
SD40 School Nourishment Program 2018-2019 Report

Insights about School Lunch Experiences from Three Schools with
Pre-existing Lunch Programs During the 2019 Transition to the Fuel
Up! School Nourishment Program in New Westminster



THE UNIVERSITY
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Executive Summary

Introduction

In June 2017, New Westminster Schools (known as SD40) passed a motion with the aim of nurturing a school district where “no child is hungry and every child eats healthy” ([Board of Education motion, June 2017](#))ⁱ. To meet this goal, SD40 partnered with the Fraser Health Authority (FHA) to develop a plan to address documented concerns related to inequitable access to nutritious, culturally appropriate, tasty foods that would be feasible and cost-effective for SD40 schools across the district. SD40 then hired a School Nutrition Coordinator (in September 2018) partnered with a private caterer (Ready Maid Meals) to develop a program called Fuel Up! to provide parents with the option to order school lunches through an online ordering system. In February 2019, Fuel Up! was launched at 3 schools with pre-existing lunch programs. Fifty cents from each full-priced entrée was allocated to support a subsidy program wherein families with significant financial need could apply to receive a full or partial subsidy. Applying for subsidies included providing a brief statement of financial or other needs that reduced their family’s ability to provide a healthy meal for their child(ren). In 2018, SD40 and collaborators from FHA partnered with a research team from the University of British Columbia to better understand the process of implementing this program, and to provide insight into the experiences of students and parents during the initial winter/spring 2019 rollout of the program.

Objectives of this Report

Our preliminary research aimed to highlight the context and complexity of school meal experiences – with a focus on better understanding the factors and dynamics that shape students’ lunch experiences, as well as parents’ perceptions about the roll out of the program during this early, transitional stage of delivery.

This report describes the research partnership between SD40, FHA and the research team and the approach developed to capture the rich and detailed experiences and perspectives of students and parents about school lunch. Data was collected in the month before and shortly after the implementation of Fuel Up! at three SD40 Schools between January and June 2019. All three schools included in this report were transitioning from the previous School Nourishment Program (SNP) (which only had capacity to serve a limited number of students) to the new Fuel Up! model (available for purchase by any student at these schools).

How We Collected and Analyzed Data from Classrooms and Parents

Insights from and about students were mainly drawn from information gathered through ethnographic fieldwork and observations during 36 lunchtime visits at the three schools where Fuel Up! was implemented during the 2018-2019 school year (École Qayqayt Elementary School (QQ),

Queen Elizabeth Elementary School (QE) and Queensborough Middle School (QMS)). Lunch time visits included careful observation of 70 consenting students from six classrooms. We visited classes with students in grades 3, 4, 5 & 8. We first collected data before Fuel Up! was implemented in January-February 2019. During this time we visited each of the six classes three times, for a total of 18 lunchtime visits. We then visited the same six classes three more times, for a total of 18 lunchtime visits, after Fuel Up! was running in May 2019. The first two visits involved detailed fieldwork which included observing, listening to children's lunchtime conversations and taking notes to describe students' lunch experiences. During a third visit, photographs were taken of consenting students' lunch items before and after lunch had been eaten. We also asked students a short set of questions about their lunchtime experiences. After each lunchtime observation, all researchers wrote up from their notes detailed written descriptions of what they had heard and observed, called field notes. The field notes from all visits were coded thematically using NVivo software for qualitative data analysis. The field notes and the codes and themes that emerged from these data were reviewed by four trained researchers. The most salient findings are presented in this report.

Parents' experiences were then captured via an online survey. In June 2019, approximately 4 months after Fuel Up! was introduced, 273 SD40 parents from these three schools accessed this survey and 226 completed it. Survey respondents represented parents with children from all grade levels and diverse socio-economic backgrounds, languages spoken at home, and working status. We captured the experiences of nearly one half of all families who participated in the subsidy program. However, the survey sample slightly over-represented parents who had ordered meals from the Fuel Up! program, as 62% of survey respondents reported having previously ordered lunch from Fuel Up!. This is slightly higher given that less than half of families from these three schools had ever ordered Fuel Up! meals at the time of the survey. Learnings presented in this report represent the integration of the most salient themes that emerged from the analyses of data from both classroom visits and parent survey responses.

What We're Learning So Far

Lunch varied widely for students both before and after Fuel Up! was introduced

Initial findings highlight the important and complex roles that school lunch plays for both students and parents, and the perceived benefits and limitations for a model like Fuel Up!. Most students ate in their classrooms, but lunch varied widely in SD40 classes both before and after implementation of Fuel Up!. Differences were seen in terms of what students brought or ordered for lunch, how they talked about food, how quickly and with whom they ate and whether or not they had opportunities to order from Fuel Up!. Some ate slowly and struggled to finish their lunch within the 15-20 minute lunch period, while some ate quickly and then played, or waited to eat until nearly the end of lunch period. Students could also be seen playing, drawing, joking, dancing, and roaming during lunch. Students' lunches also varied widely in size, colour and composition. Photographs of school lunches showed that students' lunches frequently included several diverse items and varied containers, while others brought a single item or occasionally had no lunch at all.

In the early months after Fuel Up! was introduced, usage varied across the 3 schools, the frequency of ordering from the school lunch program declined, and the program did not yet reach many potentially vulnerable students

Overall, Fuel Up! usage was highest at QQ where Fuel Up! ordering records suggested that approximately 1 in 3 students ordered at least once in May 2019. At QE and QMS, schools which had a strong cultural history of students eating (often hot) lunches from home, fewer than 1 in 10 children had ordered from Fuel Up! in May. Parent surveys suggested that marginally more parents reported ever trying Fuel Up! compared to the previous lunch program; but overall, the frequency of usage reported in parents' survey responses and through our in-class observations and lunch photographs, appeared to have declined compared to the previous program. Unlike the previous program where parents typically signed up for full month at a time (but at a lower cost, with fewer menu choices), most parents reported using Fuel Up! for only occasional use. In the past month surveyed, approximately 1/3 of parents who reported ordering Fuel Up! at all, did so regularly (measured as 3-4 times per week or more); whereas 50% ordered only 0-2 times per month. There were also a number of parents who reported always or sometimes ordering lunch through the previous program and who believed they were eligible for the Fuel Up! subsidy program, but had not yet enrolled in the subsidy program and had never or seldom ordered a Fuel Up! lunch.

Overall, taste, variety, choice, flexibility, nutritional quality and time savings were perceived benefits of Fuel Up!

There was a perceived sense by parents that Fuel Up! lunches were nutritious. Eighty-three percent of parents surveyed agreed or strongly agreed that Fuel Up! "provides healthy food options" and over 70% agreed or strongly agreed the program: "offers a variety of foods", "offers flexibility of ordering side dishes" and "it is easy to use the online ordering system". In most but not all of the six classes observed, there was generally positive "buzz" among students about the program, with several students interested in trying it. We found that students' impressions were often socially formed and influenced by what their classmates were saying about the program. Students who were using the program regularly reported enjoying the food and the ability to have choices in their lunch.

Increased price emerged as a primary barrier to usage

While several examples of students eating Fuel Up! lunches that they enjoyed and spoke favourably about were documented, and several students with home packed lunches said they wanted to participate in Fuel Up!; we also documented remaining barriers to accessing Fuel Up! that largely centered on the perceived excess cost of the program. This was particularly pronounced compared to the previous lunch program which was subsidized for all participating students (but was not available at all SD40 schools or open to all students in order to facilitate a lower cost for the small number of participating families). For example, we encountered several students who believed or were told by their parents that school lunches through Fuel Up! were too expensive or not an option

for them to access. Students sometimes also were not sure why they no longer had access to the school lunch program. The perceived high cost of program participation emerged as the primary barrier to usage, repeatedly raised in the parent survey, discussions with students and input from school staff present during fieldwork in classes. Written comments on the parent survey frequently commented about the sense of risk in paying a high cost for food that children may not eat or like when delivered, or may not have time to finish in a short lunch period.

Taste, waste, time and food safety were also top of mind for parents

While some parents commented on their positive perceptions of the Fuel Up! menu, parent survey comments also often called for more “kid friendly” or “basic” lunch options that would better appeal to their children. Concerns around children not eating or wasting the purchased food, use of non-reusable packaging and lack of options for students with dietary restrictions and allergies also emerged as salient in parent surveys. Parent surveys also highlighted concerns about children not having enough time to eat their lunches and hesitation about ordering pricey lunches that children would not have sufficient time to eat or enjoy. While we did not have a large enough sample of school lunch program photos with which to rigorously assess changes in food waste following Fuel Up!, we did document several instances of students saving uneaten Fuel Up! lunches in fieldwork. Over 40% of parents who ordered from Fuel Up! reported that their child(ren) “often bring(s) leftover food home” and some parents raised concerns regarding food safety from unrefrigerated leftovers and a desire for safer storage options for leftovers.

Fostering an individualized versus communal meal experience

We did not observe patterns of physical separation between students with home lunch and students with school program lunches in terms of where they sat or ate lunch in class, either before or after Fuel Up!. In one school, we found that with the previous SNP, the delivery model which involved all SNP students lining up and waiting to pick up lunches, could lead to delays in students receiving their meal, and hence a very short window of time for some SNP students to eat with peers in their classrooms. The in-class delivery model with Fuel Up! seemed to allow SNP students to more easily start their lunch at the same time as their classmates and therefore have a more similar lunch time experience to students with lunch from home. The ability of students participating in Fuel Up! to access their lunches at the same time and eat collectively with students with packed lunches bodes well for concerns around explicit stigma and separation based on SNP participation. Yet, we found that the Fuel Up! lunches were far more visible and easier to discern from home packed lunches compared to the previous lunch program meals which came in brown paper bags with items more similar in style to home packed foods. Given the choice and flexibility in ordering, Fuel Up! lunches were highly individualized, with students’ names and orders printed on them. This seemed to result in a greater sense of individual ownership of meals, rather than a shared meal experience where students were participating collectively.

Food and care go hand and hand, and adults are an important part of students' lunch experiences

Students also often talked about food as care, whether this was being cared for by others through food or not feeling cared for; for example, by not having your food preferences considered or not having a family member with time to pack lunch. Fieldwork highlighted the social relationships and caring work involved in lunch, including some students expressing how much they missed the former lunch workers employed at their schools who were in charge of the former school meal program. By comparison, Fuel Up! had a distinctly less personal approach, where neither students nor adult staff had much direct knowledge about the people involved in preparing or delivering lunch. This also seemed to result in students having a weakened sense of social support and care during lunch. Students were not sure who to turn to for help at lunch despite the presence of other adults such as roving lunch hour supervisors and educational assistants in classes or nearby. Many students pointed to the former school lunch workers as someone they could turn to if they had concerns related to their lunch or were in need of a meal; but the caring role and work provided by the former lunch workers did not appear to have been filled through the model in place at the time of our fieldwork.

Parents generally supported the need for a subsidy program, but barriers and stigma remained for accessing the subsidy program

We did not specifically ask children about their knowledge of the Fuel Up! subsidy program or if they or their classmates were receiving subsidized meals. However, from in-class observations, it was evident, both before and after Fuel Up! was implemented, that students were highly aware of who gets the program food and were paying attention to what their classmates were eating. Students were also actively forming impressions and making meaning of their experiences during lunch. We noted skepticism among students about, and occasionally resistance to, the idea of free lunch. Parent surveys further revealed a lack of awareness and understanding about the subsidy option and remaining barriers preventing some parents from attempting to access the subsidy program. The survey identified several parents who believed that they were eligible for a subsidy but who were not participating because of perceived stigma and/or lack of awareness regarding eligibility. Still, parents receiving subsidies appeared to view the program favorably, and parents overall seemed to support the need for and existence of the subsidy program. Yet, some parents seemed to prefer offering a lower cost program that is more broadly financially accessible to more parents without the need for targeted subsidies, as was the approach in place at these schools before the implementation of Fuel Up!

Strengths and Limitations of this Report

There is very little published research available in Canada that describes the detailed and firsthand lunch experiences of students. Moreover, this report provides rich and systematically collected data about nuanced interactions that are not otherwise easy to capture by school staff or program

developers. This research therefore provides novel information directly from the perspectives of students, school staff and parents about what school lunchtime is like, what matters to students and families and what these experiences could mean for the success of new meal initiatives. It is important to note that these data were collected just before and in the first few months following the change to a new meal program at only three schools that had existing programs. Therefore, family and classroom experiences could differ substantively from other SD40 schools that did not have preexisting meal programs, or those with different school dynamics. Also, the Fuel Up! program model itself has changed in meaningful ways since the 2018-2019 pilot year of implementation. Results from this report should therefore be considered within the context of these schools in the early months of implementation. We note, this work does not document important changes that have been implemented in the 2019-2020 school year, including implementing several menu enhancements, new sizing options for entrees including a smaller and larger size, program implementation at other district schools including those with no previous school meal programs, and other likely important efforts to support communication between staff and students. Still, key themes raise critical questions about the reach and uptake of a model like Fuel Up! and key factors that are shaping lunchtime experiences of students relevant beyond this school district.

Conclusions and Next Steps

With growing calls to improve dietary quality and access to nutritious foods for Canadian children at school, and to better connect school food programming to wider community, educational and sustainability programming, it is imperative to document learnings from emerging school-led initiatives like Fuel Up!. This report highlights both the perceived benefits and limitations of a school meal model like Fuel Up! and provides preliminary recommendations for SD40 and for other school districts and policy makers developing school meal programs. Key themes emerging from this research include: the role of food (and the adults who provide it) in caring for children, the diversity of lunch eating styles and types of foods consumed by students, food as a marker of social identity in the classroom, individualized versus communal approaches to lunch delivery, and perceptions of the value and affordability of lunch. Insight from this work can inform the delivery model implemented in SD40 and in school districts nationwide by informing understandings about the facilitators, barriers, and benefits of a cost-shared meal program model provided by an external caterer.

Based on findings from the first months following implementation, the Fuel Up! model alone does not appear to be sufficient for ensuring that “no child goes hungry”. We provide a set of preliminary recommendations for program improvement and conclude that larger programmatic changes and resources would be needed to provide sufficient care and support to ensure that all students have access to a nutritious lunch at school. Next steps for research include completing a complementary research project which includes analyzing data from interviews of key stakeholders involved in the development and implementation of Fuel Up! to inform understandings of the history and processes through which the current meal program came into existence.

Glossary of Key Terms

Cost-shared school meal program: An approach to funding school meal programs wherein funds come from a variety of sources. In the case of Fuel Up!, meals are funded largely through payment from parents, with some funds provided by the school district and charitable sources.

Fuel Up!: A school lunch program introduced in February 2019 to schools in New Westminster, BC which provided parents with the option to order and pay for school lunches through an online ordering system, prepared and delivered by a private caterer.

QE: Queen Elizabeth Elementary School

QMS: Queensborough Middle School

QQ: École Qayqayt Elementary School

SNP: School Nourishment Program; a term that refers to both the old (or previous) lunch program available before February 2019 and the new Fuel Up! lunch program.

SNPEC: School Nourishment Program Evaluation Committee

Subsidy program: Fifty cents from each Fuel Up! full-priced entrée was allocated to support a subsidy program wherein families with significant financial need could apply to receive a full or partial subsidy. Applying for subsidies included providing a brief statement of financial or other needs that reduced the family's ability to provide a healthy meal for their child(ren).

Universal social program: Non-targeted services in which eligibility is not affected by income of recipients and participants do not need to meet specific eligibility criteria to participate.

Program Summary and Context

In June 2017, New Westminster Schools (known as SD40) passed a motion with the aim of nurturing a school district where “no child is hungry and every child eats healthy” ([Board of Education motion, June 2017](#)).¹ To meet this goal, SD40 partnered with the Fraser Health Authority (FHA) to develop a plan to address documented concerns related to inequitable access to nutritious, culturally appropriate, tasty foods that would be feasible and cost-effective for all SD40 schools. In September 2018 a dietitian was hired into the role of School Nutrition Coordinator to support the development, implementation and evaluation of the meal program. In 2018, following a Request for Proposal process, SD40 partnered with a private caterer (Ready Maid Meals) to develop a program called Fuel Up! which provides parents with the option to order school lunches through an online ordering system with the aim of addressing the key themes arising [from the detailed environmental](#) scan previously developed by FHA in conjunction with SD40 staff².

