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SUMMARY REPORT | FEBRUARY 2010

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AUTHOR

National Collaborating Centre for Healthy Public Policy

EDITORS

Val Morrison
National Collaborating Centre for Healthy Public Policy

Suzanne Blanchet
Rédaction SB

RESEARCH

This document is a summary of a longer report (available on request) prepared by Dominique Côté, under the supervision of Dr. Marie-France Raynault, of the Centre de recherche Léa-Roback sur les inégalités de santé de Montréal.

LAYOUT

Madalina Burtan
National Collaborating Centre for Healthy Public Policy

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ABOUT THE NATIONAL COLLABORATING CENTRE FOR HEALTHY PUBLIC POLICY

The National Collaborating Centre for Healthy Public Policy (NCCHPP) seeks to increase the expertise of public health actors across Canada in healthy public policy through the development, sharing and use of knowledge. The NCCHPP is one of six Centres financed by the Public Health Agency of Canada. The six Centres form a network across Canada, each hosted by a different institution and each focusing on a specific topic linked to public health. In addition to the Centres' individual contributions, the network of Collaborating Centres provides focal points for the exchange and common production of knowledge relating to these topics.

FOREWORD

The following summary report details policies and programs in Canada that have had some measure of success in reducing health inequalities.

The National Collaborating Centre for Healthy Public Policy asked researchers at a research centre on health inequalities, Centre Léa-Roback, to report on programs and policies in Canada whose results have been evaluated using current medical evidence-based standards, including an evaluation of the quality of published evidence used in clinical guidelines.

Public health actors interested in promoting healthy public policies are concerned that these policies be based on a rigorous application of sound methodologies. Policies and broad government programs, in other words, are ideally based on what has been proven to work. Working with actual populations in social contexts, however, is not the same as working in a laboratory where the researcher has far more control over the experiment. Working with health inequalities and the social determinants of health may make the application of evidence-based standards even more difficult. Notably, in the recently completed report of the Commission on the Social Determinants of Health, the World Health Organization concluded, “had the commission made a decision to rely on evidence solely from well-controlled experiments, this would be a short report with only biomedical evidence-based recommendations and the conclusion that more research is needed” (WHO, 2008, p.42). This abridged report attempts to highlight the publications which have relied on biomedical evidence-based approaches to evaluating the effectiveness of past and current policies and programs that seek to address health inequalities.

The report summarizes the findings from 13 cases. Interestingly, when comparing these results with a report published by the Canadian Institute for Health Information (Ross, 2003), we found that some six years later, very few additional cases had been evaluated. The fact that many of these programs were discussed in the 2003 report emphasizes the fact that few policies/programs are subject to this kind of evaluation. In other words, there are only a few policy/program initiatives that have been systematically studied, particularly over a long period, for which we have results. Although perhaps frustrating from a research point of view, this is not surprising given the nature of health inequalities, referred to above, and the difficulty of isolating the policy or program variables that might be directly measured. This situation underlines the need for a variety of methodological tools for carrying out this type of evaluation.

The following is a summary of a longer document produced by the Centre Léa-Roback on the 13 policies/programs examined, including the basis for their selection and the criteria used to evaluate their success. We hope that this will be useful to public health actors working in the area of the social determinants of health.

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1 PART I: INTRODUCTION

1.1 CONTEXT AND METHODOLOGY

The reduction of social inequalities generally and of health inequalities in particular has been a constant preoccupation of many democratic societies for decades. However, the fact that inequalities persist is an indication that the efforts and programs to reduce them have not all been successful. Decision makers and social actors would thus be well-advised to take note of those programs and policies that have managed to reduce inequalities, and to draw on them for inspiration in order to achieve greater efficiency and efficacy. Some of the programs with results that have been assessed as positive are presented in the following pages.

The selection of governmental interventions or programs financed by the state was guided by a rigorous selection process based on several criteria. Only those whose explicit goal was to act on the social determinants of health (for example, through reducing tobacco use) or to reduce health inequalities (through various income support programs, for example) were selected.

The selection was made from three data sources:

- Databases which house scientific documents (academic journals, reports, books, theses) on public health, on the sociology of health, as well as repertories of evidence-based practice;
- Publications of governmental and paragovernmental organizations (ministries and governmental agencies);
- Information disseminated by non-governmental and not-for-profit organizations working in the area of public health.

