Policy Research Secretariat | Secrétariat de la recherche sur les politiques

POLICY RESEARCH INITIATIVE

HORIZONS

Volume 2 Number 3

September 1999

EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

In this issue

Welcome!

This issue's organizing theme, population health, invariably fascinates policy developers. **It offers innovative measurements of individual and societal well-being, and the prospect of precise policy interventions that pre-empt the loss of much human potential and happiness** – what we euphemistically refer to as "quality of life". For those who are newcomers to this policy area, the suggestion implicit in much of the research is that just as a favorable micro-economic environment is essential to firm performance, a favorable micro-social environment is essential to drawing out the human potential. The challenge is to define and build it.

Work in this area is, for the most part, at the trail-blazing, primary research stage. We invite you to sample its intriguing possibilities.

Policy Research Secretariat

Supporting Our Children

"Children and youth need support - from parents, from child care providers, from teachers, peers, coaches and instructors, and from their communities - throughout their youth. While the prevention dollar clearly buys more during the early years before windows of opportunity have closed and the formation and sculpting of the brain are complete, **no single prevention program, or no series of prevention programs limited to any single age and stage can, by themselves, counteract the combined effects of adverse genetics and long-term exposure to corrosive environments."**

The Sparrow Lake Alliance. *Proposals Regarding the National Children's Agenda*. The Centre for Health Promotion of the University of Toronto, and Canadians Against Child Poverty. 1999, p. 15.

Policy Reflections

"We are permanent custodians of permanent problems."

Arthur Kroeger, Canadian civil servant

The Earlier, the Better

"It is clear that the early years from conception to age six have the most important influence of any time in the life cycle on brain development and subsequent learning, behaviour and health. The effects of early experience, particularly during the first three years, on the wiring and sculpting of the brain's billions of neurons, last a lifetime... The evidence is clear that good early child development programs that involve parents or other primary caregivers of young children can influence how they relate to and care for children in the home and can vastly improve outcomes for children's behaviour, learning and health in later life. The earlier in a child's life these programs begin, the better. These programs can benefit children and families from all socioeconomic groups in society. This period of life is as important for an educated, competent population as any other period. Given its importance, **society must give at least the same amount of attention to this period of development as it does to the school and postsecondary education periods of human development."**

Government of Ontario Reference Group, co-chaired by Margaret Norrie McCain and J. Fraser Mustard. *Early Years Study: Final Report*. April 1999, p. 52. Available online at http://www.childsec.gov.on.ca/newsrel/apr2099.html.

Volume 2 Number 3
September 1999

POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

Executive Brief

A Stitch in Time Saves Nine

Population health — the study of the determinants of a healthy population — is a relatively new area of public policy, but its philosophical antecedents are as old as recorded history. The ingredients for prosperous, happy, and successful societies are an enduring preoccupation of governance from Plato's Republic and Hammurabi's code to the UNDP development index.

In recent times, such research has gained new impetus from the quickening advance of the biological sciences that is reframing our understanding of the human potential. Equally essential are advances in statistical methodologies, particularly greater data linking and availability, and sociology that are creating penetrating portraits of Canadian life at the end of the century. When brought together in a creative, multi-disciplinary way, the results have powerful public policy implications.

Population health research is at once tantalizing and frustrating. It is tantalizing because it is rife with policy insight and meaning, but frustrating in that it remains (as yet) difficult to design specific programs and policies based on current knowledge. If population health were an industrial technology, it would be in its pre-commercial phase with brilliant entrepreneurs, anxious investors, and much talk on the street surrounding it.

A stitch in time saves nine; but where and when to initiate policy interventions remains problematic. The allure of population health research is one of efficacious surgical, indeed better than surgical, precision. As in many policy areas, a challenge for population health researchers is that of bridging the gap between abstract findings and day-to-day living. Developing even more robust data sets of greater texture and depth is necessary if the quantum leap from association to causality is to be made. Ultimately it means identifying ways to influence life choices and improve outcomes so as to promote early childhood development, reduce morbidity, and improve quality of life.

A stitch in time saves nine; but where and when to initiate policy interventions remains problematic. The allure of population health research is one of efficacious surgical, indeed better than surgical, precision.

Tightening the link between research and policy development is an important next step in "commercializing" population health findings. This will require the maintenance of high quality research standards, including cautious and prudent assessments of data quality. Researchers should be commended for their professionalism to date in resisting the temptation to promote conclusions that cannot be supported by the data. In doing so, they are providing an increasingly solid foundation of knowledge as exemplified by the National Population Health Survey, the National Longitudinal Study of Children and Youth, the Canadian Population Health Initiative, and the Canadian Institute for Advanced Research's Population Health Program.

In the short and medium term, this foundation of knowledge needs to be built on creatively by policy developers. The art and craft of public policy, to quote Aaron Wildavsky, "consists of finding a problem about which something can and ought to be done." Population health research is pointing the way to a fundamental re-thinking of many aspects of public policy.

Laura A. Chapman
Executive Director,
Policy Research Secretariat

To learn more about how to tighten the link between population health research and policy development, you may wish to attend "Population Health Perspectives: Making Research Work" from October 5 – 7, 1999 in Winnipeg. See http://policyresearch.gc.ca/pophealth99 for details.

Canadian Connections

The following web sites contain relevant information on population health in Canada. A mega directory of Canadian population health research can be found at (http://policyresearch.gc.ca). Visit the Theme sites section.

Health Canada

http://www.hc-sc.gc.ca/

Health Canada's web site provides information on a variety of aspects related to Canadians' health. For example, Health Promotion and Programs Branch (http://www.hc-sc.gc.ca/hppb/) examines the health of individuals of all age groups (children, adults and seniors). The Health Protection Branch (http://www.hc-sc.gc.ca/hpb/) focuses on strategies to improve and protect the health of Canadians. You can also find information on the Canadian health system (http://www.hc-sc.gc.ca/datapcb/datahesa/hex.htm), women's health (http://www.hc-sc.gc.ca/datapcb/datawhb/engpage.htm), and on the National Health Research and Development Program (NHRDP) (http://www.hc-sc.gc.ca/iacb-dgiac/nhrdp/indexe.html).

Fonds de la recherche en santé du Québec (FRSQ)

http://www.frsq.gouv.qc.ca/

The FRSQ promotes research related to health issues in Quebec. Researchers can get access to a variety of health themes regarding Quebecers' health, such as workplace health, mental health, health services, nutrition, toxicology, gerontology and pollution. Links to other related organizations and to their newsletter entitled, "Recherche en santé", are also included on this site.

InvestinKids

http://www.investinkids.ca

This corporate-sponsored initiative is aimed at providing parents with young children information on how to ensure that their kids can maximize their potential. The emphasis is on outreach and bringing together the Canadian corporate, health care, and research communities. Hats off to this innovative project!

Bookmark

Creating Linkages – Population Health Style

"This description of the different (population health) groups involved in evidence-based decision making – decision makers, research funders, researchers, and knowledge purveyors – emphasizes three things:

a) that getting "the evidence", as represented by health services research, into decision making involves multiple steps and is not only a matter of direct linkage between decision makers and researchers;

b) that each of the steps involves improving relationships and communication across the four groups in the health sector; and

c) that evidence-based decision making is a "virtuous cycle" and any weak link in the chain has the capacity to interrupt the optimal flow of research into decision making."

Canadian Health Services Research Foundation. *Growth Through Innovation: 1998 Final Report*. p. 34.

Cost of Caring

"Women appear to be more affected than men by events occurring to significant others, particularly to their spouse. Stated differently, there is evidence that women are more responsive to the negative experiences of others and this differential responsiveness has significant mental health implications. The cost of caring hypothesis is thus supported by these data. … the (additional) hypothesis that women tend to be more depressed because they are less capable than men of dealing with stressful circumstances is clearly refuted."

Turner, R. Jay and William Avison. "Gender and Depression: Assessing Exposure and Vulnerability to Life Events in a Chronically Strained Population", in David Cobourn, Carl D'Arcy, and George Torrance (eds.), *Health and Canadian Society: Sociological Perspectives*. Toronto: University of Toronto Press, 1998, p. 255.

All web sites cited in this issue of Horizons can be conveniently reached through the Policy Research Iniative web site at http://policyresearch.gc.ca

Volume 2 Number 3
September 1999

POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

Network Nuggets

GLOBAL

Protecting Against Global Currency Fluctuations: Prudent Measures for Developing Countries

"Governments (in developing countries), therefore, are concentrating on getting the right policies in place to attract investment and strengthening the agencies that are capable of enforcing national standards (e.g., labour and environmental policies).

