store Shertshalthursten, extension from Northern International 2012 03: <u>ed.</u>	2021	N	N	Y	Y	Y	Y	Y	Y	N	N	N	N	
5	1	Immunitation and Rostine Immunitation Schedule_ (effective Immury 1.2021)	<u>Government of</u> <u>Alberta (GoA)</u>	Generation of Alberta (2021b). Journalization and Bastine Journalization Schedule. Betwieved Journalization contrastructure contrastructure and the same	2021	¥	N	¥	N	N	¥	Y	N	N	N	N	N	
6	IX	Health Information and Tools - Immunitation: Childhood Immunitation	Government of Alberta (myhealth alberta ca > Health Information and Teola)	Generation of Alberta (2020c). Hashi Jefernation and Tasle Childhood Journationium. Retrieved from: http://my/hashi/alberta/alberta/2020c/3/ideod-Jerenerations.app.	2020	N	N	Y	N	N	Y	Y	Y	N	N	N	N	
7	1-2X	Albertic Netcare Learning Center - Immunization, Regulation Information	<u>Government of</u> <u>Alberta - Alberta</u> <u>Netcare Learning</u> <u>Centre</u>	Generation of Alberta (2020). Alberta Netour Learning Contex - Immunitation Resistant Adversation: Reviewed Inter: May Use on International enforcement of Network Inter Steven	2020	Y	Y	Y	N	N	¥	Y	Y	N	N	N	N	
8	1-3X	More Information about the Immunication Regulation . For Healthcare Professionals	<u>Generationi of</u> <u>Alberta (open alberta</u> <u>ca)</u>	Generation of Alberta (2019). More deformation about the formation are Resolution. Fair, doublesser Professionals, Retrieved from Alberta statement to a statement to a Statement March 2018 (1918). Belle: ATT at Alberta (2019). The annual Hard Alberta and Alberta and Alberta (2019). International f.	2019	Y	Y	Y	N	N	Y	Y	Y	N	N	N	N	
,	IA	d Parent's Guide to Faceination (published Jan 2018)	Generation of Canada	hblic Hallh Agency of Canada (2018). A Prover's Gaste as Faccination. Retrieved from: http://www.canada.cs/extent/storphic-are/documents/arriver/aph/cations/heal/to- http://area/area/area/area/area/area/area/ar	2018	¥	Y	Y	N	N	¥	Y	N	N	N	N	N	
10	2	Generation of Canada: "New Orbid's Excention, Schedule"	<u>Government of</u> <u>Canada</u>	Geventment of Alberta (2018). New Child's Facebookie Schedule: Retrieved from: https:// classes.healthycenadians.gc.ca/appn/saccination-schedule/index-eng.php.	2018	Y	N	¥	N	N	¥	Y	N	Y	N	N	N	
11	28	National Immunication Strategy: Objectives 2016 – 2021 <u>= "Budger 2016"</u>	<u>Government of</u> <u>Canada</u>	Public Health Agency of Canada (2017). National Instantation Strategy: Objective: 2016- 2021, Canada and Reference Origin. Physics Canada and Antonio Strategy. Intelli-Strategy of Canada and Canada	2017	¥	Y	Y	N	Y	Ŷ	Y	N	N	N	N	N	
12	3C	Your Child's Best Shot : A Parent's Guide to Vaccination	<u>Canadian Paedattic</u> <u>Sociaty</u>	Ornation Publicly: Society (2017). Tase (2014): Rost Shot: A Person't Golde in Euconomic- th Edition. Retrieved from Jirms Jorokoms epis as inteledential year-childe-bott-dut-ag- prostin-and-do-to-sacination-4th-offmen.	2015	N	N	¥	N	N	¥	Y	N	N	N	N	N	
13	4D	CATMAT Shatement: Podistric Tenvellerz	<u>Government of</u> <u>Canada</u>	Pable: Hallb Agency of Canada (2020). Constitute to Advice on Empirical Moderate and Energy Structures on Poderate Populary. Frank Constraints Robinson: Boost (CCRR), Advintary 2010; Marcania To, Bertover data (1998). In the Constraint CCRR, and Constraints and Constraints and Constraints and Constraints and the Constraints of Constraints and Constraints and Constraints and and Constraints and communicable disease experimentals constraints.	2010	¥	N	Ŷ	N	N	¥	Y	N	¥	¥	N	N	
14	SE	Alberta Immunitation Strategy 2007-2017 (effective Feb. 2007: Inst updated May 2017).	Government of Alberta (GoA)	Generation of Alberta (2007). Alberta Innovation Strategy. 2007-2017. Retrieved from https://open.alberta.co.publications/072833502.	2007	N	Y	Ŷ	Y	Y	Ŷ	Y	¥	N	N	N	N	



