Tailoring outreach strategies to overcome barriers to childhood immunizations in Fraser region

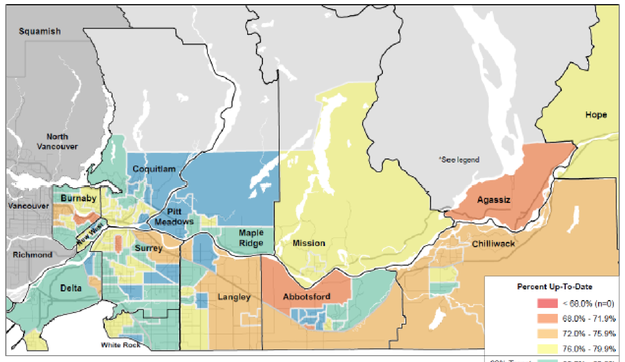
Meghan Martin, Christina Fung, Sarah Fielden, Anup Samra, Judi Mussenden, Dr. Lindsay Bowthorpe, Dr. Shovita Padhi, Amrit Rai, and the Immunization Outreach Project Nursing Team

What's the problem?

2-year-old up-to-date (UTD) immunization rates are an indicator of a population's protection against vaccine preventable diseases. UTD rates in Fraser Health region in 2018 were 77.3% - below the levels needed for adequate protection - and data showed that there were inequities in immunization coverage.

Fraser Health is home to over 1.9 million people.
Approximately 19,000 babies are born here each year.

Each child needs 13 vaccinations across at least 5 appointments to be up-to-date by age 2.



Fraser Health 2-Year-Old Immunization Rates
2018/19 Fiscal Year

What are we going to do?

This project was developed to design, implement and evaluate a range of outreach clinic strategies to identify which are most effective for reducing barriers to childhood vaccinations. The goal was to increase uptake of childhood vaccinations and decrease inequities in vaccine coverage.

Step 1: Identifying Priority Populations

North Surrey and Chilliwack were selected as our project communities. These areas had some of the lowest 2-year-old UTD coverage rates in 2018 (72- 74%) and represented a mix of urban and suburban/rural communities.

In 2019 we carried out surveys (n=513) and focus groups (n=40) to gather client demographics and explore barriers that they had experienced to accessing vaccinations. Responses were matched to children's health records to identify populations that were less likely to have their children UTD.

Results

UTD status was closely aligned with socioeconomic status in Chilliwack, but less so in North Surrey.

On average, caregivers in both communities who reported an ethnicity other than white were less likely to have their children UTD compared with those who identified as white. There were exceptions, with East Asians in both communities and South Asians and West Asians in Chilliwack being more likely to have their children UTD.

Finally, the barriers of busy schedule and lack of childcare were reported more frequently by caregivers whose children were not UTD compared with those who were UTD.

Children in Canada are less likely to be vaccinated in families that report:

- Lower household income
- Lower parental education
- A single parent family
- That the child was born outside of Canada[1]

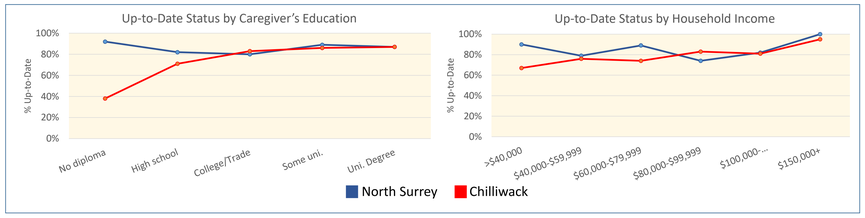
1. N.L. Gilbert, H. Gilmour, S.E. Wilson & L. Cantin (2017). Determinants of non-vaccination and incomplete vaccination in Canadian toddlers. *Human Vaccines & Immuno-therapeutics, 13*(6), 1447-1453.

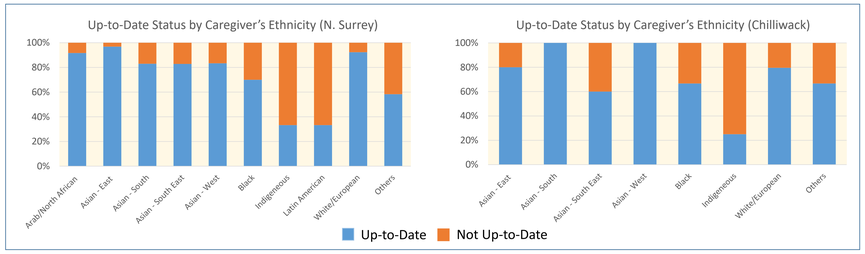
fraserhealth

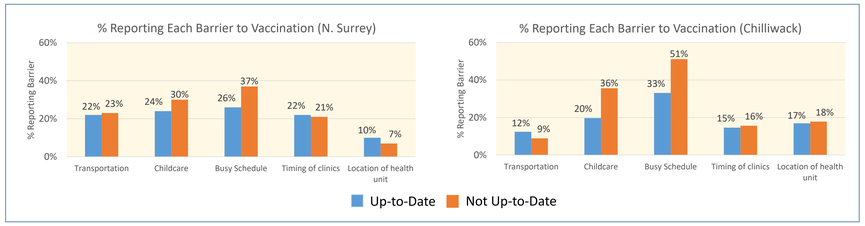
Fraser Health provides services within the traditional and unceded territories of the Coast Salish and Nlaka'pamux Nations and is home to six Métis Chartered Communities.