The Fuel Up! program was launched at three SD40 schools in February 2019 (École Qayqayt Elementary School (QQ), Queen Elizabeth Elementary School (QE) and Queensborough Middle School (QMS)) to provide monthly school lunch menus with a variety of options, including daily vegetarian and gluten-free options. The set cost for all entrées was \$5.75 and optional side dishes (e.g. side salad, fruit or dessert) could be ordered for \$1.25-\$1.50. Available drinks included milk (dairy or soy) for \$1.25 and chocolate milk (dairy or soy) offered once per week for \$1.50. The School Nutrition Coordinator worked closely with the caterer to ensure that menus developed met the Guidelines for Food and Beverage Sales in BC Schools. As part of the program’s commitment to nutritional quality, the menus also ensured that a fruit or vegetable was included with every entrée, that additional fruit and vegetable side dish options were frequently available for purchase and that milk and milk substitutes could be purchased daily.

Subsidy Program

Program participation was entirely voluntary, and parents could order meals each day, or for occasional use only. Fifty cents from each full-priced entrée was allocated to support a subsidy program wherein families with significant financial need could submit an application to receive a full or partial subsidy after providing a brief statement of financial or other needs that reduce their family’s ability to provide a healthy meal for their child(ren). With approval from an SD40 staff person, a subsidized family could receive a lunch entrée at no charge (full subsidy) or a partial subsidy where the entrée cost either \$2.75 or \$1.00 (depending on self-reported need). Neither drinks nor side dishes were included as part of the subsidy program but could be purchased for \$1.25-\$1.50. During the 2018-2019 school year, the subsidy program and approvals were overseen by the School Nourishment Program Coordinator.

School Context Prior to Fuel Up!

Before the onset of Fuel Up!, the three pilot schools—QQ, QE, and QMS—all participated in a school nourishment program which was run in-house by the Canadian Union of Public Employees (CUPE) Lunch Program workers. These schools represent three of four such schools with pre-existing lunch programs prior to 2019 (out of 11 total SD40 schools). These schools were identified as having high needs and received support through provincial Ministry of Education CommunityLINK funding to support their SNP operations. All three pilot schools had an SNP available, but did not have capacity to offer lunch to all students. Parents had little flexibility or choice in ordering and were typically required to commit to an entire month of SNP lunches at a time. Parents previously paid “what they could” through an anonymous envelope payment system with payment details known by school staff. Lunch costs were highly subsidized for all participants and cost approximately \$3 per meal in the previous program and typically included an entrée, beverage and small snack.

It is also worth noting that one of the pilot schools, QE, has a history of allowing a special lunch drop-off system, whereby parents or other caregivers could drop off a hot or cold meal shortly before the school lunch period. Some parents also dropped off meals at QMS, typically by leaving meals labeled with the student’s name and division number on a fold-out table near the front entrance next to the reception area. During one visit to QMS, a researcher counted 19 such meals on the fold-out table.

The environmental scanⁱⁱ that informed the development of the Fuel Up! approach also raised several key themes that were considered when designing the new SNP. These themes included: support for an affordable, daily SNP that would offer convenience, choice and nutritious options; the desire to distinguish parents who were using the program for “convenience” versus those “in need” of subsidized meals so that funds intended to support students in greatest need of subsidies were more widely available to students in need across the district. Because the original payment system was via a sealed envelope, there was a sense at that time that (as noted in the 2018 report that) “resources need to be re-aligned to meet district needs as there is an inequity in access, staffing and funding”¹ since the anonymous sealed envelope payment process for the in-house lunch program made it difficult to identify who was using the programs for “convenience” versus for “need”. Program designers were concerned that parents with financial means may not be paying the full fee. In the 2016/17 school year, it was estimated that the three in-house lunch programs together cost \$209,953. Parents contributed \$75,187 from lunch fees, with Community LINK funding covering the remaining cost of \$134,766. It was further suspected that only a minority of program users were deemed as “high need” users and that the program subsidies should be more equitably distributed across the district instead of concentrated within only three schools. Students and staff reported stigma as another potential barrier for accessing the former SNP, and the district had difficulty identifying “hungry” and highest need students. The report emphasized the importance of relationships between staff and students to ensure access to food and the role of food programming as part of school community building. As a result, the need for designated food program staff was

also emphasised as part of the core planning for Fuel Up!, including hiring a registered dietitian to serve in a core coordinating role.

The information below in **Table 1** draws from a report presented to SD40 on Jan 16, 2018. The specific historical context from these schools is relevant such that when considering the results from this report, it is important to recognize that the three schools described here could differ from other SD40 schools that had no prior history of hosting a school lunch program before Fuel Up!.

Table 1. 2016/2017 School Nourishment Program Context in SD40: Costs, Staffing, and Estimated Students Served By Previous Programs

School Name & Attendance (2018)	Number of students identified as in need daily*	Daily Food Programming Availability	District cost for daily Lunch Program (staff & food)**	Annual school food costs***	Designated food support staff & additional staff supporting food programming
Queen Elizabeth Elementary School 418	5-6 (However 70% estimated in need of some form of subsidy)	<u>Breakfast:</u> Yes, daily offsite BP (located at QMS) <u>Lunch:</u> Yes LP. 30-35 served <u>Snacks:</u> Office provides snacks	\$33,833^	\$160-240	<u>Food staff:</u> 0.5 hrs/day (noon hour supervisor to distribute meals) <u>Additional staff:</u> - School secretary processes payments, purchases snacks, distributes snacks
École Qayqayt Elementary School 498	10	<u>Breakfast:</u> Yes BP. 20 - 35 served <u>Lunch:</u> Yes LP. 65 lunches served (75 capacity) <u>Snacks:</u> Snacks are leftovers from BP and LP	\$69,618	\$1,600	<u>Food staff:</u> 5 hours/day (LPW); 1 hr./day (CYCW) <u>Additional staff:</u> -Principal, VP, EAs cover for BP if CYCW is away -CYCW purchases food - School secretary processes payments - CYCW preps Costco donations for take home
Queensborough Middle School 280	11 <i>Principal estimated that 10 more that don't ask for help</i>	<u>Breakfast:</u> Yes BP. 8-20 served <u>Lunch:</u> Yes LP. 55 served <u>Snacks:</u> Office provides snacks	\$50,749^	\$1,310	<u>Food staff:</u> 5 hours/day (LPW) <u>Additional staff:</u> -Volunteers run BP

Legend: BP = Breakfast program; LP = Lunch program; LPW = Lunch Program Worker; CYCW = Child and Youth Care Worker; SFVNP = School Fruit and Vegetable Nutritional Program

*These estimates likely underestimate the actual number of students in need. Reasons include difficulty identifying those in need due to stigma, cultural issues, and families' reluctance to request support and their potentially not knowing resources exist. There are also others whose needs vary depending on the time of month and time of year. Food assistance was provided occasionally to these students. This figure only captures those identified as needing assistance daily.

** 2016/2017. Costs do not include revenue from parent contributions. 2016/2017 revenue from parents was \$75,187. Unable to determine how much money came from each school.

^Total costs of staff/supplies for daily lunch program at QMS and QE is \$84,582. 60% of cost is for QMS (\$50,749) and 40% is for QE (\$33,833).

*** Total amount of money spent by schools on food other than the district-supported daily Lunch Program. This would cover the costs of all other food supports, such as breakfast, lunch supports and snacks. Funds come from a combination of Trans Continental Textile Recycling Program (TTRP), school funds, PAC and school donations. If monthly amounts were provided, figure was multiplied by 9 months to estimate an annual amount. If weekly amounts were provided, figure was multiplied by 39 weeks to estimate an annual amount.

Objectives of this Report

Our preliminary research aimed to highlight the contexts and complex dynamics of school meal experiences – with a focus on better understanding the factors that shape students’ lunch experiences, as well as parents’ perceptions about the roll out of the program during this early, transitional stage of delivery.

This report also describes the research partnership between SD40, FHA and the research team and the approach developed to capture the rich and detailed experiences and perspectives of students and parents about school lunch. Data was collected in the month before and shortly after the implementation of Fuel Up! at the three SD40 Schools (between January and June 2019). All 3 schools included in this report were transitioning from the previous School Nourishment Program (SNP) (that only had enough capacity to serve a limited number of students) to the new Fuel Up! model (available for purchase by any student at these schools).

School Nourishment Program Evaluation Committee

Given the novelty of the Fuel Up! model as a cost-shared school lunch program that can be ordered by all students with a subsidy program for eligible families, SD40 and their project partners from the Fraser Health Authority (FHA) sought an academic partnership to support the evaluation of this project. In the spring of 2018, researchers from the University of British Columbia (Jennifer Black and Sinikka Elliott) in collaboration with Rachel Engler-Stringer from the University of Saskatchewan joined together with SD40 and FHA to create a School Nourishment Program Evaluation Committee (SNPEC). To support the development of this committee’s work, a \$25,000 grant was sought and awarded from the June 2018 Partnership Engage Grant Competition (from the Social Sciences and Humanities Research Council of Canada).

With this funding, the researchers worked with SD40 and FHA partners during the program's first year (the 2018-2019 school year) to develop evaluation tools to support the long-term success of the new school lunch program.

Aims of the SNPEC

The aims of the committee’s work in 2018-2019 were:

- To develop a research partnership and model for collaboration between the SD40 (research partner), the Fraser Health Authority and academic researchers including a partnership agreement to structure our work.

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- To develop a project logic model, which is a research and evaluation planning tool to graphically describe the resources, activities, outputs and expected outcomes of the proposed school meal program needed to prioritize long-term research questions and measurement approaches.
 - To develop a process evaluation plan to map out how the implementation of the first wave of the program (at three schools) in 2019 will be monitored and assessed.
 - To develop and pilot test a set of evaluation tools and gather baseline data needed to examine proposed impacts of this program.

The Research Partnership

In 2018, the SNPEC developed a memorandum of understanding (MOU) to guide our work. The MOU outlined the scope of roles and responsibilities of key stakeholders, and approaches to communication and collaboration.

The evaluation project was led by Jennifer Black and Sinikka Elliott (UBC researchers) with key support from Rachel Mazac and Amber Heckelman (former UBC graduate student research assistants) and input from Rachel Engler-Stringer (University of Saskatchewan researcher). These academic partners contributed to the design of the evaluation approaches, data collection and analyses, oversight of research ethics and data storage, and knowledge sharing activities.

Quirina Gamblen, Iain Lancaster, Cyndi Adams (SD40 staff) and Deanna Tan, Sukhdeep Jassar and Lisa Sohi (FHA staff), acted as community partners. These key partners supported the ongoing evaluation by building connections within the SNPEC, keeping the team updated about the implementation of the school nourishment program and by providing insight to inform project methodology and design in their respective areas. Former SD40 staff Betina Wheeler (Community Program Development) and Belinda Scott (Director of Programs and Planning) were also founding members of the SNPEC, instrumental in the conception and initiation of the meal program redesign but moved on to roles outside the district shortly after the partnership was formed. Seri Niimi-Burch also joined the team as a graduate student in UBC's Integrated Studies in Land and Food Systems program in September 2019.

To best facilitate a working relationship within the project team, all participating members abided by a set of common working principles and guidelines including:

- Regular communication from: i) SD40/FHA on the status of School Nourishment Program (SNP) setup and program development to the research and evaluation team, and ii) from the research and evaluation team on the status of research and evaluation progress.
- Meetings at least every two months between researchers and SD40/FHA to discuss project progress and any necessary decision-making.
- Document the process of this project (e.g., collect meeting notes and process data as a part of the development of the evaluation plan and implementation of the program).

Project Team Members

The project team (in 2018-2019) included:

New Westminster School District

- Cyndi Adams: SNP Coordinator and Dietitian
- Quirina Gamblen: Director of Programs and Planning
- Iain Lancaster: District VP, Programs and Planning

Academic Researchers

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Project Logic Model

To structure our work, we developed a research and evaluation planning tool to graphically describe the resources, activities, outputs and expected outcomes of the proposed school meal program. We used this tool to prioritize long-term research questions and measurement approaches. The model now serves as a “living document” that was revised during the 2018-2019 school year as emerging insights from the implementation of Fuel Up! informed expected outcomes. This document was also useful for examining the activities and resources that were expected by the SNPEC at the time of logic model development in summer 2018, but had not yet been implemented when this report was written (summer/fall 2019).

See **Appendix 1**.

Process Evaluation (*In progress*)

To ensure that we gained insight into the process of the development and implementation of the SNP, we tracked the process using two main approaches. The first involves carefully documenting key meetings where decisions about the program are made and shared. Meeting participants were asked to consent to extensive notes being taken during meetings. Afterwards, these notes were shared with those present at the meetings for comments and clarifications. When possible, researchers also attended and wrote notes from meetings in which Fuel Up! was introduced to parents at the pilot schools.

Interviews have also been conducted with 12 key individuals involved in the conception and implementation of the program to document the historical and processual elements of the program. The interviews will provide information about how and why decisions were made regarding the program, and thus will be useful to SD40 as it evaluates the program, and to other school districts considering implementing a lunch program. These interviews asked participants to reflect on the process of passing the motion that "no child is hungry and every child eats healthy" and the ensuing processes that led to the current lunch program. At the time of writing this report, researchers were at the preliminary stages of analyzing and synthesizing the data from this process evaluation.

Data from the recorded meeting notes and key stakeholder interviews are capturing a behind-the-scenes understanding of the decision-making processes involved in the execution of the SD40 motion and the design and implementation of Fuel Up!. Insights gained will assist SD40 by documenting the philosophy and practical decision-making that guided the SNP. This work is timely given the growing interest in developing a [National School Meal Program in Canada](#), as part of the Food Policy For Canada³. This interest in the development of a national school food program is also reflected in the May 2019 [School Food Program For Children Act \(Bill C-446\)](#) and the recent creation of the BC chapter of [The Coalition for Healthy School Food](#) which is "a group of organizations seeking federal investment in a Universal Healthy School Food Program to support the health, well-being and education of all Canadian children"⁴. Hence, the conceptualization and implementation phases of SD40's SNP has much to teach about the processes that are undertaken in the formation of programs at the local level. Our findings from this process evaluation are not included in this report but will be shared when available after detailed analyses.

Purpose and Description of Data Collection Tools

The research approaches reported on here aimed primarily:

- To document the school lunch experiences of SD40 children in six classrooms (before and after the implementation of Fuel Up!), with a focus on better understanding the complex factors and dynamics that shape students' lunch experiences.
- To understand the perspectives of parents in three schools regarding the strengths and perceived challenges regarding the new program.

To that end, we developed two sets of data collection tools that will be described along with initial reflections about their results and implications, and potential next steps for research and recommendations for consideration.

Data collection procedures were approved by the UBC Behavioural Research Ethics Board and by SD40 leadership. Please contact study researchers if you wish to review or adapt the study tools for work in other districts.

Describing the School Lunch Experiences

The SNPEC was interested in better understanding the role of Fuel Up! in supporting improved: dietary quality, access to food, and the meal experience of SD40 students. But we recognized that there was a gap in detailed knowledge regarding these facets of school lunch in SD40 (and in the wider research literature on school lunches in Canada). In particular, there was an absence of information about the nuanced social dynamics that happen during lunch. To inform this work, we carried out a detailed case study of the three schools where this program was launched in 2019. Prior to (and following) the introduction of the new SNP, we documented the spaces where students in two classes per school ate and accessed food at school including the composition, look and feel of classrooms where lunch is held and spaces where students interact with food. These schools all had existing lunch programs. We also paid attention to how the program (before and after Fuel Up!) worked, the kinds of meals participating students were eating and how they were eating them. We collected data on where students ate, what mealtime was like, what food looked and smelled like and how it was presented to students. Similar factors were observed following the introduction of the new meal program with particular interest in observing whether changes had occurred in the ways that students accessed food, talked about food and the people who provided it, engaged with the meal program, and managed food waste. We also noted any insights from adults in the classroom about their perspectives regarding students' lunch experiences. These adults included approximately 12 teachers, educational assistants or noon-hour supervisors who provided additional context about lunchtime dynamics.

