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*Policy Approaches to Address
the Impact of Poverty on Health*

A S C A N O F P O L I C Y L I T E R A T U R E

by David P. Ross

Poverty and Health—CPHI Collected Papers

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Policy Approaches to Address the Impact of Poverty on Health by David P. Ross

Poverty and Health: Links to Action

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About the Canadian Population Health Initiative

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

As a key actor in population health, CPHI:

- Provides analysis of Canadian and international population health evidence to inform policies that improve the health of Canadians.
- Funds research and builds research partnerships to enhance understanding of research findings and to promote analysis of strategies that improve population health.
- Synthesizes evidence about policy experiences, analyzes evidence on the effectiveness of policy initiatives and develops policy options.
- Works to improve public knowledge and understanding of the determinants that affect individual and community health and well-being.
- Works within the Canadian Institute for Health Information to contribute to improvements in Canada's health system and the health of Canadians.

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Policy Approaches to Address the Impact of Poverty on Health

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Executive Summary

Solid evidence demonstrates a correlation between poverty and ill health. This paper identifies public policy strategies (as of June 2002) designed to alleviate the health impacts of poverty, either by reducing poverty or mitigating its effect on health. It also reviews strategies shown to be effective through program evaluations. The value of this scan lies in identifying ways to address the links between poverty and health—measures that are likely to improve the health of Canadians.

This paper reviews demonstration projects and community intervention programs. These initiatives are drawn from two broad strategies: *upstream* interventions, which directly prevent or reduce poverty and inequality, and *downstream* interventions, aimed at specific populations and designed to lessen the negative health impacts of poverty. Either strategy can be based on absolute or relative definitions of poverty and offered on a targeted or a universal basis. We examine the current United Kingdom initiative to address health inequalities as a comprehensive approach that employs both upstream and downstream strategies.

Successful interventions require understanding of the pathways linking poverty and health. While much still remains to be known, a growing body of knowledge is accumulating. This knowledge has been used to develop a range of projects and programs, including income-support programs, home visiting programs for new mothers, pre-school programs, community mobilization and neighbourhood improvement projects, program interventions for youth at risk and health-promotion interventions to reduce negative health behaviours. This scan found a heavy focus on programming for babies, children and mothers, and that the majority of interventions target the most disadvantaged in society: lone-parent families, Aboriginal people, and those excluded by reason of race or ethnicity.

Key Findings

Strategy Coordination

- Evidence suggests that a coherent, multi-faceted approach involving income support and programs aimed at families with young children would offer the best hope for improving the health of low-income Canadians.
- One promising approach involves incorporating specific interventions that successfully target only one or two risks into a more comprehensive strategy, as the United Kingdom initiative has done.
- Our knowledge of the various interventions aimed at reducing poverty, their relative success, and the effect of poverty on health remains fragmented. Canadian health policy would benefit from establishing means of identifying and synthesizing current knowledge about policies that affect the determinants of health and making this knowledge more readily available to interested parties.

- Individual demonstration projects and community intervention programs appear to spring from many disparate sources with a lack of any central coordinating mechanism. We need a strategy and mechanisms for translating grant-driven projects into long-term public programs.

Evaluating Interventions

- While there are promising interventions, most programs demonstrate fairly modest poverty reductions and health improvements.
- While evaluations provide a growing knowledge of the effectiveness of interventions aimed at reducing poverty and avoiding negative health impacts, evaluations seldom assess the cost-effectiveness of such interventions.
- Multiple risk factors and their interactions make interventions challenging and expensive. Measuring effectiveness can be difficult under such conditions.
- The poor face multiple health risks. Thus, we should not expect that interventions aimed at alleviating only one or a few risk factors will pay huge health dividends.
- We need more evaluation research, especially on the effect of upstream interventions on health.

Upstream Policy/Programs

- Aggregate spending on income programs affects poverty. Poverty reduction depends on government spending levels, which vary across demographic groups. In a 12-country study, poverty reduction varied between 30% and 80%, depending on spending level.
- Government intervention in Canada cut the depth of poverty among all individuals by half, compared to what likely would have prevailed in the absence of government programs. It is estimated that government spending on anti-poverty interventions reduced child poverty by one-third.
- Internationally, Canada has not ranked high in terms of poverty reduction, except for seniors, for whom government intervention in Canada has reduced poverty by 90%. In a ranking of 12 countries, Canada's anti-poverty measures placed it near the bottom, tied with the United Kingdom and ahead only of Australia and the United States. By comparison, Sweden and Belgium reduced overall poverty by 80%.

Downstream Policy/Programs

- Demonstration programs aimed at improving the employment prospects and earnings of parents on social assistance have shown positive results.
- Employment and income self-sufficiency demonstration projects show mixed rates of success in decreasing welfare costs, on people exiting poverty, and on raising academic achievement for children and youth in a cost-effective manner.

- Programs to support healthy pregnancy, early childhood development and school-age children show moderate to high effectiveness.
- Few evaluations are available for programs that take a community-support approach to improving the well-being of young children. However, programs in Norway and England that use improvements in infrastructure to transform poorly functioning neighbourhoods have demonstrated positive health outcomes. Success in reducing risk behaviours has also been demonstrated in a few programs.

Introduction

Current public debate on reforming the health system in Canada focuses on health care. Little attention, however, has been paid to the role of broader determinants of health, such as income inequality. Yet, mounting public-health evidence demonstrates the negative health impacts of poverty. This paper examines relevant policy experience (as of June 2002) to identify what has been tried and what has worked in terms of interventions that alleviate the health effects of poverty.

The first section of this paper provides historical context for considering Canadian social and health policy. It also notes two new strategies developed by governments in Québec and the United Kingdom. Section 2 examines broad approaches to addressing poverty and health. The paper then turns, in Section 3, to a review of “upstream” income-support and “downstream” program strategies, including evaluation results from these programs. Policy directions are identified in Section 4. The paper concludes with a summary of key findings and promising strategies.

