



The Tides of Change:

A Discussion of Inequity and Chronic Disease in Atlantic Canada

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"The growing gaps in health status between people in different groups is a serious and a major concern for the government. We cannot accept that the rich get healthier and the poor get sicker. Not in our country, nor in the world."

Ingvar Carlsson
Prime Minister, Sweden 1995



Rationale

This discussion paper will assist PPHB Atlantic and its partners in the Atlantic Region to develop effective chronic disease prevention strategies that are grounded in a deep understanding of the pathways between inequity and the development of chronic disease.



Definition of Chronic Disease

- "a condition that is continuous or persistent over an extended period of time. The opposite of acute. A chronic condition is one that is long-standing, not easily or quickly resolved."
(Victoria Kennedy, RN, A.D.A.M. editorial - MedlinePlus).
- encompasses communicable and non-communicable disease, both physical and mental conditions.



Definition of Inequity

- refers to material, gender, racial, income, and other social inequalities that are beyond the control of the individual and are therefore considered unfair and unjust.



Key Components of the Paper

- identify, through epidemiological data, the most prevalent chronic diseases
- analyse the Atlantic Region's cultural context
- discuss the interplay between the diseases, their risk factors and the root causes
- identify priorities for action and identify common strategies to address the root causes, with an emphasis on primary prevention



Context: Inequity and Chronic Disease

The risk factors (social, environmental, economic and behavioural) which contribute to the development of chronic disease are inter-related and do not generally occur in isolation.

Root Causes (Systemic and Structural)	Social, Economic and Environmental Risk Factors	Individual Choices	Increased Susceptibility to Chronic Disease
e.g.	e.g.	e.g.	e.g.
- poverty	- homelessness	- smoking	- diabetes
- systemic racism	- lack of education	- injection drug use	- HIV/AIDS
- violence	- unemployment	- unhealthy eating	- depression

Upstream action will have the greatest impact for the largest number of people



Members of Reference Group

- Heather Alaverdy
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- Roberta Ellingsen
- Lois Jackson
- Laurie-Ann McCardle
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Genuine Progress Index for Atlantic Canada
Indice de progrès véritable - Atlantique

Inequity and Disease in Atlantic Canada

*Prepared for: Population and Public Health Branch,
Atlantic Region, Health Canada*

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Categories of evidence

1. Burden of chronic illness ***and*** socioeconomic disadvantage in Atlantic Canada is proportionally greater than rest of country
2. Importance of socio-economic determinants of disease and of establishing pathways between root causes and health outcomes
3. Evidence on health impacts of inequities in Atlantic Canada – focus of this report
4. Potential interventions and strategies

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Atlantic Canada Challenges

- Poorest health in Canada
- Lower average incomes
- Higher unemployment
- Disproportionately small portion of the national wealth
- Highest rates of risk behaviours

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Poorest health in Canada

Nova Scotia has highest rates cancer deaths, respiratory disease deaths, arthritis, disability, activity limitation, hypertension

- 2nd highest rates circulatory deaths, diabetes, depression, psychiatric hospitalization

New Brunswick has 2nd highest rates male lung cancer deaths & male cancer incidence

PEI also has high rates of death due to cancer, respiratory disease, stroke

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Poorest health in Canada

Newfoundland and Labrador has highest death rates cardiovascular disease, heart attack, stroke, colorectal cancer

- High rates respiratory disease deaths, diabetes

COSTS of chronic disease are crippling: 60% of all medical costs; 76% of all disability costs = 13% of region's GDP

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The Good News: What Portion is Preventable?

- 40% chronic disease incidence
- 50% chronic disease mortality
- 25% medical care costs
- 38% total burden of disease

Are attributable to modifiable risk factors

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Socioeconomic Determinants

- Education, income, employment, stress, social networks are key health determinants
- Lifestyle interventions effective for higher income/education groups; not for lower (e.g. St. Henri experiment) -> ***widen health inequities***
- WHO: lifestyle related to socioeconomic and environmental conditions + social interactions. Lifestyle factors explain only 25-30% of premature death (Adler)

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Health Care Costs of Poverty

- Most reliable predictor of poor health, premature death, disability: 4x more likely report fair or poor health = costly
- e.g. Low income Canadians more likely to be hospitalized:
Men 15-39 = +46%; 40-64 = +57%
Women 15-39 = +62%; 40-64 = +92%

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Heart Health Costs of Poverty

- Higher risk smoking, obesity, physical inactivity, cardiovascular risk = costly
- York U: 6,366 Canadian deaths; \$4 bill. health care costs / year are attributable to poverty-related heart disease
- NS could avoid 200 deaths, \$124 million per year if all Nova Scotians were as heart healthy as higher income groups

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Health Cost of Inequality

- British Medical Journal: ***“What matters in determining mortality and health is less the overall wealth of the society and more how evenly wealth is distributed. The more equally wealth is distributed, the better the health of that society.”***
- e.g. Sweden, Japan vs USA

