"You say 'to-may-to(e)' and I say 'to-mah-to(e)'"

Bridging the Communication Gap Between Researchers and Policy-Makers

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Canadian Population Health Initiative | Initiative sur la santé de la population canadienne

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Bridging the Communications Gap Between Researchers and Policy-Makers

CPHI Report on
Moving from Research to Policy:
Improving the Health of Canada's Youth

A workshop held in Toronto, Ontario
February 19 and 20, 2004

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go!communications

For the Canadian Population Health Initiative
Canadian Institute for Health Information

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Introduction

"Research, if it is to be important, must be used."

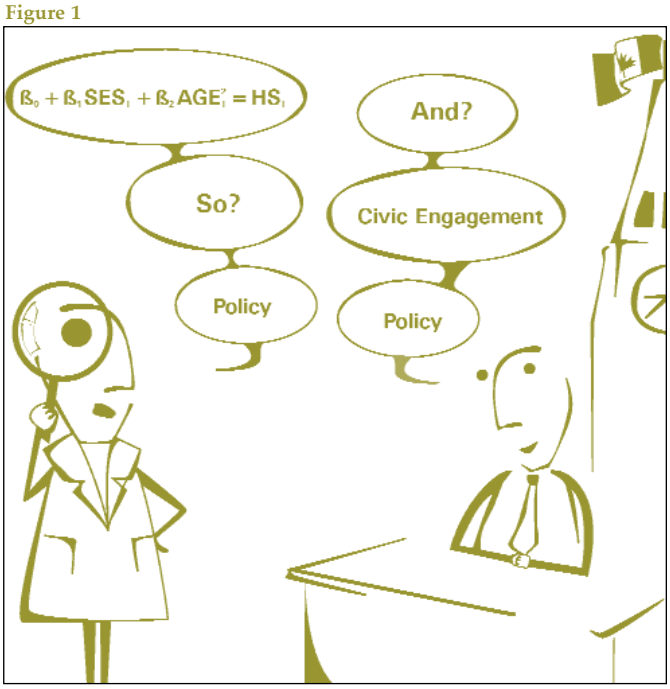
—Rehr, 1992.[1]

Researchers studying child and youth health in Canada come from a position of strength. Their topic is a compelling one: the well-being of our youth represents Canada's well-being as a whole, both today and in the future. Researchers have access to a wealth of data that provides longitudinal and international comparisons of child and adolescent health.* Moreover, governments and funding agencies (such as the Canadian Institute for Advanced Research and the Canadian Institutes for Health Research) have shown a commitment to fund researchers to use such data, while organizations like the Canadian Institute for Health Information (CIHI) through its Canadian Population Health Initiative (CPHI) have also funded research and facilitated research networks and partnerships across the country and beyond.

Finally, research that is translated into policy has the potential to make a difference in the lives of Canadians. When it comes to creating policy, decision-makers need and rely upon researchers. Without their work, as Claire Marshall, Director of the Institute On Governance, noted, policy-makers simply cannot do their jobs.

Despite these strengths, there can be a gap between the worlds of research and policy-making, a gap characterized by different needs, desires, and goals, different time frames for action, and different incentive and reward structures. Often, it seems as though the two groups not only come from different cultures but in fact speak different languages (see Figure 1). As a result, communication between the two often falters, leaving both frustrated. Researchers do not understand why their research findings do not seem to find their way into policy. Policy-makers, on the other hand, do not always understand or find relevant research agendas or results, and, further, cannot always find the results in time to incorporate them into the decision-making process.

Figure 1



* The National Longitudinal Survey of Children and Youth (NLSCY), the Health Behaviour in School-aged Children (HBSC) survey, the Canadian Community Health Survey (CCHS), and the National Population Health Survey (NPHS) are some examples.

Few researchers want their hard work to collect dust on a shelf. If researchers want to see their work make a difference, however, they must learn how to bridge the communications gap between their own world and that of policy-makers. In short, they need to learn to speak the language of policy-makers.

With this goal in mind, a group of CPHI-funded researchers working in the area of youth health recently participated in a workshop, "Improving the Health of Canada's Youth: From Research to Policy," sponsored by CPHI and the Canadian Adolescents at Risk Research Network (CAARRN). Over the course of two days, researchers came together with decision-makers, consultants, representatives of non-governmental organizations, and other stakeholders in the policy process. Researchers presented some of their results, while policy experts provided an insider's perspective on how to best ensure that those results would be taken up in policy initiatives. For a full list of workshop participants, please see Appendix A.

From Research to Policy: Workshop Objectives

1. To improve understanding of the policy development process and the importance of research in that process
2. To develop researcher capacity to develop policy implications from research work
3. To facilitate the development of a pan-Canadian research network investigating aspects of youth health
4. To promote linkages and exchange between CPHI-funded researchers in this area

The workshop opened with researchers' presentations of findings, progressed through several discussions on the workings of government and the nature of policy-making, and closed with researchers beginning to apply the knowledge and strategies they had learned to their own work. In breakout groups, they began the process of targeting audiences, defining key messages, and creating dissemination strategies. The full workshop agenda is provided in Appendix B.

This document provides an overview of the two-day workshop. Its purpose is to provide researchers with:

- information about the policy- and decision-making processes,
- some practical strategies for presenting their research, engaging with policy-makers, and increasing knowledge transfer and uptake, and
- suggestions for further resources on policy-making and knowledge-transfer processes.

About the Canadian Population Health Initiative

The Canadian Population Health Initiative (CPHI) is part of the Canadian Institute for Health Information. CPHI's mission is twofold: to foster a better understanding of factors that affect the health of individuals and communities, and to contribute to the development of policies that reduce inequities and improve the health and well-being of Canadians. A council of respected researchers and decision-makers from across Canada guides CPHI in this work. CPHI collaborates with researchers, policy-makers, the public, and other key partners to increase understanding of the determinants of health, with the goal of helping Canadians stay healthy and live longer.

At the foundation of CPHI's research partnerships are collaborations established with research teams across the country that have received CPHI research funding. Relationships between CPHI and research partners are ongoing. Partnering is also viewed as a capacity-building strategy. CPHI encourages the development of partnerships among researchers and between researchers and policy-makers through multi-sectoral (research and policy) research team membership and sponsorship of networking and theme-based interactions among teams.

CPHI is committed to engaging policy-makers and decision-makers in the process of transforming evidence into policy. To ensure that messages about the determinants of health are relevant to policy—and decision—makers at all levels and across sectors, CPHI is building strategic relationships, both formal and informal, with officials in federal, provincial, regional, and local governments. Mechanisms for these relationships include advisory groups, case studies, research collaboration and other joint ventures. In addition, CPHI has partnerships and collaborative relationships with a variety of non-government organizations, including policy research organizations, public interest groups and key media contacts with interest in the determinants of health.

CPHI is guided by five strategic questions:

1. Why are some communities healthy and others not?
2. To what extent do Canada's major policies and programs improve population health?
3. How do social roles at work, in the family, and in the community affect health status over the life course?
4. What are the population health effects of broad factors in social organization in Canada and other wealthy countries?
5. What is Canada's relationship to population health from a global perspective?

In order to facilitate evidence-based policy-making in population health, CPHI has four functions:

1. Knowledge generation and synthesis: building a better understanding of the factors affecting population health
2. Policy synthesis and analysis: contributing to policy development to improve the health and well-being of Canadians
3. Knowledge transfer and reporting: providing objective and credible information on population health issues
4. Knowledge exchange: establishing collaborative strategies and networks to bring a focus to understanding the determinants of health

About the Canadian Adolescents at Risk Research Network

The Canadian Adolescents at Risk Research Network (CAARRN) facilitates knowledge exchange, communication, and collaboration between youth, researchers, policy developers, and program implementers to improve young people's quality of life. This Queen's University–led research program is funded by CPHI.

Across Canada, CAARRN researchers come together to study national and international data on youth health, focusing on seven key aspects: bullying, obesity/physical activity, sexual health, injuries, school culture, disability and chronic conditions, and social capital.

Using the Health Behaviour in School-aged Children (HBSC) Survey, CAARRN researchers investigate why youth in some communities are healthy and others are not, and look at the environmental influences that affect adolescent health and well-being in Canada and other wealthy countries, such as the United States and European Union countries. CAARRN looks beyond the role of health services to investigate other influences on adolescent health, such as the social, physical, economic, and political environments in which youth live.

CAARRN is an interdisciplinary research program involving researchers from Queen's University, the University of Toronto, Health Canada's Childhood and Adolescence Division, and the Canadian Education Association. In the future, and with the help of the Centre for Excellence in Youth Engagement, CAARRN hopes to involve youth more directly in adolescent health research, training them how to collect information about their issues to determine the root causes of health problems. In turn, youth will be able to educate researchers in how to effectively engage youth.

Why the Gap? Barriers to Effective Communication Between Researchers and Policy/Decision-Makers

> *"Policy-making is as much an art as it is a science. Much of it seems to be ad hoc, created in response to strange influences. It takes place very quickly or not at all. The framework—constraints, rules of engagement, procedures, manuals, and legislation—isn't overly clear. Researchers therefore can become quite frustrated."*
>
> *—Les Foster*

> *"All decisions are not evidence-based. Many, many other factors, from emotion to budgetary pressures, from peer pressure to politics, all play as big—or bigger roles—as the research-based arguments we present."*
>
> *—Canadian Health Service Research Foundation, Knowledge Transfer: Looking Beyond Health*[2]

Researchers and policy-makers are often thought of as two distinct communities, noted Claire Marshall: the former are regarded as dispassionate and detached from the practical applications of their work, while the latter are assumed to be governed largely by political agendas, with less emphasis on evidence.

These stereotypes, however, don't really apply, remarked Matthew Sanger, CPHI Policy Analysis Consultant. Researchers come to their areas of investigation through their own obligations and values, and are interested in "making a difference." Policy-makers, while certainly affected by constraints, are interested in being informed by research evidence and knowledge to create effective policy. In fact, many welcome researchers' input—if it is presented in ways that are relevant to their needs.