1. Overview

Over the years, all levels of government in Canada have adopted a range of income, employment, health, education and social programs to alleviate poverty and reduce socio-economic inequality. Despite these efforts, no comprehensive government agenda for reduced poverty and socio-economic inequality exists, and only a few of these programs cite improved health as their explicit aim. This is in spite of Health Canada reports *A New Perspective on the Health of Canadians* (1974) and *Achieving Health for All: A Framework for Health Promotion* (1986), both of which emphasize that health is determined by many other factors than health care. A 1999 national report by the federal, provincial and territorial advisory committee to deputy ministers of health stated that the "...determinants of health include income and social status, social support networks, education, employment and working conditions, physical environments, social environments, biology and genetic endowment, personal health practices and coping skills, healthy child development, health services, gender and culture."¹

But there may be encouraging signs of change. During the 1990s the federal government, the provinces and the territories began to cooperate on anti-poverty approaches that recognized how family poverty affects child health. Illustrations of this progress include:

- the expansion of the national child tax benefit, the transfer of funds to the provinces for children's programs;
- the expansion of maternal and parental leave;
- the Community Action Program for Children, the Canada Prenatal Nutrition Program;
- a number of measures aimed at Aboriginal health; and
- the introduction of the *National Longitudinal Survey for Children and Youth*, which is now being used to gain a better understanding of the health of children and families. This survey adds to the income and health questions of the *National Population Health Survey* and *Canadian Community Health Survey*.

Individual provinces also have recognized the role that income plays in determining health. One study cited five provinces—British Columbia, Saskatchewan, Manitoba, Ontario and Prince Edward Island—for their positions in this regard.² Yet words do not always mean action, as summed up in a Québec ministry statement: "...a comparison of departmental pronouncements on poverty with the level of departmental activity, particularly joint activity with other ministries or organizations, leads to the following general conclusion: a truly integrated vision of the issue of poverty is lacking in the major functions of the Department." It concluded "...that there has been too little evaluative research on ways of tailoring programs and services to the needs of the poor."³

In two notable cases, poverty is being addressed as a health issue: in Québec and the United Kingdom.

In the former, recent initiatives to address recognized weaknesses in policy are moving the province towards establishing a more comprehensive approach to population health. An example is the 1997 Québec Family Policy, providing for family allowances, universal childcare, parental leave and enhanced family income supports,⁴ coupled with the work of the Ministry of Health and Social Services and its regional health departments. Integral to this overall initiative is the goal of eliminating poverty. Beginning with a forum of stakeholders in 1997, the government announced plans to implement a National Strategy to Combat Poverty and Social Exclusion in 2002,⁵ conducted by the minister of state for social solidarity and child and family welfare, the minister for the elimination of poverty and exclusion and the secretary of state for the status of women. In its 2002 budget speech, the government announced actions to remove more low-income taxpayers from the tax rolls, increase financial assistance to the most disadvantaged in Quebec, enhance employment-assistance measures, direct more money into local development in high-poverty areas and spend additional money on prevention services for children and youth.

The United Kingdom is adopting the target of improved health for all segments of society. Its goal for a comprehensive agenda of programs is designed to reduce socio-economic inequalities. Although it will take years to judge how well good intentions translate into action, the program is impressive.⁶ Attempting to overcome health effects associated with inequality, the current government has initiated programs to reduce inequality and improve health: "At the beginning of the twenty-first century, your chances of a healthy life still depend on what job you do, where you live, and how much your parents earn. It is unfair and unjust."⁷ To achieve its goal, the government has set out a comprehensive program, including action to eradicate child poverty by increasing parental incomes, a *Surestart* program for preschoolers, improving housing and neighbourhoods, raising employment, increasing the minimum wage, targeting social exclusion and strengthening programs to reduce smoking and drug and alcohol abuse. It has instituted targets, such as halving child poverty by the year 2010; established eight regional Public Health Observatories that act as information clearinghouses and is strengthening its evidence base in order to be able know which interventions work.⁸

2. Strategic Approaches to Addressing Poverty

Two broad strategic approaches focus on alleviating the effects of poverty on health: 1) directly reducing poverty and socio-economic inequality and, 2) intervening in the pathways connecting poverty and health.⁹ A founding document of the United Kingdom's initiative to address health inequalities categorized these two interventions as "upstream" and "downstream."¹⁰ *Upstream* refers to those "...wider influences on health inequalities such as income distribution, education, public safety, housing, work environment, employment, social networks, transport and pollution,"¹¹ factors that would universally affect the population-health environment. *Downstream* policies have an explicit health purpose, a narrower range of benefits and tend to be targeted at those already suffering from increased health risk. While this apparent dichotomy is useful for illustrative purposes, in reality there is no neat dividing line between the two. Rather, policies fall along a continuum stretching from the *upstream* approach of making fundamental changes in how society is governed and power shared, to the *downstream* approach of clinical treatment at the individual level (e.g. providing a nicotine patch to a patient to help him or her stop smoking).¹²

As we move downstream, interventions are intended to act upon the pathways, or linkages, between poverty and health, a move that requires some understanding of such pathways. Much still remains to be known. A growing body of knowledge is accumulating, however, and certain principles garner general agreement:

- Poverty affects health throughout the life cycle. Social disadvantage places people on fairly predictable health trajectories beginning before birth, and the impacts of that disadvantage are most pronounced at certain sensitive points or developmental transitions.¹³ Examples of these sensitive points are: birth, starting school, adolescence and developing sexual relationships, leaving home, getting a job, marriage, parenthood, chronic disease and illness and retirement.¹⁴ These sensitive periods afford particularly effective downstream intervention points. Additionally, the health impacts of poverty accumulate and reinforce each other over a lifetime.
- Poverty does not affect health through a single pathway. If it did, a "magic bullet" could be developed to prevent harm, just as immunization does for infectious diseases. Instead, multiple factors affect health. These may be summarized according to broad negative consequences of poverty: material want and deprivation, psychosocial impairment, social exclusion and negative health behaviours such as smoking and excessive drinking.¹⁵
- Multiple risk factors and their interactions make interventions challenging and expensive.¹⁶ Measuring the effectiveness of interventions can be especially challenging for this reason. It has been estimated that risk behaviours such as smoking, unhealthy eating and drinking, and lack of physical exercise explain only 10–20% of mortality attributed to inequality.¹⁷ To reduce inequality-induced mortality by 50–100% would require eliminating between 10 and 20 risk factors.¹⁸ Consequently, seriously reducing the negative health consequences of inequality requires action on many fronts. Nonetheless, certain downstream approaches have had success. It has been

demonstrated that different social conditions and risk factors produce different gradients linking mortality with income. The cumulative effects of improving the social environment, including health and education services, social supports, and inclusive policies and attitudes (i.e. downstream interventions), appear to flatten the gradient.¹⁹

- Knowledge is accumulating on how certain health risks, such as tobacco and alcohol, affect biophysical pathways and result in illness and premature mortality. Increasingly, researchers agree that disadvantage stemming from conditions associated with poverty between foetal development and three years of age can have largely irreversible effects on brain development. Because such impairment becomes virtually impossible or very difficult to undo later in life, there is consensus that interventions need to begin as early as possible.²⁰

Reaching the Poor

The theme of this paper is poverty and health. The policies and programs reviewed primarily address people living in poverty. However, policies and programs that help poor people are not necessarily closed to others; some are universal or near universal and aid a broad range of people within a certain demographic or geographic category. Other interventions are targeted at poor people. The degree of access to a program depends on the definition of poverty used to judge eligibility. If eligibility is based on an absolute concept of poverty, citizens must meet specific criteria in order to qualify. If a relative concept—based on the notion of inequality—is used, then individuals representing a wider income range will be eligible.

At the national level, Canada's main income-security programs fall between universal and targeted. They all provide assistance to poor Canadians, but the majority of benefits go to Canadians who are not poor.

- Among the elderly (over 65 years), in 1997, the 20% of the elderly population with the lowest income received 26% of total universal Old Age Security and targeted Guaranteed Income Supplement and Spouses Allowance benefits.²¹ This lowest-income group received only 14% of Canada/Quebec Pension Plan benefits, but the combined benefits of these programs constituted 90% of the poorest groups' total income. These programs are vitally important to seniors' health.
- Among families with eligible children, the Child Tax Benefit directed 35% of its total expenditure to the poorest 20% of families in 1997, providing recipients with 15% of their total incomes. While this amount helps recipients lead healthier lives, it is not as significant for health as the benefits for the elderly.
- Among working-age households, the program most targeted to poor people is provincial social assistance. In 1997, 83% of social assistance benefits went to the poorest 20% of households, while this population received only 17% of benefits from the Employment Insurance program. Together, social assistance and Employment Insurance provide 36% of household income for those in the bottom 20%, providing a significant addition to their standard of living.

At the community level, demonstration projects and programs frequently target mothers on social assistance, implying the adoption of an absolute poverty criterion for project or program entry. One Toronto program serves families in a community where incomes are 41% of the Toronto average and 50% of citizens are unemployed.²² The program, however, is open to all in the community. In 2001, the national Community Action Program for Children reported that 45% of participant families had incomes below \$15,000 and 38% were headed by a lone parent.²³

Even though alleviating absolute poverty inspires many of these programs, a relative definition of poverty applies in many community and school-based programs, which are targeted at poor neighbourhoods but remain open to all residents. The Child Tax Benefit is an example of a program that uses a relative definition of poverty, as does the sliding scale of charges for childcare in Quebec. In the broad United Kingdom initiative to address health inequalities, some programs are universal but heavily target the nation's poorest neighbourhoods, where unemployment and poverty often exceed 50% and many people are excluded from society.

A lesson drawn from an international study of policies and outcomes for young children provides an instructive lesson on targeting versus universal approaches: countries where social programs are targeted to the poor are associated with the worst record of alleviating poverty.²⁴ This is explained partly by the fact that targeting is often used as a way to save money and help those only in dire need, whereas universal programs are more generous and are an extension of an inclusive social strategy designed to help all. Additionally, in periods of economic decline, universal programs are less likely to be cut back because they receive support from all citizens, not just the few who receive benefits and often have less political power.²⁵

3. What's Been Tried, What Works: Evaluating Interventions

This section reviews upstream interventions that raise income and downstream program interventions. The latter include demonstration projects that aim to improve income and self-sufficiency and programs with health-specific goals.

Included in this review are some promising projects that are not yet complete but which include a health-evaluation component. In some cases, evaluations look only at effects on income, employment and poverty. Seldom is the cost-effectiveness of interventions assessed. A lack of evaluation studies is not a problem unique to Canada: one knowledge gap revealed in the development of the comprehensive United Kingdom intervention program was the lack of evaluation studies, especially for upstream interventions.²⁶

Upstream: Income Support Strategies

If we look at upstream interventions designed to avoid or reduce poverty and income inequality, most countries, Canada included, have developed a range of income and social security policies and progressive tax systems. This support is not just for poor people, but for all who qualify based on income levels and demographic factors. Canada's income security system includes:

- Programs and tax provisions that benefit families with children;
- Benefits for the elderly;
- Social assistance programs for the poorest members of society;
- Earnings-related pension, disability, maternal/parental leave, sickness, injury and unemployment benefits; and
- Regulatory provisions for minimum-wage laws.