The purpose of this preliminary fieldwork was to better understand the social and contextual factors influencing meal program participation and experiences in schools implementing a new school lunch program. We were not able to carefully examine all of the proposed outcomes described in the project logic model, but focused on several of the key short-term student and school-level improvements of interest. For example, program developers described aiming to increase the number of students participating in the meal program and reduce stigma related to accessing meals for those with financial and household barriers to participating in an SNP.

This study therefore explored how the new meal program was achieving these short-term goals and describes student meal experiences and food access, meal program participation as well as parent perspectives about the benefits and limitations of the Fuel Up! model. Future work is needed to carefully capture impacts of the program on food literacy, school food environments, dietary outcomes for children or long-term nutrition-related health outcomes for children or their families.

How Was Information Collected and Analyzed to Learn about Lunchtime Experiences?

Fieldwork took place in two classes from each of the three participating schools in January-February and May 2019 (six classes in total). Since we were limited in time and resources for data collection (and hence could not observe all classrooms), we focused our attention on the oldest students in each school (grades 3-5 in the two elementary schools, including split classes and both English speaking and French immersion classes) and grade 8 classes from the middle school to capture classrooms where we hypothesized that food-related stigma may be more salient (compared to classes with younger children). We visited each classroom three times before the implementation of Fuel Up! (in January and early February 2019) and three times in the spring (May 2019) after it had been running for approximately three months (total classroom visits=36). The first two visits included only fieldwork comprised of careful observations and notetaking to describe students' lunch experiences and occasional brief conversations with students. The third visit included a short written survey (see **Appendix 3**) and photographs of consenting students' lunch items before and after lunch had been eaten (see below for a discussion of consent procedures) along with observations and asking students' about their lunch experiences (see **Table 2**).

Table 2. Questions asked to consenting students during classroom visits after Fuel Up! was introduced

#	Questions
1	Have you tried the new school lunch program? a. If yes, how often do you have the SNP lunch? [Move on to questions 2-4] b. If no (and used to be on the old SNP), do you know why you are no longer on the lunch program? What do you like more, the old lunch program or bringing lunch from home? Why? [also ask c.] c. If no (and has never used the SNP), are you interested in trying the new lunch SNP? Why?
2	What do you think of it? (Probe: What do you like about it? What do you not like about it?)
3	What would make it better?
4	How is it different from the old school lunch program?

Fieldwork involved careful observation of school premises with special attention paid to spaces where food was served and eaten (lunchrooms, hallways and spaces where foods were advertised). Upon entering classrooms for the first time, data collectors introduced themselves to the students and adults present to explain the purpose of the visits and expectations during study sessions and to request students' oral assent to participate (this applied only to those students whose parents had consented for them to participate). We informed teachers and students that we were there to help the school district learn more about the context in which children eat school meals, so would be visiting their schools and some classrooms and eating spaces to learn more about school meals.

Approximately a week before our first visits, SD40 contacted parents (electronically) in participating classes to let them know when/how and where to access online consent forms. Consent forms were available to parents online (which they could access through their unique and secure logins which they use often for other school related consent and permission protocols). Student assent was also requested orally in class. Students who assented and who provided signed consent forms from caregivers were identified with a name tag or coloured sticker on their desk or shirt so that data collectors could identify participating students. Data collectors took careful notes of all observations made, only detailing experiences of consenting students. Overall, 7 to 17 students per class were actively consented to participate with a total of 70 children (response rate of approximately 50% of students) participating across six classes.

Our focus was on observation and engagement with students, but we also documented any key insights shared by adults during classroom visits, including teachers, educational assistants or noon-hour supervisors. Adults shared valuable insights that provided context about nuanced dynamics at lunch. All adult data reported here came from staff who consented orally to having their comments documented. Only aggregate, anonymized data from adults are shared here.

Detailed field notes from all classroom visits were initially coded independently by at least two researchers to develop codes to capture broad themes in the notes (examples of broad codes include EATSTYLE, FOODTALK, TIME, PROGFOOD, HOMEFOOD, STIGMA). Researchers then developed a code book that defined the codes and provided examples. The code book was used to guide the thematic coding of all field notes using NVivo software for qualitative data analysis. These detailed notes and the thematic codes that emerged from these data were reviewed by four trained researchers who then summarized the most salient findings which are presented in this report. We followed these coding procedures for both waves of data collection (i.e., coding and analysis occurred in February-April 2019 for the fieldwork done in January-February and in May-July 2019 for fieldwork done in May).

How Was Information Collected from Parents?

To better understand parent perspectives about the Fuel Up! Program, in winter 2019, the SNPEC team developed an online survey to engage parents in providing their feedback (see Appendix 4). To our knowledge no validated survey has been used or is available for assessing the areas of main interest in this project, so the team developed new survey questions. The survey included questions relevant to both parents who have and have not engaged in Fuel Up! and had a specific module for parents who have participated in the subsidy program. Soliciting feedback from parents that had not used the program provided a means for exploring potential barriers to participation. A draft survey was reviewed by all members of the SNPEC and by three additional SD40 parents for clarity and revised accordingly.

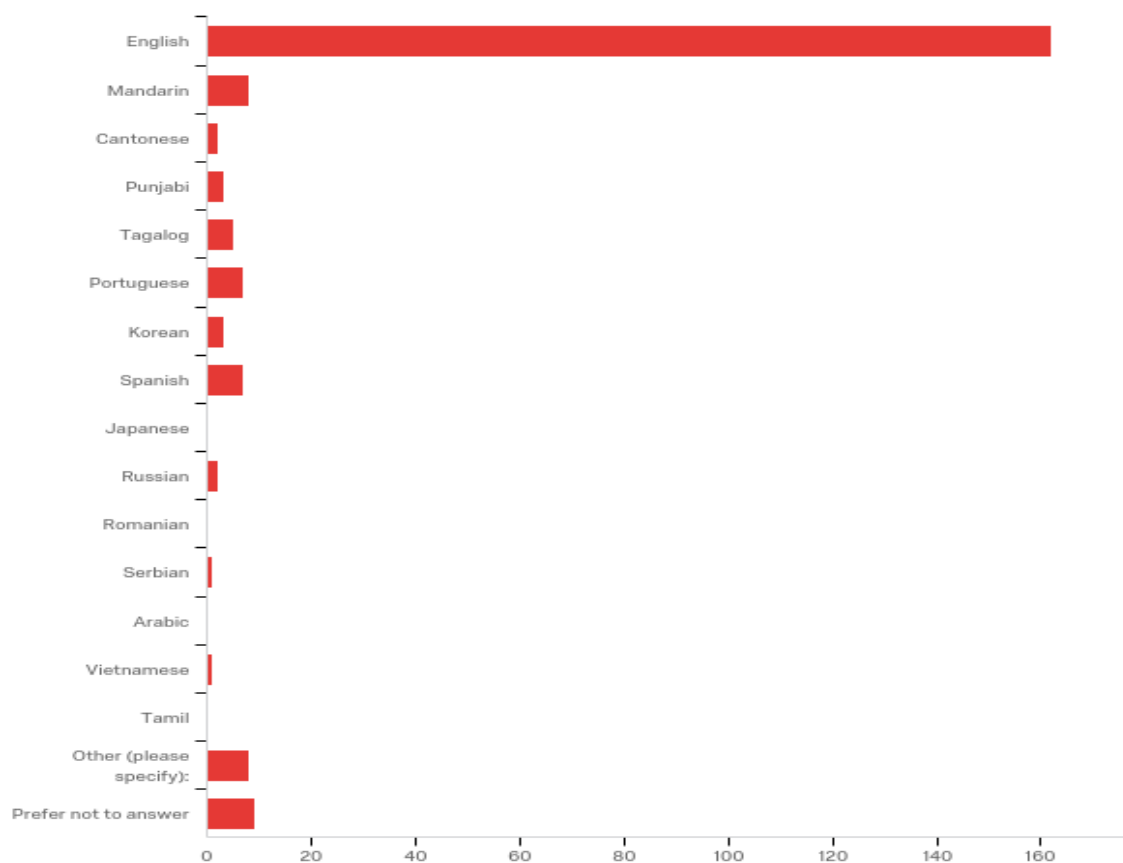
On June 10, 2019 all parents at the three schools (École Qayqayt Elementary School (QQ), Queen Elizabeth Elementary School (QE) and Queensborough Middle School (QMS)) were emailed a link to the survey (which was to be administered via Qualtrics, an online survey system). The emails were forwarded by SD40 staff using "School Messenger", which is a listserv for legal guardians of children enrolled in SD40 schools. The invitation requested that only one parent per family complete the survey, so we are assuming that each survey response represents one individual family.

Two reminder emails were sent over the next two weeks, and research assistants and SNPEC members visited schools at morning drop-off or afternoon pickup times on several occasions the following week and visited two middle school assemblies (attended by parents) to inform parents about the survey and to offer on-site electronic tablet access for parents wishing to complete the survey on-site. To further encourage participation, fliers were posted near school entrance doors, and forwarded to parent advisory council chairs and the New West Mom's Group (#NWMG) Facebook Group.

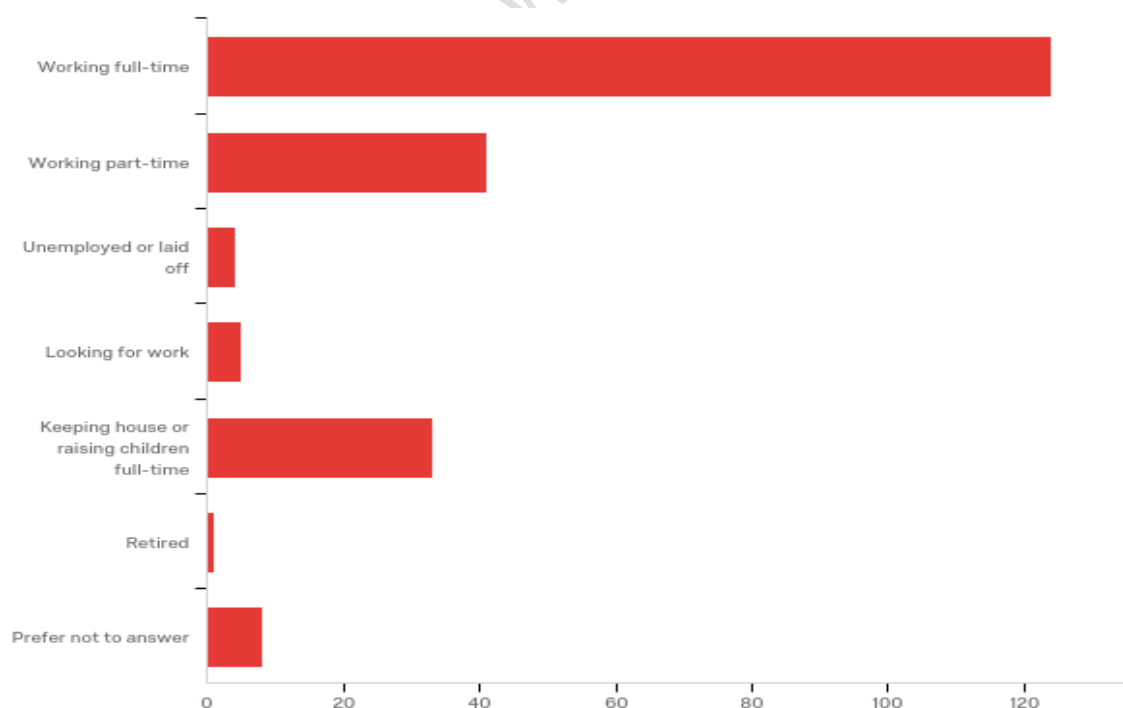
Who Completed the Parent Survey?

In total, 273 parents logged on to complete the survey in June 2019, and 226 parents completed the survey from start to finish. Over half of the respondents had at least one child at QQ (n=151), 28% had a child at QE (n=74), and 16% (n=44) of the respondents had at least one child enrolled at QMS. While we cannot confirm the exact proportion of families represented by the survey (as we only have rough estimates of the total number of distinct families engaged at QQ or these three schools combined in the 2018-2019 school year), we estimate that this survey was completed by approximately 25% of all families attending these three schools. Respondents represented children at all grade levels and diverse socio-economic circumstances, languages spoken at home, and working status. See graphs below for an overview of the characteristics of parent survey participants.

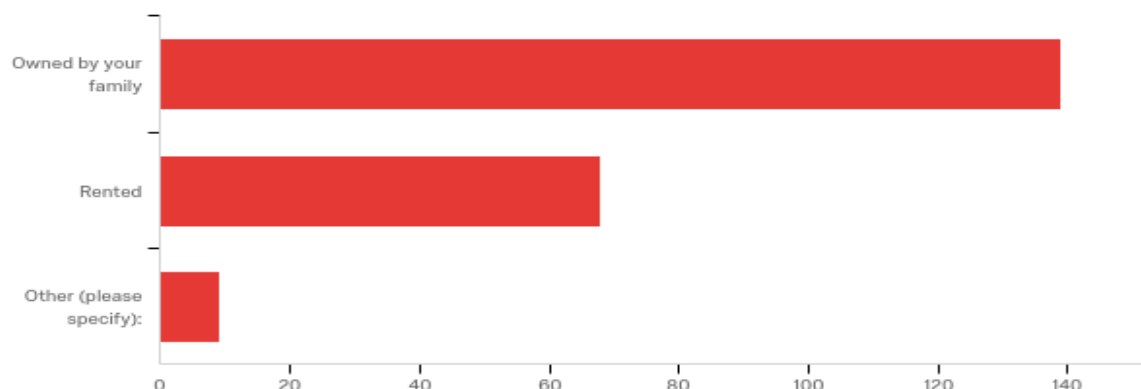
What language is spoken most often at home?



Which of the following best describes your current status?

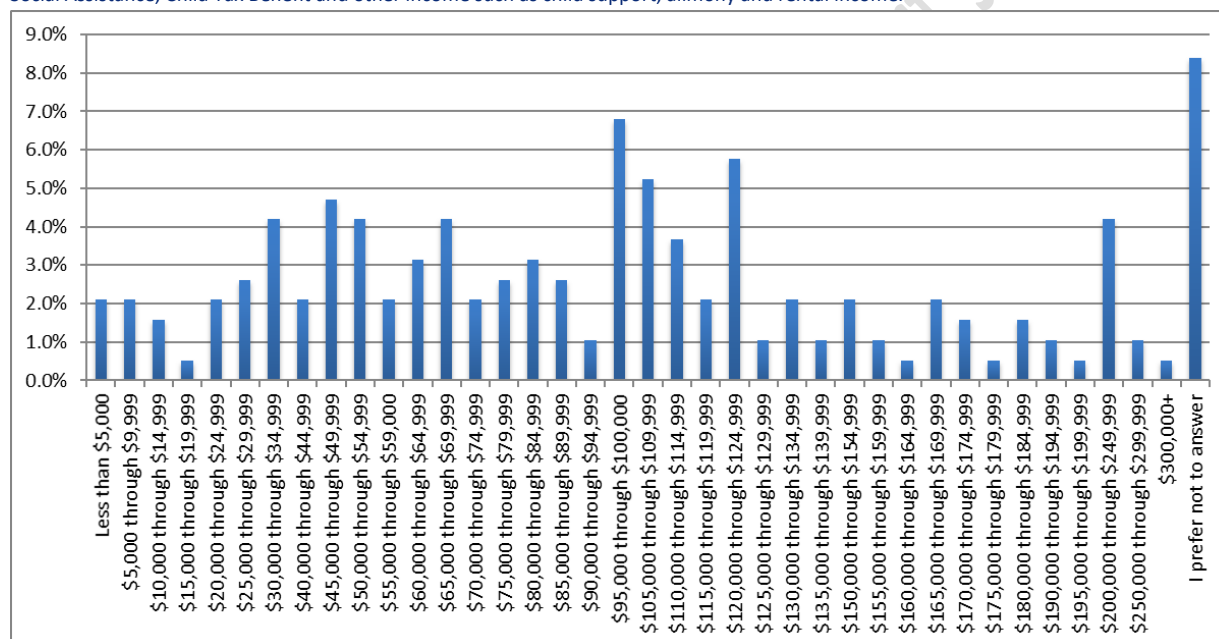


Is the home where you live:



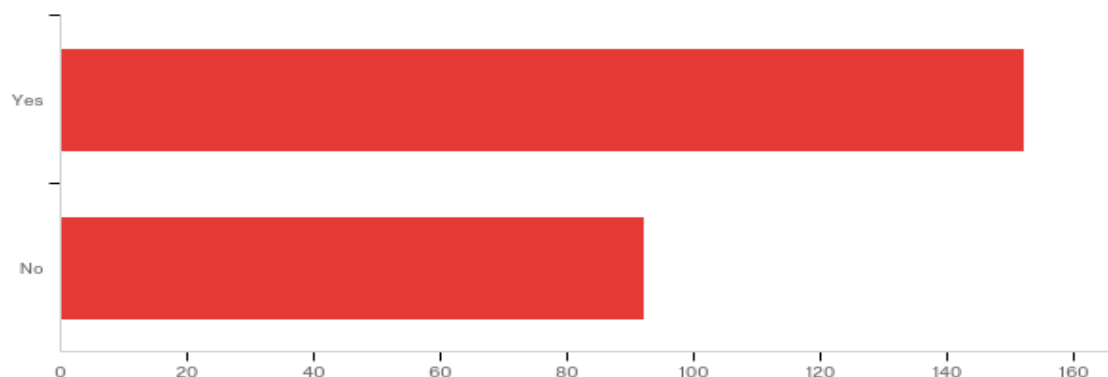
What is your best estimate of the total income* received by all household members, from all sources, before taxes and deductions, in the past 12 months?