Governments can also help ensure local development benefits by safeguarding against unwanted *macroeconomic volatility* resulting from FDI (foreign direct investment). Particularly in small countries, if total exports increase substantially as a result of the foreign direct investment, then the local currency will tend to appreciate. ... FDI can also cause Balance of Payments problems if dividends and royalty outflows exceed capital inflows. **Hence, governments would be prudent to sharpen their macroeconomic and cost-benefit modeling skills, to better predict and manage the impacts of specific investments."**

Saravanamuttoo, Neil. *Foreign Direct Investment and Poverty Reduction in Developing Countries.* Toronto: TurnCourse Solutions, April 1999, Chapter 4, p. 21.

Human Development

The face of poverty is changing: Some Canadian families face a high risk of being poor

"In 1996, 15.5% of all Canadian families fell below the low income cutoffs (LICOs). Poverty is increasingly concentrated amongst five high risk groups:

- **female-headed lone parent families** (low-income rate of 61%)
- **families headed by a disabled person** (low-income rate of 56%)
- **recent immigrants** (low-income rate of 47% for families and 64% for individuals who arrived after 1989)
- **Aboriginals** (low-income rate of 44% for Aboriginals off reserves; the rates for Aboriginals living on reserves would be much higher, but are unavailable)
- **Senior women living alone** (poverty rate of 53%)"

Sustaining Growth, Human Development, and Social Cohesion in a Global World. Ottawa: Policy Research Initiative, February 1999, Chap. 3, pp.16-17. Available on-line at http://policyresearch.gc.ca

KBES

Info. Tech's Growing Importance

"Over the last two decades, an increased share of industrial investment in Canada has gone towards information technology. The increase has been particularly marked in the service sector where the information technology share rose by 13.5 percentage points between 1971 and 1990… A number of recent studies show that investment in information technology stimulates productivity growth across industries…. The rate of return on IT investment is estimated to be between 27 and 36 percent.

Canada's progress in developing the basic foundations of a knowledge economy is also noted in a recent report by the World Economic Forum. In the Forum's 1997 "Global Competitivenss Report," Canada is ranked first among the G-7 for "technology potential", an index based on a number of information technology and human capital characteristics."

Gera, Surrendra. "The Emerging Global Knowledge-Based Economy", presentation to the *Skills Development in the Knowledge-Based Economy* conference, June 22 –23, 1999.

Growth
New Investment Patterns

"…The outward FDI (foreign direct investment) stock surpassed the inward FDI stock in 1996, **making Canada a net exporter of FDI for the first time in the country's history.** The ratio of Canada's outward to inward FDI stock rose from 75 percent in 1990 to slightly over 103 percent in 1997. … In contrast to the trend observed in inward FDI, Canadian investors are not investing primarily in our FTA partner's market. While the United States is still the dominant venue for Canadian direct investment abroad (CDIA), its importance has dwindled steadily over the past two decades."

"A Report Card on Canada's Trade and Investment Record," *Micro.* Ottawa: Industry Canada, Vol. 5, Spring 1999. Available on-line at http://strategis.ic.gc.ca/sc_ecnmy/mera/engdoc/01.html

Social Cohesion
Fraying Community Bonds

"Investing time, money and energy in their communities helps people to define common goals and shape their own destinies. Because of increased pressures on the middle class, a shift in values toward growing individualism among all Canadians, and marginalization of growing segments of the Canadian population, fewer people are able and willing to invest in social capital. Yet such investments are becoming more important as governments withdraw services."

Growth, Human Development, and Social Cohesion. Draft Interim Report, October 4, 1996, p. 47.

Upcoming Events

DATE	EVENTS
SEPT. 17-18, 1999	***"Canada in the 21st Century: A Time for Vision"*** Hosted by Industry Canada, in partnership with the Centre for the Study of Living Standards, the conference will bring together senior level representatives of government, business, labour, academia, and other interested groups to discuss economic issues and challenges facing Canada as we move into the next century. This event is being organized around a series of forward-looking papers commissioned by Industry Canada. The conference will look at issues such as: global trends; demographic challenges; labour market developments; productivity and living standards; the environment and sustainable development; international trade and foreign investment; and, investment and innovation. Contact Andrew Sharpe at (613) 233-8891 or csls@csls.ca or http://www.csls.ca
OCT. 5-7, 1999	***"Population Health Perspectives: Making Research Work"*** Co-hosted by the Policy Research Secretariat, the Canadian Institute for Health Information, Health Canada, the Manitoba Centre for Health Policy and Evaluation, and Statistics Canada, this conference is devoted to showcasing promising population health research and linking it to policy development. The emphasis of the conference is on using health surveys and administrative data to impact policy development. This event is ideal for researchers, federal or provincial policy developers, regional health managers, community health leaders, other interested health professionals and students. The conference will be convened in Winnipeg, Manitoba. Contact Roger Roberge at (613) 943-8412 or http://policyresearch.gc.ca .
NOV. 25-26, 1999	***"National Policy Research Conference: Analysing the Trends"*** The second national policy research conference in Ottawa will highlight emerging horizontal policy research themes such as globalization, sustainable development, social differentiation, North American integration and information technologies. Research findings from the PRI-Social Sciences and Humanities Research Council Trends project will also be featured. Contact Vasanthi Srinivasan at (613) 992-8161 or http://policyresearch.gc.ca for on-line registration.

Volume 2 Number 3
September 1999

POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

A Look Ahead

Social Inequalities in Health

Why do senior civil servants outlive their subordinates? More generally, why are higher-ranked people (or baboons) healthier? Knowing this would tell us more about the determinants of health and disease — why are some people healthy and others not — and perhaps what to do about them. "…heterogeneity in populations," says Robert Sapolsky, "[is] a wedge for greater understanding." In variety there is information. The trick is to find it.

The underlying strategy is rather simple. Group the members of a population by some characteristic – say gender, location, income or occupation, or colour of hair. Measure their health status in some relatively unambiguous way such as life expectancy. (Do NOT get drawn into a discussion over "What is health?") If there are systematic differences between the groups, then your measure of health status is somehow associated with the partitioning characteristic. And somewhere behind that association is a causal relationship.

The pattern may be complex. A classic puzzle is that females outlive males. But *living* males are on average healthier. Interpretations vary; the data are what they are.

The cluster of partitioning characteristics under the general heading of socio-economic status is drawing increasing attention. Ranking people by income, or education, or occupational prestige, or position in organizational hierarchies, yields a consistent pattern. The higher, the healthier — on average — and the differences are large. This socio-economic gradient can be traced back to the beginning of the century — a persistence that has important implications.

The great advances in medicine over this time have had benefits extending across the whole populations of developed societies. Yet the gradient remains. Apparently it does not result from differential access to health care. Status is primarily reflected in different susceptibility to illness, not in patterns of treatment – in the onset of heart attack, e.g., rather than access to cardiac care.

The United States is an exception; its unique health care system generates socially graded differences in access that do have implications for health. But that is another story.

The principal causes of death have also changed markedly over the century, from infectious to degenerative diseases. But those at the lower end of the social scale continue to die earlier. Similarly, contemporary studies show gradients in mortality for a number of different diseases (not all), suggesting that some more fundamental factor associated with social position influences vulnerability to many different diseases.

Poverty? Certainly material deprivation can do physical and mental harm. But again, the whole income structure has risen dramatically in the last hundred years. If income is the key, it must be relative income that matters. Indeed the fact that the gradient is a gradient, with differences in health status all across the social scale, cannot be explained by the absolute or relative deprivation of "the poor" alone. It is not just "their" problem; the gradient applies to us all.

This understanding has evolved from research over the last quarter-century. It raises two fundamental questions. First, what is it about socio-economic status that influences health? And second, how does it "get inside the body" to produce the biological effects of disease and death?

The critical biological process appears to be the stress response, or the "fight-or-flight" syndrome. Neural impressions of a perceived threat trigger a whole cascade of physiological processes directing maximum energy and attention toward dealing with the threat, and away from the "optimistic" functions of growth, repair, and

Continued on page 7

Continued from page 6

reproduction. This response is highly adaptive, especially in tiger country.

But prolonged or chronic "threat perception" — a continuing sense of vulnerability — can result in a permanent state of low level stress response. You cannot turn it off. And this can lead to a number of forms of physiological damage — reduced immune function, e.g., and increased atherosclerosis — that can emerge as many different diseases.

The obverse of vulnerability is control, the ability to cope with present or potential demands or threats. Studies of working environments have explored the balance between the demands of different jobs, and the worker's discretion over responses. It appears that control of one's work environment, whatever its demands, is significantly related to health. And control is of course closely correlated with hierarchical position. More generally, income, education, and social support all correlate with perceived coping capacity or vulnerability. What resources can one call on in the face of a problem?

But the story does not end there. Both physiological and behavioural responses to threat are "learned" — they can be biologically embedded by previous experience. And this process is most active very early in life, when the brain and neural system are most plastic — think of learning language. Experiences in those earliest years "sculpt" and train the neural system in ways that profoundly influence whether the responses to later stresses will be adaptive or damaging. For the optimal watering of children, variety and security are key.