The effectiveness of Canada's national income security system at poverty reduction has never been rigorously evaluated, partly because the system is not a demonstration program that can carve out control groups, and partly because program details, amounts and recipients constantly change. Nor has the direct impact of the system on health been evaluated. Consequently, from a poverty perspective, the only test of effectiveness is whether the system reduces poverty. Using the Statistics Canada low-income cut-off (LICO) (pre-tax) as a proxy for poverty, the following trends emerge:²⁷

- The poverty rate for families has gone from 11.3% in 1981 to 14% in 1997, two similar years in the economic cycle. It should be noted that in 1997, female lone parents with children constituted 28.4% of all poor families, and their poverty rate was 56.0%, up from 52.9% in 1981.
- For seniors over the age of 65 years, the picture is better: the poverty rate fell from 33.8% in 1981 to 24.8% in 1997.

- Other groups face high poverty rates: Aboriginal people off reserve (43%); disabled persons (31%); and persons of visible minority status (36%).²⁸ In 1995, these rates were well above the Canadian average of less than 20%.

Despite these trends, it has been shown that in the face of the decline in the earnings of poor people relative to those with higher incomes—reflected in the growth of “market poverty”²⁹ from 1981 to 1997—poverty rates would have been much higher in 1997 in the absence of government programs and taxes. In addition to government program benefits, provincial minimum wages should be an effective remedy against poverty level earnings. However, an analysis using 1998 data shows that for a lone-parent mother with one child, minimum wage income would leave her at 57% of the LICO in Newfoundland and at 78% in British Columbia.³⁰

In addition to the poverty rate outcomes, data for the depth of poverty is also not encouraging. For non-elderly households, the average household poverty gap (the dollar amount by which a family falls short of the poverty line) rose from \$7,810 in 1981 to \$8,265 in 1997 (all values adjusted for inflation). For seniors, the picture is slightly better: the average gap declined from \$3,683 in 1981 to \$3,169 in 1997.³¹

Another effectiveness benchmark of Canada’s income security system is its performance compared to other market economies:

- In a mid-1990s study of 12 western European countries, North America and Australia, Canada’s poverty rate (15%, using a standard poverty measure) was higher than that of eight other countries. It almost doubled that of most western European countries, and quintupled the Swedish and Finnish rates of 3%, but was much lower than the United States rate of 25%.³² In contrast, due to its relatively generous income programs for seniors, only three countries had more favourable rates of poverty among seniors than Canada.
- In rankings analyzing the effectiveness of poverty reduction programs, Canada’s efforts were shown to reduce poverty among all individuals by half compared to what would likely have prevailed in the absence of government programs. Out of 12 countries, Canada placed near the bottom on this measure, tied with the United Kingdom and ahead only of Australia and the United States. By comparison, Sweden and Belgium reduced overall poverty by 80%.
- However, Canada ranked near the top in terms of reducing seniors’ poverty, causing it to fall by 90%. For children, anti-poverty interventions had less spectacular results, reducing child poverty by only one-third compared to what it would likely have been in the absence of government spending.

We can conclude that aggregate spending on income programs has an impact on poverty, albeit an impact that is uneven across demographic groups, and that depends on government spending levels. With the exception of seniors, Canada has not ranked high internationally in terms of poverty reduction, a fact connected to its low ranking in terms of its social expenditures as a percentage of GDP.³³ In 1995, for example, Canada placed tenth out of 12 countries for social expenditures as a percentage of GDP: it allocated 19%

of GDP, far below Sweden's 33%. We know that government income-security programs lessen poverty. How much depends on the amount spent: in a 12-country study, poverty reduction varied between 30% and 80% depending on spending level. This evidence suggests that adopting programs to increase income support reduces poverty.

Some evidence cites the effectiveness of upstream interventions on poverty in terms of health outcomes. Following the inception of Social Security for the United States elderly, for example, and during a later high-inflationary period when benefits were indexed, elderly mortality rates decreased demonstrably compared to those of other age groups.³⁴ A United Kingdom study estimates the reduction in premature deaths that would likely result if the three major upstream intervention targets in the government program were achieved. If full employment were attained, premature deaths would fall by 2% (by up to 17% in areas of high unemployment). Redistribution of wealth to pre-1980 levels would reduce premature deaths by 7% nationally, and up to 37% in very unequal areas. Finally, the eradication of child poverty would reduce premature deaths among zero to 14-year-olds by 21% (up to 92% in high-poverty areas).³⁵

Downstream: Programmatic Strategies

When we turn from large upstream and unevaluated interventions to income and employment programs and, further, to health-specific programs, we find many examples of rigorous evaluations demonstrating programs' impact on both poverty and health. Many of these community-level interventions and demonstration projects focus on children and families and tend to target specific risk factors such as material want and exclusion. Nine programmatic strategies are assessed below—one on employment and self-sufficiency and the rest on health: prenatal nutritional support, home and nurse visiting, infant support, pre-school support, school-age support, mobilizing community support, neighbourhood improvement and reducing risk behaviours.

Employment and Self-sufficiency

Demonstration programs aimed at improving the employment prospects and earnings of parents on social assistance have shown positive results.

- An Ontario-based randomized trial of parents with children on social assistance provided nurse home visiting, recreation services, childcare, and employment retraining on a pro-active basis and compared the results to a control group not receiving pro-active assistance. The results showed the intervention paid for itself in the reduced use of other services and a 15% greater exit from welfare.³⁶
- During the 1970s, a number of controlled, guaranteed-income experiments in the United States and Manitoba demonstrated that varying levels of guaranteed income produce different employment impacts (some increasing work effort, some decreasing it) but reduce poverty (because of the generous guarantees). Since the focus of these experiments was on the effects on work effort, health was not extensively monitored. An experiment conducted in Gary, Indiana, however, which raised incomes to the poverty line, tracked birth weight. Increased income resulted in

increases of between 0.3 to 1.2 pounds for babies in families of the income-supplemented group, due to improved nutrition for their mothers.³⁷

