PEI Youth Excel CLASP Case Study

Final Report

D. Murnaghan, PhD, RN; B. Bell, PhD; C. Laurence, MA; M. Spidel, MPhil

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Comprehensive School Health Research (CSHR) Group
University of Prince Edward Island
550 University Ave.
Charlottetown, PE
C1A 4P3
Tel: (902) 894-2820
Fax: (902)566-6486
Email: cshrt@upei.ca
Web: http://www.upei.ca/cshr

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Executive Summary

This report provides an overview of the Prince Edward Island case study on youth health knowledge exchange capacity carried out as part of the *Youth Health Collaborative: 'Excel'erating Evidence Informed Action* (Youth Excel). Youth Excel is a partnership between seven provinces, the Propel Centre for Population Health Impact, and the Joint Consortium for School Health (JCSH). As one part of Youth Excel's activities, Prince Edward Island, New Brunswick, and Manitoba were identified as leaders in youth health knowledge exchange (i.e., collecting, synthesizing, using, and evaluating school health information) and selected to carry out case studies of the school health initiatives in their respective provinces. In PEI, this is focused on the implementation of the School Health Action, Planning, and Evaluation System – Prince Edward Island (SHAPES-PEI), a system designed to gather student and school-level health data and report the data back to schools, school boards, and the province to support school health program and policy planning.

The provincial case studies have two distinct purposes: (1) To examine ongoing initiatives/activities and document lessons learned with respect to building capacity in collection of local data, interpretation and synthesis of data, utilization of knowledge to take action, generation of evidence from action; and (2) To help discern realistic outcomes from these knowledge exchange networks. The PEI case study had three additional objectives:

1. To document and understand the development of SHAPES-PEI, focusing on the critical factors for establishing priorities and generating evidence.
2. To explore SHAPES-PEI evidence synthesis, distillation, and use.
3. To understand stakeholder perspectives on school health knowledge exchange.

A case study research design was chosen because it is suited to understanding complex social phenomenon within real-life contexts. A multiple case study design involving PE, NB, and MB provides researchers with opportunities to explore differences within and between the three provincial cases and to uncover relevant contextual conditions (Yin, 2008). Data collection in all three case study provinces consisted of document analysis, interviews, and/or participant observation. Research participants in PEI included research, policy, and practice representatives, and both education and health sectors. They were university researchers, government employees, school administrators, school district employees, parents, teachers, NGO employees, etc.

Key Findings

Objective 1: SHAPES-PEI Development & Implementation

- It is crucial to start preparations for a data collection and feedback system, such as SHAPES-PEI, well in advance. Finalizing budgets, contracts, ethics, and staffing took more time than expected.
- Time and effort was needed to develop strong and trusting relationships.
- Pre-existing informal ties and formal partnerships were crucial to the eventual funding and implementation of SHAPES-PEI.
- Face-to-face meetings were key to sharing information and gaining support for SHAPES-PEI.
- Strong leaders and champions in influential positions were effective in building support.
- Providing feedback reports to schools was a key factor in the positive reception of the initiative by the province, school boards, and schools.
- Schools were motivated to participate in SHAPES-PEI in order to support school-level change, to enhance their school development plans, and/or to acquire funding (i.e., an honorarium), but also often by a perception that most other schools were participating.
- Schools that chose not to participate often did not because of lack of time or research fatigue. Schools had competing demands with curriculum, storm days, and other events at the school.
- Open and clear communication was critical throughout the process.
- It was important for schools and other stakeholders to understand that it is a multi-year funded project, and not a one-off survey.
- School and student health is only a priority for some individuals, schools, and organizations. Often other competing issues take precedence.
- The link between student health and academic achievement is not always emphasized/understood.
- There is a need to continuously update and adjust the SHAPES-PEI questionnaires and feedback reports to ensure that the data collected and reported is of use and valued.

Objective 2: Knowledge Use

- The SHAPES-PEI feedback reports have generally been received in a positive manner.
- It was felt that the reports are user-friendly, clear, and provide a broad summary of information.
- It was important for the research team to encourage sharing of reports.
- Additional efforts were needed to raise awareness of the initiative/reports among parents.

- Principals can get overwhelmed with the information provided in the reports and may not know how to go about sharing results.
- There was a lack of awareness of school-level reports among students.
- Even when stakeholders were aware of the reports, they were not necessarily aware of the specific information that the report contained or how it may be relevant to them.
- The School Health Grant program was a major driver for schools to use their SHAPES-PEI reports.
- Although there is evidence that mental fitness is of interest to schools, there are a lack of activities targeting this area being proposed in the grant applications. This may be due to mental fitness being more challenging to understand or know how to act upon.
- Some stakeholders feel they already know the information that SHAPES-PEI provides and suggested that more in-depth information is required.
- Improved communication and collaboration between principals and parents, and also between the research team, principals, and parents, seems key to generating broader awareness and use.
- Schools need support to be able to effectively use their feedback reports and implement actions.

<u>Objective 3: School Health Knowledge Exchange</u>

- While PEI school health stakeholders felt that good work is being done in school health knowledge exchange, they believe there are many areas for improvement.
- Partnerships, collaborations, and working together should be the focus.
- The process of moving from having knowledge to acting on it is not always easy or straightforward and many do not have any training in this area.
- With principals' busy schedules and competing demands, school health research results and information were often pushed aside.
- There remains a lack of communication across research, policy, and practice settings, as well as sectors and health behaviours, both within PEI and across Canada.
- PEI's small size can be favourable to knowledge exchange because people have many connections and are open to informal communication; however, the small size can also create barriers since there is limited funding for resources to facilitate consistent knowledge exchange activities.
- Lack of communication and relying on informal networks can result in confusion and overlapping of work.
- Suggestions for improvement:
    - Consider engaging beyond the school setting and with 'non-traditional' partners
    - Identify champions to help improve current practices

  - Communicate information in a variety of ways to encourage sharing
- School Health Network:
  - Most stakeholders felt it would be beneficial to formalize the networks and discussions already in place
  - Some interviewees saw this network coming from the grassroots (i.e., schools)
  - Such a network should not be policy focused, but rather play a coordinating and information-sharing role
  - School champions should be involved to ensure the purposes meet schools' needs
  - Concerns exist about how to address different stakeholders' priorities
  - Stakeholders question whether 'school health' is the best focus or terminology to use
- Student Perspectives:
  - Physical activity and healthy eating were discussed frequently. Other issues mentioned included social interaction, feeling respected and comfortable at school, mental health, and school environment/atmosphere
  - Food quality and price in cafeterias was considered an important school health issue
  - Students felt that problems with the cafeteria resulted in students purchasing food from fast-food outlets
  - Some students felt there was a lack of physical activity options available at their school
  - Bullying was often discussed, but some students preferred not to call the behaviour 'bullying' – Discussions revealed that it is a complex issue for students
  - Students think schools are already doing a lot to promote healthy living
  - Students felt that having positive relationships with teachers/staff/principals was important
  - The majority of students expressed feeling that they did not have any power to make change in their schools

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INTRODUCTION

This report provides an overview of the Prince Edward Island case study on youth health knowledge exchange capacity carried out as part of the *Youth Health Collaborative: 'Excel'erating Evidence Informed Action* (Youth Excel). We aim to provide reflections on the case study data in the hopes of encouraging dialogue within the province. Following sections on the project background, purposes, and methodology, we discuss findings and present some lessons learned. The report concludes with a section outlining next steps.

BACKGROUND: Youth Excel

In February 2010 the Canadian Partnership Against Cancer, along with the Public Health Agency of Canada and the Heart & Stroke Foundation, announced funding for Coalitions Linking Action and Science for Prevention (CLASP). Seven provinces, the Propel Centre for Population Health Impact, and the Joint Consortium for School Health (JCSH) joined to form the *Youth Health Collaborative: 'Excel'erating Evidence Informed Action* (Youth Excel). Youth Excel aims to improve collaboration among researchers, policy makers, and practitioners towards enhancing youth health policies and programs.

Youth Excel has three aims:

- Aim 1: Establish and advance priorities for youth health
- Aim 2: Accelerate development of knowledge exchange (KE) capability in provinces
- Aim 3: Strengthen collaboration among research, policy, practice, and youth leaders

Aim 2: Knowledge Exchange Capability

Making effective connections between research, policy, and practice has long been a concern of those carrying out research and making use of its findings and outputs. Such processes and practices have variously been referred to as 'research utilization,' 'knowledge utilization,' 'knowledge translation,' and 'knowledge exchange.'

As part of Youth Excel's Aim 2, Prince Edward Island, New Brunswick, and Manitoba were identified as leaders in youth health knowledge exchange (KE). In PEI, there are presently several youth health initiatives which involve knowledge exchange processes (i.e., collecting, synthesizing, using, or evaluating school health information). For the past several years, the CSHR Group at the University of Prince Edward Island (UPEI) and the PEI Department of Education and Early Childhood Development (DEECD) have been working towards a more comprehensive approach to youth health knowledge exchange in the province, focusing particularly on the School Health Action, Planning, and Evaluation System – Prince Edward Island (SHAPES-PEI). In the 2008-09 school year, the SHAPES-PEI initiative began with the collection of student-level data on tobacco use, physical activity, healthy eating, and mental

fitness (grades 5-12 students from schools across the province). School-level data were also collected on programs and policies addressing tobacco use, physical activity and healthy eating. During 2009-10 the SHAPES-PEI team engaged in knowledge synthesis and exchange activities following from the data collection. These included feedback reports (i.e., Profiles) to schools, school boards, and the province, presentations to various alliances and committees, and the launch of a School Health Grant program to provide funding to schools and school boards implementing activities in response to their SHAPES-PEI data. SHAPES-PEI is planned as a biennial system and data collection was repeated during the 2010-11 school year. As we build youth health knowledge exchange in these and other ways, we have identified the need for PEI to continue to increase capacity and to enhance collaborations among leaders in research, policy, and practice. Complimentary to our goal to further enhance SHAPES-PEI, we aim to broadly engage youth stakeholders in PEI to work towards building knowledge exchange capacity and a learning platform in youth health to benefit those in policy, practice, and research, as well as youth themselves.

CASE STUDY PURPOSES & OBJECTIVES

Purposes

The Aim 2 case studies have two distinct purposes:

1) The case studies will examine ongoing initiatives/activities and document lessons learned with respect to building capacity in the four components of youth health KE:

- Community monitoring systems to support planning and evaluating of policies and programs for children and youth (i.e., collecting local data, including risk factor data)
- The ability to synthesize relevant evidence with respect to the kinds of interventions that prove to be effective (i.e., interpretation of data informed by literature, program evaluations and the local context, etc.)
- The capacity to move evidence into action (i.e., utilization of knowledge derived from interpretation of data to implement better practices)
- The means of generating evidence from action (i.e., learning from and sharing better practices, programs, policies, interventions, shared experiences and evaluations)

2) In addition, this endeavour will help to discern realistic outcomes from these networks, such as agenda-setting, influence on youth health programs and policies, and costs and benefits to youth, as well as to regional and provincial policy makers and practitioners.

