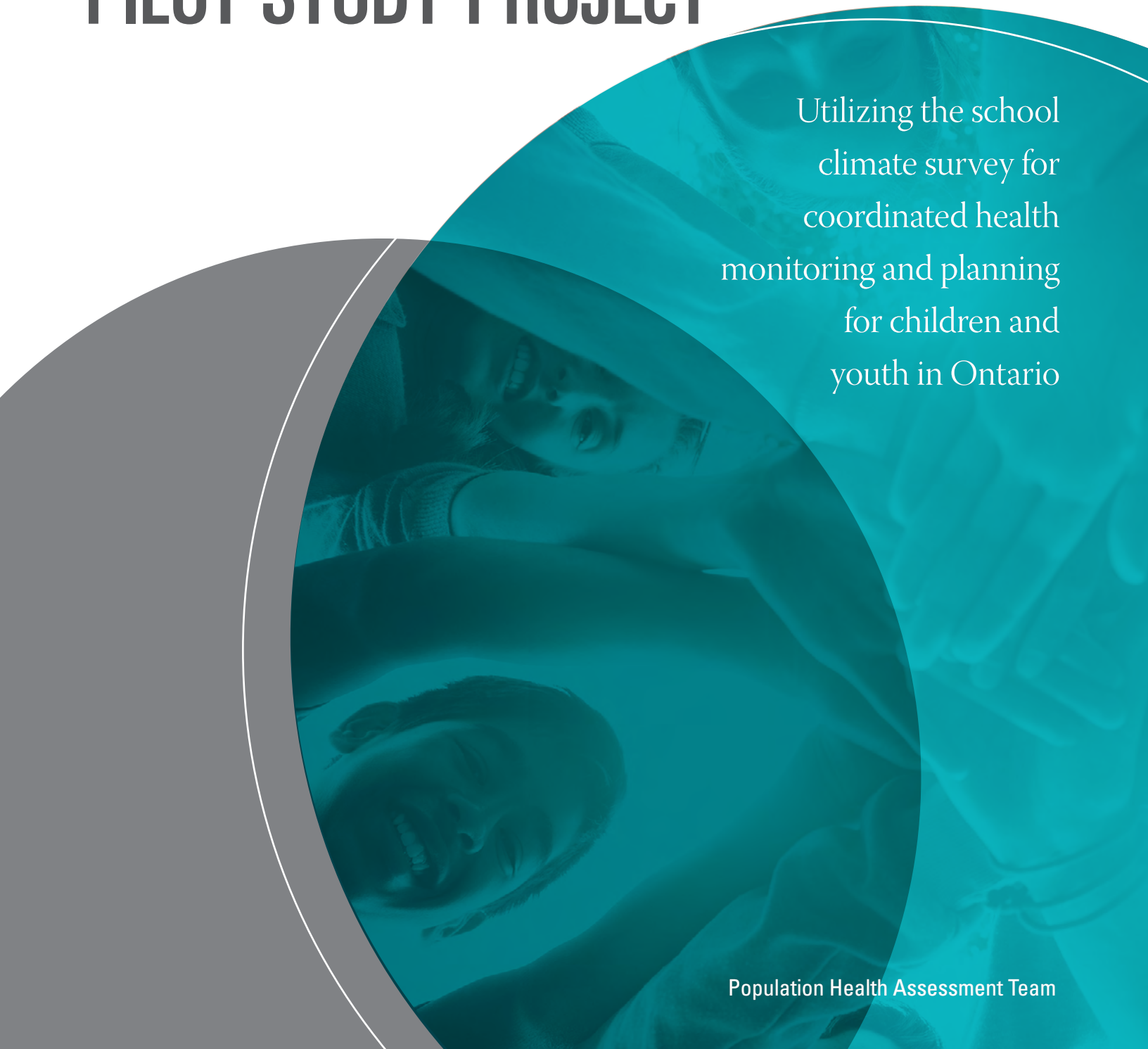
CHILDREN COUNT

December 2019

THE CHILDREN COUNT PILOT STUDY PROJECT

Utilizing the school climate survey for coordinated health monitoring and planning for children and youth in Ontario



Population Health Assessment Team

A Locally Driven Collaborative Project

ACKNOWLEDGEMENTS

The Pilot Study Project Team thanks Public Health Ontario (PHO) for its support of this project. The team gratefully acknowledges funding received from PHO through the Locally Driven Collaborative Projects program. The views expressed in this publication are the views of the project team, and do not necessarily reflect those of PHO.

PILOT STUDY PROJECT TEAM

PROJECT LEAD:

Nicole Dupuis, MPH, Director of Health Promotion, Windsor-Essex County Health Unit

PROJECT CO-LEADS:

Ramsey D'Souza, MPH, Manager of Epidemiology and Evaluation, Windsor-Essex County Health Unit

Jessica Deming, MSc, Epidemiologist, Region of Waterloo Public Health and Emergency Services

RESEARCH COORDINATORS:

Stephanie Lu, PhD, Program Evaluation Specialist, Windsor-Essex County Health Unit

Saamir Pasha, MPH, Epidemiologist, Windsor-Essex County Health Unit

Smit Patel, MPH, Epidemiologist, Windsor-Essex County Health Unit

STEERING COMMITTEE:

School Board Representatives:

Heather Campbell, MA, OCT, Director of Education, Rainy River District School Board

Tracey Idle, MA, Mental Health Lead, Rainy River District School Board

Sharon Pyke, EdD, Superintendent of Education – Student Well-Being, Greater Essex County District School Board

Teresa Hoffman-Sartor, Vice-Principal, Greater Essex County District School Board

Katie Colameco, MSW, RSW, Mental Health Lead, Lambton-Kent District School Board

Mark Houghton, Principal, Lambton-Kent District School Board

Gary Girardi, MEd, Superintendent of Education – Human Resources, Lambton-Kent District School Board

Christine Preece, MHS, MCHES®, Mental Health Lead, St. Clair Catholic District School Board

Lisa Demers, Superintendent, St. Clair Catholic District School Board

Dr. Guy Gignac, C.Psych, Mental Health Lead and Supervisor of Clinical Services, Conseil Scolaire Catholique Providence

Frédéric Rivière, Principal, Conseil Scolaire Catholique Providence

Mirella Fata, MA, Mental Health Lead, Thunder Bay Catholic School Board

Public Health Representatives:

Stephanie Cran, Health Promotion Coordinator, Northwestern Health Unit

Dorian Lunny, MSc, Epidemiologist, Northwestern Health Unit

Shannon Robinson, MSc, Manager of Chronic Disease Prevention, Northwestern Health Unit

Sophia Wenzel, MPH, Health Promotion Planner, Thunder Bay District Health Unit

Jennifer McFarlane, Manager of Family and School Health, Thunder Bay District Health Unit

Anita Cramp, PhD, School Health Manager, Middlesex-London Health Unit

Laura Zettler, MSc, Epidemiologist and Program Manager, Chatham-Kent Public Health Unit

Crystal Palleschi, MSc, Epidemiologist, Lambton Public Health

Kelly Farrugia, MA, RN, Manager of Healthy Schools, Windsor-Essex County Health Unit

ACKNOWLEDGEMENTS

KNOWLEDGE USERS:

Janine Monahan, MSc, Manager of School Health, Kingston, Frontenac and Lennox & Addington Public Health

Suzanne Biro, MPH, Foundational Standard Specialist, Kingston, Frontenac and Lennox & Addington Public Health

Sarah Collier, MPH, Manager of Surveillance and Epidemiology, Toronto Public Health

Paul Fleiszer, MSc, Associate Director, Surveillance and Epidemiology, Toronto Public Health

Mohammed Kharbouch, MSc, Epidemiologist, Peterborough Public Health

Po-Po Lam, PhD, Epidemiologist, Peel Public Health

Heather Pimbert, MSc, Epidemiologist, York Region Public Health

Mackenzie Slifierz, PhD, Epidemiologist, Hamilton Public Health Services

Adam Stevens, MSc, Epidemiologist, Brant County Health Unit

Shailee Tanna, MSc, Epidemiologist, Niagara Region Public Health

Fangli Xie, MSc, Epidemiologist, Durham Region Health Department

Advisory Committee:

Haley Hamilton, PhD, Scientist, Centre for Addition and Mental Health, Ontario Student Drug Use and Health Survey (OSDUHS)

William Pickett, PhD, Professor and Head, Department of Public Health Sciences, Queen's University, Health Behaviour in School-aged Children (HBSC)

Scott Leatherdale, PhD, Associate Professor, University of Waterloo, COMPASS

Gillian Alton, PhD, Epidemiologist, Better Outcomes Registry and Network (BORN) Ontario

Project Practicum Students:

Rachel Blok, MSW, Practicum Student,University of Windsor

Debasree Deb, MPH, Practicum Student, Western University

Suggested Citation:
Population Health Assessment LDCP Team. The Children Count Pilot Study Project. Windsor, ON: Windsor-Essex County Health Unit; 2019.

For more information, please contact:
ChildrenCount@wechu.org

EXECUTIVE SUMMARY

Supporting student achievement and improving overall quality of life for children and youth is a priority shared across multiple sectors, including health and education. In 2017, the Children Count Pilot Study Project Team set out to explore the feasibility of coordinated monitoring and assessment of child and youth health, utilizing the school climate survey, to address local health data gaps. Six school board and public health unit pairings piloted the Healthy Living Module as part of the school board's school climate survey in the 2018/19 academic year. The Healthy Living Module included 17 questions on mental health, healthy eating, and physical activity. While every school board and public health unit pairing took a different approach to implementing the Healthy Living Module to suit their needs, findings from the pilot study demonstrate that this model of data sharing is feasible, replicable in school boards with a variety of characteristics, and valuable for strengthening partnerships. The specific challenges and lessons learned during this pilot study are captured in this report from the perspective of the pilot site organizations. In addition, The Children Count Healthy Living Module Toolkit was created to enable other school boards and public health units to adopt a similar collaborative partnership model.

ABBREVIATIONS

CKPH	Chatham-Kent Public Health
CSC	Conseil Scolaire Catholique Providence
GECDSB	Greater Essex County District School Board
HLM	Healthy Living Module
LDCP	Locally Driven Collaborative Project
LHIN	Local Health Integration Network
LKDSB	Lambton-Kent District School Board
LPH	Lambton Public Health
MLHU	Middlesex-London Health Unit
MOU	Memorandum of understanding
NWHU	Northwestern Health Unit
OPHS	Ontario Public Health Standards
PAR	Participatory Action Research
PASS	Physical Activity, Sedentary Behaviour and Sleep
PHO	Public Health Ontario
REB	Research ethics board
RRDSB	Rainy River District School Board
SCS	School climate survey
SCCDSB	St. Clair Catholic District School Board
SHAPES	School Health Action, Planning and Evaluation System
SMHO	School Mental Health Ontario
TBCDSB	Thunder Bay Catholic District School Board
TBDHU	Thunder Bay District Health Unit
WECHU	Windsor-Essex County Health Unit

BACKGROUND

"Healthy, activing living benefits both individuals and society in many ways—for example, by increasing productivity and readiness for learning, improving morale, decreasing absenteeism, reducing health-care costs, decreasing anti-social behavior such as bullying and violence, promoting safe and healthy relationships, and heightening personal satisfaction. Research has shown a connection between increased levels of physical activity and better academic achievement, better concentration, better classroom behavior, and more focused learning. Other benefits include improvements in mental health and wellbeing, physical capacity, self-concept, and the ability to cope with stress."

– The Ontario Curriculum, Grades 1-8: Health and Physical Education (Ministry of Education, 2019)

Supporting student achievement and improving overall quality of life for children and youth is a priority shared across multiple sectors, including health and education. In the Ontario Curriculum (2019), and reports Achieving Excellence (Ministry of Education, 2014) and Supporting Minds (Ministry of Education, 2013), the Ontario Ministry of Education has acknowledged the important interrelationship between health, well-being, and educational outcomes. As well, the Ontario Ministry of Health, in their release of the Ontario Public Health Standards (OPHS) (Ministry of Health and Long-Term Care, 2018), underscored the importance of this connection with the inclusion of a School Health Standard, including a requirement for assessment and monitoring of school-aged child and youth health.

In order to develop evidence-based, high quality programs and resources that meet the needs of students, reliable local data is needed. In the report, **Children Count: Assessing Child and Youth Surveillance Gaps for Ontario Public Health Units** (Population Health Assessment LDCP Team, 2017), public health units and school boards identified a need for local data related to mental health, physical activity, and healthy eating for school-aged children and youth.

