MODEL SCHOOLS PAEDIATRIC HEALTH INITIATIVE: IN-SCHOOL HEALTH CLINICS

PHASE III EVALUATION

Academic, Research & Information Services

Toronto District School Board

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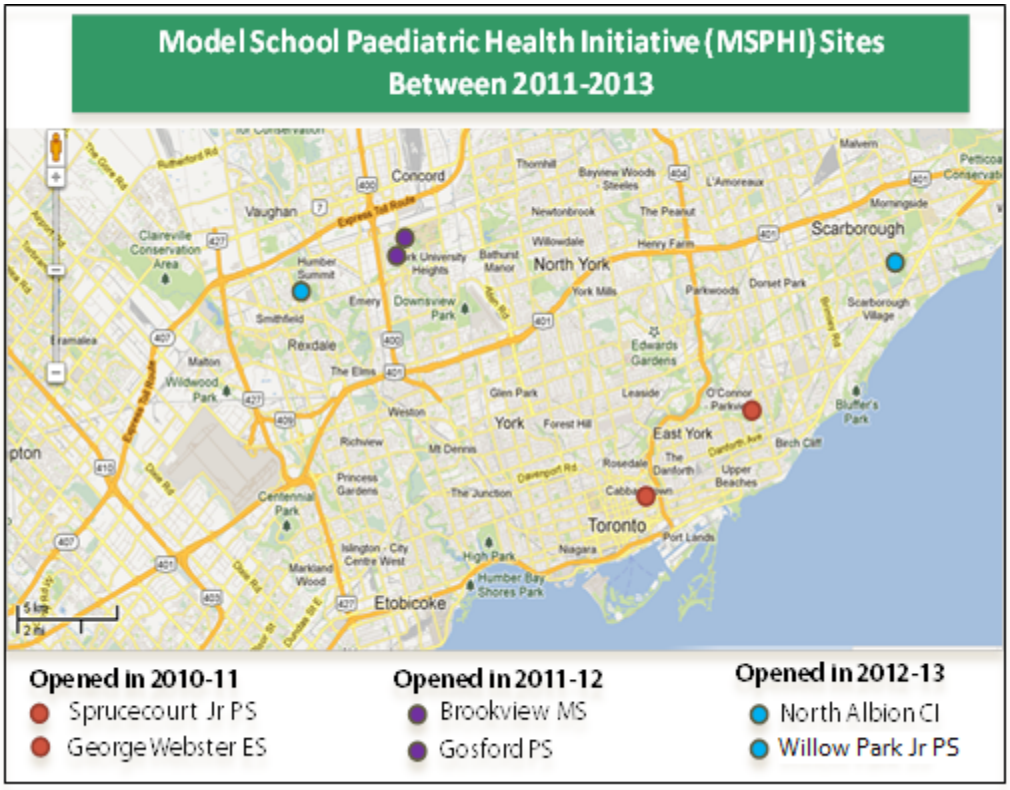
INTRODUCTION

BACKGROUND

This Phase III report is a continuation of the Phase I and II Evaluations of the Model Schools Paediatric Health Initiative (MSPHI) implemented in the Toronto District School Board's (TDSB) Model Schools for Inner Cities (MSIC). Starting with two MSIC schools in 2010-11, by 2013-14 the MSPHI had expanded to six host schools (five elementary and one secondary school) across the city (see Figure 1).

Figure 1: MSPHI Sites between 2011 and 2013



The MSPHI is an innovative integrated school service whereby health clinics are set up in a number of inner-city schools with the support of local health agencies, such as community health centres and/or hospitals, which offer free medical services to students of the host and/or the surrounding feeder schools. The idea is to eliminate health care accessibility barriers in high priority neighbourhoods as a way to address the physical and psychological needs of students and to enhance their chance of success in school and for their future.

As emphasized in the Phase I and II reports, the sustainability of the MSPHI entails a close tri-partnership between the school board under the MSIC program, medical service providers

within the community, and the Toronto Foundation for Student Success (TFSS)[1] as the supporting funding and coordinating agency. With this cross-sector collaboration, the MSPHI has become a concrete step towards integrating education and health for the long-term well-being of students, especially those in high needs communities.

Since 2011-12, the Ministry of Education has provided annual grants to the TDSB research unit to support the evaluation of the MSPHI by phase. The Phase I study, which was completed in Fall 2012, was a retrospective assessment of the first pilot year of the initiative. The report (Yau & Newton, 2012) included a literature review summary, a documentation of the origin of the MSPHI, and two case studies on the first two TDSB in-school health clinics - Sprucecourt Public School, and George Webster Elementary School respectively. The Phase II Evaluation (Yau & Newton, 2012) conducted in the following year (2012-13) took a micro and macro look at the MSPHI, including Case Study 3 on the new and only secondary-school health clinic located at North Albion Collegiate Institute, and a review of the three-year progress and the overall impact of the MSPHI as a whole. In the Phase II report, conditions for MSPHI's success and sustainability were also discussed.

FOCUS OF THE PHASE III EVALUATION

With the continued research funding support from the Ministry of Education, this Phase III study attempts to take an in-depth look into the following questions:

1. Why and how has the MSPHI been considered an important and impactful service for students and the community of the host and/or feeder schools?

2. How has this integrated school and health initiative been helpful in addressing children's and youth's psychological and mental health issues that have been drawing growing public attention? And how could the MSPHI efforts dovetail into the TDSB's recently released Children and Youth Mental Health and Well-being Strategy (2013)?

To answer the above questions, this research examines the experience of two relatively recent MSPHI health clinics in great detail – one elementary and one secondary, both of which were opened in the fall of 2012.

- Case Study 4 is a detailed study of the MSPHI clinic at Willow Park Junior Public School (WPJPS) serving Woburn and surrounding neighbourhoods in Scarborough. Having observed other more established sites, WPJPS' in-school health clinic adopted a mixed service delivery model and has served an increasing number of elementary school students and families in the neighbourhood.

[1] The TFSS, the arm's length charitable foundation of the TDSB, leveraged funds for the MSPHI while also securing commitments for the medical staffing and overseeing, with the School Board, all the operational requirements.

- Case Study 5 is in fact an extension of a previous case study (Case Study 3 in Phase II research) on North Albion Collegiate Institute (NACI) in the Rexdale-Kipling area. The reason for continuing to study the NACI case is that although it is the only secondary-school health clinic as of today in Ontario, it has successfully addressed many of the mental health issues presented by the students at the school. As will be discussed in the case study, mental health concerns exist among adolescents in general regardless of school or geographic area. Hence, there is a hope that through an in-depth study, the effective practices at the NACI clinic can be shared, especially for policy- and decision-makers to consider, as a cost-effective way to meet the prevalent mental health needs of youth.

DATA COLLECTION METHODS

This Phase III study was based heavily on qualitative data supplemented by existing quantitative data sources.

Qualitative Data

Since the emphasis of this study is to understand the why and the how, a series of in-depth focus group interviews were conducted with different stakeholder groups including:

- Clinic staff from both in-school clinics
- School and student support staff from WPJPS and NACI
- Representatives from supporting health agencies – Scarborough Community Health Centre, Rexdale Community Health Centre, and Toronto Public Health
- Parents from WPJPS feeder schools
- Students from NACI (separate interviews for female and male students)

Quantitative Data

Three existing data sources were also used to support the qualitative findings.

- TDSB's *2012 Parent Census* School Report for WPJPS – Information about WPJPS student demographics was captured from the school's *2012 Parent Census* report to provide contextual information for understanding the family background of children in the community.

- TDSB's *2011 Student Census* School Report for NACI – Similarly, information about NACI's student demographics was extracted from the school's *2011 Student Census* report to help understand the needs and conditions of adolescents at the school.

- MSPHI database – This database, maintained by the MSPHI central office, records ongoing information about student registrations, appointments, feeder schools, and presenting health issues for all TDSB in-school health clinics. For this Phase III study, data gathered from the two clinics between 2012-13 and 2013-14 were extracted.

FINDINGS

- Case Study 4: In-School Health Clinic at Willow Park Junior Public School
- Case Study 5: In-School Health Clinic at North Albion Collegiate Institute

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CASE STUDY 4: IN-SCHOOL HEALTH CLINIC AT WILLOW PARK JUNIOR PUBLIC SCHOOL (WPJPS)

This case study examines one of the newer MSPHI health clinics, at Willow Park Junior Public School (WPJPS), which opened in the fall of 2012. Having studied other existing MSPHI clinics, the WPJPS in-school clinic developed a combined delivery model to serve the inner-city children in its Scarborough community. For a thorough understanding of this clinic and its impacts, the following areas were explored:

- Context – in which the clinic was operated
  - Environmental circumstances facing the community
  - Children's health-related needs
  - Barriers to accessing health care

- WPJPS clinic and services
  - Delivery model
  - Population served
  - Promotional and referral efforts
  - Types of health care services offered

- Clinic's results and benefits
  - Clinic's results – appointments served
  - Clinic's benefits for:
    - students
    - families, and
    - school community

- Factors for WPJPS clinic's effectiveness
  - Within school location
  - Approach to health care
  - Characteristics of the service deliverers
  - Partnerships

CONTEXT

Environmental Circumstances

According to the 2012 TDSB Parent Census, the socio-demographic characteristics of students from Willow Park Junior Public School (WPJPS) were distinctly different from the general population in a number of ways (see Table 1). Many families in the WPJPS community were faced with both poverty and settlement-related challenges.

Table 1: Characteristics of Willow Park School Community

Family/Community Characteristics	Willow Park Jr PS (*N*=290)	TDSB (*N*=89,503)
Annual household income less than $30,000	60%	28%
Parents born outside Canada	83%	63%
Two-parent household	64%	83%
Mother with a university/college degree	59%	72%
Father with a university/college degree	61%	74%

Source: TDSB's 2012 Parent Census

Based on the TDSB's 2014 Learning Opportunities Index (LOI), WPJPS ranked 8 out of a total 474 elementary schools within the school board. Essentially, schools with a ranking closer to "1" experience a higher level of poverty-related challenges that affect student success. As shown in Table 1, the majority (60%) of the children attending WPJPS, as compared to 28% of the overall population, were from families with an annual household income of less than $30,000, which was well below the poverty line. According to school staff interviewed during the focus groups, unfavourable and crowded living conditions were common among families in the community, interfering with children's health and well-being.

School staff further pointed out a large representation of immigrant, refugee, and non-status families from South Asia, the Caribbean, and Eastern Europe among their student population. Again, as shown in Table 1 above, over 80% of WPJPS students were from families where both parents were born outside Canada, compared to 63% for the TDSB as a whole. While such diversity offered much strength for the school community, many newcomer parents encountered challenges such as financial difficulties, language barriers, and cultural conflicts, limiting their capacity to meet their children's educational and health-related needs.

Children's Health-related Needs

Research has revealed an indirect relationship between health and educational inequities. That is, as health inequities increase, academic achievement declines and vice versa (Fiscella and Kitzman, 2009). Hence it is crucial to understand the health-related needs of the children in the community. School and clinic staff, parents, and caregivers from WPJPS and feeder schools reported an array of children's health concerns in their school community which can be broadly categorized under: (1) physical health and (2) psychological health.

Physical Health

According to school and clinic staff, physical ailments presented by children at the WPJPS clinic varied from acute to chronic and individual to population-level health concerns within the following areas:

- Individual health concerns
- Communicable health concerns

Individual Health Concerns

The most prevalent individual physical health concerns for children were vision and hearing challenges. In rare occasions, students required specialized ophthalmology and audiology care and complex surgeries. Other individual physical health concerns that surfaced from the focus group interviews included tinea (a type of fungal skin infection), a foot disorder that required orthotics, and a heart defect that entailed surgery. Also common among primary and junior grades was the incidence of schoolyard injuries which ranged from bumps and bruises to those requiring immediate medical attention.

Communicable Health Concerns

Communicable diseases are contagious and easily transmitted between children due to their age, negligible hygiene practices, and frequent and close contact with other students. The Public Health Nurse (PHN) and teachers regularly encountered health concerns related to the spread of ring worm, lice, chicken pox, bed bugs, and the flu among WPJPS students. On a similar note, immunization was an important concern for newcomers to Canada, as their records were often incomplete based on standards set out by the Ministry of Health and Long-term Care.

Psychological Health

All stakeholder groups interviewed, including school and clinic staff and parents, agreed that the prominent health issue among children in the community was psychological in nature. Considering the stigma associated with psychological-related illnesses in society and some immigrant families, there was noticeable recognition and disclosure of these conditions by parents and caregivers during focus groups. These parents, along with school and clinic staff, identified three overarching psychological concerns:

- Behavioural Issues
- Developmental Issues
- Emotional Issues

> *I would see kids with ADHD, behavioural problems, learning disabilities, difficulties socializing, communicating effectively and a whole host of medical things too, but I'd say mostly behavioural and developmental that I see.* (Paediatrician)

Behavioural Issues

Irritability, restlessness, and disruptive behaviour were trademark characteristics of young children who visited the WPJPS clinic. The persistent and severe expression of these characteristics often necessitated professional medical assistance. Behavioural disorders were identified by clinic staff as being common among patients at the WPJPS in-school clinic. Specifically, attention deficit hyperactivity disorder (ADHD) was the most frequently presented behavioural issue in students and more prevalent among younger patients.

Developmental Issues

From the focus groups, developmental exceptionalities or delays were identified by clinic staff, parents, and caregivers as one of the major issues addressed by the WPJPS clinic. The Paediatrician shared that children from Kindergarten to Grade 2 visited the clinic with learning disabilities and difficulty with socializing and communicating. The pathology of some of these children led to a diagnosis of autism.

Emotional Issues

Finally, school and clinic staff described that students also experienced emotional conditions that warranted psychiatric attention. For some older students, managing academic pressures from parents and anxiety about their future were overwhelming. These individuals resorted to self-harming behaviours, such as cutting and suicidal intentions. The Principal and a Nurse Practitioner (NP) acknowledged depression and aggressive behaviour among their students:

> *Based on observations, there appears to be a lot of emotional issues with quite a few students and some of them are extreme enough to suggest that there might also be some mental health issues […] We can just share with you that we do have many students that do not seem to be adapting to student life, acting a way a student would be in a typical or normal setting.* (Principal)

Barriers to Health Care

Despite the numerous health concerns described earlier, many families in this Scarborough neighbourhood seldom accessed medical attention due to a number of barriers related to:

- a lack of understanding of the health care system and health-related needs
- limited resources to access health care
- negative experience with external medical services

Lack of Understanding and Awareness

For a newcomer to Canada, the health care system and related services can be overwhelming to navigate. A lack of familiarity and understanding was an obstacle to seeking medical attention for parents and caregivers of students in the neighbourhood. For example, the NP described that sometimes parents were hesitant about their child being referred to a health care professional and initially refused to provide the WPJPS in-school clinic with consent, simply due to their uncertainty about the process of seeking health care support. Similarly, parents and caregivers were not aware that the onus of updating children's immunization records was on them. They did not know who to call, what types of immunizations their child required, and/or how to follow-up with Toronto Public Health.

To further aggravate the challenges posed by a limited awareness and understanding of the health care system, family members were often naïve about the exceptionalities their child demonstrated, particularly psychological conditions. This may have prevented parents and caregivers from pursuing medical attention for their children as they did not recognize, and sometimes denied, ongoing psychological health problems. Both the Paediatrician and Clinic Coordinator described this naivety and denial in the WPJPS community:

> *Lack of awareness among parents, I'd say that's another barrier. Awareness among parents 'cause maybe it's their love or whatever. They're just blind to […] seeing that this kid is, you know, wrecking up the whole place. This kid has something wrong. When they go to school, the teacher or whomever, is able to see, ok there's something wrong.* (Clinic Coordinator)

Limited Resources

For newcomers to Canada, some, if not all, of the following factors reduced accessible medical attention in times of need:

- Uninsured or unattached health care provision
- Competing priorities
- Financial and geographical barriers
- Language barriers

Uninsured or Unattached Health Care Provision

A leading obstacle for health care access for children of newcomer families was the ineligibility for provincial health care coverage. This was very much the case for families at WPJPS and feeder schools. Even for students who did have OHIP coverage, many were unattached; in other words, they did not have family doctors, and hence consistent primary health care was uncommon:

> *A lot of our students actually don't have dentists or family physicians that they see, and ones that do see physicians regularly […] It's usually at a walk-in clinic so it's not like they have someone giving them continuous care. It's always fragmented.* (Principal)

Competing Priorities

Time can be a precious commodity for parents and caregivers in this Scarborough neighbourhood. During the focus groups, family members explained that they did not routinely visit doctors in the community because of the substantial time it required to travel to and from the clinic office. The Paediatrician mentioned that parents and caregivers felt overwhelmed from looking after multiple children and elders, managing various jobs, and pursuing part-time education, and sometimes all as a single parent. Obviously, competing priorities and limited time among parents and caregivers did not facilitate access to health care for themselves or their children.

Financial and Geographical Barriers

Financial inflexibility and distance prevented families at WPJPS and feeder schools from seeking medical attention. Many families could not afford extra public transit fares to visit family doctors or walk-in health clinics, not to mention the cost for out-of-pocket medical services. The WPJPS Family Physician shared that these financially vulnerable families paid $50 for their child's routine assessment at walk-in clinics, and were often displeased with the quality of care.

> *The parents here often don't have a vehicle, they're reliant on public transit, and there may be multiple children so anything that's not local is very difficult for them to access.* (Teacher)

Language Barriers

Parents and caregivers function as a gateway for health care access for their children. Language barriers can impede this process and were a common concern for newcomers in this Scarborough community, affecting their comfort level in accessing health care services on multiple levels, such as asking questions, receiving care, and understanding treatment options and diagnoses:

> *Language is sometimes a concern because many immigrants, they have the language issues… I think it happens from the family when they're entering this school and they have some barriers, in terms of understanding the service they can get from the family doctor and also, the needs they're looking for.* (Clinic Coordinator)

Negative Experience with External Medical Services

School staff agreed that parents and caregivers were intimidated to visit hospitals, specialists, and walk-in clinics, perhaps due to the impersonal environment at these practices and their own unfamiliarity with the health care system and English language. Parents and caregivers from WPJPS feeder schools further revealed that they were frustrated with the medical attention they generally received from health care providers in the community. For instance, they found the process slow and inefficient, having to wait months to receive specific resources and be referred to specialists. The Director of the Scarborough Centre for Healthy Communities (SCHC) recalled parents and caregivers saying: "We don't know them. We don't interact with them". Previous negative experiences with external health care professionals further discouraged parents from seeking external medical attention.

WPJPS HEALTH CLINIC AND SERVICES

After deliberation over the strengths and challenges associated with other existing MSPHI in-school clinics, the WPJPS in-school clinic was opened in October 2012 with the adoption of a medical team approach to deliver primary health care.

Clinic Delivery Model

Primary health care refers to the comprehensive provision of medical services, recognizing the biological, psychological, and social (including family dynamics, housing, environmental) factors that influence health and well-being. This approach strives to improve access to and continuity of health care. As we will see below, the focus of primary health care is health promotion and the prevention, diagnosis, and management of illness and injury. At WPJPS, primary health care was administered by a small team of medical professionals who had expertise in serving the youth population and networking with external professionals and services. The WPJPS clinic team consisted of:

- A Nurse Practitioner, who was employed by SCHC, and worked at the WPJPC clinic one half-day (9:00 a.m. to 12:30 p.m.) every other week;
- A Family Physician, who was employed by SCHC, and worked at the WPJPC clinic one day (9:00 a.m. to 3:00 p.m.) every two weeks, alternating with the NP;
- A Paediatrician, who was employed by SCHC, and worked at the WPJPS clinic one day per month (8:30 a.m. to3:00 p.m.); and

- Two Clinic Coordinators, who were funded by the TFSS, to provide support to the medical team during clinic hours.