The research activities for the case studies were guided by *key areas of inquiry*. The key areas of inquiry were derived from the case study purposes and the perspectives of the Aim 2 Working Group and refined through a nation-wide consultation process. The key areas of inquiry are:

- Three youth health KE components: (1) Community monitoring/surveillance systems to support planning and evaluation of policies and programs for children and youth, (2) The ability to synthesize and elicit relevant evidence about the type of intervention most likely to work, and (3) Means of moving evidence into action
- Partnerships/Collaboration
- Using Evidence
- Resources/Contexts

Three unique objectives also guided the PEI provincial case study activities. These are:

Objective 1: SHAPES-PEI Development & Implementation

To document and understand the development of SHAPES-PEI, focusing on the critical factors for establishing priorities and generating evidence (i.e., community monitoring system).

An in-depth understanding of how SHAPES-PEI originated and developed is a key component to the PEI case study. We captured the stories of individuals involved with the initiation and implementation of SHAPES-PEI and documented the chronology and major turning points of the project (e.g., steps, decision-making processes, initiation). We sought to understand various perspectives on the goals and objectives for participation or nonparticipation in SHAPES-PEI.

Objective 2: Knowledge Use

To explore SHAPES-PEI evidence synthesis, distillation, and use (i.e., ability to synthesize relevant evidence).

Exploring knowledge synthesis enables us to further understand the varied perspectives regarding current practices, future goals and objectives with regards to youth health knowledge use. Specifically, we aim to understand schools', school boards', the province's, and intermediaries' reactions to, and use of, SHAPES-PEI feedback reports (i.e., Profiles) and other SHAPES-PEI youth health knowledge. In addition to documenting recent and current use of SHAPES-PEI knowledge, the case study explores the contexts in which knowledge use occurs.

Objective 3: School Health Knowledge Exchange

To understand stakeholder perspectives on school health knowledge exchange (i.e., evidence generation, synthesis and use to support program and policy planning).

The third objective of the PEI case study is to understand perspectives on, and lessons learned about, school health knowledge exchange from a diversity of stakeholders, including students.

The case study explores the potential for an integrated approach to school health knowledge exchange in PEI through gathering and documenting key stakeholders' lessons learned, and engaging them in discussions about their beliefs regarding school health knowledge exchange and their vision(s) for the future.

METHODOLOGY

The first challenge faced by researchers in approaching a study is matching the appropriate research methodology to the research mandate. A case study research design is situated between the quantitative and qualitative paradigms utilizing multi-data collection to gain an in-depth understanding of a complex social phenomenon within the real-life context in which it occurs (Yin, 2008). Case study research is useful when *"a how and why question is being asked about a contemporary set of events over which the investigator has little or no control"* (Yin, 2008, p.13). This study is exploratory in nature (i.e., meant to investigate phenomena/situations where there is no clear single set of outcomes) and focused on describing youth health KE experiences and capacity. It seeks to answer the questions of "what," "how," and "why" with respect to building knowledge exchange capacity in three real-life contexts (Manitoba, New Brunswick, and Prince Edward Island). Thus, a multiple case study design has been selected as it provides researchers with opportunities to explore differences within and between cases and to uncover relevant contextual conditions (Yin, 2008).

Youth Excel's Aim 2 Working Group is responsible for ensuring the success of the Aim 2 activities. It includes representation from the three case study provinces. This group collaborated in creating and coordinating the overall research design. Members worked with their provincial case study teams to refine and implement the case study plan within their own province and maintained contact with each other to ensure some consistency across case provinces. The PEI case study team consisted of Dr. Donna Murnaghan (Principal Investigator), Dr. Brandi Bell (Research Coordinator), Courtney Laurence (Project Researcher), and Matthew Spidel (Project Researcher).[1]

Data Collection Procedures

All three case study provinces determined that data collection methods would consist of document analysis, interviews, and/or participant observation.[2] Document analysis involved

[1] The PEI Youth Excel Steering Committee and Dr. Barb Riley of the Propel Centre for Population Health Impact provided additional input and guidance at various stages of planning and data collection.

[2] Further details on these methods can be found in the Youth Excel Tri-Province Case Study Plan, available from the CSHR Group.

gathering a variety of documents relevant to the case study purposes and objectives. Semi-structured key informant interviews provided comprehensive in-depth information on individuals' experiences, feelings, and attitudes, while semi-structured focus group interviews were conducted where small group discussion was applicable (e.g., when we were interested in collective experiences, understandings, or perspectives). All interviews were tape recorded. A structured survey was used to understand the viewpoints of a larger diverse spectrum of partners, end users, and stakeholders. Participant observation was carried out by the research team in suitable situations (e.g., meetings where relevant themes were discussed).

Participants for key informant interviews, focus groups, and the structured survey were recruited through existing contacts and networks within the province. Snowball sampling was used where appropriate. Ethics approval for this study was received from the University of Prince Edward Island Research Ethics Board in July 2010. Data collection took place July-December 2010, with follow-up interviews and focus groups in May-June 2011.

All participants received information about the project and provided informed consent prior to participation.

Summary of Data Collection Activities

	Documents	**Interviews**	**Survey Respondents**	**Focus Groups (# of participants)**
Objective 1	50*	9		
Objective 2	69*	6	69	
Objective 3		11		7 (51)
Total:	**119**	**26****	**69**	**7 (51)**

* Some documents overlapped between the two objectives, but are only counted here once.
** Note that, in some cases, more than one interview was conducted with a research participant and the total here represents the total number of interviews conducted not the total number of different individuals interviewed. Follow-up interviews/focus groups are not included here. Similarly, there is overlap between survey respondents and interviewees.

These data collection activities represent 119 documents, 26 interviews, 69 completed surveys, and 7 student focus groups (51 total student participants). Interviewees represented research, policy, and practice, and both education and health sectors. They were university researchers,

government employees, school administrators, school district employees, parents, teachers, NGO employees, etc.

Interviewee Representation			
Role		**Sector**	
Research	6	**Health**	8
Policy	6	**Education**	13
Practice	9	**Other**	2
Other	2		

The online survey was distributed through existing networks on November 4, 2010. Reminders were sent out on November 16, 2010 and the survey closed November 19, 2010. Snowball sampling was used to help reach a broader audience. In total, 69 individuals opened the link to the survey with 53 of those completing it in full. Of the 69 individuals who completed at least part of the survey, approximately 57% were female. Additionally, 48% of respondents were school administrators. Student focus groups were held with grade 7-12 students from schools in all three PEI school boards.

In May-June 2011, seven follow-up interviews (including two focus groups) were conducted with participants (representing different roles/sectors and case study objectives) to ensure that the analysis and reporting reflected the contributions of the participants, as well as to clarify and explore details from their initial interview.

Data Analysis Procedures

Data management, synthesis, and analysis activities were concurrent, iterative, and ongoing. They were negotiated across the three case study provinces to ensure consistency as needed for future cross-case comparisons. In PEI, researchers constructed detailed notes of the interviews, focus groups, and participant observation occurrences, as well as parallel notes of the interviewer's experiences and thoughts of the data collection activities (Halcomb & Davidson, 2006). These notes, as well as survey responses and gathered documents, were stored and organized in a provincial case study database.

NVivo 8/9 software was used to manage and analyze data. Analysis focused on thematic survey and conceptual/thematic description (Sandelowski & Barroso, 2003). The team engaged in both

"the nominal use of concepts or themes, where they are used only to label and order portions of data, and the interpretive use of concepts or themes, where concepts are actually used conceptually or themes are actually used thematically to recast portions of data" (Sandelowski & Barroso, 2003, p. 913). Based on an analytic framework drawn from the literature and from reading the data, 'units of meaning' arising from the texts were condensed into a set of thematic codes for each document, interview, and observation. The themes "bring together components or fragments of ideas or experiences, which often are meaningless when viewed alone" (Leininger, 1985, p. 60).

In developing the broader thematic codes, special attention was given to sections of the field notes that did not fit with the organizing structure to ensure a thorough analysis of the data. The thematic analysis which forms the basis of this report was conducted by the PEI team, with communication with the NB and MB teams to help ensure consistency. The themes identified from multiple readings of the texts as well as from findings of previous research resulted in emergent questions and issues that guided ongoing data collection (Miles & Huberman, 1994). All new data was coded and analyzed in terms of existing themes.

Preliminary data analysis was conducted by the PEI research team. A priori codes were developed based on the PEI case study objectives and the key areas of inquiry guiding the case study. They were revised on an ongoing basis with emergent codes added throughout the iterative data collection and analysis process and all codes reviewed, as needed. Each segment of data (e.g., interview notes, field notes, etc.) was reviewed and coded by two team members using NVivo 8/9. These researchers met on a regular basis to discuss and review the coding structure and overall analysis of the data. After all data was coded the team engaged in an in-depth review of the data and coding to develop the preliminary findings and lessons presented in the section below.

KEY FINDINGS

Objective 1: SHAPES-PEI Development & Implementation

Semi-structured interviews were conducted with a variety of stakeholders involved in different roles and stages of SHAPES-PEI. Participants were asked a series of questions regarding the development and initiation of the initiative. These interviews, along with document sources, provide the foundation for telling the story of SHAPES-PEI. The focus of objective 1 was to document how SHAPES-PEI came to be initiated in the province and the details of its implementation thus far. It also encompassed developing a better understanding of the motivating factors for provincial, board, and school participation in the initiative. Below we tell the 'story' of SHAPES-PEI prior to discussing important lessons and critical factors for success.

Bringing SHAPES to PEI (late 1990s-2008)

In the late 1990s and early 2000s, research on youth smoking took place in PEI schools. Donna Murnaghan, a nursing professor at UPEI, was seeking a project for her PhD research. She spoke with her Canadian Cancer Society colleague, Roy Cameron of the University of Waterloo (UW), who suggested that she could implement the tobacco module of the School Health Action Planning and Evaluation System tool (SHAPES) in PEI high schools and do a natural experiment over the 1999-2001 timeframe as new smoking policies and prevention programs were being implemented. As this work proceeded, Dr. Murnaghan established the Comprehensive School Health Research group (CSHR) at UPEI and it became the School Health Unit of the Atlantic Networks for Prevention Research (ANPR). The ANPR was funded by the Canadian Institutes of Health Research (CIHR) from 2004-2009 and provided Dr. Murnaghan with important infrastructure support for resources, materials, and staff, to dedicate to meetings/forums, travel, planning, and networking.

This work led to Dr. Murnaghan's research group (the Comprehensive School Health Research group, CSHR) implementing the Youth Smoking Survey in PEI during the 2004-05 and 2006-07 school years (and again in more recent years, as described below). Thus, Dr. Murnaghan became a part of the YSS and SHAPES teams of researchers, centred at the University of Waterloo (organized by what is now the Propel Centre for Population Health Impact). She had also, through this research, developed relationships with the PEI school/education system, including with the school boards and principals. An important part of her work was providing research results (feedback) to schools that participated – something that was continued as part of YSS and SHAPES.

Having an interest in chronic disease risk factors generally, Dr. Murnaghan sought to implement student surveys in areas other than smoking. This aligned with the work of those at the University of Waterloo who were developing physical activity and healthy eating modules of SHAPES, and the Health and Education Research Group at the University of New Brunswick who were developing a mental fitness module. Dr. Murnaghan and these groups were seeking a way to gather evidence to support broad-based policy and program initiatives at local, provincial, and national levels. Towards this end in PEI, Dr. Murnaghan spoke with others in the province about developing a grant application which would include the implementation of SHAPES (along with other public health activities with adults).