The great advances in medicine over this time have had benefits extending across the whole populations of developed societies. Yet the gradient remains. Apparently it does not result from differential access to health care. Status is primarily reflected in different susceptibility to illness, not in patterns of treatment — in the onset of heart attack, e.g., rather than access to cardiac care.

And the all-powerful gene? Genetic make-up also appears to affect vulnerability. Some people are born "hyper-reactive" to stress; with a predisposition to characteristic behavioural and physiological responses throughout life. But nurturing patterns, essentially very good parenting, in early life can buffer this genetic predisposition and convert it into an advantage, rather than a tendency to "go off the deep end" in stressful situations.

Returning to the gradient, social position is correlated both with exposure to stress (risk, hassle) and with coping resources — money, friends, knowledge, but also self-confidence and adaptive physiological and behavioural responses. The experiences that embed these coping styles, especially those in early life, are also socially graded.

What follows? Both stress exposures and coping resources appear to be more evenly distributed in relatively egalitarian societies, where overall health status is higher. There are also implications for workplace organization. But particular attention must be paid to the circumstances of early childhood — a message that does seem to be getting through in Canada. As the twig is bent, so grows the tree.

Robert G. Evans
Professor (Economics) and Manulife/Syd Jackson Fellow, Canadian Institute for Advanced Research

Volume 2 Number 3
September 1999

POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

Network Columnist

How Healthy are Canadians?

Determining the health of Canadians may seem straightforward but it continues to confound health policy researchers and analysts. Even today, a "healthy" individual is still only viewed in the most general sense as being in very good, good, fair, or poor health. Such generalizations are inadequate to the task of conducting rigorous assessments of our health and social programs. The capacity to report on an individual's health, in a standard and quantifiable manner, would provide policy developers with an ability to both monitor a population's health and to evaluate health status for a diverse range of health interventions.

Although many health indicators exist, most tend to focus on the inputs to health. The number and type of surgical procedures, the cost of the health-care system, the number of health professionals, the incidence and prevalence of disease, and risk factor profiles are all examples of input indicators that can serve only as indirect indicators of Canadian's health. In focusing on inputs, such as the number of procedures, this approach insinuates that the larger the number of interventions the better the health outcomes. Instead, the emphasis should be on measuring the "health" or quality of life, not the "sickness", of Canadians. This would better capture the state of Canadians' health and the impact of health interventions writ large.

Traditionally, life expectancy (LE) has been used as a proxy for the health of a population. An absolute measure, mortality data is routinely collected, captured for analysis, and is readily available to researchers. In addition, LE data is available historically and is quite comparable internationally thus making it suitable for monitoring and limited evaluation purposes. However, LE by itself fails to take any account of the morbidity or health status of a population. Increasingly, advances in the health care field are reflected not only in the extension of life, but also in the improvements of health-related quality of life. With significant resources being directed to this aspect of health care, policy makers require an indicator which measures the overall morbidity, or the burden of ill health, of a population, yet still retains the comparability of mortality outcomes.

One technique being employed in Canada and internationally is referred to as Health-Adjusted Life Expectancy (HALE). HALEs combine life expectancy and a measure of health status to generate a remaining life-expectancy figure that has factored in health status. Health status measurement indicators commonly record an individual's health status on a scale that ranges from 0 (dead) to 1.0 (fully healthy) for a variety of health conditions (hearing, sight, mental health, mobility). More sophisticated measures incorporate population preferences or weights to order/classify an individual's health status within a population, thereby providing researchers with a meaningful scale to conduct economic evaluations. Several "generic" or population level versions of health status indicators currently exist (McMaster Health Utility Index, EQ-5D, SF-36, WHOQOL (World Health Organization Quality of Life measure)) and have been used both in monitoring the health of the populations and in economic evaluations. In Canada, the McMaster Health Utility Index has been included on

In focusing on inputs, such as the number of procedures, this approach insinuates that the larger the number of interventions the better the health outcomes. Instead, the emphasis should be on measuring the "health" or quality of life, not the "sickness", of Canadians. This would better capture the state of Canadians' health and the impact of health interventions writ large.

Continued on page 9

Continued from page 8

TABLE 1:
Life Expectancy (LE) and Health-Adjusted Life Expectancy (HALE) at age 30 by selected socio-economic indicators (1991) for the Canadian population.[2]

	MALES				FEMALES			
	LE (Years)	HALE (Years)	LE – HALE (Years)	(%)	LE (Years)	HALE (Years)	LE - HALE (Years)	(%)
Overall	46.2	40.6	5.6	12.1%	51.9	44.3	7.6	14.6%
Income Quartiles:								
Poorest-1	43.3	36.8	6.5	15.0%	51.2	42.5	8.7	17.0%
2	46.5	40.6	5.9	12.7%	51.4	43.6	7.9	15.4%
3	46.5	41.1	5.3	11.4%	52.9	45.9	7.0	13.2%
Richest-4	48.3	43.4	4.9	10.1%	53.4	46.2	7.2	13.5%
Education Quartile:								
Lowest-1	44.5	37.5	7.0	15.7%	51.0	41.0	10.0	19.6%
2	45.2	39.5	5.7	12.6%	52.0	44.5	7.5	14.4%
3	47.6	41.8	5.8	12.2%	52.2	45.0	7.2	13.8%
Highest-4	47.7	42.8	4.9	10.3%	53.2	46.2	7.0	13.2%
Marital Status:								
Single	43.3	37.3	6.0	13.9%	51.1	43.0	8.2	16.0%
Widowed	44.7	39.4	5.3	11.9%	51.3	43.3	7.9	15.4%
Divorced	46.0	40.0	6.0	13.0%	51.5	43.3	8.2	15.9%
Married	46.6	40.9	5.7	12.2%	52.1	44.2	7.8	15.0%

Statistics Canada's National Population Health Survey since 1994.

Table 1 demonstrates the potential usefulness of HALEs. Taking life expectancy by income for males at age 30 as an example, those in the poorest income quartiles can expect to live on average an additional 43.3 years. Adjusted for health status, these same individuals can expect 36.8 equivalent years of "full" health, or the equivalent of 6.5 years in ill health.[1] Looked at another way, 15% of remaining life expectancy for this group will be in ill health. By contrast, those individuals in the richest income quartile can expect to live 48.3 years longer, or 5 years longer than individuals in the poorest quartile. This disparity extends to health, with richer individuals experiencing only 4.9 equivalent years or 10.1% of their remaining life expectancy in ill health. The "health gap" between higher and lower income males is 6.6 years. When compared with poverty lines and income inequality measures, these striking disparities remain little known outside of the health policy research community.

By calculating measures such as HALEs or health status indicators on a regular basis, policy makers have access to a tool that can conceivably answer the question: How healthy are Canadians? As a monitoring tool, it can identify vulnerable sub-populations such as smokers, the disabled, or specific low income groups. Further, a HALE type measure can evaluate health interventions on these same sub-populations providing clinicians and health officials with objective measures of the effectiveness of programs such as smoking cessation, health care practices, or a school breakfast/lunch program.

Health outcome measures are an emerging tool in assessing the health of populations. This includes administrative data sets, longitudinal surveys containing reliable health outcome measures, detailed and periodic assessments of vulnerable sub-populations, and cross-sectoral, multi-disciplinary cooperation. HALEs help shift the analytical balance from input to output measures. While these efforts are still at the early stages, the shift is important to Canada's ongoing efforts to improve the health of all.

Roger Roberge
Senior Associate,
Policy Research Secretariat

1 "Equivalent" years refers to the sum of ill health experienced over an individuals remaining life at varying degrees of severity.
2 Nault, F, Roberge, R, Berthelot, J-M, Cahiers Québécois de Démographie, Fall 96.

Volume 2 Number 3
September 1999

POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

Eyewitness

Towards a Family-friendly Canada

The Queen's University International Institute on Social Policy annual conference, "Canada in International Perspective '99", is a remarkable 5 day examination of social policy with a Canadian accent and an international perspective. Day 4 of the conference (August 26) was dedicated to children and young families. It featured presentations from academics and practitioners, who employed a variety of disciplinary tools, ranging from psychology and sociology to economics and public administration.

Discussion also contained a substantial element of hardheaded political calculation. Tim Smeeding (Maxwell School) addressed the thorny taxpayers' NIMBW (Not In My Back Wallet) issue of "why should I pay to raise your kids?" Smeeding's answer mixes an appeal to equality of opportunity and the need to help overburdened families. He also makes the observation that children are public goods in that (properly raised) most will grow up to be more or less responsible, tax paying adults. If nothing else, there is a clear state interest in ensuring its own perpetuation.

Looking at the Canadian scene, Judith Maxwell (Canadian Policy Research Networks) noted that a historic "window of opportunity" existed to build "one of the last big pieces of social infrastructure that is missing" in Canada. Others agreed, though there was polite disagreement as to appropriate policy instruments. Katherine Scott (Canadian Centre for Social Development) suggested that "targeting bad; universalism good" be the operative mantra for children's policy, while "choice", tailoring, and the need for a portfolio of programs featured prominently in other presentations. Some viewed Quebec's positive approach to children with strong approval.