The strength of the evaluation was determined on the basis of a hierarchical analysis of the quality of published evidence.

Type I	Evidence obtained from at least one properly randomized trial
Type II-1	Evidence obtained from well-designed controlled trials without randomization
Type II-2	Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one centre or research group
Type II-3	Evidence obtained from comparisons between times or places with or without the intervention
Type III	Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees

Health Canada, 1994, p.xxxvii.

1.2 INEQUALITIES IN CANADA

Although Canada is a developed country, poverty and socioeconomic inequality are widespread enough to considerably affect the health of a portion of the population. Several potential solutions to the problem have been proposed: in a report entitled, *Social Determinants of Health. The Solid Facts* (WHO, 2003), the World Health Organization concludes,

> Good health involves reducing levels of educational failure, reducing insecurity and unemployment and improving housing standards. Societies that enable all citizens to play a full and useful role in the social, economic and cultural life of their society will be healthier than those where people face insecurity, exclusion and deprivation. (WHO, 2003, p.11)

Solutions to the problem of health inequalities, then, require complex, judiciously applied, and sustained interventions. The multipronged objectives often involve breaking cycles in which health problems associated with poverty are exacerbated by food insecurity, inadequate housing, unstable employment and income, etc. It is therefore unlikely that any single program will solve all health inequalities.

1.3 TWO BROAD APPROACHES TO ACTION

It is commonly accepted today that actions to reduce health inequalities need to come from two directions. With reference to the work of a research team in the Netherlands, it has been established that the most efficient governmental interventions are those that reduce poverty itself, which is the first approach (Mackenbach, 1994). This is done by raising levels of educational attainment, by working to reduce unemployment, and by raising the income of those at the bottom of the social hierarchy. The means for accomplishing this are known: allowances, income supplements, and programs that raise education levels.

The second approach is to reduce the exposure of disadvantaged groups to health-damaging conditions (food insecurity, pollution, and unsafe environments, for example) and behaviours (poor diet, tobacco use, etc.), while keeping the contexts of the target groups in mind.

Income supplements, allowances for the purchase of health services, the creation of activities that promote early childhood development, monitoring and help for pregnant women, the teaching of social skills, – these are only some of the possible paths that can be taken in the effort to reduce health inequalities.

1.4 SOCIALLY AND ECONOMICALLY PROFITABLE

We know that these interventions are not only socially profitable, but that they are also profitable in economic terms. Healthy children and adolescents given the chance to stay healthy and to cultivate opportunities for success represent savings for society when we consider the potential savings in the health care system, in public security, and in the work of other regulatory agencies. The 13 programs presented in the following pages demonstrate that efforts made to reduce health inequalities are not simply expenses, but indeed represent investments from which the whole of society benefits. The evaluated programs presented here convincingly show that social determinants, ill health, and health inequalities are linked in inextricable and complex ways. It is shown that parents who suffer from high levels of stress are less likely to be closely

involved in the development of their children and that poverty affects the cognitive development of children, but also that children who develop skills through leisure activities may perform better at school.

One of the characteristics of the programs summarized below is their capacity to adapt to the contexts of the targeted groups. The *Yes, I Quit!* smoking cessation program, for example, was specifically tailored to women with low levels of educational attainment, and this contributed in part to its success, as the program achieved higher rates of cessation than is usually the case among women with low levels of educational attainment.

2 PART II: PROJECTS, PROGRAMS AND POLICIES

The following is a summary of 13 cases that achieved measurable success in reducing health inequalities.

2.1 FIRST APPROACH: REVENUE SUPPORT PROGRAMS

Table 1 Self-Sufficiency Project – SSP (British Columbia and New Brunswick)