During this same time period (2006-07), the PEI DEECD had hired a School Health Specialist, Sterling Carruthers, and asked him to look at the Active Healthy School Communities program already in place in Island schools. The DEECD determined that the program did not meet their needs and it was discontinued. That program had an assessment component that gathered information about school health, but after eliminating the program there was no such data being

systematically collected. Some DEECD staff began to seek support from within the Department for a new way to gather data on school health. It was felt that schools wanted to act on health-related issues, but only had intuition to go by and needed evidence to help them determine where and how they should act. Mr. Carruthers set out to find appropriate tools that could be used. Drawing on his colleagues in the Joint Consortium for School Health (JCSH), and other resources, he came upon SHAPES. He liked this tool mainly because it was already being used in other jurisdictions in Canada (including our neighbouring province, NB) and focused on not only data collection, but also feedback to schools.

Dr. Murnaghan became aware of the DEECD's interest in SHAPES and felt that she might be able to obtain funding from the DEECD to implement SHAPES-PEI due to her involvement on the SHAPES team and her previous implementation of YSS on PEI. She began to focus on this possibility. Within the DEECD, memos and presentations were developed to gain interest. When support seemed likely, Mr. Carruthers approached Dr. Murnaghan about partnering to implement the project due to her involvement with YSS and the potential to implement SHAPES along with YSS.

Dr. Murnaghan, Mr. Carruthers, and Dr. Steve Manske of UW eventually came together to discuss the possibility of implementing SHAPES in PEI with Dr. Murnaghan's CSHR Group and the DEECD as partners. Planning meetings among these partners were plentiful in 2007. Discussions focused on: who the sample of students would be (e.g., French schools? Grades?), which modules would be used and how they would be combined into questionnaires, how to distribute the SHAPES and YSS surveys within schools/grades/classes, whether it was possible/desirable to use student identifiers, etc. This planning, as well as continued efforts within the DEECD, resulted in the SHAPES-PEI initiative becoming a budget item in the DEECD budget for the 2008-09 fiscal year, with a commitment to annual funding.

Thus, SHAPES-PEI grew out of a provincial desire for student health information (among research and policy sectors), but also depended on existing partnerships with national and provincial youth health stakeholders, tools adaptable to provincial needs, and established expertise and capacity in school-based health research in the province.

<u>The First Data Collection (2008-2009)</u>

Planning

While planning for the 2008-09 data collection began in 2007, it was not until early 2008 – when the provincial budget was announced and funds were dedicated to the SHAPES-PEI initiative – that more formal preparations could take place. From the announcement of the provincial budget in Spring 2008 until the Fall, budgets were revised, contracts and sub-contracts were developed,

and data collection planning continued. This planning process took longer than hoped due to a few factors:

- Building relationships among the project team, in the early stages, required time to meet and establish trust. Difficult questions had to be asked and discussed to ensure all partners felt value-added in the partnership.
- Synergy needed to be created across research groups present in PEI schools. Meetings were held between research groups and the DEECD to ensure smooth data collections and minimal burden on schools.
- Implementing YSS as part of SHAPES-PEI meant that YSS budgets and contracts needed to be completed prior to establishing agreements for SHAPES-PEI more generally. Health Canada, the YSS funder, took longer than initially thought to establish agreements with UW, the national YSS coordinator, thus delaying the development of agreements between UW and CSHR.
- The details of data collection continued to change long into the planning process (i.e., sample, means of distributing surveys, questionnaire development, etc.) which impacted the budget.
- Developing a new contract between CHSR and the DEECD took more time than expected due to issues with data ownership.

Ethics & Early Discussions

Once contracts were finalized, an ethics application was made to the UPEI Research Ethics Board. This process was also complicated by the fact that we were planning to implement YSS as a component of the SHAPES-PEI initiative. Ethics procedures had to follow YSS protocols but all documentation (i.e., information sheets, consent letters, etc.) had to be revised to encompass the entirety of SHAPES-PEI. Consent procedures also had to follow the UPEI guidelines for research with minors. Ethics approval for data collection was received in November 2008.

As these processes continued, informal discussions took place between the project team (CSHR and the DEECD) and the three PEI school boards, with presentations to trustees and superintendents, as appropriate. Informal consent to participate in SHAPES-PEI was received in all cases and presentations were done at board-level principal meetings during Summer and Fall 2008 to explain the project and advise principals that they would be contacted during the school year with a request to participate.

Recruitment

In October 2008, once initial funds were received at UPEI, a project coordinator was hired. Prior to this, project activities were carried out by existing CSHR staff with funds leveraged from

other sources. Having infrastructure support through the CSHR Group was critical to continuing the momentum to move SHAPES-PEI forward. From October 2008 on, the SHAPES-PEI coordinator oversaw all aspects of the recruitment and data collection described below, with support from other existing CSHR staff and other SHAPES-PEI staff hired at a later date.

Recruitment processes dictated that the three PEI school boards would be approached first to ask for their willingness to participate in SHAPES-PEI (Murnaghan, MacLellan, McVey, Chad, Collier, 2008). Each board was sent a recruitment package with a fax-back form in December 2008 and all three agreed to participate. Following board recruitment, school recruitment began with packages and fax-back forms sent to principals in December 2008. Packages included information about the project and the role school staff would need to play. When responding with the fax-back form, schools willing to participate were asked to identify a contact person with whom the research team could work to arrange and carry out the data collection procedures. This allowed the principal to designate another individual as they liked, and in ideal situations the contact person selected had both the time and interest to support SHAPES-PEI within their school.

As the Fall progressed, the planning stage was extended (discussed earlier), delaying the data collection from when the project team had planned to start and had initially told school boards it would start. Thus, a push was made to recruit and schedule a few school data collections in December. Personal connections were used so that this could happen without damaging relationships with the schools. While this was challenging for the research team and the participating schools due to an expedited time-frame for preparation, it was unexpectedly beneficial. The schools completed in December included elementary grades and feedback received from these schools indicated that the questionnaires were too difficult and lengthy for younger students. In reaction to this feedback, the questionnaires were revised for grades 5 and 6 prior to further data collections.

Sixty-eight schools were approached to participate in the project and recruitment took months to complete due to slow or non-response, in part due to schools dealing with other challenges (e.g., a high number of storm days and ongoing debate and discussion regarding school closures in one of the three boards). These challenges also meant that data collections often had to be rescheduled and they continued into June 2009. In the end, 3/3 boards and 58/68 schools participated.

Preparation for Student Data Collection

Once a school agreed to participate, the school contact corresponded with the coordinator to ensure they understood the project and the role they would play. A data collection date that would work for the school was then set. That date would be entered into a computer database

system (UW's OSIS system) designed to support project implementation and coordination. The system then calculated the dates required to complete the consent and preparation procedures prior to data collection. Parental consent was sought for all students in grades 5-12 classes in a participating school. For grades 5-8, active permission from parents was required.[3] For students in grades 9-12, an active information/passive consent procedure was followed.[4] These procedures comply with YSS protocols and the requirements of the UPEI Research Ethics Board.

Prior to the data collection, the research team met with all teachers whose classes would be participating in the survey. The procedures were explained and teachers were able to ask questions. In some cases, teachers were provided with packages containing all the information and materials they would need for data collection at that time, including instructions and student surveys. In other cases, these were handed out to teachers on the day of data collection.

Data Collection

On the day of data collection, a team of researchers arrived at the school in advance, bringing with them any materials that may be required. All materials for the French schools, including student questionnaires, were in French. Student-level data collection was scheduled to take one classroom period. There were five different questionnaires that a student could receive (each student completed only one):

- YSS Module A (grade 6)
- YSS Module B (grade 7-12)
- SHAPES Healthy Eating (grade 5-6)
- SHAPES Physical Activity (grade 5-6)
- SHAPES-PEI (grade 7-12)

The questionnaires contained questions about behaviours and attitudes pertaining to smoking, drug/alcohol use, physical activity, healthy eating, and mental fitness.

[3] Active permission procedures involve letters and forms sent home with students to their parents. The parents must complete the form and return it to the school with their child. Only students whose parents have provided permission receive a survey on the day of data collection.

[4] Active information/passive consent procedures involve letters and forms mailed to all students' homes by the school. Parents must contact the research team within a certain timeframe if they do not want their child to participate. On the day of data collection, students receive a survey unless their parent has notified the team or information was unable to be sent to the home (e.g., mail returned due to incorrect address).

Project staff were on-hand throughout the classroom period to answer questions and ensure the data collection went smoothly. Teachers were instructed to administer the survey in their classrooms per the instructions they were provided. They distributed one survey to each student, along with an envelope, and then read out instructions to their class. Students then completed the questionnaires individually and sealed them in envelopes before returning them to the teacher. The teacher collected all the completed questionnaires, put them in a large envelope and filled out a one-page form attached to the front. The research team collected the envelopes from each classroom teacher prior to leaving the school. The team also connected with the school contact, when possible, to express thanks and remind them to complete the administrator survey online (the Healthy School Planner).

The JCSH's Healthy School Planner (HSP) was used to gather program and policy information at the school-level. Initially, school contacts were asked to complete all three modules (healthy eating, physical activity and tobacco use); however, early participants expressed frustration at the amount of time it took. It was felt that encouraging participants to complete the HSP was creating a major burden and the project team feared that emphasizing the HSP too much could put the student-level survey, and the whole of SHAPES-PEI, at risk. After listening to early school contacts, the team adjusted their approach and asked contacts to complete (at least) one HSP module if they could find time. It was explained to them in advance that others had found it time consuming so that they would know what to expect, however, the benefit of the tool was also explained. There were still only 19/58 schools who completed at least one module.

After a school data collection was complete, the materials from that school would be sorted, packaged, and mailed to UW for survey scanning, data processing, and feedback report development.

Feedback Reports (i.e., Profiles)

Once the student questionnaires from a school were scanned, UW prepared a school-level report that was shared with the principal and school contact through the online database system. The team aimed to make these available 8-10 weeks following data collection. Schools were also sent a thank you letter and $100 honorarium for their participation. All schools were also offered a chance to meet with the research team to discuss their school's results.

After all data collections were complete, board profiles were created and sent to the school boards in August 2009. The provincial SHAPES-PEI report was available in October 2009, while the YSS report was not released until June 2010 due to Health Canada restrictions. Reports for the French schools and school board, as well as the SHAPES-PEI and YSS provincial reports, were translated.

Knowledge Exchange Year (2009-2010)

Presentations

Following the first year of data collection, the research team and DEECD presented the project and select findings to a wide variety of audiences, either by invitation or by our offering to present. Project updates were provided to provincial government departments, committees, and teams. Updates and board-specific findings were presented at principal meetings. Presentations were made to additional stakeholder groups including the PEI Teachers' Federation and the PEI Home and School Federation. Students were engaged via a presentation at the PEI Student Leadership Symposium. The CSHR team also presented the project and results at academic conferences.

In February 2010, a media event was held to officially release the provincial SHAPES-PEI report and to launch the School Health Grant program. Media packages were prepared and stakeholders invited to the event, which was hosted by (and located at) a local high school. Statements were made by the Minister of Education, Mr. Carruthers (School Health Specialist of the DEECD), Dr. Murnaghan, and school staff (vice-principals and principals) who participated in SHAPES-PEI. These efforts resulted in local radio, television, and newspaper coverage.

School Health Grant

The DEECD was committed to providing schools with support to act on their SHAPES-PEI data and partnered with the CSHR Group to develop and administer a School Health Grant program allowing schools to apply for funds to implement activities informed by their school-level results. The Department of Health and Wellness was also committed to supporting PEI schools' use of their reports and provided additional funding for the School Health Grant.