Still, it remains clear that researchers and policy-makers do not always communicate clearly with each other, and that poor communication can hamper the uptake of research knowledge at the policy level. At the heart of this communication gap lies a lack of understanding by each group of the other's cultures, priorities, and processes.

At the CPHI/CAARRN workshop, several presenters discussed reasons, summarized below, for the communications gap between research and policy.

Researchers and policy-makers are driven by different incentive and reward structures.

As Dr. Les Foster, Assistant Deputy Minister of Research and Knowledge Transfer at the British Columbia Ministry of Children and Family Development, pointed out, researchers are driven not only by passion for their topics, but by the goal of publication in refereed journals. Their reward system, including research grants and tenured positions, depends to a large degree on quantity of publications in quality journals. Policy-makers, on the other hand, are driven by the need for useful, timely, relevant, and understandable information to inform their decisions. They are rewarded for making solid and timely decisions and solving problems.

Foster noted that if research is to be translated into policy, researchers must include key policy stakeholders in the early planning stages of their projects. Researchers, however, value their independent, unbiased perspective, and may worry about compromising their independence by considering policy-makers' needs in project design and conceptualization. If researchers work in a vacuum, however, policy-makers can feel, as Foster noted, "blindsided about research that seems to come out of left field."

On the other hand, as noted by the University of Victoria's Dr. Irving Rootman and Gord Miller, policy-makers' desire to use and control findings may not be compatible with researchers' need to publish. Further, some practitioners may give limited credence to evidence, and/or fear that researchers will tell them what to do and how to do it.

Rootman and Miller noted that competition for scarce research funding is fierce, as is competition among issues and advocates for policy attention. Policy-makers, further, must balance the allocation of resources between research and implementation: every dollar invested in research may be perceived by the public as one less dollar for programs to help citizens and/or clients.

Researchers and policy-makers have different timeframes for action.

Typically, a government funding cycle for research lasts between two and three years. This time frame, however, is often too short for researchers to conduct research and too long a wait for policy-makers, leaving both groups in a bind.

Decision-makers, as Rootman and Miller noted, are driven by immediate needs ("We're living this now!"), and typically require results faster than research can produce them. This problem is exacerbated by the fact that governments typically cannot rely on being in power for more than three or four years at a stretch, a cycle not overly compatible with longer-term research projects. Grant applicants, therefore, may over-sell themselves to get the funding, but may not realistically be able to achieve the proposed outcomes in two-to-three-year time frames; their perceived failures may lend credence to the belief that health promotion initiatives do not work and may make policy-makers less inclined to use such research. One response to this problem, suggested Rootman and Miller, is to look at longer-term and open-ended funding.

Further, Rootman and Miller noted that inconsistencies in funding policies can impede long-term development of solid, knowledge-based research. The same can be true for frequent personnel changes and restructuring at the government level.

Researchers and policy-makers have different understandings of and standards for evidence.

Researchers subscribe to what Miller calls a "hierarchy of evidence" that holds as a gold standard the systematic review and meta-analysis, defined as "a statistical procedure that integrates the results of several independent studies considered to be 'combinable,'"[3] or two or more double blind randomized controlled trials. From there, the hierarchy descends to well-designed randomized controlled studies; well-designed trials without randomization (for example, single group pre-post, cohort, time series, or matched case-controlled studies); and well-designed non-experimental studies from more than one centre.

This hierarchy, however, has limitations when it comes to policy-making. Notably, it does not allow for qualitative research. As Miller noted, policy-makers want not only scientific quality and rigour, but also evidence that is relevant for use in a practical, "real life" social context. What is knowledge to policy-makers (that is, compelling human stories), however, may be dismissed as "soft" evidence by researchers. Standards of evidence, explained Miller, need to meet the standards of rigour defined by the researcher, but in partnership with a specific community's culture and program leaders' and practitioners' experience with the intervention.

Dr. Réjean Landry of Laval University also noted that researchers and policy-makers often have different definitions of knowledge and information. While researchers may regard their results as "knowledge," policy-makers may regard them as simply "information": knowledge in policy terms, explained Landry, is usable information based on evidence (see "What Works" on page 19).

Policy-makers do not have the time to pay attention to research results published in the style and media typically used by researchers.

As noted above, researchers are typically driven by the need to publish their findings in refereed journals and/or as books. These resources, however, are seldom read by decision-makers, who, as Landry pointed out, tend to use evidence that is either produced by their own or similar organizations or presented at conferences and seminars. As Foster noted, information from books or journal articles is generally too long to catch the attention of most decision-makers, who need information distilled to five-point briefing notes that succinctly outline key points and their relevance.

Similarly, noted Claire Marshall and Landry, researchers' use of highly technical language can prevent uptake of research findings by policy-makers, who need the information in plain, non-technical language. In short, unless researchers learn how to present and market their results in ways that policy-makers can use and understand, it is unlikely that their work will influence policy.

From Bright Idea to Reality: An Introduction to Policy-Making in Canada

Claire Marshall, Director of the Institute On Governance, guided conference participants through the multi-faceted policy-making process in Canada, with a focus on the federal government. Marshall left the group with five key points to remember:

1. Policy development is a definable process.
2. Research has a role inside and outside that process.
3. Governments are made up of people—researchers, therefore, need to build relationships with them.
4. Look for synergy and symbiosis. Researchers need to look for what they have that a government needs, and go forward together with policy-makers.
5. Government does not have the research capacity to do what researchers do. It needs research, but in non-technical language.

What Is policy?

- A framework for action
- A set of decisions around a public issue
- The translation of government's political vision into programs and actions to achieve results
- A set of inter-related decisions, taken by public authorities, concerning the selection of goals and the means of achieving them[4]

What Is Government's Role? What Are Government's Priorities?

Government's role, suggested Marshall, is to make choices about seemingly intractable issues, prioritize goals, and develop the means of achieving them. In addition, governments work closely with civil society and the private sector.

As they consider how to influence policy, researchers must take into account how their work fits with a government's priorities and agenda. While health, social policy, and education are primarily the purview of provincial and territorial governments, that does not mean that there is no role for the federal government in this domain. Current government priorities that offer opportunities to social policy researchers include:

- Democratic reform: a recent initiative under Prime Minister Paul Martin supporting an increased role for members of Parliament, caucus, and parliamentary committees
- Strengthening the social foundation: $2 billion health-care transfer; focus on children, especially "at risk" children; opportunities for persons with disabilities; support for Aboriginal peoples
- A "new deal" for communities: targeting immigrants, the homeless, urban Aboriginals; and focusing on housing, safe neighbourhoods, schools, health care, and infrastructure
- Lifelong learning: assistance for low-income families[5]

Who's Involved? Where Can Researchers Make Their Voices Heard?

Policy decisions are made and influenced at several levels. With so many actors, researchers need to understand how and where to make their voices heard. Marshall provided examples of federal government audiences that researchers should consider:

- While a researcher might be lucky to get ten minutes with a minister, said Marshall, an hour with the **policy analyst** who writes that minister's briefing notes and does the legwork is invaluable before a meeting.
- Each party's **caucus** provides a chance for party members to quiz their colleagues and share ideas that they have received from their communities.
- Democratic reform means an increased voice for **MPs**; researchers would be wise to include them on their dissemination plans and network lists.
- After being tabled, initiatives often go to Parliamentary **committees:** target their members.
- Central government agencies are key players in the policy process. For example:
  - The **Treasury Board Secretariat** sorts out where the money goes.
  - The **Privy Council Office** coordinates issues across government and controls what goes to **Cabinet**.
  - **Finance Canada** sets the budget and determines how tax dollars will be spent.
  - The more that public servants—from junior policy analysts to analysts to assistant deputy ministers—know about your cause, the better.

Note that 75 percent of federal government employees are not in Ottawa: there may be more opportunities for small-scale change (pilot projects, for example) at regional levels than at the centre.

How Does Policy Develop?

1. Usually, policy initiatives begin with a **problem or opportunity** that suggests a need to create new policy.
2. After **identifying the basic issue** (for example, "Obesity is a growing problem among youth in Canada."), policy-makers engage in a substantial amount of **analysis** ("Why are kids becoming overweight and obese? Are they eating too much? Eating the wrong kinds of foods? Are they not getting enough physical activity?").
3. Out of this analysis comes the **development of policy and program options** (for example, "Young people are becoming obese because they get the wrong food and do not get enough exercise. We can educate them and their families; regulate the kind of food offered in vending machines in and near the school; work on changing the acceptability of 'wrong' foods; introduce mandatory daily gym programs in school; devise ways of making physical activity 'cool.'").