Roles of Clinic Staff

Nurse Practitioner

In Ontario, Nurse Practitioners (NP) provide a spectrum of health care services, including immunizations, annual physicals and episodic illness care, in diverse settings. With an expanded legislated scope of practice, NPs serve comparable roles to Family Physicians. At WPJPS in-school clinic, the NP provided first-contact health-related service to the Willow Park community. Her services ranged from diagnosis and treatment to health promotion activities. Students and their parents or caregivers initially met with the NP, who took this opportunity to orient newcomers to the services provided by the WPJPS clinic and how to navigate the provincial health care system:

> *Sometimes there is [hesitation from parents about being referred to medical professionals] but the simple reason is that they don't understand why. So then you just have to keep explaining to them the reasons. When they come to see you as a first contact with the health care providing system, you've got to do a lot of talking, a lot of explanation.* (Nurse Practitioner)

The NP was also responsible for conducting a medical history and physical assessment (including measuring children's height and weight) and resolving any underlying and presenting physical, mental, or lifestyle-related health concerns. If the diagnosis and treatment of these medical concerns were outside the NPs scope of practice and expertise, the NP would collaborate with or refer the patient to the on-site Family Physician.

Family Physician

The Family Physician (FP) at the WPJPS in-school health clinic provided primary care associated with physical and mental health. The FP devoted particular attention to patients who were referred by the NP. With a background in developmental health, the FP was able to manage some of these disorders as well. For complex patients who required specialized care, the FP would inform parents and caregivers of the likely diagnosis and refer them to the WPJPS Paediatrician or other appropriate medical specialists in the community.

Paediatrician

The final member of the medical consultation team was a Paediatrician who was primarily affiliated with St. Joseph's Hospital, but had worked out of Humber River Hospital and other community health centres. As a general paediatrician, she diagnosed and completed care plans for complex patients who were referred by the NP and FP. She too had a specific focus on

developmental and academic-related (e.g., test anxiety, depression, burnout) health concerns which she routinely treated. At the WPJPS clinic, she was regularly fully booked, typically seeing five to seven patients per month.

Clinic Coordinators

The Clinic Coordinators provided critical administrative, logistical, and stakeholder support. They were International Medical Graduates (IMG) and assumed the responsibilities of public relations, scheduling appointments, referrals to external agencies and resources, interpretation support, collecting patient data, and general operations of the clinic. The Clinic Coordinators also played a central role in supporting families with accessing health care and community services:

> *Our role as coordinators is facilitating that process, clarifying doubts, making sure that the right message is conveyed. Also, it's connecting with resources. Thankfully, we're working with the clinics, working with our providers. They've learned about a lot of resources that are in the community, like CITYKIDS or … ADHD clinics. A lot of these places are there.* (Clinic Coordinator)

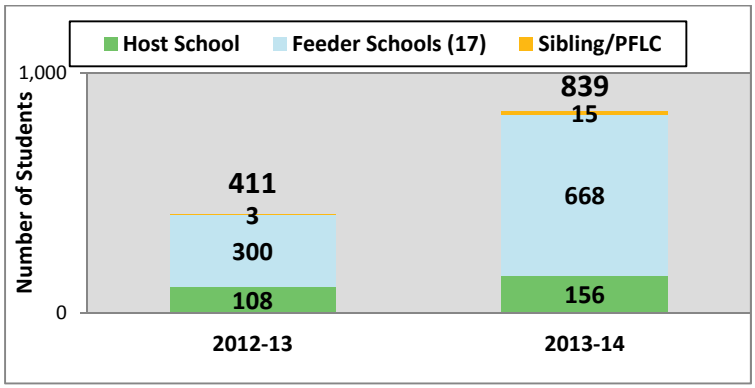
POPULATION SERVED BY WPJPS CLINIC

Through the primary health care model adopted at the WPJPS in-school clinic, the medical team was able to provide accessible and coordinated care to students at the host school (WPJPS) and 17 feeder schools in the neighbourhoods, including siblings and Parenting and Family Literacy Centre (PFLC) participants of these schools (see Figure 2).

Figure 2: Location of Willow Park Junior Public School (WPJPS) and WPJPS Clinic's Feeder Schools

Between the first (2012-2013) and second (2013-2014) year of operation, the WPJPS clinic witnessed a noticeable increase in the number of student registrations, especially from the growing number of feeder schools (see Figure 3). Registration was required prior to being seen by a health care professional at WPJPS in-school clinic. The in-school clinic had also provided medical attention to a larger number of siblings and PFLC participants in 2013-2014.

Figure 3: Willow Park Jr PS Clinic's Student Registration



Promotional and Referral Efforts

During focus groups, a few promotional and referral methods were identified as drawing families to the WPJPS in-school clinic:

- Promotion efforts within the school community
- Referral by school staff
- Word of mouth among parents and caregivers

Promotion Efforts within the School Community

The primary audience of direct and indirect promotion efforts within the school community were parents and caregivers of children attending WPJPS and its feeder schools. The WPJPS in-school clinic was promoted at school council meetings – in significant depth at the first meeting, and as needed during subsequent meetings. The September school package sent home at the beginning of the school year was accompanied by the WPJPS in-school clinic card. The clinic card included the contact information and the types of services the clinic staff provided. School administrators would undertake promotional blitzes during times when the clinic was not heavily used.

As previously mentioned, maintaining accurate and up-to-date immunization records was a public health concern in this community. Families belonging to WPJPS and its feeder schools learned about the in-school clinic through the documentation that Toronto Public Health disseminated:

> *Before [Toronto Public Health] sends out the [immunization reminder] letters, we send which of the feeder schools […] belong to this Willow Park School so they send them our clinic's […] information card, with each letter so when they're sending the letters to the parents, they also get the information card for the clinic […] The parents call us and book an appointment.* (Clinic Coordinator)

This promotion effort was effective. Families were immediately drawn to the WPJPS clinic because mandatory suspension was enforced for children with inadequate immunization records.

Referral by School Staff

Teachers from WPJPS and its feeder schools were cognizant of the on-site health clinic as a result of the aforementioned promotion efforts and through school staff meetings. School staff, particularly teachers, were in a critical position to observe and recognize their students' physical and psychological development and well-being on a daily basis. Teachers at host and feeder schools encouraged and referred parents and caregivers to visit the WPJPS for their child. The Clinic Coordinator for the Paediatrician described the impact of school referrals on clinic enrollment and utilization:

> *[The clinic staff] went to several school staff meetings, just to let the staff know that […] the school clinic is here. You can refer any of the children. And after that meeting, the referral numbers increased a lot because the teachers [knew] about [the clinic].* (Clinic Coordinator)

Other school staff who made referrals to the WPJPS clinic included school administrators, school support staff, and settlement workers. School staff also collaboratively referred children to the in-school clinic during School Support Team (SST) meetings. These meetings were called to discuss staff and/or parental concerns regarding a student and beneficial support services required. In addition, Parent Workers at the schools' PFLC also prompted parents and caregivers to pursue medical attention where necessary for their pre-schoolers at the WPJPS clinic.

Word of Mouth among Parents and Caregivers

Both the Clinic Coordinator and Director of the SCHC acknowledged the importance of WPJPS clinic endorsement among parents and caregivers. Oftentimes, parents and caregivers shared with each other their children's health-related experiences in their community. This fostered a support network but also exposed other families to the services available at WPJPS in-school clinic.

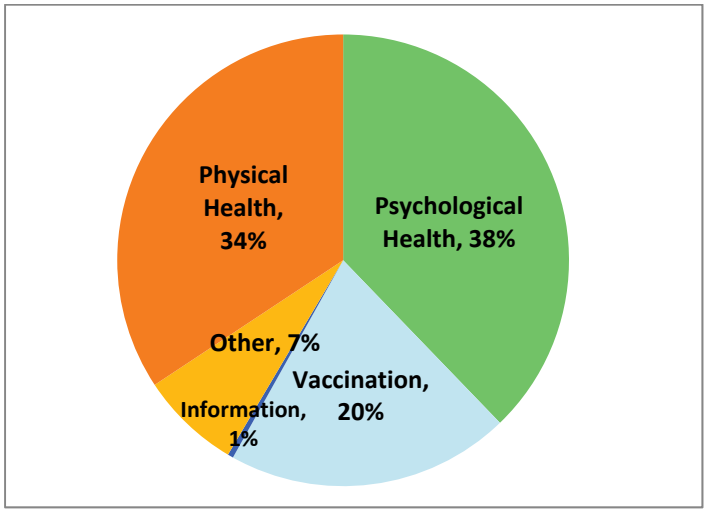
> *You know, one parent comes, they realize that, ok this is useful. We've had parents who were like, "Ok yeah somebody told me. My kid goes to this school.*

Can I come?" So we have had that too and especially in close-knit school communities or in the parenting centres. (Clinic Coordinator)

TYPES OF HEALTH SERVICES OFFERED

Figure 4 displays the wide spectrum of health care services the medical team at the WPJPS in-school clinic provided to students from the host and feeder schools. The two major types of presenting issues were physical and psychological-related health concerns. The latter included behavioural, developmental, and emotional needs.

Figure 4: Patients' Presenting Issues at WPJPS Clinic (2012-13 and 2013-14)



In light of the diverse presenting issues, the WPJPS medical team provided a broad range of health care services that can be categorized according to: (1) physical health (2) psychological health, and (3) familial health needs.

Physical Health Services

The WPJPS medical staff tended to diverse physical health concerns. From the focus group interviews, the following physical health services were provided:

- immunization and vaccination
- communicable disease management
- routine diagnostic assessments
- injury treatment

Immunization and Vaccination

A high priority for the student population in this Scarborough neighbourhood was disease and illness prevention, specifically immunizations and flu vaccines. The Ministry of Health and Long-term Care has established a routine immunization schedule for children and adults alike. Immigrant, refugee, and non-status families were usually unaware of these requirements or the requirement to maintain and disclose their children's immunization record to the local health unit. To support the extensive demand for immunization in this neighbourhood, due to a high number of newcomer families, the WPJPS provided age-appropriate vaccines to patients in a timely manner. The spring and autumn months were popular months for such immunization efforts at the WPJPS clinic.

> *We had a special immunization day 'cause this year, the Toronto Public Health centre sent out letters to all the students who didn't have their immunization records and so we had quite a few parents who actually came to the clinic to get immunized because they're either far away from their family doctors or didn't have one.* (Clinic Coordinator)

The Director of the SCHC described that this immunization effort was a high priority for the in-school health clinic as an effective population-based disease prevention strategy, which also helped with reducing student absenteeism or suspensions.

As well, in partnership with Toronto Public Health, the in-school clinic NP and nurses from this municipal agency organized a specific "flu clinic" for students and their families. This community health initiative also demonstrated the efficient and multipurpose use of WPJPS clinic space.

Communicable Disease Management

Considering the susceptibility of children to communicable diseases, identification and management of contagious illnesses was another concern for the WPJPS school community. Educators and clinic staff recognized the presence of communicable diseases among students based on their symptomology. For instance, students with lice presented with an itchy scalp, whereas redness, swelling and itchiness of small, raised and aligned dermal bumps were common among those experiencing a bed bug infection at home.

When communicable diseases surfaced at the WPJPS clinic, the NP spoke with and provided educational materials to the parent and caregiver regarding the disease itself, infection control measures, and disease management options. The NP also provided the child's teacher with similar information in an effort to minimize potential misunderstandings regarding the degree of severity and contagion of the student's condition.

Routine Diagnostic Assessments

Hearing and vision testing are the most common diagnostic measures the MSIC employ for early recognition and diagnosis of issues that could impede children's success in the classroom. The WPJPS in-school clinic collaborated with this MSIC Gift of Sight and Sound Program to provide follow-up for students with hearing and vision exceptionalities. For example, some students were referred to an Ear Nose and Throat (ENT) Specialist in the Scarborough General Hospital for further consultation.

> *[Based on] the hearing test […] whatever abnormalities come up, [TDSB] refer [students] to [the WPJPS in-school clinic], for [clinic staff] to do further assessments, whether it's cleaning out [students'] ear irrigation because they've got so much wax or whatever. Half the time, there is no wax at all but it's a problem with the child's speech delay or something, that the parents don't actually recognize or they don't even know.* (Nurse Practitioner)

The Clinic Coordinators supported students and their families with obtaining affordable eye glasses. In another case, one male student visited the WPJPS clinic with vision troubles and was referred to the on-site Paediatrician. He received immediate attention and was referred to an ophthalmologist for ocular surgery, which was completed in a timely fashion at the Hospital for Sick Children:

> *He needed surgery for his eyes and so, [the Paediatrician] referred him to, I think, Sick Kids it was, for surgery […] They got the health card [in time so] they didn't have to worry about the cost of the surgery. I know recently the mom came and she said he already had the surgery and [they] were very thankful because it saved [them] a lot of time. Otherwise, [they] would've had to wait some moments and then you know, go through the whole process. It had saved [them] a few months' time.* (Clinic Coordinator)

Injury Treatment

Schoolyard injuries were common among young children. The NP described one example where a young female student visited the WPJPS in-school clinic for an injury she sustained while playing soccer. After acute nausea and vomiting, the NP arranged for a WPJPS school teacher to transport her to the local hospital Emergency Room to seek urgent medical attention for the concussion she was experiencing.

Psychological Health Services

Considering the incidence of psychological health issues in this population, the diversity in symptom manifestation was also noticeable. Typically, teachers initially detected behavioural

disorders in their students as they had difficulty concentrating in the classroom or demonstrated aggressive behaviour and inappropriately high energy levels. The NP also explained how behavioural concerns were exhibited through impulsivity, explosive actions, disobedience, sleeplessness, constant crying, and an aversion to school. In these cases, the Paediatrician often prescribed suitable medication to help alleviate these symptoms.

> *First time [the patient] was there, she was like screaming. I had to step out for a couple of times. I couldn't bear it. She was screaming the whole time […] She was pulling […] everything off the walls. She was really difficult.* (Clinic Coordinator)

Regarding emotional and mental health, the NP and School Principal expressed their concern as some students were less social and exhibited depressive states. They believed that these students would benefit from more intensive psychological services (i.e., psychiatric care).

Familial Health Needs

The WPJPS medical team became well-acquainted with families as they accompanied their children to clinic appointments. From doing so, these health care professionals understood the circumstances and barriers family members encountered and identified their multidisciplinary needs (pp. 8, 11-13). For instance, WPJPS clinic staff learned that most newcomer families did not have access to primary health care. Through the MSPHI, while children received appropriate care, their parents and caregivers were connected with the SCHC and relevant resources and services:

> *This is an immigrant base thing so they're coming in and […] the families actually don't have access to primary health care so when we see the kids, then we're able to realize that, oh the whole family needs medical providers, health care providers. So then, we're able to send them to [the Scarborough Community Health Centre], refer them to our social worker, who then does an assessment and then provides a healthcare provider for the parents while we also look after the kids. So at the beginning of the school year, we have a lot of, such family groups for whom we have to cater.* (Nurse Practitioner)

Furthermore, medical professionals at the in-school clinic observed that some families found raising their children to be quite challenging and sought health-related and personal support from the WPJPS clinic:

> *I do my best. I feel like a lot of it is the parenting style. Parents don't know how to parent. They don't know how to use appropriate discipline. They're completely overwhelmed. They don't have enough money and they come to the*

clinic and you know, 'Fix them,' which obviously we can help but we can't, I don't have a magic wand to fix everybody but that's what the parents want from us. (Pediatrician)

The NP and other clinic staff offered brief intervention where possible to these parents and caregivers. One father benefited from the parenting strategies he garnered from his visits to the WPJPS clinic:

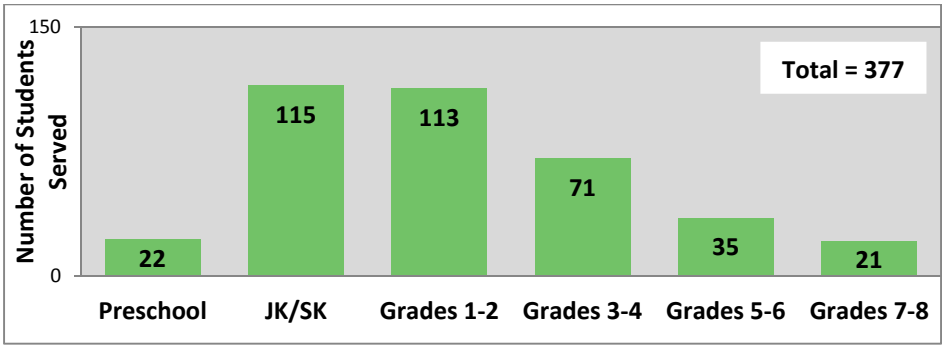
To me, my boy's behaviour, I am really concerned about that, you know. So when that came out, I was so happy because I needed help. And I would say, until now, we got so much help. [The clinic staff] showed me steps, how to talk to [my child], when [my child] is talking I don't have to interrupt him, I have to let him finish what he is saying. (Male Parent)

WPJPS CLINIC'S RESULTS AND BENEFITS

Clinic's Results

According to the clinic staff, the majority of their student patients were younger children. The records in the MSPHI database show that of the nearly 400 appointments served, two-thirds were for children from the primary grades (Kindergarten to Grade 2) along with siblings and pre-schoolers from the PFLCs (see Figure 5). The small fraction of older students, Grades 5 to 8 in particular, may be attributed to their hesitation in discussing sensitive physical and psychological health issues in the presence of their parents and caregivers, who were legally required to attend medical appointments with them at this elementary school MSPHI clinic.

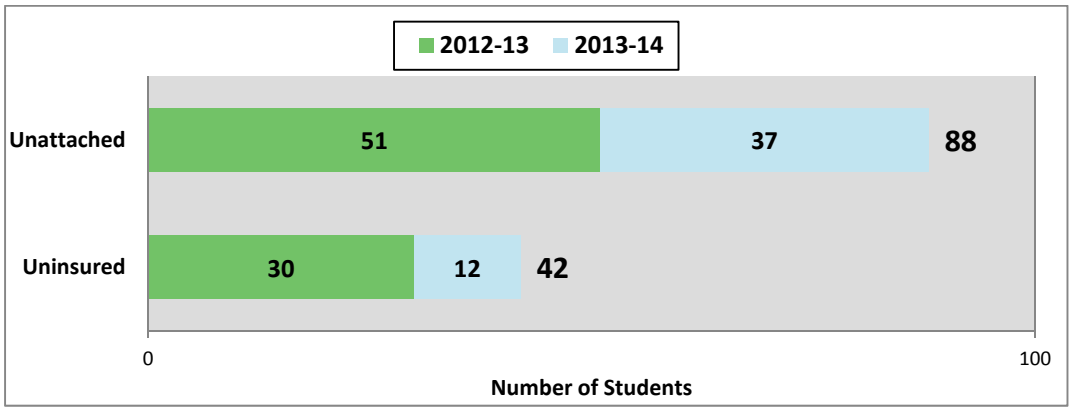
Figure 5: Number of Students Served per Grade at WPJPS Clinic (2012-13 and 2013-14)



Aside from the number of appointments served, it should be noted that over the two years of operation, the WPJSP clinic was able to offer primary health care to a total of 88 "unattached" children (those without family doctors) and 42 "uninsured" students (who had no provincial health care coverage) (see Figure 6). Evidently, this MSPHI clinic site alleviated barriers to

accessing health care for "unattached" and "uninsured" children, most of whom were from newcomer families in the community.