Financial contribution from
Avec le financement de

Public Health Agency of Canada | Agence de la santé publique du Canada







Step 2: Testing Outreach Clinic Models

Nursing teams in North Surrey and Chilliwack identified partners that could assist us in reaching priority populations, including:

- Family and newcomer resource centres (n=5)
- Strong Start programs (n=5)
- Shopping malls (n=2)
- Municipal libraries (n=1)
- Recreation centres (n=1)
- Housing complexes (n=1)
- Community schools (n=1)

From 2020 to 2023, nurses offered 297 childhood immunization clinics with drop-in and booked appointments available.

Vaccines and supplies were transported to each clinic daily and laptops were used to check client records and document immunizations given at the outreach clinics.

Clients were asked to provide demographic information and complete a client experience survey, which included questions about what barriers they previously experienced and why they chose to attend the outreach clinic that day.

Impact of the COVID-19 Pandemic

Our outreach clinics were initially launched in February of 2020. In March 2020, when the COVID-19 pandemic was declared, our community partners closed their doors to in-person gatherings and public health staff were redeployed to support Fraser Health's COVID-19 response, forcing us to pause our outreach clinics.

We attempted to re-start the outreach clinics in the summer of 2020; however, there continued to be significant challenges accessing community space. In the summer of 2021, a few partners in Chilliwack were open to discussing outreach clinics at their sites. It took longer to find available and appropriate space in Surrey and clinics in that community did not re-start until May of 2022.

Step 3: Sharing Promising Practices

Community	Timeline	Total Clinics Offered	# of Client Interactions	# of Clients Immunized	% of Clients Receiving Imms.
Chilliwack	July 2020 to Feb 2023	224	1228 (5.5 per clinic)	1117 (5.0 per clinic)	91%
North Surrey	May 2022 to Feb 2023	73	386 (5.3 per clinic)	190 (2.6 per clinic)	49%

Chilliwack Locations	Total Survey Responses	Non-White Ethnicity	Income <$50,000	Busy Schedule Barrier	Childcare Barrier
Shopping Mall	265	33%	13%	48%	13%
Community School	71	28%	26%	47%	13%
Family Resource Centre 1	19	42%	37%	63%	11%
Housing Complex	14	64%	42%	36%	21%
Family Resource Centre 2	5	60%	100%	20%	80%

North Surrey Locations	Total Survey Responses	Non-White Ethnicity	Income <$50,000	Busy Schedule Barrier	Childcare Barrier
Shopping Mall	56	85%	27%	32%	4%
Family Resource Centre 1	21	94%	39%	52%	10%
Recreation Centre	16	88%	14%	50%	6%
Municipal Library	16	81%	13%	19%	0%
Family Resource Centre 2	12	70%	30%	25%	17%
Newcomer Resource Centre	5	100%	50%	0%	20%
Strong Start Programs	2	100%	100%	50%	0%

Outreach clinics in the suburban/rural community of Chilliwack saw an average of 5.5 clients per clinic and provided immunizations to 91% of those clients. In contrast, the urban clinics in North Surrey saw 5.3 clients per clinic but provided immunizations to only 49% of clients. The North Surrey clinics reported more demand for education and record review, often for newcomers to Canada.

Shopping mall clinics were the busiest locations in both communities and reached a significant number of people who reported "busy schedule" as a barrier to vaccination.

Family Resource Centres saw fewer clients, but a large proportion of those clients came from our priority populations, in particular clients who reported a household income of under $50,000 per year.

The clinic attributes that were identified as most helpful by families attending the clinics were:

- Drop-in appointments
- Co-location with other services
- Clinic days/times that matched families' busy schedules

Discussion

This project uncovered notable differences between communities in terms of the priority populations and the services needed.

The stronger association between UTD status and socioeconomic status in Chilliwack made it easier for the team to identify partners that could help us reach the priority populations. Further, the clients they encountered through these partners were more willing to receive immunizations in an outreach setting.

In contrast, the North Surrey nursing team was attempting to reach a population that had common barriers to vaccinations, rather than a shared ethnic or socioeconomic identity. This required a broader approach to partnership in order to reach the priority populations. The large newcomer population in Surrey also meant that this team needed to provide more orientation to the Canadian healthcare system and record review. Although fewer immunizations were given, these outreach clinics met an often overlooked need in our communities.