In 2017, the Children Count Locally Driven Collaborative Project (LDCP) Team convened a Task Force of leaders in education, public health, research, government and non-governmental organizations to explore solutions and make recommendations for improving assessment and monitoring of child and youth health. In the release of their recommendations, the **Children Count Task Force** (Children Count Task Force, 2019) recommended building on the existing infrastructure by using the Ministry of Education mandated school climate survey (SCS). The SCS addresses student, staff, and parent/caregiver perceptions of safety, bullying, and harassment as well as diversity; however, schools are able to expand survey content to capture additional information related to student health and well-being (Ministry of Education, 2018). The SCS provides population level data for children and youth grades 4 to 12 (i.e., children and youth aged 8 to 18 years old) and represents a significant opportunity to understand local health needs of this population. The Ministry of Education requires that school level data is collected through a SCS at minimum every two years, allowing for targeted programming and supports to be developed by school principals, school board stakeholders, and public health units.

CHILDREN COUNT PILOT STUDY PROJECT

A number of factors and life experiences contribute to student overall health or well-being, some within education's sphere of influence. Skills for healthy living can be taught, modeled, and supported in schools that have a positive climate, are culturally-informed, and adequately resourced. This often requires a strategic and collaborative community approach involving educators, parents/guardians, health promotion professionals, mental health professionals, cultural leaders, and community leaders.

The domains that make up overall health are inter-connected; targeting one domain of health also targets others. As an example, teaching and supporting healthy eating and physical activity benefits individual and group physical health and may also benefit individual and group mental and social health.

School boards, with the support of partnering public health units, can collaborate to:

- Create a positive social climate where students feel safe, cared for, and know that they belong;
- Educate students about healthy living and mental wellness from a culturally appropriate framework;
- Help students develop skills to cope with stress and/or adversity;
- Help students develop healthy relationships; and
- Help connect students to mental health supports.

The Children Count Pilot Study began in December 2017 with a goal to explore the feasibility of coordinated monitoring and assessment of child and youth health, utilizing the SCS, to address local health data gaps. This provincial project consisted of six school board and public health unit pairings who piloted a Healthy Living Module (HLM) as part of the school board's SCS. The HLM provided questions in the areas of mental health, healthy eating, and physical activity designed to meet the needs of local school boards and public health units **(Appendix A).**

The objectives of the Pilot Study were:

1. To work collaboratively to develop a HLM for the SCS;
2. To pilot test and evaluate the applicability and feasibility of the partnership between public heath units and school boards in coordinated monitoring and assessment utilizing the SCS; and
3. To develop a toolkit for implementation of coordinated monitoring and assessment for health service planning using the SCS for child and youth health in Ontario.

To build and strengthen the relationships between local school boards and public health units, a Participatory Action Research (PAR) approach was used by the Pilot Study Project Team in the Children Count Pilot Study. PAR projects, at their core, require collectively and collaboratively identifying and solving a problem (Baum, MacDougall, & Smith, 2006). At every stage of the pilot study, the partnered school boards and public health units were encouraged to engage in data collection, analysis, and reflection processes. As a result, decisions were action-oriented and data was used to strengthen partners' advocacy for joint planning of programs and services related to student health and well-being.

Together, pilot sites (school board and public health unit pairings) developed a supplemental HLM that included questions for students in grades 4-12 in priority areas identified in the original Children Count Report, specifically, mental health, healthy eating, and physical activity (Population Health Assessment LDCP Team, 2017). The HLM was used by all six school board pilot sites; however, the implementation process differed to accommodate the various SCS tools and processes of each participating school board.

The HLM enhanced each school board's SCS, identifying what schools can do to positively support student well-being in partnership with the local public health unit. The HLM was also developed to align with board mental health strategies and the work of School Mental Health Ontario (SMHO) with respect to student mental health and well-being.

The HLM asks questions about student nutrition, physical activity, sleep, relationships at school, help-seeking, and general coping and life satisfaction. Findings from the HLM supplement enhanced school climate data interpretation and further informed local board and public health unit collaborative planning on behalf of student well-being.

The findings from the Children Count Pilot Study have been captured in this report, along with the challenges faced and lessons learned—this documentation demonstrates how the HLM can be adopted in various settings across Ontario. In addition, The Children Count Healthy Living Module Toolkit was created to support other school boards and public health units to adopt a similar collaborative partnership model. The Toolkit includes practical suggestions and tools for implementation, including samples of a data sharing agreement, parent notification letter, data reporting template, infographic, and data analysis plan.

Findings from the HLM supplement enhanced school climate data interpretation and further informed local board and public health unit collaborative planning on behalf of student well-being.

PLANNING

1.1 Recruitment

To best understand the relevance of the HLM questions and its application in a variety of settings, the Pilot Study Project Team sought to recruit school boards that represented:

- Catholic, and Public
- English, and French
- Urban, rural mix, mostly rural, and mostly urban
- Geographic regions (i.e., northern, southern Ontario)

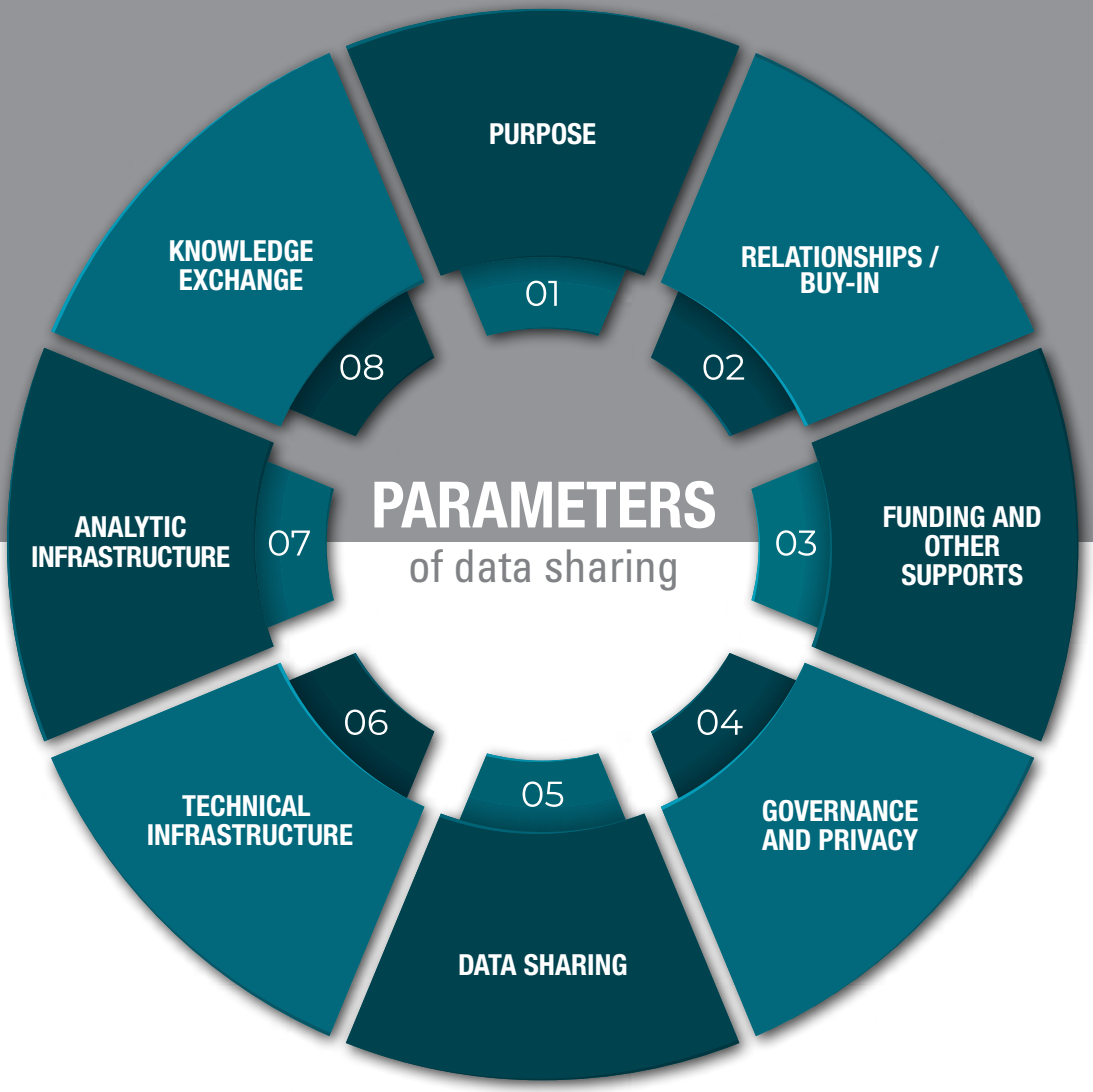
In winter 2018, formal invitations to participate as a pilot site organization in the study were sent via email to all 74 publically-funded school boards within Ontario. Additionally, school boards and public health units involved in the previous two Children Count projects were approached and invited to consider continued participation. The key criterion for consideration was the ability of the school board to implement the SCS in the 2018/2019 academic year. Six school boards and five public health units were successfully recruited to form a Steering Committee for the project, establishing the collaborative partnership that was essential to developing the HLM and the necessary infrastructure to enable data sharing. Participating school boards included representation from Catholic, Public, English and French schools located in Northern and Southern Ontario, including from a variety of geographical settings, from mostly urban to mostly rural.

1.2 Building collaborative partnerships

Public health units and school boards have varying expertise and capacity for collecting, analyzing, and reporting and using data to inform program planning, to direct resources, and to evaluate outcomes. By working together in a collaborative partnership, both school boards and public health units benefit from shared expertise, perspectives, resources and skills; this ensures more strategic use of local data and better outcomes overall.

The process of building collaborative partnerships around data is depicted in The Seven Parameters of Data-sharing (UC Berkeley Center for Healthcare Organizational + Innovation Research, 2016). As described by the creators of the framework, a "data-sharing infrastructure begins and ends with a clear purpose and strong buy-in from a broad array of key community stakeholders … the data can be shared, first within an organization/agency/sector, then across sectors. The entire process is iterative and each of the parameters builds on the others" (UC Berkeley Center for Healthcare Organizational + Innovation Research, 2016, p. 3). With the addition of an eighth parameter for Knowledge Exchange, this process accurately describes the process undertaken for the Children Count Pilot Study.

By working together in a collaborative partnership, both school boards and public health units benefit from shared expertise, perspectives, resources and skills; this ensures more strategic use of local data and better outcomes overall.



Parameter 1: Purpose

The purpose of the Children Count Pilot Study was to develop and pilot a HLM, enhance and build relationships, share resources for implementation and analysis, and to use the findings to aid in evidence-informed decision-making for joint program planning to, ultimately, improve student well-being and educational outcomes.

The Pilot Study Project Team viewed access to local data as a shared goal of school boards and public health units. Therefore, the guiding principles for collaboration in this project were to ensure that questions created for the HLM were meaningful to both partner agencies, and that the information being collected would be put to use in a positive way for improving school climate and supporting collaborative planning of health and wellness programs in schools.

Parameter 2: Relationships/buy-in

All of the school board and public health unit pairings participating in the pilot study already had established relationships with one another before embarking on this project. Each school board and public health unit pairing approached their collaborative partnership differently based on their local context, governance, and capacity. For example, Terms of References and data sharing agreements were created for some of the pairings for this pilot study to formalize the collaboration; however, in most cases the pilot study's research ethics application served as both a memorandum of understanding (MOU) and data sharing agreement.

In keeping with the PAR model, all work and decisions related to the SCS were driven by the local school boards, following their typical processes and protocols, with input and support from the public health units. The development of the HLM occurred through face-to-face meetings with the Steering Committee, which served to build relationships and trust between pilot site representatives, a process that was supplemented with teleconferences to complete the work.

Parameter 3: Funding and other supports

This pilot study was enabled through grant and in-kind contributions. Funding was received from Public Health Ontario's LDCP funding stream for two years (2018-2019). The LDCP funding supported the work of the Research Coordinators, face-to-face meetings, graphic design and language translation services, and knowledge exchange activities. The LDCP funding was important for enabling the development of both the HLM and the The Children Count Healthy Living Module Toolkit.

In-kind resources were used to plan and implement the SCS/HLMs. School board staff resources included the mental health leads, principals, teachers, and administrators. Public health unit resources included staff time from epidemiologists, school health program planners and managers.