- For about 30 years, United States governments at the federal and state level have been experimenting with ways to reduce the welfare case-roll for single mothers. An evaluation was conducted based on a five-year follow-up of single mothers and their children in 11 mandatory programs in six different states. The evaluation compared two interventions: the first, a short-term approach, focused on helping people with job searches and moving them quickly into jobs, while the second involved improving people's skills through education and training. Overall, the results show a low rate of success.³⁸ About three-quarters of people on welfare, enrolled in neither program, found jobs; the employment rate for those enrolled in the two intervention programs was not much higher. However, those in the programs did find more months of work, and their earnings were slightly higher, but their combined total income was little different from those on welfare. Poverty-level earnings simply replaced poverty level social assistance, and the slight gain in self-sufficiency was not accompanied by any reduction in poverty. Young children experienced little impact to health, although adolescents experienced a small, unfavourable effect on academic functioning.
- Two interventions using earnings incentives are being tested in Canada and Minnesota and represent a different approach to encouraging self-sufficiency.³⁹ In Canada, British Columbia and New Brunswick are the sites of two pilot *Self Sufficiency Projects* that aim to determine the effects that earnings supplements might have on helping single parents move off income assistance. They involve supplementing the wages of single parents who have been long-term income-assistance recipients but who are willing to leave income assistance for a full-time job of their choosing. Recipients in these projects receive a supplement equal to 50% of the difference between their job earnings and a benchmark figure initially set at \$30,000 a year in New Brunswick and \$37,000 in British Columbia. After 36 months, the results are positive. In terms of effects on full-time employment, 42% of the program group, in contrast to 27% of the control group, had ever worked full time during the three-year period, and their monthly incomes were \$121 higher. Poverty was also affected: 78% of those receiving the supplement are below the Statistics Canada LICO, compared to 87% of the control group.

As part of its welfare reform, Minnesota has introduced the *Minnesota Family Investment Program*. This program offers an incentive to employment in the form of disregarding earnings in calculating welfare benefits. If not disregarded, earnings would normally reduce benefit amounts (as they do in the control group), leaving workers little better off. Like the *Self Sufficiency Projects*, the *Minnesota Family Investment Program* has increased employment. Unlike the Canadian projects, it is not restricted to full-time jobs. The Minnesota project has increased part-time employment by 12 percentage points over the control group, but has marginally reduced full-time employment. However, it has reduced the poverty rate by 12 percentage points.

Running alongside both these projects are incentives-only hybrid programs that include job-search and employment-support services. The resulting effect of these projects on annual earnings was substantial in Minnesota (a \$650 increase), but more modest in

the *Self Sufficiency Projects* (a \$200 increase). While both programs succeeded in getting people off welfare and reducing poverty, they paid out \$450 more in total public assistance per person in Canada and \$1,700 more in Minnesota than the amount paid to those in the welfare-only control group.

In both programs, evidence for child outcomes for elementary school-aged children shows higher school achievement and better behaviour compared to the control group. The *Self Sufficiency Projects* also studied outcomes for children aged 3–5 and those aged 12–18: there was no measurable impact for the younger children, while adolescents exhibited increased acts of minor delinquency. Little impact on school achievement was noted. Additionally, mothers in the supplement group spent \$15 a month more on food and were less likely to use a food bank.⁴⁰

Prenatal Nutritional Support

Some programs provide mothers and infants with nutritional support. The Montreal Diet Dispensary sponsored an early nutrition program for women in poverty to reduce the risk of low-birth weight babies. It provides nutritional counselling and support, group activities, home assessment and follow-up visits. A study of 522 siblings over a 16-year period showed a reduction in low birth weight of 50%.⁴¹

In the United States, the federally funded *Special Supplemental Food Program for Women, Infants and Children* provides nutrition education and food vouchers for poor families. The evaluations have been mixed, but in general they show a reduction in low-birth weight babies.⁴² The reduction of low birth weight is important because it has been shown that among many other effects, low birth weight leads to increased likelihood of cardiovascular disease in adulthood.⁴³

The national *Canada Prenatal Nutrition Program* assists communities in developing or enhancing comprehensive services for pregnant women who face conditions of risk. More than 700 projects are operating, but no evaluations are available to date.⁴⁴

Home and Nurse Visiting

Home visiting programs for new mothers by nurses and midwives or trained volunteers, often drawn from the same ethnocultural community as the mothers, are aimed at improving nutrition and parenting effectiveness and reducing isolation. These programs provide varying types of support for women in low-income and other risky situations, and a number have been evaluated.

- Toronto's *Babies Best Start*, aimed at low-income parents, recruits, trains and supervises parents from the community who are paid to provide a friendly home-visiting service to new parents of similar ethnocultural backgrounds from birth to age six. According to an interim evaluation report, parents report less stress and more pleasure in caring for their young children and positive changes in home environments.⁴⁵
- The *Hawaii Healthy Start* program uses professionally supervised volunteers to visit, for up to three years, the homes of newborn children at risk of being abused. Evaluations of this program are neutral or positive depending on the administering agency.⁴⁶

- The *Nurse Home Visitation Program* of Elmira, New York, used nurse visitation to single-parent and poor families during pregnancy and up to the child's second birthday. This program showed reduced incidence of maltreatment by parents, reduced hospital visits for children, and increased employment for mothers, but at age four, no improvement in children's IQ.⁴⁷ A 15-year follow-up found some positive effect in reducing serious criminal behaviour for children and for mothers, fewer behavioural impairments, less abuse and neglect, and less use of welfare. A cost-benefit analysis concluded there was an overall saving of \$180 per person in the program.