Figure 6: "Unattached" and "Uninsured" Children Served at WPJPS Clinic



Clinic's Benefits

From interviewing different stakeholder groups, it was clear that the WPJPS in-school clinic had a profound effect on:

1. Students
2. Families and the community
3. School community

Benefits for Students

Receiving medical attention in a timely fashion was invaluable to students at WPJPS and its feeder schools. The in-school health clinic had a positive impact on this population's (1) health and well-being, and (2) performance in school.

Health and Well-being

Physical Health

School and clinic staff discussed the positive health outcomes that Willow Park Jr PS's in-school health clinic yielded. The provision of immunization and vaccination services at the WPJPS clinic satisfied provincially mandated immunization standards and protected children's physical health and the community at large, in the event of a communicable disease outbreak.

> *At least, the thing that I know for sure that we've impacted would be that they're healthier with the immunizations, keeping them on top of the immunizations alone. I think it's got to have an impact.* (Nurse Practitioner)

Other benefits to physical health from visiting the WPJPS clinic included receiving hearing and vision follow-up, managing and controlling contagious illnesses (e.g., lice, bed bugs, chicken

pox, and ringworm), treating injuries, and reducing the incidence of tooth decay. This greatly improved children's classroom engagement as their physical health concerns were lessened or resolved.

Psychological Health

Interview comments from different stakeholders also revealed that students from WPJPS and feeder schools felt better psychologically since they were diagnosed with and treated for various behavioural, developmental, and emotional disorders at the in-school clinic. School staff, health care professionals, and parents noted in their respective focus groups that it was because of the clinic that children with behavioural issues were formally diagnosed. The TDSB Psychologist stated:

> *There's no doubt that there are many students who would not have any sort of pediatric assessment, were it not for this clinic.* (TDSB Psychologist)

This formal identification and diagnosis provided a sense of relief to families as their children received an "early assessment, early diagnosis, and early intervention". This initiated a chain of events that prompted medical intervention. Intervention for this young population ranged from suitable medication to accessing appropriate community services, such as social work, to support parents in caring for their child. As seen below, a Clinic Coordinator described the progress a seven year old child made from receiving treatment at the WPJPS clinic:

> *Once [the Paediatrician] put [the child] on medication, her behaviour changed… Their own social esteem goes up. Not all the kids are avoiding them […] Everybody can note that she's behaving better.* (Clinic Coordinator)

Similarly, one father noticed a significant improvement in his son's behaviour in school as a result of medical intervention from the WPJPS clinic. Destructive, disruptive, and aggressive behaviour no longer interfered with classroom and school yard activities.

Performance in School

The academic-related improvements students demonstrated as a result of seeking health care from the WPJPS clinic were apparent. Improved performance was observed with respect to:

- School engagement
- Academic skills
- Academic achievement

School Engagement

Throughout the focus group interviews, it was repeatedly discussed that students who sought health care at the WPJPS clinic were more engaged than before. To be specific, the Director of the SCHC and the TDSB Psychologist noticed a reduction in student absenteeism and

suspensions. This was primarily the result of clinic staff facilitating up-to-date and complete immunization records for their students. The WPJPS Paediatrician also testified that the students she treated for behavioural disorders, such as ADHD, began more meaningful engagement at school after commencing medication that she prescribed.

Academic Skills

With school staff detecting academic delays in their students, some learning and communication difficulties were improved through medical investigation at the WPJPS in-school clinic. For example, a three year old child from the WPJPS PFLC visited the clinic with incomprehensible speech. The NP asked her mother if she could understand her daughter's garbled words and the mother responded that she "knew what she meant" and that her two older children exhibited similar speech impediments, which naturally disappeared. From there, the NP made the necessary referrals to audiology specialists who formally confirmed communication exceptionalities in this young child.

A father described the progress his young son, who had been diagnosed with a learning exceptionality, made after visiting the WPJPS clinic and receiving numerous resources:

> *My other boy was born premature. And the doctor already told us he would have trouble with learning and writing. And I kind of saw that. It was hard for him to hold the pencil. But now, he can write, he has started to read, so I would say that is a great achievement.* (Male Parent)

He noted these impressive accomplishments were also acknowledged by the child's teacher:

> *From time to time I would have to meet with [the teacher] about how my boy and my girl is doing, either in learning or behavioural. I just met the teacher, probably two months ago. […I told her] I think I see improvements in my boy, now he can read, he can write. Then [the teacher] said to me, "You know what? I also wanted to meet you and tell you that."* (Male Parent)

Academic Achievement

Multiple stories of academic readiness and success in WPJPS clinic patients were shared during focus group interviews. The Paediatrician described the improvements in school routine, homework completion, and concentration in a seven year old girl who was prescribed ADHD medication at the WPJPS clinic:

> *[This] mom who has a 7 year old, a 9 year old, a 4 year old, twin babies, and we put the 7 year old on [ADHD] medications and now she can focus. The mornings are a lot easier. It's not a struggle to get her off to school in the morning. Homework isn't so difficult. The teachers are saying nice things about her.* (Paediatrician)

Another parent shared the tangible improvements in his son's academic performance with the WPJPS Paediatrician after complying with her medical orders:

> *He's in Grade 8, getting ready for high school and he had been diagnosed with ADHD when he was younger but [the] parents didn't really pay any attention to it. They didn't think it was a right diagnosis and they came to the clinic in a crisis. […] we diagnosed him with ADHD and put him on medications […] and then I saw [the family] for follow-up and dad is like, 'The reason that he's passing is you. You're the reason so without the school clinic, he would not be going to Grade 9. He would not have been, he was getting 40s, 50s and now he's getting 70s'.* (Paediatrician)

Similar findings have been demonstrated in the United States, whereby school-based health clinics were on the front line to address students' diverse health needs (such as poor nutrition, self-harm, and substance use) to ensure their readiness to learn and succeed (Horton & Lima-Negron, 2009).

Benefits for Families and the Community

While school children were the primary beneficiaries of the WPJPS MSPHI, the in-school clinic also had a positive rippling effect on families in the community. From utilizing this primary health care site for their children, family members and the community benefited from:

- Reduced financial barriers associated with health care
- Promotion of their own health and well-being
- Improved health literacy and advocacy
- Reduced mental health stigma in the community

Reduced Financial Barriers Associated with Health Care

The WPJPS in-school clinic offered free health care to children regardless of their status (i.e., immigrant, refugee, non-status). Instead of resorting to pay-per-service in the community, parents and caregivers were relieved to know that accessible health care was within their reach:

> *When parents learn about [the WPJPS clinic], they seem to be very pleased to know that we have it.* (Principal)

For example, a six year old boy at WPJPS was misdiagnosed with behavioural issues. Health care professionals at WPJPS identified that he actually had hearing challenges and recommended further assessment at the Hospital for Sick Children. This child, who was ineligible for OHIP, required an audiology-related transplant. The cost for the implanted device and procedure was negotiated and covered by the SCHC. As a result, this child received the necessary and accessible medical and academic support to continue his schooling.

The convenient in-school location of the WPJPS clinic also financially benefitted families from host and feeder schools, as it eliminated the need to allocate time and money for transportation to receive health care. This was particularly appreciated, and for many critical, since many parents did not have a vehicle and relied on public transit.

Promotion of Their Own Health and Well-being

Stress and fatigue were common among parents and caregivers who had to balance competing priorities and care for children with health needs. The WPJPS medical team observed a boost in psychological well-being among parents and caregivers following the diagnosis and treatment of their child at the in-school clinic. The Clinic Coordinator and the Paediatrician believed that receiving timely and adequate medical attention made "a huge difference" for families. Parents were more relaxed and were able to attend to their other children.

> *I've seen several kids who I have diagnosed with ADHD and we have started on medications and the change that that makes for the family is huge […] When you have that ADHD better under control, then the whole family unit works a lot better. We've got a lot of really nice feedback about that specifically.*
> (Pediatrician)

Improved health and well-being among other family members also occurred as a result of visiting the WPJPS in-school clinic. Namely, from seeking health care services for their child, familial circumstances and health needs were discovered. A father of three revealed that he initially visited the WPJPS health clinic for vaccinations one of his sons required. After describing the poor behaviour of another child to the medical team, they encouraged him to return for a consultation with the on-site Paediatrician.

Furthermore, WPJPS clinic staff also identified parents and caregivers with neglected health needs. In these cases, the NP and Clinic Coordinator directed them to the services and resources available at the Scarborough Centre for Health Communities (SCHC) which was mandated to provide primary health care irrespective of status. The clinic staff at WPJPS provided families who relied on public transit with bus tokens, in order to reduce potential barriers to attending their appointments at the SCHC. At the SCHC, families received services such as chiropody, counselling, domestic violence care, diabetes and prenatal education, supportive housing, and clothing, furniture and food banks. Therefore, the WPJPS clinic served as a conduit for familial health and well-being. Not only were the health needs of students tended to, but their families were connected to appropriate agencies.

Improved Health Literacy, Behaviour, and Advocacy

Families are an integral element of a child's social network and the protagonist for their healthy development. Parents and caregivers can positively or negatively intervene in this process through their knowledge, behaviour, and advocacy. Many newcomer parents and caregivers require more information and awareness to seek professional help when needed for their children. In the Willow Park community, families who were referred to the WPJPS health clinic were provided with proper health care information to restore and promote wellness among their families. For instance, one father described that the WPJPS medical team was very thorough in clarifying his son's food allergy. Another parent expressed her gratitude for the learning opportunity the WPJPS clinic provided her:

> *[The clinic] has helped me, really, to find stuff that I would never have known about or nobody would have ever told me about […It is unfortunate] because maybe I could have accessed those [resources and services] earlier and not when he's four because when they reach a certain age it's a harder gap [to fill] […The clinic] has helped me to learn and understand.* (Female Parent)

As summed up by the Clinic Coordinator, through the school-clinic partnership, parents and caregivers were referred to the clinic, informed of their child's health status, and provided a better understanding of the diagnosis, allowing families to better support their children.

The behaviours modeled by family members have a profound effect on their children. For instance, parent-child connectedness is a crucial protective factor for their child's health and development (WHO, 2007). From her firsthand experience, the WPJPS NP alluded to the effect of poor parenting on children's behaviour:

> *[Parents] will come and think [their child has] ADHD or whatever but most of them are behavioural, you know, parental skills, that sort of thing.* (Nurse Practitioner)

Connectedness can be established through a "positive, stable, emotional bond" that is both loving and accepting (WHO, 2007). For overworked parents and caregivers struggling to adapt to a new country, managing their children's health, and persistently nurturing this relationship can be difficult. Understanding that many adults in the community faced similar circumstances, WPJPS clinic staff sought to remedy these conditions by providing parenting strategies and guidance:

> *[The clinic] helped me to talk to [my son], how to communicate with him […] how to make him feel [understood].* (Female Parent)

It was evident in the parent and caregiver focus group that the WPJPS clinic had imparted skills and ideas to them to ensure their better understanding of their children's needs and emotions.

Finally, the WPJPS in-school clinic fostered health-related advocacy and a greater sense of accountability among parents and caregivers in this community. Newcomers were initially hesitant and confused about why their children were referred to medical professionals at the WPJPS clinic. The NP described that education was key to encouraging families to advocate for their children's welfare. As parents became more aware of the provincial health care system, they were able to make informed and proactive decisions in the best interest of their child. For instance, after one mother learned to manage her daughter's behavioural disorder, she became concerned for her other child and took the initiative to seek help. This was testament to the empowering impact of the WPJPS clinic on parents and caregivers.

Reduced Mental Health Stigma in the Community

Health care professionals at the WPJPS in-school clinic created awareness of psychological health issues and contributed to reducing the associated stigma in the community. The WPJPS Paediatrician reported that parents and caregivers initially visited the clinic in denial, rejecting the idea that their child had a psychological issue. Through education and treatment offered by the WPJPS medical team, parents and caregivers became more accommodating and supportive of their diagnosed child. By engaging in compassionate and informative discussions with families, they became more understanding and aware of their child's psychological needs:

> *We can make a big difference and break down the barriers and break down the stigma associated with it.* (Paediatrician)

The reduction in mental health stigma manifested in a few ways. First, parents and caregivers were more inclined to seek professional help for their other children who might have been experiencing similar symptoms or behaviour patterns. Second, the Director of the SCHC mentioned that positive experiences and success stories associated with mental wellness were shared with other families in the community. By doing so, mental health awareness was promoted and families were encouraged to access relevant services at the WPJPS clinic.

Benefits for the School Community

From interviewing different stakeholder groups, it was clear that the WPJPS clinic had also produced favourable outcomes for the school community at large:

- Providing medical expertise
- Supporting the work of school staff
- Supplementing school board resources
- Promoting the TDSB Children and Youth Mental Health and Well-Being Strategic Plan

Providing Medical Expertise

Considering the wide range of physical and psychological health needs of students from WPJPS and its feeder schools, qualified medical personnel were required. As such, the in-school clinic was advantageous to educators. In one case, educators had a general idea of guidelines and protocols related to managing a lice outbreak at school; however, they did not have the training or time to develop informational letters for the affected child, their family, and classmates. The NP described that during these situations, she provided routine head lice screening, teacher and parent education, and was available to address any questions or concerns posed by the school community.

Although school administrators and teachers often observed and were genuinely concerned about afflicted students, they were not equipped nor supposed to diagnose, treat, and counsel students with health-related matters.

> *[The School Staff] realize that we're here and they realize that we're a resource for the school […] So if there's any problem that they have, they will quickly come.* (Nurse Practitioner)

Consequently, when school staff recognized physical or psychological health concerns, they prompted parents and their children to schedule an appointment at the WPJPS in-school health clinic. In the event of acute medical issues, such as school yard injuries and nausea, teachers accompanied the student to the WPJPS clinic to seek timely treatment from the NP during clinic hours.

Supporting the Work of School Staff

Interestingly, access to an in- school health clinic also supported teachers both professionally and psychologically. With students' physical and psychological health needs being looked after, students were healthier and better positioned to learn. In turn, teachers were in a better position to manage their classes and to "focus their energy on education" (Horton & Lima-Negron, 2009). As commented by the WPJPC Paediatrician who received positive feedback from a school administrator about the impact of supporting a student with a behavioural disorder made on school staff:

> *We diagnosed [a male student] with ADHD and put him on medications and then, within a week of starting the medication, the principal called the school clinic and said, 'You have changed him. Thank you.'* (Paediatrician)

Moreover, the immunization services provided in collaboration with the WPJPS clinic and Toronto Public Health ensured that children were up-to-date with their immunization record which minimized absenteeism and suspensions.

The clinic was also advantageous to the psychological well-being of educators. Specifically, the TDSB Social Worker suggested that by having an accessible and nearby location for students to receive much needed medical attention, the stress levels of educators were appeased:

> *There's a little bit of less anxiety amongst school personnel to know that there's a place that we can refer families [when] they have nowhere else to go. So I think, for staff here, they just feel, oh, we've got a place to send families to.* (TDSB Social Worker)

Supplementing School Board Resources

The in-school clinic at WPJPS also supplemented the resources and services provided by the TDSB. The professional support services, such as psychological consultants and social workers, made available by the school board were limited, as these individuals, who were relatively small in number, were required to serve a family of schools. The family of schools to which WPJPS belonged had a total of 18 schools with nearly 7,500 students. As a result, psychological consultants and social workers were spread thin and were typically exhausted with administrative responsibilities, which diminished the number of students they could directly care for. Thus, the in-school WPJPS clinic was instrumental in helping to bridge the gap in demand for TDSB student support services.

Meeting the TDSB Children and Youth Mental Health and Well-Being Strategic Plan

The TDSB's strategic plan for Children and Youth Mental Health and Well-Being, which was released in January 2014, strives to create a culture where mental health and well-being are integrated into every aspect of every student's school experience. It entails the board's commitment to providing school staff with professional development and training on the foundations of mental health; establishing "Mental Health Teams" that were responsible for facilitating student mental health and well-being in their schools; and expanding and strengthening mental health partnerships to better meet system needs by enhancing supports for students and staff.

Although the MSPHI was established before the release of the TDSB mental health strategy, in-school health clinics, such the one at WPJPS, has in many ways worked towards this strategy by diminishing the stigma associated with mental illness within the WPJPS and feeder school community, and by mitigating these concerns through the direct services offered by this MSPHI partnership between school and local health agencies. As well, teachers and senior administrators routinely encouraged parents and caregivers to seek intervention for their children's psychological concerns at the WPJPS clinic.

FACTORS FOR WPJPS CLINIC EFFECTIVENESS

A thorough analysis of all the qualitative data collected thus far indicates the following factors as crucial in ensuring the effectiveness of the WPJPS in-school health clinic for underserved students and families:

- Within school location
- Primary health care approach
- Caring characteristics of clinic staff
- Collaboration with local health agencies

Within School Location

With the health clinic located within a school setting, the MSPHI (1) enhanced accessibility and convenience for students and parents to obtain proper medical attention, and (2) facilitated collaborative efforts of school staff to refer students for timely health care – a prerequisite for school success.

Enhanced Accessibility and Convenience

As discussed earlier (pp. 11-13), for families of WPJPS and its feeder schools, multiple factors compromised their health and ability to receive adequate medical attention. For instance, financial hardship, limited time, and dependence on public transit were some of the barriers explaining why many families in the community seldom visited family doctors or external walk-in clinics. The school environment, however, is the ideal access point for children and their families experiencing such barriers (Freeman, Sgro, & Mamdani, 2013). Schools are easy to get to and are familiar settings for parents. With the opening of the WPJPS in-school clinic, parents and caregivers reported feeling comfortable visiting the WPJPS clinic to seek medical attention for their children, since it was conveniently located either where their children attended school or a few blocks away from their children's feeder schools. Seeking health-related services at the WPJPS clinic did not require the children to miss school, or additional time and money on behalf of the family, in comparison to visiting community-based medical professionals. The advantages associated with the in-school clinic were described by the WPJPS Principal:

> *[The WPJPS clinic is] giving them immediate accessibility. […] When we have been able to refer parents to the clinic through the school's support team meeting, most parents will go because it is in the school and parents drop off their students and appointments are right there. […] They have to make appointments, of course, but they're dropping off the student in the same place they're going to be having the appointment so it makes life easier.* (Principal)

Considering the high proportion of newcomers and families that primarily spoke a language besides English in the WPJPS community, navigating the health care system and other services, such as walk-in clinics, was difficult due to the language barrier. The WPJPS Clinic Coordinators were multi-lingual, and as such, could comfortably communicate with parents whose first language was not English. Parents and caregivers understood health care providers' instructions with the Clinic Coordinator's language support.

The Director of the SCHC explained that the in-school clinic at WPJPS fit within their mandate to provide accessible and comprehensive services in diverse settings:

> *I think [the WPJPS clinic] fits within the work that we do within a [Community Health Centre] CHC and I don't think the CHC model really isn't having it in one place. I mean, we provide our services to our client population, this being one of them, and the whole idea is really to bring the services to whoever they need it most so based on our different populations. So [the NP] actually does a lot of outreach and that's [what] we want to lean more towards, rather than having it all housed in one place because we want it from an accessibility perspective, right? […] There is a big gap and it's the early intervention [during] the formative years [that] can make such a big difference with kids […] It makes sense to be able to support those kids 'cause it's part of what we do within our CHC, whether it's on-site or off-site.* (Director of SCHC)

Facilitated Collaborative Efforts of School Staff

The provision of health services and education under one roof provided an opportune environment to facilitate a collaborative partnership between school and clinic staff to support student success. To illustrate, administrators and teachers were well-positioned to identify children's exceptionalities or abnormalities in school. This knowledge was brought to the attention of parents, caregivers, and clinic staff which fostered uptake and utilization of the in-school health clinic. One father from a feeder school described that the TDSB Social Worker recommended that he seek medical attention for his child at the WPJPS clinic as opposed to external walk-in clinics, as his child would receive more timely and thorough care.