* Income can come from various sources such as from work, investments, pensions or government. Examples include Employment Insurance, Social Assistance, Child Tax Benefit and other income such as child support, alimony and rental income.

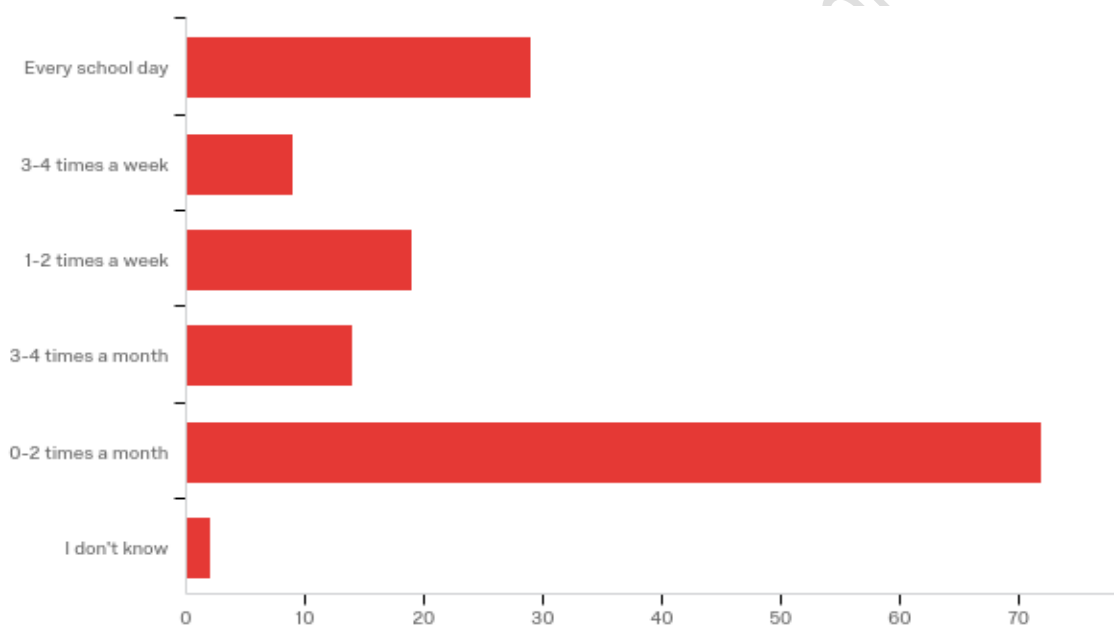


Not surprisingly, this sample captured more respondents who had tried the Fuel Up! program than parents who always sent lunches from home, with 152 parents (62% of respondents) having tried the program since February 2019. To put this into context, SD40 staff estimated that since the program began, families of 551 out of 1,277 students had placed at least one Fuel Up! order between February and June 2019 (QQ=257 (out of 511), QE=186 (out of 445), QMS=108 (out of 321)). In May 2019 alone, orders were placed on behalf of 215 students (QQ=160, QE=25, QMS=30). These estimates also provide a sense of the overall uptake of the program across schools in May 2019 (QQ=31%, QE=6%, QMS=9% had ordered at least once that month). This suggests, that the survey was completed by approximately 28% of families who had ordered from Fuel Up! at least once between February and June 2019 and 13% of families who never placed a Fuel Up! order during that time.

Have you ever ordered lunch from the Fuel Up! school lunch program that started in February 2019?

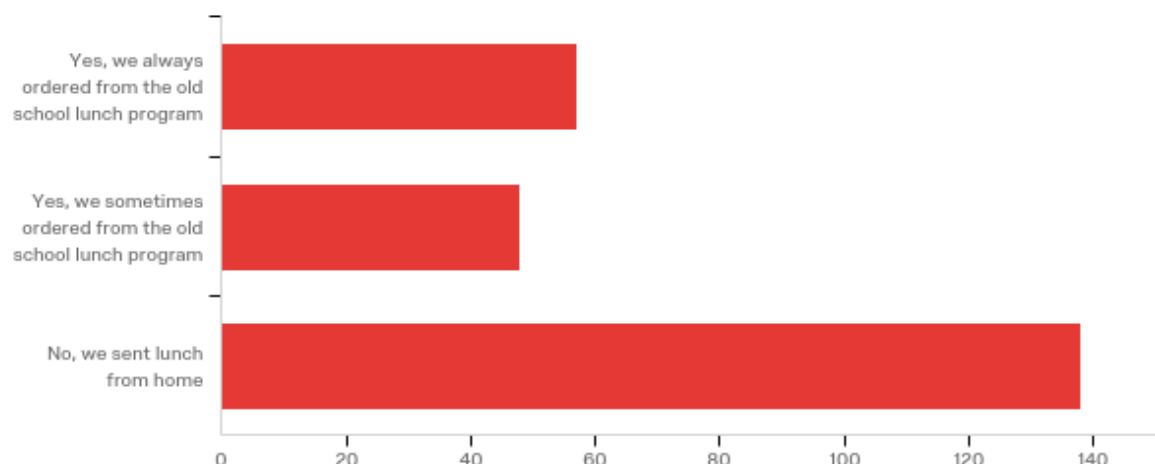


In the last month, about how often did your child(ren) eat food ordered from the Fuel Up! school lunch program?



Twenty-three percent (n=57) of families who completed the survey reported always ordering lunch from the previous meal program in place before Fuel Up! and 20 % (n=48) sometimes ordered from the previous program.

Before February 2019, did you ever order lunch from the school meal program offered before Fuel Up! started in your school?



What We're Learning from Children and Parents

Lunch varies widely for SD40 students:

Most students ate in their classrooms but where they sat in the room (and even whether they sat) and how social they were varied dramatically. Some read a book the entire time they ate, some played games with others as they ate. Some ate slowly and were rushed to finish their lunches, some ate quickly and then played (or waited to eat until nearly the end of lunch period). In addition to playing or reading, students could be seen drawing, joking, dancing, roaming, or chatting.

Students' lunches also varied widely

We have collected a wide set of school lunch photos that show that some students brought large thermoses or plastic containers of food from home, while some had a variety of small containers and packages of home food. Many had diverse and colourful lunch bags and reusable containers and water bottles and there was a wide array of foods both in terms of cultural diversity and nutritional quality. Overall, SNP lunches both before and after Fuel Up! appeared to include more (single use) packaging and disposable cutlery, than lunches brought from home.

Program Usage

After Fuel Up!, the frequency of ordering school lunch declined, varied across schools, and did not yet reach all potentially vulnerable students

We did not have access to detailed program ordering or usage trends and therefore cannot speculate about the patterns of growth of the program between February to June. Initial reports from SD40's own analysis of ordering records suggests that program usage and uptake grew steadily after the program's introduction in February 2019 (although the research team has never formally analyzed ordering records). Based on feedback from parents and school staff, the program and menu were also adjusted over time taking into account preferences and demand for certain menu items⁵.

Overall, estimates from parent surveys, lunch photos and data provided by SD40 suggest that by June 2019 Fuel Up! program use was low to moderate in 2019

Out of 53 meals photographed in May 2019, only six (11%) were Fuel Up! meals; whereas 27% of the lunches photographed in Jan/Feb 2019 were SNP lunches under the old program (14 out of 51). SD40's ordering data obtained from Ready Maid Meals' ordering logs suggested that highest usage was at QQ where nearly 1 in 3 students ordered from Fuel Up! in May, whereas there was relatively low uptake at QE and QMS where less than 1 in 10 students ordered any Fuel Up! meals in May.

Of those using Fuel Up! who completed the survey, most families were occasional users ordering sporadically (rather than daily or regular users)

Among the parents who had tried the Fuel Up! program, 29% reported ordering it daily or 3-4 times per week, while 33% ordered 1-2 times per week or 3-4 times per month. It is worth noting that 50% of those who had ever used the program reported ordering only 0-2 times per month in the last month. Therefore, parent survey estimates suggest that most parents are infrequent users.

Survey participants also varied in frequency of ordering school meals through the previous SNP

At QQ, 55% of parents sent lunch from home before February (21% reported always ordering the previous SNP and 24% sometimes ordered it). At QE, 69% always sent lunch from home before Fuel Up! (whereas 17% always and 14% sometimes ordered the old SNP). At QMS, while 50% of parents reported always ordering from the old SNP (and 50% had similarly reported ever trying Fuel Up!), only 25% of QMS families reported ordering Fuel Up! either every school day or 3-4 times per week in May 2019, and 75% of users reported ordering 1-2x per week or less.

Overall, 57% (n=138) of responding parents reported never ordering from the previous SNP (and always previously sending food from home prior to February 2019), and slightly more parents reported having ever tried Fuel Up! (n=152). This suggests that Fuel Up! facilitated access for a small number of parents who had not previously ever ordered from the old SNP. Indeed, 75 parents who had ordered from Fuel Up! reported that, before February, they had never before ordered from the SNP. Hence, Fuel Up! may have been accessed by families new to SNP usage. However, among our lunch photographs, we identified no students who had a lunch from home in Jan/Feb who then had a Fuel Up! lunch in May 2019.

Further, 16 parents who reported that they "always ordered from the old school lunch program", and 13 parents that "sometimes ordered from the old school lunch program" had not yet tried Fuel Up!. These data suggest that overall there was a decline in the frequency of accessing school meals regularly compared to the old SNP (which required monthly ordering), given that only 29 parents (11% of the sample) now reported ordering every school day (and few others ordered Fuel Up! lunches more often than 1-2 times per week). Among the 57 parents who reported "always" ordering the previous SNP and have tried Fuel Up!, less than half (40%, n=23) reported ordering Fuel Up! 3-4 times per week or more in the last month.

During classroom observations, we observed that the vast majority of students brought lunches from home both before and after Fuel Up!'s introduction

For example, in one of the two classes visited at QE, there was only one student who received Fuel Up! lunches during observation days and no students in the second class observed received Fuel Up!. Fuel Up! ordering reports provided by SD40 confirm that from these two classes only one student had placed any Fuel Up! orders. Overall, SD40's estimates (confirmed by our observations and photographs) found that of the three pilot schools, QE had the lowest Fuel Up! program participation rate between February and May 2019. From our sample of 104 lunch photos, it is estimated that 73% of students in our sample brought lunch from home before Fuel Up!, and 89% brought lunch from home in May 2019 following Fuel Up!'s introduction.

What Else We Learned from School Lunch Photos

School lunch program usage

We collected photos from 51 students before Fuel Up! was implemented in January-February 2019 and 53 students after Fuel Up!'s introduction in May. The photo analysis confirmed that the majority of lunches were brought from home (both before and after Fuel Up!'s introduction). However, the photos confirmed qualitative observations finding that the proportion of students ordering school meals dropped significantly from 14/51 (27%) of meals photographed in early winter to just 6/53 meals (11%) following Fuel Up!'s introduction ($p < 0.05$). No students with home packed lunches photographed in winter had photographs showing that they ordered Fuel Up! meals during our observations in May.

Food packaging and colour

As reported in fieldnotes of meal observations, photos found that lunches frequently contained multiple items and packages. Only 22% of lunches contained just a single item/container. Students commonly brought both reusable and disposable packaging in lunch bags. Given that most students brought lunches from home, reusable packaging was common, with the majority of students bringing at least one reusable package both before and after Fuel Up!'s introduction (69% pre; and 81% post-Fuel Up!). But more than half of students had at least one single-use package as well (both pre and post-Fuel Up!).

Food waste and consumption

Comparing photos of lunches taken before and after children ate, we estimated the proportion of food consumed from food items photographed. There were 14 lunches for which this could not be accurately estimated (if, for example, students had a closed/opaque lunch container in after-lunch photos and estimates could not be accurately conducted). Among the 90 lunch photographs available for this analysis, most students consumed the majority of the meal photographed. Few (13%) photos showed that 40% or less of the original meal had been consumed, whereas approximately 75% of all photographs showed that three quarters or more of the lunch meal had been consumed. Because of the very small sample size of SNP meals photographed (both before and after Fuel Up!), we cannot draw firm conclusions about changes in food waste or proportion

consumed from these data. From the very small sample of SNP lunches documented, we estimated that students consumed an average of approximately 60% of their SNP lunch both before and after Fuel Up!, but there was wide variation in proportion of food leftover (mean amount of food consumed with old SNP=64%, standard deviation=26%; mean with Fuel Up!=60%, standard deviation=29%).

Food and nutritional composition of lunches

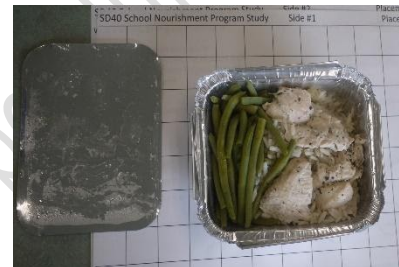
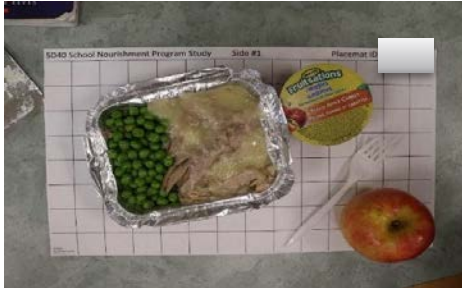
Students often brought sandwiches as the main component of their lunch, with other students typically bringing a hot dish. Some brought previously frozen “quick meals” such as pizza pops, chicken strips or nuggets, and one instance a chicken pot pie was brought in its original packaging. As well, when students would bring “other” minimally nutritious snack foods (e.g. cookies, granola bars) or other packaged products (e.g yogurt), they were almost always a branded product (e.g. Oreos, Yoplait) rather than an off-brand.