The intellectual basis of much of today's political impetus for re-thinking child and young families policy rests on a growing foundation of studies on early childhood development. Ray Peters (Queen's University) cautioned against extrapolating from dated demonstration (or small scale) studies to large scale implementation. For those interested in comprehensive analyses of "what we know and don't know about young children", he recommended studies from the Rand Corporation www.rand.org and the Packard Foundation www.futureofchildren.org He also implored policy-makers to build long term funding into the evaluation of programs, as was done in Ontario's "Better Beginnings, Better Futures" program, whose initial results are expected in the fall.

Offord scorned the "drug'em down, Ritalin solution" — where, if all you have is a prescription pad, every fluctuation from the norm is a clinical condition. Instead, his emphasis was on raising social cohesion and civic mindedness.

Dan Offord (McMaster University) made a powerful presentation on early intervention and children's health. While the incidence of dysfunctional and struggling kids is higher among the poor, these children exist in all income groupings. This "casualty class" is increasing with growing numbers of Canadian children exhibiting behavioural, emotional, and learning difficulties. Offord scorned the "drug'em down, Ritalin solution" — where, if all you have is a prescription pad, every fluctuation from the norm is a clinical condition. Instead, his emphasis was on raising social cohesion and civic mindedness. For him, a healthy community for kids and young families is one where all children are able to participate in sports and arts, where parents take responsibility for others' children, and where work places are family-friendly. It was evident from his presentation that more is needed to improve community life for children and young families in Canada.

Research to Action: *The Role of Health Services Research*

Over 2,000 clinicians, nurses, administrators, economists, policy-makers, and health service researchers gathered in Chicago June 27-29 at the 16th annual meeting of the American Health Services Research Association (AHSR) to discuss the role of health services research in the development of health policy. The AHSR conference is considered the premiere venue in the U.S. for researchers, the public, and policy makers to exchange information and set the agenda for future research directions.

The discourse at the AHSR meetings has evolved significantly over the past 2 decades. In the 1980s, the health care debate focused on providing a minimal level of health care coverage to all Americans (currently 45 million individuals have no coverage). As costs began to climb in the late 1980s and early 1990s, the debate shifted to cost containment in the form of health management organizations (HMOs). With a robust economy, the debate has now come full circle, and policy makers have again begun to explore the possibilities of extending coverage to all Americans. HMOs, once regarded as the champion of affordable health care, are experiencing a backlash as patients question increasingly limited treatment options. Uwe Reinhardt, a prominent U.S. health care critic from Princeton University, envisioned a future that features a 20/60/20 system — 20% of the population would receive world-class treatment, 60% would receive less than satisfactory managed care, and 20% would receive no care.

While the emphasis of the conference was on the U.S. health care system, the Canadian experience was discussed in a number of sessions. In a session sponsored by the Commonwealth Fund, Robert Evans (University of British Columbia) characterized the current health care debate in Canada as one of equity. Evans asserted that over the past decade there has been pressure to shift the financial burden for financing the health care system from the more affluent segments of society to those of lesser means on the basis of a user pay argument. These poorer segments of society, particularly those residing in an institutional setting, are unable to support such a shift. In addition to equity considerations, various agents continue to evoke the spectre of a health care system in decline — overburdened and considerably under-financed. Although these agents (doctors/nurses) have contributed objective assessments on the state of system, their demands have focussed on increased salaries rather than issues of numbers or regional distribution. Further, current mortality and morbidity statistics do not bear out the assertion of a crisis in the system and instead paint a picture of enviable life expectancy, child mortality, and health status.

Jack Tu (Institute of Clinical Evaluative Sciences) presented research that compared the prevalence and incidence of cardiac interventions (surgical) between Canada (Ontario) and the U.S. (New York state). **Surgical interventions were much more common in the U.S. than in Canada, where the treatment of choice tended to be monitoring and less-invasive pharmacological treatments. When these interventions were compared against mortality outcomes, there was no significant difference. The more aggressive and costly interventions practiced by U.S. surgeons did not result in more favourable mortality outcomes.** One caveat, however, was anecdotal evidence to suggest that surgical interventions did result in greater quality of life outcomes (fewer symptoms associated with angina, earlier return to work).

Several participants criticized Canada for a certain degree of "smugness" regarding the health care debate. It was perceived that whereas a vigorous debate was occurring in the U.S. concerning the structure of the health care system, including the use of new and innovative service delivery models, such debate was for the most part absent in Canadian public policy discourse. Canada, although critical of the U.S. system, was doing little to address some of its more serious issues, seemingly content in defining its system as "not American". At the same time, these same participants did recognize that in general, Canada's population health outcomes were to be envied and could be learned from.

Volume 2 Number 3
September 1999

POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

Eyewitness

Skills Development in the Knowledge-Based Economy

On June 22-23, over 200 people gathered in Moncton to consider the challenge of skills development in a knowledge-based economy. The conference was organized by five major partners — Atlantic Canada Opportunities Agency (ACOA), Atlantic Provinces Economic Council (APEC), Industry Canada (IC), Human Resources Development Canada (HRDC), and the Policy Research Secretariat (PRS). It combined international and national perspectives with a particular focus on the Atlantic Provinces and the unique challenges of developing knowledge workers in and for that region.

The broad range of perspectives and, in particular, the regional focus led to a number of principal findings:

We need to take a very broad view of skills and their outcomes. A society of skillful and adaptable individuals is the product of long and complex processes, involving many stakeholders, including families, governments, and private sector corporations. This point was driven home by several of the plenary speakers. Thomas Healy (OECD) reported on OECD and other research that suggested skills affect economic success and non-economic outcomes, such as social cohesion and quality of life. He pointed out that there was increasing emphasis on the "social nature of competence". Avrim Lazar (HRDC) reminded conference participants of the importance of investments in early childhood. In the policy roundtable at the end of the Conference, Elizabeth Beale (APEC) wondered if Canada lacked, or had given up, the ability to coordinate stakeholders and to think strategically about labour force development.

Which skills?

There was debate and differences of opinion over which skill sets should be emphasized. Universities, community colleges, and even schools are under pressure to build skills in areas thought to be more directly relevant to the knowledge-based economy. Some of the papers reported on efforts by universities to adjust their programs accordingly. These efforts do not sit well with some supporters of the traditional role and approach of universities. Conference participants were told of research suggesting that the skills that really matter in the knowledge-based economy — team building, leadership, self-management — may not be the kind of skills that tend to be associated with a narrow, vocational approach to training.

Skills development has winners and losers. Healey, Beale and Lazar all urged conference participants to remember that the knowledge-based economy (KBE) has its victims. Healey said there was a need to "focus on groups at risk." Saying that economic policy must serve human purpose, Lazar urged policy makers to be deliberate in choosing a combination of social and economic policies that will ensure that the KBE advances our quality of life.

The brain trickle and the national skills shortage myth. The Conference provided researchers with an opportunity to counter certain widely held policy misconceptions. For example, HRDC researchers told conference participants that they have found no evidence of a generalized skills gap in Canada. A number of presenters also took issue with exaggerated claims about a brain drain to the US, and the advocacy of a tax cut remedy.

Regional perspectives are fundamental. Problems can be obscured in national aggregations. The Conference helped participants realize the importance of taking regional perspectives on complex policy research issues. For example:

- Atlantic Canada is more rural than the rest of the country, and the KBE is largely an urban phenomena. By many key indicators (patents, workplace training, R&D business expenditure) of the KBE, Atlantic Canada trails behind the rest of Canada.
- The brain drain may be overblown in the country as a whole, with the brain gain from new immigrants far exceeding the loss of talent to (mostly) the US, but the brain drain is

Continued on page 13

Continued from page 12

very real, and of long standing, in Atlantic Canada. The region attracts relatively few immigrants to offset its emigrants, both to other provinces and to the US.

- The structure of the economy matters. The private sector in Atlantic Canada consists mostly of small and medium size businesses, which has important implications for training since small- and medium-sized corporations simply do not do as much training as larger corporations.
- A greater share of the population of Quebec and the Atlantic Provinces has only rudimentary literacy skills (58% in Quebec and 54% in Atlantic Canada) compared with 47% for Canada as a whole and 43% for Ontario.

Skills is only one dimension of a successful economy and society. As Lazar said, skills are a "necessary but not sufficient condition." The discussion, particularly in Atlantic Canada, where there is a good supply of high-tech graduates, highlighted other potential barriers to a thriving knowledge-base economy, such as entrepreneurship and the dynamic effects of the clustering of a critical mass of high-tech corporations.

From the Cyberzone

Thinking Outside the Health Care Box

There's growing interest worldwide into what makes people healthy beyond the traditional emphasis on the health care system. Here are some sites of interest.