WPJPS and feeder schools were also indispensable in providing clinic staff with critical information. Through the school office, the WPJPS Clinic Coordinator obtained the contact information of and connected with students who needed immunization updates. Operating within the school setting, the FP and Paediatrician could work more collaboratively with educators to identify the educational needs of their student patients. This sharing of student information allowed clinic staff to better understand contextual factors and students' academic progress to make informed health-related decisions.

Primary Health Care Approach

The extensive impact of the WPJPS in-school clinic was also facilitated by the primary health care model and approach, as executed by the medical professional team. The following ingredients were acknowledged by stakeholders to be critical to clinic effectiveness:

- Student-centered focus
- Holistic mindfulness
- Inter-professional support

Student-centered Focus

Patient-centered care refers to intentionally engaging student patients and their families in every aspect of their health care, such as decision-making, to yield outcomes that are meaningful and of value to the student. This respectful and informed approach to health care was exhibited by WPJPS clinic staff through a comprehensive appreciation for contextual factors and an understanding of the health-related needs of the students, families, and community at large. For instance, recognizing the high settlement rates in the community, WPJPS health care professionals collaborated with school staff and the Toronto Public Health to ensure that children from WPJPS and feeder schools had adequate immunization records in a timely manner.

> *We had a special immunization day because this year, the Toronto Public Health centre sent out letters to all the students who didn't have their immunization records and so we had quite a few parents who actually came to the clinic to get immunized.* (Clinic Coordinator)

Furthermore, the NP created educational materials for the schools depending on their episodic health needs (e.g., lice, ringworm). These efforts played an important role in targeted health promotion and disease prevention for the children in the community.

The WPJPC student-centered focus also involved the advocacy efforts of clinic staff. Many families were not aware of the various resources available to them and how to navigate the health care system for their children. As such, the Clinic Coordinator communicated to families in their native tongue to improve their knowledge and understanding of local and provincial health-related services. For children who required eye glasses but faced financial hardship, he connected them with a free vision glasses program. Similarly, the medical team understood the connection between parent/caregiver and child health. Hence, for families who did not have or could not afford primary health care, clinic staff directed them to seek treatment at the SCHC. By engaging parents and caregivers in their children's health, they were proactive in seeking medical attention for their own health needs and those of other family members.

Holistic Mindfulness

A holistic approach to health care, otherwise known as the biopsychosocial model, upholds that health and well-being are the products of the multidisciplinary interaction between biological, psychological, and social (including economics, environment, cultural) factors. Therefore, the whole person is respected and engaged.

WPJPS clinic staff exercised holistic mindfulness in their primary health care practice. By building rapport with family members, WPJPS health care professionals employed a probing technique, whereby they gradually extracted, like peeling away layers of an onion, relevant information about their patient's physical and psychological health and academic, sociocultural and environmental factors.

> *Our [approach to health] is much more holistic. We look at the social determinants of health, not just from a, you know, physical or a social or mental.* (Director of SCHC)

A parent described during the focus group interviews that WPJPC staff "didn't just give needles"; they tended to physical ailments, like family practices and walk-in clinics in the community, but they thoroughly interacted with patients and their families:

> *[WPJPS clinic staff] take their time to discuss with you, step by step, what's going on. They are more in tune with [the patient's health].* (Female parent)

Another father expressed his appreciation for the inquisitive diagnostic method practiced at WPJPS, compared to family doctors and walk-in clinics in the community:

> *[External] doctors don't really concentrate as they do [in the WPJPS clinic] on developmental issues and deficits and engages [parents] on special requirements. Doctors, I feel, whenever you go to the [walk-in] clinic, all they do is "What sickness do you have?" And you get a prescription.* (Male Parent)

By way of illustration, a Grade 7 student was referred to the WPJPC in-school clinic because she was constantly having fainting spells. Since settling with her parents in Canada a few years ago, she visited walk-in clinics but her health concerns were not addressed. From the medical attention she received at the WPJPC clinic and their referral to a cardiologist, her family learned that she had a heart murmur due to a hole in her heart. This young girl was referred for her heart surgery at the Hospital for Sick Children. Clearly, the thorough and probing approach to health care at WPJPS had beneficial life-altering repercussions for patients.

WPJPC clinic staff were able to practice this "onion" technique because they structured their scheduling patterns to permit it. The NP described that the nature of her practice necessitated an adequate amount of time to conduct thorough assessments with each patient:

> *I would see [patients] for at least 30 minutes because I'd do the history taking and all that stuff, […] By the time I'm done, at the end of the 30 minutes, I have all the information that I need, you know, for my assessments, to come up with some kind of a diagnosis […] At the same time, to explain everything that they need to know so that going forward, they're comfortable and understand why, you know, they are where they are.* (Nurse Practitioner)

Similarly, the WPJPS Paediatrician also allocated an appropriate amount of time to see her patients, spending one hour for new patients and 30 minutes for follow-up visits. In comparison to the rushed diagnoses (i.e., taking several minutes) of the medical model generally practiced at family doctor's offices and walk-in clinics, the primary health care model at WPJPS provided comprehensive and individualized attention to patients.

Inter-professional Support

As previously described, primary health care was delivered at the WPJPS in-school clinic by a NP, FP, and Paediatrician. This medical team was supported by the multilingual Clinic Coordinators. Overall, each member of the team possessed unique but complementary skills and areas of expertise for the optimal functioning of the WPJPS clinic. The efficiency of the primary health care model at the WPJPS clinic fostered continuative care for patients. Initially, patients were seen by the NP and FP and if necessary, a referral to the on-site Paediatrician was made. This process allowed for effective communication between medical professionals, the family, and the school with the provision of health-related services in an organized and timely manner:

> *I have been pleasantly surprised by the pediatric clinic's ongoing follow-up of a couple of students that I have known who have been undergoing a trial of medication for ADHD. I've been really impressed by it and I think that's something that should be even pursued even more thoroughly. I think there's been better follow-up at this clinic than perhaps, than some of the, [external clinics and hospitals].* (TDSB Social Worker)

Consequently, patients benefitted from this "wrap-around" response in that they received physical and psychological health care, counselling, prescriptions, and immunizations on-site. This fluid, coordinated, and continuative medical attention from different professionals in one central location undoubtedly contributed to the WPJPC clinic effectiveness.

Caring Characteristics of Clinic Staff

The success and positive effects of the WPJPS clinic were also attributed to the genuine, caring and trusting nature of WPJPS clinic staff. Parents and caregivers described that clinic staff offered attentive care to their children's health and well-being and did so in a comforting manner:

> *[The WPJPS clinic] is more comfortable […The WPJPS clinic staff] have time for you to express yourself and what is really bother your kid and in detail.* (Male Parent)

Clinic staff were also accommodating. They recognized that very few families had previous experience with the Ontario health care system, and they played an important role in facilitating that process – for example, clarifying doubts and ensuring the right message was conveyed. Similarly, they acknowledged that some families had difficulties communicating in English. Therefore, the multilingual Clinic Coordinator would reduce language barriers by conversing to parents and caregivers in their native tongue, such as Tamil and Hindi.

Commitment and accessibility were additional characteristics that WPJPS health care professionals portrayed to their stakeholders. For instance, the Clinic Coordinator provided families with his clinic cell phone number and was available outside of clinic hours, as described below:

> *I would say 24 hours communication because [the Clinic Coordinator] carries his cellphone, always with him so parents will call him after 6, 8, 9. It's 24 hours communication.* (Clinic Coordinator)

The Clinic Coordinator also arranged to meet with parents and caregivers outside of the typical WPJPS clinic schedule on an informational basis and to facilitate additional support such as dispensing affordable glasses. This demonstrates the unwavering commitment and attentiveness of clinic staff to their roles serving the WPJPS students and community.

Furthermore, clinic staff strived to create an inclusive health care environment by building trust and rapport with their stakeholders. Specifically, the NP and Clinic Coordinator described how valuable developing relationships with parents and caregivers were in obtaining their confidence and consent to share basic information about their child's health with educators. Parents and caregivers were at ease in utilizing WPJPS health services:

> *There's a couple of things that we do differently that I think is awesome for this clinic. The first is, it's within the school so it's a safe place to come. We're not very judgmental. We'll see all comers.* (Paediatrician)

Trust and rapport with patients' parents and caregivers also had implications for compliance with medical orders and referrals to external specialists:

> *[The WPJPS clinic] is a safe place where people are already comfortable with and so [parents and caregivers are] more willingness to go to that referral and […] implement the treatment plan.* (Director of SCHC)

Collaboration with Local Health Agencies

Given that most newcomers are not aware of the existence of or how to navigate various community infrastructures, the WPJPS health care professionals were ideally situated to draw from the network of resources and services from the SCHC and St. Joseph's Hospital. The WPJPS in-school health clinic was a satellite site of the SCHC. The Director of the SCHC described his organization as diverse and interdisciplinary:

> *Within our health centre, […]we have doctors, we have a social worker, we have a dietician and then we have, within our organization, you know, settlement workers, […] we have youth workers, we have all kinds of programming that we can link clients to, just within our services alone too. So it's much more holistic, I would say, and it's much more of a network of services that we've already built.* (Director of SCHC)

For example, parents and caregivers of children with developmental needs were encouraged to seek support from Holland Bloorview and CITY KIDS, a specialized network of agencies for children with special needs and their families. Consequently, the clinic staff connected patients with additional resources and support.

> *[There are] a lot of resources out there. […] People don't know about them. […] So whichever is faster, whichever is best for the child, we would connect [families] with that.* (Clinic Coordinator)

Moreover, the NP and FP guaranteed continuative care on other days of the week and during summer months by seeing WPJPS clinic patients at the SCHC, where they worked outside of regular clinic hours. Similarly, the Paediatrician ensured continuative care by tending to students at St. Joseph's Hospital.

As clinic staff came to realize that their student patients' parents or siblings did not have accessible health care, they collaborated with professionals at the SCHC and the broader community to extend holistic health care to other family members:

> *[At] the beginning of the school year, we have a lot of new people coming into the school […] This is [a settlement issue] So they're coming in and […] families actually don't have access to primary health care so when we see the kids, then we're able to realize that, oh the whole family needs medical providers, health care providers. So then, we're able to send them to our SCHC, refer them to our social worker, who then does an assessment and then provides a healthcare provider for the parents while [the WPJPS clinic] look after the kids.* (Nurse Practitioner)

This collaborative orientation exhibited by a united inter-professional care was crucial to the WPJPS clinic success. By breaking silos that typically exist in the provision of education and health care, various stakeholders facilitated student success in partnership with their families.

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CASE STUDY 5: IN-SCHOOL HEALTH CLINIC AT NORTH ALBION COLLEGIATE INSTITUTE (NACI)

This Case Study 5 is an extension of Case Study 3 (in the Phase II Evaluation) on the only secondary-school health clinic in the TDSB. This MSPHI clinic is located at North Albion Collegiate Institution (NACI) in the Rexdale-Kipling area (see Figure 7).

Figure 7: Location of North Albion Collegiate Institute (NACI)

The focus of this case study is to examine in detail "why" and "how" the NACI in-school health clinic has been so important and impactful for adolescent students and the school, especially in addressing mental health issues which have been a prevalent concern among secondary school populations. A series of focus group interviews were conducted with different stakeholder groups including the students themselves, school staff, clinic staff, and representatives from associated health agencies – Rexdale Community Health Centre (RCHC) and the Toronto Public Health. To synthesize the large volume of qualitative data thus collected, the following framework was used to analyze and present the findings.

- Context – in which the clinic was operated
  - Environmental circumstances facing the community
  - Student's health-related concerns
  - Barriers to accessing health care

- NACI clinic and services
  - Delivery model
  - Promotional and referral efforts
  - Types of health care services offered

- Clinic's results and benefits
  - Clinic's results – appointments served
  - Clinic's multiple benefits for:
    - students
    - school community

- Factors for WPJPS clinic's effectiveness
  - Within school location
  - Welcoming and safe environment to ensure trust and confidentiality
  - Approaches to health care
  - Characteristics of the service deliverers
  - Partnerships

CONTEXT

Environmental Circumstances

Challenging family backgrounds and circumstances often compromise student success and well-being. At NACI, large proportions of its student population were of immigrant (first- or second-generation), refugee, or non-status background and were afflicted with poverty-related difficulties. Based on the 2011 TDSB's Student Census, nearly half (48%) of NACI students were immigrants born outside of Canada, and almost all NACI parents (95%) emigrated from other countries. These proportions were significantly higher than those of the general population - 36% and 72% respectively (see Table 2). At the same time, over two-thirds (68%) of the NACI students were from families of lower socio-economic background.

Table 2: Demographic Characteristics of NACI Student Population

Family and Community Background	NACI (*N*=1,082)	TDSB (*N*=71,671)
Students born outside Canada	48%	36%
Both parents born outside Canada	95%	72%
Lower socio-economic status categories	68%	50%
Students who rarely/never spoke to their parents about relationships and problems	64%	54%

Source: TDSB's 2011 Student Census

In addition to settlement and poverty-related challenges, focus group interviews reveal that some students also endured difficult situations at home. For instance, some NACI students described the lack of physical, emotional, and mental support from family members. In fact, based on the 2011 Student Census data, NACI had a higher proportion (64%) of its students than the overall population (54%) reporting they rarely or never spoke to their parents about their relationship issues or problems (see Table 2). For some newcomer students, especially those who arrived in Canada on their own, domestic instability was not uncommon whereby they had to seek alternative and independent living arrangements after sponsorship breakdown with their relatives or guardians.

Another challenge facing the NACI community was the high neighbourhood crime rates. According to the 2012 Toronto Police Service Statistics Report, Rexdale-Kipling ranked 16 out of 140 Toronto neighbourhoods in 2011 for the most sexual assault occurrences and the seventh Toronto neighbourhood by number of murders per 10,000 residents. Both clinic and school staff learned from their encounters with students that youth in this neighbourhood were regularly exposed to violence. Students nonchalantly told their school administrators that they frequently witnessed drug use and distribution in apartment lobbies, bullet holes in building

elevators, or blood stains in hallways. Students seemed to have become immune to these violent and criminal activities and described it as "everyday living". The school was the only safe haven for many of these students.

Students' Health-related Needs

It is also well documented that poor physical and psychosocial health and behaviours negatively affect academic performance. This section examines the health-related concerns and needs of the NACI student population.

Physical Health

Based on the MSPHI database, a variety of acute and chronic physical health issues were presented by NACI students who visited the in-school clinic. These physical health issues included seasonal illnesses (e.g., flu, cold), chest pain, vision and dental issues, athletic injuries, allergic reactions, and dermatological abnormalities. Other physical health ailments manifested in students included dizziness, breathing difficulties, hair loss, weight loss, skin rash, eye dryness, and hypertension. During focus group interviews, male students reported physical health-related concerns in greater frequency than their female counterparts. Both clinic and school staff observed that often these physical symptoms were indeed manifestations of underlying mental health concerns:

> *You see sometimes hair loss or you see kids coming in with rashes […] the mental anguish comes out in a physical way.* (Vice Principal)

Mental Health

Clinic and school staff consistently identified mental health as the pervasive concern facing their high school students, estimating that half of students visiting the clinic experienced mental distress of some kind. Depression, stress, anxiety, self-harm, and suicide were the most common forms of reported mental illness. Students themselves revealed that they experienced heavy breathing, hair loss, panic attacks, heightened emotions, and engaged in self-harm. During focus groups, female students were more open and descriptive regarding their mental wellness, while their male counterparts were more likely to use generalizing and less descriptive statements (e.g., "emotional things", "just stress") when describing their mental health.

Based on the collective information garnered from various stakeholder groups, the following factors could be attributed to NACI students' mental health status:

- Academic stressors
- Social stressors

- Difficult family situations
- Challenges facing newcomers

Academic Stressors

Academic concerns are a potent source of stress for many students. Nearly three quarters (73%) of students at NACI constantly worried about their school work (2011 Student Census). Students described they were often overwhelmed by their concerns about, for example, attaining good grades, the transition from intermediate to high school, heavy demands of schoolwork, and secondary school graduation, on top of other commitments such as part-time jobs and extracurricular activities. A male student spoke about his anxiety regarding balancing his numerous obligations:

> *One challenge I'm facing in my life is, let's see, next year I'm going to [take up a leadership role in] school ... I'm working… Every day after school for 2.5 hours. […] I'm [involved in] a charitable organization... I'm also in [a school] club […] And that my biggest fear, if one day, it just all crashes… It's anxiety that it all might crumble.* (Male Student)

Unrealistic, self-imposed academic expectations also contributed to adolescent anxiety. A female student expressed the considerable stress associated with maintaining exceptional grades and incessantly studying. Clinic and school staff indeed noticed increasing rates of substance use and self-medication among students who were bored or unable to cope with academic stressors.[2] According to a Public Health Nurse (PHN) and the school's Vice Principal, the substances included marijuana, ecstasy, painkillers, and drug cocktails.

Social Stressors

Navigating high school and connecting with peers often served as novel social stressors. For instance, a female student commented on her friends' inabilities to support her with depression:

> *So a lot of my friends, they don't really understand what depression is like. Some of them, they try to comfort me. They don't really understand […] they try their best but it makes them uncomfortable 'cause they don't know how to react. They don't know what to do with the situation.* (Female Student)

Social and physical bullying posed another serious stressor for many high school students. Clinic and school staff realized that although physical fights occurred more commonly among male students, they also happened among female students in the form of group fighting over relationship issues and gossip. Clinic staff further noted that some females were marginalized

[2] During focus groups, male and female students did not disclose their experience with substance use.

by their peers due to continued intra-gender animosity and body-image concerns. These students coped through internalization (e.g., self-harm) and social exclusion.

Difficult Family Situations

Adolescence involves a period of self-discovery and pushing boundaries which undeniably creates tension at home with parents and/or guardians. Adding to this common adolescence stressor, for some NACI students, unstable home environments became an additional and unsurmountable source of stress. Inadequate emotional and physical support from parents and guardians could be detrimental to a student's well-being. For instance, a few female students mentioned during the focus group that they were not comfortable sharing their health issues with their parents or guardians, and thus had not received any medical attention.

Familial burdens were also taxing for students at NACI. A female student expressed the difficulties associated with witnessing her parents' battle with substance abuse, such as alcoholism, while managing her own depression. In addition, according to the PHN, many students in the community were obligated to take care of their younger siblings due to late-working parents, creating another layer of burden and stress for these adolescent students.

Challenges Facing Newcomers

For newcomers to Canada, a period of physical and emotional adjustment is expected. Some of the newcomer students at NACI recalled this hardship which had taken a toll on their physical and mental well-being. For instance, a high school student who came to Canada without her parents described the difficulties she experienced while living with her relatives:

> *So there's lots of times they told me that they [aunt] were going to kick me out of the house and then, got into a big argument… I got kicked out of the house and I came to the school crying and my VP helped me.* (Female Student)

After enduring physical and mental abuse, she resolved to live on her own while attending school and managing health concerns.