Over 50% of lunches photographed had no fruit visible in photos, and over 40% had no documented vegetables. Nearly three quarters of lunch photos had no evident servings of milk or alternatives (such as fluid milk, cheese, yogurt or fortified soy drinks), and only one of the six Fuel Up! photos had any milk or milk alternative products evident. This suggests that for students bringing lunch from home or ordering Fuel Up! entrees (without the supplemental milk purchase), lunch meals will likely be relatively low in calcium and vitamin D. This is a noteworthy shift since the majority of SNP lunches photographed in the winter before Fuel Up! included a carton of milk. Few home lunches (13%) contained yogurt, and none of SNP meals photographed before or after Fuel Up! included yogurt. While over 50% of photos shows some source of meat and alternatives, 37% had none; and in another nine photos it was not possible to tell whether mixed dishes (e.g. pasta, casseroles, sandwiches) contained any servings of meat or meat substitutes. No SNP lunch before or after Fuel Up! contained any evident legumes and only four home lunches had any. Similarly, less than 5% of lunch photos contained any fish, and of these 3 out of 5 were brought from home and two were from the previous SNP. Nearly 1/3 of lunches from home contained processed meat, but only one SNP lunch (from the previous program) had evidence of a small amount of processed meat. Most home packed lunches (85%), and all previous SNP lunches included more than one serving of grain, while 2/6 Fuel Up! lunches photographed contained no grain products. Less than 20% of all lunches contained evidence of any whole grain foods, and none of the six Fuel Up! lunches photographed contained any evident whole grains. Only one lunch photo out of 104 photos contained a sugar sweetened beverage (and it was packed from home).

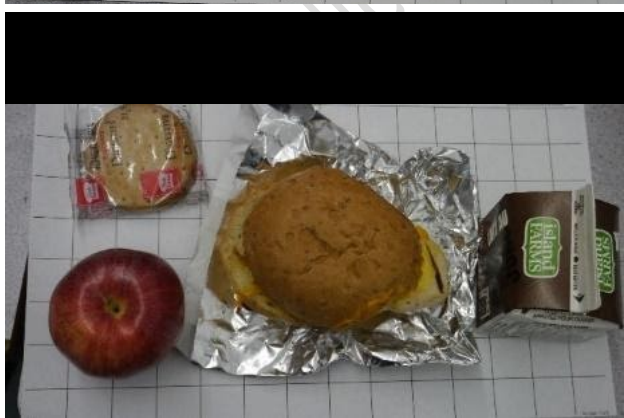
While the sample of Fuel Up! lunches is too small to draw meaningful conclusions about the nutritional quality of the full menu cycle, this preliminary analysis suggests that continued monitoring by a registered dietitian is essential for ensuring the nutritional quality of menu offerings. Considerations should continue to be given to ensuring improved access to fruits, vegetables, whole grains and foods rich in calcium and vitamin D as well as sources of omega 3 fatty acids in SD40 schools.

Sample Lunch Photos

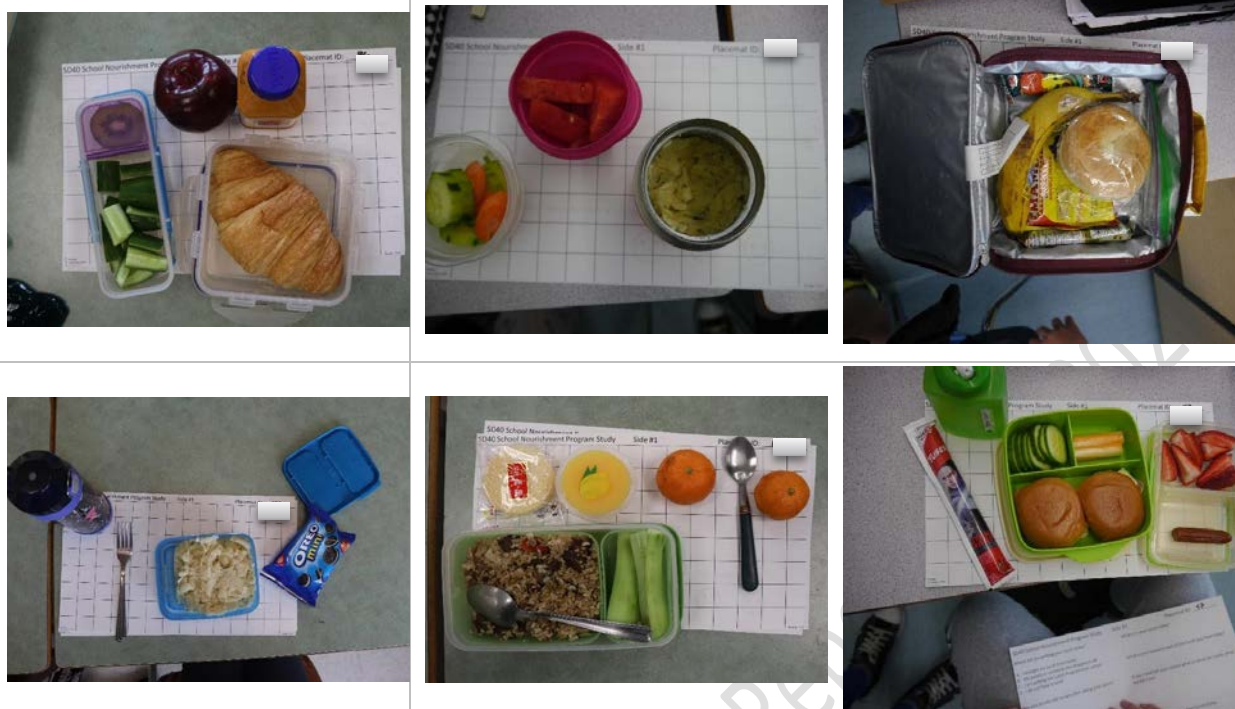
Examples of lunches from Fuel Up!



Examples of lunches from previous SNP



Examples of lunches packed from home



Parent and Student Impressions of Fuel Up!

Overview

Overall, findings from field observations and parent survey data highlight the mixed and sometimes conflicted viewpoints of both students and parents in regards to the importance, success and values of school meal programs and Fuel Up!. For example, less than half (43%) of parents agreed or strongly agreed that “schools should sell lunch”, while 42% were neutral (neither agreed nor disagreed), and 11% of parents disagreed or strongly disagreed with this statement.

We frequently documented openness among students about participating in Fuel Up! and sometimes found that there was a positive “buzz” about the program. Several students and staff told us they had heard that it was tasty and healthy, although few students in classes we observed had regularly purchased or accessed it themselves. Adult staff offered some positive impressions about the program (as well concerns described in sections below) and noted that students who accessed it seemed to enjoy the food, including the wider variety of choices and nutritious options.

Still some students had little interest in the program. Level of interest in the program seemed to vary by class and was influenced by perceptions of peers and, potentially, by what other students in individual classrooms did and said. We found that students in a classroom often formed a collective or shared understanding of Fuel Up!. For example, a student said “I hear my friends talking about it

and say it's good" in a class in which other students participated in the school lunch program and in which many students described the program favourably. Several students in a middle school class, however, described the new school lunch program as *"airplane food"* (referring to their sense that this was produced commercially and for the masses) despite being asked individually for their impressions. While a group of middle schoolers in another class commented collectively that they like that Fuel Up! provides a *"good amount of food"* and *"tastes good and is healthy."* These examples revealed how both negative and positive perceptions were being socially formed.

The sections below will highlight several of the most common perceived benefits and potential limitations, and insights about the subsidy program, lunch-related stigma, as well as program accessibility that emerged from our fieldwork and data reported in the parent surveys.

Perceived Benefits of Fuel Up!

Taste, variety, choice, flexibility, nutritional quality and time savings were raised as important perceived benefits of the program. In the parent survey, most parents using the program agreed or strongly agreed that the program *"offers a variety of foods"* (71%), *"provides healthy food options"* (83%), *"offers flexibility of ordering side dishes"* (72%), and *"it is easy to use the online ordering system"* (72%).

Healthy Food

Overall, parents perceive that Fuel Up! offers nutritious options

The majority of parents (83%) agreed or strongly agreed that Fuel Up! *"provides healthy food options"*. In the survey, one parent commented *"I like the healthy meals, vegetarian options, grain and starch light meals that offer the kids an opportunity to try healthy real food."* Another commented that *"[Fuel Up!] should continue"* and made the connection between the new SNP and *"children hav[ing] a right to eat healthy food."* At QQ, one participating student described the new SNP as being *"healthier"* and *"still tast[ing] good"* while a non-participating student, when asked to share what she'd heard about the new SNP, commented that *"[her classmate] says she likes it and that it's more healthier."* Some students at QMS had a generally positive view of the lunches, stating *"the food is good"* or *"yummy, and [I] get it each day."* We commonly found that teachers and adult staff also reported improved nutritional quality (compared to the previous SNP). We note that nutrition and healthfulness was raised more often by parents and adults than by students themselves, for whom it did not come up as a frequent topic of discussion.

A small **baseline assessment** (of the previous SNP at one SD40 school) was recently conducted by UBC dietetics students and a Fraser Health dietitian (see results poster in **Appendix 2**). Their findings suggested that the previous SNP provided a daily source of fruits and vegetables, grain products and milk and alternatives and a daily vegetarian option. Their recommendations included a reduction in highly processed items and more frequent availability of whole fruit, vegetables and high-quality proteins and the continued evaluation of menus to ensure the nutritional quality of Fuel Up! meals.

Fuel Up! menus were developed with close oversight from the SD40 School Nutrition Coordinator who was a Registered Dietitian, whereas previous SNP menus did not have nutritional oversight from a dietitian or a standard menu cycle. Still, no explicit dietary analysis or comparison has yet been conducted by or reviewed by this research team to assess the dietary quality of Fuel Up! meals or whether their introduction has improved dietary outcomes for SD40 students. But overall, parent surveys suggest that adults generally perceived the program as one that offers nutritious choices.

Variety and Flexibility

Students and parents value choice and variety

Students said they liked being able to choose when they did and did not participate in Fuel Up! and choosing which foods they would get through the ordering system. One student, in describing the difference between the former meal program and Fuel Up!, said *“in the old program you didn’t get to choose the food.”* We asked, “Do you like choosing the food with your parents?” The student nodded yes in response. Also suggesting the value of choice for students, some students who brought lunch from home talked about regretting getting the same things day after day, while some said they like packing their own lunch because they got to choose what they would eat.

The majority of parents also agreed or strongly agreed with the survey statement that the program “offers flexibility of ordering side dishes” (72%). One parent survey commented: “I like ordering from the Fuel Up! program because it allows me to pick and choose what to order and choose what days I want to order lunch for my child. My child likes being able to sit with me and choose what they want to eat during the whole month.”

Time Savings and Convenience

Parents and students recognize the value of time and roles of those who spend time preparing lunch

The majority of parents who have used the program (86%) reported agreeing or strongly agreeing that the program “helps us save time”. For example, one parent commented: *“I have 4 children and I don’t have time to prep lunch for all my kids so it’s been very helpful for me as a mom to have a lunch program at school. Thank you”*. Another said: *“The program is convenient and saves time...”*.

We also heard students reflect on the meaning and value of having adults spend time preparing their lunches and the time and thought that went into making sure they were fed. And some students said they made their own lunches because their parents didn’t have time. We also noted examples of students who described enjoying spending the time choosing their Fuel Up! meals and ordering food with the help of their parents.

Seventy-two percent of parents surveyed also agreed or strongly agreed with the survey statement that “it is easy to use the online ordering system”. For example, one parent survey comment noted:

"I LOVE ordering from the lunch program and would continue to do so...[text truncated].. I'll continue to order next year and love that we can pick and choose lunch each day easily online!"

Perceived Limitations of Fuel Up!

Overall, both parents and students raised cost, concerns about the available food options (and whether their children would eat or enjoy these foods), food and packaging waste, limited time to eat, and concerns regarding reliability of delivery as barriers to program participation. Students and parents at times also shared a preference for home-prepared meals and highlighted the important role of caring through food. The researchers also observed a great deal of variability in terms of the amount of classroom supervision during lunch and some parents expressed concerns that their children lacked adult supervision at lunch time.

Cost

Perceived high program cost emerged as the primary barrier to uptake

Cost was repeatedly raised in the parent survey, discussions with students and input from staff in classrooms. In the parent survey, few parents agreed or strongly agreed that the program "helps us save money" (n=19, 13%), "is good value for the price" (n=49, 34%), and "is priced fairly" (n=56, 39%). When parents were asked if they would like to participate more often, a very common theme that emerged in written comments was the perception of the excess cost of the program and parents' inability to afford it. Over half (54%) of those who had not ordered Fuel Up! agreed or strongly agreed that "the price is too expensive".

We also received feedback from several adult staff members (including teachers, noon hour supervisors, and educational assistants) who said that they had seen program participation go down with the new program. Most thought this had to do with the high cost of Fuel Up! and barriers in accessing the subsidy program. We also note that student comments during fieldwork and parent comments on the survey often compared the Fuel Up! price point to the previous SNP price which was less expensive. Hence, perceived price may be influenced by prior expectations based on a program that subsidized food costs for all users at these three schools.

As one parent survey commented: *"Increasingly in the lower mainland, for the middle class, expenses are soaring. So, to tout this program as affordable for average (not low income) families is laughable. When our rent is double a mortgage payment, paying on average \$10 a day per child for a lunch they don't like, is absolutely ridiculous. I've met numerous families who feel the same way..."*

Another parents survey comment noted: *"This month we ordered almost every day (because work is crazy and the month was shorter) and although it made my life so much easier it is too cost prohibitive for me to continue to order like this, and I don't qualify I believe for any subsidy. So for a regular, two parent income household we can't afford it regularly".*

During fieldwork, when possible, each student was asked whether they had heard about Fuel Up! and whether they thought they would try it in future. There seemed to be openness among many students about eating Fuel Up! lunches. These students seemed interested in eating Fuel Up! food, even if just once to try it out. Yet, many reported being told by their parents that it was too expensive or often reported that they did not understand why they were not participating or had stopped using the SNP after Fuel Up! was introduced.

The comments below represent a sample of student responses when asked about whether they thought they would order from Fuel Up! in the future:

- *No, my mom says it's too expensive and she's able to make my lunch.*
- *No, because my mom says no. I don't want to 'cause I like having my own lunch. Because I get to choose what I want to eat.*
- *Maybe because I've never had anything from the new one.*
- *No, because my mom says it's too expensive and I might not like it.*
- *No, I don't know why I'm not on the school lunch program anymore.*
- *I liked the old program. [Why is that, what did you like about it?] I don't know why.*
- *Yes, because it's new and a lot of people enjoy it, so I want to try it out.*

Food Options Perceived as Not “Kid Friendly”

Parents raised concerns about paying for meals their children may not eat

Parent survey comments suggest a sense of risk among some parents in paying a perceived high cost for food their child(ren) may not eat or like when delivered. For example, one parent wrote: “*My child is an eat almost anything, not a picky eater. But many of the food choices are not what she would choose to eat or like. Also, compared to our previous program, the cost is way higher (more than double)*”. Several parents described preferring home packed lunches as a means to both save costs and ensure that meals can cater to preferred tastes of their children. Parents often reported concern over their children’s “pickiness” and concerns about finding options that would not be “wasted”.

For example, 50% of parents who did not order Fuel Up! agreed or strongly agreed with the statement that “there are not enough food options being offered” and 50% said “my child does not like the food being offered”. Among the parents who did order from Fuel Up!, 73% agreed or strongly agreed that “my child only likes some of the food being offered” while only 26% agreed or strongly agreed that “my child likes most of the food on the menu”. A common request in written survey comments were for more “kid friendly” or “basic” lunch options. When we asked parents (via the survey) if they would like their children to participate in Fuel Up! more often, several mentioned that their decisions would depend on the menu.

The following parent comments represent commonly reported sentiments about program offerings:

- *“Some of the days, there are menu items that he doesn't enjoy (meat loaf, butter chicken etc). Coming from an Asian background, it doesn't always appeal to his taste.”*
- *“My children tend to be very selective about what they eat, so it's easier in some ways to send from home for them. But I'd like to be able to have them in the program for my own benefit!”*

Challenges in Meeting Culturally Diverse Tastes

SD40 students and parents have diverse tastes, and competing priorities related to nutrition, culture, cost, and simplicity

Results highlight competing priorities when it comes to school food menus. When students were asked to describe the foods they'd like served for lunch, they commonly requested conventional North American fast foods such as chicken nuggets, hamburgers, hot dogs, pizza, sushi, pasta, sandwiches and other “junk food treats” such as ice cream, chips and candy. But children also occasionally described their desires for foods familiar from their cultures and appreciation for the specific home-prepared lunches made with care from their cultural background by their parents.