Department of Epidemiology & Public Health, University College London

http://www.ucl.ac.uk/epidemiology/

The Department has been home to a number of advances in population health research, including Michael Marmot's study of income, status and health outcomes among British civil servants, and innovative health surveys of England and Scotland. This tradition of excellence continues with the International Centre for Health and Society that hosts seminars for health practitioners. A comprehensive list of staff publications is provided on the site.

National Centre for Epidemiology and Population Health, Australian National University (NCEPH)

http://nceph.anu.edu.au/

This multidisciplinary research centre is committed to improving health, both nationally and internationally. Its research and education focuses on the areas of epidemiology, population health, and public health policy and practice. The site profiles the Centre's research on communicable diseases, environmental health, integrated health care systems, and health inequalities. Working papers, discussion papers, and publications on women's and indigenous peoples' health, are listed on the Web and are available upon request. Currently, the Centre is conducting a feasibility study for a national collaboration project on health and socio-economic status, entitled *the Health Inequalities Research Collaboration*. A discussion paper and the first workshop report about this initiative is available on-line.

Verona Initiative

http://www.who.dk/Verona/main.htm

The Verona Initiative, led by the World Health Organization's Regional Office for Europe, is an effort to address and debate the question of how to invest in health by improving the surrounding economic and social environment. The Initiative is responsible for hosting three symposia, the second of which takes place in the fall of 1999 and builds on previous international conferences and initiatives. The site contains selected papers from a European context and a summary of the first symposium, "Benchmark I". The Initiative is also linked to *Health 21*, the WHO European Region's "Health for All Policy Framework".

Volume 2 Number 3
September 1999
POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

Looking Outward

A Global Perspective on Health

A look back at the astounding progress we've made in improving health and a look forward at the challenges to come — that is the focus of the *World Health Report 1999: Making a Difference*, the first report published by the World Health Organization (WHO) under the leadership of Gro Harlem Brundtland.

In her introduction to the Report, Brundtland emphasizes one of the lessons she learned during her innovative stewardship of the World Commission on the Environment and Development (Brundtland Commission): **"You cannot make real changes in society unless the economic dimension of the issue is fully understood."** Since governments will be slow to act until the costs of poor health and the rewards from investment in health are known, she has set collecting, analyzing, and spreading the evidence of this relationship as a goal for WHO.

Certainly, it can be hard to keep in perspective the striking gains made in health over the past century, or indeed over the past two decades since WHO adopted the goal of "Health for All" in Alma-Ata in 1978. The health status of billions of people has greatly improved through better primary care, improvements in living standards, and the generation and application of new knowledge about diseases and their control. Consider the following: life expectancy in Chile for both men and women has gone up an astounding 45 years since the start of the century. Health improvements have also contributed to the rapid economic growth enjoyed by many countries — explaining one-third to one-half of East Asian economic growth, according to the Asian Development Bank. Clear evidence that the social ledger carries an important economic bottom line.

Ironically, these improvements have created a new set of challenges. As the report puts it, "The world today is perhaps somewhat past the halfway point of a two-century period during which the demographic characteristics of the human population will have been totally transformed." As countries pass through this change, they face an increase in population, rising elderly dependency ratios, and fundamental changes in the most common causes of death, from primarily infectious diseases to non-transmittable illnesses such as neuropsychiatric illnesses, cancer and heart disease. The aging society is one of the key policy issues going into the next century (see *Horizons*, Vol. 2, Number 2).

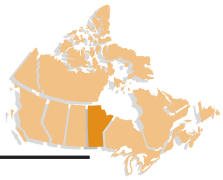
Another issue identified by the report is the problem of those left behind in this transition. Not only the poor countries of the world, but the poor in every country make up the "epidemiologically polarized sub-populations" which continue to face avoidable disease, malnutrition and complications of childbirth, despite the inexpensive and effective tools already available. **" . . . Over a billion people will enter the 21st century without having shared in these gains: their lives remain short and scarred by disease."**

The rest of the report focuses on how to meet these challenges into the next century. Some of the ways identified include strengthening health systems, achieving greater efficiency while renewing progress towards universal coverage, addressing the health burden of malaria in developing countries, and combating the "tobacco epidemic" with its huge health and economic costs.

The World Health Report closes with a review of the challenges preventing good health and a high quality of life worldwide. It emphasizes the need for leadership, and encourages greater focus on diseases that disproportionately affect the poor, building a proactive response to threats to good health, improving health systems, and expanding the knowledge base.

The World Health Report 1999: Making a Difference. World Health Organization: Geneva, 1999. Available online at http://www.who.int/whr/

Across Canada



Manitoba's Academics at the Interface

To have a healthy country, not only must we make sick people well; we need to know what makes people sick in the first place. Will we make the Canadian population healthier if we increase spending on health care? Conversely, will we do harm if we decrease it? What would be the impact of shifting our investments to other programs that affect health? Questions like these are the focus of research at the Manitoba Centre for Health Policy and Evaluation (MCHPE).

Part of the Faculty of Medicine at the University of Manitoba, the MCHPE examines patterns of illness in the Manitoba population, studies how people use health care services, and describes factors that affect health. The foundation for much of its research is a large database, comprising data routinely collected for the administration of Manitoba's publicly insured health care services, as well as Statistics Canada and survey data. Recently, the MCHPE received funding from the Canada Foundation for Innovation to add social services and education data to this database, thus expanding the Centre's capabilities to study factors that influence health.

The MCHPE's pioneering research into the effect of socio-economic differences on health has been widely recognized. This research suggests a persistent social gradient in health: on average, people who are the poorest and least educated are sicker than people in the middle, who in turn are likely to be sicker than the wealthiest and best educated. Canada's publicly-financed health care system has been very good at providing health care – physicians, drugs, and hospital care – to those who need it most. But the provision of health care does not appear to influence this gradient. Poorer people remain sicker, on average, despite their access to care. How to influence the social gradient in health is a question that MCHPE continues to study.

One of MCHPE's strengths is that it conducts research that is policy-relevant, while working at arm's length from government. Although it is a University research unit, its researchers work closely with government in defining research questions and communicating results to policy developers. The interaction with policy makers is one of the themes of MCHPE's recent book, *Academics at the Policy Interface*. This book outlines the MCHPE's research findings on the social/public policy determinants of health, and reflects on its experience regarding the dissemination and integration of research into policy-making. The book is in the form of supplement to the journal *Medical Care* (June 1999).

The Manitoba Centre for Health Policy and Evaluation's recent reports—including summaries, and complete reports – are available from its Web site. Visit http://www.umanitoba.ca/centres/mchpe and click on "Reports."

Carolyn DeCoster and
Charlyn Black
Manitoba Centre for Health Policy and Evaluation

Academics at the Policy Interface can be ordered for $19.95 from: Health Sciences Bookstore, 140 Brodie Centre, University of Manitoba, Winnipeg, MB, Canada, R3E 3P5, Tel: (204) 789-3601 or email: medbookstore@umanitoba.ca

WANTED

Ideas

The policy research and ideas environment is in constant change. Despite what you may have heard, no single organization, discipline, or source has all of the answers or even all of the questions. **We are on the lookout for cutting edge research, ideas and knowledge in public policy to profile in *Horizons*.** If you know of some noteworthy horizontal policy research, please contact Allen Sutherland at a.sutherland@prs-srp.gc.ca or call (613) 943-2490.

Thanks.

Volume 2 Number 3
September 1999

POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

Guest Columnist

Canada's First Generation of Visible Minorities Comes of Age

One of the challenges facing Canadian policy makers is to understand and connect to Canada's first generation visible minorities. With distinct experiences that fit neither the lives of their parents nor those of the mainstream, this segment of the Nexus Generation (Canadians aged 18 to 34), what it believes in, and how it defines itself will be essential to formulating sound public policy in the future.

Who is the Nexus Generation?

The Nexus Generation is made up of 7 million Canadians between the ages of 18 to 34. A significant proportion of Nexus (20%) is composed of visible minorities. The hidden value of this Generation lies in its identity — an identity which functions as a link or "nexus" between the past and the future, between the Industrial Age and the Information Age, between the Baby Boomers and their kids, and between the Industrial Revolution and the Technological Revolution. Nexus is the transitional generation, bridging new realities with existing values.

Why do first generation visible minorities matter?

The fact that currently two-thirds of the visible minority population in Canada are under the age of 34, highlights the need for decision makers to recognize what motivates this group. The number of visible minorities in younger generations is even higher. According to a recent article in *MacLean's Magazine*, one of the defining characteristics of Generation Y, ages 5 to 15, is the fact that it is the most racially diverse Generation ever, with 1 in 3 individuals being non-Caucasian.

Dual Cultural Identity

The key to understanding first generation visible minorities lies in their dual cultural identity — two sets of values, two languages, often two wardrobes, two sets of movie stars and music videos, two kinds of humour, and two lives — one at home and one "out there".

