



COVID-19 School Re-opening Plans: Rolling Back School Food Programming in Canada?

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At the beginning of 2020 national school food programs reached more children than any time in history making school food programs the most extensive form of social safety nets in the world. Looking to Canada, school food programs across the country serve more than 1 million students and provide multifaceted benefits including access to healthy fresh food choices, improving learning capacities, promoting nutritional awareness, assisting food-insecure households, and promoting local food procurement. However, since the beginning of the SARS-Cov 2 (COVID-19) pandemic these programs have faced operational challenges resulting in many rolling back their operations while food insecurity rates in Canada have increased dramatically. Framed as a Canadian case study analysis, this paper considers the discursive effects of provincial and territorial school reopening plans and the material consequences felt by SFPs. Specifically, this paper considers the reach, effectiveness, adoption, implementation, and maintenance of provincial and territorial school food programs within the broader conceptualization of ecological public health to consider if these programs were enabled or constrained by school reopening plans. The authors conducted a policy analysis of 57 primary and 164 supportive school reopening documents developed between April 2020 and September 2021. It was found that provincial and territorial school reopening plans primarily focused on measures to limit infectious disease transmission while food discussed in broad terms demonstrated policy makers' limited awareness of the important role of school food programs and support required to maintain them. In turn, two key observations were made: 1) government school reopening plans have overlooked the benefits of school food programs in Canada, and 2) school reopening plan designers missed opportunities to improve school food programs. This paper argues a thorough understanding of the impacts to school food programs by provincial and territorial COVID-19 public health guidelines is needed for politicians, policymakers, and school food practitioners to support the short- and long-term capacity of these programs and to ensure food insecurity and nutritional health issues in Canada continue to be on the political agenda.

Keywords: schools, coronavirus, student health, food security, school food program, mandates, implementation, monitoring

INTRODUCTION

Pre-pandemic, “690 million people... were already undernourished, 135 million in 55 countries were food insecure or worse, and 2 billion people did not have regular access to safe nutrition and sufficient food” (FAO et al., 2020; Food Security Information Network, 2020; Borkowski et al., 2021, p. 6). In response, countries that have adopted school food programs (SFPs) see these programs as providing some level of mitigation (short- and long-term results varying) in response to rising food insecurity rates (Roustit et al., 2010; Heflin et al., 2015; Bauer et al., 2021) in addition to a host of other benefits including: increased student access to and consumption of healthy foods, reduced risk of chronic diseases, enhanced school attendance (Bundy et al., 2012), improved behavior and cognitive mental well-being (Hoyland et al., 2009), improved food literacy and food skills, and strengthened local food systems (Powell and Wittman, 2018). At the beginning of 2020, SFPs reached more children than any time in history making SFPs the most extensive form of social safety nets in the world (World Food Programme, 2020). However, by the end of 2020 the World Food Programme (2020) predicted that in the wake of the coronavirus SARS-CoV 2 (COVID-19) 121 million more people faced acute food insecurity.¹

Despite the many benefits of national SFPs experienced elsewhere, Canada remains one of the only member organizations of the Organization for Economic Cooperation and Development (OECD) and of the G7 countries without a national school food program². Historically, SFPs in Canada have been relatively informal, largely run by volunteers with significant portions of community-raised funds. Prior to the pandemic, a minimum of 1,018,323 JK-12 Canadian students³ participated in free breakfast, snack and to a lesser degree lunch programs. These SFPs have multifaceted, but varying mandates (Ruetz and McKenna, 2021), with benefits including access to healthy fresh food choices, improving learning capacities, promoting nutritional awareness, assisting food-insecure households, and promoting local food procurement (Oostindjer et al., 2017). Together, provincial and territorial governments contributed over \$93 million to partially fund a minimum of 6,408 programs in 5,371 or at least 35%⁴ elementary and secondary schools (Ruetz and McKenna, 2021). The majority of provinces and territories partner with one or more non-governmental organizations (NGOs) and rely heavily on NGO staff and volunteers to operate. SFPs are distinct from school board-controlled cafeteria services which are not connected to or funded by provincial and territorial governments.

¹Food insecurity is understood as “the inadequate or insecure access to food because of financial constraints” (Tarasuk and Mitchell, 2020: p.3).

²The growing health promotion mandate of SFPs is supported by calls from the Coalition for Healthy School Food, a group of over 145 school food organizations, advocating for a universal, health-based National School Food Program in Canada (Coalition for Healthy School Food, 2018).

³A conservative figure as student participation data was unavailable from Saskatchewan, British Columbia, Northwest Territories and was only partial data from Québec and Ontario.

⁴A conservative figure as schools participation data was unavailable from BC and only partial data was from Saskatchewan.

While provincial and territorial SFP implementation guidelines exist, in practice, the structure, function, and operation of individual SFPs vary. In turn, prior to the pandemic, SFPs were not provided the necessary support to meet the program demand and address underlying program tensions (Russell et al., 2008; Winson, 2008; de Wit, 2012; Ismail et al., 2021; Ruetz and McKenna, 2021). Specifically, Canada’s patchwork nature of SFPs precludes universal access resulting in SFPs often being framed as short-term solutions for the food insecure. Further, nutritional guidelines and “healthy food” have not been prioritized across all Canadian SFPs—a reflection of outdated evidence and practices. In 2019, however, the federal government announced its intention to “work with provinces and territories toward the creation of a National School Food Program” within the country’s first national Food Policy (Government of Canada, 2019), presenting an opportunity to expansion and formalization.

Framed as a Canadian case study analysis, this paper considers the discursive effects of provincial and territorial school reopening plans (i.e., government documents guiding the reopening and operation of schools) and the material consequences felt by SFPs. Specifically, the authors asked: to what extent were SFPs’ multi-faceted mandates enabled or constrained by provincial and territorial school reopening plans between April 1, 2020, and September 30, 2021, and what might be the repercussions? The authors conducted a policy analysis of 57 primary and 164 supportive school reopening documents developed between April 2020 and September 2021 and evaluated the reach, effectiveness, adoption, implementation, and maintenance of SFPs within the broader conceptualization of ecological public health. It was found that provincial and territorial school reopening plans primarily focused on measures to limit infectious disease transmission while food discussed in broad terms demonstrated policy makers’ limited awareness of the important role(s) of SFPs and how the plans inadvertently constrained SFPs’ ability to achieve a range of positive outcomes. In turn, two key observations stand out: (1) school reopening plans overlooked the health-related benefits of school food programs in Canada, and (2) school reopening plan designers missed opportunities to improve school food programs. This paper argues a thorough understanding of the impacts to SFPs by provincial and territorial COVID-19 public health guidelines is needed for politicians, policymakers, and school food practitioners to support the short- and long-term capacity of these programs and to ensure food insecurity and nutritional health issues in Canada continue to be on the political agenda.

This paper is organized into five sections. First, a literature review contextualizes the modern tensions that constrain the contours of SFPs in Canada. Second, we introduce the RE-AIM framework (Glasgow et al., 1999; Glasgow and Estabrooks, 2018) within the broader conceptualization of ecological public health situating our research on SFPs in Canada. Third, we present our findings: how food in schools has been impacted by COVID-19 health and safety protocols. Fourth, we critically examine the effects these protocols have on the various objectives of SFPs in Canada as demonstrated within provincial and territorial school reopening plans. Finally, we conclude with recommendations.

CONTEXT AND LITERATURE REVIEW

COVID-19 in Canada

The World Health Organization declared the COVID-19 outbreak a public health emergency of international concern on January 30, 2020, and a pandemic on March 11, 2020 (Canadian Institute for Health Information, 2021a). During 2020 and 2021 COVID-19 vaccinations were anticipated to help curb severe illness and death caused by the COVID-19 virus, as well as the impacts the pandemic placed on Canadian health care systems (Science et al., 2021). Prior to and during vaccination roll out, the Canadian government focused on surface sanitization, physical-distancing recommendations, capacity restrictions, and mask mandates to reduce transmission (Canadian Institute for Health Information, 2021b). In the spring and summer of 2020, the Government of Canada published the *Government of Canada's List of Hard Surface Disinfectants and Sanitizers* (Health Canada, 2020b) and *List of Hand Sanitizers* (Health Canada, 2020a) and by September 2020 all provinces and territories adopted these guidelines into their regional reopening plans. Regarding physical distancing, Canada followed the World Health Organization's (2020, 2021) guidance that "people standing <1 m away from an infected person were much more likely to catch the virus than those standing more than 1 m away." Taking further precaution, Canada instilled physical recommendations of 2-m in all public and private spaces. Compared to the World Health Organization (2020, 2021) and other countries' requirements like Italy and Germany (1.5 m) and the United States (1.8 m), Canada's physical distancing recommendation was the largest (D'Amore, 2020). Provinces and territories followed suit adopting 2-metre physical distancing requirements in all public spaces (e.g., schools, government buildings, public transit) and private entities (e.g., grocery stores, restaurants, factories).