Project	Results – Type I Evaluation
Carried out between 1992 and 1999, the aim of this project was to verify whether an income supplement could help single-parent families to exit social assistance. Within the framework of this project, a parent who agreed to work full-time at a job of their choice could receive, for three years, an income supplement equal to half the difference between their salary and an annual amount ($30,000 in New Brunswick and $37,000 in British Columbia).	*On poverty:* although most of the jobs paid minimum wage, 42% of the subjects in the experimental group worked full-time and saw their monthly income increase by $121. This compared to 27% in the control group. The number of persons below the low-income threshold was approximately 10% lower in the experimental group than in the control group (87% versus 78%). *On the health, behaviour or school outcomes for the children:* overall there was no effect, except there were reports of: • higher levels of minor delinquency and lower academic achievement in young adolescents; • slightly higher results for cognitive functioning and school outcome among older children, but no difference in social behaviour or health. A subsequent evaluation (after 54 months) found that children who were between three and five at the time of the program subsequently performed better at school. Another study (after 72 months) indicated that the children between four and nine years of age demonstrated more positive social behaviour than those in the control group, while also showing more behaviour problems. *On the mental health of parents:* 19% reduction in the incidence of mental health problems, making it possible to conclude that income supplements cost less than treating depression.

Cremieux, Greenberg, Kessler, Merrigan, & Van Audenrode 2004; Michalopoulos, Card, Gennetian, Harknett, & Robins, 2000; Morris & Michalopoulos, 2000; Ross, 2003.

Table 2 Subsidies for health care (Saskatchewan)

Project: *Family Health Benefits*	Results – Type II-3 Evaluation
Since 1998, low-income families (less than $25,900) have been offered financial assistance so that they can have free access to health services not covered by health insurance (dental care, eye care, chiropractic care, prescription drugs, ambulance services, medical supplies). The evaluation, which assessed the behaviour of some 100,000 persons between 1998 and 2000, indicated that the funding had an overall positive effect on "health behaviour".	In concrete terms, the following was observed: • An increase in the use of all the services covered; • An increase in the purchase of medication for adults, including essential medication that the adults did not purchase previously for lack of money. This was the case for medication for cardiovascular diseases and the central nervous system. Many of these medications are essential for treating or preventing chronic illness; • A similar phenomenon was observed in relation to the purchase of medication for children. This led to the extrapolation of a corollary, according to which these increases in the purchase of medication might translate, in the long term, into a lower hospitalization rate.

Livingston, Lix, McNutt, Morris, Rosenbluth, Scott, & Watson, 2004; Saskatchewan Health & Saskatchewan Social Services, 2007.

2.2 SECOND APPROACH: REDUCING EXPOSURE TO HEALTH-DAMAGING CONDITIONS AND BEHAVIOURS

Table 3 Skills development for children (The Ottawa Project)

Project *Participate and Learn Skills*	Results – Type II-1 Evaluation
Aimed at preventing delinquency, this program offered about forty recreational and skills-development activities to children from 5 to 15 years of age living in a large social housing complex, from January 1980 to August 1982.	• Net reduction in overall level of anti-social behaviour among youth in the community. • Increase in sports-related achievement and participation. • Increased levels of self-esteem. • Delinquent behaviour: a net decrease, making it possible to postulate that the resulting savings were 2.55 times higher than the cost of the program. • No observable effect on school outcome or behaviour at home.

Hertzman & Weins, 1996; Jones & Offord, 1989; Ross, 2003.

Table 4 Prevention of delinquency among boys (Montréal)

Project: *L'Étude expérimentale longitudinale de Montréal* (Montréal experimental longitudinal study)	**Results – Type I Evaluation**
Targeting rowdy and aggressive boys, this program consisted in teaching them social skills at school, between September 1985 and June 1987, in order to discourage, among other things, an attraction to antisocial peers. In parallel, parents were given training on child education and teachers were provided with support and information on boys at risk.	• Significant improvement in school outcomes: 20% more boys did not have to repeat a school year; significant drop in anti-social behaviour. • Compared to the boys in the control group, the boys who participated in the program were more likely to graduate (+13%) and had fewer run-ins with the law (11% drop in criminal records).

Boisjoli, Vitaro, Lacourse, Barker, & Tremblay, 2007; Hertzman & Weins, 1996.

Table 5 Monitoring diet during pregnancy (Montréal)

Project: *The Higgins Nutrition Intervention Program*	**Results – Type II-1 Evaluation**
Between 1981 and 1991, this support program for low-income women provided individualized dietary treatment for each woman pregnant with a second child (the first child was part of the control group). Each woman received an allowance for a diet specifically designed to address diagnosed risks.	• The newborns in the experimental group weighed on average 107g more than their brother or sister in the control group. • The rate for low birth weight was 50% lower for babies in the experimental group. • The rates for intra-uterine growth retardation and perinatal mortality were also lower.