The CSHR Group and the DEECD prepared a guide for applicants, which was sent to the 51 eligible schools in December 2009 (all participating SHAPES-PEI schools minus those participating schools that were closed by their school board). Follow-up application forms were sent to schools and boards in January 2010 and information was sent directly to teachers in February 2010 to encourage uptake. The initial deadline was in February, but feedback from schools indicated that they required more time and the deadline was extended until March. Throughout the process, CSHR staff attempted to contact schools to encourage and support their participation. A total of 16 applications were received.

The Second Data Collection (2010-2011)

The second round of data collection generally followed the same process as the 2008-09 data collection, with a few changes:

- Questionnaires were modified to simplify and clarify the process, as well as ensure important information was collected (e.g., the SHAPES-PEI questionnaire was replaced by Healthy Eating and Physical Activity questionnaires for all grades, socio-economic status questions were added).
- Contracts, budget, funding, staffing, and ethics were in place earlier, meaning that recruitment and data collection started earlier (Sept and Nov, respectively). This is despite the fact that one of the school boards implemented a new system for research in schools which required an additional application to their board.
- A co-coordinator was available from the beginning of the project allowing for more efficient distribution of tasks.
- School Profiles were revised with the purpose of including meaningful information/data for schools and providing comparisons to their 2008-09 results, where possible. Challenges were faced in trying to make the Profiles as useful as possible for schools, while maintaining the integrity of the data (e.g., wanting to separate results by gender but not having enough students at many schools to do so). Revising the Profile template and changing the data to be presented resulted in delays, and many schools did not receive their School Profile within the 8-10 week timeframe the team aimed for.
- The HSP was still included as a school-level tool, but was not emphasized as much due to earlier challenges and the fact that the tool was undergoing revisions (at the national level).

<u>Continued KE (2010-11)</u>

The School Health Grant was offered again during the 2010-11 school year, this time with two deadlines (Nov 2010 and Mar 2011). The process was the same as the previous year, however, due to an earlier launch, there was an increase in applications: 18 in the first round and 12 in the second round.

During the Fall of 2010, fourth year nursing students working in select schools requested access to SHAPES-PEI school reports after learning about the initiative through Dr. Murnaghan. The reports were used to inform their health promotion projects in the schools. This speaks to leveraging support from diverse sources and finding points of synergy – students needed evidence and our team needed help to promote knowledge exchange and information sharing in schools.

Presentations about the project (both invited and offered) also continued with a variety of stakeholders during 2010-11.

Planning has now begun for the 2011-12 year which is expected to focus on knowledge exchange.

Lessons

A number of important lessons can be learned from the experiences described above. With respect to early planning to implement such a monitoring system, it is crucial to start preparations well in advance. The earlier that budgets, contracts, ethics, and staffing can be completed, the better. These are all likely to take more time than expected. As one SHAPES-PEI team member told us: "I could create a list of things that would have happened sooner, but a lot of those things are out of our control...if it [ethics] would have been in sooner, would have been great. We didn't get ethics until Nov 08 and we were wanting to recruit schools in Sept/Oct of 08 so that pushed everything back."

Much time and effort needs to go into developing strong and trusting relationships upon which to build such an initiative. According to one interviewee:

> *The real advantage, we saw the importance of those personal connections in the fact that ease of access, or ease of building the partnerships, not so much access, because what I see is happening in PEI, there are partnerships being built where each of the partners has a role, and it's not like I am using you, but rather that together, we are forming something that is of value to each of us.*

Within the province, relationships already existed between Dr. Murnaghan, school boards, and principals which set a precedent and demonstrated capacity within Dr. Murnaghan's CSHR Group. In addition, Dr. Murnaghan's connections to those and other school health stakeholders in PEI and nationally meant that she was aware of the direction others were headed, including the DEECD. These mainly informal ties were crucial to events coalescing into the eventual funding and implementation of SHAPES-PEI. One participant speaking to SHAPES-PEI's success factors said, "I think I would repeat the idea about the partnerships that were formed in order to lead to [success]. Donna and the provincial education folks, and Donna's other connection with health promotion or population health committees on the Island. So all the relevant stakeholders were aware of what was going on and able to provide input."

Not only was it necessary to develop strong and trusting relationships with stakeholders, boards, and schools, but the partnership between the SHAPES-PEI team and UW was extremely beneficial, especially in the early stages of survey implementation. UW's pre-existing infrastructure provided the support that was needed for successful coordination of the project.

Once it was determined that SHAPES-PEI would go ahead, face-to-face meetings were key to sharing information, gaining support for the initiative, and accessing schools. Engaging with people at the provincial government and school board levels has been key to the success of SHAPES-PEI thus far. According to one interviewee:

> *With SHAPES particularly, and the work with the CSHRT [Comprehensive School Health Research team] they were smart enough or lucky enough to go into the Department of Education or the school boards and start at the top and say "this is what we have, this is what we want to do and these are the benefits for your schools." Instead of starting at grassroots, if you start top-down and had the enthusiastic support of the system itself and that made it easier for schools to say yes and made it easier for them to donate the time because they are being told to. But that took them off the hook, teachers that didn't want their classes disrupted, it was easy for administration to say "no, no, this is coming from the department," which made a lot better research environment.*

While there were clear benefits to this approach of engaging the departments, school boards, and principals to build support, some felt that by not approaching the teachers and staff who would be administering the survey there may have been missed opportunities to garner support and to determine how the tool could benefit teachers and their students directly.

The SHAPES-PEI team held meetings and presentations with department employees, school board employees, school principals, and others to create awareness and provide an opportunity for open dialogue that allowed any comments and/or concerns to be expressed before implementation. These activities were seen as important to gain support from boards and schools as they were made well aware of the objectives and benefits SHAPES-PEI had to offer. A member of the SHAPES-PEI team explained how much work and time this relationship building took: "Truthfully, we had spent a lot of years really ensuring we had built those relationships, that we had made the calls, we had meetings with them on a regular basis, we asked 'What we are doing right? What are we doing wrong? How can we make this better?' So we did work hard at that."

An important factor that led to the successful reception and implementation of SHAPES-PEI, according to some case study participants, was the leadership and selflessness displayed by the original champions of the initiative. They believed that Dr. Murnaghan and Mr. Carruthers pushed forward a youth health agenda, not for their own benefits, but for the benefit of advancing youth health in PEI. The support SHAPES-PEI received from senior-level employees within the school boards and the PEI Department of Education and Early Childhood Development was also an important aspect to the implementation province wide.

Champions in influential positions pushed for SHAPES-PEI. One reason for this was because SHAPES-PEI not only was a comprehensive survey that covered four important youth health behaviours, but it also provided feedback reports customized to schools, school boards and the province at large. This set SHAPES-PEI apart from other research projects. Not only was this a key factor in the positive reception of the initiative by school boards and schools, but the school

feedback reports were also one of the main reasons the DEECD chose to select the SHAPES tool in the first place. As one participant stated, "the big big difference is that the schools get their own information. When there is research done at schools and schools don't get feedback, it is very hard to engage them. This is a big important piece. The profile reports and the feedback reports are huge."

Feedback reports were believed to be a beneficial idea not only because it was felt that they would provide youth health stakeholders with a snapshot of student health in PEI, but that they would also provide support for existing beliefs, particularly for those working in schools. In a case we heard about, a physical education teacher believed their students were not getting enough physical activity per day, but without evidence, they found it difficult to make an argument to administration to implement new programs or activities. A school board representative also emphasized the usefulness of school-specific information:

> *What I do like about SHAPES again goes back to the fact that it is school driven data. You can look at it in terms of your own students and not necessarily say "well that's a provincial picture, that is not me." I think we now know that the two hundred or the one hundred or three hundred students in my school, what is the incidence of tobacco, the incidence of marijuana, the incidence of healthy eating. Those numbers start to have more meaning.*

Overall, there were a variety of reasons schools voiced for choosing to participate in SHAPES-PEI. An important motivating factor for participation in SHAPES-PEI at all levels was to support school-level change: "There were some people that were big fans of SHAPES and felt that this was a very important approach in helping student achievement as it is a goal in and of itself – we should have healthier students, we should have students eating better, they should not be smoking, their mental health should be good."

Overall, youth health stakeholders wanted to see students become healthier. In order for this to happen, the problem areas needed to be identified. Some schools saw SHAPES-PEI as an opportunity to link their results to their school development plans, while others saw it as an opportunity to develop new programs and initiatives that would support a healthier school environment (i.e. healthy snack programs, intramurals, etc.). During the case study interviews, we often heard that schools would have a general idea of how their students were doing in regards to healthy eating, physical activity, tobacco use, and mental fitness but without evidence, it was difficult for them to leverage funds for new activities or programs. For some schools, SHAPES-PEI was seen as an opportunity to acquire new funding. Participating schools received a $100 honorarium and could also apply to the School Health Grant program which provides schools with funding to implement activities or programs based on their SHAPES-PEI data.

Others schools were motivated primarily by their perception that their school board wanted them to participate and/or that most other schools were participating. One interviewee felt that "schools may have a little competitive edge that they know most of the schools within their board are going to participate, so if they didn't they would be one of the few that didn't and…how would that reflect on them?"

SHAPES-PEI had the support from the PEI Department of Education and Early Childhood Development along with the three school boards, but the schools were the ones with the final say in terms of their own participation. Unfortunately, schools with few participating students were unable to receive a school level feedback report due to the risk of student identification. This was reason enough for some smaller schools to not participate in the survey. During the 2010-11 data collection year, the school-level reports were modified in a way such that some schools with smaller numbers of students could receive a school-specific report. This influenced some schools' decisions to participate.

Other schools chose not to participate, either in the entire initiative or specific components (e.g., the administrator survey or the grant program), due to lack of time or research fatigue. Schools had competing demands with curriculum, storm days, and other events happening within the school. Through the case study, we developed a better understanding of just how busy schools are and the constant research requests they are burdened with on a regular basis. One principal states "when 50 things come across my desk in a run of a year saying this is research or this is a project, I would say 40 of them get dumped and the other ten, if I think someone on staff will buy into it and it fits with what we are doing in our school development plan, I will pass this on and say is this something that we want to do?" This quote helps demonstrate the high volume of requests schools are faced with each year.

Open and clear communication is critical throughout the school recruitment process with early and ongoing exchange between schools and CSHR. Such communication ensures clear direction and good coordination, resulting in a user-friendly project for schools. As one school principal states:

> *From what I looked at, even for the package this year, it can't be any clearer. I fill out surveys all the time, and most of the time it is the length of time getting the report back that is a problem or not getting a report back. With SHAPES, we got a report, we got a follow-up, everything we needed. We needed help with that day giving out the surveys, the team was here, and there is even a checklist. I really like the checklist part, you know what you have to do and by when. For us as principals, if you are spearheading this project, it is nice that you don't have to worry about forgetting something. It was very well organized, and to be honest, I wouldn't change a thing.*

On the day of the data collection each classroom teacher receives a pre-organized package of surveys with instructions. Project staff also hold a meeting with the teachers prior to the implementation of the survey to explain the process and are present in each school when the survey takes place to answer any questions and remedy problems as they arise. This reflects the work and effort the SHAPES-PEI team puts into the implementation process to ensure that there is minimal burden placed on the schools and staff members.