> *I have health problems, you know? And although I'm living by myself, I'm still stressing because I have school.* (Female Student)

According to the Vice Principal, this newcomer student also experienced bullying, poor nutrition and body image while living in a shelter. Not surprisingly, this hardship triggered additional medical concerns.

Another newcomer student described experiencing panic attacks and associated physical symptoms (e.g., dizziness, difficulty breathing) in response to the stress of living independently and adjusting to a new environment:

> *It's really hard for you to imagine a new world, new things, new weather, new everything around you, right? So everything was just, it's just overwhelming.* (Female student)

Furthermore, for some refugee students, past experiences and traumatic events experienced in the home country, such as physical harassment and threats to livelihood, led to deteriorating changes in habits and personality in Canada. Specifically, a female student disclosed that her personality changed, and her school attendance and punctuality worsened after arriving in Canada despite her strong survival instincts and resiliency.

Other Health Issues

Associated with adolescent students' mental health state were a range of concerns relating to leading a healthy lifestyle. These concerns included sexual health, weight management, nutrition, and substance use.

- Sexual health - According to the clinic staff, students were generally not knowledgeable about sexually transmitted infections, contraception, and pregnancy, despite ongoing experimentation and diverse relationship types.
- Weight management - Some students at NACI demonstrated poor weight management during adolescence, such as eating disorders (e.g., bulimia, anorexia), obesity, and weight loss. For some students, these conditions were self-inflicted, and for others, they were consequences of multiple stressors.
- Nutrition - In a similar fashion, intentional and unintentional nutritional deficits existed in some students. Poor nutritional choices stemmed from dieting, self-deprivation, and financial challenges.
- Substance use - Clinic and school staff reported the use of tobacco, marijuana, ecstasy, painkillers, prescription medication, and drug cocktails by students. These substances were regularly accessible in the community and used as coping mechanisms for their stress and emotional issues.

Barriers to Health Care

Despite numerous health-related concerns among NACI youth, according to the Manager of the local community health centre (Rexdale Community Health Centre, RCHC), young people in the neighbourhood seldom accessed health care due to a number of barriers related to environmental and situational factors, cultural and family dynamics, and health awareness and literacy.

1. ***Environmental and Situational Factors*** – Although the RCHC had three sites, visiting their locations required students to use transportation, which was an additional financial burden for many families. Moreover, the office hours of Community Health Centres and other medical clinics usually conflict with school hours – making it more difficult or inconvenient for students to seek medical help. Also, for newcomer students at NACI who were uninsured, out-of-pocket costs for treatment required by regular walk-in clinics or family doctors was another financial obstacle precluding them from accessing health care.

   > *First, when you get [to the family doctor or walk-in clinic], nobody listens to you. They tell you, 'Where's your [OHIP card]? If you don't have a card, do you have money? If you don't have money, out you go, right? And they don't intentionally want to be mean.* (Nurse Practitioner)

2. ***Cultural and Family Dynamics*** – Focus group interviews revealed that cultural and family dynamics also surfaced as another factor preventing students from seeking health care support. Both male and female students expressed hesitation in discussing sensitive health issues with their parents. The Clinic Coordinator explained the stigma attached to student concerns, particularly mental health. Many families did not openly discuss taboo topics such as depression, sexual health or family problems. In such cases, students` health needs were seldom met, or they failed to receive appropriate information from family members. Some students indeed reported dismissal upon approaching their parents with a health concern, or that their newcomer parents had neither the trust nor comfort level to rely on the health care system. The Vice Principal shared the hesitation of two female students in taking them to a community health clinic; they feared that they would encounter a family friend who would divulge their whereabouts to their parents.

3. ***Health Awareness and Literacy*** – Adolescents typically do not assume autonomy over their health and well-being. Not surprisingly, a female student noted that some of her peers did not possess the health knowledge and awareness to seek professional help when needed. Similarly, the PHN described that some adolescents were unable to define what they were experiencing or feeling, and had thus affected the course of treatment. In fact, due to an inability to recognize and act on physical and mental health issues, some students resorted to self-harming behaviours to relieve their psychological pains.

Bearing in mind the environmental circumstances, health-related concerns, and accessibility barriers to health care encountered by the NACI student community, the following sections will explore:

- How the MSPHI at NACI (the only secondary school with an in-school health clinic at the time) had helped to address students' health issues, particularly mental health

- How the MSPHI had positively affected these students as well as the school community at large.

NACI HEALTH CLINIC AND SERVICES

Clinic Delivery Model and Approach

The NACI in-school clinic, which was opened in the Fall of 2012, adopted a Nurse Practitioner model consisting of:

- a Nurse Practitioner (NP) employed by the RCHC to provide primary health care services and counselling to NACI students;
- a Clinic Coordinator (funded through the TFSS) assumed the responsibilities of general operations of the clinic – including registration, scheduling of appointments and referrals, collecting patient data, as well as liaising with different stakeholders and public relations; and
- where necessary, external consultations or referrals to specialized health care professionals made to RCHC for access to additional health services such as counselling, social work, physiotherapy, chiropody, community assistance, and dental and dietary aid.

Due to limited funding, the NACI in-school health clinic operated only one morning (Monday) each school week, although appointments often extended beyond the allotted time.

Promotional and Referral Efforts

Various approaches were employed in the school community to increase awareness and utilization of the NACI clinic. For instance, at the start of the academic year, the Clinic Coordinator and NP introduced the NACI clinic to students at a school assembly. Weekly announcements were also made over the school's public address system to remind students of the clinic's operating hours. Advertisement efforts were also made, including displaying posters in the school hallways and distributing leaflets among the student population. Male students credited these forms of advertisements as initiating their clinic use.

Word of mouth amongst friends and acquaintances was also important for both initial and sustained use of the NACI clinic. Students courageously shared their health-related and positive experiences with the NACI clinic with individuals struggling in a similar manner. The NP explained that male students usually invited their peers to attend their appointments. This served as a source of support, but more importantly, exposed their peers to the services available at NACI and initiate utilization of services.

School staff members were also made aware of the NACI clinic through presentations at staff meetings and teacher clinic nights. The Clinic Coordinator and NP also familiarized parents and guardians to the MSPHI through outreach activities, such as parent teacher nights and introductory talks.

Types of Health Services Offered

The NACI MSPHI clinic provided primary care related to: (1) physical health, (2) mental health, and (3) lifestyle counselling to secondary students.

Physical Health Services

As mentioned earlier, physical health concerns that the NP tended to included seasonal illnesses (e.g., flu, cold), vision and dental issues, allergic reactions, athletic injuries, chest pain, and dermatological abnormalities. The NP also prescribed medication during clinic visits. For instance, one female student was diagnosed with an iron deficiency following blood work ordered by the NP and was subsequently prescribed iron supplements. Another particular student suffering from recurring allergy symptoms was prescribed non-responsive medication (i.e., Benadryl) from a doctor in the community. Upon meeting with the NP and complying with her medical orders (i.e., Reactine), his allergy symptoms were relieved.

In addition, preventative care, such as immunizations for newcomers and flu vaccines, were administered to students. Where necessary, students were referred by the NP to the RCHC for the completion of chronic allergy treatment and diagnostic assessments. For instance, one student presented with chest pain at NACI was referred by the NP for an electrocardiogram at the RCHC.

Mental Health Services

Physical manifestations (e.g., dizziness, breathing difficulties, hair loss, weight loss, skin rash) of mental health issues were also cared for. More importantly, the NP discussed confidentially with individual students, and provided counselling and coping strategies surrounding their mental and emotional well-being. Validated screening tools (e.g., Patient Health Questionnaire-9) were also used by the NP to support diagnosis, and to track students' progress from before, during and post treatment. For distressed students who required additional support, students were referred to counsellors at the RCHC, local psychiatrists, or to the George Hull Centre.

Lifestyle Health Services

Similarly, a safe and confidential environment ensured that the NP could discuss sensitive issues such as sexual health, safe weight management, nutrition, and substance abuse with students. The NP provided students with factual and evidence-based information concerning

contraception, sexually transmitted infections, and teenage pregnancy. The NP also supported students with self-image issues (e.g., eating disorders such as obesity, anorexia, and bulimia) by helping students develop individualized nutrition plans.

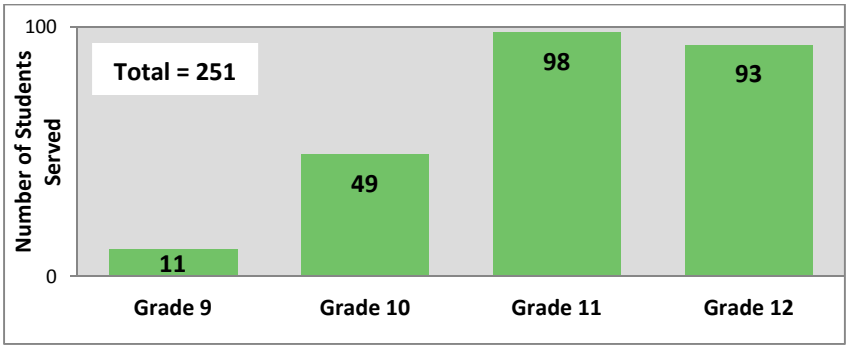
NACI CLINIC'S RESULTS AND BENEFITS

Clinic's Results

Although the NACI in-school clinic has been opened for only two years, more than 250 appointments have been served. This in-school clinic had been operating to its full capacity and indeed beyond, as on many occasions, the clinic staff stayed behind to see student patients after the scheduled hours. This full utilization itself is a success indicator for this innovative school-based clinic.

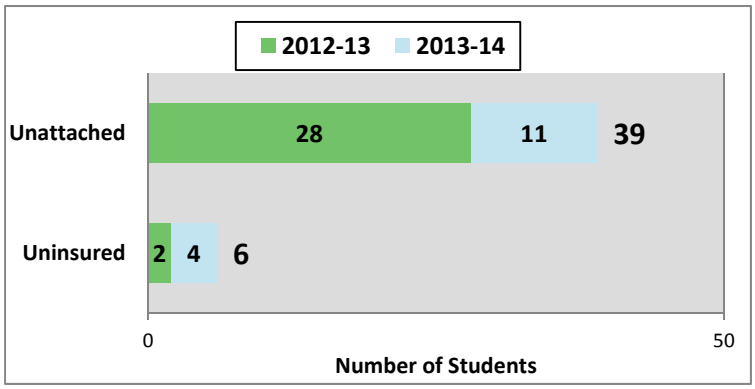
Figure 8 shows the total number of appointments served by the NACI clinic over the two years by grade. It should be noted that over three quarters of the patients were from Grade 11 and 12. This could be attributed to younger students, mainly those in Grade 9, requiring some time to become acquainted with their new school environment and available services, as well as to become comfortable with seeking health care independently.

Figure 8: Number of Appointments Served per Grade at NACI Clinic (2012-13 and 2013-14)



According to the number of appointments served, it should be pointed out that through the MSPHI, students, especially newcomers, who did not have provincial health care coverage (uninsured) or were eligible for OHIP but did not access health care (unattached) had been insured and "attached". In its first year, the NACI in-school clinic saw 28 unattached and 2 uninsured unique patients (Figure 9). In its second year, an additional 11 unattached and 4 uninsured unique patients were enrolled and visited the NACI clinic. Evidently, this MSPHI clinic site alleviated barriers to accessing health care for unattached (total of 39) and uninsured children (total of 6) in this community.

Figure 9: "Unattached" and "Uninsured" Students Served at NACI Clinic



The next section examines in detail the types of benefits the MSPHI had yielded for the secondary school students as well as for their school community as a whole. As presented below, the positive outcomes produced by the NACI in-school health clinic are apparent and far reaching.

Clinic's Benefits

Benefits for Students

Without a doubt the direct beneficiaries of the NACI MSPHI were the students. Provision of immediate and accessible comprehensive health care positively influenced their:

- Health and well-being
- Health literacy and self-advocacy
- Performance in school

Health and Well-being

Physical Health

The NACI clinic staff provided a wide spectrum of medical services, treatment plans and counselling. Interviewed students described their ailments, such as skin abnormalities, eye redness, chest pain, high blood pressure, and allergies were alleviated after visiting the clinic.

> *My eyes were really dry […] they would just get red or pink all of a sudden… I went to the clinic. I asked him what was wrong and I went to the [NP] and she said that my eyes were just really dry. And then she prescribed me some drops […] My eyes are better now and I don't get the pink eye more.* (Male student)

In addition, the immunization and flu shot services offered by the MSPHI clinic to the general school population had helped boost the health of individual students while preventing the spread of communicable diseases. Further, students with substance dependencies received strategies to reduce harm and quit altogether from the NP. One male student favoured

receiving smoking cessation advice from the NP compared to regular anti-smoking posters; he found the personal approach offered by the NP more direct and effective.

Mental Health

As discussed earlier, there was a high incidence of psychological and emotional health issues among NACI secondary school students. During focus groups, students attributed their formal mental health diagnosis solely to the clinic – diagnoses that they would not have sought or received outside of school. This claim has been substantiated by a New York based study (Klein et al., 2007) which demonstrated that students enrolled in a SBHC were significantly more likely to receive mental health screening and counselling than students who were not enrolled in a SBHC.

Apart from diagnoses, according to the students interviewed at NACI, the individual care offered by clinic staff, the various coping strategies imparted by the NP, and, where necessary, the additional referred medical services provided by the RCHC, had helped make tremendous progress in their mental well-being.

> *[The health clinic] basically helps you overcome the depression and gave me many options to heal […] I'm feeling good […] Compared from November last year till now [June], I feel like a totally different person.* (Female Student)

According to the NP, when some students initially visited the NACI health clinic, the screening assessment (i.e., Patient Health Questionnaire-9) indicated high levels of mental distress; during and following treatment, the NP detected the gradual reduction of students' distress scores and progressive improvement on their mental health:

> *Sometimes we're not able to remove all the stressors […] but at least, bring them to a safer level, then they are able to cope, function, concentrate in school, able to make more friends. They are more outgoing now, more happier. In terms of self-harming themselves, most of them stop doing that.* (Nurse Practitioner)

School and clinic staff also noted that from the relief of diverse physical and psychological health concerns, NACI students became more expressive, felt confident, and engaged in healthy relationships.

Health Literacy and Self-advocacy

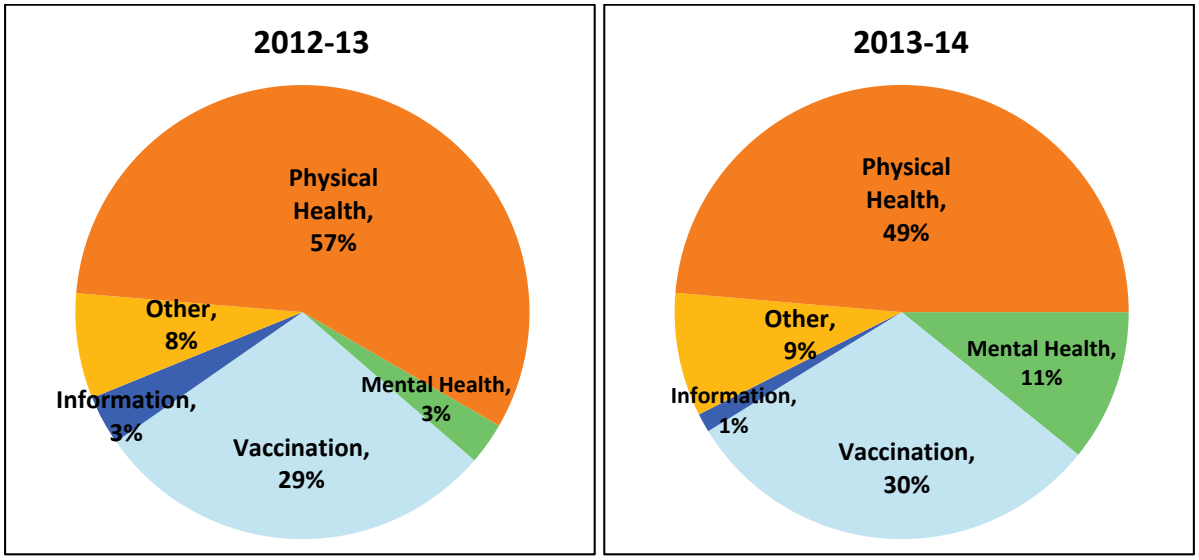
Aside from receiving medical treatment and other health care support, visiting the NACI clinic afforded students an empowering learning opportunity. As Horton and Lima Negron (2009) pointed out, school-based health clinics are portals for promoting health education (e.g., nutrition, physical activity, disease prevention) and health advocacy skills among youth and

their families. By engaging students in a thorough and honest discussion about their health, the NP at NACI's clinic increased student awareness of their health condition, the repercussions if left untreated, who to contact, and how to appropriately respond to symptoms. One female student described how her understanding of her mental health condition evolved due to the clinic:

> *I didn't really understand. Like I knew it was depression but I didn't, I couldn't really explain why and things like that so, but now I'm more aware. I'm able to deal with my stress easily and […] I'm able to stop myself if I had like a bad thought.* (Female Student)

Indeed, there appeared to be an increased recognition and disclosure of mental illness symptomology by the second year of the clinic operation. As illustrated in Figure 10, a temporal comparison of presenting issues at the NACI in-school health clinic revealed interesting trends. Between the first (2012-2013) and second (2013-2014) year of operation, the proportion of students presenting with mental health-related concerns nearly quadrupled, from 3% to 11% of the presenting issues. Clinic staff were still cognizant that many students, especially new patients, still presented themselves with physical symptoms which were indeed manifestations of underlying mental health concerns.

Figure 10: Presenting Issues at NACI Clinic



Aside from growing acknowledgement of mental health concerns, students also perceived the NACI clinic as a health promotion information hub. The NP taught students about healthy lifestyle behaviours and repercussions for risky activities, such as unprotected sex. One male student became fully aware of the gravity of his heart condition from his appointments at the NACI clinic:

> *[The NP] would tell me that […] you have been having high blood pressure, you know. It could give you a heart attack at a very young age or could, you know, give you heart disease […] If [the NP] wasn't there, I still would've been a really sick person today.* (Male Student)

For students who endured negligible support from family and guardians, the knowledge and support they gained from the clinic enabled them to assume the responsibility for their own physical and mental welfare. The Clinic Coordinator and NP described that the NACI clinic acted as a safe environment for this shift in medical autonomy, as students were able to access health care on their own. For example, one female student disclosed that she felt more confident in handling health problems when they arose after visiting the NP:

> *This clinic has helped me especially, to deal with [depression]. I don't know about other people, how they got rid of their depression but the clinic has really helped me because I was really deep into depression. My coming here, my staying here, […] I feel good. Never been good before. Health, health-wise, education-wise. Though […] some problems still pops out but you know what to do.* (Female Student)

By the same token, many NACI students did not initially know how to navigate the health care system; through the essential skills imparted by the clinic staff, students felt knowledgeable and confident in pursuing medical attention independently. Some students described that their immigration status was previously a barrier to seeking health services but they self-affirmed following their experience with the NACI in-school clinic:

> *That was part of the problems I had too, right? My immigration situation, I didn't know anything about [the health care system]. Once [NACI clinic staff] told me what to do, I went through it and here I am. I'm really happy right now.* (Female Student)

Performance in School

From managing personal and social determinants of health, such as depression and immigration issues, the NP and Clinical Coordinator noticed that students could concentrate better in school. The Vice Principal also observed that since the opening of the NACI health clinic, absenteeism decreased. Research in the United States has indicated a significant decrease in absenteeism and an improvement in punctuality in adolescents who used counselling services at their SBHC (Gail et al., 2000). For example, an SBHC in Dallas was an important factor in decreasing absenteeism by 50% among students who were categorized as frequently absent from school (three or more absences within six weeks; Hall, 2001).