However, one of the myths that persist about this group is that the first generation is highly assimilated into Western society. The reality, as Marye Tharpe, an expert in multicultural marketing and communications at the University of Texas explains, is that for the first generation, acculturation does not mean assimilation. Rather, it means integrating the values of mainstream society with those of their parents' culture. As Pierre Wuu, CEO of the Asian Business Consortium, an on-line community for Asian North Americans explains, one culture, almost always the culture learned at home, forms the "core" values held by this group. For this group, who they marry, how they raise their kids, the languages they speak, and their relationships with their families are guided by values from their parents' culture, not that of the mainstream. However, when it comes to work, socializing, hobbies, education etc., this group tends to draw more on the Western values they have learned.

Understanding First Generation Visible Minorities

A. The Family Connection

The other common experience that defines first generation visible minority individuals is this group's unique relationship to their parents. Unlike most children from Canadian families, first generation visible minorities watched their parents start their lives in a new country in order to provide better opportunities for their children. As Wuu explains, these children, now adults, remember very well the sacrifices their parents made. Vacillating between a sense of gratitude and guilt, this group has a deep respect for their parents and the values they wish their children to live by.

In addition, first generation visible minorities, unlike mainstream children, were and still are in the unusual position of knowing more than their parents from a very young age. Learning a new culture and language more quickly, these children acted as translators and advisors for their parents from a young age and continue to carry out this function even now.

Continued on page 23

Making the Office Nexus-Friendly

Optimistic but skeptical. Saavy. Adaptable. Highly educated. Interested in "community" but disconnected from government. These words and phrases were used by Jennifer Welsh, partner with d~code inc., to capture the attributes and attitudes of the Nexus Generation, the cohort of Canadians roughly between the ages of 18 and 34. Welsh spoke at a recent forum, "Understanding the Nexus Generation", that was organized in Toronto by the Policy Research Secretariat.

According to a study undertaken by the Public Management Research Centre, prepared for the Public Service Commission of Canada, as of March 1997, 8.1% of full-time or "interdeterminate" federal government labour force was under the age of 30 and 12.4% were between the ages of 30-34.

Facing the Challenge: Recruiting the Next Generation of Unversity Graduates to the Public Service, Government of Canada 1998, p. 17-18. This document is also available on the Internet at http://jobs.ca.ca/ recruit/dl/univeng.pdf

The 50+ people in attendance, including many would-be Nexus Generation members, spent an evening, "talking about their generation". Interestingly, the conversation over the course of evening tended to gravitate towards "capacity" and human resource issues – the recruitment and retention of young knowledgeworkers in the labour force. This constitutes a challenge for all employers, participants were told, but especially for the public service.

Why? Welsh and others suggested the reasons were more complicated than restricted employment opportunities. The "decline of deference" and low level of trust in public institutions has been a factor that cuts across all generations. On a related note, **many observed that in the 1960s and 70s government was an obvious choice for young people "who wanted to make difference". Troubled economic times and government cut-backs over the past decades have had a lasting impact on Nexus, many of whom have grown up never having seen government "dream or build something".**

A revitalized policy agenda, then, may help entice more Nexus to the public service. In terms of environment, we heard as well that this group is looking for a dynamic, fluid and "entrpreneurial" place to work (read: premium on experience and personal development, not employment security). Participants argued that opportunities, not taxes, may be pulling some of their peers south of the border. Quality of life — a sense of community in the workplace and the ability to balance work and family life — is key. A practical suggestion put forward for a retention strategy involved developing tools (e.g., surveys) for Nexus employees to relate levels of job satisfaction on an ongoing basis.

Perception also seems to be a factor. "Government is an exciting and rewarding" career choice said a number of the government employees (both the young and the not-so-young) and others who were in attendance. What's needed is to communicate this message to potential next or current Nexus generation public servants.

As a follow-up to this forum, the Policy Research Secretariat has launched an on-line discussion group devoted to "Understanding the Nexus Generation" which will run as a pilot project until October 1. Visit nexus-subscribe@topica.com for instructions on how to join.

Peters, Joseph. *An Era of Change: Government Employment Trends in the 1980s and 1990s.* CPRN, 1999. Available at http://www.cprn.org/

Volume 2 Number 3
September 1999

POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

Research Brief

A Foundation for Evidence-Based Decision-Making: *Indicators of Employment and Working Conditions*

Imagine that a leading research scientist announces that he has irrefutable proof that people who experience unemployment lead shorter, less healthy lives than those who do not experience unemployment. But he doesn't stop there. He also announces that he has irrefutable proof that people who experience job insecurity, i.e., people who are worried that they will lose their job, lead shorter, less healthy lives than their colleagues with job security. And he makes the same claim about people who have high-strain jobs: people who have to perform tasks that are psychologically demanding but who have little latitude in how they perform these tasks lead shorter, less healthy lives than people who have low-strain jobs.

Now imagine that you're a policy maker charged with developing population-level indicators to monitor the condition of a population or of sub-groups within a population. You hear about the research scientist's announcement. And you know that in a determinants-of-health context, policies and programs are typically conceptualized, developed and evaluated at the level of individual health determinants like those mentioned in the announcement. It therefore makes sense to focus on indicators related to determinants of health like those mentioned in the announcement, rather than on indicators related to the downstream health consequences of these determinants. You consider focusing on the unemployment rate, the proportion of people reporting that their jobs are insecure, and the proportion of people with high-strain jobs.

Since no research scientist has made such a pronouncement and no policy maker has leaped forward with a proposal to track a set of population-level indicators, we set out to provide the basis for evaluating the applicability of population-level indicators related to employment/working conditions for use in a determinants-of-health context. We developed a framework of relevant labour-market experiences, systematically reviewed studies that assess the association between measures of these experiences and measures of health, and reviewed related measures at the population level that could immediately or in the short-term be used as population-level indicators.

While the results of our systematic review don't allow us to be quite as confident as the research scientist described above, we can recommend a set of population-level indicators related to the availability and nature of work with each indicator graded by the strength of supporting evidence. We base these recommendations on a comparison of possible population-level indicators with the data from and validity of studies that assess the association between individual-level measures and health. The first three population-level indicators require data that are already routinely collected and made publicly available (and our grade of support for the recommendations is provided in brackets):

a) unemployment rate (strong);
b) long-term unemployment rate (limited);
c) permanent lay-off rate (limited);

The other population-level indicators require data that are not routinely collected (and our grade of support for the recommendations is provided in brackets):

a) insecurity associated with pending job loss (limited)
b) insecurity associated with possible major organizational change (limited)
c) insecurity associated with actual major organizational change (limited); and
d) job strain, using a model developed by Robert Karasek and Tores Theorell which examines the psychological demands of a job and the decision latitude given to the person in the job (medium).

These population-level indicators can be used to monitor the employment- and work-related determinants of the levels of health status in a population or in population sub-groups and thus to inform the conceptualization, development, and evaluation of policies and programs related to these determinants.

Continued on page 23

Evidence on Four Determinants of Population Health

The population health approach looks at a wide range of factors, both individual and social, that determine health status. Four "emerging" determinants of health are considered here: **income inequality, early childhood influences on adult health, non-work and work-based control, and social capital.**

Each determinant is represented by a broad range of indicators and measures at varying stages of development. The measures of non-work (locus of control, hardiness, self-efficacy, sense of coherence) and work control (demand/control, effort/reward), for example, have existed and evolved over several decades, while the measures of social capital are relatively new. The concept of social capital is still being defined, debated and constructed, and so too are the indicators used to measure it. As a result, this determinant still faces problems of construct and content validity. Indicators and hypothesized mechanisms of early life effects on adult health are chiefly threatened by the distant nature of the relationship, and as a consequence, by the considerable potential for confounding factors (such as socio-economic status). Income inequality, about which there is at least some agreement in terms of measurement, lacks a clear theoretical underpinning for the pathway through which it affects health. While there remain some issues regarding the specific measures and indicators for each emerging determinant, this does not negate the potential importance of each with respect to the health of populations.

The evidence linking these determinants to health is still being developed. Increases in income inequality measured through the Gini coefficient or other means, and decreases in social capital as measured through levels of trust and association membership, for example, are associated with increased rates of mortality at the population level. Increased control versus demands at work provides a protective effect against mortality and morbidity from cardiovascular disease. There is, however, a great deal of variance in the degree of association found. For example, study estimates of the ability of income inequality to explain the socio-economic gradient found in mortality range from 0 to 75%. Similarly, the evidence linking early life influences to adult health is only now beginning to coalesce around fundamental themes, concepts, and indicators, and lags considerably behind other areas in development of measurement tools.

While each determinant is individually linked to health, they do not necessarily function independently of one another. Emerging evidence clearly suggests that there are possible links among these determinants. For example, income inequality has been linked to both social capital and childhood health. Social capital was found to mediate the relationship between income inequality and health, such that the effect of the latter on health was reduced. Why this happens is not known. Social capital has been associated with various childhood and adolescent outcomes which may, in the long run, affect adult health. The cumulative effects of sustained income inequality during early childhood may have long term implications for adult health. It is imperative, therefore, that determinants of health are considered within a broader context in order to more fully understand their relationship to each other, and ultimately to health.