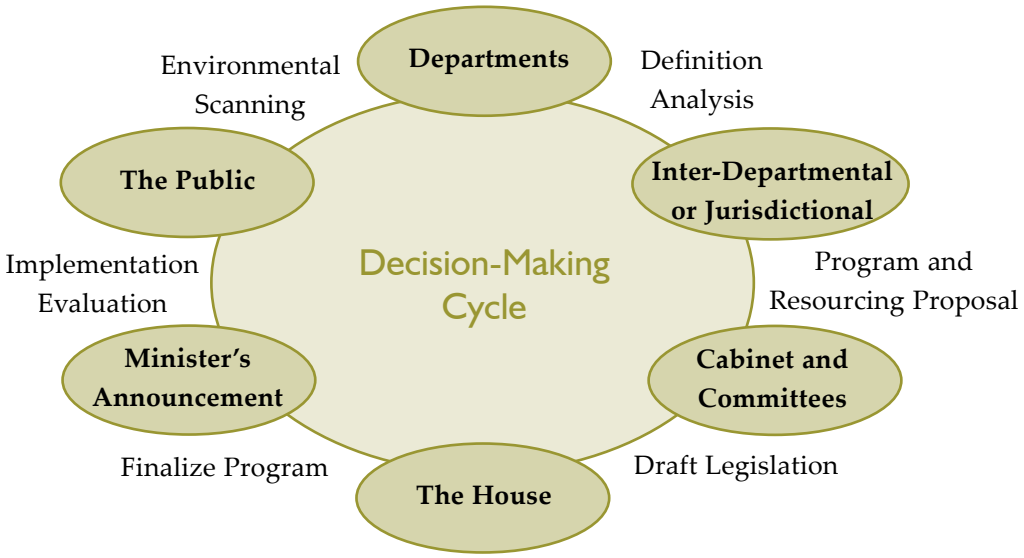
4. Eventually, **a decision is made**, part of a complex cycle that takes into account the impact of new policy on several levels (for example, a decision on smoking affects many government departments, including customs, finance, intergovernmental, health, Aboriginal—not to mention tobacco industry lobby groups). **Influences on decisions are many and varied.**
5. A **new or changed policy and/or program** is introduced.
6. The policy is **monitored and evaluated.**

Research Can Play a Role at Several Points in the Decision-Making Cycle

At the level of environmental scanning, research articles, conferences, reports, and meetings can contribute knowledge. Research also plays an important role in defining the problem. Governments will use a plethora of types of analysis (contextual, historical, organizational, legal, ethical, comparative, quantitative, cost-benefit, statistical, etc.) to develop policy; again, researchers can tap in at different points on the cycle.

The road from bright idea to policy is an iterative, messy, constantly changing process. It can be tedious and at times difficult, according to Marshall; but the meandering path to decisions represents a huge opportunity: while decision-makers prepare a careful case for consideration, there is opportunity for input from researchers and other stakeholders (see figure 2).

Figure 2 **Decision-Making Cycle**



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Bridging the Gap: How to Engage Policy-Makers

Throughout the two-day workshop, the same messages surfaced and resurfaced: policy-makers need researchers. Researchers, in turn, must build stronger relationships with policy-makers, develop a better understanding of policy-makers' needs, and consider those needs when designing projects. Finally, researchers need to present (or market) their work in ways that will attract and engage policy-makers.

Policy-Makers Are People, Too

Presenters and workshop participants alike stressed the importance of building relationships between research and policy worlds. As Claire Marshall pointed out, the government is made up of people. Researchers need to build relationships with them, not only to build receptor capacity for their research, but also to understand policy-makers' needs.

Knowledge is most effectively transferred through collaborative relationships and interactive engagement with policy-makers, noted Matthew Sanger. Over time, he continued, collaboration can develop into a two-way process that encompasses both decision-relevant research and research-informed decisions.

Strong relationships between researchers and policy-makers are necessary for the effective dissemination of and access to research, noted Irving Rootman and Gord Miller. Strong relationships help create a desire, or groundswell, within government for research knowledge, making uptake that much easier.

Further, communicating research results and implications to government through an insider increases the chances of people listening to the information: people may not have any reason to trust an outside researcher "telling them what to do," but may be more receptive to the same information coming from one of their own staff members.

Marshall and Les Foster discussed the importance of building relationships at all levels and branches of government. Marshall guided participants through the vast array of federal government actors who influence decision-making (see "From Bright Idea to Reality," page 9). Foster discussed the information that these actors rely on at each level. From comprehensive databases to 200-page books to 20-page journal articles to five-point briefing notes, he explained, information on the road from research to policy is constantly narrowed and filtered. Knowing who reads what is key to knowledge transfer. Researchers can tailor their message accordingly at each level:

- At one end of the information chain, **technical staff** and **analysts** will read academic articles and books, as well as internal and external reports. Researchers should not dismiss these people, advised both Foster and Marshall: they write the briefing notes upon which ministers, Cabinet, and Cabinet committees rely.

- **Program directors** (up to the level of assistant deputy minister) will read books and technical reports, but are also influenced by advocacy groups, constituents, the media, and briefing notes.
- At the other end of the information chain, **ministry executives, ministers, Cabinet,** and **Cabinet committees** tend not to read academic writing or reports, relying chiefly on advocacy groups, constituents, briefing notes, submissions and—importantly—the media for their information.

The type of relationship researchers build with policy-makers can also affect knowledge transfer (see "What Works," p. 19). As Landry noted, weak ties are associated with incremental innovations, like pilot projects, while strong ties are associated with more significant innovations.

Building relationships can be as easy as dropping by an office and saying hello. Dr. Roger Tonkin, Chair of the McCreary Centre Society, advocates simply visiting government offices and engaging employees at their desks. This strategy is a good way to build relationships based on trust, without expectations or demands.

What Do Policy-Makers Want?

If researchers want to see their evidence inform policy, they must first understand what policy-makers want, and then tailor their messages accordingly.

Policy-makers, stressed several presenters and participants, are looking for solutions, not problems. In other words, they are not interested in knowing only, for example, how many adolescents use tobacco and at what ages, what percentage of teens have low self-esteem or poor school experiences, the prevalence of overweight and obesity, or the negative health effects of bullying and being bullied.

Rather, policy-makers are interested in what research can tell us about how to most effectively address public policy issues. For example, how can public policy stop kids from using tobacco and what is the best age at which to target them? What are the most effective ways to improve self-esteem and school experience with specific initiatives? What are the best ways to reduce overweight and obesity through physical education and community programs? What do we know about how to most effectively address bullying through multiple interventions at school board and community levels?

Presenters summed up some of the key characteristics of research that are helpful to the policy process:

- Relevance: Addresses questions of interest to policy-makers. Researchers should relate their work to issues that seem to have government—and media—attention (obesity, strengthening the social foundation, "at-risk" children, etc.). While investigator-driven research is still important to identify the unexplored, there is a critical need to also address issues emerging in practice/experience.

- **Accessibility:** First, allows policy-makers to find the information, and, second, ensures that the information is understandable to policy-makers. Researchers must consider the human "stories" behind their numbers, and create compelling messages for policy-makers and the public. Qualitative as well as quantitative research is important.
- **Immediacy:** Provides information in a timely manner. Again, policy-makers are driven by shorter-term cycles, and need information and solutions for current problems.
- **Usefulness:** Provides information that is usable and used—that is, it provides solutions to problems.
- **Quality:** Provides sound, credible, and scientifically rigorous information, with appropriate and rigorous research methods and data. Having a solid research and publication track record—or aligning yourself with someone who does—is an advantage.
- **Collaborative:** Demonstrates the presence of early and sustained engagement with policy-makers. This increases the likelihood that policy-makers will feel ownership in the research findings. Further, they will be not only aware of the research, but also confident in using the research findings.
- **Targeted:** Identifies a specific audience and clearly defined—and compelling—key messages (for example, "Children come to school more equal than when they leave it.").

Attention is paid to research when:

- The research is timely, the evidence is clear and relevant, and the methods are uncontested.
- The results are consistent with past practices, values, or needs. The evidence is an important counterbalance to expert opinion.
- Users are partners in the generation of evidence.
- Research findings have strong advocates.
- The results are robust in implementation and adaptable to day-to-day work.
- There is little requirement for additional visible resources.

—Irving Rootman and Gord Miller

Questions Policy-Makers Ask

After the workshop, facilitator Lillian Bayne provided "A Policy-Maker's Take" on the translation of research to policy on the topic of healthy youth. Bayne situated various CPHI/CAARRN researchers' work within the context of five questions policy-makers ask.

1. What is the problem?

Policy-makers need a descriptive, rich, conceptual understanding of research. Qualitative research—such as Dr. Ilze Kalnins' work on adolescents with disabilities—contributes to this understanding. Nesting research findings in other important work can create synergies and contribute to more "complete," holistic policy initiatives—as shown in Cara Fedick's work on self-esteem and its potential relationship to other areas of inquiry.

2. Why does it matter?

Policy-makers want answers to a variety of questions:

- Why does the research matter now?
- Why does it matter to:
  - the public?
  - family members?
  - advocates?
  - decision-makers and policy-makers/providers?
- Where are governments implicated?
- Where do governments have responsibility?
- How will key stakeholders react?
- What are competing pressures?

The more completely researchers can answer these questions, the more targeted and thorough—and, therefore, potentially effective—their messages will be to policy-makers.

3. What can—and should—be done about it?

To answer this we need to know:

- What prompts? For example, Dr. Wendy Craig's work (presented by Danielle Shelley) on bullying raises important questions about the origin of problematic and/or unhealthy behaviours.
- What protects? Dr. Will Pickett's findings on the role of protective factors in injury prevention are relevant here.
- What predicts? Dr. Susan Dahinten's work on the health influences of maternal age at birth on children and mothers may shed light on who should be targeted and when by new policies.

Dr. Ilze Kalnins from the University of Toronto, together with colleagues Dr. Catherine Steele of Bloorview McMillan Children's Centre and Dr. Beverly Antle of the Hospital for Sick children, is part of a CAARRN research team studying health promotion for adolescents with physical disabilities. In addition to quantitative analysis of age-related trends in key health behaviours, the team also built a qualitative component into its research project, interviewing 15 families to discover the health promotion strategies of parents of adolescents with physical disabilities.

The results showed that parents' perceptions about health promotion focus on psycho-social issues rather than risk behaviours. These issues include emphasizing routines, pursuing a productive future, developing a social life and friendships, making an extraordinary effort, and conserving energy. As one parent put it:

> *". . . I take him [to school] in the morning and the bus picks him up in the afternoon . . . [W]e found that J. has a lot of trouble to . . . get up in the morning . . . He's very tired and slow to get ready. . . . I take him right inside. I leave him ready . . . with his backpack at the door of the elevator. I take his jacket and his lunch and put it in his locker . . . . "*

These qualitative findings provide important glimpses into policy directions that might improve health for adolescents (and future adults) with disabilities by focusing on psycho-social as well as risk-oriented initiatives.