When approaching a school to participate in a research study, it is important to consider that schools should be treated like partners rather than subjects. One school principal suggests that it is important for researchers to respect and understand the school environment and put the school's agenda above theirs:

> *Is it their own [researchers'] agenda they are putting forward or is it the school's agenda? Because some schools are ready to rock and roll with this sort of stuff, other schools are just at the cusp of getting involved, and if someone was to come out and have an agenda, they may put people off or they may not even be where the school is at.*

This quote underlines the importance of ensuring schools clearly understand the SHAPES-PEI process and the potential benefits received as participants in the study, as well as the importance for researchers to understand the school context and explain the perceived benefits in a way that makes sense to school staff. To further back that point up, another participant states,

> *I think for SHAPES to be really successful, the participants, whether they are the principals, or the parents or the kids, they need to get a sense of what is next and understand that this is going to inform the next step and this is the timeline to the next step so that everybody knows that this is the start of a process versus the end of a process. Or versus this is just a one off data set and we are going to publish a paper on it, and we will give this report to someone who needs it and that's that.*

This participant, along with others, suggested that there needs to be more clarity given in terms of the SHAPES-PEI process. Schools need to clearly understand that this is a multi-year funded project and that in off years to data collection, the research team will be open and willing to work with schools to help them better understand and work with their data.

A recurring theme that surfaced throughout the case study was that there was a perception that school and student health was only a priority for some individuals, schools, and organizations and that often other competing issues take precedence. The link between the health of students and academic achievement is not always being emphasized or understood and many schools tend to push health to the sidelines. As one participant puts it,

> *I think schools recognize that [health] needs attention and perhaps the time has come they will, but they are so inundated now with literacy and numeracy and the assessments that are involved with those at different grade levels and from one to nine that makes it difficult. I think if we could make the connections between healthy individuals and physically active individuals and academic achievement that that could [help].*

Teachers in specialized areas such as physical education and health sometimes feel sidelined as their curriculums are often the first to be disregarded. Although PEI now has two new physical education curriculums it has been over 20 years since it was last renewed, compared to other provinces that renew their physical education curriculum more frequently. As one interviewee states, "I am always concerned that health is not given the priority that I feel it deserves and I feel the same way about physical education. I think that we have not gotten to the point where the importance of them is recognized enough within the system". As one principal explains,

> *I think schools need to have a health contact, someone that is a champion in the school that will be supported from the department of education or the [school board] to attend sessions or meetings where health is discussed as a priority. We have them for math and English curriculum, I don't know the last time that my home economics teachers went to a session in which there were a number of creative ideas on how to increase the healthiness, I don' t think she has ever been to one.*

As the SHAPES-PEI story reveals, much time and effort goes into implementing the data collection and developing/maintaining the relationships needed to carry out such a widespread initiative. The research team has also realised that there is a need to continuously update and adjust the SHAPES-PEI modules (i.e., which modules to include and which questions), as well as the feedback/profile reports, to ensure that the data collected and reported is of most use to schools, boards, and the province. Although there was no pilot study of the SHAPES-PEI modules within the province, the first data collections in December 2008 actually served as a mini-pilot. The first students to participate in SHAPES-PEI found the surveys too long and difficult to complete so they were modified before further data collections took place.

The knowledge use survey conducted as part of the case study asked which of the SHAPES-PEI youth health behaviours was of most interest to participants. Not surprisingly, 52% of the respondents indicated that physical activity is the youth health behaviour of most concern, with healthy eating next at 41%. While there is significant interest around mental fitness, many educators and youth health stakeholders are still unsure about how to improve or deal with mental fitness. According to the survey, 31% indicated that mental fitness was a concern for them. Following the other three youth health behaviours, tobacco use was a concern for just 15% of respondents. As a follow up to this question, we asked what other youth health behaviour(s), if

any, participants would like to see included in SHAPES-PEI. Of the 25% of respondents who answered the question, drug and alcohol use/addiction, bullying, sexual health, internet safety, healthy relationships, sleep/rest, social support and social inclusion or belonging were all mentioned as possible areas for future monitoring.

Cycle timing and school burden are also considerations. Presently, SHAPES-PEI is funded to have a two year data collection cycle because of its ties to the Youth Smoking Survey (YSS). Some stakeholders consider this cycle too aggressive. One interviewee states:

> *The only thing is I wish, because we are tied into the smoking survey, which is every two years, it ties us down. I don't know if we have to do it every two years. I think every three years would be sufficient. We have budgetary constraints and so I worry about that as to whether we are going to be able to keep the two year cycle. NB uses the three year cycle, so some years they are parallel with YSS and some years they are not. We are just trying to be not in the schools all the time.*

SHAPES-PEI has been seen as a success by many with a number of important factors contributing to that success, including strong and trusting relationships, face-to-face meetings, strong leadership, champions in influential positions, school-level feedback, and a clearly communicated and organized data collection process. Despite this there remain factors to consider as the initiative continues to develop. These include clarifying the link between health and academic achievement, better understanding school/board/provincial contexts and why school health is not always a priority, and continuing to modify the initiative to ensure it remains relevant and beneficial.

Objective 2: Knowledge Use

An online knowledge use survey was distributed to approximately 50 youth health stakeholders across PEI, with snowball sampling (recruitment of participants through the referral of initial participants) used to expand the sample. The survey was designed to help better understand use/non-use of the SHAPES-PEI feedback reports by a variety of youth health stakeholders across PEI. It focused on whether they had used SHAPES-PEI knowledge, what knowledge they used, why they used it or not, whether they shared it with anyone else, whether they knew of anyone else using the knowledge, and what their desired knowledge was. The survey questions were designed to help improve understanding of the challenges and opportunities associated with using SHAPES-PEI knowledge. Follow-up interviews were conducted with those willing to participate. The survey responses, follow-up interviews, and document sources provide insight into youth health knowledge use practices in PEI, including accessibility and usability of SHAPES-PEI knowledge.

Our case study findings suggest that the SHAPES-PEI feedback reports have generally been received in a positive manner. Comments from several participants spoke to the quality of the reports. For example, we heard that reports provide teachers and schools insight into what they are seeing from students in the classroom and how it may be connected to their health and lifestyle patterns. Reports were said to contain good information for teachers to have and to give a teacher some data to put to use when discussing healthy life choices with students. It was generally felt that the reports are user-friendly, clear, and provide a broad summary of information. Participants said they found the reports comprehensive and appealing in that there are a lot of tables and charts provided. One participant states:

> *You have analyzed the data in a very open way. You put it into context without drawing conclusions. I think surveys that just put the data out there, provide some context so people can understand the data, but don't necessarily draw strong conclusions about what this means, but allowing the local school or the local parent group to draw their own conclusions. I think that is very effective.*

Awareness of SHAPES-PEI Feedback Reports & Data

Ensuring individuals/organizations are aware of the SHAPES-PEI feedback reports is important for the future success of the survey. Prior to the online knowledge use survey being distributed, the link to the provincial report was sent to individuals who were going to receive the survey. The survey, thus, indicated that a majority of participants were aware of a SHAPES-PEI feedback report (72%), whether it was school, board, or provincial level. Only 6% of those who were aware of the reports indicated they had *never* read any report. And of those who had read a report, 60% suggested that the reports were presented in a way that was easy to read and understand.

Sharing the information provided in the SHAPES-PEI feedback reports is of utmost importance. When schools and/or other organizations receive the report, the value of the data collected can only be realized when others know that it exists. The SHAPES-PEI team encourages schools, school boards, and the province to share their reports with interested stakeholders that can help interpret and take action on the data (e.g., school board staff, teachers, parents, community groups, health alliances, other government departments and staff, etc.). When the results fail to be shared, the people who could make use of it do not have that chance. In the survey we asked "have you discussed the SHAPES-PEI feedback reports with colleagues within your school/organization?" The results indicated that 52% of respondents have discussed the SHAPES-PEI feedback reports with colleagues *within* their organization. This compares to 31% of respondents who indicated that they had discussed it with people *outside* of their organization.

An important recurring theme in participants' stories of knowledge use is the importance of raising awareness of the initiative and of school-level reports among parents. Participants felt that principals can get overwhelmed with the information provided in the reports and that they do not know where to start or how to go about sharing these results with parents. As one parent said, "I think we are going to have to be more persistent as parents." In one particular case described to us, it was a champion parent who worked together with the principal to host a presentation to share their school's SHAPES-PEI results with other parents. Similarly, we heard how one school's Home and School Association heard about the initiative and was motivated to ask the principal to share the SHAPES-PEI results with parents:

> *It took a long time, well relatively long, maybe weeks or a few months, to get it from the principal. I don't think it is in anyway the principal was withholding it, I think he just wanted to digest it and decide "well how do I respond to this?" rather than just giving a dataset over to parents. I think the principal wanted to decide "well what does this mean? what can we do? what is the context of this?" and then he would be more informed to talk to the parents about it.*

Without the persistence and determination of these parents, there would be even less awareness in the parent community surrounding SHAPES-PEI results than there is now. Finding ways to engage and share with parents will be important for moving SHAPES-PEI forward in the future and encouraging knowledge use.

There was also a lack of awareness of school-level reports among students. Even though the students themselves complete the survey, they are very much unaware that there is a report available containing information on student health behaviours.

> *I have suggested to them that they, the teachers and the students, try and get this data and none of them were even aware that it existed. I asked if they remembered doing the surveys and to see, if not, whether or not they had participated, but just to say if you have done a survey there are chances there's a report kind of thing – and not everyone was really clear. Four schools that I talked to a year ago didn't really know what was going on, that it even existed. But they were excited to know that it did.*

One concern that was raised was that although stakeholders and organizations may be aware of the SHAPES-PEI reports, they are not necessarily aware of the specific information that the report contains and how that may be relevant to them. Also, without first-hand knowledge of the questions asked on the SHAPES-PEI surveys, stakeholders and organizations do not know the details of the data that could be available for their use, outside of the information and data contained in the reports. Even though an individual may know that a report exists, the lack of

knowledge of what the report actually contains or what additional data is available to them can be a barrier to the use of the reports and of SHAPES-PEI knowledge more generally.

Use of SHAPES-PEI Feedback Reports & Data

As part of the survey, participants were asked questions regarding their use of SHAPES-PEI knowledge. Specifically they were asked whether they had cited the SHAPES-PEI results in their own reports or documents and whether the SHAPES-PEI results influenced their decisions/choices in program and policy planning, development, and implementation. According to the survey, 24% have cited SHAPES-PEI data in their reports or documents, while 31% indicated that SHAPES-PEI data has influenced their program and policy planning, development, and implementation. The majority of respondents had yet to employ any short-term strategies for using SHAPES-PEI results (e.g., holding workgroups or meetings, etc.). When asked "what are the long term strategies required for using SHAPES-PEI results in planning and evaluation?" 21% of respondents indicated that securing funding would be their main requirement for using the SHAPES-PEI data while 17% suggested that they would require advocacy for evidence-informed planning.