Parameter 4: Governance and privacy

A research ethics application for the pilot study was completed and approved by The University of Windsor's research ethics board (REB). For most of the pairings between school boards and public health units, the research proposal and approved research ethics application served as a MOU and data sharing agreement. For pilot sites that needed additional supporting documents, either a separate data sharing agreement was created, or an expedited ethics review was completed using the approved research ethics application from the University of Windsor's REB. A fundamental clause highlighted in the research ethics application, one that is typically addressed in a MOU, stated that the data collected as part of the HLM within the SCS was solely owned by the school board, and that how the data was shared with public health units would be based on their discretion only. Public dissemination of the results was solely up to the schools and school boards, whereas public health units that had access to the data were able to use the information to help inform their own programming as well as joint initiatives with their school board counterparts. Any publication made by the public health unit would require prior permission from the local school board.

Once the pilot study was underway, a Terms of Reference was also developed for the Steering Committee to outline roles and responsibilities and the decision-making process for the group. A key part of PAR revolves around building consensus and active engagement during the research, and these items were reflected in the Terms of Reference.

Parameter 5: Data sharing

School boards and public health units agreed early on that the school boards would have ownership of the data. This element of the partnership was an important factor that facilitated buy-in from school board partners. Partnership public health units were to be given access to the data as needed for the purposes of analysis and reporting, but they would not be able to publish any data results without permission from their local school board who retained the ownership. Data sharing agreements were initiated by school boards given their ownership status of the data source. Some school boards normally outsource their SCS to third party entities, and as a result there were additional nuances that applied in these scenarios. When this was the case, the data sharing process agreement involved additional items related to data ownership, transfer, and the collection process. To offset barriers related to third party data collection for the SCS, the HLM was administered separately from the SCS, but during the same timeframe as the SCS. Please see The Children Count Healthy Living Module Toolkit for a sample data sharing agreement.

School boards and public health units agreed early on that the school boards would have ownership of the data. This element of the partnership was an important factor that facilitated buy-in from school board partners.

Parameter 6: Technical infrastructure

Participating school boards and public health units had access to a central research support team through the Windsor-Essex County Health Unit (i.e., the Pilot Study Project Team) that provided technical expertise on the collection, analyzing, and sharing of HLM data. Additionally, the Pilot Study Project Team either assisted with, or conducted, the data analysis on behalf of school boards and public health units when such support was requested. This centralized analytic support enabled consistency in the approach to data analysis and reporting across all the pilot sites. The Pilot Study Project Team's involvement also allowed for documentation of processes and lessons learned throughout the entirety of the pilot study. The findings in this report provide insight into the time and resource investment made by public health units and school boards. Furthermore, it was important to the Pilot Study Project Team to demonstrate consistency in data analysis despite differing resources and capacity, so that the developed technical infrastructure would support future analysis.

Participating public health units agreed to support future analysis of SCS/HLM data for their school board partners, thus enabling continued partnership and sharing of resources into the future.

Parameter 7: Analytic infrastructure

The Pilot Study Project Team offered analytical support to all pilot school boards to develop a consistent framework and data analysis plan. These efforts helped to ensure consistent data quality and comparability of findings between all of the pilot sites. Developing a data analysis plan included consultations with pilot sites to determine requirements for analysis and reporting, including how to address analytical challenges (e.g., small counts and data suppression). The epidemiologist leading the analysis from the Pilot Study Project Team also had the opportunity to refine the analytic process after each subsequent pilot site, based on the needs of each respective pilot site and lessons learned along the way. The end result was a streamlined approach complete with guidelines on how to analyze and report on HLM data. For an example data analysis plan, please see the The Children Count Healthy Living Module Toolkit.

Parameter 8: Knowledge exchange

The use of a PAR model led to the development of a common goal between school boards and public health units, namely the joint creation, through collaboration, of knowledge on student health and well-being using the HLM. The pilot site representatives brought forward approaches, benefits, and challenges that facilitated engaging conversations and discussions. This led to more meaningful research findings, as their interactions and relationships were central to the research process, engaging with each other purposefully.

Public health units provided support to school boards in interpreting the results of their HLM, and in some cases, assisted in knowledge exchange activities with school staff and principals. School board representatives provided direction on the best methods for presenting and sharing information with stakeholders by reviewing drafts with principals for feedback. Various methods were used to share information with students and parents/guardians, and the school board representatives were able to share ideas and learn from each other's experiences.

1.3 Developing the Healthy Living Module

To inform the development of the HLM and make the most of face-to-face meetings, the Pilot Study Project Team conducted preliminary research using the following sources of information:

- Telephone interviews with representatives from school boards (n=6) and public health units (n=6) who were interested in being a pilot site organization.
- A scan of existing validated indicator frameworks on physical activity, healthy eating, and mental health.
- A scan of existing and relevant health and SCSs.

Telephone interviews

Representatives from each of the pilot site organizations were interviewed by the Research Coordinator to determine their reasons for wanting to be involved and expectations for being involved in the Children Count Pilot Study.

For public health units, the following information was also collected:

- Past and present level of engagement with partnering school board, including involvement in administrating the SCS.
- Any successful past or present experiences in working with their local Board of Education.
- Anticipated challenges or barriers to being involved in the Children Count Pilot Study.

For school boards, the following information was also collected:

- Current method (i.e., electronic or paper-based) and timing for administering the SCS.
- Persons responsible for developing their SCS (e.g., hired researcher/third party group, school board staff).
- Extent and nature of questions in past SCSs that are about physical health, healthy eating, and mental health.
- Number of questions asked in past SCSs and any known restrictions for adding more questions.
- Other surveys that have been administered to measure student behaviour, health, and wellness.
- Past and present level of engagement with their partnering public health unit.
- Any successful past or present experiences in working with their partnering public health unit.
- Anticipated challenges or barriers to being involved in the Children Count Pilot Study.

The key findings from these telephone interviews are summarized in Table 1. Overall, most school boards (n=5, 83%) agreed that creating a single evidence-based survey or module for health-related topics would be beneficial. They also described their relationship to their local public health unit as "moderately" to "fully involved." At the time of interview, half of the school boards (n=3, 50%) had questions related to physical health, mental health, and healthy eating in their SCS, while the other half (n=3, 50%) had questions related to only mental health. Half of the school boards (n=3, 50%) anticipated that adding more questions to their current would SCS would present a challenge, because they felt that the SCS was already long. Both school boards and public health units also saw limited staff capacity in public health units to support this collaboration as a challenge.

Table 1. Summary of pilot site organizations' responses to telephone interviews

Theme	School Board Specific Responses (%)	Agreement in School Board and Public Health Unit Response (n=12)	Public Health Unit Specific Responses (%)
Reason for involvement	Opportunity to create a single source of health-related survey questions (50%)	**Need for quality data on children and youth (n=7, 58%)**	Opportunity to work collaboratively towards a common goal (67%)
Expected outcome	To create an evidence-based data product (83%)	**To work and learn collaboratively/ strengthened partnership (n=12, 50%)**	To make data more transparent (50%)
Past engagement	Don't know (17%)	**Moderately to very involved (n=8, 67%)**	Somewhat or briefly involved (50%)
Present engagement	Don't know (17%)	**Moderately to very involved (n=11, 92%)**	None
Positive experiences	Great communication process and experience (17%); representation of public health units on board level committees (17%); don't know (17%)	**Training and knowledge translation (n=7, 58%)**	Positive partnership experiences at both programmatic and strategic levels (100%); development of MOUs/agreements (67%); involvement at policy level with board (33%)
Anticipated challenges	Funding for long-term processes (33%); alignment with Catholic values (50%); don't know (17%)	**Staffing capacity issues at public health unit (n=5, 42%)**	Bureaucracy (17%); differences in policies, schedules, and priorities (33%); inconsistent communication (17%)

Scan of indicator frameworks and health surveys

There are many existing tools that aim to understand or measure child and youth health and well-being. All the indicator frameworks that informed this work were organized and based on the three topics identified in the Children Count: Assessing Child and Youth Surveillance Gaps for Ontario Public Health Units (Population Health Assessment LDCP Team, 2017) report: healthy eating, physical activity, and mental health.

The Physical Activity, Sedentary Behaviour and Sleep (PASS) Indicator Framework (Public Health Agency of Canada, 2019) was used to develop the physical activity component of the HLM. The PASS Indicator Framework considers activity, sedentary behaviour, and sleep as important factors that influence risk for chronic disease. The PASS Indicator Framework provided a standardized approach to measuring the risk factors and outcomes related to physical activity or inactivity.

The Positive Mental Health Surveillance Indicator Framework for youth (12 to 17 years) (Public Health Agency of Canada, Centre for Surveillance and Applied Research, 2019) was used as the foundation for discussion on mental health. The Indicator Framework includes multiple domains (i.e., internalizing positive behaviours, internalizing negative behaviours, externalizing positive behaviours, and externalizing negative behaviours) and spans topics ranging from resilience and overall life satisfaction to suicide and violence.

The Pilot Study Project Team was unable to identify an appropriate existing indicator framework for healthy eating through their scan. Therefore, the Pilot Study Project Team took an approach that was similar to how they addressed mental health, considering positive and negative healthy eating behaviours, plus the factors that influence them at the individual, societal/social, and environmental level.

In preparation for face-to-face Steering Committee meetings, a summary sheet was compiled for each of physical activity, mental health, and healthy eating questions available. The summary sheets included information on relevant domains (e.g., internalizing positive behaviours), topics (e.g., sense of belonging), indicators (e.g., % of students who feel safe at school), alignment with existing data sources, alignment with each pilot site organization's past SCSs, and identified gaps.

In addition to the OPHS (Ministry of Health and Long-Term Care, 2018), the following data sources were scanned to inform the specific indicators that were considered for use in the HLM:

- COMPASS survey (Grades 9-12)
- Middle Years Development Instrument (MDI) (Grades 4 and 7)
- Health Behaviour in School-Aged Children, World Health Organization Collaborative Cross-National Survey International Standard Mandatory Questionnaire (11-15 year olds)
- Ontario Student Drug Use and Health Survey, Centre for Addiction and Mental Health (Grades 7-12)
- SCSs from LKDSB, GECDSB, TBCDSB, RRDSB, SCCDSB, and CSC

Steering Committee members were provided with the summary sheets, a catalogue of the above data sources, and SCSs from multiple school boards. Over a three-month period, the Steering Committee used findings from the preliminary research to select questions and indicators for the HLM from existing sources and develop indicators if there were gaps. Discussions with the Steering Committee were conducted through teleconferences, face-to-face meetings, and by email. The Advisory Committee, made up of academics and public health stakeholders with expertise in children and youth health research, were also consulted in the HLM development. During the Steering Committee meetings, the group noted that inclusion of questions to develop a HLM needed to be limited as the length of the SCS could not be extended. The selection of survey questions was based heavily on how school boards and public health units could realistically take action to address the findings within the school.

The Steering Committee also identified gaps—indicators where there was no identified data source suitable for surveillance, and/or knowledge gaps at the local and regional level that would support school boards and public health units with the planning, implementation, and evaluation of their programs.

Finally, the timely release of Gearing UP: A Strategic Framework to Help Ontario Middle Years Children Thrive (Ministry of Children, Community and Social Services, 2017) was used to inform more strategic alignment between local level measures and provincial level indicators.

Indicator selection

Three face-to-face meetings allowed the Steering Committee to have an in-depth discussion and reflection needed to build the HLM. During each face-to-face meeting, attendees were split into smaller working groups based on their pilot site pairings, and then reconvened to share key discussion points. Selected questions went through several rounds of priority setting, to fine-tune the wording of the questions and to ensure that the entire survey module would be feasible for students to complete. There was no specific target for the number of questions for the HLM before the process began; however, the pre-existing length of the pilot sites' SCSs necessitated the much shortened length for the HLM. During the HLM development process, a parent/guardian notification form was developed for school boards that requested it. In keeping with the PAR approach, a mid-point evaluation survey was also conducted, to assess strengths and weaknesses of the collaborative experience. The results of the mid-point evaluation served to refine and build a better collaborative process.

Facilitators to indicator selection

An overview of facilitators can be found on the next page.

A key facilitator of this process was the buy-in from each member of the Steering Committee; they recognized the potential benefits from taking a coordinated approach:

"Because of my work on the Task Force and understanding of how there is such a disconnect, or lack of available data for health units, to inform their programming and planning, I saw the benefit of working collaboratively … The benefit of updating our survey is that we can look at all aspects of well-being."

- Rainy River District School Board

"We definitely wanted to be part of it because we want to increase our partnership with the school board and increase data collection—anything we could do to have more and better quality data related to child health."