4. How should we do something?

What is the appropriate locus: home, school, community, society? All of the above? Dr. Ian Janssen's work on physical inactivity and obesity in Canadian adolescents stimulated discussion here, as participants debated the merits of targeting obesity and inactivity through school physical education programs, parent education campaigns, or a variety of strategies.

What is the appropriate timing? When should we intervene? Dr. Doug Willms' research team talked about the usefulness of longitudinal data for answering these questions. By studying groups of the same children/youth over time, researchers can better identify the points at which change occurs, and potentially plan interventions that can prevent health problems.

What is the appropriate format? Here, questions of culture and receptivity—for example, Brad Corbett's observations on tobacco in Aboriginal culture—come into play. How can we target specific groups so that they will respond?

5. How will we know it worked?

Why did it work? Why did it not work? What are the consequences if it does not work? Here, researchers may want to think about building ongoing or follow-up studies (such as using longitudinal data, perhaps) into their proposals, and communicating plans for follow-up to policy-makers.

The research referred to in this report was presented at the workshop. Summaries of each presentation are provided in Appendix C.

What Works: An Evidence-Based Approach to Engaging Decision-Makers

Dr. Réjean Landry presented a summary of the current research findings on knowledge transfer from research to policy, and provided researchers with a comprehensive series of "tips," summarized here, on the best ways to best engage policy-makers. What was his most important point? There are no "magic tips": success depends on the joint use of multiple strategies.

Dr. Réjean Landry holds the Chair on Knowledge Transfer and Innovation, funded by the Canadian Health Services Research Foundation (CHSRF) and the Canadian Institute of Health Research (CIHR). He teaches about knowledge transfer at the University of Laval's Faculty of Business.

FACT: Professionals and managers do not read all available research; internal sources, written by their own and other, similar organizations, are their most important sources (70%), followed by conferences and seminars, guidelines and technology assessment reports, and—finally—research sources.

TIP 1: Relate your story to decision-makers' usual sources of knowledge: reports produced by their own organizations, talked about in conferences, and produced by other organizations.

TIP 2: Show what your research has to offer in comparison to the other knowledge sources that are considered more important by decision-makers.

TIP 3: Be able to compare research knowledge with knowledge generated by the other sources and articulate the value-added provided by research.

TIP 4: Knowledge is useable information based on evidence. Remember that decision-makers do not want information (facts), but knowledge (that is, how your research can be used to shape policy).

TIP 5: Show that you are sensitive to practical issues and existing reports: a demonstrated interest in practical problems facing policy-makers and an awareness of the breadth of technical reports available will enhance a researcher's credibility.

TIP 6: For your toolbox: more than 2,500 decision-makers subscribe to the E-watch newsletter on innovation in health services (http://kuuc.chair.ulaval.ca), a database that contains documents on knowledge transfer, innovation, and the policy and management of health services. Subscribe to keep informed about the latest research and reports.

FACT: Researchers who are the most successful in knowledge transfer are the most productive scientists (in terms of number of articles) and have the most extensive linkages with decision-makers.

TIP 7: Base your story on a strong publication record in order to successfully engage decision-makers. If you are a young researcher, get involved with someone more established in order to develop a solid track record.

FACT: Research knowledge tends to be about general principles, but these do not have concrete, tangible applications. To be readily implemented, research knowledge must generate specific benefits that could not be captured otherwise, and must provide a solution for a real problem.

TIP 8: Translate general principles to specific policy implications or professional practice. Provide an intuitive evaluation that would compare the situation now to the situation that would result if your findings were implemented.

FACT: New research knowledge that can be tried on a small scale is generally adopted more rapidly than research knowledge that is not divisible: divisibility is a means to reduce uncertainty about new research knowledge.

TIP 9: Provide room for small-scale pilot projects and experiments.

FACT: Decision-makers are attracted to research that has visible benefits that occur in the shorter term.

TIP 10: Your story needs to show benefits that are observable in the short run.

FACT: Research knowledge that is to be useful to decision-makers factors in their information needs from the start.

TIP 11: Your first step in defining your research question is to look at issues relevant to your topic that are currently of concern to decision-makers.

TIP 12: Clarify at the outset what decisions are to be influenced and who are the potential users.

TIP 13: Involve decision-makers in implementing and monitoring the study, particularly when coming to the stage of drawing conclusions and making recommendations.

TIP 14: For your toolbox: Making a Difference to Policies and Programs: A Guide for Researchers (http://sara.aed.org/publications/cross_cutting/policy_programs/html/eng_intro.htm).

FACT: Highly technical research results generate feelings of uncertainty and decrease the likelihood of uptake.

TIP 15: Translate research knowledge into plain, non-technical language that makes sense to decision-makers.

TIP 16: Customize research knowledge for decision-makers' organizational context.

TIP 17: For your toolbox: National Center for Dissemination of Disability Research: Improving the Usefulness of Disability Research: A Toolbox for Dissemination Strategies (http://www.ncddr.org/du/products/).

TIP 18: For your toolbox: Granger and White: Developing an Effective Dissemination Plan, National Center for the Dissemination of Disability Research (http://www.ncddr.org/du/products/dissplan.html).

TIP 19: For your toolbox: National Center for Dissemination of Disability Research: Dissemination Self-Inventory, 2001, (http://www.ncddr.org/du/products/disseminv/index.html).

FACT: As formal and informal linkages between researchers and decision-makers increase, so does the likelihood of research uptake. Weak ties are associated with incremental innovations, while strong ties are associated with more significant innovations.

TIP 20: Forge weak ties for access to novel information and to identify new opportunities.

TIP 21: Forge strong ties to be efficient in the short term in research uptake.

TIP 22: Engage in dialogue with decision-makers who are part of extensive networks.

TIP 23: For your toolbox: Hardy, Hudson and Waddington, Strategic Partnering Taskforce, Assessing Strategic Partnership: The Partnership Assessment (http://www.nuffield.leeds.ac.uk/downloads/pat.pdf).

FACT: Education matters: decision-makers who completed masters and doctorate degrees are more likely to base their decisions on research evidence.

TIP 24: Whenever possible, engage with decision-makers who hold advanced degrees.

TIP 25: For your toolbox: Getting Research into Policy and Practice Website (http://www.jsiuk-gripp-resources.net/gripp/do/viewPages?pageID=1).

Getting Heard: Tailoring Effective Messages

To influence policy, researchers need to present (or market) their work in ways that will attract and engage policy-makers. Throughout this document, several strategies have been outlined—building relationships, including involving policy stakeholders in research projects from the beginning, and incorporating qualitative evidence into the results—that help tailor effective messages. Here, some more specific strategies for engaging decision-makers are presented.

Social Marketing

If researchers want their results to influence policy, they must "market" those results. Without marketing, warns Les Foster, researchers should not be surprised if the results do not have any impact.

Foster outlined several decades' worth of theory on social marketing. While individual theories varied, the overall message that emerged—and that was echoed by workshop presenters—was strikingly consistent: when crafting messages for decision-makers and the public, researchers must keep the needs of their audience, rather than their own goals, at the forefront. What does that audience want to know and to hear? If researchers can tap into the public's and decision-makers' needs, and provide knowledge that relates to those needs, they have a better chance of success. Again, building relationships with decision-makers is key to this process.

Foster drew upon H. R. Davis's 1978 "AVICTORY"[6] principle to outline several variables that can influence knowledge transfer:

A: The **ability** of a person or organization to carry out change.

V: The **values** of the organization.

I: Values can depend on **idiosyncratic** factors (for example, the minister is a social worker by training and is therefore attuned to social work policy).

C: The current **circumstances:** if there's a major issue underway in a non-related area, you are probably not going to have an impact.

T: **Timing** is key: if an issue comes up, are you ready to step in with the information?

O: Is there an **obligation** for someone to do something with your work: the provincial government, the municipality, a school board?

R: **Resistance** levels: What are some of the negative consequences researchers are up against? Is the research at odds with the status quo? How can the research be marketed to counteract the consequences?

Y: **Yield**—an audience must understand how policy deriving from this research will make a positive difference.[7]

Foster also cited Kotler and Zaltman's (1971) "Six Ps"[8] necessary for effective social marketing: a quality **product**; a sound **promotion** or dissemination strategy, targeted at the right **place** or **person**, and at the right **price**. **Politics**, in the form of lobbying for change, and **public approval** are also key.

The process by which results are disseminated goes through several stages (from knowledge through persuasion and decision-making, to implementation) and can be lengthy. While policy-making is a slow process, public service turnover is high, so researchers should be prepared to inform stakeholders on an ongoing basis.

Finally, said Foster, one size will not fit all: researchers need to tailor individual messages to specific audiences. Citing Geller (1989)[9] and Ho et al (2003)[10], Foster discussed the importance of market analysis to identify the needs, characteristics, and boundaries of target populations; and market segmentation to tailor and adopt the research product to the unique needs of sub-populations. When tailoring messages, researchers need to ask the following questions:

- Who is the target audience? Who is the research trying to influence?
- What do you want to say to that audience?
- What is the audience's perspective? What do they want to hear?
- Is the audience ready? Is the audience receptive to change?
- How much will the audience remember? How can you craft your messages so that they will be remembered?
- What can the audience learn by using this information? Why is it valuable to them?

With this information, researchers can begin to develop a marketing strategy for dissemination and implementation, and an evaluation strategy to facilitate feedback.

Putting It in Writing

> *"Writing main messages can be difficult for researchers to do, trained as they are to be detached and to collect evidence, rather than judge it, but it has to be done if research is to be of real use to decision-makers. And remember—if you don't do it, you're leaving your work to be interpreted by someone else, who won't likely have your insight."*
>
> *–Canadian Health Services Research Foundation, "Reader-Friendly Writing—1:3:25"*[11]

While there is no one template for writing research reports for policy-makers, effective reports share similar features: they are clear, concise, and compelling. In crafting messages in any medium, said Foster, keep in mind the KISS principle: "Keep It Short and Simple."