A female student from NACI also shared that after reducing her stress with the support of the in-school health clinic, she was able to better manage her school work. NACI students as well as clinic and school staff acknowledged the interconnectedness of health and well-being with the ability to perform optimally at school.

> *When you're stressed, it's every aspect. When you're outside of school, when you're in school, it's everything. So when I was healing, when I was ok, I was able to blend in with the school and start to participate so that like influenced everything… I say to myself, health first, right? Health first. When there's health, then every other thing falls in place.* (Female Student)

It was also reported that receiving early help for health problems allowed students to lead positive and more productive lives. Students no longer felt lost; rather, they felt more integrated with their school community. One male student shared that he was no longer removed from class after receiving treatment for his eye redness.

The NACI clinic also positively impacted peer relationships. According to the Vice Principal, after overcoming a severe traumatic experience with the comprehensive support by the clinic staff, a female student became a student leader and mentor in the NACI community, assisting her fellow students who were struggling with similar situations. From seeking assistance with and taking control of health issues, NACI students were comfortable in sharing their experiences with others. They played an important role in educating others about health-related issues and reducing mental health stigma.

> *Just opening my eyes more to helping students. Living a happier life… It's just, when you go there; [the NP] just throws out random information. Like this time I'll be like, 'Oh what if this happened?' And she'll just give you information […], 'Oh this happens because of that.' And then I take that information and I educate my friends too. And they just opened their eyes to […being] more mindful of their body.* (Male Student)

The Vice Principal also witnessed a few male students diffuse tension among aggressive peers using healthy coping techniques (i.e., deep breathing, physical activity) to prevent further escalation, which previously was seldom the case at NACI.

> *We've got some very angry boys that we're working with […] So we've got these, the same boys I'm speaking of, they're actually walking around, trying to calm them down and say, take a breath, let's go for a walk.* (Vice Principal)

In sum, the NACI clinic played a significant role in shaping empowered, health literate and autonomous students. In fact, a few students stated during focus group interviews that they would protest and rebel in the event that the NACI clinic closed. This acknowledged that

students themselves realized the importance and benefit of NACI clinic services for their own health and well-being.

Benefits for the School Community

While students were the direct beneficiaries of the MSPHI, this study also found that the in-school clinic also benefited the school staff and community in the following ways:

- Providing medical expertise to complement the work of school staff
- Reducing staff burnout
- Supplementing school board resources
- Meeting the TDSB Mental Health and Well-Being Strategic Plan

Providing Medical Expertise to Complement the Work of School Staff

It is true that NACI educators and administrators on the frontlines could observe students with distress or non-academic needs; they were however not equipped nor supposed to diagnose, treat, and counsel students with health-related issues. School and clinic staff indeed concurred that educators, including Guidance Counsellors, were not trained nor expected to provide psychological counselling beyond school-related matters.

> *There's medical support for us because a lot of it is beyond our training and ability. When you look at non-suicidal self-injury, when you look at eating disorders, we can only do so much to support those students but there comes a point where medical intervention is needed and to be able to access that, as a Guidance Counselor, it's just incredible because I'm not a psychologist, I'm not a nurse. I can only do so much for the students and so this gives us the reassurance that we're doing everything we possibly can to support that student.* (Guidance Counsellor)

Interviewed students also perceived that school staff's focus was on academic issues. They were uncomfortable to divulge to teachers and Guidance Counsellors about their personal medical needs, as they found it difficult to emotionally connect to school staff. Students also questioned the confidentiality and possible academic implications surrounding sharing their health-related concerns with teachers and other school staff. For instance, one self-harming female student was grateful for her Guidance Counsellor's efforts but she was looking for immediate and direct health-related support:

> *When you go to the Guidance teacher, Guidance Counsellor, they're telling you, they're giving you a book to call like, different people, hotlines and stuff […] I don't want to call a hotline. Like I remember that I was trying to kill myself and like, 'Oh here's a book. Call a hotline.' Like, why am I going to call a hotline? Are they going to come rescue me from myself? Are they going to come take me from my house and rescue me? [The Guidance Counsellor] would talk to you but*

> *like, they're not telling you things that you want to hear. They're not helping you in a right way.* (Female Student)

The frustration of school staff being cognizant of some of their students' irregularities – such as those who were underperforming, having behavioural difficulties, or losing weight abnormally – while not being able to help could now be resolved. With the in-school health clinic, school staff could support their students with health concerns by referring them directly to the NACI clinic for immediate medical attention:

> *The Guidance Counsellors don't really connect with you on an emotional level. They're only there for mostly academic purposes […] That is why my Guidance Counsellor recommended me to go to the clinic because she didn't know what to do […] I don't think she was really trained for it, [but] she was kind of concerned.* (Female Student)

Reducing Staff Burnout

The Vice Principal raised an important issue about burnout among school staff and administrators, especially in association with students' health issues. As described by the NP, bringing students to a stable state is time intensive and requires frequent contact with the students. According to the Guidance Counsellor, managing the increased prevalence of mental health concerns among students, on top of academic matters, was particularly challenging in light of the limited time and resources available.

> *The caseload of kids coming down with true problems, real problems that will impact them for the rest of their lives, is so high that we can't possibly manage it, in here. We have two and a half counselors, we've got two vice-principals and we're all worked, all day long counseling kids with mental health-related concerns. Not just the academic, not just the regular day-to-day school concerns and so, having [the NACI clinic] gives us […] peace of mind.* (Guidance Counsellor)

The active presence of an in-school health clinic thus offered school staff with important professional and psychological support.

> *Everybody is overworked and overwhelmed these days with their workload. They're giving us advice for us to do it and everybody's work is loaded. And at the end of the day, we care about the kids so we will do it but having someone like [the NP] in the building and [the Clinic Coordinator] to support her, give us a little more comfort to sort of rely on her to give us more immediate support […] It has been difficult this year trying to get certain people and certain professions to do what we think they should be doing and it hasn't happened.* (Vice Principal)

Supplementing School Board Resources

While professional support services - including Psychological Consultants, Social Workers, and Public Health Nurses – were made available to local schools by the school board, these professionals (who were small in number relative to the size of the student population) were allocated to families of schools with multiple obligatory administrative responsibilities (e.g., School Support Team meetings, and academic assessments). The Psychological Consultant assigned to NACI expressed that his administrative responsibilities limited the frequency and depth of mental health care he and his colleagues could provide to individual students. Thus, providing direct and regular service to students in need was rare. At the same time, though, as described by the Vice Principal, there was an apparent need for mental health support at her school:

> *We could have [our PHN] here all day. We could have our Social Worker here all day. Our school psychologist here all day. There's enough need in the building to have, but they're spread across multiple schools so that's the unfortunate piece, that we have all these great people but we have to share them and rightfully so but there is a need to have people in the building all day.* (Vice Principal)

The Vice Principal further pointed out a shortage of child psychologists in the community aggravated by the long wait time (six months) for students to receive mental health services at the George Hull Centre. The in-school NACI clinic thus played an extremely essential role in addressing the exceedingly high demand for TDSB student support resources in a timely and comprehensive fashion.

Meeting the TDSB Mental Health Strategic Plan

The vision behind the TDSB's strategic plan for Children and Youth Mental Health and Well-Being is a culture where mental health and well-being is integrated into every aspect of every student's school experience. The in-school clinic had been instrumental not only in addressing its students' mental health needs, but also in reducing the stigma associated with mental illness within the NACI school community. According to the Clinic Coordinator and NP, the in-school health clinic had become a safe place for students to discuss and explore their mental health. Students became comfortable with seeking assistance and sharing their experiences with their peers. This generated further awareness at NACI of the prevalence of mental health issues and the importance of prevention and treatment among students.

Regarding school staff, through participation in staff and community meetings, clinic staff were provided with a platform to inform their school counterparts about the clinic and the mental health needs of students. As explained by a Guidance Counsellor,

> *With the mental health strategy, discussions about mental health are going to be embedded in the curriculum, across the board. I think that's a very good thing*

but teachers need to be equipped to talk about it. And if teachers aren't comfortable or have their own concerns, they're not going to be able to address it in a class. Therefore, they're not going to be able to address their students' needs. So having the conversation about mental health, having more posters, more announcements, more talk about mental health is opening that door for students to be able to talk about it. And if they can't talk about it with their teacher, they can make an appointment with the clinic. They know that it's there now so the more that we talk about it, the more we're going to see concerns coming up because kids are becoming more comfortable. (Guidance Counsellor)

FACTORS FOR NACI CLINIC EFFECTIVENESS

Having explained in depth the impact the MSPHI clinic had produced for the NACI school community, this section will discuss five important factors behind the clinic's effectiveness and sustainability.

- Within school location
- Welcoming and safe environment
- Characteristics of clinic staff
- Primary health care approach
- Partnership with the local community health centres

Within School Location

Removing Accessibility Barriers for Youth to Seek Health Care

During focus group interviews, students commented that they rarely visited family doctors or external walk-in clinics due to the various accessibility barriers discussed earlier (pp. 48-49). Since the opening of the in-school clinic in the Fall of 2012, increasing numbers of NACI students began to seek medical attention, as they no longer had to miss school, spend additional time or money, or require parental permission to access health care services. This comes as no surprise as individuals are more likely to seek and receive medical attention when barriers, particularly financial, are reduced (Feldstein, 2005). A study completed by Mathmatica Policy Research on SBHCs across the U.S. showed improvements in health care accessibility for students who utilized SBHCs (Kisker & Brown, 1996). Specifically, 71% of students who had access to a SBHC visited a health care professional versus 59% of students who did not have access to a SBHC (Kisker & Brown, 1996).

The thing is, with the school [NP], it's always, with teens, our age […] wouldn't make that trip to go to a family doctor and we're already in school and you can just walk down the hallway and it's easier access. (Male Student)

A male student, who made weekly visits to the NACI clinic for his high blood pressure, stated that if it were not for the convenient location of the NACI clinic (compared to the inaccessible location of his family doctor), he would not be able to regularly monitor his heart health. A female NACI student succinctly described the advantage of having both education and health services in one location:

> *You learn in your classroom and the clinic is there for you to be healthy. So basically just, everything just works.* (Female Student)

The Guidance Counsellor further explained how seeking health-related service on school property could be an important relief for parents who had to work long hours or multiple jobs:

> *I think in a lot of cases too, the parents appreciate the fact that we have the clinic here because they're working two jobs or they're working night shifts or they've got younger kids at home. They don't have time to take time off work or they don't have a job that allows them that flexibility to take their child to the doctor so we're able to help them facilitate that and I think a lot of parents appreciate that.* (Guidance Counsellor)

Additionally, the comprehensive and inter-professional collaborative approach adopted at the NACI MSPHI clinic afforded students with convenient "one-stop" health care within their school building. Namely, students were able to benefit from a spectrum of care, such as receiving primary health care, medical prescriptions, on-site immunizations and mental health and lifestyle counselling. Rather than referring them to external specialists which would further delay health improvements, the clinic's NP was able to address students' multiple health issues, such as nutritional deficiencies. Conversely, many external family doctors and walk-in clinics refer adolescent patients to multiple health care professionals at different locations across the city. Navigating and travelling to these services were additional burdens on NACI's student patients and families, which the MSPHI clinic alleviated.

> *One thing I've noticed about doctors, they would tell you, 'Ok go here, go here,' and then they call you back for your reports. They don't tell you over the phone so when you go back, you swipe your health card. It's like more money for them, right?* (Male Student)

Students appreciated the time and cost-saving benefits with the NACI in-school clinic. According to the Manager of the RCHC, since the opening of the NACI in-school health clinic, his CHC could "reach 100% young people" and effectively fulfill its mandate to increase the youth population's access to primary health care and social services, which was part of its CHC's strategic direction for 2013-2016.

Facilitating School Staff Support

With the health clinic located inside the school building, school staff were more likely to take a proactive role to refer students whom they detected with health needs to the clinic for medical attention. According to the Vice Principal, she referred students to the NACI clinic almost every day, including serious cases such as suicidal attempts. Most female students admitted during their focus group that they first visited the NACI clinic as a result of referrals from Guidance Counsellors or school administrators.

Aside from maximizing NACI clinic uptake as a result of active referrals by school staff, the provision of health services and education under one roof also facilitated effective follow-up by both clinic and school staff to ensure student success. Namely, clinic staff and school administrators maintained ongoing communication about students' health progress without sharing the confidential medical records. This seamless involvement of multiple stakeholders would be difficult, if not impossible, in regular family doctor offices or walk-in clinics.

> *That's the key, I think, because kids could get service out there but then, that's never communicated back with us and […] sometimes the students don't know how to articulate what the doctor was saying. They don't quite understand anything but when they go to the clinic here, there's communication so it's a team approach to helping the child through whatever it is they're dealing with.* (Guidance Counsellor)

Additionally, the in-school clinic enabled educators and health care providers to involve and work with families collaboratively to promote student well-being inside and outside of school.

Welcoming and Safe Environment

Although the NACI clinic was physically located within the school, it was at the same time a separate entity. The space which used to be a classroom was converted into a clinic, and did not possess a school-like atmosphere.

> *I think you mentioned the physical space. Going in there, it looks like a doctor's office so the kids walk through the door and they're not at school anymore. They're in a doctor's office and I think that's really important as well* (Guidance Counsellor)

This study shows that it was crucial for secondary school students to perceive the clinic to be a distinct place. As mentioned earlier, while students might seek Guidance Counsellors or other school staff for academic advice, they were apprehensive about confiding in them about their more sensitive, personal and health-related concerns in fear of possible disclosure to other school staff or of how they could be subsequently perceived or judged personally and academically. On the other hand, the separate and accepting environment created in the

MSPHI clinic allowed adolescent students to feel more at ease in sharing their health concerns with the clinic staff. They had no fear of being judged, or of facing repercussions on their academic status due to their personal or health issues; instead, they could receive objective information and advice that was not emotionally driven. In admitting to the hardship she and her NACI peers had endured, one female student expressed how comfortable and accepted she felt at the in-school health clinic:

> *Most of us are not [accepted] outside but when we're here, like we feel [accepted] because […] we have different people here, representing us and we could, you know, be comfortable talking to them.* (Female Student)

Confidentiality

Aside from being a separate entity, clinic staff put great emphasis to ensure that the clinic was a safe place for assuring students' confidentiality. It was emphasized in all focus groups, that confidentiality was the overarching constraint adolescents required when seeking medical attention. This condition was rarely satisfied in other settings. For instance, one female student was not comfortable with sharing her health issues with her aunt (guardian) and as a result, did not receive medical attention under her supervision. Even for adolescents accompanied to doctors' offices by their family members, they were not comfortable speaking to medical professionals about their health concerns in the presence of family members.

At the same time, adolescents were not familiar with their medical rights. Many NACI students were unaware of the Personal Health Information Protection Act[3], which allowed them to seek confidential medical attention without the knowledge or consent of their parents or guardians. To develop trust and rapport with the student patients, clinic staff made a conscious effort to create a safe environment in the clinic by:

- always assuring students during their initial appointments of their legal rights to access health care, and
- reassuring them that their privacy was respected and anything discussed at the clinic would not be disclosed to family members or school staff.

In fact, according to the NP, establishing trust and rapport with some students did not occur immediately:

> *Adolescents […] are wary about other, you know, adults or asking professional help so most of them come in, just to test the water. See what it is all about.*

[3] According to the Personal Health Information Protection Act, capable individuals over the age of 16 possess authority over the collection, use, or disclosure of their health-related information.

> *Once they are comfortable, right? And we get to talk a little bit more and then, we find out what's really going on and at that point, they are more comfortable and willing to want to work with us, to help them rectify this issue.* (Nurse Practitioner)

By building trust and rapport and by reminding students of their medical rights, psychological barriers were minimized. Students became comfortable in discussing their health knowing that their interactions with the NP remained private. The NACI clinic thus provided students with not only accessible but also confidential health care to remedy their medical situations.

The Vice Principal and Guidance Counsellor attested to the welcoming and safe environment established by the clinic staff:

> *[The NP] talks to them about all these different issues and STDs, anything that the student is curious about. They're very comfortable speaking to [the NP]. She creates an environment where it's very welcoming and there's no judgment and I think that's really important for kids. That judgmental piece is huge that will lock them right away.* (Vice Principal)

Caring Characteristics of Clinic Staff

Disposition and Attitudes

Aside from offering a safe and welcoming setting, the disposition and attitudes of clinic staff were also instrumental in fostering a supportive and trustworthy climate. School staff and students described the NP and Clinic Coordinator as warm, accepting, and friendly health care professionals. One female student described her experience with the NACI clinic's NP:

> *They're very attentive and I feel really comfortable with the nurse […] It's easy to talk to her. The conversation we have, it's, I don't know how to describe it but it's just easy to talk to her […] It feels like I've been friends with her for a while.* (Female Student)

The Guidance Counsellor further described the NP in the following way:

> *[The NP] is really welcoming. She's very resourceful. They feel that they can trust her. They feel that they get help, when they see her regardless of what the issue is.* (Guidance Counsellor)

In addition to the NP, students appreciated how the Clinic Coordinator showed respect and genuine interest in them by inquiring about their interests, extracurricular activities, or weekend plans when they were in the clinic waiting room.

> *[The NP] and [Clinic Coordinator] are both friendly. If I'm in the waiting room, [the Clinic Coordinator] would ask me a few questions, like 'Hey are you playing any sports?' So they're really both friendly, which, you know, creates that environment.* (Male Student)

A female student further pointed out that the ethnic backgrounds of the clinic staff helped promote a cultural understanding and appreciation of the diverse NACI student body. Since the clinic staff represented visible minorities, students at NACI easily connected with them:

> *[The Clinic Coordinator] is Indian. [The NP] is Nigerian and I feel comfortable going to [the NP] and [the Clinic Coordinator] because like they accept me like I'm even their own child and I can sit down there and talk to them and they could give me advice and help me with my personal life and stress.* (Female Student)

In sum, the NP's nonjudgmental, attentive approach created an inclusive and accepting environment. This enhanced students' comfort level to seek care and promoted their openness about mental wellness despite the associated stigma they confronted in society and at home.

Commitment to Individual Students' Health Care Needs

Besides their warm and friendly attitudes, both the NP and Clinic Coordinator demonstrated strong commitment to the well-being of their individual student patients. The Clinic Coordinator described their committed approach to providing health care to the NACI community:

> *… [our] ultimate goal is to help that individual, is to help that student, that patient, that he's the centre of our world. So everything we do is to help that person.* (Clinic Coordinator)

For instance, the Clinic Coordinator made efforts to accompany students newly referred by school staff from their classrooms to the clinic to ensure they would feel comfortable to visit the clinic as well as to assure students would not miss their appointments. Further evidence of the clinic staff's commitment was the NP's conscious effort to advise students to regularly visit the clinic for follow-up and for continuation of care and to monitor their well-being.