- Chatham-Kent Public Health

Another facilitator was the preliminary research, described above, that was done to facilitate discussions:

"The organization of the materials presented clearly indicated hours of work, streamlining and putting everything together. That pre-work made everything more robust and productive. That was a huge strength."

- Greater Essex County District School Board

Steering Committee members also valued the face-to-face meetings, which facilitated perspective taking and the strengthening of relationships:

"From my perspective the face-to-face meetings were good. They allowed us to have various conversations with the stakeholders and partners, and also gain understanding from the epidemiologists' perspectives of what we should be looking for."

- St. Clair Catholic District School Board

"A lot of great things have come out of this process. Even going through the different SCSs and learning about them, getting the perspectives of different school boards of what's important to them … It is good to have a shared language and shared perspective when it comes to the type and importance of data and how we can use these data in the future."

- Thunder Bay District Health Unit

Challenges, considerations, and lessons learned

While Steering Committee members found face-to-face meetings easier to be actively engaged in compared to teleconferences, the meetings were not without their challenges. Since every school board had their own version of the SCS and these groups had not worked together before, some members found it challenging to come to consensus when it came to the wording of survey questions, which led to lengthy technical discussions. Additionally, reviewing questions in order, rather than in conjunction with the indicators, did not always allow for an equal, robust discussion. This process might be improved in the future with a **decision-making matrix** to ensure that everyone has an equal voice:

> "Without having the relationship with the other groups involved, other school boards and other health units, all trying to come to consensus, it was really hard to get that when you don't have that sense of the relationship. And at no fault of the project, it was just hard because everyone's passionate about different things. You had to keep in mind that the survey just couldn't be hours and hours long for kids to complete."
>
> – Rainy River District School Board

> "It was structured, but kind of also who spoke loudest in the room in terms of deciding if we've really landed on something. We didn't have a real process or criteria in place. It was just kind of how the discussion panned out in the room."
>
> – Chatham-Kent Public Health

Furthermore, there were a number of considerations made regarding **translation and language use.** For example, translating the survey questions into French was not always straightforward. Some of the agreed-upon terms and indicators in English did not have an obvious equivalent in French, which required further discussions for affected pilot sites.

As well, the mental health indicators warranted further considerations and discussions amongst the Steering Committee members. Since there is a breadth of potential questions that could be asked about student mental health, the Steering Committee focused on those in scope of the roles and responsibilities of school boards and public health units related to mental health. This discussion returned to the guiding principles developed early on in the project, recognizing that educators and public health professionals do not have a clinical background in mental health, and thus prospective mental health survey questions should focus on the individual and social aspects of students and how those factors can affect their mental health and well-being. Additionally, the questions around mental health went back for further review to school boards' mental health committees to obtain their feedback.

The Steering Committee was also mindful about choosing quantities and scales in the survey questions that would be understandable to school-aged children and youth. Questions that could be interpreted in multiple ways were avoided. After the pilot site organizations had implemented the HLM, they made further refinements to the questions, to improve consistency, and to facilitate survey completion. The final version of the HLM is included in both this report (see **Appendix A**) and *The Children Count Healthy Living Module Toolkit.*

Above all, Steering Committee members agreed that the most important consideration was how the collected data from each question and indicator would be used. Considering this question greatly helped to reign in the scope of the HLM.

> "A lot of the discussion we had was centered around why we're asking what we're asking, and are we asking it appropriately so that it's not too sensitive. Is it something we can ask across all age groups? Because in the end—'if we can't do something about an issue, why are we asking about it?'"
>
> - Windsor-Essex County Health Unit

Steering Committee members acknowledged the importance of being able to take action on an issue if the student data results necessitated it.

PILOT STUDY ORGANIZATIONS

Each pilot site organization was asked to write a case study to summarize their experience in developing and implementing the HLM; a full account of their lessons learned are included in **Appendix B.**

2.1 Greater Essex County District School Board and Windsor-Essex County Health Unit

Our community

The Greater Essex County District School Board (GECDSB), the largest school board in the pilot study, along with the Windsor-Essex County Health Unit (WECHU), serve Windsor and Essex County, located at the southern tip of Ontario. The total population within the area is approximately 398,953, 23.0% of whom are children and youth age 19 or younger (Windsor-Essex County Health Unit, 2019). Overall, the area has a higher rate of low-income households compared to Ontario; 22.6% of children and youth age 17 or younger live in low-income households based on the after-tax low-income measure (Windsor-Essex County Health Unit, 2019). Manufacturing is the most common industry to work in for Windsor and Essex County residents. Recent immigrants make up 2.7% of the total population, predominantly from Asia, and specifically from the Middle East. Residents face higher rates of death and morbidity and chronic diseases like obesity and cardiovascular disease compared to Ontario. The rate of mental health-related emergencies is higher compared to Ontario, with residents of low socioeconomic status at greater risk. Rates of substance use are also higher in Windsor and Essex County compared to Ontario, making it a top concern among residents (Windsor-Essex County Health Unit, 2019).

Our organizations

The GECDSB is a publicly funded school board with 25,126 students enrolled in 55 elementary schools and 11,495 students enrolled in 15 secondary schools in 2018-19. It is the largest board in Windsor and Essex County. The school board has 4,663 staff members, approximately half of which are teachers. The majority of GECDSB students are Canadian or American, or Canadian dual citizens. 1.5% of GECDSB citizens identify as Indigenous.

The WECHU provides services to over 398,000 residents in Windsor and Essex County. It consists of approximately 240 staff located in three offices found in the City of Windsor, Town of Essex, and Town of Leamington.

The GECDSB and the WECHU have had a MOU in place for many years, which has resulted in an open and productive relationship with each other. The WECHU had also always provided nurses to support healthy school resources and to address needs in the GECDSB schools. In 2016, as part of the Healthy Kids Community Challenge, the two parties highlighted that the gap and need for local health data for school aged children and youth was lacking, prompting the two to collaborate on the inclusion of a HLM as part of the SCS. This strong partnership that was built upon open communication contributed to the initiation of the Children Count Pilot Study.

15 HIGH SCHOOLS **55** ELEMENTARY SCHOOLS **4,663** STAFF MEMBERS **36,621** STUDENTS

2.2 Rainy River District School Board and Northwestern Health Unit

Our community

The Northwestern Health Unit (NWHU) and the Rainy River District School Board (RRDSB) cover a large catchment area (171, 288 km^2 for the NWHU) with low population density (0.5 people/km^2) (Northwestern Health Unit, 2016). The total population within the area is approximately 80,721, of which 21,140 are children and youth age 19 or younger (Ministry of Health and Long-Term Care, 2016). Overall, the area has a higher rate of low-income households and unemployment compared to the province. The area has seen a shifting employment sector, primarily pulp and paper mills to mining. Residents have a shorter life expectancy at birth and at age 65 compared to the province, which is likely caused by higher rates of colorectal and lung cancer, circulatory diseases, respiratory diseases, unintentional injuries, intentional self-harm, and associated risk factors such as being overweight or obese (Northwestern Health Unit, 2016). The area is home to 39 First Nations communities and two unincorporated or "unorganized" territories (Kenora Unorganized and Rainy River Unorganized).

Our organizations

The RRDSB covers a large region, from Atikokan to Fort Frances, to Emo, to Rainy River and is comprised of 12 elementary schools and 3 high schools. Approximately 600 staff members (occasional and casual), 215 of which are teaching staff, support a little less than 2,800 students from Kindergarten to Grade 12 within the Board. The Board of Education consists of seven elected/acclaimed Trustees, including a First Nation Trustee, and two Student Trustees. The Board works directly with eight First Nation communities within the lower part of Treaty Three under education service agreements.

The NWHU serves the Kenora (part) and Rainy River Districts, with offices in 13 municipalities and approximately 150 staff in total. The Board of Health for the NWHU is made up of eight members from local municipal councils, with three members being appointed by the Province.

The partnership between the NWHU and the RRDSB is strong, with years of collaboration in support of their students, parents/guardians and families, and communities. An annual Memorandum of Understanding guides the partnership at the regional level, with service delivery being customized for each community's or school's unique needs. In the past, the NWHU approached the RRDSB to implement the School Health Action, Planning and Evaluation System (SHAPES) and COMPASS surveys to students to inform school and community planning and program delivery. The implementation of the HLM within the SCS was a natural next step in this long-standing partnership.

3 HIGH SCHOOLS **12** ELEMENTARY SCHOOLS **600** STAFF MEMBERS **2,800** STUDENTS

2.3 Thunder Bay Catholic District School Board and Thunder Bay District Health Unit

Our community

The District of Thunder Bay covers a large geographic area of 249,900 km^2 that contains both urban and rural populations. The overall population is stable at approximately 155,000 people, of which 18,750 are children and youth age 19 or younger. 72% of the population lives within the City of Thunder Bay. Indigenous people represent over 15% of the population. Twenty-five First Nations communities, almost half of which are not road accessible, are distributed over the entire catchment area of the Thunder Bay District Health Unit (TBDHU).

TBDHU experiences some of the poorest health outcomes compared to the rest of Ontario. There is a greater burden of many infectious diseases (e.g., chlamydia, gonorrhea, Hepatitis C, invasive Group A Streptococcus, tuberculosis), chronic diseases (diabetes, respiratory, cardiovascular), and substance use (alcohol, tobacco, opioids) in TBDHU compared to Ontario, resulting in a life expectancy that is three years less than the provincial average.

From a social determinant of health perspective, 2016 data show that 13.8% (vs. 14.4% in Ontario) of households in Thunder Bay District were low income; 19.9% (vs. 18.4%) of children under 18 years were living in low income; 13.4% (vs. 17.5%) had no diploma/degree, the unemployment rate was 8.2% (vs. 7.4%), and 18.7% (vs. 27.6%) of the population was spending 30% or more of their income on shelter costs (41.8% of renters). In 2013-14, 14.4% (vs. 12.2%) of households in TBDHU were estimated to be food insecure. Geography is also a determinant of health, with rural communities at risk of poorer health. District communities are dependent on local industry and demographics and health status can fluctuate.

Our organizations

The Thunder Bay Catholic District School Board (TBCDSB) is comprised of 2 high schools (9-12), 3 senior elementary schools (7-8), and 15 elementary schools (K-6), serving approximately 5,200 students. The School Board employs approximately 1,459 staff members, 894 of which are teaching staff. The TBCDSB Director of Education manages all activities with school board administration as well as administrators at individual schools. The Director of the TBCDSB, along with the Senior Team comprised of three Superintendents of Education, Business, and Corporate Services, plus a Capital Plant Analyst, are guided by Thunder Bay Catholic's Mission and Vision as well as the goals set out by its Board of Trustees.

The Thunder Bay District Health Unit (TBDHU) has approximately 180 staff members who are located either at the main office in Thunder Bay or in Branch Offices and/or services located in Geraldton, Marathon, Red Rock, Manitouwadge, and Terrace Bay. The governance model for the TBDHU consists of a Board of Health, made up of 16 members (12 municipal elected, 4 provincially appointed).

The TBCDSB and TBDHU have a history of a good working relationship together, with the Schools Program and many other programs of the TBDHU supporting the Boards of Education in the District of Thunder Bay.

2 HIGH SCHOOLS **18** ELEMENTARY SCHOOLS **1,459** STAFF MEMBERS **5,200** STUDENTS

2.4 Lambton-Kent District School Board, St. Clair Catholic District School Board and Lambton Public Health and Chatham-Kent Public Health

Our community

The Lambton-Kent District School Board (LKDSB) and St. Clair Catholic District School Board (SCCDSB) covers a large geographic area in southwestern Ontario, surrounded by the Great Lakes, that includes two public health unit regions. The total population within the area is approximately 228,680, of which 49,390 are children and youth age 19 or younger. The area is largely rural, with many small communities and two main urban centres (Chatham and Sarnia). Overall, the area has higher rates of low-income households and lower rates of adult educational attainment compared to Ontario. Residents face higher rates of death and morbidity from major chronic diseases and associated risk factors, and problematic substance use has become a growing concern in many communities. There is a strong blue collar workforce with manufacturing and agriculture being some of the predominant industries. The area is home to four First Nations groups: Aamjiwnaang First Nation, Delaware Nation, Kettle and Stony Point First Nation, and Walpole Island (Bkejwanong) First Nation.

Our organizations

The LKDSB provides educational services to more than 21,000 students in 63 (51 elementary and 12 secondary) schools (1446 teachers, 1051 occasional teachers, 14667 elementary students, 7361 secondary students).

Chatham-Kent Public Health (CKPH) has approximately 80 staff members and is integrated into the single-tier Municipality of Chatham-Kent, covering a population of approximately 102,042, including 22,850 residents age 19 and younger.