John Lavis Model[12]

In his discussion of best practices for knowledge transfer, Matthew Sanger cited John Lavis, Canada Research Chair in Knowledge Transfer and Uptake at McMaster University, who recommends preparing four versions of the message:

1. **The headline version** should be short and catchy, while retaining the essence of the overall message. For example, in brainstorming sessions near the end of the workshop, one group, developing implications on school experience, developed the headline "Children enter school more equal than when they leave."
2. **The sentence version** "should either highlight the research evidence or the implication of the research evidence for policy decision-makers."[13]
3. **The one-paragraph version** should contain sentences, answering the following four questions:
   - Why is this issue important?
   - What does the research evidence tell us about the issue?
   - Do we know whether and to what extent current decision-making differs from optimal decision-making based on the evidence?
   - Who should act and what should be done?
4. **The full text version**, which should elaborate on each of the points raised in the paragraph and provide full references for all statements.

Canadian Health Services Research Foundation (CHSRF) Approach

Lillian Bayne briefly discussed CHSRF's "1:3:25" approach to writing research summary reports for decision-makers: "start with one page of main messages; follow that with a three-page executive summary; present your findings in no more than 25 pages of writing, in language a bright, educated, but not research-trained person would understand."[14]

That one page of main messages is crucial, noted many workshop presenters. Unfortunately, too many researchers confuse the evidence with the message. Rather, the evidence provides the basis for the message. Instead of simply summarizing the findings, main messages summarize the implications of those findings. For example, while the research findings may show that smoking tobacco kills, the message may involve quitting strategies. In short, main messages answer the "So what?" question—as in "So, what use is this research evidence to me as a policy-maker?"

The three-page executive summary is designed to provide a condensed version of findings in order for decision-makers to assess quickly whether the report will be useful. This section "is not like an academic abstract; it's much more like a newspaper story, where the most interesting stuff goes at the top, followed by the background, context and less important information further down."[15] This is not the place for exhaustive information on approach, methods, and other technical details.

Similarly, the 25-page report is not the same as a scholarly article. It should be written in plain language, directed at the intelligent, busy decision-maker, who is not necessarily an academic. Anecdotes and stories that convey the main messages of the research are appropriate here. CHSRF suggests that seven categories be covered in the report, in the following order:[16]

- **Context:** Identify the policy issue/problem, research question, earlier related research, and the contribution this research can make.
- **Implications:** What do the research findings mean for decision-makers? Target these implications to specific audiences.
- **Approach:** Outline research methods, study design, data sources, response rates, and analysis techniques. Describe decision-makers' involvement and your plans for dissemination.
- **Results:** Summarize key results to show how they support your conclusions, highlighting themes and messages.
- **Additional resources:** Give information on related publications, Web sites, and other potentially useful information sources.
- **Further research:** Outline gaps in knowledge and outstanding questions; suggest studies to address these questions.
- **References and bibliography**

The media is a key player in the marketing process, noted Foster, Marshall, and Bayne. "Every day, probably the first thing a politician will do is go through the media," to get a sense of key issues, said Foster. If you can get the media to report on your research, it is more likely to get to the key decision-makers, because the key decision-makers read the papers. Good press releases follow many of the principles outlined above: a catchy headline; a summing up of the issue in one sentence; a focus on implications rather than information; and the use of intelligent yet jargon-free language, anecdotes, and stories to get the message across.

Why Is There No National Youth Agenda?

Claire Marshall used the example of the National Children's Agenda to illustrate the development of a major policy initiative. Participants then brainstormed strategies for putting youth on governments' agendas.

Case Study

The **National Children's Agenda** is an example of a major policy development that emerged out of a groundswell.[17] This formally negotiated document, agreed to and signed by First Ministers, had major political support and was developed with positive endorsement from non-government partners, including researchers. It began in 1998 with the National Children's Benefit, which gave financial support to parents, and was followed by the Early Childhood Development program in 2000 and the Early Learning & Childcare program in 2003, both of which saw federal funds transferred to the provinces. The federal government recently committed more funds to the agenda in the February 2, 2004, Throne Speech.[18]

Q: How did the National Children's Agenda move from bright idea to reality?

A: As Marshall pointed out, the timing was ripe: in the early 1990s, the Canadian Institute for Advanced Research (CIAR) had undertaken research on the importance of investing in early years. That initiative coincided with the World Summit on Children, co-chaired by then–Prime Minister Brian Mulroney. At the same time, the House of Commons undertook research into ways of eradicating child poverty, while the United States introduced its Head Start program and released annual evaluations.

In 1993, the federal government began funding the National Longitudinal Survey of Children and Youth (NLSCY). At a cost of $3 million a year, the survey was very expensive, and officials inside government needed to justify the expenditure. Advocates made their case through research, a strategy that required demand from researchers. Thus, the government made the data available to researchers and funded them to use it.

Marshall noted that CIAR research on early learning, and research by the United States' Head Start program, both conducted in the early 1990s, proved particularly useful to governments because they managed to bridge the gap between research results and program delivery. That is, the research results became useful to policy- and decision-makers when the findings demonstrated usefulness at the stage of program implementation.

Q: If we could create the National Children's Agenda, how can we now create the National Youth Agenda?

A: As Marshall pointed out, lots of excellent data on adolescents exists. The NLSCY now includes children and youth up to age 20. Researchers—including some funded by CPHI—are mining that data. Are their results implementable? Have they translated technical data into usable knowledge on what works? Are their messages compelling to policy-makers? Is the timing right?

Marshall noted that some issues, such as obesity, security/safe cities, and a learning agenda are current in the media and on the minds of the public and governments. Capitalizing and focusing on these issues could help with the promotion of the National Youth Agenda.

Marshall commented that the current political climate could also work to promote a youth agenda. Federally, the government—with a new minister and Department of Social Development—wants to show that it will implement change. Further, the interest in and discussions around "democratic reform" may provide researchers with new avenues for contact via parliamentary secretaries, caucus, and members of Parliament.

Exercise

Conference participants worked in teams to brainstorm strategies for putting youth onto the government's agenda. Marshall asked them to consider the following questions:

- Who would you involve? Coalitions, officials, politicians, media?
- What would you promote? Priorities: yours and governments'?
- What would you use? Tools, reports, surveys, papers, conferences, meetings, interviews?
- When would be the right time to move: what events are happening in the next 18 months (provincial and federal elections, new waves of national surveys, visits by foreign figures or dignitaries, etc.)?

Putting It All Together: Creating Policy Implications

In this session, researchers had a chance to implement what they had learned over the course of the workshop. Using fact sheets developed by CAARRN before the workshop (available at www.educ.queensu.ca/~caarrn/pub.htm), participants worked in facilitated groups to develop policy implications for three areas of research related to youth health:

- School environment
- Bullying
- Overweight/physical inactivity

Participants agreed that a coordinated, multi-level approach to the issue could be an effective way to influence policy, and suggested that such an approach could be more effective than single-issue, "problem-based" policy initiatives. After some discussion, a fourth group was formed to discuss a holistic approach to adolescent health.

Each group was encouraged to identify the key research findings and discuss their relevance for policy- and decision-makers. Group facilitators guided the discussions around the following questions:

- Who are the key players and why are the research findings important to them?
- What other pieces of research or findings will be important or helpful to move the agenda forward?
- Who should be targeted for knowledge transfer? Who should researchers focus on? Who is obligated to act?
- What are the three key messages?
- How are the key messages best communicated?

The following section reports on how each group responded to the above questions based on the evidence provided in the fact sheets.

Group 1: School Environment

Key findings

1. When students have positive experiences of school, health-risk behaviours decline, while perceived school achievement and mental health increase.
2. Adolescents' positive school experience is influenced by
   - peer support
   - parental support, and
   - school climate.

3. Research shows a decline in school satisfaction from elementary to secondary school. We need to know the reasons for this decline: could it be a change in school structure? Moving from a single teacher to many? From a smaller to a larger school?

These findings are relevant for:

- The school system—teachers, principals/administrators, counsellors/health care workers, students, parent advisory committees/school council
- Home—parent/guardians
- Community—public health nurses, environmental officers, justice, business sector, voluntary sector
- Government—education/health ministries, NGOs

Key messages

1. Parents still matter. Parental support and involvement is still an important aspect of adolescent well-being. Parents need to realize that their children need them.
   TARGET: parents, parent groups, schools (teachers, principals, guidance counsellors), students, social service agencies
2. School climate matters. A positive school environment facilitates both higher academic achievement and self-esteem in adolescents. It also contributes to a better sense of well-being, safety, and belonging.
   TARGET: teachers and principals, parents, students; provincial ministries; school boards; business and industry

So what?

Adolescents who are well adjusted and satisfied with school:

- engage in less high-risk behaviour
- have higher self-esteem (better emotional health)
- have greater academic achievement
- have a greater sense of belonging and safety, and
- have more positive relationships.

Group 2: Bullying

Participants in this group began by setting out the definition of bullying as follows: "Bullying is a relationship problem that is characterized by a negative physical or verbal action that has hostile intent, causes distress to victims, is repeated over time, and involves a power differential between bullies and their victims. A more dominant individual, the bully, repeatedly exposes the victim to aggression."[19]

Participants agreed that there is a need for an agenda for the prevention of bullying.

Key findings

- The prevalence of bullying is high amongst youth in Canada.
- Bullying can lead to multiple problems, for both bullies and victims.
- Bullying decreases educational outcomes.
- Bullying increases the likelihood of more and future violence by bullies, and sometimes by victims.
- Bullying occurs over the life course.

Relevance

- Bullying costs society, both socially and financially.
- Bullying goes against our values as a society, including commitments to protect kids, to have safe kids, and to have happy kids.
- We have political commitments to address bullying, including the *United Nations Convention on the Rights of the Child* and the *Canadian Charter of Rights and Freedoms.*
- We have legal reasons to address bullying, including criminal prosecutions and civil lawsuits.
- We have places to act: schools, homes, other child care settings.