The current evidence appears to indicate some level of association between the identified determinants and health. Our understanding, however, of precisely how these determinants interact with each other, and ultimately affect health, is clearly at a nascent stage. We should continue to pursue these determinants, because increasing our understanding about the causes of poor health outcomes is critical to the identification of effective policy levers required to effect any change in the health of populations.

Kimberlyn M. McGrail,
Aleck Ostry,
Vince Salazar Thomas,
and Claudia Sanmartin

Determinants of Population Health: A Synthesis of the Literature, Final Report to Health Canada, December 1998.

Volume 2 Number 3
September 1999

POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

E-mail to the Editor

DEAR SIR:

I was a bit surprised to open my copy of "Horizons" (April 1999 issue) and read on Page 18 that "Economics at its Best" was the 1999 meetings of the American Economics Association in New York. Since I was there, and in fact gave a paper on "Trends in Well Being in Canada and the US", I agree that many of the sessions were excellent, but not all. For Canadian policy purposes, morover, one might want to refer to data on Canada, or to theoretical studies that are framed with Canadian realities in mind — in general, one might not want to assume reflexively that whatever happens in New York is "The Best", particularly in a Canadian "policy research" context.

The 1999 Meetings of the Canadian Economics Association, whose conference programme is available on the Web at http://economics.ca/conference.html, provide some evidence that Canadian economists *are* addressing many of the crucial issues that face Canadian society, and their work is available *here*.

There is currently a good deal of concern with Canada's productivity performance and its implications. A delegate to the CEA who was interested in the underlying causes of Canada's productivity performance could have chosen Friday sessions on "Causes and Consequences of R & D" and "The Adoption of New Technology", followed by sessions on "Intellectual Property" and "Better Measures of Economic Activity". On Saturday, this delegate might well have chosen to attend the sessions on "What Explains the Canada-US Manufacturing Productivity Gap?", "Productivity in Canada", "Are Canadians Better Off in 1999 than in 1989?" and "Has the Quality of Working Life Fallen?". On Sunday morning, the session on "Incentive Pay" and on "Recent Developments in the Study of Innovation" would also have followed up the same line of interest.

However, productivity trends are not the only crucial economic policy issue facing the Canadian economy. The depreciation of the Canadian dollar relative to the US dollar has recently been a major issue, and a crucial strategic decision for Canada in the longer term is whether to continue with a floating exchange rate, or move to a fixed exchange rate, or possibly even adopt the US dollar. Delegates interested in this set of issues would probably have chosen the Friday sessions on "Exchange Rate Fluctuations", "Purchasing Power Parity and the Real Exchange Rate" and panel discussions on "Why is the Value of the Canadian Dollar So Low?" and "Canadian Exchange Rate Policy". The issue was examined again in depth on Saturday in sessions on "Lessons from Recent Currency Crises", "Choice of Exchange Rate Regimes" and "Global Financial Instability". In addition, the featured speaker at the noon Purvis lunch spoke on the case for North American Monetary Union.

For many people in Canada, economic growth is no longer seen as an unalloyed blessing, since there is a new level of consciousness about the possible effects of the economy on the environment. A full day of sessions on Friday focussed on global warming and its economic implications. On Saturday, there were sessions on "Economics of the Fishery", "Environmental Policy and its Implications", "Environmental Regulation" and "Estimating Environmental Benefits" and on Sunday morning, sessions on "Trade and the Environment" and "Trade, Property Rights and Endangered Species".

Rising levels of economic inequality and poverty are also a major issue for Canadian society. Friday saw sessions on "Trends in Income Distribution in Canada", "Poverty Trends", "Wealth Inequality in North America" and "Inequality in Canada: Trends, Causes, and Consequences". On Saturday, there were two morning sessions on "Economics of Social Assistance" and afternoon sessions on "Children and Neighbourhoods" and "Issues in Social Policy", "Cohort Effects on Wages" and "Returns from Work for Young and Old". On Sunday morning, the session on "Poverty Indices and Inference" and the State of the Art survey on "Income Inequality: Is Canada Different or Just Behind the Times?" followed up the same theme.

When one thinks of the major policy issues faced by the federal government over the last dozen years, it is clear that three of the biggest decisions were the Free Trade Agreement, the adoption of "price stability" as the sole objective of monetary policy and the elimination of the budget deficit (plus what to do with an emerging fiscal surplus). The issues raised by Trade policy, Monetary policy and Fiscal policy remain crucially important and were examined in depth.

Continued on page 21

Continued from page 20

Economists are also sometimes concerned with the micro problems of specific industries — for example the sessions on Sunday on "Bank Mergers and Competition in the Airline Industry" or the Saturday afternoon sessions on "The Economics of Drugs" or "Electricity Deregulation". An issue like immigration raises, however, broader concerns — which were addressed in sessions on Friday morning and on Saturday morning. Broader still was the perspective proposed in the Innis lecture by Shelley Phipps on "Economics and the Wellbeing of Canadian Children".

This letter has tried to illustrate the depth, as well as the breadth, of the research results presented at the 1999 CEA. However, it is not my intention to try to discuss the social importance of every one of the 142 sessions at the 1999 Meetings. Furthermore, these sessions represent only a sampling from the research agendas of Canadian economists, since much research is presented at specialist meetings and at international conferences. The general point that I want to make, however, is that Canadian economists are examining many of the issues, both small and large, which concern Canadian society.

Of course, we could do better. Some issues are not being sufficiently examined. Money does matter. Economists (like other social science researchers) could do an even better job with more resources. However, the point of this letter is to emphasize that there is a solid record of achievement on which to build, here in Canada.

Yours sincerely,
Lars Osberg
President
Canadian Economics Association
McCulloch Professor of Economics
Dalhousie University

Alternative Thinking on Income Distribution and Health

"The implication of a "population health" approach to health policy is that policies to improve population health may now have to include policies to address living and working conditions and the physical environment, as well as the more traditional health policy concerns such as personal health practices or "lifestyles" and health services. But policy-makers do not seem ready to pursue the "population health" approach to its logical conclusion…it seems clear that a concerted effort to address the inequitable distribution of income as a way to improve the overall health of the population is not yet on the policy agenda in Canada."

Townson, Monica. *Health and Wealth: How Social and Economic Factors Affect our Well Being.* Ottawa: Canadian Centre for Policy Alternatives, 1999, p. 15 - 16.

Mapping DNA Policy

Some policy fields are notable for questions not answers. Biotechnology and the human genome are such areas. Asking the correct questions will be essential to formulating sound public policy on the human genome, and, at this stage, identifying the correct questions is both a challenge and an imperative. To help in this endeavour, the Department of the Solicitor General held an innovative Human Genome Workshop on February 24, 1999 that explored some of the issues surrounding this emerging and fast-changing policy area.

The workshop looked at the science and economics of the human genome as a means of furthering understanding of potential social justice, human rights, and health policy implications of human genome/biotechnologies. Issues such as cross-species genetic manipulation to increase food production and the creation of genetically altered animals whose organs might be suitable for human transplants, i.e., xenotransplantation, were explored. Another issue that loomed large was the uses and possible abuses of DNA banks. Such banks might aid the development of pharmacogenomics, i.e., the tailoring of drugs to individual or group genetic markers. However, in a scenario reminiscent of the movie *Gattaca,* individuals with particular risk factors might find themselves exposed to discrimination in such areas as life insurance, employment, or access to medical treatment. As the biotechnology revolution takes hold the number of policy-related questions, dilemmas and even paradoxes is likely to increase dramatically.

For an introduction to human genome issues see: http://www.sgc.gc.ca/WhoWeAre/PPC/eScan.htm and *The 1998 Canadian Biotechnology Strategy: An Ongoing Renewal Process.* Industry Canada, 1998.

Volume 2 Number 3
September 1999

POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

Managing Horizontal Policy

Responding to the emergence of horizontal issues in such areas as cyber-terrorism and international crime, as well as the need to coordinate approaches among other government departments, the department of the Solicitor General sponsored an officer development workshop on "Effectively Managing Horizontal Policy" on June 3, 1999.

Understanding Horizontal Policy

Alex Himelfarb, Co-chair of the Policy Research Initiative and Deputy Minister of Heritage Canada, opened the session with a discussion of the meaning of horizontal policy. For Himelfarb (and many others), horizontality is an "ugly word". While "horizontality is not new, there is a lot new about it". Certainly globalization, the information communications revolution, and growing societal differentiation have added complexity to the policy environment. It is increasingly necessary to internationalize the domestic; and domesticize the international.

Gone are the days of the over-confident Keynesian consensus on government's positive role. Fiscal constraint and citizen distrust of government and its effectiveness are features of the new environment. Rather than lament this situation, Himelfarb reminded the audience that "doubts are the beginning of learning and knowledge". When issues are daunting, cooperation may be the sole path available.