Conflicting parent survey comments about menu options also highlighted tensions between parents' desires to have affordable and nutritious choices that appeal to children, but also options that reflect their cultural tastes. Below are a small sample of comments that highlight this diversity of expectations:

- *“The food doesn't reflect the diversity of children on the School. It's restricted to Chinese or Canadian food preferences. I try to ask for food so many times but there was nothing my children like to eat. So frustrating!”*
- *“I think that if there were options of foods that kids recognize like pizza, hot dogs, grilled cheese, chicken nuggets, Mac and cheese, tomato sauce and noodles that there would be more interest in participating. I know the goal is healthy meals, but hot meal options that are more what kids truly do eat would bring more people into the program. [Excerpt cut for anonymity] Warm meals provided at school for lower income families (and anyone else choosing school lunch) should be the part of the public school experience!”*
- *“This menu is too grown up for elementary students. My son usually has carrots and cucumbers for a snack and lunch is usual a Nutella sandwich on whole wheat bread, turkey rolled up and a fruit of choice and extra veggies if needed. Then juice and water to drink. Things like this is what kids will eat and no waste, no issues...”*

Lack of safe options for students with dietary restrictions

Parents' concerns about the program's ability to meet the needs of children with allergies or special dietary needs.

Eleven percent of survey respondents noted that “my child has dietary restrictions or allergies” as an important reason their family did not order from Fuel Up! and several comments reflect this sentiment, for example:

- *“My daughter was going to participate in this new lunch program, however the website says that if you have a severe allergy (peanuts in our case), then they recommend not to order from them. The previous lunch program was peanut free and less expensive! I just don't understand why this one is not (peanut free) and more expensive!”*
- *“My child has a severe allergy to all nuts. I worry about contamination”.*
- *“My daughter has celiac disease so we don't order very often as I can't be sure that the food is prepared in a way to prevent cross contamination. However, when we have ordered the food has been great--but the portions are too big. The biggest challenge is the price. I'm 100% behind this program and I'm happy to have some of the cost go to helping children who need a subsidy--that's what makes this program so wonderful, no one gets singled out. But the cost is about \$7.00 a day or \$140 a month. I can make her lunch for much less than that. My other daughter will be joining the school next year and I really want to support the program, but the cost is too prohibitive.”*

Food Waste and Packaging Waste

Food waste not a top concern, but still on the minds of parents

Among the parents who did *not* order from Fuel Up!, only 18% of parents agreed or strongly agreed that “there is too much waste” as a potential reason that they are not participating. This suggests that food waste is not the most pressing barrier for parents, particularly compared to costs and accessibility. However, among parents who do use Fuel Up! 40% (n=47) agreed or strongly agreed that they would order more often if “there was less packaging waste”.

Further, several parents raised waste as a concern and barrier to ordering more Fuel Up! meals in their written survey comments. As noted above, much of the concern regarding waste related to the high cost of the program and fear of wasting money on a lunch their child would not eat. But others raised concern about the excess amount of single-use packaging and environmental concerns.

Below are a sample of parent comments to that end:

- *“I don't think my son would eat all the food so I don't want to waste 5\$ if he doesn't have enough time to eat it”*
- *“I love the idea of having a lunch program that can save me time in the school day, and the program that is available is great in terms of quality/healthiness of the food, however 2 things are stopping me from participating. 1) the packaging is a real problem for me. My daughter is in grade 5 and I have worked hard to try and send her to school with reusable containers/no packaging as much as possible over the years. For me to switch to a program that creates so much waste is an issue. 2) it is kind of expensive. I understand that part of that is to help subsidize those who can't afford it; I am not one of those people, but I also don't want to spend more (a lot more) on lunches each day than I would to make it myself. If it was a little cheaper, it might make more sense. Other than that, I think the food is great, and I hope the program is working well for those who need it”.*

- *"I would love to see less packaging, but that will not impact my decision to order (at least at this time). I would like to see simpler food options (for the pickier children) as well as many of the options you have today. I love that my older daughter is trying new foods with her friends".*
- *"It would be nice to have some more environmentally friendly alternatives to single-use packaging".*
- *"Love the program - roll out to other schools. Find a way to get subsidies that lower the price - it is a big sticking point for lots of the people I speak with about it. The kinders need smaller portions. The grade 5s and up need larger portions. Some flexibility in the meal size would be helpful. Biodegradable packaging would set an example - reduce greenhouse gas emissions, lower carbon footprint, be sustainable with our choices. The kids will see that - and grow to expect life cycle stewardship rather than single-use".*

In parent surveys, 40% of parents who ordered from Fuel Up! agreed or strongly agreed that "my child often brings leftover food home". Given how common bringing leftover food was, parents also commonly expressed concern (in written comments) about ensuring the safety of un-refrigerated items. Examples of parent survey comments include:

- *"I will also plan ahead better for leftovers; e.g. ensure sufficient icepacks are in his lunchbag to bring food home safely."*
- *"I, and other parents I know, will not spend money on a meal at school, knowing that there is no way to maintain it in a food safe environment in order for them to finish the leftovers when they have time. The rushed lunchtime environment also means that if they are to finish their lunches, they often must have part of it packaged in such a way that they can take it outside and finish it."*
- *"Often needs to eat leftovers in afterschool program and meat dishes and mayonnaise are not safe to eat after so much time passes."*

Time as a Barrier

Many parents are concerned that lunchtime is too short for students to prepare for lunch, wash hands, find their lunch, unwrap, eat and clean up their lunches

Only 28% of parents agreed or strongly agreed with the statement "children have enough time to eat their lunch at school" and numerous parent comments highlighted perceived challenges of completing Fuel Up! meals in the assigned 15 or 20 minute lunch periods. For example:

- *"My child often brings leftovers home so we he takes a ziplock back. The reason why there are leftovers is because they say they do not have enough time to eat. The sauces can be minimized as it takes time for young children especially to open containers and they usually don't get eaten."*
- *"She finds the portions a little small. But food comes home because the school doesn't allow enough time for lunches to be eaten. I find portions small for the \$\$. "*
- *"My daughter is social, and with cleaning up the classroom, washing hands, and talking with friends, she is always saying she doesn't have enough time to eat. I think the 20 minutes given*

ends up being on 15, or even 10. It needs to be more. It is unhealthy for them to rush through eating.”

- *“I have Great Concern about the lack of time (5-15 minutes in reality) allotted for eating lunches at school. We are continuously teaching our children to make healthy choices and to bring nutritious lunches, but we do NOT provide enough time for them to eat it properly... especially if it’s raw crunchy foods like carrots, etc. Furthermore, the noon hour supervisors continuously come in and hurry the children.”*

Yet, given the diversity of eating styles we observed in the six classes, it was difficult to come to one clear conclusion about the insufficiency of the lunch period time. There were certainly common examples of students rushing to finish, and examples of adults asking students to hurry up; but we also found students often finished their meals quickly and began playing long before the end of lunch and some teachers reported being generous in allowing students to continue eating un-rushed once instructional time began (in schools where students had recess before and not after lunch). Still, during fieldwork when students were asked about their concerns related to lunch, some talked about how they would like more time for lunch.

It is worth noting that the SNP lunch delivery system also has implications for students’ time during lunch. With the former SNP model (where students would line up at one central pickup location at QQ for example), we found examples of students who arrived back to class quite late after waiting in the line to pick up their lunch. In this sense, the model of having Fuel Up! lunches delivered directly to classes seemed to help reduce delays and avoided singling out SNP students (who may otherwise have less time to eat compared to students with lunches from home).

Concerns about Reliability of Delivery

Delivery appeared to run smoothly, but a small number of parents still worry, and first impressions mattered

Most parent survey responses and children’s experience suggest that the delivery of Fuel Up! meals was working smoothly in early 2019 and that children received the ordered items on time and as expected. However, it is worth noting that a very small number of parents (n=13) who did not order Fuel Up! lunches also agreed or strongly agreed that one of the important reasons they don’t currently order was that “I worry that my child would not get the food”.

We did not find evidence that children were regularly missing items or not receiving the food they ordered, but at least one child reported this as a concern for their parents. Some children in May also reported challenges during the first week of delivery in February (where their lunches were late), or when the temperature of meals was not what they expected. The fact that students could recall and had ongoing concerns about the reliability of Fuel Up! delivery demonstrates how even isolated experiences early on in the program roll-out could shape students’ opinions.

Preference for Home-Prepared Meals

Many children and parents still value home cooked lunches

Among the 79 parents surveyed who had not ordered from the program, 56% agreed or strongly agreed that they “prefer to send lunch from home”. Student reflections about lunches also pointed out the complex meanings, roles and value of (home packed) lunches from students’ perspectives. Student comments showed that they noticed and valued family efforts, time and thought involved in providing lunch. For example, one student noted that *“my stepmom got me this thermos so now I get hot lunch with bread”*.

Students also noted the importance of home packed lunch for helping families stay on budget and to reduce household costs; the ability of home lunches to meet specific ethnic and individual tastes and preferences of children; and the deep meaning and importance of having someone pack a lunch for you. Often students were also proud that they could and had packed their own lunch as well, stating *“I made this!”* or *“I like to make my own food in the morning”*.

In QE where it was common for adults to drop off hot home-packed lunches just before the lunch bell, our data suggests that both parents and children attached value to this experience. This allowed students to access a hot meal, freshly delivered from a loved one; but may also help to facilitate a mid-day connection and sense of care.

The Role of Food as Care in the Old vs New SNP

School lunch is an opportunity to nurture more than just eating habits

During fieldwork, students frequently talked about food as care, whether this was being cared for by others through food or not feeling cared for (not having your food preferences considered, for example). Our fieldwork highlighted the social relationships and caring work involved in lunch, including some students expressing how much they missed the lunch workers employed at their schools who were in charge of the former school meal programs.

For example, one student said they valued the previous in-house school lunch worker who they felt students could go to if they didn’t have time (or their parents didn’t have time) to pack a lunch. When talking about Fuel Up!, which did not include an in-house lunch worker, one student noted that *“now you just have to starve”*. This vignette points to the appreciation students had for adults who had time to prepare their meals and the roles that school meals can play in nurturing relationships and connecting students with trusted adults (both at home and at school).

Comparing the classroom observations from before and after the implementation of Fuel Up!, our notes indicated that Fuel Up! had a distinctly less personal approach than the former SNP

For example, we observed paper lunch bags from the previous SNP with a personalized note (e.g. “have a nice day”) written on the bag by hand. The student receiving the lunch with that note let us know that the previous day her SNP lunch bag had a star on it. And many students talked about the

care and thoughtfulness of the former school-based SNP lunch workers in knowing them, their preferences and caring for them.

One middle school student also emphasized that the school kitchen worker provided opportunities for students to volunteer and learn skills that would help them secure jobs in the near future. School staff also reported the ability of staff to keep extra food (e.g. milk cartons or fruit) from the old SNP and distribute to hungry students when needed. This system seemed to be an informal one in use with the former SNP. And while SD40 reported ordering surplus Fuel Up! lunches aiming to make sure students in need could access food, during our fieldwork, we did not observe or hear about students in need accessing surplus Fuel Up! food if they had not specifically ordered it beforehand. Given the individualized packaging of meals with students' names on them, there seemed to be more hesitation about accessing items that were otherwise specifically ordered for individual customers. We also neither saw nor heard of examples of Fuel Up! food being stored as a safety net for hungry students or those missing a lunch.

Few students seemed to personally know any staff involved in the delivery (or preparation) of the Fuel Up! food

Although roving noon hour supervisors were frequently observed checking in on classrooms and monitoring safety, noise and behavioural concerns; classroom teachers (who typically left classrooms during lunch time) made it clear to the researchers that they did not have detailed awareness of what goes on for specific students during lunch. Therefore, an important issue to address was the limited capacity of adults to provide oversight and support during lunch.

Variability in Adult Supervision and Capacity to Provide Support During Lunch

Relationships with trusted adults are important for ensuring that “no child goes hungry”

It was clear that adults played an important role in school lunch, whether children were getting home food or program food. We observed several interactions between adults and students during lunch. Adult roles were often focused on ensuring classroom safety and conduct (e.g. ensuring doors were locked/closed appropriately or calming noisy classrooms), but we also documented pleasant lunch-time conversations and personal and caring interactions between adults and students. Still during one observation, students clamored for the attention of a noon hour supervisor and/or teacher's aide who eventually told them she was essentially too busy to spend time and chat with them because she had many other students to supervise.

Students at times asked the researchers for permission to do something or for help with something related to their lunch and there were several times in classrooms where adult presence would have been valuable to support students. For example, in elementary school classrooms, we witnessed incidents of roughhousing and name calling and students disrupting the lunches of others at times when none of the roving noon hour supervisors were present in class. Although at other times, adults were available to intervene and support students and we documented several supportive and

caring interactions between lunch staff and students, but given the roving nature of supervising staff, there were certainly gaps in adult presence and available support during lunch. (Students in older grades in elementary school sometimes provided supervision in the classrooms in grades below them. Because we chose the highest grades in each school to observe, the students in the classrooms we visited were not monitored by other students but were instead leaving their own classrooms to monitor the lower grades.)

Another key way that adults mattered was in terms of helping students who did not have a lunch by looking out for students' food needs

Given the relatively short lunch period and the variability of adult presence in the classroom, there was sometimes no adult who could support a child who was missing a lunch or who had trouble related to their lunch. For example, we encountered children with no lunch or lunches that were spoiled (in one instance a student's bread was moldy and she wasn't sure what to do).

Comments from children and school staff in class suggested that the onus was on students to seek out help for lunch-related support; but students were not always aware of how or whom to ask for help. It seemed as though teachers and schools differed in protocols for how to address lunch-related issues such as a student missing a lunch. Some adult staff thought a parent would be called to bring a new lunch, others had ad hoc systems for helping hungry students with extra food or sending students to the main office for support.

We did not explicitly ask parents about lunch time supervision on the parent survey but note this comment from an elementary school parent that suggests that this topic is permeating into home time conversations and parental concern: *"I hate that there is minimal supervision of the older classes. My daughter comes home with awful stories of bullying and bad behaviour over lunch."*

There may also be a difference in how elementary and middle school students dealt with not having a lunch. While there was a level of shame that elementary students seemed to have when they didn't have lunch, our classroom observations revealed that they were more willing to admit it and receive help. In contrast, middle schoolers may have felt more shame and could be less willing to admit not having lunch and therefore seemed less open to the possibility of receiving help. For example, we recorded instances in our second round of fieldwork of middle-school students telling researchers that they ate earlier, but an adult staff member noted that one such student regularly had no lunch but would not admit it. The adult staff member also revealed not knowing what to do about this situation. This could possibly explain why students at this school shared with us the importance of the school-based lunch worker. It was not just that students thought she was amazing, but also that she was a person the students could point to as being in charge of food at their school and hence someone they could go to when they needed help (whereas middle-school students may not want to go to the main office or a teacher).

Usage and Impressions of the Subsidy Program

Parents generally supported the need for a subsidy program, but barriers and stigma remained for accessing the subsidy program

While 38 parents (17% of the full sample) reported on the survey that they believed they were eligible for the subsidy program, only around half (n=20) of those respondents reported being currently enrolled in the subsidy program (with 9 receiving the full subsidy and 10 on partial subsidy (5=\$2.75 per entrée and 5=\$1 per entrée), and 1 preferring not to answer what kind of subsidy they receive). Based on SD40's estimates from June 2019, 44 families were receiving subsidies to participate in Fuel Up!; and over 40% (n=20) of these families receiving subsidies responded to the parent survey.