In reviewing home-visitation programs, Mustard and McCain concluded that home visitation does not appear to have a large effect on early child development unless it is coupled with early child development programs in centres.⁴⁸ In a similar vein, commenting on the effectiveness of early childhood programs in general, a pair of United States reviewers concluded that family and child support programs can be effective, especially for low-income families, but must be sustained by multi-dimensional services supporting both children and families.⁴⁹

Infant Support

In Ontario, a randomized trial of lone mothers on social assistance examined the effects of subsidized recreation and quality childcare services on children aged zero to two years. The results showed that children in the study were less frequent users of physician specialists and social-work services; the increased competencies were especially significant for those with an initial behavioural disorder. Parents exhibited fewer nervous-system disorders, used less medication for sleep and had fewer anxiety disorders.⁵⁰

In Toronto, the St. Jamestown community's *Growing Together Program* was instituted to address preventive health needs in a community that exhibited the highest rates of low birth weight and hospital admissions in Ontario. It consists of early screening and assessment of newborns, childcare services while mothers attend groups, special services for children identified with developmental delays, home visits, therapy and counselling. While inspired by a 50% unemployment rate and low incomes in the community, the services are universal and open to all in the community. The program phones all families with a newborn, for example, and offers them a visit. An immediate-impact assessment demonstrated an improvement in the psychological functioning of and reduced depression in mothers, while children exhibited reduced risk affecting development.⁵¹

Hertzman and Weins surveyed a number of successful demonstration models in the United States aimed at improving child development during infancy.⁵² They looked at about a dozen programs, aimed mainly at high-risk children, designed primarily to provide infant stimulation and parent awareness. Common features of the successful programs were: voluntary parental involvement, an actively reinforced parental role, the promotion of positive role models, frequent contact with program staff, and a focus on both cognitive and social-emotional factors. In the *Infant Health and Development Program*, involving low-birth weight babies of disadvantaged mothers, after 36 months of weekly home visits in the first year, educational centre-based care from one to three years, and parent support groups, the IQs of the children were 13.2 points higher than those in the control group.⁵³ *The Family Rehabilitation Program* was an intervention targeted at

developmentally challenged young mothers and their infants. For mothers, it consisted of eight years of intensive education, vocational programs and counselling. The children's educational program began at three to six months and continued through to age six. By age 10, their IQs compared favourably to those in the control group.⁵⁴

Pre-school Support

Pre-school programs for children from disadvantaged families are a popular type of community initiative. In Canada, *The Aboriginal Brighter Futures* assists First Nations and Inuit communities in developing community-based approaches to health programs for children aged zero to six and their families. It operates in 667 communities. *First Nations Head Start* is designed to meet the unique needs of children aged zero to six and their families living on-reserve. It currently serves 307 communities. The *Aboriginal Head Start* program currently involves 114 projects for three- to five-year olds and addresses the pre-school educational needs of First Nations, Inuit and Metis children living in urban and northern communities.⁵⁵ Evaluations of these three interventions are being undertaken, and the success of similar head-start and community interventions bodes well for their successful impact.

The United States is home to two heavily cited pre-school demonstration projects, the *Carolina Abecedarian*⁵⁶ and the *Ypsilanti/High Scope*, commonly referred to as the *Perry Preschool Project*.⁵⁷ Several centres in the federally funded *Head Start* program have also been evaluated.⁵⁸ The evaluations of these preschool centre-based educational interventions demonstrate increased cognitive and socio-emotional development for children in the groups compared to those in control groups. In the *Abecedarian* project, follow-up at age 15 showed that children who were in the program had better scores on reading and mathematics. The mothers also became better educated and less likely to be unemployed than those in the control group. Follow up of the *Perry Project* showed that at age 27, the competencies of adults who had been in the program showed positive differences from the non-intervention group. Evaluations of *Head Start* in four counties showed that, compared to the control groups, those in *Head Start* were much more likely to have received basic health services, were in better health, exhibited better motor coordination and development and had eaten meals higher in nutrient quality. The *Abecedarian* project provided an eight-year intervention for children, the *Perry Project* three years and *Head Start* one year.

School-age Support

Four elementary school and pre-adolescent program interventions reviewed by Hertzman and Weins show encouraging results.⁵⁹ The *Yale Child Study Center* attempted to change the social environment for an entire school population in a socially and economically deprived community.⁶⁰ It was designed to improve trust, communication, mutual respect and understanding. Evaluation at Grade 7 for students who had been at an intervention school for Grades 1 to 4 showed significantly higher levels of competence in language, work-study and mathematical skills than those in the control group.

Three other projects were aimed at reducing aggressive behaviour. The *Oregon Social Learning Center* conducted an experiment with the volunteer parents of socially aggressive

children aged 3 to 12.⁶¹ The parents were supported and trained to deal with their children's aggression, and aggressive behaviour scores dropped compared to the control group. This model was also applied to prevent disruptive behaviour among boys in selected disadvantaged areas in Montreal.⁶² Study participants were screened in kindergarten, but the two-year intervention took place when the boys were aged seven to nine years. At age 12, 65% of the boys in the experimental group were at their appropriate grade level, compared to only 45% of the control group. The *Ottawa Project* offered a recreational and skill development program to all children aged 5 to 15 in a social-housing development.⁶³ During this period, antisocial behaviour in the community fell compared to the control site, which provided only a traditional recreation program.

Mobilizing Community Support

Another popular type of intervention centres on mobilizing communities and building community coalitions. These interventions are primarily motivated by the desire to encourage a better environment for children in homes and communities and to increase understanding of conditions necessary to produce healthy children. However, these interventions should not be regarded simply as attempts to improve early childhood development. Rather, they should be seen in the broader context of efforts to rebuild the social fabric of neighbourhoods in order to improve social support for all residents and reduce social exclusion.