The opportunity to talk to school administrators and staff was valuable for helping to understand the variety of actions that schools are taking in response to student health concerns. When asked if they implemented any new policies or programs as a result of SHAPES-PEI, one principal replied:

> *We did actually….In our school, we implemented many different initiatives that did turn out to be policy for our school. So for example, we started a before-school program for kids of elementary age. We found that obesity was a problem, not only in our school but throughout Canada, and that the kids need to stay active, so we started getting our phys. ed. teachers coming at 7:30 in the morning, kids started coming in at 7:30 Tuesdays and Thursdays and they are here for an hour before school starts and they do laps, they run for 15 minutes, then they are down in the gym for activities….We feed them a healthy breakfast after. We have the breakfast program that was initiated, as well. We have the revised menu for the cafeteria; anything like soft drinks were removed from the school. We have a list of things. Intramural sports at noon – we have expanded the program….So we do a lot of work with health and fitness, no fryers or anything left in the cafeteria, everything is homemade. We had a dietician to come in and look at the menu two or three times. So we really did a lot. We are actually working with the seniors group in the community, two groups actually, they come in and the students show them what to do to stay healthy while they are at home during the winter. We have a really good relationship with the community.*

At the school level, we heard examples of teachers using the reports as evidence to provide support for ideas and policies to increase the students' physical activity levels. The School Health Grant program was a major driver for schools to use their SHAPES-PEI reports. Grant applications were open for submission during the 2009-2010 and 2010-11 school years. In 2009-10, 16 schools applied and received funding through the initiative. Many schools focused their attention on improving physical activity and healthy eating with their grant money. Some schools purchased new fitness equipment for their gym or conducted hip-hop classes for students, while others created a weekly healthy snack break (consisting of fresh fruits and vegetables) or created or expanded their in-school breakfast program. Although there is evidence that mental fitness is of interest to schools, the lack of activities targeting this area could be due to it being more challenging to understand or know how to act upon. The School Health Grant program increased in popularity in the 2010-2011 year with 30 applications over the whole school year. The focus of activities was similar to 2009-2010. Although the grant program resulted in more use of SHAPES-PEI reports and interest in the program has increased, the fact that there was little change in the types of activities carried out from one year to the next may point to a gap in understanding how best to support schools and encourage them to advance school health in creative ways.

Enhancing SHAPES-PEI Knowledge Use

While there were many positive comments regarding the initiative and the feedback reports, there were several concerns that were expressed and respondents suggested different ways to support knowledge use.

Clarity, Accuracy, and Perceived Usefulness of Data

One concern was the issue of self-reported data and how accurate the results were. Inconsistency with language used between different groups was also acknowledged as a barrier to use. Although organizations and stakeholders may have the same end goals, differences in the language used can confuse knowledge users. Another concern was that the data provided is perceived as nothing new to school administrators. Some feel that they already know the information that SHAPES-PEI provides them and suggested that more in-depth information is required. According to one participant:

> *I don't know if we could get any finer detail than that, or ask more pertinent questions and get more in-depth information as to what is under that. To say someone is just not involved in school or not taking part in school activities, therefore they are disconnected, you want to get a better feeling about what might be some of the reasons why they are not connected to the school and that is how I would come around and say with that kind of knowledge we might be able to address more than a general term. I would like to know why is it that they don't want to be connected. Is it they can't stay after school to be*

> *connected? What is the myriad of reasons why the child is not connecting, because there is lots offered….It is really difficult to come up with a policy or a strategy. It is pretty broad strokes yet when I look at it.*

These responses suggest that more work could be done with stakeholders regarding data quality, questionnaire topics and coverage, depth of reported knowledge, and potential uses of the data, to help ensure SHAPES-PEI data and reports are of value and use to stakeholders.

It is important that not only the data and reports remain of value to stakeholders, but also that they continue to be of use to schools. As school health issues change over time, it is necessary that the information collected change to reflect emerging areas of concern. One participant states:

> *I just think that as long as SHAPES continues to be dynamic, and change with the times, and really continues to fit the needs of what the schools want, I think we need to have consultation with the schools in terms of what are some of their key content areas and I know in the evaluation, the schools filled out after, it asks them what are things they want to see, to really take that feedback and try to incorporate it into the survey's and feedback reports and things.*

By ensuring that the data collected remains of use and value to schools, SHAPES-PEI knowledge use will be enhanced.

Building Awareness & Collaborations to Enhance Use

While the current level of use and sharing is promising, throughout our study participants suggested areas for improvement. As mentioned above, one area of concern is the lack of awareness of the SHAPES-PEI feedback reports in the parent community. When asked the question "how could the feedback reports be more useful?" a PEI Home and School Federation representative replied:

> *Well I think they have to get into the hands of the parents is the first part. We had [SHAPES-PEI team members] Brandi, Sterling, and Donna to our semi-annual meeting last year, so it was Fall 2009, and they actually had time to talk about what SHAPES was, what was coming. I remember a comment from parents after that meeting was "you mean these reports are with the principals and we never have heard anything about this? We don't know that they are there."*

Improved communication and collaboration between principals and parents, and also between the research team, principals, and parents, seems key to generating a broader awareness of the SHAPES-PEI initiative and the school-level feedback reports. In order to encourage

collaboration between different parties the research team needs to be proactively working with the schools, home and school associations, and community organizations to share what information is available for use and how that can fit into the needs of the different organizations' goals. As one participant states:

> *If somebody does take the time to personally say "okay, this is what it's about and let's look at how it could be relative to you and what are the key highlights" or something like that is helpful. And even just having some of those highlight documents are really good too. It's going to take personal people time, not just announcements and emails, to get some actual embedded[ness] into the network and to the system.*

Providing School-level Support

A content area identified as lacking in the reports is a "next steps" section which, it was felt, would help schools who might struggle to know what to do with the data. A school principal states:

> *Sharing knowledge is a lovely thing except for the fact that it is time consuming. The issue is not using the data, the issue is getting us the data in a format that is useable. If we just get the data, I will look at it and I will go "you know what, there is some relevance to that" and I will store it in my head, but to actually turn it into something we do becomes a little more complicated and it becomes a time, a managerial, thing. It is not "yeah we don't want to do it," it is "come up with something for us to do" because we do not have the time to be creative.*

This is a concern that was voiced several times over the course of our study. Schools need more support to be able to effectively use their feedback reports and plan/implement actions based on the results. One participant suggests

> *An area for improvement is always taking the research and tying it to solutions or practical strategies. Because it is all well and good for me to know that we should be doing this or doing that, but how do I make that actually happen in a school setting? For instance, we know we should have more physical activity during the school day but the kids cannot go to phys. ed. every day for an hour, so if I am going to have more activities in my school where kids are going to be physically active, what can that look like? That is always the challenge. I know I have to do this, but I do not know how.*

Given these types of statements, we asked youth health stakeholders whether it would be helpful to schools if the SHAPES-PEI report provided practical solutions or an "idea bank" to assist schools in using their SHAPES-PEI data. The overwhelming response was yes: With schools'

busy schedules and a lack of knowing what to do next with the report, schools would appreciate assistance.

The need for schools to have additional support in order to act on SHAPES-PEI knowledge was a commonly heard theme. School administrators face a number of challenges in their attempts to use SHAPES-PEI reports, from a lack of time to process the results to pressures to focus on academic achievement above all else. During the implementation period of SHAPES-PEI so far, the PEI education system has gone through a number of changes, including school closures, new and revised curricula, and changes in senior school board and provincial government department staff. As discussed in the objective 1 section, the system is currently focused on student achievement with less attention being paid to student health, meaning less emphasis on, and fewer resources dedicated to, using school health knowledge.

Other Suggestions

Participants had a number of other suggestions for how to encourage knowledge use. It was suggested that people might be unsure about how the SHAPES-PEI data can help schools promote health and that there needs to be more attention focused on how to move evidence into action (i.e., how to take the results and use them to promote healthy lifestyles). It was also suggested that making the charts and tables from the feedback reports usable in other presentations would be helpful. It was stressed that materials developed to make use of the data need to be tangible for users, such as manuals or guidelines.

Several respondents indicated that the SHAPES-PEI data should be linked with other data available, particularly the Tell Them From Me survey which was conducted in 2010-11 at the same time as SHAPES-PEI. Another suggestion was that in order to enable student-directed learning, the SHAPES data ought to be framed in a way that would allow students to use it for project work and other types of student based research. One government employee, and parent, suggested how projects such as SHAPES-PEI could be incorporated into health courses:

> *If we had a really interesting health course for students where it had kids learning in the community and doing research and answering quality questions, being mentored by someone like yourself in a research unit, kids can come out and learn that way and be much more community focused. If we did something like that, that allowed kids to be out of the classroom and to be strategic thinkers and self-learners, we could have kids doing all kinds of great things for us and health is a great field because it is everywhere and it impacts your own.*

A number of suggestions were made regarding possible school-level changes that would support increased use of SHAPES-PEI information. Some suggested that, similar to other committees that exist in schools, a committee that focused on student health could be created. It was also

suggested that rather than creating additional committees that could be seen as an add-on by staff members, SHAPES-PEI results and student health in general could be embedded into health and physical education curriculum, as well as other subjects. Some felt that initially this could begin by assigning health courses to teachers with an interest in health to limit yearly turnover, which could lead to the development of health champions within schools. Similar to this, it was suggested that student health and wellbeing could be incorporated into each school's development and planning goals.

In addition to awareness and suggestions for supporting use, there were some areas for improvement with respect to the content of the reports. According to one parent's perspective, "the thing that I did find difficult, when I first read it, was right at the front I wanted the definitions of physical activity, healthy eating, and mental fitness right at the beginning to know what those measures were. We say that was what the survey was about but we don't actually outline what those were until you get to the section."

Thus, while SHAPES-PEI knowledge is being shared, primarily through reports and presentations, there are important improvements that could be made. In addition to enhancing the content of reports, raising awareness of the initiative and reports among the broader school community has been suggested as a means of encouraging more knowledge use. To enhance knowledge use it will also be important to work directly with schools who are often eager to use the knowledge but may require additional supports given the realities of the current school and education contexts.

Objective 3: School Health Knowledge Exchange

As part of our third objective, we interviewed 11 youth health champions across PEI who had experience in school/youth health knowledge exchange (whether it was surveillance/research, policy and program development, implementation, or evaluation). We asked them their thoughts on their experiences, including current practices, gaps and challenges, as well as ideas for improvement. We also conducted student focus groups about school health knowledge exchange (KE) and discuss these in the section following.

Generally, PEI school health stakeholders felt that while good work is being done in school health knowledge exchange, there are many areas for improvement. As one participant stated, knowledge exchange "tends to be a piece that we do not do very well, just overall. We have such great stuff so we just assume somehow people know it is there, or will access it." When asked about youth health KE in PEI, another participant said, "I think we are heading in the right direction: I don't think we are quite there yet." Many discussed the importance of the people carrying out the knowledge exchange and maintaining a focus on working together. One participant stated, "Collaboration is the key," while another felt that "as leaders, we need to get

back to basic partnerships and collaborations and working together, because we are all trying to do the same thing."

KE Challenges

Participants felt that there were many challenges to effective youth health KE in PEI. As discussed previously, one challenge is that the process of moving from having data or knowledge to acting on it is not always easy or straightforward. As one participant shared, we sometimes forget that principals may not have experience or training in moving evidence to action:

> *We can't assume that they know how to review the data, make linkages, analyze what it means, and then think about what the process could be to do something with it. I think we assume they know, but I think the majority don't. I would say the majority don't. So, it would be great if there are some ways that we can help school principals look at both sides of their data and making those linkages. I think it would be more meaningful.*

A principal similarly discussed the challenges of gathering appropriate information and doing something once they receive data: "I think we are [at] step one. Where we get information or where we look for information beyond that, I don't know. So I don't know if the exchange is there." Principals were also cited as a barrier to school health knowledge exchange. Another participant, a parent, stated:

> *I think it is going to require a lot of principal training and I think that has to come from the top. In many ways, principals, they are in fact the gatekeepers of information for their school, they get provided this document called the curriculum, which is a guideline, and they decide how to roll out and deliver the curriculum within their school….I guess we have anecdotal data around the SHAPES information but it just was not getting out to parents. Principals had this information and maybe they were not clear on how to get the information out, or the effective way to do that so that is part of the training that I think needs to take place.*

We found that, in general, health was not a priority at the school level. With principals' busy schedules and competing demands, school health research results and information were often pushed aside. This may be compounded by a lack of experience or training in knowledge exchange, or evidence to action, processes (i.e., not knowing what to do with the information or how to react to it), as well as a lack of understanding regarding the relationship between student/school health and academic achievement.