Dubois, Coulombe, Pencharz, Pinsonneaut, & Duquette, 1997; Higgins, Moxley, Pencharz, Mikolainis, & Dubois, 1989; Ross, 2003.

Table 6 Proactive services for single mothers (Ontario)

Project	Results – Type I Evaluation
Between 1994 and 1999, a service or group of services was offered proactively to single mothers on social assistance: home visits from a nurse, professional development, recreational activities for children, daycare, and skills development for children.	• Compared to the control group, 15% more mothers no longer needed social assistance after one year. • "Individual impact" of services: of the families that benefited from only the recreational services, 10% more stopped receiving social assistance than those who had only the home visits (12%) or received only the professional training (10%). • Impact on children under two years of age of subsidized daycare/recreational services compared to that of children in the control group receiving services chosen and paid for by their parents: a) The children in the first group participated in more activities and more team activities (activities most apt to develop general and social skills); b) They had less need for the services of medical specialists and social workers; c) Those who initially had behaviour problems showed significantly improved skills; d) The parents of these children suffered less from anxiety and nervous system problems and took fewer sleeping pills. • Cost-effectiveness: the cost of additional services is compensated for by the savings associated with reduced use of health services.

Browne et al., 1999; Browne, Byrne, Roberts, Gafni, & Whittaker, 2001; Ross, 2003.

Table 7 Better Beginnings, Better Future (Ontario)

Project: ***Better Beginnings, Better Future***	Results – Type II-1 Evaluation
Carried out between 1993 and 1998, this program affected 550 children. It is described as one of the most complete and complex controlled prevention projects ever set up for pre-school and school-age children. Carried out in eight disadvantaged communities, it emphasized the ecological nature of their development, and included a full range of activities aimed at promoting their development and the functioning of families and communities.	• Children: improved emotional, behavioural and social development. • Family: reduction of family violence and tobacco use, greater spousal satisfaction. • Community: higher levels of safety and of satisfaction with neighbourhoods (better quality of life); greater use of recreational facilities, and a reduction in the number of students requiring specialized services.

Peters et al., 2000; Peters et al., 2004; Ross, 2003.

Table 8 Anti-smoking campaign (Montréal)

Project: *Yes, I Quit!*	Results – Type II-3 Evaluation
This program offered a course consisting of six classes to low-income women with relatively low levels of educational attainment living in the Saint-Henri neighbourhood. The classes were given by community organizations. The classes were free and were adapted (in terms of content and structure) to the needs of the targeted clientele. Offered for five years, this course was part of a broader program entitled *Cœur en santé Saint-Henri*.	• Six months after finishing the program, the cessation rate was 22%, a higher level than that usually found in this group, which tends to have a higher than average rate of smoking. • The women who did not quit smoking nevertheless reduced their consumption by 67%.

O'Loughlin, Paradis, Renaud, Meshefedjian, & Barnett, 1997.

Table 9 Born Equal – Growing Healthy (Québec)

Project: ***Naître égaux – Grandir en santé*** **(Born Equal – Growing Healthy)**	Results – Type I Evaluation
Between January 1994 and November 1998, personalized monitoring and support was offered to women with low educational attainment levels living below the poverty line. Provided from the 20th week of pregnancy, this psycho-social, informational and nutritional support was aimed at preventing intra-uterine growth retardation, premature birth and low birth weight. The control group was composed of women who received only nutritional assistance (rather than women receiving no support).	• The significance of the program was in the mental health of the mothers, for there was no significant difference between the babies in the two groups. The program had a significant positive effect on the average rate of postnatal depression symptoms among new mothers, both among those with high prenatal depressive symptomology and those whose scores were normal. • There was less postnatal anemia among women who benefited from the program, as well as higher rates of breastfeeding among mothers of Canadian origin.

Boyer & Laverdure, 2000; Boyer & Brodeur, 2001; Colin, 2004.