Capacity restrictions for public and private spaces varied between jurisdictions and fluctuated between 50% and higher depending on active cases and vaccination rates (Pass-Lang, 2021). Mask mandates were not consistently adopted across provinces and territories. Early in the pandemic the Government of Canada did not take a clear stance on mask use arguing not enough data was available at the time (Canadian Press, 2021); however, by June 2020, (Public Health Agency of Canada, 2021) recommended the wearing of either medical or non-medical masks to slow the spread of COVID-19 based on evidence that masks reduce the spread of respiratory droplets (Chung, 2020). Some provinces and territories, such as Ontario, quickly adopted mask mandates and kept them in place throughout the pandemic while others, such as Saskatchewan, fluctuated between implementing and rolling back mask mandates over time and in response to rising/declining case numbers (Chung, 2020).

Additionally, early in the pandemic, it was unclear if people could contract the virus from food and food packaging. Following the lead of the World Health Organization (2020), the Government of Canada (2021a) acknowledged that it was highly unlikely for COVID-19 to be contracted from food or food packaging because, as a respiratory illness, the primary transmission was through person-to-person contact and direct

contact with respiratory droplets generated when an infected person coughed or sneezed; the virus required an animal or human host to multiply. In turn, the Government of Canada (2021a) took the stance that continuing to follow safe food handling and cooking practices was important for lowering the risk of infection and killing the virus that caused COVID-19 during the pandemic. This included: washing hands with soap and warm water for 20 s before and after handling food and food packaging or sanitizing hands with a federally approved hand sanitizer when water was not available, using common cleaning and disinfecting methods of food preparation and serving surfaces, washing fruits and vegetables with running water, cooking food to the recommended safe internal temperatures, and avoiding and cross-contamination with raw food or contaminated surfaces (Government of Canada, 2021a,b).⁵

Collectively, safe food handling measures were incorporated alongside sanitization, physical-distancing, capacity restrictions, and mask mandates in provincial and territorial school reopening plans to help curb the spread of the virus among children and young adults who were unable to be vaccinated as the country reopened following lock downs and the lifting of restrictions.

The Development of School Reopening Plans in Canada

In March 2020 provinces and territories closed schools. Initially the intent was an extended spring break; however, virtual at-home learning was instilled for the remainder of the school year (March–June 2020) with the aim of returning to in-class learning in September 2020.⁶ In June and July 2020 most provinces and territories released their school reopening plans. School reopening plans in Canada are documents generated by the provincial and territorial governments to guide the reopening process and operation of schools in their jurisdiction under COVID-19 restrictions. Each provincial and territorial reopening framework is available through a central document or provided across a slew of information outlets that are open access for the public, health professionals, and other governments to consider. Most provinces and territories developed these guiding documents within a broader framework for re-opening their communities and economy following the March 2020 nationwide lockdown.

Summer 2020 saw protests from parents and school staff across provinces and territories seeking more detailed guidance for a safe return. In response, some provinces revised and updated their plans while others did not. Provinces and territories also requested and were pledged \$2 billion in financial assistance from the federal government. By late September 2020 most schools across Canada had reopened. By November

⁵For further description and explanation of these practices see the Government of Canada's (2021c) General Food Safety Tips.

⁶Notably, Quebec reopened elementary schools on May 11, 2020 (Montreal area delayed until May 25, 2020) situating the return of students as optional for families. However, high school and junior college students did not have the option to return until the fall (MacLoed, 2020). Many observed this move as risking youth's health and safety for parents to return to work and restimulate the economy (Monpetit and Loewen, 2020).

2020, however, the second wave⁷ of COVID-19 cases rose quickly across the country. Interestingly, political decision-makers focused on keeping schools open, and extended the winter break into mid-January for most provinces and territories. The third⁸ wave in Spring 2021 saw another sharp increase in cases. However, school closures were inconsistent across the country resulting in some reopening plans being further revised while others were not. Collectively, between April 2020 and September 2021 reopening plans predominantly focused on disease prevention health but did not provide clear direction for existing program operations, particularly SFPs. The rationale points to unaddressed tensions (McSheffrey, 2020).

Unaddressed Tensions: The Fork in the Road for Canadian SFPs

The patchwork of SFPs that exist in Canada are perceived, among other things, to curb food insecurity, and from this perspective, SFPs are viewed as essential programs (Bhattacharya et al., 2006; Public Health Agency of Canada, 2008; Coalition for Healthy School Food, 2020). Food insecurity in Canada is a serious problem linked to poor physical and mental health, premature death, and general material deprivation and particularly affects households with low incomes, lone-parent families, households who rent their housing, and those who identify as Indigenous or Black (Tarasuk and Mitchell, 2020). During the first wave⁹ of the pandemic, Canadian households with children were more likely to be food insecure than those without children, and households with unemployed persons were three times as likely to be food insecure than those with no employment status change (Statistics Canada, 2020). This period of the crisis resulted in federal, provincial, and territorial governments responding with the rapid funding of community food programs focused on emergency food, including alternatives to in-person SFPs. Canada's patchwork nature of SFPs precludes universal access and prior to the pandemic, SFPs were not provided the necessary support to meet the program demand and address underlying program tensions (Russell et al., 2008; Winson, 2008; de Wit, 2012; Ismail et al., 2021; Ruetz and McKenna, 2021). In 2020, Debbie Field of the Coalition for Healthy School Food explained the underlying tensions for both individual SFPs and a federally funded and mandated SFP were threefold.

First, "healthy food" is not prioritized across Canadian provinces and territories because nutrition guidelines are inconsistently written and applied to reflect outdated evidence and practices. Hernandez et al. (2018) note that New Brunswick

and British Columbia were the first provinces to introduce mandated standards for food served in schools (McKenna, 2003; Government of British Columbia, 2005), later followed by Nova Scotia in 2006 (Government of Nova Scotia, 2006), and Ontario in 2010 (Government of Ontario, 2010). Although it has been found that mandated health and nutrition standards have improved students' dietary intake (i.e., Ontario: Gates et al., 2011; Alberta: Fung et al., 2012; Nova Scotia: Fung et al., 2013; Manitoba: Child Nutrition Council of Manitoba, 2017), the breadth and depth of data is lacking. For instance, Everitt et al. (2020), note there are few research articles representing comprehensive data on SFPs. Further, the majority of provincial and territorial SFP nutritional guidelines are outdated because they do not reflect the 2019 Canada Food Guide (Health Canada, 2019b) or Canada's Dietary Guidelines (Health Canada, 2019a). Although some provinces and intra-provincial regional officials have proactively incorporated healthy eating updates since 2007, including acknowledgement of distinct cultural and traditional dietary requirements most provincial and territorial guidelines continue to reinforce outdated practices based on evidence informing the 2007 Canada Food Guide.

Second, the divisions between federal and provincial jurisdiction underpin inaction. Canada is a federation that includes a national government, ten provinces, and three territories.¹⁰ Under the Constitution Act, 1982, Canada (2021) the provinces have the exclusive authority to govern in certain areas, such as health, natural resources, and education, while the federal government has authority over other areas, for example, commerce and defense. These two levels of government also share jurisdiction in certain domains, such as agriculture. However, since 1867, courts have added complexity to questions of jurisdiction related to many areas of food system governance, simultaneously broadening provincial power and federal power (e.g., international trade) ultimately leading to jurisdictional confusion and impasse (Berger Richardson and Lambek, 2018; Andr e et al., 2019, 2021). In turn, departments within each of the various levels of government have developed their own distinct laws, policies, and regulations governing different aspects of Canada's food system(s). The result is a patchwork of food-related law and policy that lacks coherence or a common vision of a healthy, just, and sustainable food system. Collectively, this history makes it challenging for policymakers to collaborate, develop, and implement food policy and programs, such as a federally funded and mandated SFP, that could attend to multiple long-standing issues (e.g., food insecurity, health and nutrition, local food system development) across Canada.

Third, robust SFPs are assumed expensive resulting in school administrators and government policymakers reluctant to develop school meal and education programs where they are not compensated for (Oostindjer et al., 2017). Individual schools and school boards are provided limited budgets by provinces and territories; in turn, improving kitchen facilities, managing unfavorable bids from healthy food suppliers, meeting the requirement of extra staff, integrating teaching in the classroom

⁷The second wave (Beta Variant) began July 18, 2020, reaching its peak on January 10, 2021, with 85,595 active cases and ended 53 days after the peak on March 4, 2021, with 29,907 active cases (CTV News, 2021; Government of Canada, 2021d; Tahirali, 2021).

⁸The third wave (Gamma Variant) began March 5, 2021, reaching its peak on April 19, 2021, with 89,884 active cases and ended 95 days after the peak on July 22, 2021, with 4,513 active cases (CTV News, 2021; Government of Canada, 2021d, 2022; Tahirali, 2021).

⁹The first COVID-19 case was identified in Canada on January 25, 2020, initiating Canada's first wave (Alpha Variant). The first wave peaked on May 30, 2020, with 35,040 active cases and ended 48 days after the peak on July 17, 2020, with 4,143 active cases (CTV News, 2021; Government of Canada, 2021d, 2022; Tahirali, 2021).