Another commonly raised challenge for youth health KE was communication itself. It was felt by some that there is a lack of communication across research, policy, and practice settings, as well as sectors and health behaviours. As one policy-maker states:

> *I don't get a sense that we are always as aware as perhaps we should be of what is going on in the academic circles, so there is a bit of a gap there. So I wouldn't say it is as large as it is in a place like Ontario where the distance between these groups are so much wider but I wouldn't be able to say off the top of my head say what the research priorities of the faculty of nursing or research priorities from the faculty of education within UPEI would be. But I could call somebody.*

The lack of communication across sectors was not only seen to be a problem in PEI, but also across the country. Concern was expressed regarding the amount of money invested in research projects that continue to examine the same issues, while there is a lack of funds invested in school programs or interventions targeting identified areas of concern.

Despite these challenges, as the above comment suggests, PEI's small size can be favourable to knowledge exchange practices: "Here on PEI, we do have an advantage where we have opportunity to pick up the phone and call people, like you did with me, and I don't mind getting an email and choosing to respond to that, but that is a unique situation in this province, so we need to make sure that we take advantage of that communication."

Unfortunately, the province's small size also creates barriers in that there is limited funding for human resources to facilitate any consistent knowledge exchange activities. Presently, there is only one School Health Specialist to connect to all PEI schools, as well as maintain connections across settings and sectors: "In our province, we only have one person for 63 schools, and it is not enough. So funding for human resource support is absolutely an issue." In addition, there are fewer people who take on youth or school health as a part of their responsibilities: "Because we are small, there [are] a lot of people taking on a lot of different things, it is not just in this area." With most stakeholders having multiple priorities, time to focus attention on youth/school health can be limited.

A lack of focus on school health was also felt to be occurring on a provincial level. Some participants voiced a concern that youth/school health was not a priority of the provincial government. As one participant stated: "We do not have a school health plan in this province yet, we do not have a school health committee that operates. I have been waiting since 2007 for them to strike one. Well it is a pet peeve of mine that that has sat and sat and sat."

Struggling with communication among stakeholders can result in confusion and overlapping of work. Some participants felt that PEI youth health stakeholders "are struggling with who is responsible for what, and what are we doing, and is there anyone else doing the same thing." One participant suggested that the informal nature of PEI relationships can sometimes hinder communication: "We do meet with our researchers fairly often. But again, that is built on

relationships, so maybe we need some formal structures. I find that when things break down, it is because there is no formal structure and the people change."

Suggestions for Improvement

Faced with these many challenges to effective KE, participants suggested a number of potential actions. Some suggested broadening our reach and engaging with some different stakeholders. For one participant, this meant looking beyond schools: "I think that schools are over utilized, so it is not that they aren't a good setting and aren't worth studying, and there is still a lot of work that needs to be done to create a health-supporting environment within the school setting and there is a lot of gaps that need to be addressed, but at the same time it is one setting." It could also mean engaging "non-traditional" stakeholders, as one participant put it.

Since people were generally seen to be key to effective KE, it is not surprising that a number of participants suggested that identifying champions would help improve current practices. As one participant argued, if you are going to bring people together around school/youth health, "there still needs to be a person that is a connector within key areas. That is very helpful. I see that as a very helpful piece of the puzzle. How exactly do you invite and connect people is very important, and who else can support or who else is in a supportive role of any of those areas. I think that is a key role." One principal also felt it was important to identify champions at the school level:

> *Sometimes initiatives take place within the school system that are started outside the school system and they are viewed as an add-on, where if [one teacher] was to go to a session on SHAPES and get excited about it and she could come back and it is not SHAPES [people] or a researcher pushing it, it is my teacher who is saying this is a good program and we need to do it. So that is where the problem occurs. It is getting people exposed to this stuff in a manner that is not intrusive and getting them to buy into it so when they come back to the staff, they are already there. If you bring someone else in, it is looked upon as an add-on.*

One way it was suggested that KE could be improved was to communicate information in a variety of ways and to encourage sharing. Some suggestions have already been discussed in previous sections, such as providing principals with more support in sharing the results. Other suggestions were a health contact within each school (supported by the PEI DEECD or the school board), as well as more open, dialogue-friendly presentations. Using media and websites were suggested as avenues to inform others of the availability of the SHAPES-PEI reports. A further suggestion was to provide the feedback reports directly to teachers.

School Health Network

As part of our objective 3 interviews, we posed the question "*If PEI were to develop something like a school health network, what role would you see that playing?*" The idea of a more formal network had been considered in the last few years, but never materialized. The research team wanted to get a sense of how school health stakeholders would feel about a network and what they thought its purpose and make-up should be. The responses varied slightly but the majority felt there was a need to "formalize those discussions that we have informally so when the players change, those conversations continue in a formalized way." Some interviewees saw this network coming from the grassroots, meaning schools should lead it or play a significant role within it. One participant states, "I think it should be school-based and they should be your members, and then they can decide 'we need someone from the department of education, need someone from the school board.' I think an automatic would be the researchers who know what they are doing. I really think it has to be grassroots to be effective instead of being dropped onto schools." It was made clear through the interview process that such a network should not be policy focused, but rather play a coordinating and information-sharing role. One principal suggests that "such a network should only be concerned with making suggestions for schools. As soon as stakeholders outside of the school system begin to push regulations or policies, then you have cornered people and turned people off." It was emphasized that regardless of who was involved in the network, in order to be successful, school champions need to be involved to ensure the objectives and purposes of the network supports the needs of schools.

Overall, participants agreed that there was a need for such a network in PEI but expressed concerns on how to address everyone's different priorities: "Everyone may have their own agenda, so when we say 'school health issues,' that is pretty broad. So I am just saying, would the educational folks be expected to say 'these are issues we have that we would like other people to help us with?' Or is it someone else making the agenda around what issues do we talk about? That would be interesting." When asked who would lead/chair this network, the majority of interviewees felt a co-chair would work best. One even suggested that a rotating co-chair would be the "easiest and least politically frictional."

More broadly, some participants, when asked about creating a school health network in PEI, questioned whether 'school health' was even the best focus to have or terminology to use:

> *I am not sure that "school health" is the right title. It might be "health of children." I am not quite sure why we say that because it is just a building. If we are talking about health of school-aged children, that is much more of an opening for everybody to be involved. When you put a title like "school health," it sounds as if health only happens at school and I don't think that is an accurate reflection of children. They spend more time in the community than in our buildings, so it is kind of unfair to exclude by name. It depends*

> *what people envision, that is why I come back to saying if we want to talk about the health of children, I think that is a better title, than you do have mental health and you have health and child family and a variety of different people who work with children and support children as well as teachers. I think it could be a broader topic if the name were thought of in a different way. I don't think of it as school's health, I think if it as children's health even though the name is there, "school health."*

It was also suggested that by moving away from school-focused language and towards a community approach it would help to take the onus off schools and instead more strongly encourage partnership between the schools and their communities. This suggests that there may be some more fundamental questions that need to be answered before creating a new formal structure. While most participants see the potential benefit of a network, further discussion may be needed to fully understand the scope, focus, and membership best suited to supporting youth/school health knowledge exchange.

Student Perspectives

When developing a plan for our provincial case study, the research team identified a continued gap in the youth health knowledge exchange going on in the province: youth participation and engagement. Thus, it was important that we capture the perspectives of youth as part of the case study. Often, youth/students are overlooked when talking about school health issues: We engage adult stakeholders in policy, practice, and research without involving young people themselves in our conversations and actions. To ensure youth voices were heard, we held seven student focus groups in schools across PEI, with representation from each of the three school boards. Students came from grades 7-12 (depending on the school), and were made up of both males and females. In some cases the students were classmates, but in others the principal selected students they felt represented the diversity of the school's student body. The focus groups were semi-structured and allowed for open discussion. Prompting questions focused on eliciting student perspectives on school health, youth health issues, and the roles of schools and students in health promotion.

What is School Health?

When asked to describe what school health meant to them, students provided a variety of responses. Physical activity and healthy eating were mentioned frequently, but other aspects of health were also discussed. These included social interaction, feeling respected and comfortable at school, mental health, and school environment/atmosphere. In one case, the students were in a new school and had a lot to say about the physical environment of the school and how it differed from their old school: "Even just the colors and stuff. At the old school, I found it a lot harder to concentrate than the new one just because the colors are lot softer here." School facilities and rules were also mentioned, such as cafeteria food and no-smoking policies, in addition to physical education classes, school activities, and sports.

Youth/School Health Issues

Students reiterated some of these themes when asked what they thought the biggest youth or school health issue was (in their school, their community, or just in general). A common issue mentioned across all the focus groups was food quality and price in their cafeterias. In 2006, PEI school boards adopted board-level school nutrition policies and have since been working to implement them in their schools. Thus, in many cases, schools have been changing their cafeteria practices, trying to encourage healthier choices. While a few students did mention healthy options that were available ("it can be pretty healthy sometimes, like salad and sandwiches and stuff"), students overwhelmingly complained about food quality and price. As one student said about their cafeteria's food now as opposed to previous years, "it is not as good taste wise, but better health wise."

Often, students felt that problems with the cafeteria resulted in students purchasing food from fast-food outlets. Unappetizing food, high costs, and long waits in line-ups were all mentioned as contributing factors, differing slightly across schools. One student states:

> *I think one thing maybe, the cafeteria has a lot of healthy food, but the prices are too high. If there was a way to lower the prices, but I know that ties in to the whole funding thing and schools need further support from the government, but I think if you lowered the prices of stuff in the cafeteria, people would be…like, "oh I am not driving all the way to Wendy's if I can get something here, and it is cheaper." But it is quite expensive right now.*

Students were aware of the fast-food options available near their school (or of the lack of options, in some cases) and stressed that many students would choose that option, whether due to price, food quality/availability, or a desire to get away from the school environment for a short time. At one school, students were acutely aware of the business potential for fast-food outlets near schools, referring to recent news items on the subject and speculating on whether new outlets would be developed near their school.

Students also discussed physical activity, and, in some cases, they felt there was a lack of options available at school. This was particularly true for senior high school students and those from smaller schools with fewer class and activity/sports choices. In other cases, students perceived social changes that they felt might be impacting physical activity levels (e.g., self-consciousness). In an all-male focus group, a few junior high students thought that girls were not as interested in physical education as they used to be: "I find the majority of girls are getting less and less, like they don't like gym as much. In elementary school, everybody looked forward to gym and was excited and stuff, but now I think the girls like it less and less, for the most part."