A large controlled Ontario demonstration project begun in 1990 involves pre-school and school-age children. *Better Beginnings Better Futures* is one of the most comprehensive and complex prevention initiatives ever implemented for young children. It will run for 25 years at eight project sites, and includes regular follow-up. The program emphasizes the ecological nature of child development through a comprehensive program of activities aimed at supporting and improving child, family and neighbourhood function. Residents at each site were involved in all stages of project development, including planning the evaluation. Two models were developed. In the first, prenatal/infant development programs for children from birth to age four link up with preschool programs. The second, for children aged four to eight, integrates preschool programs with primary-school programs. Five sites serve the younger children and three serve the older children; services provided vary across sites. The communities served are low-income: at the beginning of the project, 83% of families with younger children lived below the poverty line, as did 64% of the families with older children. An interim findings report shows positive child outcomes in the areas of emotional, behavioural and social functioning. Families have experienced reduced domestic violence and smoking and increased marital satisfaction. Neighbourhood outcomes show increased safety, satisfaction with housing, use of recreational facilities and a reduced number of students requiring special education.⁶⁴

Project 1,2,3 Go! operates in five low-income, high-risk communities in Montreal and in one high-risk rural community. This project recognizes the role of communities in promoting child well-being. Its aim is to mobilize community support around the shared goal of providing a healthy environment for zero- to three-year-olds. It will soon be evaluated for its effectiveness in community mobilization and its impact on children.⁶⁵

Community Action Program for Children is a national initiative that currently funds 464 community-based coalitions to establish and deliver services to meet the developmental needs of children under age six living in conditions of risk.⁶⁶ An evaluation report is nearing completion. *Understanding the Early Years* is a community intervention that builds on the *National Longitudinal Survey of Children and Youth* and involves parents, teachers, guardians, community agencies and the federal government. Its focus on the early years is designed to increase knowledge about children's development—especially the role communities can play in development. A community mapping study that describes the distribution and range of programs and services available within 13 communities is an important element of increasing this understanding.⁶⁷

Following the influential McCain and Mustard report in 1999, Ontario instituted five *Early Years Demonstration Projects* in different regions to test and evaluate different community-based approaches to early child development and parenting.⁶⁸ Release of an evaluation report is expected in the near future. However, the government has pushed ahead with the announcement of 41 *Early Years Centres* designed as one-stop shops that provide answers to parent's questions about their children aged zero to six years, and referrals to parental-support services. The centres are designed to offer a mix of universal supports that address common needs, such as literacy programs, nutrition programs and resources for parents, but will also offer targeted services such as support for children with special needs.

Neighbourhood Improvement

Neighbourhood improvement is another type of intervention that enhances social support. Norway and the United Kingdom provide examples. A new school, playground, arena and park, sports organizations, restaurants and a cinema transformed a poorly functioning neighbourhood in Norway.⁶⁹ A 10-year follow-up reported improved mental health. In England, with input from residents, a two-year neighbourhood improvement project refurbished housing, improved traffic and lighting, enclosed gardens and provided landscaping. After one year, these physical changes were accompanied by improvements in the social environment and mental health.⁷⁰

Several studies have documented the importance of neighbourhoods to population health. Swedish research has shown that residential segregation in itself has social consequences.⁷¹ In the United States, a statistical study of four communities concluded that living in a disadvantaged neighbourhood was associated with increased heart disease.⁷² In Canada, a study using data from the *National Longitudinal Survey of Children and Youth* demonstrated that neighbourhood safety and cohesiveness were related to cognitive and behavioural outcomes for preschoolers.⁷³

Reducing Risk Behaviours

Finally, some health promotion interventions aim to reduce the health impacts of negative health behaviours. People at all income levels may indulge in risky behaviours such as alcohol abuse, tobacco and drug use, poor eating habits and sedentary lifestyles. However, there are significant socio-economic differences in risk behaviours: the highest prevalence of many of these behaviours appears in groups with the lowest income. Tobacco use

clearly illustrates this pattern: over time, socio-economic differences in smoking have increased, due largely to the success of smoking-cessation initiatives among middle- to high-income groups.⁷⁴

The publication in 1974 of *A New Perspective on the Health of Canadians* (the Lalonde Report) marked the beginning of a new era in Canadian health policy, when the Canadian government recognized for the first time that important factors other than the health-care system contribute to health status.⁷⁵ In the ensuing 25-plus years, health promotion has evolved as a key federal and provincial/territorial strategy for both improving the health of Canadians and reducing risk behaviours in the population, especially among disadvantaged groups. Subsequent advances in thinking reflected in the *Ottawa Charter for Health Promotion* (1986) and *Achieving Health for All, A Framework for Health Promotion* (1986) helped move health promotion beyond a lifestyle orientation and recognized that lifestyle is often not a matter of personal choice. Conditions associated with social and economic disadvantage, such as poverty, unemployment, substandard housing, lack of social support and other determinants of health, serve to condition and constrain behaviour.⁷⁶ To successfully reduce risk behaviours, integrated health promotion approaches have evolved, involving multiple players and inter-sectoral action. Social-marketing campaigns, community-based initiatives, strategies aimed at the key settings that have meaning to people—home, workplace, school—and a growing emphasis on the determinants of health are among the approaches that have been used to change the conditions that shape health behaviour.

In this vein, the *Heart Health* initiative is an example of a well-established, countrywide, multi-level strategy for the prevention of cardiovascular disease. *Heart Health* is an integrated approach to controlling the multiple risk factors for heart disease. It involves numerous networks and coalitions composed of provincial departments of health, the Heart and Stroke Foundation of Canada and more than a thousand organizations in the public, private and voluntary sectors. The national *ParticipAction* program was another example of a joint initiative of public, voluntary and private sectors that combined community mobilization and social marketing to encourage Canadians to become more physically fit. Other notable examples of national health promotion initiatives include the collaborative process that led to consensus among a broad range of partners on nutritional policies, programs and messages (and to a significantly revised *Canada's Food Guide*) and the National AIDS Strategy, a multifaceted, multisectoral response to the spread of HIV/AIDS.⁷⁷

At the population level, the policy approaches that have succeeded in reducing certain risk behaviours include education, treatment services for addicts and changes to the regulation and pricing rules for addictive substances.⁷⁸ A continual drop in the number of smokers, shown in a recent Health Canada-Statistics Canada survey, is attributed largely to control and education measures at the population level.⁷⁹