Lambton Public Health (LPH) has approximately 112 staff members and is integrated into the County of Lambton, which has 11 municipalities covering a total population of 126,638, including 26,540 residents age 19 and younger.

Both public health units have a strong relationship with the LKDSB; MOUs are in place to support working together and public health programming is integrated into schools.

The SCCDSB provides educational services to more than 8800 students (6199 elementary and 2658 secondary) in 27 (25 elementary and 2 secondary) schools, with approximately 1100 staff (full time, part time and occasional ranging from teachers, principals, school board administrators and support staff, educational assistants, custodians, clerical, social workers, child and youth workers and early childhood educators). The Children Count Pilot Study has provided a new opportunity for the SCCDSB to partner with CKPH and LPH.

12 HIGH SCHOOLS **51** ELEMENTARY SCHOOLS **2,497** STAFF MEMBERS **22,028** STUDENTS

2.5 Conseil Scolaire Catholique Providence

Our community

The Conseil Scolaire Catholique (CSC) Providence school board is a French Catholic board that spans 28,819 km^2 and serves the communities of Windsor-Essex, Chatham-Kent, Sarnia-Lambton, Middlesex-London, Elgin, Woodstock-Oxford, Huron-Perth, and Grey-Bruce (Conseil Scholaire Catholique Providence, 2019). This region includes a mix of rural and urban communities and eight public health units. The catchment area consists of two Local Health Integration Networks (LHINs): South West LHIN and Erie-St. Clair LHIN. Within the South West LHIN (Bruce, Elgin, Grey, Huron, Middlesex, Norfolk, Oxford, and Perth counties) there are 953,261 people with 40% living within the City of London (South West LHIN, 2014). Additionally, there are approximately 8,000 Francophones in London and the city is designated under the French Language Services Act (South West LHIN, 2014). The self-reported rates for exceeding the low-risk drinking guidelines and heavy drinking are higher in the LHIN compared to Ontario (Public Health Ontario, 2019). Just over 1.5% of population are recent immigrants to the area. There are five First Nations communities within the South West LHIN with a significant off-reserve population (South West LHIN, 2014). The LHIN had mortality rates that were higher compared to the rest of Ontario. Approximately 60% of residents within the South West LHIN are overweight or obese and is higher than the provincial average. In the Erie-St. Clair LHIN (Essex County, Lambton County and Municipality of Chatham-Kent) there are 627,663 residents with 63% living in Essex County, 20% in Lambton County, and 17% in Chatham-Kent. Approximately 3.3% of the residents identify as Francophone and are typically older than the general population. Currently, 2.5% of the population identify as Indigenous (South West LHIN, 2014). Approximately 43% of Indigenous people in the LHIN live in Essex County followed by 39% in Lambton County and 18% in Chatham-Kent. Compared to the rest of Ontario, residents in the Erie-St. Clair LHIN have higher rates of daily smoking and being overweight or obese (Public Health Ontario, 2019).

Approximately 3.3% of the residents identify as Francophone and are typically older than the general population. Currently, 2.5% of the population identify as Indigenous (South West LHIN, 2014). Approximately 43% of Indigenous people in the LHIN live in Essex County followed by 39% in Lambton County and 18% in Chatham-Kent.

Our organizations

CSC Providence has 23 elementary schools and 7 secondary schools, serving 10,117 students. The school board both fosters and supports francophone identity and community through French language education. The school board's main office and office of the Director of Education is located in Windsor-Essex. The CSC Providence employs 1,393 permanent (756 teaching and 637 non-teaching) staff.

The Middlesex-London Health Unit (MLHU) has approximately 300 staff and serves the communities of Middlesex County and the City of London. The MLHU has a school health team for both elementary schools and high schools in their region and includes French designated staff. French speaking public health nurses provide health-related curriculum resources and also support the activities that promote healthy school environments.

The Windsor-Essex County Health Unit (WECHU) has approximately 250 staff, including a school health team of nurses with school assignments, with two French language designated positions. The WECHU has had an MOU in place with CSC Providence for many years and provides all services and materials in French. The WECHU and CSC Providence have collaborated on several projects in the past, but prior to this pilot study, none centred on the collection or use of student data.

Chatham-Kent Public Health (CKPH) has approximately 80 staff members and is integrated into the single-tier Municipality of Chatham-Kent, covering a population of approximately 102,042, including 22,850 residents age 19 and younger. CKPH has a good relationship with CSC Providence and has actively supported specific schools in their wellness teams and initiatives. However, CKPH has not worked broadly with all schools in Chatham-Kent or at the school board level to date.

Lambton Public Health (LPH) has approximately 112 staff members and is integrated into the County of Lambton, which has 11 municipalities covering a total population of 126,638, including 26,540 residents age 19 and younger. LPH and CSC Providence have a positive working relationship, however the Children Count Pilot Study is the first initiative that the two agencies have partnered on.

7 HIGH SCHOOLS **23** ELEMENTARY SCHOOLS **1,393** STAFF MEMBERS **10,117** STUDENTS

IMPLEMENTATION AND ANALYSIS

3.1 Planning the school climate survey

Facilitators to implementation

All the pilot site organizations agreed that the key to successfully implementing the HLM with the SCS was a strong relationship between senior level school board and public health unit representatives. These relationships were enabled by first creating a **data sharing agreement,** and then forming new or calling together pre-existing open, transparent, and inclusive **committees** (sometimes referred to as working groups). Data sharing agreements were used to outline the roles and responsibilities of each party involved—who would be responsible for collecting and analyzing the data, data confidentiality and security processes, and the agreement that the school boards owned the data and retained the right to publish it, whereas public health units would only use the data for internal planning processes and according to the tenants of any previously established MOU.

"The creation of a data sharing agreement was an important and useful first step, outlining the roles and responsibilities of the school board and the public health unit, and delineating the use and analysis of the data."

- Rainy River District School Board

"A data sharing agreement between public health units and schools in order to have permission to use data for planning purposes was advantageous. It removed reservations from school boards about the Health Unit accessing the data by providing clear expectations about how information will be used. For our scenario we found that the TBCDSB looked to TBDHU to take the lead on establishing the data sharing agreement."

- Thunder Bay Catholic District School Board

With a data sharing agreement in place, **project champions** were identified (e.g., Mental Health Lead or Technology Enabled Learning and Teaching Contact from a school board; Epidemiologist or School Health Manager from a public health unit) and unified under a **clear purpose:** to examine the intention behind each SCS question (including the HLM questions), what data would be collected by it, and what that data would inform for both the school boards and public health units. In other words, "what are we asking and why?"

"If there was no tangible action associated with asking the question, then it was not asked … In the process of choosing each question, we collectively challenged each other. The purpose of formulating questions was not to diagnose someone, but rather to plan for intervention, create tools and strategies."

- Greater Essex County District School Board

"Redesigning the SCS was a big undertaking given our limited resources. However, having a collaborative working group (with representation from principals, special education, superintendents, mental health, Indigenous liaison, parents, student trustees, public health) that was very supportive of this process increased efficiencies and allowed for thorough discussion."

- Lambton-Kent District School Board

It was also important to involve individuals who were familiar with the SCS at the school board in the past, especially if a third party organization was involved. Pilot site organizations found it important to know the **assets and limitations of past SCSs**, for context to understand how HLM results could be used in conjunction with SCS data. Results from a single question on the HLM may indicate areas of concern that warrant further exploration through collecting more details information using other means (e.g., key informant interviews, focus groups).

Challenges, considerations, and lessons learned

Pilot site organizations agreed that bringing a diverse group of people together required a significant **time commitment;** however, the time allocated to planning the SCS collaboratively resulted in stronger relationships between school boards and public health units, and a SCS that was comprehensive, and yet focused enough, to gain a better understanding of children and youth needs.

Some of the other key considerations made when designing the HLM for the SCS included **survey length and language,** which affect the time commitment for students completing the surveys. One pilot site organization added definitions of words and gave examples of situations to the survey to enhance comprehension. Another pilot site organization changed examples in the SCS/HLM to make them more accessible for their students (e.g., replacing "eggplant" with another vegetable since eggplant is not found in many grocery stores in that region). Now that pilot site organizations have implemented their SCS/HLM, some are continuing to make adjustments to how the survey is implemented to better suit elementary level students (e.g., exploring the idea of administering the survey in two sittings instead of one).

One of the pilot site organizations included an additional last step to finalize the SCS/HLM prior to implementation, which was to **field-test the questions** with several students. While optional, this may be a useful step if significant changes are being made to the SCS. Once the SCS with the HLM has been implemented, **changes should be minimized in the future to ensure the results remain comparable over time.**

> "The draft HLM was field-tested with several students … Some questions were changed based on their feedback due to a variety of reasons (wording, terms used, and level of comprehension of students). While some questions were re-worded, some words were recommended to be taught prior to the administration of the final survey, and some rating scales were adjusted to ensure that they were consistent in how they were presented in the survey."
>
> - Greater Essex County District School Board

3.2 Administering the school climate survey

Public health units were not involved in the administration of the SCS/HLM survey to students. Each pilot school board took their own individualized approach to implementation to best suit their system, including how they communicated the purpose of the survey to principals, teachers, parents/guardians, and students; when the survey was administered; how long the survey was open for; expectations for survey completion, and so on. Pilot school boards who described their implementation as "smooth" cited the high level of communication between project champions and school principals in the months leading up to survey administration as a key component that facilitated success.

> "Before it even hit the table, we brought it to our own school board committee. We didn't just spring it on them. They had been part of this all the way through. I had brought it to a large percentage of the members of the committee to get their perspective … having more people look at the survey—it made the survey more diverse."
>
> – Greater Essex County District School Board

Because each pilot school board was responsible for administrating their SCS/HLM, there was a lot of variation when it came to how the survey was communicated to others. Some pilot school boards used principal memos, while others used letters to school administrators, and scripts to classroom teachers, or a combination of methods. One pilot school board created video announcements to explain the purpose of the survey and to draw students, teachers, and parents/guardians to school websites and social media platforms where they could access the survey. What was important in all of these efforts was the consistency in the messaging to students, teachers, and parents/guardians about the SCS/HLM.

Furthermore, school boards varied in the timing of data collection. Some pilot school boards chose to administer their survey to coincide with a particular event as an awareness raising strategy:

> "The Board administers the SCS to students during Bullying Awareness Week, which occurs during the third week of November. This timing helps to enhance the understanding of bullying, with the lessons, assemblies, and overall heightened promotion providing greater awareness of what bullying is and is not, for our students."
>
> - Rainy River District School Board

> "We timed our survey roll-out to overlap with parent-teacher interviews, which encouraged parents to complete the survey on the spot if that was a more accessible option."
>
> - Lambton-Kent District School Board

While the survey was open, some pilot school boards also monitored survey completion and sent reminders to school administrators to complete their surveys at various time checkpoints (e.g., a check-in 3 days before the survey deadline). School boards who sent reminders had higher survey completion rates than school boards that did not monitor survey completion. With regular monitoring pilot site organizations found that having the survey open for one month was adequate. In reflecting upon the administration process, some pilot school boards already made plans for how they will do this differently in the future to maximize response rates:

> "School principals have recommended that the Grade 12 students have an abbreviated survey, administered with school exit questions, in May of each year, as a possible next step. Similarly, ensuring that all secondary students complete the survey is a challenge. Students have different timetables, with cooperative education placements and spare periods. We have many students enrolled in alternative education settings. As such, this is a challenge that we will continue to work through in order to have the greatest participation rate possible."
>
> – Rainy River District School Board

3.3 School climate survey planning and implementation checklist

Please refer to *The Children Count Healthy Living Module Toolkit* for more suggestions and tools to support SCS/HLM planning and implementation.