Key messages

1. The problem of bullying is big: it affects 30 to 50% of students.
2. Bullying causes real harm to victims, bullies, and the environment. It is not trivial.
3. Bullying is no longer socially acceptable. Just as our society will not tolerate racism, sexism, and violence, we have moved beyond the acceptance of bullying.
4. Policies to deal with bullying may not currently be sufficient. We need to go further.
5. While bullying is a problem for school-aged children, bullying also occurs within and outside the physical boundaries of schools. Still, schools are a key modality to intervene, and must intervene—as opposed to ignoring the problem. A "zero tolerance," or "100% acknowledgement," approach was suggested.
6. If we are trying to change our society to not accept bullying, then we need to go beyond small interventions and create high-level policy statements. Anti-bullying messages and initiatives should be enshrined in the National Policy on Youth.

   TARGET: Dealing with bullying requires a multi-level approach, from grassroots to federal government organizations. We should approach key players simultaneously, by means of interventions from the top down and bottom up:

   - At a high level, this includes the National Youth Agenda
   - Council of Ministers on Education (CMEC), because it is credible and receptive

- School superintendents
- Child care institutions—because they are accessible
- NGOs
- Grassroots

Communications strategies could include high-profile media cases, or using adolescents to present the message ("This is what is happening to me."). It is important to establish the credibility of research on bullying, to show that this is an evidence-based initiative.

Group 3: Overweight and Inactivity

Key messages

1. 30% of Canadian adolescents are overweight.
2. For more than half of adolescents, physical activity levels are too low for optimum growth and development.
3. Negative health effects of overweight and inactivity (high blood pressure, type 2 diabetes, high cholesterol levels, etc.) are increasing.
4. Canada is doing worse than other countries in terms of our percentage of overweight adolescents.

Key policy options

A challenge to creating policy on this issue is that it does not belong to any one level or department of government. Some options at multiple levels include:

1. **Raise awareness** of the issue through a massive national campaign to increase physical activity (the "Healthy Living Strategy").
2. **Promote safe communities:** There is a notion that our communities are not safe places in which young people can play and exercise.
3. **Increase access to recreation opportunities** for all children and youth.

4. **Increase structured and unstructured physical activity in schools** through policy changes at the individual school levels but also systemically.
5. **Integrate school and community opportunities for recreation:** Make schools more a part of community and vice versa.

Group 4: Holistic Approach

Participants struggled to define "holistic." They noted that a holistic approach acknowledges the intersections and similarities of research findings across the many different youth health issues discussed. Policy initiatives on adolescent health are the shared purview and responsibility of many government departments, systems, and other players.

Key findings

1. Most youth are healthy, productive, and engaged (despite a general perception to the contrary).
2. Healthy youth engage in risky behaviours (skateboarding, substance use, sex, etc.).
3. Students connected to family, school, and community are more resilient even when engaging in risky behaviour.
4. Multiple interventions are more useful than single-issue interventions.
5. A "problem-focused" approach may work for one issue, but a positive youth development approach can work for many issues at the same time. Problem-focused approaches are more productive within a positive youth development framework.

Key messages

Children enter school more equal than when they leave.

Why? We do not have enough evidence on adolescent developmental trajectories to know why, possibly related to the fact that Canada does not have a national youth health research agenda.

TARGET: research institutes, public/media, policy-makers at every level: from the local school board up to national decision-makers, with the message that youth enter school more equal than when they leave, local and provincial school districts, provincial and national education associations

Conclusion: From Research to Policy: Improving the Health of Canada's Youth

Over two days, researchers, policy-makers, and experts in knowledge transfer and uptake shared ideas, experiences, and information on the current "state of the evidence" on youth health in Canada, and how to translate that evidence into policy initiatives that could make a difference to Canada's youth. The workshop was a chance for youth health researchers and stakeholders from across the country to meet, exchange ideas and information, and consider the policy implications of their work. It was clear that participants appreciated the chance to learn and benefit from their colleagues' knowledge.

The workshop included an opportunity for CPHI-funded researchers to present research findings both to other researchers and to research users: policy-makers and policy-influencers. Interesting discussions on the workings of government and the nature of policy-making were followed by exercises in which researchers were asked to apply what they had learned in order to develop policy implications of their own work. In breakout groups, workshop participants successfully began to identify the target audiences, craft key messages from research findings, and discuss dissemination strategies.

Near the outset of the workshop, Institute On Governance Director Claire Marshall commented that the researchers in the room seemed to be speaking a different language than that of policy-makers. By the end of the two days, meeting facilitator Lillian Bayne noted that it appeared that the two groups had gained a better understanding of each other's vernacular. In that respect and others, the workshop provided an important first step to bridging the gap between the research and policy worlds.

Continuing to bridge that gap is a priority for the Canadian Population Health Initiative. The work of CPHI is inherently collaborative and inter-sectoral, reflecting the complex matrix of interests in and influences on the determinants of health. CPHI is committed to building and strengthening relationships—with researchers, research funders, and other research organizations, and with policy- and decision-makers, opinion leaders, and non-governmental organizations that influence the policy process. One of CPHI's key activities is establishing collaborative strategies and networks to bring a focus to understanding the determinants of health. Under this activity, CPHI strives to further expand research networks, such as CAARRN, and foster relationships between researchers and decision-makers. CPHI is involved in ongoing activities related to knowledge brokering and knowledge transfer, including hosting workshops, sponsoring conference sessions, and working with the media to disseminate new findings. CPHI also provides information through its various reports, including its flagship report, *Improving the Health of Canadians*, and its quarterly e-newsletter, *Health of the Nation.*

Appendix A: List of Participants

CPHI/CAARRN Workshop:
Improving the Health of Canada's Youth: From Research to Policy

February 19-20, 2004 • Marriott Bloor Yorkville, Toronto, Ontario

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Appendix B: Workshop Agenda

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CPHI/CAARRN Workshop:
Improving the Health of Canada's Youth: From Research to Policy

February 19-20, 2004 • Marriott Bloor Yorkville, Toronto, Ontario

Objectives

1. Improve understanding of the policy development process and the importance of research in that process;
2. Develop researcher capacity to develop policy implications from research work;
3. Facilitate the development of a pan-Canadian research network investigating aspects of youth health;
4. Promote linkages and exchange between CPHI-funded researchers in this area.

February 19, 2004—Marriott Bloor Yorkville

8:45 **Continental Breakfast Buffet**

9:00 **Welcome**

…from CPHI/CIHI,
Jennifer Zelmer
…from CAARRN ,
Will Boyce

9:15 **Vulnerable Teens:** What we can learn from longitudinal studies of adolescents' outcomes – Part I

1. Intro to the NLSCY and growth analysis
2. The effects of teenage motherhood on their adolescent children's outcomes
3. Trajectories of the prevalence of smoking in Canada

Doug Willms, Susan Dahinten, Cara Fedick, and Brad Corbett,
CRISP, University of New Brunswick

10:45 **Break**

11:00 **Vulnerable Teens:** What we can learn from longitudinal studies of adolescents' outcomes—Part II

1. Sex differences in adolescents' self esteem
2. Growth trajectories in children and youth BMI – problems in the definition of childhood obesity and overweight
3. Summary: What we have learned from the first set of growth studies on adolescent outcomes

Doug Willms, Susan Dahinten, Cara Fedick and Brad Corbett
CRISP, University of New Brunswick

12:30 **Buffet Lunch**

Lunchtime address:
Youth at Risk in Canada

Irving Rootman and Gord Miller,
University of Victoria

13:30 **CAARRN Research Presentation**

Investigators will present findings on the various aspects of youth health, including

- Canadian Youth in the World-An Introdution to the HBSC Survey,

  Will Boyce

- Bully and Victimization: A Cross Cultural Perspective,

  Wendy Craig

- Risk Behaviour and Injury Among Young People,

  Will Pickett

- Physical inactivity and Obesity in Canadian Adolescents: Lessons Learned from the 2001/02 HBSC,

  Ian Janssen

- Adolescents With Physical Disabilities: Risk and Strengths in Lifestyle, Health, and Social Relationships

  Ilze Kalnins

15:30 **Break**

16:00 **Session 1:** From Bright Idea to Reality—An Introduction to Policy

This session will examine the following questions: What is policy? How does it happen? It will introduce the role of research into the process of evidence-based decision-making and show whyit is important. Questions and answers will follow.

Claire Marshall, Institute On Governance

17:30 **Adjournment**

18:15 **Reception and Dinner**

February 20, 2004—Marriott Bloor Yorkville

8:00 **Continental Breakfast Buffet**

8:45 **Session 2:** Identifying Youth and Health Policy Issues

PART A: The first part of this session will be a reflection on session 1 from the perspective of a former decision-maker from the British Columbia provincial government.

Les Foster, Ministry of Children and Family Development, BC

PART B: This part of the session is intended to provide researchers with the tools to identify policy implications of their research. The session leaders will help researchers to determine how the key findings of their research might impact decision-makers at a variety of levels as well as NGOs.

Elizabeth Gyorfi-Dyke and Matt Sanger, CPHI

10:00 **Break**

10:30 **Session 3:** Creating Policy Implications—Workshop

In this session researchers will implement what they learned in Session 2. Using the fact sheets, developed prior to the workshop, researchers will work in groups with table facilitators to develop policy implications for selected topics.

Lillian Bayne, Elizabeth Gyorfi-Dyke, Matt Sanger, Lorna Malone, Les Foster

12:00 **Lunch**

13:00 **Session 4:** Workshop Results—Reporting Back

Workshop participants will have a chance to share their experiences in developing policy implications as well as the policy implications themselves with the full group.

Lillian Bayne, Facilitator

14:00 **Break**

14:15 **Session 5:** Engaging Decision-Makers

The final session will provide tips on linking with decision-makers. It will address how to identify relevant decision-makers, how and when to involve them in the research process and effective methods of knowledge transfer and exchange.