To meet the high demand for clinic appointments, the NP and Clinic Coordinator regularly worked beyond their scheduled hours. The Clinic Coordinator and NP were adamant that students would not be turned away if they required health-related attention. School staff and students acknowledged the clinic staff's commitment to providing the best possible health care service:

> *[The NP] and [Clinic Coordinator], they're pretty nice, that they would actually stay back for their lunchtime to […] call in more students. I've seen that many times.* (Male Student)

In addition to their service during scheduled hours, clinic staff also made efforts to ensure the communication line with staff and students remained open beyond the clinic time where necessary. For instance, the NP provided vulnerable students with her RCHC contact number in the event that they needed urgent attention outside of NACI clinic hours. After-hour contact information, such as the clinic business cell phone number, was made available to students. This provided students with an accessible and discreet method of scheduling appointments (i.e., by texting or calling). The NP also connected with the Vice Principal after business hours for support with emergency cases:

> *[The NP] actually called me from home and even gave me her personal number. I would never abuse anything like that but it was a one-time thing and it was really wonderful that [the NP] did connect with me and was concerned and wanted me to follow up with the student.* (Vice Principal)

These examples serve to testify to the sincere concern and commitment clinic staff expressed for their patients.

Clinic Staff's Advocacy Efforts

The clinic staff's strong commitment was also evident by the voluntary advocacy roles they played on behalf of their student patients. Time and again, clinic staff encountered students who required additional specialized health care beyond the clinic. Navigating and affording the health care system was intimidating for adolescents, especially newcomers or those from unstable home environments. The Clinic Coordinator and NP often advocated for the best possible and affordable medical attention available for their clients. For instance, many NACI students could not afford new glasses or to replace broken or lost pairs; the NACI clinic staff connected them with a free vision glasses program. In other cases, uninsured students occasionally required costly procedures and surgeries. The Clinic Coordinator described one student who experienced seizures at school and was rushed to the hospital. The hospital visit and diagnostic scans amounted to over $5,000, an exorbitant sum for the student's parents. The Clinic Coordinator and a school board Social Worker advocated for the affordable access to health care of this student. As a result, the hospital waived the bill given this student's unique circumstances.

It was also obvious that clinic staff were accepting of and flexible to the evolution of their roles, which often involved taking on more responsibility. For example, tirelessly advocating on behalf of students, navigating services and resources unrelated to health matters (e.g., immigration lawyers), and devoting an unexpectedly high proportion of time to mental health

counselling were not anticipated from the onset. It was apparent that the commitment and advocacy efforts invested by clinic staff had helped ensure the diverse needs of students were met in a timely, accessible, and equitable manner.

Primary Health Care Approach

In regular medical clinics**,** the duration of a typical appointment is about several minutes per patient. Family doctors in this practice setting have limited time to spend with each patient.

> *[The NACI NP] is different from other doctors because she actually has time. The other family doctors we go into, they would spend five minutes inside and then we're out.* (Male Student)

Also due to high patient volume**,** doctors mainly treat physical ailments, resort to medication for treatment, and/or refer patients to other specialists. Seldom would they have the time or resources to understand the patient's sociocultural circumstances, delve into mental health concerns, or connect patients with community resources.

> *Versus if they go out there to, let's say they're able to go to a family [doctor…] You come in for a headache, 'Ok headache. Take a Tylenol.* (Nurse Practitioner)

Some students commented that they felt "like a number" when they visited their family doctor's office or walk-in clinics.

In contrast, the NP at the NACI's in-school clinic spent on average 30 minutes or more with each student patient. This lent itself to a holistic and comprehensive approach adopted by the NACI clinic staff. Formally known as the biopsychosocial model, this philosophy of clinical care posits that biological, psychological, and social (including economics, environment, cultural) factors influence health and well-being. This approach is particularly beneficial since the patient's objective and subjective experiences are understood as contributing to their overall state.

At NACI, the biopsychosocial-oriented practice meant that the multifaceted dimensions that constitute a student's health and well-being were prioritized from initial assessment to diagnosis and to external referrals and follow-up. This practice entailed thorough probing, listening, screening and assessment. The NP described it as an "onion" approach, which she found crucial when addressing adolescents' health concerns, especially their mental well-being. Due to the social stigma and/or their unawareness of their own mental health state, some student patients, especially male students, presented with physical needs such as a headache and weight loss, and just sought basic medical care when they first visited the clinic. Using the "onion" approach, the NP progressively unearthed students' inner thoughts, emotions, and worries as students became increasingly more comfortable over their subsequent visits:

> *It's like an onion. You start peeling the layers and then, you start talking about those things, you know, and just take away the stigma because there's a lot of stigma related to mental health.* (Nurse Practitioner)

The NP's inquisitive diagnostic method was particularly effective, as clinic and school staff realized that many physical ailments were interconnected with poor mental health. A few students conveyed that although they initially presented at the clinic with a physical health matter, they were subsequently treated for mental health issues (e.g., anxiety, stress, depression) as a result of the NP's probing manner. One male student shared his experience:

> *I was sick for two weeks. I went to the doctor. He gave me a prescription but it didn't help me out. But when I went [to the NACI clinic], [the NP] asked me like some personal questions, like my family and background, my school, what was happening with me. And when she asked me, then she got to know [that] I'm depressed.* (Male Student)

The NP further described their holistic practice with the following example:

> *Because a client coming, 'Ok I feel I have a headache,' […] After talking, you find that out, the reason why they're having a headache is they have a lot of stressors. They don't have status in Canada. They don't have family in Canada. They don't have food. They have so many other things. Ok, so in order to relieve that headache, we talk about treatment plan. […] Then I go on to say, 'Ok, maybe you need to talk to a counsellor.' I do that. 'Maybe a case manager would be beneficial to you. She will help you for food linkage, housing, those kinds of things. Ok maybe you need support with your immigration problem.' […] And that's the gateway to come in and that's when we do our assessment and then can link them up with all these other resources that will be able to help them.* (Nurse Practitioner)

Students also conveyed their perspective and appreciation of the holistic approach utilized at the NACI clinic. Female students mentioned that the NP treated their physical symptoms but also addressed their emotional issues and provided advice, encouragement, and moral support. Two male students also communicated the benefit of the biopsychosocial approach practiced at the NACI clinic. For instance, the NP helped reduce a male student's high blood pressure, but also counselled him in lifestyle behaviour modification (e.g., healthy nutrition and physical activity prescription). Moreover, the NP assisted another male student with managing his stress and commitments by guiding him through a decision-making process:

> *One thing that [the NP] told me once was, 'There's no point in stressing. You know, if you stress or not, the problem is still going to be there,' right? […] I remember one time, I had such a hard decision 'cause I used to do so many extra-*

> *curricular activities. She told me, […] 'You have to cut back on one of them.' I couldn't decide and she helped me on which one to cut back and then, later on I found out that it was good and that she helped me do a lot.* (Male Student)

By being mindful of the complexity surrounding patient care, students were empowered and autonomous to be decision makers in relation to their health. One female student described that the NACI clinic increased her awareness of her mental health condition and provided strategies to be in control and cope with her stress. The NP also demonstrated her approach to bestowing health-related autonomy to her clients as follows:

> *When they come, we listen to them. We're not like rushing them away, like it's time to go. We listen and then try to, kind of, make them as a partner for their health care. We make them take the lead for their health care. They tell us, 'Ok this is what I want you to help me with.' […] Then I try to guide them within safe parameters. 'Ok this is what we need to do. Which one do you think you'll be able to do first?' Just listening and not being judgmental is a really good thing for this population.* (Nurse Practitioner)

Ultimately, as a result of implementing a holistic, comprehensive approach to health care at NACI, student patients themselves commented that they felt acknowledged, valued, and understood. By being "in tune" with their clients, the NP and Clinic Coordinator learned of and treated underlying, complex health issues.

Partnership with the Local Community Health Centres

Biopsychosocial health management also extended beyond the care offered within the in-school clinic. To optimize student health, the clinic staff navigated relevant external services and the health care system on behalf of students. The NACI clinic served as a gateway to an inter-professional team at RCHC:

> *We're not just treating the different parts of the client. We're trying to make sure that all the resources that they need to take care of the aspects of the holistic human being, is being advocated for, […] in collaboration with all the partners in the community so that's […] very critical in looking after this population. They might come in for a single need but then you find that there's other underlying issues that you know, just one single person, the clinic cannot handle that. You have to collaborate with other resources in the community.* (Nurse Practitioner)

Partnership with local CHCs, in this case the RCHC, afforded the MSPHI the capability to offer such "wrap-around response" for students, especially in high priority neighbourhoods. Through close partnership with the RCHC and with the NACI clinic acting as the nucleus, not only did all students, regardless of status, receive free-of-charge health care services, they also benefitted

from fluid, coordinated and continuative care plans that involved multiple stakeholders,. For instance, as RCHC staff, the NP connected students, where necessary, to other non-medical government-funded resources, such as community social workers, case managers, or immigration lawyers. Also, where serious mental health issues emerged in students, the NP referred them to accessible agencies, such as the George Hull Centre.

> *[The NP] won't tell the clients, 'Sorry I know you're bothered by your status issues but I'm a nurse practitioner. Nothing I can do.' She won't do that. Then she'll think, yes someone may be able to bring her to a legal clinic [where] she could be advised accordingly so that's the value of every provider here […] it's the model of care, not just the resources. It's more than just family doctors and nurse practitioners.* (RCHC Manager)

NACI's Clinic Coordinator further pointed out how the partnership with the local CHC enabled the clinic to advocate for students' other health-related needs, for example, accessible physiotherapy, dental hygiene, optometry services, and free eye glasses. This would not be possible if students received medical attention through typical primary health care routes, where family doctors and walk-in clinics function in silos.

Clinic staff also shared stories of students who required costly emergency procedures that, if not completed, would have further compromised the students' health. Given the common financial hardship among NACI students, clinic and school staff pooled resources with the RCHC and other external health care providers, such as the Hospital for Sick Children, to ensure students received timely and affordable care.

As well, considering that the NACI clinic NP also worked at the RCHC, students were guaranteed continuative care on other days of the week and during summer months. As described by the PHN, the model of primary care at NACI was facilitated by a united inter-professional community. The partnership between the school and the local CHC had made it possible for the MSPHI clinic to offer the wraparound biopsychosocial health care, which effectively addressed the individual and social determinants of health facing students at NACI.

CONCLUSION AND DISCUSSION

- Highlights of the WPJPS and NACI In-school Clinics
- Long-term Cost-effectiveness of the MSPHI
- Suggestions for Enhancing the Efficacy of the MSPHI

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CONCLUSION AND DISCUSSION

The two case studies in this Phase III evaluation corroborate the far-reaching benefits of the MSPHI for children and adolescents, especially in high priority neighbourhoods where health risks are generally high and access to medical care is low. With health clinics situated within the school setting – along with the continuum of primary health care services, dedicated clinic staff, and partnerships with local health agencies – not only do students have greater access to quality, comprehensive medical attention, but students being identified by school staff with health-related issues are now directly referred to the in-school clinic. As a result, preventative measures and early interventions are in place to mitigate their physical and mental health concerns in a timely manner.

In this concluding section, the following will be presented:

- Highlights and comparisons of the WPJPS (an elementary-school) health clinic and the NACI (a secondary-school) health clinic
- Long-term cost effectiveness of the MSPHI based on the findings of the two case studies
- Suggestions for enhancing the efficacy of the WPJPS and NACI clinics and the MSPHI as a whole

HIGHLIGHTS OF THE WPJPS AND NACI IN-SCHOOL CLINICS

Table 3 below compares the two in-school health clinics studied in this Phase III evaluation by highlighting the contexts in which they operated, the approaches adopted, the multiple impacts made, and the factors identified for their efficacy and sustainability.

Table 3: Highlights of WPJPS and NACI's Health Clinics

		Willow Park Jr Public School's Clinic (for elementary school students)	North Albion Collegiate's Clinic (for secondary school students)
CONTEXT	*Environmental circumstances*	▪ Poverty and settlement-related challenges (e.g., finances, language, living conditions) ▪ High proportion of immigrant families	▪ Poverty and settlement-related challenges (e.g., finances, language, living conditions) ▪ High proportion of newcomer students ▪ Domestic instability ▪ High neighbourhood crime rates
	Health-related needs	▪ Psychological concerns - behavioural, developmental, and emotional issues - presented in 38% of cases ▪ Vision and hearing issues ▪ Communicable diseases (e.g., vaccination and immunization)	▪ Mental health - depression, stress, self-harm, suicide, and anxiety - presented in 11% of cases ▪ Acute/chronic physical health concerns ▪ Lifestyle-related issues (e.g., sexual, weight, nutrition, substance use)
	Barriers to health care	▪ Limited resources (e.g., health care coverage, time, finances, transportation) ▪ Limited heath-literacy and understanding of health care system ▪ Previous negative experiences with external health care professionals	▪ Limited resources (e.g., health care coverage, time, finances, transportation) ▪ Limited heath-literacy and understanding of health care system ▪ Cultural and family dynamics ▪ Confidentiality issues
MSPHI CLINIC SERVICES	*Delivery model*	Opened in October 2012 Medical team approach ▪ Nurse Practitioner, Family Physician, Paediatrician, and Clinic Coordinators ▪ NP and FP one half-day/week; Paediatrician one day/month	Opened in October 2012 Nurse Practitioner Model ▪ Nurse Practitioner and Clinic Coordinator ▪ NP one half-day/week
	Services offered	▪ Acute and communicable disease prevention and management ▪ Routine diagnostic assessments ▪ Psychological health services ▪ Family and caregiver support	▪ Acute and communicable disease prevention and management ▪ Routine diagnostic assessments ▪ Diagnosis, treatment, and support for mental and emotional well-being ▪ Lifestyle health services (e.g., sexual education, healthy weight management, smoking cessation)

	Population served	▪ Students from WPJPS ▪ Students from 17 feeder schools ▪ Siblings of students from WPJPS and feeder schools ▪ PFLC participants	▪ Students from NACI
	Promotion and referral efforts	▪ Promotion efforts within school ▪ Referral by school staff ▪ Word of mouth among parents	▪ Promotion efforts within school ▪ Referral by school staff ▪ Word of mouth among students
IMPACTS	On students	▪ Improved physical and psychological well-being ▪ Increased engagement, skills and achievement at school ▪ Reduced absenteeism and suspensions	▪ Improved physical and mental well-being ▪ Increased engagement, concentration, and achievement at school ▪ Reduced absenteeism ▪ Improved health literacy / self-advocacy
	On school community	▪ Reduced mental health stigma ▪ Supported the work of school staff ▪ Supplemented school board resources ▪ Meeting the TDSB Mental Health and Well-Being Strategic Plan	▪ Provided medical expertise to complement the work of school staff ▪ Reduced staff burnout ▪ Supplemented school board resources ▪ Meeting the TDSB Mental Health and Well-Being Strategic Plan
	On families and the community	▪ Accessible health care for families ▪ Improved well-being, health literacy, and advocacy of parents/caregivers ▪ Reduced mental health stigma	(*To be explored in future research*)
FACTORS FOR EFFECTIVENESS		▪ Within school location ▪ Holistic approach to primary health care ▪ Caring characteristics of clinic staff ▪ Collaboration with local health agencies (Scarborough Centre for Healthy Communities and St. Joseph Hospital)	▪ Within school location ▪ Welcoming and safe environment (for building trust and confidentiality) ▪ Holistic approach to primary health care ▪ Caring characteristics of clinic staff ▪ Partnership with the local community health centre (Rexdale Community Health Centre)

It should be noted that although the two MSPHI clinics described in this report adopted different delivery models and served two distinct age groups of students with varying health needs, both clinics did share a number of commonalities such as the environmental circumstances and accessibility barriers to health care encountered by the community, as well as the comprehensive health care services offered by the clinics. More importantly, both in-school health clinics have made a positive and multidimensional impact on the lives of students, school community and their families. The convenient within school location, holistic approach to primary health care, caring characteristics of clinic staff and a collaborative partnership with local health agencies were critical factors for their effectiveness.

LONG-TERM COST-EFFECTIVENESS OF THE MSPHI

In addition to the discernable impacts and effectiveness of the two in-school health clinics highlighted earlier, there were discussions during focus groups about the long-term cost-effectiveness of this innovative, collaborative health care initiative. As clinic staff from both case studies unanimously agreed, many children and youth in their community fell through the cracks, since their physical and psychological health needs were often unmet due to a lack of knowledge, denial, and multiple accessibility barriers. Their health issues escalated as they aged, becoming much more complex and sometimes involving the law. With the MSPHI, the in-school health clinics have become an ideal access point for modifying these students' physical and mental health trajectories. Having a health clinic located inside the school – a convenient and familiar environment – parents and caregivers were no longer confronted by additional barriers (e.g., time, money, language, and trust) when seeking medical attention for a continuum of needs their children presented with; similarly, adolescents received confidential and targeted health care directly from the clinic staff within their reach.

This "upstream approach" epitomized by the MSPHI delivers first-contact care for health promotion as well as preventative and curative interventions. It also addresses the root cause of the problem and, thereby, minimizes the risk, acceleration, and burden of health disparities in an already marginalized population. In contrast, the "downstream approach" deals with the consequences of health problems at a more advanced stage. Queue-based health care settings, such as a hospital, often manage a high volume of diverse patients with episodic health concerns. This type of care is associated with long wait times, expeditious diagnoses, and intimidating and disjointed medical attention. What's more, newcomers are unlikely to pursue queue-based health care due to various barriers and unfamiliarity with navigating the health care system. As described by a Clinic Co-ordinator,

> *From a ground level example, like many of the people we treat here, you know, otherwise would end up in hospitals and emergencies. It would cost them a lot. Otherwise, they would be dropping out of school, getting into all sorts of trouble, with the law, with different kinds of stuff. Costs a lot more then. So all those kinds of things are prevented by simple things we are doing here.* (NACI Clinic Coordinator)

The RCHC Manager further described the value of the upstream approach of the MSPHI:

> *That's exactly the function of primary care in the whole health care system. There are hospitals, the best in the world, but a lot of the health issues should be addressed upstream […] When you have a headache, you see [the NP], rather than have the person going to the extreme, that he/she injures and suicide and should be treated in the emergency room but then it is way bigger than coming*

to see [the NP] because of the headache […] So I think that's the textbook's case of how systems should work. (RCHC Manager)

Without a doubt, health-related expenditures can be reduced by the MSPHI which provides accessible care, early detection, and patient-centered intervention. While it has not been examined in Canada, cost-effectiveness of early intervention has been evaluated in the United States. For youth with limited access to health care, Karoly and colleagues (2005) found that investing in this population was associated with better health outcomes due to:

- Reduced health care expenditure on pediatric health-related issues
- Higher graduation rates from high school and college
- Higher income earnings
- Greater labour productivity during adulthood
- Lower rates of welfare dependency
- Lower rates of delinquency

Webber and others (2003) also found that students enrolled in a school-based health center (SBHC) in the Bronx, New York, visited the hospital emergency room half as often as students who attended a school without an SBHC. Similar findings were revealed for students with chronic respiratory illnesses; asthmatic students without access to a SBHC were twice as likely to be hospitalized as students who attended a school with an SBHC (Horton & Lima-Negron, 2009).

While more time and objective data from the health sector are needed to determine the long-term cost-effectiveness of the MSPHI in Toronto, the Phase II Report (Yau, Newton, & Ferri, 2013) has already pointed to the fact that establishing and maintaining in-school health clinics is economically manageable[4] as long as the tri-partnership between the school board, public health agencies, and the funding and co-ordinating agency (the TFSS in this case) is securely in place. Even without fiscal data, the cost benefit of this MPSHI is apparent, as substantiated by the three-year findings of the MSPHI evaluation on the improved health outcomes and educational benefits for students as well as the positive rippling effects on families and school communities. After all, reducing both the educational and health inequities among children and adolescents from different socio-economic groups will decelerate provincial health care and social spending down the road.