¹⁰Municipalities and Indigenous systems of governance are not constitutionally recognized as forms of government under Canada's Constitution Act 1982.

and involving parents (Story et al., 2009; Belansky et al., 2010) are perceived as too expensive (Harris et al., 2012). However, some researchers (Kirk and Ruetz, 2018) and groups like Coalition for Healthy School Food (2016; 2019; 2021) argue, the burden that chronic, diet-related diseases already place on the Canadian health care system—a cost estimated at \$190 billion each year (Kaczorowski et al., 2016)—can be mitigated by adopting a national SFP which has the potential to reduce future health care expenditures. Based on the full operation¹¹ of Finland's free school meal service that serves 95% of students in the country, Ruetz and McKenna (2021) calculated that it would cost approximately \$5 per student or \$4.3 billion (\$4,288,497,588) per annum to provide a similar program in Canada.

In Canada, SFP advocates argue COVID-19 has further complicated the tensions noted above and restrained the delivery of existing SFPs due to increased program demand (Neustaeter, 2020). In May 2020, Statistics Canada identified a country-wide 14.6% increase in food insecurity as well as an increase in the severity of child food insecurity since the beginning of the pandemic in Canada (Statistics Canada, 2020). For example, Breakfast Club of Canada (BCC) approximated that one in three children would likely go to school hungry (Breakfast Club of Canada, 2020a). As SFP actors identified the need for increased state intervention to better support SFPs long before COVID-19, during the pandemic, many now see SFPs sitting at a fork in the road where either further support will be provided or SFPs may revert to lower standards of operation, or close.

CONCEPTUAL FRAMEWORK AND METHODS

While the focus of this paper is narrowed to the discursive effects found in provincial and territorial school reopening plans and the material consequences felt by SFPs, the authors bring expertise from a range of disciplines and perspectives. This includes theoretical and practical insight from working with school food programs in Canada, local food system sustainability and environmental assessment, human nutrition and health policy, and intergovernmental food policy development. In turn, this allows for a critical assessment of power imbalances and different types of marginalization taking place within food policy development, implementation, and assessment. Policy analysis is therefore a central component of this research. As a methodological tool it is first and foremost an information collecting activity; however, it holds the potential to also be a political activity, aiding policy actors in shaping the contours of future policy. That is, identifying “how problems are represented in policy and how policy subjects are constituted through problem representation” (Goodwin, 2011, p. 167). This is an important approach for understanding the different ways governments in Canada have (or have not) considered SFPs during the pandemic and how they might change their approaches in the future.

¹¹Full operation including ingredients, labor costs, kitchen equipment maintenance, and other fixed expenses.

Advocates of an integrated approach to addressing food and nutrition-related issues argue for food policies at multiple and interrelated levels of governance based on the fundamental principles of ecological public health (Lang et al., 2009). Ecological public health developed from the public health projects of disease prevention, sanitation, and controlling communicable diseases during the 18th and 19th centuries. Carried into the 21st century, ecological public health brings insights from complexity theory and systems dynamics, to encourage open debate and pursuit of social values and embraces interdisciplinarity and multi-actor approaches to address health challenges (Lang and Raynor, 2012).

To date, there has been an increase in published research on theoretical frameworks driving program evaluation of public health interventions (e.g., Baranowski and Stables, 2000; Carroll et al., 2007; Durlak and DuPre, 2008) intended to determine areas of growth. For this paper, we did not aim to present a comprehensive review of the theoretical framework, but rather integrate the theoretical bases that underpin the research field of program evaluation. For example, one commonly used framework developed by Baranowski and Stables (2000) and refined by Steckler and Linnan (2002) and Saunders et al. (2005) outlines important aspects to assess including recruitment, context, and reach. Other frameworks have conceptualized the impact of an intervention as a function of factors including fidelity, dosage, quality, participant responsiveness, program differentiation, monitoring of control conditions, program reach, and adaptation (Durlak and DuPre, 2008). This is reflected by the lack of uniformity or “one size fits all approach” framework in implementation literature. Yet despite heterogeneity they are all intended to determine aspects that are not working in the program and that need to be further improved.

An ecological public health approach within the scope of SFPs means considering multilayered and interconnected sociocultural determinants and political economic factors from which provincial and territorial SFPs and school reopening plans are built. The RE-AIM framework, a multi-dimensional health program evaluation tool developed by Glasgow et al. (1999), was selected to guide the analysis because it aligns with ecological public health's intersectional (or systems) approach to health. The framework assess public health interventions across five dimensions: **Adoption** (identifying the representativeness of the contexts where policy and programs are administered), **Reach** (considers the participation and demographics of individuals using the program), **Implementation** (evaluating the extent to which policy and programs are delivered as intended), **Maintenance** (considering the short and long-term enforcement and how this affects cultural and normative practices for administering the policy or program) and **Efficacy** (considers the positive and negative consequences of delivery for individuals executing and participating in the program) (Glasgow et al., 1999). The RE-AIM Framework is appropriate because: (a) it uses systems-based and social-ecological thinking as well as community-based and public health interventions, (b) it helps determine what programs are worth investment and make decisions about resource redistribution, and (c) it encourages planning strategies to improve existing program operation in

the long- and short-term. Theoretically, the ecological public health and RE-AIM frameworks are linked to conceptualize the various levels of influence occurring in government decision-making and in segments of society that play an active role in health promotion.

Following Ruetz and McKenna (2021) who utilized the RE-AIM framework to analyze SFPs operations and characteristics in Canada, our research adopts the RE-AIM Framework and similarly reorders the sequence as ARIME to reflect the structure of program evaluation which started with adoption. Akin to Ruetz and McKenna (2021), this paper uses the RE-AIM Framework to ask similar, but distinct, “who, what, where, how, when, and why” questions (Glasgow and Estabrooks, 2018, 5) to identify and examine challenges faced by SFPs during the pandemic and how this compared to pre-pandemic operations. These questions include:

- **Adoption:** how and to what extent are SFPs addressed within provincial and territorial school reopening plans?
- **Reach:** has SFP participation increased or decreased since the 2018/19 school year (pre-pandemic)¹²?
- **Implementation:** what new funding was made available to support SFPs to adapt to the new COVID-19 protocols?
- **Maintenance:** how have the new COVID-19 protocols impacted the delivery of SFPs?
- **Efficacy:** what are the positive and negative implications of the COVID-19 protocols for the long-term trajectory of SFP operations in Canada?

Data collection and analysis including an extensive policy scan and analysis of 57 primary and 164 supportive documents related to provincial and territorial school reopening plans was conducted. Primary documents and resources are defined as the central guiding document(s) and web platforms generated by the government(s) departments and agencies where school reopening plans are housed. These documents were intended to inform and direct the public (students, parents, communities) and public institutions (schools, school boards, other ministries) in the operation protocols for reopening school facilities. These documents include accumulation of both earlier versions as well as the versions of the document which came to supersede (see **Table 1** primary documents and resource and reference list in **Supplementary Materials**). Supportive documents are defined as those generated by government departments, agencies, as well as national and provincial community partner organizations directly involved in supporting the design and execution of the school reopening plans.¹³ Eligibility of primary and supportive documents rested on publicly available resources (media releases, plans, policies, strategies) published between April 1, 2020, and September 30, 2021, generated by federal, provincial, and territorial governments in Canada. In addition, a review of

academic and grey literature on SFP operation during the COVID-19 pandemic was conducted.

Content and policy analysis were the driving methodologies of this research. Qualitative data were analyzed using NVIVO 12¹⁴ software program using a combination of deductive and inductive thematic analysis (Braun and Clarke, 2006). During the assessment of the data the researchers familiarized themselves with the data and sorted data by inductive (defining, naming, and categorizing codes and themes that arose from the data) and deductive (sorted data into preconceived codes and themes following the REAIME framework) analysis. This occurred by reading each primary and supportive document closely as well as through specific text searches (e.g., school food, lunch, nutrition). Adopting both inductive and deductive assessment allowed for researchers to identify, critique, and understand how and why Canadian governments enacted specific policy approaches from different perspectives. In turn, this allowed for the researchers to consider deeper complexities of the resulting effects for SFPs (Browne et al., 2019). The findings illustrate inductive themes and codes that arose organically while our discussion reflects themes and codes derived from the RE-AIME framework. For quality assurance, analysis was conducted by one author and validated and verified by continuous discussions with co-authors. Discrepancies were amended following discussions to clarify coding and emergent these (e.g., investigator triangulation) (Merriam, 2009). Altogether there was three rounds of data assessment and author discussion (December 2020, May 2021, and September 2021).

FINDINGS

With respect to SFP logistical operation within school environments, the findings first address standardized COVID-19 protocols before providing details regarding procurement of food, preparation of food, and dispensing of food. Collectively, our analysis revealed that an infectious disease prevention approach was dominant across data sources. The findings illustrate that in instances where students were in close proximity to or in physical contact with food, the more detail was provided for the prevention of infectious disease transmission, with food preparation and food dispensing described in greater detail compared to food procurement. Specifically, the terminology used, and direction provided within primary and supportive guiding documents was inconsistent across provinces and territories as well as within provinces and territories, illustrating a disconnect in important details between those planning for reopening and those actually carrying out SFPs. As will be discussed below, the school reopening plans did not consider the broader features of SFP operation (i.e., robust health and nutrition guidelines focused on whole foods, environmental consciousness regarding food procurement and waste), thus missing a key opportunity for SFPs to support health promotion and food security during the pandemic.