The issue of bullying was discussed in all focus groups, sometimes mentioned initially by

students and other times when prompted by a facilitator. In one school, students thought bullying was a bigger issue for junior high students. As one student explained: "Junior high, bullying I would say is a pretty big problem…I notice it, I notice it a lot. I am one of the people who are getting bullied sometimes, too. There are the few people who will really, really everyday get on ya, but then there are some people who will just [go] off and talk to their friends about you type thing….junior high I notice it and it is a problem."

Some students preferred not to call it 'bullying': "I wouldn't say bullying, because it is not people going up and making fun of other people, it is more like, I wouldn't even say face-to-face stuff, just like different groups clashing." In one exchange among students, they went from thinking bullying wasn't an issue to recognizing that it might be:

> *Student 1: I don't know if [it's] bullying…as much as just mocking. But sometimes you don't even know if they are just kidding around as friends...*
>
> *Student 2: It just depends, some kids they get picked on.*
>
> *Student 1: It happens either not at all or a whole lot. Almost everyone in the school picks on each other as a joke, or because they don't like the people.*
>
> *Student 3: But then there are some people who are actually, like, bullied. Everything they do, they get made fun of.*
>
> *Student 1: Yeah, it gets really serious in those cases.*

In one school, students considered physical behaviour, such as stealing another student's lunch, or pushing another student, as bullying, but did not label verbal behaviours, such as gossiping or negative comments, as bullying. They recognized that it was poor behaviour, but did not call it bullying specifically because then everyone could be considered a bully. As one student explains: I think because everyone is a bully. Like we've all done it so, like I don't know, it's just, everyone's like, I know I've done, not all that, but some of it and, I don't know, I guess for me I'll at least own up to it, to actually say that I'm a bully. It's like, I don't know, it knocks your self-esteem a little bit.

School & Student Actions

Students spoke extensively about what they thought their school and its students were doing, or could do, to improve youth health. In all schools, students could think of good things their school was already doing. These included a clean and well-kept school environment, facilities available (e.g., gymnasium, fitness room), healthy selections at the cafeteria, breakfast and snack clubs, no vending machines, anti-smoking/alcohol/bullying policies, and other health-promoting policies.

According to one student their school is "doing a good job now. They are promoting a lot of healthy stuff. They put in weights, treadmills, and in the cafeteria all the food is healthy." At another school the students told us about a recent school-wide activity to promote physical activity:

> *Student 1: Well, we actually do a lot of things. Like when the Olympics were here, we did Footsteps to Vancouver….We did a thing where the number of laps you run around the gym is equal to 1km, so if you run this amount of laps around the gym, it is 1km, so students could go after school, or during lunch, or phys. ed. classes and people would run, and we had a giant poster that went across the wall.*
>
> ….
>
> *Student 2: It was pretty fun. It really motivated a lot of people. Before, in grade 7, I never used to run. Once this Olympic run came, all the teachers were really adamant that we do this, and they even had the staff, the staff could go in and do it. I saw a lot of staff do it.*

Many also spoke about their teachers and the school staff acting as role models for students and encouraging the use of fitness equipment and other healthy choices. Students in one school really valued the presence of a school counsellor and expressed their desire to have her at the school more often. At another, the gym teacher was considered "really nice and probably one of the most active living people I know. She is one of the people who will get up at 6 o'clock to go for a kilometer run." Students felt strongly that having positive relationships with teachers, staff and principals was important. They liked it when teachers and principals knew their names, had conversations with them, and were generally interested in how the student was doing. As a reflection of this, students said they tried harder in class when they liked a teacher and felt that teacher respected them because they did not want to disappoint the teacher. The positive relationships that students develop with teachers, principals, and staff also seem to have a long-term impact as several students discussed their relationships with teachers and staff at their previous schools and reflected on how they enjoyed those connections.

We also wanted to understand whether or not students felt they had, or could have, any influence on decisions schools make in regards to creating a healthy school. We asked whether the students have tried to promote change in their school through such avenues as student council or whether their school ever asks for their input on ways to improve the school environment. While there were a few students who had confidence in their ability as a group to influence change, the majority of students expressed feeling that they did not have any power when it came to making change in their schools. As one student states: "They [the school] just push us away because they think we don't really know what we are talking about, but on subjects like that [food served in

cafeteria, number of gym classes, tobacco on school grounds] we could actually have something against it, like it is true, but they just don't listen to us because of our age. If they did, I am sure the school would be way better." Another student at this school expressed feeling the same: "I guess we never really tried that hard, but there are certain things that we tried to fight for that it just doesn't work because we are kids. They don't look at us as responsible and that we know what we are doing." Students understand that major changes do not come easy. They acknowledge that for change to happen, school boards and the provincial government have to be involved. As one student said, "it seems like no matter what you want to do to change anything, like even the amount of gym class, you are going to have to go through the board of education."

Our experiences speaking with students in these focus groups have been encouraging. Students are clearly aware of youth health issues, as well as the various ways the school can affect student health. When asked, students shared many ideas on what schools are already doing well and what they could do better. Suggestions for improvements ranged from small actions such as hanging clocks in the hallways and providing an 'idea wall' for students, to more complex issues such as lowering food prices and providing better access to school and community fitness facilities.

Further research is needed to explore youth stories and perspectives more thoroughly and to engage youth voices in school/youth health dialogues. Attention needs to be paid to inclusive knowledge exchange practices that value and integrate youth perspectives and ideas as a basis for building health promotion actions and interventions.

NEXT STEPS

This report will initially be shared with the case study participants (in the case of students, with their principal or teacher contact), the Youth Excel Secretariat, Youth Excel partners, and the PEI Youth Excel Steering Committee. It will also be posted on the CSHR Group website (http://www.upei.ca/cshr/). The research team and the PEI Steering Committee will then determine a broader distribution list of PEI stakeholders.

Case study findings will be presented at a provincial forum on school health in October 2011 and will provide a basis for discussion and provincial planning. This report will be made available to all forum attendees.

Further analysis and reporting of the PEI case study data is also taking place as part of the cross-case comparison process being conducted with the MB and NB case study teams. A cross-case report is being prepared and will be shared widely via existing networks and the CSHR website.

Lessons learned from the PEI provincial case study and/or the cross-case comparison have already been presented at the Manitoba Partners in Planning for Healthy Living AGM, the Community-University Expo, and a Youth Excel partners meeting (all May 2011).

The CSHR Group also plans to conduct additional data analysis with the aim of presenting more in-depth and nuanced findings in the future. Plans are already in place to present the PEI and/or cross-province findings at numerous academic conferences in Fall 2011 (e.g., the World Alliance for Risk Factor Surveillance Global Conference, the National Conference on Tobacco or Health, and the Health Promoting Schools event at the Journées annuelles de santé publique).

Provincial and cross-case findings will also be presented at a national Youth Excel Roundtable in October 2011 to support cross-province sharing and learning, as well as to help determine next steps for the Youth Excel group as a whole.

With respect to SHAPES-PEI, planning for upcoming years continues and the case study findings reported here will influence decisions made in future years of the initiative. Likewise, lessons learned from the case study will inform parent and student workshops the CSHR Group is holding in Fall 2011 which will focus on exchanging SHAPES-PEI knowledge with those stakeholder groups (funded by the Canadian Institutes for Health Research, CIHR). It is hoped that all PEI youth/school health stakeholders will find some information of benefit in this report that will inform future actions.

QUESTIONS OR COMMENTS?

Please contact a member of the PEI Youth Excel team for more information on the project, the case study, and/or future activities. **Your comments and feedback are appreciated, as are any suggestions regarding future analyses that would be valuable to you or your organization.**

Principal Investigator: Donna Murnaghan, PhD, RN
Tel: (902) 566-0749
Email: dmurnaghan@upei.ca

Research Coordinator: Brandi Bell, PhD
Tel: (902) 894-2820
Email: brbell@upei.ca

Project Researcher: Courtney Laurence, MA
Tel: (902) 894-2891
Email: claurence@upei.ca

Appendix A: PEI Findings and KE Literature

While some of the lessons learned from the PEI case study were unique to PEI itself, others were consistent with lessons learned from the development and implementation of other similar systems of knowledge development and exchange reported in the literature. The following provides a brief synopsis of how some of the PEI lessons are reflected in the knowledge exchange literature. Further literature review and data analysis will occur as we prepare academic publications about the case study in the future.

An environmental scan of government and non-government organizations was conducted to determine the best strategies for disseminating and transferring knowledge to multiple stakeholders (Canadian Population Health Initiative of the Canadian Institute for Health Information, 2001). This scan found that the best strategies were those that engaged a wide audience, engaged stakeholders from the beginning of the research process, and continued to engage stakeholders throughout the entire process. In PEI, face-to-face meetings and presentations to a variety of stakeholders have been utilized to gain support and share information about SHAPES-PEI at all stages of the initiative.

Another important factor that has been found to be related to the successful implementation of a system such as SHAPES-PEI, is the readiness of the target audience or stakeholder group (Cockburn, 2004; Edwards, Jumper-Thurman, Plested, Oetting, and Swanson, 2000). Although SHAPES-PEI is designed to collect information on a census level, each individual school had the choice to participate or not. Some schools chose not to participate due to other competing demands, while others were fully engaged and open to the system. It is possible that because participation in SHAPES-PEI is not mandated, that the implementation of SHAPES-PEI was aided by the readiness of the schools that chose to participate (e.g., schools seeking school-level information, schools that had participated in similar research projects in the past, etc.). In addition, recognition of the importance of readiness and allowing schools to consider the value-added aspects of SHAPES-PEI over time has resulted in additional schools requesting that their school participate in the next round of data collection. This resulted in increasing our recruitment from 85% to 90%.

Time delays and lack of resources have been identified in the literature as challenges to project implementation and knowledge dissemination (Dal Santo, Goldberg, Choice, and Austin, 2002). This was true of SHAPES-PEI as preparations (e.g., staffing, contracts, ethics, etc.) took longer than expected and resulted in delayed implementation in the first year. Lack of financial resources is also reported as a challenge for long-term sustainability of such projects and knowledge dissemination (Lang, Wyer, and Haynes, 2007). In PEI, our case study revealed that the small size of the province may create challenges as there is limited funding to support consistent knowledge exchange activities.

Literature suggests that knowledge dissemination is enhanced when the product is presented in a user-friendly and concise manner, and is not too technical or statistically focused (Dobbins, DeCorby, and Twiddy, 2004; Dal Santo, Goldberg, Choice, and Austin, 2002). The language is particularly important and consideration needs to be taken to ensure the language is appropriate for the particular audience (Garland, Plemmons, and Koontz, 2006). The case study findings show that the SHAPES-PEI profile reports were received in a positive manner and those who used the reports found them to be user-friendly and clear. For SHAPES-PEI, positive feedback for the profile reports is especially important since the provision of individual school profiles was a key factor for the initiative's uptake (both by schools and the provincial government).

According to the literature, some barriers to knowledge use are due to the evidence itself. Uncertain or inaccurate interpretation of evidence or unclear applicability of evidence can be barriers for the target audience when attempting to move from evidence to action (Lang, Wyer, and Haynes, 2007). The PEI case study findings show that the administrators of participating schools do not always clearly understand the research process (and their role in it) or have the knowledge, skills, or time needed to interpret their school's profile report. Administrators may feel overwhelmed with the information provided and not know how best to proceed or share the information with others. By maintaining communication through formal and informal means knowledge use and dissemination can be enhanced (Dal Santo, Goldberg, Choice, and Austin, 2002). This is the focus of many SHAPES-PEI activities.

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