Himelfarb also stressed the intellectual impetus behind perceptions of growing horizontality. Gone are the days of the over-confident Keynesian consensus on government's positive role. Fiscal constraint and citizen distrust of government and its effectiveness are features of the new environment. Rather than lament this situation, Himelfarb reminded the audience that "doubts are the beginning of learning and knowledge". When issues are daunting, cooperation may be the sole path available.

Network approaches will be essential to future success in addressing horizontal issues. This means making long term investments in partnerships with other orders of government, stakeholders, and citizens. While recognizing the often under-appreciated time and labour costs of developing such partnerships, Himelfarb noted that working horizontally, reflecting diversity, and developing organic, flexible mechanisms were particularly well suited to balancing the economic and social aspects of the human purpose.

Aspects of Partnership

The rest of the session addressed different aspects of improving partnerships to address horizontal issues. Janice Charette (Justice Canada) led off with a discussion of team building, providing numerous practitioner tips. She emphasized the importance of shared commitment to a team's success, as well as the need for clear ground rules, co-location, and sensitivity to the interests of different participants. Gilles Paquet (University of Ottawa) spoke on leadership. Today's leaders of horizontal policy "influence the community to face its problems." He was sceptical of government's ability to develop meaningful partnerships and encouraged executives to listen more, and be "accepting of the chaos" that comes with delegation.

Jim Mitchell (Sussex Circle) spoke on networking. While the term carries a "grasping" and "manipulative" connotation, developing working relationships with colleagues is important at every level. Officers need to "scheme virtuously" by "seeing their job as extending beyond their immediate environment". In this hopeful vision of the officer's role, "trust matters more than authority" and effective networking starts with making time for a coffee, breakfast or lunch with colleagues.

Continued from page 16

B. The Perpetual Struggle to "Fit In"

As with their mainstream Nexus cousins, paradox and instability are continuous themes running throughout the lives of first generation visible minorities. Faced with the daunting task of reconciling what one culture holds desirable and the other deems unacceptable, this group has had to carefully pick and choose its values, and the situations in which to express them. Growing up with belief structures that cannot fit their reality 100% of the time, this group has had to seek out and manufacture their own icons and structures of stability.

Policy Implications

The distinct value of this group lies in their uncanny ability to function as a two-way access point between the mainstream and the immigrant communities inhabited by their parents. In light of their unique relationship to their parents and their distinct hybrid cultural identities, first generation visible minorities hold enormous potential for connecting to immigrant communities. By understanding and leveraging this group's unique cultural position, policy makers can communicate, service and target Canada's multi-cultural communities more effectively.

Bani Dheer and Robert Barnard work at d~Code, a firm that helps organizations understand, attract, and retain members of the Nexus Generation as consumers, employees and citizens. They can be reached at www.d-code.com or at 1-800-448-4044 for comments or queries.

Continued from page 18

The limitations of population-level studies for circumstances in which the relationships are posited to exist at the individual level mean, however, that the population-level indicators that we recommend cannot be validated. That is, while the choice of an indicator, e.g., the unemployment rate, will be based on evidence of an association between a related individual-level experience (unemployment) and an individual-level health outcome, we cannot validate the choice of an indicator by assessing the association between the population-level indicator and population-level health status. Nevertheless, this project lays a solid foundation for evidence-based decision-making in the choice of population-level indicators related to employment/working conditions.

John N. Lavis, Cameron A. Mustard,
Jennifer I. Payne, Mark S.R. Farrant

Lavis et al. *Employment/Working Conditions and Health: Towards a Set of Population-Level Indicators*, Final Report to Health Canada, October 15, 1998.
Contact: jlavis@iwh.on.ca

Developing indicators that reflect community values

"… indicators are only useful if the process of developing and using them engages the community as a whole in examining what it wants to be, where it wants to go and what its values are; if the process provides useful and usable information to the community; and if the process increases the community's knowledge and power. **The development of indicators should be looked upon as an opportunity for increasing public and political education and awareness as to health and its determinants, and to explore ways of creating healthier, more sustainable, more equitable, safer, more livable and prosperous communities."**

Hancock, Trevor, Rick Labonte and Rick Edwards. "Indicators that Count! – Measuring Population Health at the Community Level", Final Report to Health Canada, November 1998, p. 108.

PRS Horizons Team

Editor

Allen Sutherland

Contributors

Sushma Barewal
Michael Brett
Tamara Candido
Robert Kunimoto
Gaétan Lafortune
Catherine Larmer
Linda Lemieux
Julie Lindblad
Alfred Leblanc
Michael MacKinnon
Heloise Mitchell
Margaret Moore
Tracie Noftle
Annick Rollin
Roger Roberge
Nancy Shipman
Gita Sud
Peggy Sun
Johanne Valcourt

Design & Layout by:
Zsuzsanna Liko Visual Communication

Horizons is published bi-monthly by the Policy Research Secretariat to share information among the public and private policy research community.

Any comments or questions? Requests for subscription or change of address?

E-mail: a.sutherland@prs-srp.gc.ca
Phone: (613) 947-1956
Fax: (613) 995-6006

Volume 2 Number 3
September 1999

POLICY RESEARCH INITIATIVE
HORIZONS
EMERGING DEVELOPMENTS AND KNOWLEDGE IN PUBLIC POLICY RESEARCH

Did you know?

The Grim Consequences of Illness in Canada

An estimated 329,000 Canadians (aged 15 and older) began smoking for the first time in the two-year period between 1994 and 1996. About one-half of those started smoking during this period became daily smokers. By contrast, of the approximately 5.6 million Canadians who reported smoking everyday, 556,000 quit and 179,000 reduced their smoking to only occasionally.

National Population Health Survey, 1994/95 (Cycle 1) and 1996/1997 (Cycle 2). Statistics Canada.

The total cost of illness in Canada in 1993 was estimated at 156.9 billion ($71.7 billion in direct costs and $85.1 billion in indirect costs). The largest component of direct costs was hospital care ($26.1 billion) followed by the cost of physician services ($10.4 billion), drugs ($9.9 billion), miscellaneous health expenditures ($9.3 billion) and health science research ($752 million). The largest component of indirect costs was the value of time lost due to long-term disability ($38.3 billion).

Moore, R. et al. *Economic Burden of Illness in Canada.* Health Protection Branch, Health Canada. 1993.

The link between health, income, and social status indicates that Canadians in the highest income bracket live longer than those in the bottom bracket. Approximately 50% of the men in the poorest neighborhoods will live to age 75. By contrast, 70% of the men in the richest neighborhoods will reach the age of 75.

Wilkins, R., *Mortality by Neighbourhood Income in Urban Canada, 1986-1991.* Statistics Canada.

In 1995, over 210,000 people died in Canada. The leading cause of death was cancer, accounting for 27.4% of all deaths. Diseases of the heart followed closely, accounting for 27.3% of all deaths. The remaining ten leading causes of death in order were cerebrovascular disease (7.4%), chronic obstructive pulmonary diseases (4.4%), accidents (4.2%), pneumonia and influenza (3.5%), diabetes (2.6%), diseases of the arteries, arterioles and capillaries (2.3%), diseases of the central nervous system (2.3%), and suicide (1.9%).

Selected leading causes of death, 1997. Cat. 84-210-X1B, Statistics Canada.

A male at age 15 (1994) can expect to live on average another 60.3 years. Similarly, a female at age 15 will live on average another 66.6 years. Not all of these of years of life, however, will be in good health. When morbidity is factored into life expectancy, the average 15 year old male can expect 5.9 equivalent years of ill health over the course of their life time or 9.8% of their life expectancy. Similarly, females will on average experience 7.9 equivalent years of ill health or 11.9% of their remaining life expectancy.

R. Roberge, J-M Berthelot, and MC Wolfson. *Adjusting Life Expectancy to Account for Morbidity in a National Population,* Quality of Life. 1997.

Young adults, particularly young males, were more likely to engage in multiple-risk behavior. Risk behavior is defined as binge drinking, cigarette smoking, sex without a condom, and sex with multiple partners. The National Population Health Survey (1994/95) reported the those aged 20 to 24 were considered to be most a risk with 22% of men and 17% of women in this age group engaging in at least three of four risk behaviors. In contrast, 19% of men in this age group and 31% of women reported that they had tried none of the risk behaviors.

Multiple-risk behavior in teenagers and young adults, Health Reports, Cat. 82-003. Autumn 1998.

Cardiovascular disease in Canada in 1993 accounted for $7.4 billion in direct costs and $12.4 billion in indirect costs. The direct costs of the next 3 largest groupings, musculoskeletal disorders, injuries, and cancer, were relatively small at $2.5, $3.1, and $3.2 billion respectively. Although these categories had low direct costs, the indirect share was large at $15.3, $11.2 and $9.8 billion.

Moore, R. et al. *Economic Burden of Illness in Canada.* Health Protection Branch, Health Canada. 1993.