Noted previously, provincial and territorial school reopening plans adopted federal COVID-19 prevention protocols including

¹²The last pre-COVID time point from which we can draw data.

¹³Note: Some versions of primary and supplementary documents have been archived when new versions superseded previous or have been altogether removed and are no longer publicly available. In some instances, governments have update information and used the same weblink instead of archiving the webpage. If you are trying to access a specific version of a document and having trouble, please connect with the lead researcher to obtain a copy.

¹⁴Version 12, QSR International Pty Ltd, Melbourne, Australia.

TABLE 1 | Primary documents and resources.

Province/territory	Primary documents/resources	Publication and revisions
Newfoundland and Labrador	Return to school plan 2021. Together. Again.	September 2021
	A safe return to school—nfsd september reopening plan 2020–2021	November 2, 2020
		September 3, 2020
		August 17, 2020
	July 6, 2020	
	Newfoundland and Labrador k-12 education re-entry plan	September 3, 2020
		August 14, 2020
		July 6, 2020
	Newfoundland and Labrador public health guidance for k-12 schools.	April 7, 2021
		September 3, 2020
New Brunswick	Healthy and safe school guidelines	August 2021
	Return to school: guide for parents and the public	August 13, 2020
		June 12, 2020
	Return to school: direction for school districts and school September 2020	November 29, 2020
		October 15, 2020
		September 16, 2020
	Return to school September 2020 executive summary	September 2020
Prince Edward Island	Prince Edward island covid-19 back-to-school public health guidance 2021–2022	August 2021
	Public school branch: guidelines for return to school September 2020	September 28, 2020
		August 5, 2020
Nova Scotia	Returning to class for 2021–2022	August 2021
	Nova scotia's back to school plan	December 18, 2020
		September 17, 2020
		August 14, 2020
		July 22, 2020
Quebec	Orientation for back-to-school 2021	August 11, 2021
	Covid-19-plan de la Rentrée Scolaire/covid-19 back to school plan	June 16, 2020
	Back to school 2020: reopening of all schools in Quebec	August 10, 2020
Ontario	Approach to reopening schools for the 2020–2021 school year	June 19, 2020
	Guide to reopening Ontario's schools	August 28, 2020
		August 24, 2020
		August 13, 2020
		July 30, 2020
	Covid-19: health, safety, and operational guidance for schools (2021–2022)	August 13, 2021
		August 3, 2021
Manitoba	Welcoming our students back: restoring safe schools—a guide for parents, caregivers and students: what to expect when welcomed back to school	October 20, 2020
		September 2, 2020
		August 24, 2020
		August 13, 2020
		July 30, 2020
	Restoring safe schools—a planning guide for 2021–2022 school year	August 24, 2021
	Restoring safe schools—a guide for parents, caregivers and students	August 24, 2021
Saskatchewan	Safe schools plan 2021–22	July 2021
	Primary and secondary educational institution guidelines	June 9, 2020
	Saskatchewan safe schools plan	August 27, 2020
		July 8, 2021
Alberta	2021–2022 school year plan	August 2021
		June 2021
	Covid-19 information: guidance for school re-entry—scenario 1	November, 2020
		October 8, 2020
		August 27, 2020

(Continued)

TABLE 1 | Continued

Province/territory	Primary documents/resources	Publication and revisions
		August 20, 2020
		July 21, 2020
		June 10, 2020
	Covid-19 information: guidance for school re-entry—scenario 2	November, 2020
		October 8, 2020
		August 27, 2020
		August 20, 2020
		July 21, 2020
British Columbia	Covid-19 public health guidance for k-12 school settings	August 24, 2021
		June 17, 2021
		September 24, 2020
		September 11, 2020
		September 3, 2020
		August 26, 2020
Yukon	K-12 school guidelines for 2021–22: covid-19	August 19, 2021
	School during covid-19: guidelines for the 2021–22 school year	August 19, 2021
	School during covid-19	September 24, 2020
		August 12, 2020
	Guidelines for k-12 school settings	July 9, 2020
		July 23, 2020
		June 4, 2020
Northwest Territories	Back to school 2021–22 guidelines	August 11, 2021
	Reopening schools safely: planning for the 2020–2021 school year	July 3, 2020
Nunavut	2021–22 health and safety guidelines for nunavut schools	July 28, 2021
	2020–2021 opening plan for nunavut schools: health and safety	December 16, 2020
		July 24, 2020
	Health and safety guidelines for nunavut schools	August 2020

the *List of Hard Surface Disinfectants and Sanitizers* (Health Canada, 2020b) and *List of Hand Sanitizers* (Health Canada, 2020a) and *Guidance for Schools Kindergarten to Grade 12* (Government of Canada, 2020). Within schools, these protocols affected individuals' patterns of accessing and consuming food. Specifically, students were arranged into cohorts (grouping of students, usually by grade or class) to limit students' movement and interaction with others. This affected where and how students were physically arranged when eating. For example, lunch and recess times were staggered between cohorts, lining up to access food in cafeterias was limited by room capacity, and eating locations were expanded to the outdoors. Because of COVID-19 sanitization protocols, high touch areas in schools were to be disinfected more frequently meaning food areas required more time between when they were accessed by different cohorts. Finally, most reopening documents emphasized frequent hand washing and hand sanitizing before and after eating requiring added time and extended oversight by teachers and staff to ensure protocols were upheld.

Procurement of Food

Limited guidance was provided for the procurement of food by schools, with only a handful of provinces providing reference. Ontario's Department of Education and Training

(2021) *COVID-19: Health, Safety and Operational Guidance for Schools (2021–22)* (August 13 and 30, 2021 versions), Ontario's Department of Education and Training, Ontario (2020a) *Approach to Reopening Schools for the 2020–2021 School Year* (June 19, 2020, version), Ontario's Department of Education and Training, Ontario (2020b) *Guide to Reopening Ontario's Schools* (July 30, 2020, version) specified physical distancing was required when accepting deliveries from suppliers. Québec's Ministère de l'Éducation (2020) *COVID-19–Plan de la rentrée scolaire/COVID-19 Back to School Plan* (June 16, 2020, version) noted the ability for schools to enter contracts with catering companies or community organizations specializing in providing meal services. Department of Education and Lifelong Learning, Prince Edward Island (2020) *Public Schools Branch: Guidelines for Return to School September 2020* (August 28, 2020, and previous versions) and Prince Edward Island's Department of Health Wellness Prince Edward Island (2021) *Prince Edward Island COVID-19 Back to School Public Health Guidance 2021-22* (August 2021 version) specified that any vendors dropping off food do so in designated visitor zones. Collectively, the limited reference to procurement results in school reopening plans lacking attention to nutritional health and environmental consciousness (e.g., fresh and locally prepared meal options).

Preparation of Food

Protocols for food preparation present considerable detail and description with previously existing food safety protocols shaping the majority of this discourse. Across provinces and territories, food items prepared outside of schools were required to follow COVID-19 food preparation protocols for any establishment returning to operation. Within most provinces and territories, school food preparation areas were closed off to students, non-designated staff, and visitors to avoid contamination. Department of Education and Training, Ontario (2020a) *Approach to Reopening Schools for the 2020–2021 School Year* (June 19, 2020, version), Department of Education and Training, Ontario (2020b) *Guide to Reopening Ontario's Schools* (July 30, 2020, version), Québec's Ministère de l'Éducation, (2020) *COVID-19–Plan de la rentrée scolaire/COVID-19 Back to School Plan* (June 16, 2020, version), and British Columbia's Ministry of Advanced Education Skills Training (2021) *COVID-19 Public Health Guidance for K-12 School Settings* (September 2021 and previous versions) made this clear in their guidelines. Department of Education and Lifelong Learning, Prince Edward Island (2020) *Public Schools Branch: Guidelines for Return to School September 2020* (August 28, 2020, and previous versions), Prince Edward Island's Department of Health and Wellness' (2021) *Prince Edward Island COVID-19 Back to School Public Health Guidance 2021–22* (August 2021 version) and Alberta's Ministry of Education (2021) *2021–2022 School Year Plan* (June and August 2021 versions), the Government of Alberta's (2020a) *COVID-19 Information: Guidance for School Re-Entry – Scenario 1* (November 2020 and previous versions), and the Government of Alberta's (2020b) *COVID-19 Information: Guidance for School Re-Entry–Scenario 2* (November 2020 and previous versions) specified that food should be provided and prepared following food handling guidelines outlined and approved by the provincial Chief Public Health Officer.