[4] Clinic setup cost was around $7,000-$10,000 for equipment and for converting a classroom into a clinic, maintenance costs for the space, as well as the costs for supplies and printing. Annual maintenance cost was approximately $30,000 for a part-time Clinic Co-ordinator to operate and support a one-day-a-week clinic within a school.

SUGGESTIONS FOR ENHANCING MSPHI EFFICACY

This final section of the report will present suggested areas for enhancing the existing effectiveness of the two clinics and the MSPHI as a whole. The focus group interviews stimulated fruitful discussions among diverse stakeholders in the school, health care, and family communities at WPJPS and NACI on further improvements. Three main recommendations were identified:

- Extending the current service
- Increasing the diversity of expertise and services
- Optimizing existing school partnerships

Extending the Current Service

Students, parents, caregivers, and clinic and school staff unanimously agreed that to cope with the increasing demand for medical attention, their respective clinics should expand the hours of operation. At WPJPS, the availability of the NP and FP was limited to one alternating half-day per week, whereas the Paediatrician was one day per month. These health care professionals, who were regularly overbooked, agreed that they could reach more student patients if there were additional days of service. Similarly, at NACI, the NP was also fully booked, sometimes two to three weeks ahead of the clinic day, and stayed beyond her scheduled hours to attend to urgent cases. To make matters worse, holidays and school professional development days, which typically fell on Mondays, the same day as the NACI clinic operation, further reduced the NP's availability to meet the health demand, especially with regards to mental health needs, of the adolescent population. One female student from NACI postulated that students might arrive to school in the morning feeling perfectly fine, but "anything could happen at any point in time" when the clinic was not open. This scenario was also applicable to WPJPS, which supported a high volume of physical and psychological needs of students from its host and feeder schools.

> *[The NP] is amazing and as I mentioned at the very beginning, I wish we had more than one day. Every day! Every morning would be lovely, you know. So the kids would know that the clinic is there for them […] There's a real need. It's not just being, trying to be selfish. There really is a need.* (NACI Vice Principal)

Aside from extending the clinic hours, stakeholders, especially those at NACI, suggested that similar in-school health clinics be offered to other high schools in priority neighbourhoods, or their on-site health services be extended to feeder schools. NACI students realized that their peers from neighbouring schools were also coping with depression and would benefit from the school-based health care that they had access to.

> *They should keep the clinic and they should spread it all out to the other schools 'cause they all need it […] Trust me, there are some students out there, even those people that I meet, even adults that are out of high school, they have their own stresses so it's like everywhere.* (Female student)

Increasing the Diversity of Expertise and Services

From the focus group interviews, school and clinic staff recognized the need for further expanding the diversity of health-related expertise and services at the WPJPS and NACI clinics. Namely, additional support for psychological health concerns, such as mental and developmental health, was articulated. Inviting additional resources from the health community, such as counsellors, therapists, and a Developmental Paediatrician, might be another option for meeting the demand for psychological health concerns while making efficient use of the clinic space which was not utilized beyond the scheduled hours. Feasible and sustainable options (e.g., in-person versus virtual) for the provision of this expertise were being considered by community health centres (SCHC and RCHC) and the TFSS. For example, mental health professionals at the RCHC suggested that they could provide mobile mental health services and make cost-effective use of the NACI in-school clinic space on the days it is not in operation.

> *When I think about how the clinic is currently structured, where they do have a day of the month, where it's vision and hearing, and then they have the rotation between pediatrician, general practitioner and the nurse practitioner, it'd be really nice if they could consider developing a day or two to actually have a mental health care professional.* (WPJPS Principal)

With respect to immunizing and vaccinating students, the WPJPS medical team identified a barrier associated with this service that could be alleviated with additional infrastructure. The Clinic Coordinator explained that vaccines must be maintained at certain temperatures; however, they did not have a proper facility such as a refrigerator to store vaccines. This reduced the number of students that could be immunized at the WPJPS clinic. As a result, some students were referred elsewhere for vaccination.

Optimizing Existing School Partnerships

Unlike external family doctors and walk-in clinics, a unique component of the MSPHI was the potential for reciprocal and collaborative student support between educators and health care professionals. At NACI, the focus group interviews revealed that a healthy collaboration existed between school and clinic staff and was credited for their continued success. Even so, the NACI Clinic Coordinator, the PHN as well as the Guidance Counsellor agreed that to facilitate student success, the world of education and the world of health care should no longer work in silos.

> *[Education and health care] both go very well together so connecting these two worlds, overcoming the approaches, barriers and different things, it's a challenge […] We can still serve them more, if we were to truly integrate it and truly function very closely.* (NACI Clinic Coordinator)

Breaking these silos was of equal importance at WPJPS. There were discussions about the need for building stronger partnerships between the WPJPS clinic and school staff through frequent dialogue. The WPJPS clinic staff suggested the need for more opportunities to communicate and collaborate with not only the host school but also its feeder schools:

> *I think [WPJPS clinic] can integrate it better. We have a good process, a good way of communicating. I think it can be still more improved […] We being a part of two big worlds, one is the world of healthcare, the world of education, there's a lot of […] bureaucratic hurdles and you know, sometimes we're in the middle of all of them, overcoming them is a big challenge.* (WPJPS Clinic Coordinator)

To enhance the supporting system for students and families, the WPJPS FP and Paediatrician wished to be able to meet with the TDSB student support staff on a regular basis, or to participate periodically in School Support Team meetings, as successfully practised at another MSPHI clinic. Through these collaborative efforts, clinic staff believed that they would be able to provide a unique, health perspective that would benefit educators in better supporting the students in question. As articulated by the Clinic Coordinator and the Paediatrician, the ability of clinic staff to update school staff of their students' health progress would enhance the school's capacity to support and champion for students in need.

> *The clinic has saved my life; otherwise, I would be dead by now!*
> (Female Student)

By all accounts, the MSPHI at both WPJPS and NACI effectively delivered primary health care to elementary and secondary school students. While there is still room for further growth and improvement, the MSPHI has provided for many children and youth in high needs communities critical health care services which were otherwise inaccessible to them. As starkly remarked by a high school student who underwent physical health and emotional difficulties:

> *The clinic has saved my life; otherwise, I would be dead by now!"*

REFERENCES

Collaborative for Academic, Social, and Emotional Learning. (2003). *Safe and sound: An educational leader's guide to evidence-based social and emotional learning (SEL) programs*. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning.

Feldstein, P.J. (2005). *Health care economics* (6th ed.). Clifton Park, NY: Thomson Delmar Learning.

Fiscella, K., & Kitzman, H. (2009). Disparities in academic achievement and health: The intersection of child education and health policy. *Pediatrics*, 123(3), 1073-1080.

Freeman, S., Sgro, M., & Mamdani, M. (2013). Novel approach to health care delivery for inner-city children. *Canadian Family Physician*, 59, 816-817.

Gail, G., Pagano, M.E., Desmond, M.S., Perrin, J.M., & Murphy, J.M. (2000). Utility of psychosocial screening at a school-based health center. *The Journal of School Health*, 70, 292-298.

Hall, L.S. (2001). *Final report: Youth and family centers program 2000–2001*. Dallas Youth and Family Centers Program. Dallas, TX: Dallas Independent Schools District.

Horton, J.M., & Lima-Negron, J. (2009). *School-based health centers: Expanding the knowledge and vision.* New York State Coalition for School-based Health Centers.

Juszczak, L., Melinkovich, P., & Kaplan, D. (2003). Use of health and mental health services by adolescents across multiple Delivery sites. *Journal of Adolescent Health*, 32(6), S108-118.

Kaplan, D.W., Brindis, C.D., Phibbs, S.L., Melinkovich, P., Naylor, K., & Ahlstrand, K.A. (1999). comparison study of an elementary school-based health center: effects on health care access and use. *Archives of Pediatrics and Adolescent Medicine*, 153(3), 235-243.

Karoly, L., Kilburn, M.R., & Cannon, J. (2005). *Early Childhood Interventions: Proven Results, Future Promise*. Santa Monica, CA: RAND Corporation.

Kisker, E.E. & Brown, R.S. (1996). Do school-based health centers improve adolescents' access to health care, health status, and risk-taking behavior? *Journal of Adolescent Health*, 18, 335-343.

Klein, J.D., Handwerker, L., Sesselberg, T.S., Sutter, E., Flanagan, E., & Gawronski, B. (2007). Measuring quality of adolescent preventive services of health plan enrollees and school-based health center users. *Journal of Adolescent Health*, 41, 153-160.

New York State Department of Health. (2009). *School-based health centers fact sheet*. Retrieved April 12, 2009 from http://www.health.state.ny.us/nysdoh/school/skfacts.htm

Visher, M. (2007). *Partnership for coverage: Increasing access to health insurance*. Albany, NY: New York State Coalition for School-Based Health Centers. Retrieved November 4, 2014 from http://partnership4coverage.ny.gov/hearings/2007-10-03/testimony/docs/melva_visher_-_new_york_state_coalition_for_school-based_health_centers.pdf

Webber, M.P., Carpinello, K.E., Oruwariye, T., Lo, Y., Burton, W.B., & Appel, D.K. (2003). Burden of asthma in innercity elementary schoolchildren: Do school-based health centers make a difference? *Archives of Pediatric Adolescent Medicine*. 157, 125-129

World Health Organization. (2007). *Helping parents in developing countries improve adolescents' health*. WHO Press.

Yau, M., & Newton, L. (2012). *Model schools paediatric health initiative: In-school health clinics – phase I report* (Research Report 12/13-02). Toronto, Ontario, Canada: Toronto District School Board.

Yau, M., Newton, L., & Ferri, M. (2013). *Model schools paediatric health initiative: In-school health clinics – phase II report* (Research Report 13/14-02). Toronto, Ontario, Canada: Toronto District School Board.

Yau, M., O'Reilly, J., Kozovski, K., Rosolen, L., & Archer, B. (2011). *2011 grades 9-12 student census: School report* (School Report). Toronto District School Board: Toronto District School Board.

Yau, M., O'Reilly, J., Kozovski, K., Rosolen, L., & Archer, B. (2013). *2012 kindergarten – grade 6 parent census: School report* (School Report). Toronto, Ontario, Canada: Toronto District School Board

APPENDICES

- Appendix A: Interview Protocol for Clinic Staff
- Appendix B: Interview Protocol for School Staff
- Appendix C: Interview Protocol for NACI Students
- Appendix D: Interview Protocol for WPJPS Parents and Caregivers

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left blank intentionally for proper pagination when printing.

APPENDIX A: INTERVIEW PROTOCOL FOR CLINIC STAFF

(June 2014)

<table>
<tr><td colspan="2">Focus of this Phase III research (funded by the Ministry):
To further understand how MSPHI clinics can help support the physical health and mental well-being of students and families in local school communities.
• Please let us know if it's fine for us to use audio-recording for note-taking purposes only. None of your names will be used in the report. Once all the information is transcribed, the recording will be erased.</td></tr>
<tr><td>Descriptions of Focus Group Participants</td><td>• Date of Focus Group: _____
• School: _____
• Participants' roles:
_____
• Participants' ethno-racial backgrounds:
_____</td></tr>
<tr><th>Topic</th><th>Interview Questions</th></tr>
<tr><td>Context/ Background</td><td>1. What are the common health-related needs of the students in this school/or community?
○ How common?
○ What are some of the causes?
○ Any differences – by gender, cultural background, age, etc.
2. Do students/families in this community have barriers in accessing health care services?</td></tr>
<tr><td>Clinic services and usage</td><td>3. Who referred students to this in-school health clinic?
4. Who are most of your clients?
• Gender, culture, age, …
• Host school vs. feeder schools
5. How do you support the students / families in this in-school clinic?
• Clinic co-ordinator
• NP
• Other medical professionals
6. What are the differences/advantages of the services offered by your in-school clinic vis-à-vis those of the regular health care services, esp. in the context of the students or families in this community?
• How is your care different from that of regular health clinics/family doctors?
• What added value can this kind of in-school clinics offer that the school (e.g., school administrators, or guidance counsellors) and regular clinic cannot provide for the students/families?</td></tr>
</table>

Impacts	7. As a result of the services/support offered by the clinic, what impacts have been made on the students / families? • Physical health • Mental, social and emotional well-being • School work, attendance, engagement 8. Any anecdotes/testimonies from students / families – about the before and after? 9. Mental health is a stigma in many communities. Has this in-school health clinic in any way helped in reducing the stigma among the students and/or in heightening the awareness on Mental and behavioural health. 10. Do you think this kind of in-school health clinic will be beneficial for other high schools? *(Question for NACI clinic only)*
Conditions for success / Improvements	11. What do you think are the conditions for success/effectiveness of this model? ○ Funding ○ Partnerships – medical professions, student support staff, health care centres ○ Staff – caring adults, …. ○ Confidentiality ○ Relationships with the school and its staff 12. Do you have any suggestions on how to improve or enhance the services offered by the clinic?

APPENDIX B: INTERVIEW PROTOCOL FOR SCHOOL STAFF

(May 2014)

Focus of this Phase III research (funded by the Ministry)**:**

- To continue to understand how MSPHI clinics can help support the physical health and mental well-being of students and families in local school communities.

Please let us know if it's fine for us to use audio-recording for note-taking purposes only. Once all the information is transcribed, the recording will be erased.

Topic	Interview Questions
Context/ Background	1. Can you describe the demographics of your school community? E.g., SES, ethno-racial and immigrant background, etc. 2. What kinds of health-related needs do your students have? – physical, emotional, mental, psychological, developmental – that may have affected their learning. 3. Are there any barriers for some of these students to access health/medical services? – uninsured, unattached, lack of services in the community, SES related, immigrant related, unfamiliar with or intimidated by the health system (not knowing or not confident enough to navigate), language issue, etc.
Impact/ Benefits	4. The (MSPHI) school-based medical clinic was introduced in your school community two years ago. Based on your observation, what differences has this in-school health clinic made to your students' lives? E.g., ○ How does this MSPHI clinic address the access barriers mentioned earlier? ○ Are there particular groups of students/families who have used the clinic more often than others? Why? (language issues, unattached/uninsured…..etc.) ○ What kinds of support/services are offered by the MSPHI clinic (including the Clinic Co-ordinator)? ○ Are your students able to receive the health services they need through this in-school health clinic in terms of: ▪ Physical health ▪ Mental health – developmental, behavioural, socio-emotional, learning difficulties/disabilities, worries, anxieties, …. ○ How do students get referred to the in-school clinic? by parents, teachers, other school staff, or through School Support Team, etc.? ○ As far as your students are concerned, how do the MSPHI services differ from those of regular clinics in the community? (e.g., in terms of waiting lists) 5. Aside from students, what value has the MSPHI clinic added to the school community as a whole? ○ Parents/families (siblings) ○ School effectiveness 6. How beneficial do you think the MSPHI initiative is for "feeder" schools? Would the benefits be different from those for the host schools? 7. Do you think this MSPHI initiative can contribute to the board's Mental Health and Well-being Strategy? 8. Mental health is a stigma in many communities. Has this in-school health clinic in any way helped in reducing the stigma among the communities and/or in

	heightening the awareness on Mental and behavioural health.
Areas of concern /or for improvement	9. Do you think the in-school clinic has been well / fully utilized? 10. Among your <u>school staff:</u> ○ To what degree are they aware of the existence of the school-based medical clinic? ○ To what extent do they consider the clinic an important part of the school's support structure/services? 11. Among your <u>parents and/or students:</u> ○ To what degree are they aware of the existence of the school-based medical clinic? ○ To what extent do they consider the clinic an important part of their support? 12. How can the services of this in-school health clinic be improved or enhanced?

APPENDIX C: INTERVIEW PROTOCOL FOR NACI STUDENTS

(June 2014)

Focus of this Phase III research (funded by the Ministry)**:**

To continue to understand how MSPHI clinics can help support the physical health and mental well-being of students and families in local school communities.

- *Your real stories are very important for us to understand whether or how useful and beneficial this clinic is for students like you.*
- *The information shared in this interview will be kept confidential, and will not be shared outside the group. If there are things that you want to tell us as researchers but don't feel comfortable to discuss as a group, we can have a private conversation after the meeting.*
- *Please let us know if it's fine for us to use audio-recording for note-taking purposes only. None of your names will be used in the report. Once all the information is transcribed, the recording will be erased.*

Topic	Interview Questions
Descriptions of Focus Group Participants	• Date of Focus Group: _____ • School: _____ • Number of participants: # Females _____ # Males_____ • Grades of participants _____ • Participants' ethno-racial backgrounds: _____
Context/ Background	1. Can you tell me some of the more critical health-related needs female/male students have in this school – physical, emotional, mental, psychological, developmental – that may have affected their learning. 2. Are you aware of any barriers some students have in accessing health/medical services? – uninsured, unattached, lack of services in the community, SES related, immigrant related, unfamiliar with or intimidated by the health system (not knowing or not confident enough to navigate), language issue, etc.
Participants' usage of clinic services / benefits	3. How has this in-school health clinic helped or benefited you? o For what kinds of health issues o How many times have you used the clinic 4. Do you think you have improved as a result of the support you received from the clinic? In what ways? – *doing better at school – academically , socially and emotionally, becoming a stronger and healthier person, …..* 5. What do think you would be without this service? 6. Thinking back, did you have any hesitation about using this clinic initially? Why? 7. Who referred or recommended you to come? 8. Would you recommend it to other students?

About the clinic itself	9. Can you tell us how the service of your school's clinic differs from those of regular clinics in the community? o Types of support/services offered o The style of care or attitudes of your MSPHI staff/health care providers o Accessibility o Confidentiality o Follow-up / referral to specialists o Being able to be open about your problems/difficulties 10. Are students in this school generally aware of the existence of the school-based medical clinic? 11. Do students in general associate this clinic with a stigma (for people with problems), or do they see this an important part of their support? 12. How can the services of this in-school health clinic be improved or enhanced?
Other questions	13. Mental health is a stigma in many communities. Has this in-school health clinic in any way helped in reducing the stigma among the students and/or in heightening the awareness on Mental and behavioural health. 14. Do you think this kind of in-school health clinic will be beneficial for other high schools?

APPENDIX D: INTERVIEW PROTOCOL FOR WPJPS PARENTS AND CAREGIVERS

(June 2014)

Information about parent informants

# of females: _____ # of males: _____

Ethno-racial backgrounds: _____

# of parent from host schools (Willow Park) _____ # of parents from feeder schools: _____

Interview Questions

1. Have there been any barriers for your child/family to access health care services in the community? *– e.g., lack of OHIP cards, no family doctors, transportation costs, unfamiliar or uncomfortable with the health care system, not knowing how to navigate the health system, language barriers, hard to take time off from work, hard to make appointments, etc.*

2. Who referred or recommended your child to Willow Park's in-school health clinic?

3. How has your child/family been supported by this in-school clinic?
    - Types of health issues addressed – physical, developmental, mental, ….
    - Kinds of services/support offered by the clinic staff

4. What kinds of benefits has your child gained as a result of the care/services offered to him/her by the clinic? (before vs. after)
    - Health wise
    - At school – *e.g., school attendance, school work, class behaviours, school engagement*
    - At home

5. Has this clinic benefited your family too?

6. Can you compare/contrast the types of services or care provided by the Willlow Park clinic to those offered by regular clinics in the community?

7. As a parent from a feeder school, do you find it convenient to use the Willow Park's clinic?

8. Do you have any suggestions on how the Willow Park clinic can be improved?