Plan

- ☐ Establish a committee (or working group) of project champions, including a representative from your local public health unit, to support survey implementation
- ☐ Create a data sharing agreement
- ☐ Consult your local public health unit's Epidemiologist for suggestions on using online survey platforms
- ☐ Work with the person responsible for analyzing data to create a data analysis plan that outlines procedures for dealing with data extraction, privacy, and expected timelines for reporting results
- ☐ Pilot test your survey with your committee and/or students
- ☐ Create a communications plan that includes messaging for online platforms (website, social media), instructions for stakeholders (principals, teachers, parents), a script for classroom teachers, etc.
- ☐ Consider aligning survey implementation period with bullying prevention week or parent-teacher interviews, while also being considerate of other family committments

Implement

- ☐ Ask school principals to coordinate a schedule for classroom teachers to use computer labs to complete the survey
- ☐ Promote the survey to relevant board committees (e.g., Special Education Advisory Committeee, Parent Groups)
- ☐ Make paper copies of the survey available and provide other types of accomodations for students who may need assistance with completing the survey
- ☐ Monitor the survey once open and choose to automate reminder emails to appropriate group

Assess

- ☐ Follow up with any schools with low survey completion rates to understand challenges and barriers
- ☐ Schedule time for your committee (or working group) to reflect on the survey process and document any changes that should be made for future iterations

3.4 Data analysis

One of the biggest learnings when it came to analyzing SCS/HLM data was the value of having school boards connect with staff from their public health unit who have expertise in survey methodology (e.g., an epidemiologist) well before the SCS/HLM is implemented. Early consultations will be particularly beneficial for smaller school boards who do not have much research capacity. Consultations will allow the public health unit staff to make recommendations regarding the collection of demographic information, the types of questions that are best suited for each indicator, question wording, and options for online survey platforms—all these decisions can influence how a user responds to a survey and the subsequent quality of results.

Conversations with public health unit staff may be facilitated through the co-creation of a data analysis plan, again, well before the SCS/HLM survey is administered to students. Please see The Children Count Healthy Living Module Toolkit for a sample data analysis plan. Developing a data analysis plan will help to clarify expectations around what kind of analyses will be done, by whom, by when, and how that data will be reported and used.

One of the biggest learnings when it came to analyzing SCS/HLM data was the value of having school boards connect with staff from their public health unit who have expertise in survey methodology (e.g., an epidemiologist) well before the SCS/HLM is implemented.

A data analysis plan may include the following elements:

- ☐ Purpose of the survey
- ☐ Description of how survey results will be used, and by whom
- ☐ Finalized version of the survey, including any questions for collecting demographic information
- ☐ Roles and responsibilities of persons involved
- ☐ School board's reporting expectations
- ☐ School board's preferences regarding data stratification and how data suppression will be treated if sample sizes are small
- ☐ Potential limitations of the data
- ☐ Timeline with dates for when the survey will be open (and monitored), reminders will be sent to schools to complete the survey, the survey will be closed, data can be extracted, analysis will be conducted (by school, by board), preliminary results will be reviewed, etc.

For the pilot study, epidemiologists from the WECHU were responsible for analyzing and reporting data for four pilot school boards (out of six in total). The epidemiologists' first task was to make sense of the raw data from the results that were used and create a data dictionary to aid in data cleaning and recoding. This varied slightly by each school board due to the whether analysis was completed for the entire SCS or just he HLM.

Initially, the analysis was conducted by categorizing the questions (variables) and analyzing the data based on the epidemiologist's discretion and provided a preliminary report consisting of results and tables to the first school that completed their SCS. However, there were some concerns raised, like data suppression that had to be explained or further revisited to fulfill the requirements of the school board. This included creating a report for each school but ensuring results were not identifiable. As a solution, certain grades were either combined and if not satisfied, schools with small counts were combined to provide a more robust and accurate measurement of the results from the SCS. Learning from this experience, a collaborative approached was undertaken moving forward and this prompted the creation of a data analysis plan for subsequent school boards which would aid in the data analysis process. In some SCS, there were approximately 60 indicators, all of which, were required by the school boards to further analyze by subgroups (i.e., gender, grade and Indigenous status).

For the first school board, the process from start to finish took six weeks to complete with three epidemiologists working full time to create 30 reports. Initially, analysis was completed in STATA, with data then being exported into data tables in Microsoft Excel with figures created manually (alongside formatting) and copied over into Microsoft Word with interpretation to follow. As a result of this time consuming exercise, solutions to reduce time spent and increase feasibility were explored.

Upon recognition that reports for each school and school boards would be fairly consistent, an auto-generated method was developed using R Studio. R Studio allowed for the completion of analysis and generation of reports in one step, so that only interpretation had to be done afterwards. After the syntax for R Studio was written, this method was applied to all schools within the school board simultaneously. Additionally, it was decided that only demographic differences in the indicators that were statistically significant would be reported; this decision was well received by both the public health units and the school boards.

When sample sizes were adequate (i.e., a large enough sample to perform statistical tests), each school was provided with its own report. If sample sizes were too small, however, data from multiple grades within the same school would be combined for analysis and reporting. Analyzed data was organized into graphically designed reports at the elementary, senior elementary, and high school levels.

When this approach was applied to data from subsequent school boards, the WECHU only had to dedicate one epidemiologist over a four week period to create approximately 60 reports. Much of that time was dedicated to creating the syntax for R Studio; with subsequent school boards this process became faster because only minor tweaks of the original syntax in R Studio were needed.

Several school boards did their own analyses of the HLM results. At Greater Essex County District School Board, the administrators played a significant role in disseminating their school survey results, which included both HLM and broader SCS results. Board staff provided the full board results and an infographic on key information to the Board of Trustees, senior administrators, school administrators, and parents/guardians (through a Special Education Advisory Committee and Parent Involvement Committee).

3.5 Sharing and using school climate survey results

At the time of writing this report, school boards that administered the SCS/HLM were at different stages of sharing and using their results. Some of their considerations included what each of their stakeholders groups would want to know, how to convey that information in an accessible and informative way, and how to make the best use of any time allocated to in-person presentations and discussions to inform next steps. Some strategies being used by pilot school boards to communicate their results included **interactive data visualization** (e.g., dashboard created in Power BI), **infographics, summary reports,** and **presentations.**

For example, the Lambton-Kent District School Board used one-page summary reports at the school level to communicate results to parents/guardians. They created a template that could be used across all of their schools for a uniform look and feel. The template included sections for highlighting results of interest and actions the school will take to improve their school climate. In addition, they were supported by Lambton Public Health who created and has been using a dashboard with mapping capability in Power BI that interactively displays results by grade, category (e.g., bullying, mental health and resiliency, etc.), survey question, and more.

To summarize the results of their individualized school reports, the Greater Essex County District School Board created an infographic to communicate their identified priority areas. Across their 85 schools, the school board identified 10 trends, which have since been used to inform a new strategic plan, operational plans, and school improvement plans.

Overall, infographics were being used as the ideal format for presenting results to teachers and students, whereas more detailed, graphically designed reports and facilitated in-person discussions were being used for school administrators and staff.

3.6 Limitations

While the school boards and public health units that participated in this pilot study have been unanimous in their support for continuing to use the HLM to improve health outcomes in schools and for strengthening partnerships, their participation required a significant time commitment. Furthermore, developing the HLM and overseeing its implementation in multiple school boards would not have been possible without the Pilot Study Project Team and resources and funding provided by Public Health Ontario's LDCP funding stream. In order to duplicate this model with other school boards, so that data can be compared at the regional level, dedicated staff time and resources at the school board and public health unit would be necessary. Additionally, the amount of in-kind support and staff time to be dedicated to the project would need to be agreed upon between a school board and public health unit at the local level during future iterations. Thus, being able to allocate enough time and resources to implement the HLM remains the primary limitation to expanding the HLM to school boards beyond those in the pilot study.

Some strategies being used by pilot school boards to communicate their results included interactive data visualization (e.g., dashboard created in Power BI), infographics, summary reports, and presentations.

CONTRIBUTIONS

Even though their involvement required a significant time commitment, pilot site organizations unanimously agreed that the pilot study contributed to **strengthened relationships** with their respective local school board or public health unit:

"I think that [our relationship] was already fairly strong, but this project has strengthened the relationship between the Mental Health Lead and the organization as a whole."

- Northwestern Health Unit

"[The project] has opened that door for collaboration going forward … Now that we're ingraining ourselves in this existing process it's really, really important. They already needs to do this—they just want to do it better and more efficiently … And if this negates the need for us to have other data collection opportunities in schools it's a win-win for us."

- Lambton Public Health

"Our new SCS is economical and efficient … We have the flexibility now to ask the questions we want to ask … I think that's the main advantage. The health unit is getting information that's helpful for them too."

- Rainy River District School Board

the overall process is feasible and adaptable

Finally, having multiple, diverse school boards implement the HLM has resulted in **data that is meaningful to them** and evidence that the **overall process is feasible and adaptable** to suit local needs:

Participating school boards who administered the HLM agreed to share their results with others to encourage other school boards to adopt the process. Public health units are also very excited to have data that will support and strengthen joint program planning in schools:

"Having pilot sites from around the province and including the North in this is helpful to understanding what might work and what might not. Including us is helpful because when it comes to scaling up, if you didn't have input from the North, it just might not be as successful as it could be."

- Northwestern Health Unit

"Some boards have a huge research team. Others, like ours, do not have one. So now that we have evidence from four parts of the province, people should benefit from it."

Greater Essex County District School Board

"Now that we're looking forward to the future I really hope this process gets implemented elsewhere in the province. It fills those gaps in health stats. I think it's a really good option for bridging that gap in a way that is standard. I hope it becomes a provincial standard."

- Northwestern Health Unit

"The plans from the GECDSB have been very useful to us in public health. The plans allow us to take a more targeted approach to higher needs schools. Our Healthy Schools teams can now offer more intensive support in these schools thanks to joint planning with the school board."

- Windsor-Essex County Health Unit

CONCLUSIONS

In 2017, the Pilot Study Project Team set out to inform a more efficient system for collecting local data on the health and well-being of children and youth. Since then, the Pilot Study has successfully followed through on recommendations from the original research project with input from public heath professionals from across Ontario.

The recommendations specifically addressed in the Children Count Pilot Study include supporting multi-sectoral collaborations (Recommendation 3) and strengthening and coordinating existing monitoring systems (Recommendation 4) (Population Health Assessment LDCP Team, 2017). This pilot study demonstrated that it is feasible to implement a local student health and well-being monitoring system within the publically-funded Ontario education system, as a collaboration between educators and public health professionals. Pilot Study participants modeled how educators and public health professionals can establish a framework for sharing and using data collaboratively, using standardized metrics that allow for comparison across regions and within regions.

"The questions asked in the HLM are some of the underlying factors that determine a student's success … now that we will have a Toolkit, it's going to help with the implementation process. I think this process will also help us in identifying trends within school boards and other geographic variations. I know there are other school board wide mandated survey pieces out there, but from this experience, not only the representatives involved in the project from our Board, but other staff could also see how the HLM fits into the SCS. The SCS really fits well with the HLM questions and combining the information is going to be useful."

- Thunder Bay District Health Unit

REFERENCES

Baum, F., MacDougall, C., & Smith, D. (2006). Participatory action research. *Journal of Epidemiology and Community Health, 60*(10), 854-857.

Children Count Task Force. (2019). *Children Count: Task Force Recommendations.* Windsor: Windsor-Essex County Health Unit.

Conseil Scholaire Catholique Providence. (2019). *Conseil Scholaire Catholique Providence.* Retrieved from Home: http://www.cscprovidence.ca/inscription/en

Ministry of Children, Community and Social Services. (2017). *Gearing UP: A Strategic Framework to Help Ontario Middle Years Children Thrive.* Toronto: Queen's Printer for Ontario.

Ministry of Education. (2013). *Supporting Minds: An Educator's Guide to Promoting Students' Mental Health and Well-being.* Queen's Printer for Ontario.

Ministry of Education. (2014). *Achieving Excellence: A Renewed Vision for Education in Ontario.* Toronto: Queen's Printer for Ontario.

Ministry of Education. (2018, February 1). *School Climate Surveys.* Retrieved from http://www.edu.gov.on.ca/eng/teachers/climate.html

Ministry of Education. (2019). *The Ontario Curriculum, Grades 1-8: Health and Physical Education.*

Ministry of Health and Long-Term Care. (2016, January 15). *IntelliHEALTH Ontario Population Projections 2016.*

Ministry of Health and Long-Term Care. (2018). *Ontario Public Health Standards: Requirements for Programs, Services, and Accountability.* Toronto: Queen's Printer for Ontario.

Northwestern Health Unit. (2016, April). *Demographic Profile and Health Status.* Retrieved from https://www.nwhu.on.ca/ourservices/healthstatistics/Documents/NWHU_Demographic_Fact_Sheet_April2016.pdf

Population Health Assessment LDCP Team. (2017). *Children Count: Assessing Child and Youth Surveillance Gaps for Ontario Public Health Units.* Windsor: Windsor-Essex County Health Unit.