When referencing food preparation and student contact points with food, several approaches were presented. All provinces and territories adopted a “no share policy” for all food and personal items. Interestingly, British Columbia's Ministry of Advanced Education Skills Training (2021) *COVID-19 Public Health Guidance for K-12 School Settings* (September 2021; and previous versions), Alberta's Ministry of Education (2021) *2021–2022 School Year Plan* (June and August 2021 versions), the Government of Alberta's (2020a) *COVID-19 Information: Guidance for School Re-Entry – Scenario 1* (November 2020 and previous versions), and the Government of Alberta's (2020b) *COVID-19 Information: Guidance for School Re-Entry–Scenario 2* (November 2020 and previous versions) allowed culinary courses to continue, but prepared food could only be consumed by the student that prepared it. Taking a more directive approach to reducing contact points, Alberta's Ministry of Education (2021) *2021–2022 School Year Plan* (June and August 2021 versions), the Government of Alberta's (2020a) *COVID-19 Information: Guidance for School Re-Entry – Scenario 1* (November 2020 and previous versions), and the Government of Alberta's (2020b) *COVID-19 Information: Guidance for School Re-Entry – Scenario 2* (November 2020 and previous versions), the Department

of Education Newfoundland Labrador (2021) *Return to School Plan. Together. Again.* (September 2020 version), Department of Education, Newfoundland and Labrador (2020a) *A Safe Return to School – NFESD September Reopening Plan 2020–2021* (November 2, 2020, September 3, 2020, versions), the Department of Education, Newfoundland and Labrador (2020b) *Newfoundland and Labrador K-12 Education Re-Entry Plan* (November 2, 2020), the Government of Newfoundland and Labrador (2021) *Newfoundland and Labrador Public Health Guidance for K-12 Schools* (April 7, 2021, and previous versions) specified switching to individual pre-packaged meals or meals only served by staff. Department of Education and Training, Ontario (2020a) *Approach to Reopening Schools for the 2020–2021 School Year* (June 19, 2020, version), Department of Education and Training, Ontario (2020b) *Guide to Reopening Ontario's Schools* (July 30, 2020, version), the Government of Nunavut's (2020) *2020–2021 Opening Plan for Nunavut School: Health & Safety Nunavut* (December 12, 2020, and July 24, 2020, versions), Department of Education Nunavut's (2020) *Health and Safety Guidelines for Nunavut Schools* (August 2020 version), 2021–22 Health and Safety Guidelines for Nunavut Schools (Department of Education Nunavut, 2021) aligned with this approach but expressed it as a recommendation rather than a requirement.

Dispensing of Food

Food dispensing was presented in an overall restrictive tone dictating what actions could or could not be practiced. Across provinces and territories self-serve, buffet, or family-style meal services were discouraged unless serving of food was done by a designated staff member with serving utensils. Pre-packaged foods were again referenced to reduce contact and transmission points where a designated server was not possible; how this was achieved varied across provinces and territories. The Government of Manitoba's (2020c) *Welcoming Our Students Back: Restoring Safe Schools—A Guide for Parents, Caregivers and Students: What to expect when welcomed back to school* (October 20th, 2020 and previous versions), the Government of Manitoba (2021a) *Restoring Safe Schools—A Guide for Parents, Caregivers and Students* (August 24, 2021 version), the Government of Manitoba (2021b) *Restoring Safe Schools—A Planning Guide for 2021–2022 School Year* (August 24, 2021 version), the Government of Saskatchewan (2020a) *Primary and Secondary Educational Institution Guidelines* (June 9, 2020, version), the Government of Saskatchewan (2020b) *Saskatchewan Safe Schools Plan* and the Government of Saskatchewan's (2021) *Government of Saskatchewan Safe Schools Plan 2021–22* (July 2021 version) referenced the option of individual meal portions served to students. Specific to SFPs, Department of Education and Training, Ontario (2020a) *Approach to Reopening Schools for the 2020–2021 School Year* (June 19, 2020, version), Department of Education and Training, Ontario (2020b) *Guide to Reopening Ontario's Schools* (August 28, 2020, and all previous versions), Department of Education Newfoundland Labrador (2021) *Return to School Plan. Together. Again.* (September 2020 version), Department of Education, Newfoundland and Labrador (2020a) *A Safe Return to School – NFESD September Reopening*

Plan 2020–2021 (November 2, 2020, and previous versions) emphasized grab-and-go where food items were presented in a way that minimized contact points. Staggered mealtimes and additional dining spaces were referenced within all plans except the Government of Northwest Territories (2021) *Back to School 2021–22 Guidelines* (August 11, 2021, version) and the Government of Northwest Territories (2020) *Reopening Schools Safely: Planning for the 2020–2021 School Year* (July 3, 2020, version). Prince Edward Island's Department of Education and Lifelong Learning, (2020) *Public Schools Branch: Guidelines for Return to School September 2020* (August 28, 2020, and previous versions) directed elementary-aged students to eat in their classrooms while older students had the option of leaving school premises. Finally, Department of Education and Lifelong Learning, Prince Edward Island (2020) *Public Schools Branch: Guidelines for Return to School September 2020* (August 28, 2020, and previous versions), Nova Scotia's Department of Education Early Childhood Development (2020) *Back to School Plan* (December 18, 2020, and all previous versions), Department of Education Early Childhood Development, New Brunswick's (2020) *Return to School: Direction for School Districts and Schools September 2020* (November 29, 2020, and previous versions) and New Brunswick's Department of Education Early Childhood Development (2020) *Return to School: Guide for Parents and the Public September 2020* (November 29, 2020, and previous versions) required SFP food orders to be taken ahead of time and for food to be delivered directly to student classrooms.

Acknowledgement of School Food Programs

All school reopening plans referenced continued operation of SFPs except the Government of Yukon's (2020a) *Guidelines for K-12 School Settings* (July 23, 2020, and June 4, 2020, versions), the Government of Yukon's (2020b) *School During COVID-19* (September 24, 2020, and previous versions), the Government of Yukon's (2021a) *K-12 School Guidelines for 2021–22: COVID-19* (August 19, 2021, version) the Government of Yukon's (2021b) *School During COVID-19: Guidelines for the 2021–22 School Year* (August 19, 2021, version) (see **Table 2**); however, direction for SFP operation under new COVID-19 protocols was limited across all plans. The Government of Manitoba's (2020c) *Welcoming Our Students Back: Restoring Safe Schools—A Guide for Parents, Caregivers and Students: What to expect when welcomed back to school* (October 20th, 2020 and previous versions), the Government of Manitoba (2021a) *Restoring Safe Schools—A Guide for Parents, Caregivers and Students* (August 24, 2021 version), the Government of Manitoba (2021b) *Restoring Safe Schools—A Planning Guide for 2021–2022 School Year* (August 24, 2021 version) inconsistently referenced SFPs and although British Columbia's Ministry of Advanced Education Skills Training (2021) *COVID-19 Public Health Guidance for K-12 School Settings* (September 2021; and previous versions), Ontario's Department of Education and Training (2020a) *Approach to Reopening Schools for the 2020–2021 School Year* (June 19, 2020, version), Ontario's Department of Education and Training (2020b) *Guide to Reopening Ontario's*

Schools (July 30, 2020, and previous versions), the Government of Northwest Territories (2021) *Back to School 2021–22 Guidelines* (August 11, 2021, version) and the Government of Northwest Territories (2020) *Reopening Schools Safely: Planning for the 2020–2021 School Year* (July 3, 2020, version), the Government of Nunavut's (2020) 2020–2021 Opening Plan for Nunavut School: Health & Safety Nunavut (December 12, 2020, and July 24, 2020, versions), Department of Education Nunavut's (2020) *Health and Safety Guidelines for Nunavut Schools* (August 2020 version) did provide the same guidance across updated documents, the guidance did not provide clear direction or details for SFP operation. Alberta's Ministry of Education (2021) *2021–2022 School Year Plan* (June and August 2021 versions), the Government of Alberta's (2020a) COVID-19 Information: Guidance for School Re-Entry—Scenario 1 (November 2020 and previous versions), and the Government of Alberta's (2020b) COVID-19 Information: Guidance for School Re-Entry—Scenario 2 (November 2020 and previous versions) referenced “food services” and “food meal programs” but it is unclear if this language pertained to SFPs or simply encompassed school-based cafeteria programs.

DISCUSSION

While the findings identified the discourse surrounding food found in Canadian provincial and territorial school reopening documents, the discussion is informed by the RE-AIM framework to consider the extent that SFPs' multi-faceted mandates were enabled or constrained by the school reopening plans. Accordingly, this section analyses the adoption, reach, implementation, maintenance, and effectiveness of SFP operations between April 2020 and September 2021. This section also compares the contours of SFPs across Canada pre-COVID and considers the long-term effects COVID-19 health and safety protocols might have on SFPs operation.

Adoption

Here we consider the extent to which SFPs were acknowledged within provincial and territorial school reopening plans. Prior to the pandemic food insecurity was the impetus for establishing most SFPs (Raine et al., 2003; Ruetz and McKenna, 2021). The evidence is strong that school day nutrition among Canadian children across the socio-economic spectrum is poor (Coalition for Healthy School Food, 2018); in turn SFPs evolved with an increased emphasis on improving all children's nutrition (Tugault-Lafleur et al., 2017; Coalition for Healthy School Food, 2018). Reflecting this shift, most provincial/territorial SFP guidelines referenced the dual importance of universal access¹⁵ to reach more children and reduce stigma (Russell et al., 2008; Oostindjer et al., 2017). Nevertheless, the tension between SFPs' health promotion and food security mandates is palpable: the majority of provincial and territorial funders view food security as the primary objective of SFPs, closely followed by health (Ruetz and McKenna, 2021).

¹⁵When all students in a school have access to the meal or snack that is offered.