These results suggest that there remains a substantial gap in coverage of the subsidy program

When asked about the reasons that these families were not signed up for the subsidy program, families agreed or strongly agreed that the reason was because they "did not know there was a subsidy program" (41%), they "did not know how to apply for a subsidy" (71%), "did not know if my family was eligible" (65%), and "think other families need the subsidy more than my family" (47%). Other key barriers that parents agreed or strongly agreed with included that they "did not want to tell anyone that I needed a subsidy" (41%), and "do not like to ask for financial help" (47%). During in-class observations, teachers and adult staff reported believing that the threshold for obtaining a subsidy was too high for many parents in SD40 who were not sufficiently struggling to ask for a subsidy, but still could not afford the cost of Fuel Up! meals.

Among the 40 parents who reported thinking they were eligible for the subsidy program, 25 parents had ordered lunch from Fuel Up! while 15 parents had never tried it

It is worth noting that there were four parents who believed they were eligible for subsidy who had never ordered lunch in the old SNP who reported now ordering 3-4 times per week or more with Fuel Up! Moreover, three parents who did report participating in the subsidy program, ordered lunch 3-4 times per week or more (but had never participated in the old SNP). This suggests that a small number of new families are accessing Fuel Up! meals who had not previously accessed school lunches. Yet, there were also 11 parents who believed they were eligible for subsidy who reported sometimes or always participating in the old SNP, but were seldom if ever ordering from Fuel Up! (reported as either 0-2 times in the past month or had never ordered Fuel Up!).

These results point to potential challenges in accessing the subsidy program and the Fuel Up! program itself

It seems that the need to actively request financial assistance, admit hardship to one's child(ren)'s school district, and accept meals paid for by fellow parents could still be a source of shame for some parents. While other parents who would like to access more affordable meals reported that while the cost was prohibitive for their budget, they were not experiencing sufficient hardship to request a subsidy. This seemed to be the case among parent survey respondents who felt they could afford to

pack a lunch from home at a lesser cost. For example, on the parent survey, one parent commented, *“Cost is prohibitive. It was great as it was lower stress in my house being on lunch program. I don’t feel as though I should apply for subsidy as I can afford to feed my child no problem just not at this price point.”*

However, for those parents who *did* report participating in the subsidy program already, 90% or more of survey respondents agreed that figuring out their eligibility was easy and that applying for the subsidy was easy. Subsidy users largely believed that other families in need would use the subsidy program and 84% agreed or strongly agreed that “other people at school will not know that we are on the subsidy program”.

Families who used the subsidy program also reported gratitude for having it available as seen by one parent’s comment on the survey: *“My answers re: cost are based on the fact that we (gratefully) received subsidy.”* But some parents would prefer a program where prices were lower for all families with a reduced need for a subsidy program. As one parent survey response stated: *“There shouldn’t be the need for a subsidy program that families have to feel they qualify for. It should be cheaper for everyone.”*

Overall, many parents still broadly supported the premise of the subsidy approach

Over half (56%) of parents reported agreeing or strongly agreeing that “part of a full-priced entree should go to support the subsidy program” (while 12% disagreed or strongly disagreed with this statement). It seems that while parents would prefer more truly universal access to school meals, they still want to see vulnerable students supported.

This sample of parent survey comments reflect the mixed perceptions about the subsidy program:

- *“I don’t know exactly how the subsidy program works. Ideally school lunch programs should provide healthy lunch options to all kids regardless of family income. I think it’s paramount the subsidy program is running.”*
- *“Although I think the subsidy application is an improvement from the previous program where parents had to physically go into the principal’s office and plead their case, I still think there’s barriers for some parents requiring a subsidy. From what I understand, it’s an online application – what if this family doesn’t have easy access to a computer? What if they’re still not comfortable sharing their reasons why they require a subsidy? I see a phone number is required, does that mean the parent will have to physically speak to someone from the school district? That may be a barrier for them completing this. Personally, I feel if a child is in need, they should be provided food – no questions asked - whether a parent filled out a subsidy application or was approved or not.”*
- *“Just get over the stigma of asking. Many parents find the program too expensive and won’t participate but won’t ask out of pride.”*

When parents were asked what would make the subsidy program work better, a common response was to eliminate the need for the subsidy program by reducing the cost of participation, as demonstrated here by several parent survey comments:

- *“Make the lunch more affordable so people don't have to apply for subsidy.”*
- *“There shouldn't be the need for a subsidy program that families have to feel they qualify for. It should be cheaper for everyone.”*
- *“I wish it was easier to order so that families who need subsidy also don't face technological barriers to ordering.”*
- *“I think that if there were more reminders and encouragement from school staff and PAC for people to use the lunch program, including the understanding that school lunch purchases help with subsidized meals, it would be good. If there was a way to bring the cost and packaging down, this might be more desirable as an option.”*
- *“Providing more specific information about who would qualify would be helpful. As a single parent making \$70k a year, I doubt I would qualify, however I know I cannot afford \$9 a day for this program.”*

Several parents also suggested raising awareness about the subsidy program, providing greater clarity about eligibility and improving uptake among full-price paying families to derive more revenue to support the subsidy program.

Based on responses from students as well as adult feedback in classroom, it seems there remains a lack of awareness or understanding about the subsidy option and there remain barriers preventing parents from attempting to access the subsidy program. One student who was previously on the SNP and is no longer participating in Fuel Up! explained that her mom says the new SNP “is too expensive”. When we followed up to learn more about what she has heard, she was hesitant and admitted that she doesn’t want to be “insulting” [to researchers]. She then continued and said, her mom says the new SNP “is not as good as the old lunch” and that it is “too big”. Another student formerly on the lunch program who is now bringing a home lunch said he didn’t know why he switched to bringing a home lunch.

Overall, the data from children and parents indicated that the subsidy program is not reaching all families who face financial barriers to participating

Parent survey data found some parents who think they are eligible don’t use it and still think it is stigmatizing to access. Children’s responses indicate that some students want to participate in Fuel Up! but feel they cannot because their parents think the cost is out of reach.

Program Stigma, Visibility and Subsidies

Students eat together, but Fuel Up! lunches are highly individualized and distinctive from home packed meals.

We observed that there did not appear to be any clear separation between students with home lunch and students with school lunch in terms of where they sat and ate lunch in class. This was the case both before and after Fuel Up!. This integration bodes well for concerns about stigma around lunch program participation. Although, we noted that the delivery model could make a difference here, such as when students picking up school meals from the former program were delayed in line ups and had less time to eat than students with packed lunches.

From in-class observations, it was evident (both before and after Fuel Up! was implemented) that students were highly aware of who got the program food.

This observation is relevant because it speaks to students' overall knowledge about one another's eating habits (and preferences) and to the challenges of keeping information from students. Students knew a lot about one another both in terms of food and other dynamics. Our classroom observations documented the extent to which students were paying attention to what their classmates were eating and actively forming impressions and making meaning during lunch.

Students also demonstrated their status among their peers by knowing about the latest food craze; being able to afford high-status food items that marked them as a member of the in-group; and bringing food from home or buying food that others deemed desirable. For example, when a researcher told the students "I've never heard of noodle snacks", they got very excited. One student told the researcher "Everyone wants it". Students would often comment on items in their classmates' lunches that they liked. One student remarked that he'd only gotten to try the school lunch on "the special days" (by which he means the tasting days) and watched another student opening his Fuel Up! entrée with great interest. We cannot draw strong conclusions here, but it appeared that some students yearned to try Fuel Up! when they saw others who had it.

While the research team had no information about which students received subsidies, other students readily volunteered which children received the SNP (including Fuel Up!) meals regularly. We cannot say whether students knew who was using the subsidy program (or even if/how the subsidy program worked), but it is likely that in classes where one or a very small subset of students received SNP, students may have a sense of who can afford full-priced meals and similarly who is likely participating in the subsidy program. For example, in an elementary school where only one child received Fuel Up! meals, the student informed us that she recently "got permission" from a school administrator to participate in the program and to get school lunch. Her response indicated

to the researcher that her parent had likely recently requested and been granted a subsidy. Given that students do not require school permission to purchase lunch, it is possible that other students were also aware of this (although we have no other knowledge of students' awareness).

Moreover, while Fuel Up!'s philosophy aims to ensure that students on subsidy are accessing the same meals as full-price paying students, it is worth noting that the subsidy program covered only the price of the entrée and not the drinks or side dishes. Therefore, "treats" like chocolate milk or desserts are more likely to be available to full paying customers; another potential marker of difference for those receiving subsidized meals.

We also noted skepticism among students about, and resistance to, the idea of free lunch. One student reported she had heard "good things" about Fuel Up!, like "you can get free lunch, but I don't think it's true". In talking about the cost of Fuel Up! some students further noted that it should *not* be free. One student told us they would like Fuel Up! to be "slightly cheaper, not free, not expensive, but different price". Another said the new SNP lunch should be "slightly cheaper, [but] not free". It may be necessary to address students' perceptions that lunch cannot (or should not) be free to both increase the likelihood of children and families participating in the subsidy program and to decrease stigma around subsidy receipt.

Further cementing the idea that students put a price tag on food, although we observed students sharing food with one another in the classroom, this was confined to small groups and students did not appear to broadly share their food with others. Moreover, at least one classroom had an active food trading scenario, in which students negotiated fiercely around food swaps. Students involved in food trading discussed food like it was a commodity describing its value. When describing Fuel Up!, several students could also describe its costs and specific differences in price and perceived value compared to the previous SNP, suggesting the perception that the former program was a better value for the price (given the lower cost of the previous program per meal and because it included a drink and other small items in addition to the entree).

We found that the former SNP (that was delivered in plain brown paper bags), although noticeable, blended in more with the other lunches compared to Fuel Up! which came in very visible, individually-labeled packaging. In some pre-program observations, the field researchers expressed a sense of feeling unsure about who was on the SNP. With Fuel Up!, the students who were eating the entrees were highly visible in the classroom. Increased visibility of Fuel Up! meals was due to how distinctly different Fuel Up! packaging was from home lunch packaging and how highly individualized the meals were. Students with home lunch (and the former SNP) usually brought a variety of items in their lunch bags (for example, a sandwich, cucumber slices, blueberries, and a bag of chips). The former SNP also included several different food items (often a separately packaged entrée, piece of whole fruit and small snack/dessert). In contrast, the Fuel Up! entrées were typically a single main container (e.g. turkey with gravy and peas, or chicken and green beans, or a salad with chicken and fruit, but all packaged in one container) that looked more distinctly like catered or

purchased meals than the previous brown bag lunches. While it is not entirely clear what this might mean, it does mean that it was much easier to identify who was and who was not participating in the lunch program with the implementation of Fuel Up!.

This visibility of Fuel Up! is exemplified by the way that meals were personalized with individual students' names on each item. In the previous SNP, all students received the same paper bag, whereas with Fuel Up!, each student's "order" was visible and marked. And as one student noted, Fuel Up! items should not be eaten by others because they were individually purchased for a specific student (even if the student it was purchased for was not present that day). This student lamented the fact that students have gotten into trouble for eating unclaimed Fuel Up! food because they weren't purchased for them specifically.

We also found that food is linked to stigma in complicated ways. Food can be a source of embarrassment or shame and students actively worked to hide discrediting information. For example, a student said that they ate earlier when their teacher reported to us that this student rarely brought a packed lunch. We noticed students hiding things in their lunches or throwing items out, sometimes in a furtive or secretive way that suggested some sense of stigma about the food.

Importantly, there were more home lunches than program meals in the classes we observed and the embarrassment we saw about food came primarily from children with home lunches (rather than SNP). And some of these actions may have been because of our presence: specifically, the children may have been concerned about how their lunch measured up to the assessment of the researchers' food ideals.

In general, students appeared very cognizant of and interested in their classmates' meals and food preferences. We also learned that food was a commodity both in terms of being a financial expense *and* expensive in terms of time, both the time it took to prepare home lunches and the time that schools set aside for students to consume lunch out of their busy curriculum. Cost remained a concern for both parents and students, and although we did not observe cases of overt shaming or stigma for students ordering from Fuel Up!, we noted they were visible and distinct from the majority of students bringing lunches from home.

Fuel Up! as a Universally Accessible Program Ensuring that “No Child Goes Hungry”

Overall, the 2018-2019 Fuel Up! model did not appear to be sufficient for ensuring that no child goes hungry” in SD40 schools, and larger programmatic changes are needed to provide sufficient care and support to ensure that all students have access to a nutritious lunch at school.

SD40 envisioned Fuel Up! as a **“universally accessible cost shared lunch program”** **“to provide access to healthy lunches for all students”**. These goals align with SD40’s June 2017 motion that directs the district to implement a plan “to address food security and healthy eating, that will make available food programs to all of our schools so that no child is hungry and every child eats healthy”.

From preliminary assessments of parents’ and children’s experiences and impressions in the three pilot schools with pre-existing lunch programs, the current model is not yet providing or ensuring access to healthy lunches for all students. Fuel Up! provides an option for all families to purchase meals that are perceived as nutritious, but at present the program model is not universal.

“Universal” social programs are typically defined as those that are not targeted; that is, do not require families to meet specific eligibility criteria, and rather are financially accessible to all families (in other words, everyone is covered by the program).

The Fuel Up! subsidy program aims to increase access for low-income families, but this remains a “targeted”, not universal model, operating within both a corporate and charity-based framework (that is, parents who can afford to pay full cost are full paying customers, but contributing to cover participation for lower-income families). Estimates from SD40 staff about usage levels suggest that in May 2019, usage at 2 out of 3 schools remained under 10% and our initial observations suggest that ordering from Fuel Up! was not yet the norm in classes we observed. Parent survey responses further indicated that many parents reported financial barriers to participating. Moreover, only around half of parents who believe they were eligible for a subsidy reported that they were currently using the subsidy program.

SD40 has articulated the **“need for reasonably priced food”**. Although there are challenges in determining what constitutes “reasonably priced”, at present, less than 40% of parent survey responses agreed that Fuel Up! is fairly priced or good value for the price. Students (including many younger students in elementary school) were also savvy about the price and value of food. Several students knew in detail the specific prices involved of participating in Fuel Up! (and how these compared with the previous SNP which was subsidized for all students, but not available to the whole school community). Several students had been told by their parents that the price was out of reach while others were not sure why they were not allowed or able to order it.

A main observation that emerged from these findings pertains to the key role of adults as trusted caregivers and their importance in school food and in ensuring that “no child goes hungry”. A common theme reported by teachers and classroom lunch staff was that despite roving presence of noon hour supervisors there is currently inconsistent participation of adults at lunch time who have the time and capacity to know about or act if a child does not have access to lunch. The onus is on the child to seek help if they have forgotten their lunch, had a miscommunication about the Fuel Up! lunch or experience other lunch-related challenges. For example, we recorded stories of children whose lunch (from home) was spoiled or who received a Fuel Up! lunch they could not eat because of a mistaken order of food that did not meet their dietary restrictions.

One of the core premises of the new SNP was that it must offer parents flexibility and choice by including daily menu options and flexibility in the frequency of ordering. In-class observations suggest that children highly value choice and talk about the importance of having tasty food and choice around food. Most parents also reported agreeing that Fuel Up! provides a variety of healthy food options. But it may be that individual choice comes at a cost. In the current model, students (and their families) are expected to make choices when ordering lunch, and are expected to remember when and what they ordered and be responsible for eating the food during lunch (i.e., the food is perishable and is not designed to be saved and eaten later).

The previous SNP (where all students ate the same meal), also came with some flexibility in terms of helping students who didn’t have lunch get a good meal. According to some school staff, the old SNP often allowed hungry students (whether they were former SNP participants or not) to snack on leftover SNP food later in the day if they were still hungry. This is in contrast to Fuel Up! meals which are highly individualized and hence not designed to be shared with other students in need or who wish to participate but lack access. It could be argued that the cost-sharing principle is one way that Fuel Up! is shared by families and students, and SD40 actively orders a small surplus of meals intended to serve as a buffer in case a student was missing a meal. However, the cost-sharing component of the program is, by design, meant to be hidden such that neither teachers or students are meant to know who is paying full price or receiving a subsidy and the costs are only shared by those who participate in the program (i.e., families can entirely opt-out of the program).