Public Health Agency of Canada. (2019, March 14). *Physical Activity, Sedentary Behaviour and Sleep (PASS) Indicator Framework for surveillance.* Retrieved from https://www.canada.ca/en/services/health/monitoring-surveillance/physical-activity-sedentary-behaviour-sleep.html

Public Health Agency of Canada, Centre for Surveillance and Applied Research. (2019, July 18). *Positive Mental Health Indicator Framework Quick Statistics, youth (12 to 17 years of age).* Retrieved from https://health-infobase.canada.ca/positive-mental-health/

Public Health Ontario. (2019). *Alcohol Use Snapshot.* Retrieved from Public Health Ontario: https://www.publichealthontario.ca/en/data-and-analysis/substance-use/alcohol-use

Public Health Ontario. (2019). *Nutrition and Healthy Weights Snapshot.* Retrieved from Public Health Ontario: https://www.publichealthontario.ca/en/data-and-analysis/health-behaviours/nutrition-and-healthy-weights

South West Local Health Integration Network (LHIN). (2014). *Integrated Health Service Plan 2016-2019*. London: South West LHIN.

UC Berkeley Center for Healthcare Organizational + Innovation Research. (2016). *Accountable Communities for Health: Data-Sharing Toolkit.* Berkeley: California Health and Human Services Agency; University of California.

Windsor-Essex County Health Unit. (2019). *Community Needs Assessment 2019 Update.* Windsor.

Appendix A

The Healthy Living Module

Healthy Living Module (HLM)

Demographic questions to be added by the school board:

- Please select your school (dropdown list)
- What grade are you in? (dropdown list)
- What is your gender? (dropdown list)
- What language do you speak most often at home? (dropdown list)
- How long have you lived in Canada? (dropdown list)
- Do you identify as Indigenous or with mixed Indigenous ancestry? (dropdown list)

Purpose:

The following questions and statements will help your school understand how healthy their students are and how they feel about certain things. Please answer as truthfully as possible. It will only take a few minutes to complete. All of your answers will be kept private and you will never be judged based on your response.

1. ON A USUAL DAY how often do you eat fruits and vegetables (not including juices)?

	5 or more times a day	4 times a day	3 times a day	2 times a day	1 time a day	0 times a day
a. Fruits (bananas, oranges, mangoes, etc.)	☐	☐	☐	☐	☐	☐
b. Vegetables (carrots, broccoli, etc.)	☐	☐	☐	☐	☐	☐

2. ON A USUAL DAY how often do you do the following?

	0 times a day	1 time a day	2 times a day	3 times a day	4 times a day	5 or more times a day
a. Eat sweets (candy, chocolate, fruit roll up, etc.)	☐	☐	☐	☐	☐	☐
b. Drink sugar sweetened beverages (soda pop, energy drinks, fruit juice, etc.)	☐	☐	☐	☐	☐	☐
c. Eat fast food (burgers, pizza, French fries, hot dogs, tacos etc.)	☐	☐	☐	☐	☐	☐
d. Eat snack foods (chips, popcorn, cheese puffs, granola bars, etc.)	☐	☐	☐	☐	☐	☐

3. On a USUAL SCHOOL WEEK (MONDAY TO FRIDAY), how many days do you eat something in the morning before 9:00 AM (more than just milk or fruit juice)?

- ☐ Every day
- ☐ 4 days
- ☐ 3 days
- ☐ 2 days
- ☐ 1 day
- ☐ Never

4. Physical activity is any activity that increases your heart rate and makes you get out of breath at times. Some examples of physical activity are running, fast walking, dancing, riding a bike, swimming, playing tag, playing soccer, and playing basketball.

On a USUAL WEEK, how many days do you spend doing at least 60 minutes (one hour) of physical activity?

- ☐ Every day
- ☐ 6 days
- ☐ 5 days
- ☐ 4 days
- ☐ 3 days
- ☐ 2 days
- ☐ 1 day
- ☐ Never

5. How much time do you spend OUTSIDE OF SCHOOL HOURS playing video/computer games, watching shows or videos (YouTube, Netflix, TV), chatting (Facebook, Twitter, Snapchat, Instagram, etc.) sending text messages and using the internet?

a. On a USUAL SCHOOL DAY?		b. On a USUAL WEEKEND DAY (SATURDAY OR SUNDAY)?	
☐	Less than 1 hour	☐	Less than 1 hour
☐	1 hour to less than 2 hours	☐	1 hour to less than 2 hours
☐	2 hours to less than 3 hours	☐	2 hours to less than 3 hours
☐	3 hours to less than 4 hours	☐	3 hours to less than 4 hours
☐	4 hours to less than 5 hours	☐	4 hours to less than 5 hours
☐	5 hours to less than 6 hours	☐	5 hours to less than 6 hours
☐	6 hours to less than 7 hours	☐	6 hours to less than 7 hours
☐	7 hours to less than 8 hours	☐	7 hours to less than 8 hours
☐	8 or more hours	☐	8 or more hours

6. On a USUAL SCHOOL NIGHT, how many hours of sleep do you get?

- ☐ 9 hours or more
- ☐ 8 hours to less than 9 hours
- ☐ 7 hours to less than 8 hours
- ☐ 6 hours to less than 7 hours
- ☐ 5 hours to less than 6 hours
- ☐ 4 hours to less than 5 hours
- ☐ Less than 4 hours

7. A good night's sleep happens when you do not have problems falling asleep once getting to bed, you do not have difficulty staying asleep, and you feel awake during the rest of your day.

On a USUAL WEEK, how often do you get a good night's sleep?

- ☐ Every day
- ☐ 6 days a week
- ☐ 5 days a week
- ☐ 4 days a week
- ☐ 3 days a week
- ☐ 2 days a week
- ☐ 1 day a week
- ☐ Never

8. We want to find out about student bullying at your school. Bullying is when a person tries to hurt another person forcefully and usually repeatedly. It can be physical, verbal, or social, and can also take place over the internet with emails or text messages. The bully usually feels that he or she has more power over the other person. Sometimes a group of students will bully others.

IN THE PAST 4 WEEKS, how often have you been:

	Never	Once or twice in the past 4 weeks	Every week	Many times each week	Do not know
a. Physically bullied (e.g., pushed, punched, or scared by someone)?	☐	☐	☐	☐	☐
b. Verbally bullied (e.g., called names, teased, threatened, or received comments about the way you look)?	☐	☐	☐	☐	☐
c. Socially bullied (e.g., excluded by others, had rumours spread about you, or had someone try to make you look bad)?	☐	☐	☐	☐	☐
d. Cyber bullied (e.g., used email, text messages, or social media such as Facebook, Twitter, or Instagram to tease or threaten you more than once)?	☐	☐	☐	☐	☐

9. Think about the last time you saw or heard about a student being bullied. What did you do? Check all that apply.

☐	I don't remember/I haven't seen bullying	☐	I stood up for the person who was being bullied
☐	I told my parent(s) or guardian(s) about it	☐	I helped the person being bullied to fight back
☐	I told an adult at school about it (e.g., teacher, vice-principal, or principal)	☐	I tried to talk to the bully about it
☐	I told a friend about it	☐	I made an effort later to include the person who was bullied
☐	I tried to comfort the person who was being bullied	☐	I ignored it
☐	I encouraged the person being bullied to ignore it	☐	I did something else

10. Do you have close friends at school you can trust?

- ☐ Yes – more than one close friend
- ☐ Yes – one close friend
- ☐ No

11. Do you have at least one caring adult that you can trust or go to if you need help with anything?

	Yes	No
a. At school?	☐	☐
b. Outside of school?	☐	☐

12. School is a place where I feel like I belong.

- ☐ Always
- ☐ Most of the time
- ☐ Sometimes
- ☐ Never

13. In general, I am happy with life

- ☐ Always
- ☐ Most of the time
- ☐ Sometimes
- ☐ Never

14. If I wanted to talk to someone about a mental health or emotional problem that I have (e.g., feeling really sad, worried, etc.), I know who I could get help from.

a. At school		b. Outside of school	
☐	Yes	☐	Yes
☐	No	☐	No

15. If I experienced a mental health or emotional problem (e.g., feeling really sad, worried, etc.), I would ask for help.			
a. At school		b. Outside of school	
☐	Yes	☐	Yes
☐	No	☐	No

16. Answer the following questions thinking about the PAST 12 MONTHS (1 YEAR).				
	Never	Sometimes	Most of the time	Always
a. I felt pressured by another student, friend, or adult to do something that didn't feel right to do	☐	☐	☐	☐
b. I worried about things too much	☐	☐	☐	☐
c. I was able to solve my problems in positive ways	☐	☐	☐	☐
d. When bad things happened, I was usually able to bounce back	☐	☐	☐	☐
e. I calmed myself down when I was stressed	☐	☐	☐	☐
f. I spoke to myself in a positive way	☐	☐	☐	☐

Your responses have been registered. Thank you!

Appendix B

Case Studies from Pilot Site Organizations

GREATER ESSEX COUNTY DISTRICT SCHOOL BOARD

Collaboration was key to the success of developing the HLM. If school boards and public health units wish to adopt this model they must ensure that they create an open, transparent, and inclusive committee which is interested in building a module or adjusting/revising existing questions to best support students within their communities. As a committee, we needed to understand why we were asking each question in the HLM and how each question would be addressed in an action step. If there was no tangible action associated with asking the question, then it was not asked. Within each question posed, we had to consider the end goal. No decision was made in isolation. Our committee members were able to address issues and were not afraid to contribute to the many discussions that took place. In the process of choosing each question, we collectively challenged each other. The purpose of formulating questions was not to diagnose someone, rather to plan for intervention, create tools and strategies thus the questions were not from clinical assessments.

We were mindful of the length of the survey and needed to ensure that the rating scales and timelines were consistent when presented to students. Wording of questions to enhance comprehension was assessed. Some definitions of words or examples of situations (definition of bullying) were explicitly written and placed in a logical order to increase student understanding of the next questions.

The draft HLM was field-tested with several students in GECDSB classes, their feedback was examined, and revisions were made. Some questions were changed based on their feedback due to a variety of reasons (wording, terms used, and level of comprehension of students). While some questions were re-worded, some words were recommended to be taught prior to the administration of the final survey, and some rating scales were adjusted to ensure that they were consistent in how they were presented on the survey.

The Healthy Living Module was then brought to our GECDSB School Climate committee to examine the content. More revisions occurred. For example, we changed the examples of fruits and vegetables on one of the questions to reflect foods that our students may better identify with as foods they would eat. The questions were also shared and discussed with a variety of committees within the GECDSB.

Our students, staff, and parents/guardians had access to the SCS, which included the Healthy Living Module questions, during the month of February 2019 and closed the first week of March 2019. Students in grades 4-6, 7-8, and 9-12 were administered separate surveys in which all included the HLM questions. Additionally, the student HLM questions were modified for our Parent/Guardian survey and our Staff survey.

No decision was made in isolation. Our committee members were able to address issues and were not afraid to contribute to the many discussions that took place

What We Learned

Our overall main findings from our 2019 SCS were based on the HLM responses. Some of the data surprised us. We knew that our students were not sleeping the recommended amount and we now have the results indicating this trend. However, we question if students underreported. We noted that the fruit and vegetable consumption was most likely over reported.

Results also determined that students were using their technology during the school week and on weekends for extended hours per day. This data will help support families to recognize the amount of screen time used at home and how it may impact sleep and other activities.

The mental health section of the HLM allowed us to identify that our students worry and that they often do not feel they have the tools to cope with their stress and problems. Seeing the numbers really drove the challenge home for us as a system confirming some of our perceptions about students and youth health. We were surprised by how many students indicated they worry and that they did not have the ability to calm themselves down when they are stressed. We will need to ask our students to clarify why and when they worry on future surveys. Are they worrying about a test they need to write or are they worrying that there is no food in the fridge to eat?

Our Next Steps

All 2019 SCS data has been collected and collated. Distribution of our SCS results took place in June 2019. Our SCS committee shared the results with the director, superintendents, board of trustees, student senate, administrators, and to various committees across the GECDSB. The data has been shared with the unions. GECDSB committees will work with the data during the 2019-2020 school year to formulate action-plans on how to best celebrate and support students.

Schools have their own data specific to their student, staff, and parent/guardian survey responses. Each school posted a one-page summary on their webpage recording strengths, challenges and next steps.

School Climate data will be shared with Student Senate in Fall 2019. Discussions will focus on how to get the information directly to students and how best support them. We look forward to working with our youth leaders to help create solutions and celebrate successes.

When we plan our SCS for 2021, we will re-examine our HLM questions. We need to find ways to address newer trends (such as vaping and cannabis use) and we feel data would have supported the conversations we are now having with our students.