TABLE 2 | Acknowledgement of (and difference in terminology regarding) “food” in school reopening plans.

Province/Territory	General acknowledgement of food						Specification of school food programs							
	Cafeteria	Meal service	Lunch	Breakfast	Meal	Snack	Nutrition	School food program	Nutrition program	Breakfast program	Lunch program	Meal program	Snack program	Food assistance program
Newfoundland and Labrador	x	x	x			x		x		x		x		
New Brunswick	x		x		x	x				x			x	
Prince Edward Island	x		x					x		x			x	
Nova Scotia	x		x		x		x			x	x			
Quebec	x													x
Ontario	x	x	x		x	x			x			x		
Manitoba	x	x	x			x				x	x	x	x	
Saskatchewan		x	x		x	x			x					
Alberta	x	x	x		x	x		x				x		
British Columbia	x		x	x		x				x		x		
Yukon	x	x	x		x									
Northwest Territories			x					x						
Nunavut			x					x						

Although the findings highlight that school reopening plans referenced continued operation of SFPs, the inconsistent and limited directional details for SFP operation under new COVID-19 protocols demonstrated that SFPs were not adequately addressed by political and bureaucratic decision-makers in the design and revision process of school reopening plans. We attribute this oversight to the lack of collaboration and integrative policymaking during the design and consultation processes of provincial and territorial reopening plans. In an interview with CBC's Jessica Wong (2020), Debbie Field of the Coalition for Healthy School Food explains, "... where each jurisdiction, each Ministry of Education, each Ministry of Health, each Medical Officer of Health, each school is literally making decisions one by one... That means children are suffering." Most provincial and territorial school reopening plans referenced a lead department, and for plans that suggest a collaborative approach, there was limited evidence regarding the stake, role of partners, or resources provided to support SFPs. For example, Ontario's school reopening plans were led by the Ministry of Education; however, the Student Nutrition Program is housed within the Ministry of Children, Community and Social Services and this body was not a named partner in Ontario's school reopening plan. These observations mirror pre-COVID-19 patterns of reactive and siloed policymaking (Fawcett-Atkinson, 2020), suggesting SFPs face continued challenges in policy design and adoption in Canada.

Here we consider if SFP participation has increased or decreased since the 2018/19 school year. Globally, it is estimated 388 million children benefitted from school feeding programs in 161 countries pre-pandemic; however, by April 2020, an

estimated 39 billion in-school meals in 199 countries had been missed during school closures (World Food Programme, 2020; Borkowski et al., 2021). During closures, many programs had to shift operation towards take-home options (i.e., hampers, food boxes) or forms of income transfers (i.e., food vouchers, gift cards). Consequently, this shift effected the participation of food programs.

In Canada, prior to the pandemic in 2018/19, SFPs reached a minimum of 21% of students¹⁶ in at least 35% of schools¹⁷ at no cost to students¹⁸ (Ruetz and McKenna, 2021). However, inconsistent funding, funding mandates (i.e., health, food security), and types of programs offered (i.e., breakfast, lunch, snack) resulted in uneven access to SFPs, ranging from 5% of students participating in Alberta to 83% of student participating in the Yukon (Ruetz and McKenna, 2021). Overall, low funding, reliance on volunteer labour, and the lack of adequate school food infrastructure posed a challenge to maintaining SFPs in Canada already prior to the pandemic (Oostindjer et al., 2017; Ismail et al., 2021; Ruetz and McKenna, 2021).

As observed in many other countries, between April 2020 and September 2021, several Canadian SFPs transitioned to deliver food to students learning from home (Goodridge, 2020). Between March and July 2020, Breakfast Club of Canada calculated it

¹⁶A conservative figure as student participation data was unavailable from Saskatchewan, British Columbia, Northwest Territories and was only partial data from Québec and Ontario.

¹⁷A conservative figure as schools participation data was unavailable from BC and only partial data was from Saskatchewan.

¹⁸Overall conservative figures based on limited data in some jurisdictions, see footnotes 14 and 15.

assisted 78 new programs (an increase of 4%) with 257 743 participants per day (an increase of 6%) (2020a, p.11, 16). While a helpful window of insight, as Breakfast Club of Canada only funds a portion of Canadian SFPs; this is not a complete picture. To provide additional insight, provincial and territorial funding for jurisdiction-wide SFPs—and where available participation numbers¹⁹—were used as a proxy to assess increased demand. It was observed that Prince Edward Island, Québec, and Manitoba were the only provinces to expand SFP operation within schools after September 2020.

Prince Edward Island initiated its *Healthy School Lunch Program* in January 2020. The program was universally available to all students and provided a healthy meal while focusing on local food procurement, ensuring equitable access through a “pay what you can” model (Government of Prince Edward Island, 2021b). However, facing rising food insecurity concerns the *Healthy School Lunch Program* was expanded to all schools for the 2020/21 school year at a cost of \$1.6 million between September 2020 and March 31, 2021, with over 250, 000 meals served (Government of Prince Edward Island, 2021a). Prince Edward Island also established the COVID-19 Food Security Program from March 2020-August 2020 at an additional operational cost of \$620,000 jointly supported by the Departments of Education and Social Development) and the Summer Food Program allocated \$600, 000 for July and August 2021 (Government of Prince Edward Island, 2021a, p. 3; Government of Prince Edward Island, 2021c; Yarr, 2021). In Québec, the Ministère de l'Éducation revised their SFP funding eligibility criteria in August 2020, extending funding for student meals in low-income neighbourhoods to all preschool, elementary, and secondary institutions in the province (Montreal Gazette, 2020). Provincial funding increased in Quebec by \$11 million, jumping 60%; however, Education Minister Roberge requested that schools establish an emergency food distribution network to help support the expansion of the program (Montreal Gazette, 2020). However, even with provincial action, Breakfast Clubs of Canada has expanded operation providing breakfast to 250,000 school children - an increase of 30,000 meals from 2019 (Fawcett-Atkinson, 2020) enabled through support from the Federal government's *Emergency Food Security Fund* (Agriculture Agri-Food Canada, 2021). Manitoba's Home Nutrition and Learning \$5.1 million Pilot Program, budgeted pre-pandemic and launched in June 2020, saw community-based organizations²⁰ delivering nutritious food to 6000 children between June and September 2020 (Government of Manitoba, 2020a). However, by February 2021 the program was serving 6,400 students and 2,500 families leading to an additional \$2 million in government funding to continue running the program until September 2021 (Government of Manitoba, 2020b).

¹⁹Not all provinces and territories have made funding and participation numbers publicly available at time of writing.

²⁰Andrews Street Family Centre Inc. in Winnipeg, Ma Mawi Wi Chi Itata Centre Inc. in Winnipeg, Samaritan House in Brandon; Food Matters Manitoba in the community of Cross Lake, and Bayline Regional Round Table in Thicket Portage, Pikiwitonei, Ilford/War Lake and Wabowden (Government of Manitoba, 2020a).

Comparatively, in 1991 New Brunswick was the first province with school nutritional guidelines, yet in 2020 it was the only province without a province wide school food program. In September 2020 this shifted as 10 schools began pilot SFPs; then nine additional schools were added to “ensure representation of all seven school districts in the province in both Anglophone and Francophone sectors,” and to include “a variety of food programs ranging from schools with no food programs to schools with comprehensive programs” (Balintec, 2021). Between September 2020 and December 2021 approximately 75% of New Brunswick Schools offered a breakfast program, 60% offered a lunch program, and collectively, 94% offered some form of SFP, including snacks (Balintec, 2021). However, like other provinces/territories the SFPs have been inconsistently operated meaning the reach of SFPs are not equal because access is not universal.

Collectively, not enough data is available to confirm an increase or decrease in SFP participation across provinces and territories. However, there is discrepancy between the public and widespread acknowledgment of increasing food insecurity rates before (Dachner and Tarasuk, 2018; Tarasuk and Mitchell, 2020) and during COVID-19 (Statistics Canada, 2020) and the fact that guiding documents inadequately make the link between these concerns and government support of SFPs (Mah et al., 2020). With few provinces and a handful of charities providing increased support to expand SFP operation during COVID-19, this demonstrates that neither fully addressing food insecurity through moving beyond targeted programs nor proactively considering the numerous benefits of SFPs for learning and population health in the long-term, are central to considerations. In turn, targeted programs continue to only reach a minority of the intended population while expanded or universal SFPs have the potential to reach all students (Ruetz and McKenna, 2021).

Implementation

Here we consider funding allocated for SFPs to adapt to COVID-19 protocols. Following the lead of Ruetz and McKenna (2021), funding was used as a proxy to assess program capacity and hence effectiveness. Pre-pandemic, provincial and territorial funders generally prioritized based on socio-economic need and partnered with non-government organizations, Indigenous communities, and/or schools to directly fund or partially fund SFPs. In 2018/19, provincial and territorial governments collectively contributed over \$93 million to SFPs (Ruetz and McKenna, 2021); however, this funding most often paid for one quarter or less of what was required to run programs. While programs were often cost-shared, it was commonly reported that there was insufficient funding to increase participation within existing programs or to establish new programs (Ruetz and McKenna, 2021).