An individual model of food delivery that limits social interactions around food may also inhibit a more communal food experience. For example, students said they appreciated being greeted by the kitchen staff when they collected their meals and receiving customized notes on their lunch bags from kitchen staff overseeing the former SNP. The Fuel Up! design may also reduce students’ and staff’s sense that the program food should be available for students in need given the perceived high prices that other families pay for individual meals. Choice may thus come at the cost of feelings of care and connection derived from the former SNP lunch staff and a very individualistic model of food delivery.

The current model does not yet fully address the role or importance of the relationships and care given by school lunch workers (or other adults). Students on many occasions talked about their yearning for the return of the previous lunch staff and the care received from them and gaps in the social safety net for other students who did not have access to sufficient food.

Questions for Future Inquiry

Our emerging findings captured here can only scratch the surface of all the complex roles that school meals play in the lives of SD40 students and families. Other valuable questions yet to be studied in depth include:

- What is the dietary quality of Fuel Up! meals and how has the dietary quality of SD40 students changed pre- and post-implementation of Fuel Up!? What proportion of Fuel Up! meals are meeting Canada's Food Guide recommendations for example, providing fruits and vegetables, whole grain options and rich sources of essential nutrients like calcium, vitamin D or omega 3 fatty acids?
- Is uptake of and perceptions of the program different across schools (e.g. in schools with no previous program, versus schools with well-established SNPs such as Lord Kelvin)? For example, do schools with diverse cultural contexts and demographic factors differ in their perceptions related to cost, access to subsidies, sense of individual versus communal design of the program.
- What is the impact of the timing of the lunch period time on program participation and experience (in terms of both length of the lunch period and scheduling lunch time before versus after outdoor play opportunities)?
- How are students impacted by differences in delivery models (i.e. where they pickup food and from whom, and when?)
- Do parent or student perceptions of the program differ depending on access to the subsidy program, social class, or cultural background?
- How are students experienced shaped by the roles of school lunch workers? How can the value of "care" be measured adequately in school food research?
- How can future research capture the impacts of food programs beyond their nutritional impacts? For example, how can meal programs enhance curricular/educational outcomes, facilitate community connections and intergenerational relationship building, be used to foster food citizenship, food literacy, interests in environmental sustainability and social justice?

Recommendations Based on Preliminary Findings

- Explore strategies to bring down the cost of Fuel Up! and reduce financial barriers to allow for wider participation for families who feel that the price is out of reach.
- Bring in measures to increase Fuel Up! uptake such as experimenting with price promotions for increased ordering. Reiterate that first impressions have lasting ones, and if food is late, disorganized or missing, this causes long-term negative perceptions of the program.
- Reduce barriers to accessing the subsidy program. This will likely require further outreach, communication, marketing and promotion methods to ensure that families are aware of the subsidy program, know if/when they are eligible, and how to access it and ensure that support is available for ordering meals if needed.
- Create improved mechanisms and training for school staff for ensuring that both students and staff know how to access lunches for students in need, and most urgently for children who come to school without any lunch.
- Do not describe this program as “universally accessible”. Neither the meals themselves nor the subsidy program are available to all students regardless of ability to pay. The program relies on both private business and charity approaches and therefore is not well aligned with notions of universality.
- While the subsidy program’s “frequently asked questions” section on the SD40 website (as of January 2020) stated that “all students will have the ability to order the same meals”, this is not currently accurate as subsidized students are only provided access to the entrée dish and are not provided access to the same “treats” (i.e., drinks, sides or desserts) as full paying students. So ongoing discussion is needed to clarify what an equivalent meal includes.
- Incorporate food literacy education into broader curricular strategies to connect lessons and values from the lunch program (regarding nutrition, environmental impacts of food systems and food equity) to student learning. This should include a discussion of the right to food to counter student perceptions that food is (solely) a commodity, and to decrease stigma around subsidy usage.
- Address food safety concerns including ensuring options are available for students with dietary restrictions.
- Ensure that safe/refrigerated storage is available for students to safely save uneaten food.
- Continue to seek opportunities to work with caterer to reduce packaging waste including reducing usage of single use cutlery.
- Continue to ensure that students accessing program lunches have sufficient time to pick up their meals and do not have shorter lunch periods than their classmates.
- Continue to seek feedback from children and families about menu options to better meet the diverse preferences of SD40 families (which may require both a wider selection of familiar “kid friendly” options, as well as culturally diverse offerings).

-
- Increase the attention paid to the role of adults during lunch including the relationships between adults in providing care as part of food programs. This could include actions such as maintaining school-based lunch staff who have direct knowledge of the students' food needs, or having more consistent adult presence in classrooms at lunch (who are eating with students and know what is going on at lunch).
 - Ensure that there remains an ongoing and regular mechanism for evaluation and input from key stakeholders (including students, parents, school staff and administrators) through the SNP Advisory Committee. This report highlights the rich insights that would be overlooked without in-depth on-the-ground observation of school lunch experiences.
 - Continue to support monitoring of the nutritional quality of Fuel Up! meals to ensure that a high standard of nutrition quality continues to be met. Preliminary results from analysis of a very small sample of school lunch photos suggests continued focus on integrating sources of fruit, whole grains, and sources of calcium and vitamin D into school meals.
 - Continue to support the valuable role of the School Nutrition Coordinator and continue working towards a more comprehensive food strategy for the district as was originally proposed as a key element of the School Nourishment Program.

Strengths and Limitations of this Report

There is very little published research available in Canada that describes the detailed and firsthand lunch experiences of students. Moreover, this report provides rich and systematically collected data about nuanced interactions that are not otherwise easy to capture by school staff or program developers. This research therefore provides novel information directly from the perspectives of students and their parents about what school lunchtime is like, what matters to students and families and what these experiences could mean for the success of new meal initiatives.

It is important to note that these data were collected just before and in the first few months following the change to a new meal program at only three schools that had existing programs. Therefore, family and classroom experiences could differ substantively from other SD40 schools that did not have preexisting meal programs, or those with different school dynamics. Also, the Fuel Up! program model itself has changed in meaningful ways since the 2018-2019 pilot year of implementation including a temporary absence of the School Nutrition Coordinator position, which was envisioned as the key staff resource for overseeing the nutritional quality of menus, integrating food literacy education into the program, contributing to a district wide comprehensive food strategy and other core programmatic activities. (Note, there is an active search to replace this position at time of writing this report). Therefore, results from this report should be considered within the context of these schools in the early months of implementation that has evolved since our data collection cycle.

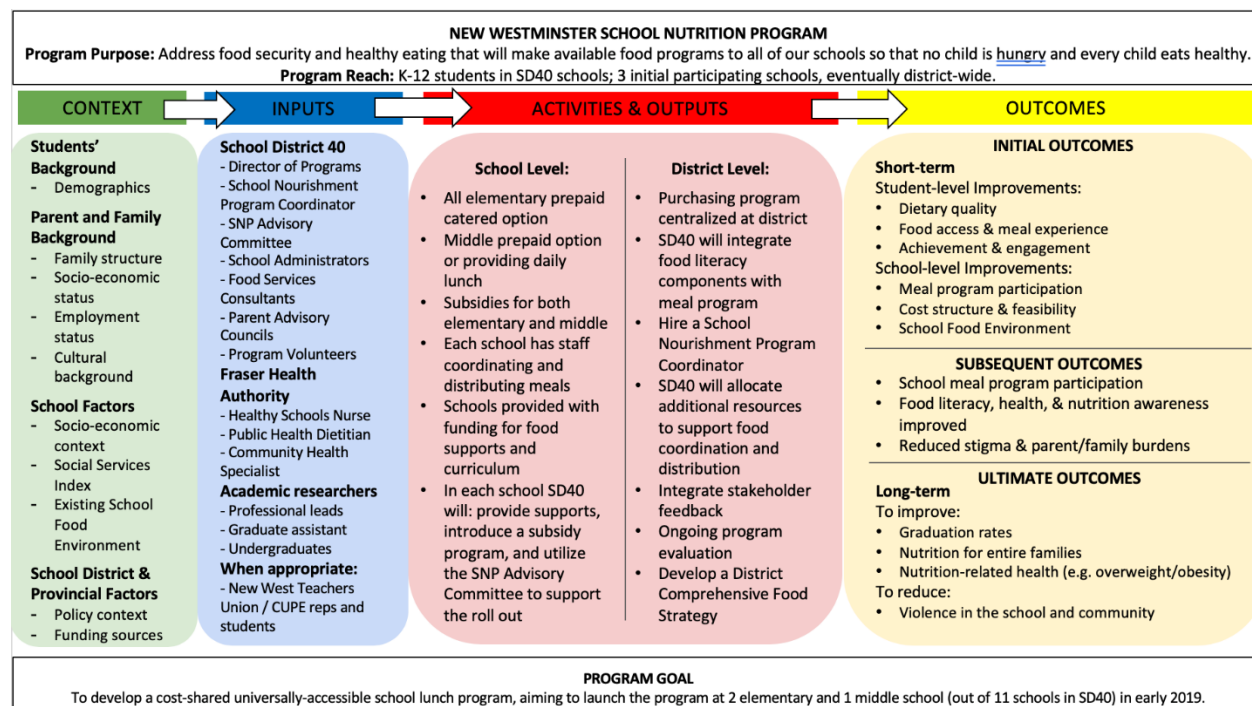
Still, key themes raised here point to critical questions about the reach and uptake of a model like Fuel Up! and key factors that are shaping lunchtime experiences of students relevant beyond this school district. Key themes emerging from this preliminary work include: the role of food and adults who provide it in caring for children, the diversity of lunch eating styles and types of foods consumed by students, food as a marker of social identity in the classroom, individualized versus communal approaches to lunch delivery, and perceptions of the value and affordability of lunch. Insight from this work can inform the delivery model implemented in SD40 and in school districts nationwide by informing understandings about the facilitators, barriers, and benefits of a cost-shared meal program model provided by an external caterer.

Pre-Publication Working Report June 2020

Appendices

Appendix 1

Program Logic Model Developed in Summer 2018



Appendix 2

UBC Dietetics Student Evaluation of SNP Menu



Nourishing Young Minds: An Evaluation of the Nutritional Quality of the Elementary School Nourishment Program at New Westminster Schools.

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INTRODUCTION

Children who suffer from hunger are more likely to have poor academic performance, mental health and cognitive development (1). New Westminster Schools (NWS) has been offering a subsidized lunch program, the School Nourishment Program (SNP), for fifteen years. This program was redesigned in January 2019. However, a nutritional analysis of the menus in place previous to the redesign in January 2019 was not completed.

OBJECTIVES

To evaluate the nutritional quality of the SNP lunch menus in NWS prior to the program redesign and to determine if the menus meet the recommendations from the BC School Meal and School Nutrition Program Handbook (SMSNPH) (2).

METHODS

Three SNP schools were approached to provide menus and recipes for a retrospective menu review. Each menu day was analyzed for the number of food groups served, whether there was a vegetarian option, and the frequency with which fish, juice, processed meats, and "other foods" were offered. Menus were assessed based on the SMSNPH.

RESULTS

Of the participating schools, one was able to provide a 2 month menu, representing 37 school days for analysis. Thirty menu days (81.1%) provided all four food groups. While a vegetarian option was available every day, fish was only offered once (2.7%). "Other foods" and processed meats were served on 9 (24.3%) and 11 (29.7%) menu days, respectively. Other foods are defined by SMSNPH as foods that do not fit into any of the four food groups. Juice was the only source of fruit and vegetables on 9 (24.3%) menu days. Standardized recipes were not available for in-depth nutritional analysis.

CONCLUSIONS

The majority of the days, the menus met the SMSNPH recommendations for food groups and vegetarian options. However, processed foods should be reduced, and whole fruit, vegetables, and high-quality proteins could be provided more often to optimize the nutritional quality of meals.

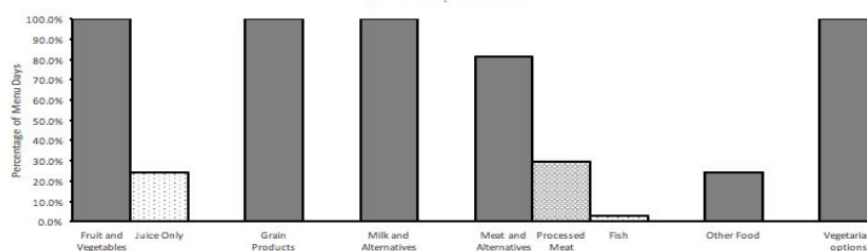
SIGNIFICANCE TO THE FIELD OF DIETETICS

Our findings highlight the importance of standardized menus and recipes in order to evaluate the nutritional quality of school meal programs. In future meal program evaluations, the provision of detailed recipes would allow for a more robust evaluation of the nutritional quality of the school meal program. This research provides important baseline data that can be used to assess the redesign of the SNP. Ongoing menu design and evaluation is an important part of promoting the health of future generations in NWS.

TABLE 1. PROPORTION OF MENU DAYS

	# of menu days (out of 37)	% of menu days
Fruit and Vegetables	37	100.0%
Juice Only	9	24.3%
Grain Products	37	100.0%
Milk and Alternatives	37	100.0%
Meat and Alternatives	30	81.1%
Processed Meat	11	29.7%
Fish	1	2.7%
Other Food	9	24.3%
Vegetarian options	37	100.0%

CHART 1. MENU ANALYSIS RESULTS



REFERENCES

1. Fought EL, Williams PL, Willows ND, Asbridge M, Veugelers PJ. The association between food insecurity and academic achievement in Canadian school-aged children. *Public Health Nutrition*. 2017;20(15):2778-85
2. Ministry of Education and the Ministry of Healthy Living and Sport. School Meal and School Nutrition Program Handbook. Available from: <https://healthyschoolsbc.ca/program/resources/87/en/11108/School-Meal-and-School-Nutrition-Program-Handbook.pdf>

ACKNOWLEDGMENTS

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Appendix 3

Student Placemat Activity

SD40 School Nourishment Program Study

Side #1

Placemat ID: _____

Version:
December 2018
Page 1 of 2

Scale: 1x1"

SD40 School Nourishment Program Study

Side #2

Placemat ID: _____

Where are you getting your lunch today?

- A. I brought my lunch from home
- B. My parent or someone else dropped it off
- C. I am getting the Lunch Program from school
- D. I do not have a lunch

Are you usually still hungry after eating your lunch?

A. Yes

B. No

Why or why not?

Is there anything else you want us to know about lunch at your school?

What is in your lunch today?

What is your favourite part of the lunch you have today?

If you could tell your school what to serve for lunch, what would it be?

How much did you like your lunch today:



Footnotes

¹ The motions that passed the regular meeting of the New Westminster Board of Education on June 27, 2017 included:

1) *Food Security and Healthy Eating* (Moved and Seconded: 2017-095)

THAT the Board of Education for School District No. 40 (New Westminster) direct the Superintendent to have temporary school specific plans to address food security at each school and if needed provide necessary funding and resources to ensure healthy food is available to students who are going hungry, by September 2017. (*Carried Unanimously.*)

2) *Main Motion as Amended: 2017-099*

THAT the Board of Education for School District No. 40 (New Westminster) direct staff to provide a report by January 2018 on the steps to be taken and costs associated with a district-wide plan to address food security and healthy eating, that will make available food programs to all of our schools so that no child is hungry and every child eats healthy. (*Carried Unanimously*)

Source: <https://newwestschools.ca/wp-content/uploads/2017/01/170627-Open-Board-Minutes-APPROVED.pdf>

² See detailed FHA/SD40 report “School Nourishment Program Review and Recommendations for Moving Forward” at: <https://newwestschools.ca/wp-content/uploads/2016/10/180116-OPEN-Ops-Agenda.pdf>

³ Food Policy for Canada: <https://www.canada.ca/en/campaign/food-policy/thefoodpolicy.html>

⁴ The Coalition for Healthy School Food BC: <https://www.healthyschoolfood.ca/bc-chapter>

⁵ In the 2019-2010 school year, Fuel Up! introduced a smaller entrée size option (for \$5.00) as well as a larger entrée size for \$5.75 (e.g. see Dec 2019 menu: <https://newwestschools.ca/wp-content/uploads/2019/12/December-Menu.pdf>)