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Costs of Socioeconomic Inequality in Nova Scotia

- **Use of physician services (Kephart):**

- No high school = +49% than degree
- High school diploma = +12% more
- Lower income = +43% than higher
- Lower middle income = +33% more

Excess use due to inequality costs \$70 mill/yr

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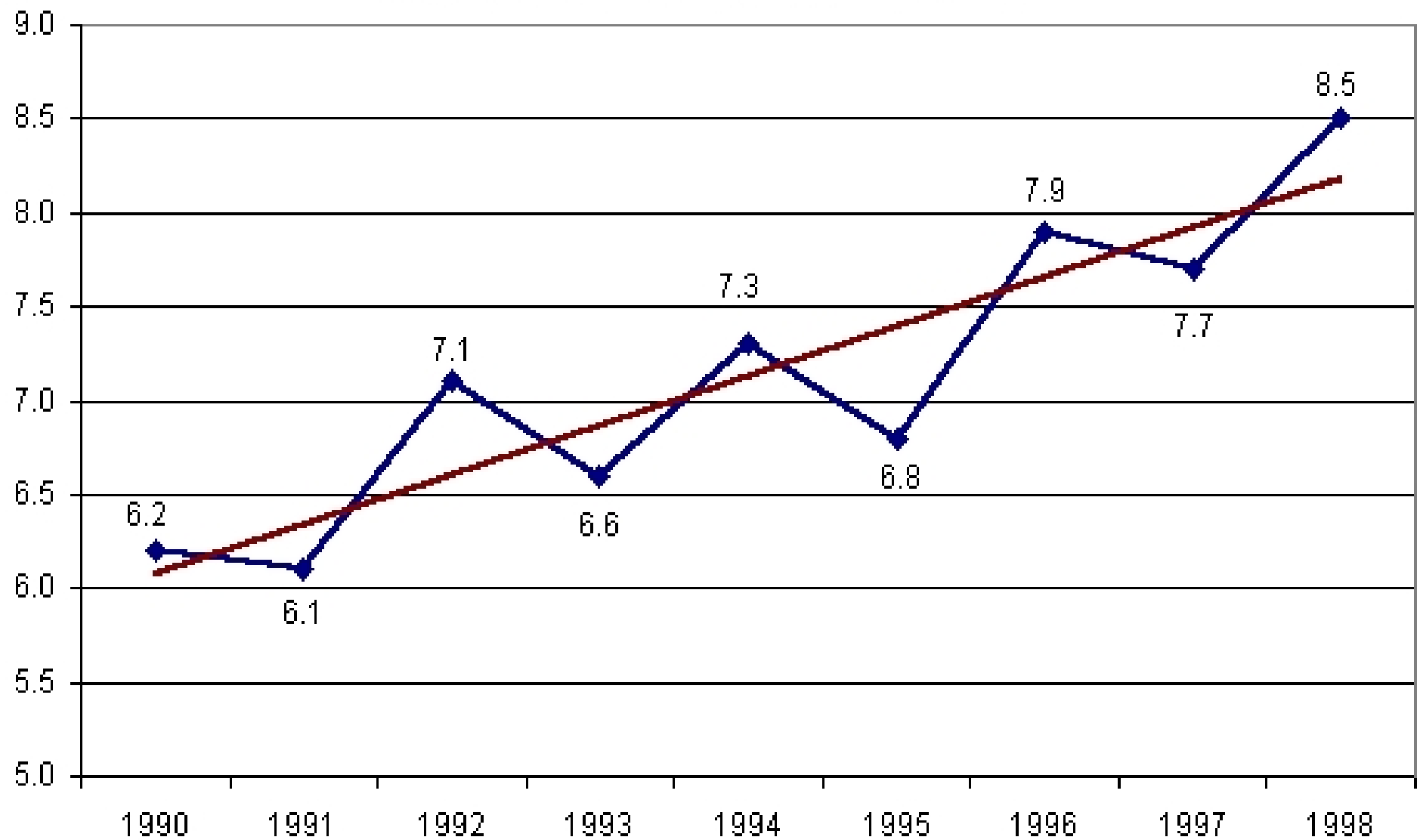
If inequality is bad for health, what are the trends in Canada?