Although food insecurity rates increased across Canada early in the pandemic (Statistics Canada, 2020) adequate funding to SFPs did not occur across all regions. For example, Ontario invested an additional \$1 million to improve access to healthy food for school-aged children and youth (Government of Ontario, 2020). Alberta increased provincial SFP funding in the 2019 Budget pre-pandemic (\$15.5 million), and subsequently

allocated \$3 million “to 9 non-profits²¹ in the 2019-20 school year to provide additional food assistance for students and families in response to the COVID-19 pandemic” (Government of Alberta, 2021). As demonstrated above, Prince Edward Island appears to be the most financially pro-active province allocating a total \$2,540,000 towards implementing and expanding SFP operation between January 2020 and September 2021 (Government of Prince Edward Island, 2021c: p. 3; Government of Prince Edward Island, 2021a; Yarr, 2021). Although New Brunswick SFPs also expanded quickly, only \$200,000 was allocated towards the design and implementation of a pilot province-wide school food program (Department of Finance Treasury Board Government of New Brunswick, 2020: p.13; Department of Education Early Childhood Development, New Brunswick, 2020). Further, the New Brunswick government had to partner with the New Brunswick Medical Association (who also allocated \$200,000) to establish the pilot program in September 2020 (Cave, 2020). Collectively, however, as schools reopened across Canada in September 2020, advocates noted an overall lack of food programs and breakfast clubs planned for students (Neustaeter, 2020).

Looking to federal supports, the Canadian government provided \$2 billion to provinces and territories in August 2020²² to support safe school reopening (Agriculture Agri-Food Canada, 2021). However, SFP operation was not defined as an eligible use of this one-time funding, suggesting limited consideration of SFPs by the federal government. In April 2020, the federal government allocated an additional \$100 million to the *Emergency Food Security Fund* which was distributed to select national and regional agencies with established distribution systems to address rising food insecurity.²³ Later in October 2020, August 2021, and December 2021 the federal government allocated an additional funding as food insecurity rates continued to rise (Office of the Prime Minister, 2020; Agriculture and Agri-Food Canada, 2021). Collectively, between April 2020 and December 2021, the Government of Canada allocated \$330 million to the Emergency Food Security Fund; however, only \$5 million of this amount was directly allocated to Breakfast Clubs of Canada to “support breakfast program enrollees and local community organizations that assist food-insecure families” (Breakfast Club of Canada, 2020b).

²¹e4c in Edmonton (\$375,000), Hope Mission in Edmonton and area (\$375,000), Calgary Meals on Wheels (\$375,000), Brown Bagging for Calgary (\$375,000), Breakfast Club of Canada in Fort McMurray (\$300,000), Salvation Army in Grande Prairie (\$300,000), Lethbridge Food Bank: (\$300,000), Medicine Hat and District Food Bank (\$300,000), The Mustard Seed in Red Deer and central Alberta (\$300,000) (Government of Alberta, 2021).

²²Alberta \$262.8 million, British Columbia \$242.4 million, Manitoba, \$85.4 million, Newfoundland and Labrador \$26.2 million, New Brunswick \$39.8 million, Nova Scotia \$47.9 million, Northwest Territories \$4.9 million, Nunavut \$5.8 million, Ontario \$763.3 million, Prince Edward \$10.4 million, Québec \$432.2 million, Saskatchewan \$74.9 million, Yukon \$4.2 million (Agriculture Agri-Food Canada, 2021).

²³Food Banks Canada received \$50 million and \$49.2 million was distributed across Second Harvest, Community Food Centres Canada, Breakfast Clubs of Canada, and the Salvation Army. La Table des Chefs also received \$800 000 for meal distribution in Québec (Montreal Gazette, 2020).

Finally, it should be noted that some national private entities donated financial and other resources. President’s Choice Children’s Charity²⁴ released \$10 million, an increase from previous annual funding to SFP partners across Canada to assist with new measures ensuring the safe delivery of nutritious food (President’s Choice Children’s Charity, 2020). The Maple Leaf Centre for Action on Food Security (2020)²⁵ donated “more than \$2 million to support emergency food access (beyond the Centre’s ongoing commitments) and donated over \$2.5 million of product, a 67% increase from 2019.” This illustrated that some industry actors were actively supporting SFPs during the pandemic, providing resources where governments did not.

Overall, pre-pandemic inadequate government funding points to why SFP operation did not meet program objectives, why SFP practitioners face operational challenges, and why SFP across Canada cannot meet their full potential. Even with additional funding provided by some provincial/territorial governments, the federal government, and the private sector, evidence suggest these trends continue and may worsen as food insecurity rates increase. As students across Canada pivot between online and in-person learning funding allocation to SFP must be clearly articulated and align with existing SFP guiding documents and new COVID-19 protocols for SFP operations to be effective.

Maintenance

Here we consider how the new COVID-19 protocols impacted the delivery of SFPs. Prior to the pandemic, the maintenance of SFP operation was already challenging due to inconsistent nutrition guidelines, SFP monitoring protocols (Martorell, 2017; Ruetz and McKenna, 2021), the lack of coordination between provinces/territories and SFP actors, and volunteer driven orchestration (Fawcett-Atkinson, 2020; Ruetz and McKenna, 2021), and inadequate levels of government funding (Ruetz and McKenna, 2021).

When schools closed in spring 2020 SFPs faced distinct implementation challenges including changes to program mandate and accessibility as well as operating under new initiatives and renegotiating partnerships. In spring 2020 many SFP community-based food partnerships adapted by sending food boxes and grocery gift cards directly to students and their families (Wong, 2020). In Ontario, for example, it was found that 10 of the 11 lead agencies surveyed²⁶ overseeing SFPs shifted their mandate from universal access to “targeted emergency food

²⁴Taken from President’s Choice Children’s Charity (2021): “In 2018, Loblaw committed \$150 million of fundraising and corporate support for the charity’s effort to address childhood hunger and nutrition skills. Since then, the company has activated its network of stores, customers, vendors and colleagues, raising more than \$48 million. This makes the charity Canada’s largest private provider to school food programs – reaching approximately 400,000 students every day, in 2,500 schools”.

²⁵The Maple Leaf Centre for Action on Food Security is a registered charity committed to working collaboratively, across sectors, to reduce food insecurity in Canada by 50% by 2030. The organization advocates for critical public policies and works with innovative food-based programs that advance the capacity of people and communities to achieve sustainable food security (Maple Leaf Centre for Action on Food Security, 2020).

²⁶In Ontario, there are 14 lead agencies but for the research cited only 11 agencies provided data pertinent to this discussion point (Noyes and Lyle, 2021).

supply to vulnerable children and families” (Noyes and Lyle, 2021: p. 202). The consequence of this shift was felt differently across Ontario; in some instances, more funding was allocated to programs with a highly vulnerable population, while in others, SFPs stopped running but program funding was allocated to select students and families deemed in need.

While nutrition guidelines did exist pre-pandemic, accessibility to and availability of nutritious and fresh food options became overshadowed by COVID-19 disease prevention protocols which supported the use of processed and prepackaged foods in many provinces and territories. SFP providers like Breakfast Club of Canada had to adapt food delivery services to only distribute individually packaged items, limiting menu options to cold items only (Goodridge, 2020). Where SFPs were well established, SFP actors worked with health officials and local authorities to blend old and new practices to minimize operational impact. Department of Newfoundland and Labrador’s School Lunch Association worked with the Chief Medical Health Officer, the Department of Education and Early Childhood Development, and the Newfoundland and Labrador English School District to create a delivery plan that aligned with new protocols. However, the group had to convince officials that “the move to individually prepackaged takeaway meals” was not conducive “from the standpoints of cost, nutrition and environmental concerns” (Harding, 2020). Finally, reflecting partnership negotiations there have been shifts in procurement partnerships and purchasing options towards larger companies that can meet large orders in short timeframes thus undermining smaller, local businesses; these observations suggest environmental consciousness in SFP operation and local food partnerships are also threatened (Goodridge, 2020; Harding, 2020).

Our assessment is that maintenance of SFPs under new infection prevention protocols requires additional resources, particularly funding. The increasing costs for operating SFPs under the new protocols are not acknowledged in reopening plans or budgets yet SFPs are seeing an increase in operational costs due to rising food prices (Agri-Food Analytics Lab, 2020; Council of Ontario Directors of Education Council of Ontario Medical Health (CODE-COMOH), 2020), new requirements to purchase pre-packaged foods, and a decline in volunteers²⁷ (Brown, 2020). If the new protocols become a long-term mandate, SFPs already operating on shoe-string budgets (Oostindjer et al., 2017; Ruetz and McKenna, 2021) SFPs will face increasing implementation challenges.