Réjean Landry, Université Laval

15:15 **Discussion:** Maintaining a pan-Canadian research network on youth and health

Lillian Bayne, Facilitator

16:00 **Wrap-up:** Take-home messages and workshop evaluation

Lillian Bayne, Facilitator

Appendix C: Summary of Research Presentations

Vulnerable Teens: What We Can Learn From Longitudinal Studies of Adolescents' Outcomes

Doug Willms, Canadian Research Institute on Social Policy (CRISP), University of New Brunswick

Dr. Doug Willms introduced the CRISP team and discussed the team's work on vulnerable teens. This research project uses data from the National Longitudinal Survey on Children and Youth (NLSCY) to examine questions related to five key health problems among Canadian adolescents: poor mental health, overweight and obesity, unsafe sex, alcohol and drug use, and smoking. It looks at the prevalence of each and identifies the determinants of these problems at family, peer-group, school, and community levels. The project, noted Willms, had its antecedents in an HRDC-funded research project on vulnerable children.

The researchers hope to discern when youth are most vulnerable to developing these problems (becoming obese, developing poor mental health, participating in risky behaviours, etc.). Researchers will ask questions about, for example, the effects of life events (for example, death and divorce) and interventions on health outcomes, and whether rates and patterns of growth differ according to gender, socio-economic status (SES), cultural background, etc. Using geographic information systems (GIS) and statistical techniques, the researchers will be able to identify where vulnerable teens reside and describe the variation in teen vulnerability among communities and provinces.

Willms briefly situated the team's work in the context of population health and health promotion. He noted that "there often seems to be disjuncture between" the two. While both are concerned with reducing inequalities in health, health promotion tends to come from a "bottom-up," participatory standpoint, while population health's key elements involved accurate measurements and scientifically rigorous studies.

"Getting the two camps together is the cusp of research to policy," said Willms. The vulnerable teens project will focus on bridging the gap between population health and health promotion by "trying to embed some of the messages we've learned, especially in schools."

Willms discussed the key methodological tools underlying the study: socio-economic gradients and the use of multi-level modelling and trajectories.

Socio-economic gradients depict the relationship between a social outcome and SES. A steep gradient would indicate wider disparity in outcomes as SES changes. Vulnerability, Willms noted, cuts across all SES levels: while low SES is related to vulnerability, it is not the determining factor. Knowledge about socio-economic gradients can provide fodder for various kinds of policy reforms:

- Universal reforms aim to improve outcomes uniformly for all adolescents.
- Performance reforms aim to improve outcomes for youth at lower levels (for example, such reforms could target poor youth and families).
- Compensatory reforms aim to level disparities in resources to improve outcomes (for example, transfer payments give resources to poor youth and families).
- Inclusive reforms aim to prevent youth from being segregated into various kinds of socio-economic/cultural groups that may have different outcomes.

CRISP is focusing on both "raising and levelling the bar": improving outcomes as a whole and reducing disparity between groups of adolescents.

Gradients and longitudinal data allow for multi-level modelling: researchers can compare data within and between countries, provinces, cities, schools, and even different ages within schools. Further, because the NLSCY measures the same children and youth at different points in time, it allows researchers to measure and compare outcomes over time and identify trajectories: when do differences in outcomes first become apparent? Do differences become more or less pronounced over time? When do differences begin to level off, if at all? Answers to these questions are important for policy-makers, noted Willms. For example, it seems that children's reading skills seem to diverge at about age eight, when some children fail to make the transition from "learning to read" to "reading to learn." Targeted interventions before that failed transition could improve literacy and general outcomes.

The Effects of Adolescent Motherhood on Their Adolescent Children's Outcomes

Susan Dahinten, University of British Columbia

Adolescent childbearing is strongly correlated with poor child outcomes. When compared with children of older mothers, children of adolescent mothers exhibit few differences during infancy. Differences often emerge, however, by the time of school entry and may become more pronounced during adolescence.

With **Drs. Doug Willms** and **Jennifer Shapka**, **Dr. Susan Dahinten** is studying the behavioural and academic trajectories of youth as a function of maternal age at childbearing. The team's goal is to determine whether differences exist after accounting for family socio-economic status (SES), maternal depression, and parenting behaviours.

This project was sparked, in part, by Dahinten and Willms' earlier analysis of results from the 1994–1995 National Longitudinal Study on Children and Youth (NLSCY). These results showed, among other things, that children of older adolescent mothers (aged 18 to 19) had worse outcomes than children of younger adolescent mothers (aged 15 to 17).

Using data from the NLSCY, the researchers studied the effects of maternal age on several outcome measures for adolescents (anxiety-emotional disorder, conduct disorder, indirect aggression, hyperactivity-inattention, property offences, pro-social behaviour, and math achievement), after accounting for several other family characteristics (maternal education, household income, lone parent status, maternal depression, and parenting behaviours).

The data showed that 18- to 19-year-old mothers scored lowest for nurturing parenting behaviours and highest for rejecting parenting styles, and had the highest rates of depression. At the same time, their children were most at risk for poor developmental outcomes. Although maternal age and SES explained some of the variance, parenting behaviours (nurturing or rejecting) explained a greater proportion of the difference.

Dahinten talked about some of the policy and practice implications—the results of this study suggest the need for targeted interventions (for example, mental health resources, parenting support, support for high-school completion, and continuing education) to supply teen mothers with the resources and skills for fostering healthy childhood development. Moreover, it is not just the youngest teen mothers who need such services, but also the 18- and 19-year-old mothers.

The Self-Esteem of Canadian Youth: A Longitudinal Analysis Using the NLSCY

Cara Fedick, Canadian Research Institute for Social Policy (CRISP), University of New Brunswick

Cara Fedick discussed her work on the self-esteem of Canadian youth using data from the National Longitudinal Survey on Children and Youth (NLSCY). The purpose of this study was to address the identified gaps in the research literature on self-esteem and to better understand the self-esteem of Canadian youth. Specifically, researchers asked:

1. What is the distribution of measured self-esteem for Canadian youth ages 10 to 17, and how does the distribution differ for male and female youth as they mature?
2. How is socio-economic status (SES) related to changes in youth self-esteem during this period?

Self-esteem, Fedick noted from preliminary results, appears to decline for Canadian youth between the ages of 10 and 17. This decline is steeper for females than for males; this steep decline, however, levels out and is reversed around age 16. While SES was not significantly related to changes in self-esteem, high-SES females experience a gentler decline in self-esteem than their average or low-SES counterparts. Factors that contribute to observed sex differences in self-esteem are at their peak by high school, having had their influence prior to this time. Future research is needed to clarify when and why gender-divergent trends in self-esteem occur.

Fedick also commented on the appropriateness of longitudinal data (that is, the NLSCY), rather than cross-sectional data, to study changes in a construct over time. Hierarchical Linear Modeling (HLM), which operates on the premise that behavioural and social data commonly have a "nested" structure (repeated observations within persons; persons within communities; communities within geographical regions), was also an appropriate choice as a tool for data analysis.

By understanding the factors that contribute to low or declining self-esteem, we can develop policies to protect at-risk youth. For example, Fedick noted anecdotally that certain characteristics, such as participation in sports and other extra-curricular activities, might buffer the effects of a drop in self-esteem.

Trajectories of the Prevalence of Smoking in Canada

Bradley A. Corbett, Canadian Research Institute on Social Policy (CRISP), University of New Brunswick

Most Canadian 10-year-olds have never tried a cigarette, and regular smoking for this age group is negligible. By age 16, however, more than 25% of adolescents are smoking monthly, compared to the population average of just over 20%. In addition, the prevalence of smoking increases faster for girls than it does for boys in this age group.

What factors contribute to such a significant change over the course of six years? Which children are most at risk of becoming regular smokers, and why? When do certain risk factors come into play? These are some of the research questions behind **Bradley Corbett's** research project on trajectories of the prevalence of smoking in Canada. Answers to these questions could help shape timely, targeted policy initiatives to both prevent and reduce youth smoking.

Using data from the two oldest cohorts (ages 10 to 17) of the National Longitudinal Survey on Children and Youth (NLSCY), Corbett has mapped a multi-level growth model for adolescent smoking behaviour that incorporates a broad range of potential risk factors, including age, gender, linguistic background (Anglophone or Francophone), whether the person most knowledgeable (PMK) about the child smokes, whether the PMK's partner smokes, peer smoking, family socio-economic status, whether the child has repeated a grade, academic pressure, and the disciplinary climate the child inhabits.

The longitudinal nature of the data, explained Corbett, is ideal for this type of study in that it allows researchers to look at the same groups of adolescents over time. With longitudinal data, researchers can measure factors such as when the smoking behaviour of peers becomes a more important influence than that of parents on adolescents' smoking behaviour.

Corbett has fashioned complex mathematical formulae that measure the relative effects of his variables over time. Age is the major variable in becoming a smoker: the odds of taking up cigarettes increase by 11% each month.

The research and its preliminary results, according to Corbett, raise several compelling questions for researchers and policy-makers: Do kids who smoke have different social norms than other kids? Can we go back to toddlerhood to assess predictors for smoking? What is the probability that in any given time and cycle someone will be smoking? What is the probability that they will smoke as they grow older? Does the influence of the predictors diminish or increase over time?

Overview of Canadian Adolescents at Risk Research Network (CAARRN) Program

William Boyce, Canadian Adolescents at Risk Research Network, Queen's University

Dr. Will Boyce talked about adolescence as a time of tremendous transition; the dynamics of the physical, psychological, social and vocational changes experienced by this age group are complex. He outlined the goals of this research program: to better understand the complex interrelationships of influences that affect the health status and daily lives of adolescents, and to facilitate policy development in these areas.