How information is shared with students has also been a challenge based on findings from the questions posed. Addressing the amount of screen time and then having students go to our publicboard.ca website to access results is an interesting quandary. What type of screen time is critical to share information and what can be shared in alternative methods to reduce screen time? Is one type of screen time more valuable than other types (social versus educational)? During our process of formulating our next SCS we will be going back to review the relevance and timeliness of each of the HLM questions. Questions cannot be static.

The final step is reciprocal. Now that we have HLM data we are exploring how the WECHU and the GECDSB can support the challenges highlighted in student responses. The partnership we have will help support wellness issues within our schools. This allows us to collectively identify priorities, resources needed, and next steps to be taken. Our school public health nurses are a valuable resource within our schools. We are looking forward to capitalizing on the data and focusing on what our evidence-informed plans will be, utilizing our public health nurses within our schools.

Overall, the process of collaborating with multiple public health units and board of educations to create our Healthy Living Module was very educational and productive. We challenge other communities to do the same.

RAINY RIVER DISTRICT SCHOOL BOARD AND NORTHWESTERN HEALTH UNIT

What We Learned

The creation of a data sharing agreement was an important and useful first step, outlining the roles and responsibilities of the school board and the public health unit, and delineating the use and analysis of the data.

The timing of survey was also noted as an important consideration. The Board administers the SCS to students during Bullying Awareness Week, which occurs during the third week of November. This timing helps to enhance the understanding of bullying, with the lessons, assemblies, and overall heightened promotion providing greater awareness of what bullying is and is not for our students.

In reviewing our implementation, we noted several important considerations. First, it is harder to engage and capture the results for senior secondary students, as they have been surveyed for approximately nine years. School principals have recommended that the Grade 12 students have an abbreviated survey, administered with school exit questions, in May of each year, as a possible next step. Similarly, ensuring that all secondary students complete the survey is a challenge. Students have different timetables, with cooperative education placements and spare periods. We have many students enrolled in alternative education settings. As such, this is a challenge that we will continue to work through in order to have the greatest participation rate possible.

Another lesson learned was to provide a script and some preliminary work with school administrators and classroom teachers, to ensure that the survey is administered consistently. Reading and understanding questions created some difficulties for students in Grades 4 to 6. Having a script, with prompts to rephrase questions, was identified as a necessary next step.

Junior students had trouble in completing the survey, specifically due to the length of the survey and the nature of some questions, we plan to review the questions and revise some of the examples for future survey administration. For instance, within the Healthy Living module is a question about access to vegetables, with eggplant as one of the examples listed in brackets. This vegetable is not found in many of the grocery stores within our District and thus, created some confusion for younger students. To address the issue of survey length, we are also exploring how to administer the survey in sections, rather than in one sitting, for our younger students.

Another consideration is the presentation of the results to principals and school staff; an at-a-glance format or infographic would be very helpful as there is a great deal of information to absorb.

Did you find the data collected from some HLM questions more useful than others? Which ones?

Another next step is to build in formats and opportunities to share the results with all stakeholders including parents/guardians and students (thoughtfully and in a non-negative way). We worked together to share the initial results with school administrators and in reflecting on this exercise, recommend that more time to review the results in advance of this session would be more productive. One school worked with staff to review the questions, to estimate how students might answer and then compared the actual results. This structure facilitated rich discussion and a greater investment in using the results to inform school improvement and bullying prevention planning activities.

For the NWHU, the data around risk-taking behaviors (e.g. vaping), sleep, screen time, physical activity and healthy eating were identified as important for planning. For the Rainy River District School Board, the data on safety, risk-taking behaviors, the identification of a caring adult, sedentary behavior, prevalence of bullying, access to mental health supports, and future aspirations/career plans were identified as important for planning. In addition, screen time data and the quality and length of students' sleep will help to inform our efforts to reduce chronic absenteeism.

Our Next Steps

Some initial next steps included sharing the information with specific audiences. Results have provided context for a variety of topics to be used within school newsletters and presentations to parents/guardians and communities. For instance, the Board's Mental Health Leader shared the sleep hygiene information with Grade 12 students when invited to present on student mental health. Going forward, this information will be used to engage students in conversations about their mental health and to increase awareness on how to access supports for their mental health. Specific data also helped to inform the Board's 2019-20 Mental Health and Addictions Plan, as well as school improvement plans and bullying prevention plans. Similarly, the results will be used to inform the Health Unit's plans both regionally and locally. In updating transition activities and processes, the Board recognizes the need to increase students' sense of belonging in their schools and the identification of a caring adult, especially as students move from Grade 8 to Grade 9.

In looking forward, we also see a need to develop and align our staff and parent surveys to cross-reference the information collected from students. Another important next step is to communicate the results to our various audiences. In addition to informing our communications with parents/guardians and communities, we recognize the importance of student voice and in sharing the results to gain greater insight—for students and for ourselves—into their feedback.

The data that surprised us included the low percentage of students who have a sense of belonging at school, the low percentage of students who could identify at least one caring adult within secondary schools, and the disparity between males and females who reported happiness with life and self-esteem/self-worth.

THUNDER BAY CATHOLIC DISTRICT SCHOOL BOARD AND THUNDER BAY DISTRICT HEALTH UNIT

Our Collaborative Data Sharing Experience

The TBCDSB and TBDHU have a history of a good working relationship together, with the Schools Program and many other programs of the TBDHU supporting the Boards of Education in the District of Thunder Bay. The interest of the TBCDSB Mental Health Lead, and coordinator of their SCS in this project, along with the support of the Board's Senior Team has been a facilitator for the pilot process.

The key to successfully implementing a HLM with a SCS is strong relationship building with school board reps at the Senior level to help facilitate decisions as well as the person responsible for coordinating the SCS process (such as the Technology Enabled Learning and Teaching – Contact). It also is important that there is a shared understanding of why the HLM data is important to Boards of Education and not just to Health Units.

If the Board uses a third party organization to do their SCS it is beneficial to build a relationship with that organization to gain an understanding of the assets and limitations of the SCS tool. Being able to use the HLM data in conjunction with the SCS data helps to build a better understanding of the situation based on a number of questions or results. It should be cautioned that developing programming based on one question alone may not be providing the full story into the needs of the student community.

A data sharing agreement between public health units and schools in order to have permission to use data for planning purposes was advantageous. It removed reservations from school boards about the Health Unit accessing the data by providing clear expectations about how information will be used. For our scenario we found that the TBCDSB looked to TBDHU to take the lead on establishing the data sharing agreement.

The project required a large time commitment in the planning stages and in the analysis/report writing stage. The Health Unit developed communications to the SCS Leads, parent letters and scripting for teachers for the implementation of the HLM which the Board representatives found helpful. Ensuring that the results report was meaningful to both the school board and public health unit required determining shared language.

Involvement in the project did increase the positive relationship especially around the area of data collection and data sharing.

Did you find the data collected from some HLM questions more useful than others? Which ones?

Local data is often difficult to access due to cost and capacity, therefore, all data collected from the HLM was found to be useful for planning and monitoring school programming and needs. It also was beneficial from the public health unit perspective to have access to the SCS data to use in conjunction with the HLM data so that the full story could be seen.

It was interesting to look at data and trends over time and trends (i.e., sleep decreases as students age, fast food and sugar sweetened beverages increases as students age). Looking at groups of questions help to provide more insight (i.e., if a high proportion of students report anxiety always/most of the time, however are able to bounce back when something bad happens and calm themselves down when stressed, this presents a different situation than if the same results for anxiety are coupled with high proportion of students who always/most of the time are unable to bounce back or calm themselves down).

Bullying data will help to target specific grades (for example, if senior elementary students reported higher rates of bullying behaviours compared to elementary and secondary schools – this would help the planning process to targeted interventions in senior elementary schools).

Mental health is an area of concern for school-aged children, thus, information on students willing to seek support, or knowing someone to talk to, at school compared to in the community is important to understand. This will inform the information and strategies schools can provide, such as identifying opportunities to raise awareness, ensuring supports are inclusive and trauma informed.

Which HLM findings confirmed your perceptions about child and youth health? Which HLM findings surprised you?

The healthy eating data supports existing programming in schools and newly-targeted initiatives at priority schools that identified a particular need. The data trends over grade levels were interesting, however, logically make sense. Students knowledge and willingness to seek help at school versus in the community is interesting and warrants further discussion.

Our Next Steps

With the data from the HLM and SCS, the TBDHU school health program will now integrate local findings into our operational planning. It ties nicely into our Public Health mandate to provide evidence-based programming based on local needs. If continued in the future, it would be helpful to track cohorts over time and continue to look at trends overtime as this type of data may inform the effectiveness of our interventions.

TBDHU Schools Manager plans to meet with school board administration in the fall to present and discuss findings. TBDHU support will also be offered to present and discuss findings at a Principal meeting.

Do you foresee any challenges to implementing the HLM? What are they and how can they be mitigated?

The main challenge for small public health units and school boards around implementation is time and capacity of limited staff to analyze data. Current capacity would need to be considered, especially if equal access for all school boards in our catchment area was to be provided. Additional funding for public health units, a central location, or a program designed specifically for analyzing the data, would help to alleviate this barrier.

How do you think the HLM data will be used?

At time of writing this report, the reports with the HLM findings are being drafted. The intention is to integrate local findings into operational planning to look at areas of need for new programming and support current programming. As mentioned, it would be helpful to track cohorts over time and continue to look at trends overtime to help monitor programming and determine priorities. The TBDHU Schools Manager will meet with school board administration and potentially principals to discuss how administration and schools can use this information to complement their SCS results.

LAMBTON-KENT DISTRICT SCHOOL BOARD, LAMBTON PUBLIC HEALTH, AND CHATHAM-KENT PUBLIC HEALTH

What We Learned

- Within the research project there was increased capacity and support to do this work, however, to ensure ongoing sustainability – need to have a plan in place to adequately resource survey development, data analysis and knowledge mobilization processes
- Redesigning the SCS was a big undertaking with limited resources and having a collaborative working group (with representation from principals, special education, superintendents, mental health, Indigenous liaison, parents/guardians, student trustees, public health) was very supportive of this process, increased efficiencies and allowed for thorough discussion
- Having historical context of past SCSs within the working group was very valuable to understand what information was useful to schools and the board in the past, and what worked well as far as survey implementation
- General approach to survey development was to ensure that every question addressed a clear information need, and the questions ended up replacing series of questions that existed on the previous surveys. Meetings allowed for a more critical look at questions – "what are we asking and why?"
- A lot of care was taken to develop high quality questions that would take an appropriate amount of time for students, parents/guardians, and teachers to complete. Overall there was a move towards quantitative (scale-based) questions wherever possible in place of open-ended questions for consistency of information, reduced response time and ease of analysis.
- It was helpful to look at the survey as just one avenue for data collection within the school – a mechanism to get at issues and trends at a high level with the understanding that individual schools may need to delve into further to better understand the context around an issue.
- With greater use of data and transparency the school board and schools will be more accountable – this was the approach used to get the working group on board
- Data MUST be useable for schools and information collected MUST reflect each school's environment
- Parent survey took less than 5 minutes to complete
- There were 46 questions in total for grade 7-12 students to answer, but no one found that it took too long to complete
- Three schools did not complete the SCSs at all – follow up is needed to understand what happened in these cases
- It was thought that the survey could have been kept open for longer than 2 weeks, with monitoring and follow up/ reminders built into the implementation timelines
- Implementing this year's survey, including the Healthy Living Module, required an extensive roll-out; there was a big push to engage parents/guardians as past years participation was low, but ultimately implementation within schools depended on Principals and whether or not they scheduled time for students to complete the SCS
- Having no control over staff participation was difficult

- Survey was announced by giving information to multidisciplinary teams with a video announcement (45 seconds explaining the survey), plus information on school websites and social media platforms
- QR codes and lots of information was communicated to schools prior
- Paper copies of the survey were made available and results were inputted into the online survey tool by school staff
- Some key terms were highlighted/defined to help people complete the Survey with more ease

Our Next Steps

For the public health units, the SCS data will inform planning with schools and the school health teams or related program areas will determine how the data influences their approach overall. School health teams will facilitate conversations with Principals to use SCS data in the process of their needs assessments with individual schools—their role is to build capacity in schools to action wellness strategies. The Health unit will ask for the school board's permission if they want to publish anything around the SCS.

The school board will be responsible for releasing the data – providing indicators, professional development, messaging, etc. In doing so they will look for opportunities to build capacity at the school and board level. Principals will be told to reach back to the public health unit for support around issues identified/highlighted. School staff will need to be mobilized to use the data. Principals vary in their level of buy-in, so the board is dependent on them and how they decide to use (or not use) the data.