Efficacy

Finally, we consider the positive and negative implications of COVID-19 prevention protocols on the long-term trajectory of SFP operation. One consequence of the pandemic and introduction of COVID-19 protocols adopted by schools is that food (in)security has been brought to the fore of some

governments’ policy agendas. Specifically, advocacy for SFP as a solution to rising rates of food insecurity is louder than ever forcing politicians and public servants to better understand how and why food policy is (or is not) practiced under their jurisdiction. This means increased awareness of the unique and placed-based circumstances in which SFP originate and operate, requiring governments to reconsider the effectiveness of their existing food policies. However, there continues to be limited coordination and collaboration across governments and departments who hold SFP within their portfolios. Further, the increase of attention suggests crisis management instead of risk management, that is, looking for solutions after negative consequences are felt instead of early and proactive mitigation. Finally, focusing on food (in)security has diverted attention away from other objectives outlined in SFP guidelines and fought for by advocates. As illustrated above, operational efforts of SFP that strive to enhance local food procurement and environmental sustainability were not considered in school reopening plans.

The federal government’s quick response to rising rates of food insecurity should be acknowledged. This includes the rapid and early research of Statistics Canada and the swift allocation of funding to provinces and territories, and repeated funding when food insecurity rates continued to rise. This allowed some NGOs and community-based partners to respond quickly and adapt to localized needs. Further, the federal government selecting Breakfast Club of Canada as a national distributor of funding to support SFPs was a quick means of allocating funding through a pan-Canadian SFP network. However, it raises the question why the funding was not distributed by provincial and territorial governments when they were the named partners in the 2019 for developing a national SFP (Government of Canada, 2019) and every province and territory were already funding SFPs (Ruetz and McKenna, 2021) and significantly more programs than Breakfast Club of Canada. Pre-pandemic, Club of Canada provided supplemental funds to 1,809 programs (Breakfast Club of Canada, 2019), compared the provinces and territories funding a conservative minimum of 6,408 programs²⁸ (Ruetz and McKenna, 2021); < 1/3rd of SFPs in Canada. Furthermore, the continued allocation of food security funds to a charitable organization (in this case Breakfast Club of Canada) instead of using a government-led approach has long been criticized as downloading the responsibility of food security to non-government sectors (Riches, 1997) and not a sufficient nor effective poverty reduction solution to food insecurity (Tarasuk and Mitchell, 2020).

When considering the short-term implications, the path taken by the federal government is shrouded with oversights and missed opportunities. The extent of cooperation between the federal government and provinces/territories, especially regarding monitoring and reporting of efforts to curb food insecurity rates is unclear (Tarasuk and Mitchell, 2020). While the Liberal Party of Canada (2021) promised a \$1 billion commitment towards developing a “National School Food Policy and work towards a national school nutritious meal program” in

²⁷The decline in volunteers is observed as a result of structural conditions of the pandemic (i.e., inconsistent direction of if SNP volunteers were allowed to enter the schools and how programs were to be run) as well as interest and will due to individual SFP volunteer health and safety concerns (Goodridge, 2020).

²⁸A conservative minimum of programs in 2018/19 as there was no data from British Columbia and there was only partial data from Saskatchewan.

their October 2021 election platform, the Liberal Government's lack of direct support for SFPs since the Budget 2019 promise demonstrates SFP development has not been a high priority. Additionally, the extent to which private entities such as the Maple Leaf Centre for Action on Food Security or President's Choice Children's Charity have collaborated with provincial and territorial governments' in their efforts to mitigate food insecurity during the pandemic; likely a missed opportunity as these organizations have distributed their own funding (Maple Leaf Centre for Action on Food Security, 2020; President's Choice Children's Charity, 2020) and other important resources (i.e., food products, distribution logistics) that could be helpful for short term solutions (i.e., getting food quickly to vulnerable populations). Collectively, the lack of coordination, cooperation, and collaboration is problematic.

When considering the long-term consequences COVID-19 prevention protocols have had on SFP operations, the overarching problem is that the approach taken by most governments in Canada reinforces a charity-driven model of support for those who are food insecure. Despite overwhelming evidence that income-based solutions are required to fully address food insecurity (Dachner and Tarasuk, 2018; Tarasuk and Mitchell, 2020), the reinforcement of SFPs targeting children, youth, and in some cases entire families perceived to be food insecure, undermines programs originally designed to provide universal access and reinforces negative stigma in the targeting processes (McIntyre et al., 1999; Raine et al., 2003). Finally, where provinces and territories increased SFP funding in response to the pandemic (the longevity and consistency of these resources unknown), insufficient levels of funding pre-pandemic made it difficult for SFPs to be prepared for and operate ineffectively in the short and long-term.

Collectively, even with increased supports for SFPs during the pandemic, limited government funding and ownership of SFPs pre-pandemic highlights how SFPs continue to be constrained, which is concerning given increased demand during the pandemic (Coalition for Healthy School Food, 2021). School reopening plans demonstrated a lack of collaboration and integrative governance via the continued downloading of services, responsibility, and liability onto NGOs and SFP volunteers without providing additional resources in most cases to integrate new pandemic protocols (e.g., training, increasing cost of food) to meet the growing clientele. These observations suggest SFPs are facing more challenging operation standards than before the pandemic and if these trends continue, it will be challenging to sustain SFPs, let alone, achieve a broader mandate beyond trying to address food insecurity.

CONCLUSION

Provincial and territorial reopening plans which focused primarily on measures intended to limit infectious disease transmission which did not consider the broader features of SFP operation (i.e., robust health and nutrition guidelines focused on whole foods, environmental consciousness regarding food procurement and waste), constrained the regular operation as well as the full potential of SFPs to deliver on a range of positive outcomes. The approach taken by decision-makers in designing

school reopening plans did not consider the broader features of SFP operation (i.e., robust health and nutrition guidelines focused on whole foods, environmental consciousness regarding food procurement and waste), thus undermined the hard-won evolution of SFPs in Canada. The design, and especially revisions, of school reopening plans could have better considered and aligned existing SFP operational and nutrition guidelines with new COVID-19 protocols to provide a more holistic and comprehensive set of directions for all actors involved in all levels SFP operation ability to deliver the range of positive mandates they normally do. Altogether, discursive efforts by Canadian policymakers have not been supportive of SFPs before or during the pandemic. If these trends continue the material consequences will be felt in the form of SFPs losing operational viability and mandates likely refocusing to food insecurity, undermining progress made in the areas of local food procurement, environmental sustainability, as well as health and nutrition standards.

The predominant focus on COVID-19 transmission emphasized in school re-opening plans across Canada could have the unintended consequence of institutionalizing school food practices and policies that emerged from the pandemic (i.e., use of processed, pre-packaged foods). Janet Poppendieck (1992), an American social historian and school food scholar, has noted while political opportunities are often generated by emergencies, we must make sure the programs that emerge are worth institutionalizing.

Moving forward the Canadian government should fulfil their 2021 election platform commitment (Liberal Party of Canada, 2021) and Budget 2019 commitment (Finance Canada, 2019) by working more closely with the provinces and territories to develop and implement comprehensive, integrated food and nutrition programs in Canadian schools (Haines and Ruetz, 2020). A federally-led SFP that is universally-available (welcoming to all students and avoids stigmatization), health promoting (provision of whole fresh foods), respectful (environmentally sustainable, culturally appropriate, and locally adapted), connected (elements connecting food and people are considered), and comprehensive (curricula incorporates food literacy, nutrition education and food skills) would promote the health and wellbeing of all children and youth in Canada (Coalition for Healthy School Food, 2020). Moreover, nationally harmonized nutrition standards based on Canada's newest Food Guide (Health Canada, 2019b, 2021) that are fully implemented, monitored, and regularly evaluated (Haines and Ruetz, 2020) and harmonized SFP metrics (Ruetz and McKenna, 2021) would increase program consistency across the country. Overall, the development of a federally funded and mandated SFP would likely force policymakers to recognize and attend to the three-fold tensions SFPs face: promoting health and nutrition as a multi-government commitment, requiring collaboration across governments and departments, and justifying budget allocation based on long- and short-term population benefits.

As new variants of COVID-19 arise and protocols change, it is important for research of the intersection between school reopening plans and SFPs to continue in Canada. First, we suggest future research continue to compare the discourse (or lack thereof) regarding SFPs found in provincial and

territorial school reopening policy documents. This is important for generating a historical timeline of how and when policy discourses among high level policymakers changed (or did not) and the repercussions. Second, we recognize the importance of Noyes and Lyle's (2021) work which highlights and compares SFPs operation across Ontario's 14 lead agencies. We recommend this research approach is conducted across all provinces and territories to identified localized trends and provide for further comparative study across, as well as within, provinces and territories. Finally, heading into the 2021/22 school year many provinces and territories have rolled out additional funding and supports for mental health and wellbeing of students and are allowing many school programs including music and sports to recommence. However, the connection between nutrition and wellbeing is overlooked and SFPs continue to be unacknowledged in school reopening documents. Research is needed to better understand why these trends are occurring when evidence in Canada (Fung et al., 2012, 2013; Powell and Wittman, 2018; Ruetz and McKenna, 2021) and beyond (Hoyland et al., 2009; Roustit et al., 2010; Bundy et al., 2012) demonstrate the multiple health and wellbeing benefits of SFPs.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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AUTHOR CONTRIBUTIONS

MC, AR, LG, MI, and SS collected and analyzed data. MC organized the database and wrote the first draft of the manuscript. All authors wrote sections of the manuscript, contributed to the conception, design of the research, manuscript revision, read, and approved the submitted version.

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SUPPLEMENTARY MATERIAL

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