		Figure 3: Reccommended C	hildho	od Vaccinations (Alberta vs. Interr	ational - WHO)						
	Figure 3A: Albert	ta Vaccination Schedule (2021)		Figure 3B: International (WHO) Vaccination Schedule (2020)							
	Age of First Dose	Alberta Vaccinations		Age of First Dose	WHO International Vaccinations						
1	2 months	DTaP-IPV-Hib-HB, Pneumococcal conjugate (PNEU-C13), Rotavirus	1	"As soon as possible after birth"	Japanese Encephalitis 1, BCG						
2	4 months	DTaP-IPV-Hib-HB, Pneumococcal conjugate (PNEU-C13), Meningococcal conjugate (MenconC), Rotavirus	2	"As soon as possible after birth < 24 hrs"	Hepatitis B Option 1 and Option 2						
	6 months	DTaP-IPV-Hib-HB, Pneumococcal conjugate (PNEU-C13) (for high-risk children only), Rotavirus	3	4 weeks	Hepatitis B Option 1 (3 doses) and Option 2 (4 doses) - 4 week min with DTPCV1 and DTPCV2 respectively. Polio bOPV + IPV (4 weeks min with DTPCV2 - 2 doses and DTPCV3 - 3 doses), DTP-containing vaccine (4 weeks min to 8 weeks) - 3 doses, Haemophilus influenze type b Option 1 (4 weeks min with DTPCV2) and Option 2 (4 weeks min if 3 doses), Pneumococcal Conjugate Option 1 Sp + 0 - 3 doses,						
3	6 months+	Annual Seasonal Influenza	4	6 weeks	DTP-containing vaccine, Haemophilus influenzae type b Optic 1 and Option 2, Pneumococcal Conjugate Opton 1 3p+0 and Option 2 2p+1, Rotovirus (with DTP1) - 2-3 doses depending on product, Measles 2 shots, Japanese Encephalitis Inactivate Vero cell-derived (2 doses generally), Seasonal Influenza (inactivated tri- and qudri-valent) - 2 doses Varicella - 4 week to 3 months per manufacturer recomendations.						
4	12 months	MMR-Var, Pneumococcal conjugate (PNEU-C13), Meningococcal conjugate (MenconC)	5	8 weeks	Polio IPV/bOPV Sequential, Polio IPV, DTP Containing Vaccine, Haemophilus influenzae type b (if only 2 doses), Pneumococcal Conjugate Option 2 2p+1 (2 doses), Meningococcal Conjugate (MenC conjugate; 2 doses)						
5	18 months	DTaP-IPV-Hib, MMR-Var	6	2-11 months	Menningococcal - MenC Conjugate (first dose), 2 doses at an interval of at least 2 months and a booster a year later.						
6	4 years	dTap-IPV, MMR-Var (if did not get at 18 months)	7	9-12 months	Yellow Fever (1 dose - 9-12 months with measles containing vaccine)						
7	Grade 6 (~11 yrs)	Hepatitis B (2 doses, 6 months apart), HPV (2 or 3 doses over 6 months)	8	9-18 months	Booster dose of Pneumococcal Conjugate Option 2 2p+1, Meningococcal - Men A Conjugate (5µg)						
8	Grade 9 (~15 yrs)	dTap, MenC-ACYW	9	12-18 months	Mumps (1st dose - 1 month min to school entry, 2 doses in total) with measles containing vaccine, Varicella (1-2 doses) with first dose four weeks to three months per manufacturer recommendations.						
			10	9-23 months	Meningococcal Quadrivalent Conjugate - 2 doses with first do after 12 weeks						
			11	6 months and up; 6 months +	Seasonal Influenza (inactivated tri- and qudri-valent), Typhoid TCV (Typbar)						
			12	1 year and up	Hepatitis A						
			13	2 years and up	Typhoid Vi PS, Cholera Dukoral (WC-rBS), Menningococca 1-dose > or = 2 years of age).						
	DATA	SOURCED FROM:	14	2-5 years	Cholera Dukoral (WC-rBS) - 3 doses						
	Figure 1A:	Alberta Health Services (2021d). Routine. Immunization Schedule. ImmunizeAlberta.ca. Retrieved from: https://www.albertahealthearvices. ca/assets/info/hp/cdc/if-hp-cdc-ipsm-routine-imm- schedule.pdf	15	6 years and up	Cholera Dukoral (WC-rBS) - 2 doses						
	Figure 1B:	World Health Organization (2020). Table 2: Summary of WHO Position Papers- Recommended Routine Immunizations for Children. Retrieved from. https://www.who. int/immunization/policy/Immunization_routine_tab le2.pdf.	16	9 years; 9 years +	Dengue (CYD-TDV) - 3 doses (9 years of age minimum), Seasonal influenza (inactivated tri- and qudri-valent) - 1 dose (revaccinate annually)						