Dr. Boyce also outlined how this research would be conducted. He explained that the Canadian Adolescents at Risk Research Network (CAARRN) program of research and policy support will use the Health Behaviour in School-aged Children (HBSC) survey as a core database to provide evidence on key issues in adolescent health. The team will examine the evidence at both the individual and community level. Other Canadian databases will be used to supplement the HBSC survey in order to provide both in-depth and longitudinal data. The investigators will look at adolescent injuries, bullying and victimization, substance abuse, sexual health, chronic conditions and disability, the school environment and local social capital.

Boyce noted that there has been a lack of policy-relevant Canadian data on child health policy for adolescents. The work of this group will provide those data and will develop a conceptual framework of adolescent development that encompasses the ever-changing nature of this age group. The knowledge developed through the CAARRN program will tell us which preventive interventions will be most effective for adolescents and when they should be put in place.

Bullying and Victimization: A Cross-Cultural Perspective

Wendy Craig, Canadian Adolescents at Risk Research Network (CAARRN), Queen's University

Using data from the Health Behaviour in School-aged Children survey (HBSC), **Dr. Wendy Craig** is examining forms of aggression in adolescents' friendships and dating relationships. The goal of her work is to examine contextual factors such as socio-economic status, family relationships, peer culture, and risk behaviour that may explain different prevalence rates in bullying. Since schools vary widely on these, a second goal is to consider whether factors such as school climate, school size, academic pressure, disciplinary climate, parental involvement in school, and teacher supportiveness explain school differences in bullying and victimization. Finally, the research team is examining the unique contribution of individual factors such as personal health and emotional, psychological, and social functioning. **Danielle Shelley,** a graduate psychology student at Queen's, presented on behalf of Dr. Craig.

Why is bullying an issue?

Lessons learned in bullying can develop into other peer relationship problems. The use of power and aggression early in life can form a basis for sexual harassment, dating aggression, workplace harassment, marital aggression, and child and elder abuse. Bullying is costly, both in terms of the economic costs associated with youth involvement in multiple systems (mental health, juvenile justice, special education, social services) and the social costs associated with lower self-esteem, criminality, depression, anxiety, and, in severe cases, suicide.

Results

- Approximately 12% of Canadian children report being victimized at least twice a term; 11 to 12% of children reported bullying others; and about 3 to 4% report both bullying and being bullied (bully-victims).
- About 20% of Canadian children sometimes or never feel safe at school.
- Canadian rates for bullying and being bullied are consistently in the middle of the 25 countries surveyed.
- Across all countries, bullies, victims, and bully-victims had consistently higher levels of health problems, poorer emotional adjustment, and poorer school adjustment than youth not involved with bullying.
- Victims and bully-victims consistently reported more problems with peers, and bullies and bully-victims consistently reported more alcohol use than youth not involved with bullying.
- Children who both bully others and are victimized are at the highest risk for problems.

Implications

- Separate interventions may need to target bullies, victims, and bully-victims.
- Interventions must be systemic and address the psychosocial and relationship problems associated with bullying.

In Canada, the Canadian Initiative for Prevention of Bullying is a new national strategy to address bullying and victimization. In partnership with all levels of government, national organizations that work with children and youth, and youth themselves, the initiative will use a four-part platform to address the issues of bullying:

- Education and awareness;
- Assessment;
- Empirically based intervention; and
- Policy development and implementation.

Risk Behaviour and Injury Among Young People

Will Pickett, Canadian Adolescents at Risk Research Network (CAARRN), Queen's University

Injury and trauma are "an unknown epidemic"—the leading cause by far of death for children and youth. Using data from the Health Behaviour in School-aged Children survey (HBSC), **Dr. Will Pickett** and his team are performing in-depth analyses of multiple risk behaviours (MRBs) and their potential association with a variety of different youth injuries, including head and neck injuries, sports injuries, severe injuries, and intentional injuries (caused by fights or abuse, for example). They are determining how groups of risk behaviours cluster together and then lead to the occurrence of different types of injury. They also examine the role of protective settings in ameliorating injury.

Dr. Pickett left the workshop with several key messages:

1. MRBs—such as the use of more or less "available" drugs, smoking, truancy, alcohol consumption, antisocial behaviour, or failure to take safety precautions—are very common among Canadian youth. Approximately 61% of survey participants had engaged in at least one risk behaviour; 41% had engaged in two or more risk behaviours; and 7% had engaged in at least five, with no significant difference between males and females.
2. Engaging in MRBs has many health consequences and is associated with acute and chronic injury.
3. Multiple risk taking has a profound influence on health.
4. As youth engage in more risky behaviours, their chance of being injured goes up; those who engaged in four or five risky behaviours were almost 20 times more likely to experience violence than those who did not engage in any.

5. Some supportive settings (home, school) offer some protection against youth engaging in and/or being injured by MRBs. These settings, however, do not necessarily protect risk-taking youth from injury and violence. A supportive peer group is less protective than supportive home or school environments.

Pickett's research into MRB raises some interesting policy implications. For example, Pickett explains, it may make more sense to create policy initiatives that target behaviours collectively, rather than taking on individual behaviours (a strategy more common in public health). The research could be used to develop a tool to identify youth at risk for trauma and injury. Finally, although youth who engage in four or five risky behaviours make up only a small percentage of the population, they are at high risk, and may warrant more targeted policy initiatives.

Participants noted the importance of terminology, citing the need to differentiate between healthy or considered risk taking versus engaging in (unhealthy) risky activities.

Physical Inactivity and Obesity in Canadian Adolescents: Lessons Learned From the 2001–2002 HBSC

Ian Janssen, Canadian Adolescents at Risk Research Network (CAARRN), Queen's University

Dr. Ian Janssen discussed the findings from his research on physical inactivity and obesity in Canadian adolescents. These studies examined the magnitude of the problem; the relation between physical inactivity, dietary patterns, and obesity; and the influence of physical inactivity and obesity on health outcomes. Janssen presented four key messages at the workshop:

1. Physical inactivity and obesity are highly prevalent in Canadian youth.

- Approximately 80% do not meet Health Canada guidelines of 90 minutes of activity each day.
- Approximately 25% manage to watch four or more hours of television a day.
- Approximately 15% are overweight (pre-obese), while 4% are obese. More boys than girls are pre-obese or obese, though prevalence does not vary much according to age.
- Canada ranks fifth highest among Health Behaviour in School Aged Children (HBSC) study countries in the prevalence of obesity and overweight.

2. Physical inactivity and television are strongly associated with obesity.

In the majority of HBSC countries, the more active the adolescents, the less likely they were to be overweight or obese. Those who watched the most television were also more likely to be overweight or obese than those who watched little or no television. Interestingly, the youth who ate candy (including chocolate but not soft drinks) most frequently were the least likely to be overweight or obese.

3. Physical inactivity and obesity are independently related to health and psychosocial outcomes.

   Adolescents with the fewest somatic and psychological health complaints were those of normal body weight and were the most physically active. Obese youth are about two times more likely to be victims of bullying, and overweight and obese boys are also more likely to be bullies.

4. These epidemics will continue to grow unless effective health practices and policies are developed and employed.

   Janssen advocated starting in schools: one study in Quebec showed that having one hour a day of physical education not only started kids moving, but also improved academic reports across the province. Workshop participants discussed extra-curricular initiatives, such as reducing the hours of television youth watch, involving parents to a greater degree, and researching social determinants that prevent inactivity.

Adolescents With Physical Disabilities: Risk and Strength in Lifestyle, Health, and Social Relationships

Ilze Kalnins, Canadian Adolescents at Risk Research Network (CAARRN), University of Toronto

Adolescents with physical disabilities constitute a small, often hidden, and diverse group of teens, with health concerns that differ from those of "typical" teens. **Drs. Ilze Kalnins** at the University of Toronto and **Catherine Steele** at Bloorview MacMillan Children's Centre are identifying similarities and differences in health, lifestyle health behaviour, and social relationship profiles between adolescents who have chronic conditions and physical disabilities and those who do not. They are particularly interested in:

1. What factors explain these adolescents' perceptions of their own health as represented by self-reported health status and symptoms of poor health?
2. What factors explain these adolescents' engagement/lack of engagement in key lifestyle behaviours?
3. What factors explain these adolescents' engagement with peers?
4. What factors explain both positive and negative school experiences for adolescents with chronic health conditions?

The goal of this research group, said Dr. Kalnins, is to identify strategies for preventing the development of health problems secondary to the physical disability and to develop the best possible programs/services for the transition into adulthood.

Researchers found that teens with a physical disability had a significantly lower likelihood of engaging in some health risk behaviours (smoking, drinking, drug use, and eating sweets), but a significantly higher likelihood of not engaging in enough physical activity, not eating fresh produce regularly, and eating foods high in fats. The latter set of behaviours, Dr. Kalnins noted, was often related to the physical disability: fatty foods, like french fries, for example, are softer and easier to pick up, chew, and swallow than fresh fruits or vegetables.

Together with their colleague **Dr. Beverly Antle** at the Hospital for Sick Children, the researchers also conducted a qualitative family study. The study involved in-depth interviews with 15 families about how parents view health promotion and what health promotion strategies they use for their adolescents with a physical disabilities. Five significant themes emerged, showing that parents

- emphasized regular routines,
- worried about and attempted to support a productive future,
- encouraged the development of a social life and friendships,
- made extraordinary effort to make sure their adolescent had a well-rounded life, and
- balanced their adolescent's independence with a need to conserve his or her energy.

The researchers concluded that parents' perceptions about health promotion focus on psychosocial issues rather than risk behaviours.

The researchers recommended that one policy question that must be considered is that health promotion interventions may need a different foci and timing for adolescents with physical disabilities. They also recommended that policy initiatives must appreciate parents' priorities and negotiate "complementary health promotion" goals.

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This publication is part of CPHI's ongoing inquiry into the patterns of health across this country. Consistent with our broader findings, it reflects the extent to which the health of Canadians is socially determined, interconnected, complex and changing. CPHI is committed to deepening our understanding of these patterns.

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