Table 10 Prevention of mistreatment of children (Manitoba)

Project: *The Neighbourhood Parenting Support Project*	Results – Type II-3 Evaluation
Between 1988 and 1992, help for parents was introduced in two disadvantaged Winnipeg neighbourhoods where cases involving youth protection are three to four times higher than average. This help took the form of personal and community support networks formed to reduce the number of cases involving mistreatment of children due to stress, psychological distress and depressive episodes. One neighbourhood served as the experimental group and the other as the control group.	• Lower risk of mistreatment of children. • Parents in the experimental group had access to more people with whom they could discuss their problems, a change that was greater than that observed in the control group. • Greater parent participation in community life and as citizens.

Armstrong & Hill, 2001; Fuchs, 1995.

Table 11 Parent training centres (Ontario)

Project: *Early Years Centres*	Results – Type II-1 Evaluation
Program targeting parents and children attending kindergarten in disadvantaged neighbourhoods, designed to enhance school readiness among children about to begin primary school and promote positive interactions between parents and children.	• Significant differences between children who participated in the program and those in the control group, specifically with respect to cognitive and language development, communication abilities and general knowledge, emotional maturity and school readiness (+10%), social skills, and health and physical well-being. • The parents who benefited from the program developed their parenting skills, established a social support network and established ties with their child's school.

Government of Ontario, n.d.; McCain & Mustard, 2002.

Table 12 Canadian Prenatal Nutrition Program – CPNP (Canada)

Project: *Canadian Prenatal Nutrition Program*	**Results – Types II-1 and III Evaluation**
Program for pregnant teenagers or pregnant women who are newly arrived in Canada and are grappling with a significant problem (poverty, poor nutrition, geographical and social isolation, violence, substance abuse). The program targets improved maternal and newborn health, fewer low birth weight babies and higher breastfeeding rates by financing numerous projects: food banks, health support services and social services, parental training programs, housing and shelter services, etc.	• Fewer low birth weight babies and more women opting to breastfeed • Improved access to services • Reduced isolation • Improved nutrition • Healthier pregnancies and outcomes • Better parenting • Reduced stress

Health Canada, 1998; Public Health Agency of Canada, 2007.

Table 13 The Canadian voluntary standard for safe play areas and promotion of the standard (Montréal)

Project: *Canadian Standards Association standard CAN/CSA Z614 on playground safety*	**Results – Type II-3 Evaluation**
In 1990, the Canadian government adopted a voluntary standard for the safety of public play areas. A year later, a study by the Direction de santé publique de Montréal revealed that unsafe play areas were twice as common in low-income neighbourhoods. Also, from 1991 to 1995, health professionals at the Direction de santé publique de Montréal raised awareness among playground managers on the island of Montréal of the importance of applying this standard and addressing this discrepancy between advantaged and disadvantaged neighbourhoods.	• Between 1991 and 1995 on the island of Montréal: 13% reduction in playground injuries. • Between 1991 and 1995, “catch-up” initiative at the City of Montréal: increase of 20% to 39% in level of playground safety in medium-income neighbourhoods, almost reaching levels of safety in high-income neighbourhoods (40%).

Option Consommateurs, 2003; Robitaille, Lesage, Laforêt, Dorval, & Bless. 1997.

3 PART III: CONCLUDING REMARKS

In an effort to support knowledge about action on the social determinants of health, the NCCHPP asked researchers at the Centre Léa-Roback to document cases of proven or promising programs and policies that seek or have sought to reduce health inequalities in Canada. The Centre's selection of 13 programs was based on the existence and the strength of studies evaluating the impacts of these programs.

This document shows that, in fact, only a limited number of policies or programs that seek to act on health inequalities have been subjected to evaluation based on strictly-defined quantitative methodologies. While it is crucial that all policies and programs that seek to act on the social determinants of health be subject to rigorous evaluation, it is not always easy or desirable to limit evaluation to one approach. Indeed, the parameters for examining social research are often different from those typically used in a clinical setting, and neither set of parameters is guaranteed to translate well into the other's domain. Nonetheless, this study was able to document evaluations covering the main components of policies and programs based on two broad approaches to the issue of health inequalities: intervention at the level of poverty itself, through various income-support programs, and intervention in specific areas commonly related to the effects of poverty, whether through early childhood intervention programs, through nutritional support for low-income pregnant women, or in other ways. While it is important to continue to evaluate the measurable outcomes of these programs and others like them, it is also important to find other methodological means for evaluating and documenting additional interventions.

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