4. Policy Directions

- Although it is widely recognized that poverty and health are connected by multiple, interrelated risks, most demonstration projects and programs tend to address only a few risks. Evidence shows that this narrower focus reduces the positive impact of programs that aim to mitigate the negative effects of poverty on health. Consequently, while we need to intervene in ways that address multiple risk factors, we also need systematic knowledge about the shape, cost and effectiveness of comprehensive or multi-dimensional programs. How many interventions are needed and how would they fit together? What is the ideal mix of upstream and downstream interventions? Who would have jurisdiction? How is the knowledge we have gained translated into programs? Demonstration projects tend to be small and geographically isolated. How are projects scaled up to apply to entire populations? What is the optimum balance between targeted and universal interventions?
- Evaluations provide a growing knowledge of the effectiveness of interventions in reducing poverty and its negative health impacts. Evaluations, however, seldom assess the cost-effectiveness of interventions.
- Our knowledge of interventions that have been tried—and of what works—remains fragmented. This fragmentation is being addressed in the United Kingdom by establishing eight regional Observatories that will collect and share information on a wide variety of health topics, with a focus on what works. Similar initiatives have begun in Ontario and in Quebec. Canadian health policy can benefit from this experience by establishing means of identifying and synthesising knowledge and making it more readily available to interested parties.
- We need more evidence concerning the trade-offs or relationships between *upstream* and *downstream* interventions. If we make significant reductions in poverty and inequality through upstream income and employment policies, how much would this reduce the need for, and alter the type of, downstream interventions designed to help poor people?
- Detailed analysis in the United Kingdom has estimated the reductions in mortality that would result from achieving the country's program goals of reducing inequality, eradicating child poverty and reducing unemployment. Quantitative estimates of this type in the Canadian context covering a range of policy options would be very useful to policy makers.

Conclusion

Despite notable advances in reducing poverty among the elderly, Canada's efforts at poverty prevention for other groups and the population as a whole have not ranked high internationally. In part, Canada's low ranking is a result of less national spending (with certain exceptions) on reducing poverty and income inequality than other, more successful, countries. It will be worth watching the lessons learned from the ambitious and comprehensive United Kingdom program, which aims, among other goals, to eradicate child poverty and reduce inequality.

Without evaluation research, we are limited to speculating about the effects of Canadian income security, income redistribution and employment policies—all strategic, upstream interventions aimed at reducing poverty and income inequalities—on the health of Canadians living in poverty. Ideally, we would be able to measure the effects of these policies and programs on health outcomes and the health-care system and their economic burden to society. As a step in this direction, we must continue to attempt to assess the effectiveness of poverty-reduction efforts.

Canada has made promising beginnings in terms of building evidence-based policy approaches to poverty reduction. Two pilot projects by the Social Research and Demonstration Corporation, designed to reduce poverty and increase the self-sufficiency of lone parents on social assistance, show early results that suggest these projects are likely to provide clear implications for income support policy as time goes on.

This review also looked at a number of *downstream*, programmatic interventions aimed at helping low-income populations better cope with the effects of poverty. The evidence base for such policy and programming is uneven: while a great number of interventions exist, very few have been rigorously evaluated and even fewer have been subjected to any cost-effectiveness analysis. Interventions aimed at improving the health of low-income groups focus (and spend) heavily on interventions aimed at babies, children and mothers, suggesting that governments and communities regard early intervention as an effective strategy. Many of these projects target the most disadvantaged in society: lone parent families, Aboriginal peoples and those excluded by reason of race or ethnicity. There is convincing evidence to recommend such strategies.⁸⁰ Nevertheless, the efficacy of most of the specific programs and projects remains to be demonstrated.

Most of the interventions that have been evaluated demonstrate modest reductions in poverty and improvements in health. However, these results should not be viewed with disappointment or surprise. As this report has shown, risks to health are multiple and the effects cumulative. Thus, we should not expect interventions aimed at alleviating only one or a few risk factors to have huge health impacts. Indeed, there appear to be no “magic bullets,” just a number of limited but promising interventions.

One promising approach involves incorporating specific interventions that successfully target only one or two risks into a more comprehensive strategy, as the United Kingdom initiative has done. This approach is beginning to emerge in Canada, notably, in the Canadian federal/provincial/territorial *Early Childhood Development Agreement* children's initiatives, and Quebec's *Family and Health Policy*. The conclusions of two American

reviewers of child and family programs represent a good general summary of these findings: “Parents need supports in multiple arenas of functioning. High-quality programs can make a difference in the health and well-being of families. And finally, there are no quick fixes—families need intensive services of substantial duration in order to reap significant benefits.”⁸¹

The many individual demonstration projects and programs reviewed in this paper appear to spring from disparate sources, with an absence of any central coordinating mechanism. Few appear to be part of a considered program that would promise follow-up of successful interventions. A coherent strategy and mechanisms for translating grant-driven community demonstrations into public programs seem largely absent, a situation due in part to fragmented jurisdictions. Income, employment, taxation and income-distribution policies are largely the responsibility of the federal government; the administration of social, education and health services falls mainly to the provinces and territories, while neighbourhood improvement, housing and childcare are largely left to municipalities and community groups.

In 1997, the National Forum on Health explicitly recognized this lack of integration and called for, “...a broad, integrated child and family strategy consisting of both programs and income support...collaboration among the federal government, private sector and existing foundations to strengthen community action...and explicit acknowledgement of the health and social impacts of economic policies and actions to help individuals who are trying to enter the workforce.”⁸²

The absence of intervention coordination and follow-up could also spring from a lack of recognition that poverty and inequality are linked to health, with the consequence that economic and health policy maintain their two solitudes. The United Kingdom initiative provides a good example of clear recognition of the link between inequality and health.

This paper has examined a range of policy and program efforts, highlighting successes throughout. The scan aims to create greater awareness of ways to address the links between poverty and health in the hope that remedies can be developed to reduce inequities and improve the health of Canadians.

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