Av. Disposable Household Income Ratios, 1980-98

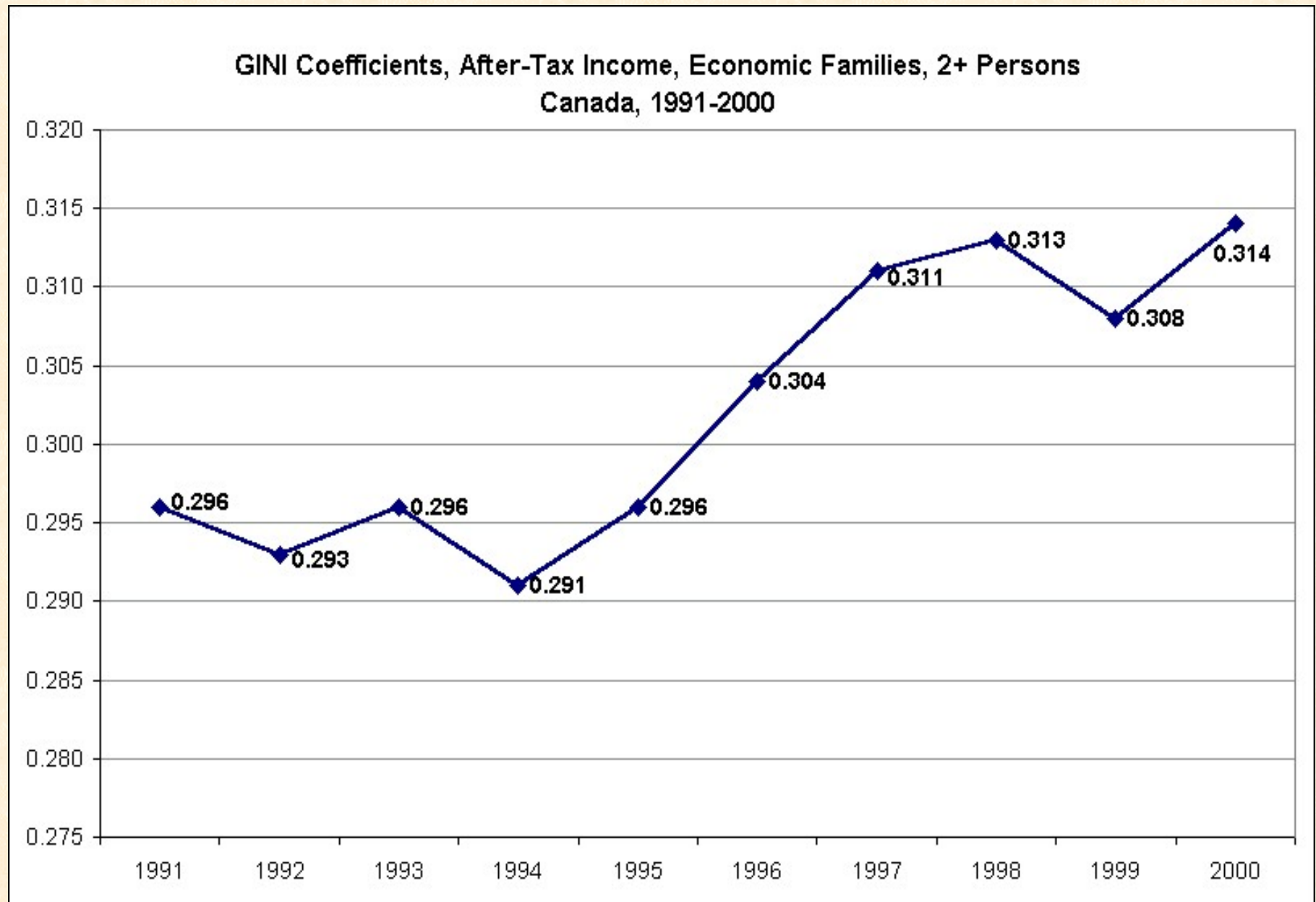
	Richest 20% : Poorest 20%		
	1980	1990	1998
Canada	8.2	7.1	8.5
Newfoundland	7.6	5.8	7.3
Prince Edward Island	7.4	6.2	6.7
Nova Scotia	7.1	6.2	8.5
New Brunswick	6.7	6.1	7.0
Quebec	7.6	6.9	7.9
Ontario	7.8	7.1	8.3
Manitoba	8.8	6.7	7.6
Saskatchewan	8.1	7.3	7.4
Alberta	9.1	7.4	10.4
British Columbia	9.3	7.6	8.0

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Average Disposable Household Income: Ratio of Top Quintile to Bottom Quintile, Nova Scotia, 1990-1998



GINI coefficient, Canada 1991-2000



Within Atlantic Canada:

- Richest 10% own 49% of wealth
- Richest 40% = 86%, leaving 14% for poorest 60%
- Poorest 10% = “negative” wealth (debts exceed assets), threatening security at time of illness, disability, job loss, etc.
- Among poorest 20%, 1/3 fell behind 2+ months in bill, loan, rent, mortgage

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Regional wealth gap grows:

- 1990 = \$0.82 disp. income NS for \$1 in Ontario.
1998 = \$0.73
- 1984 Atlantic Canada had 5.4 % of national wealth; 1999 = 4.4% , yet 7.8% of Canadian pop.

This disparity affects whole population = Leaves fewer resources for social development, health care, education, environment, and other services that impact health

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Highest Risk Groups

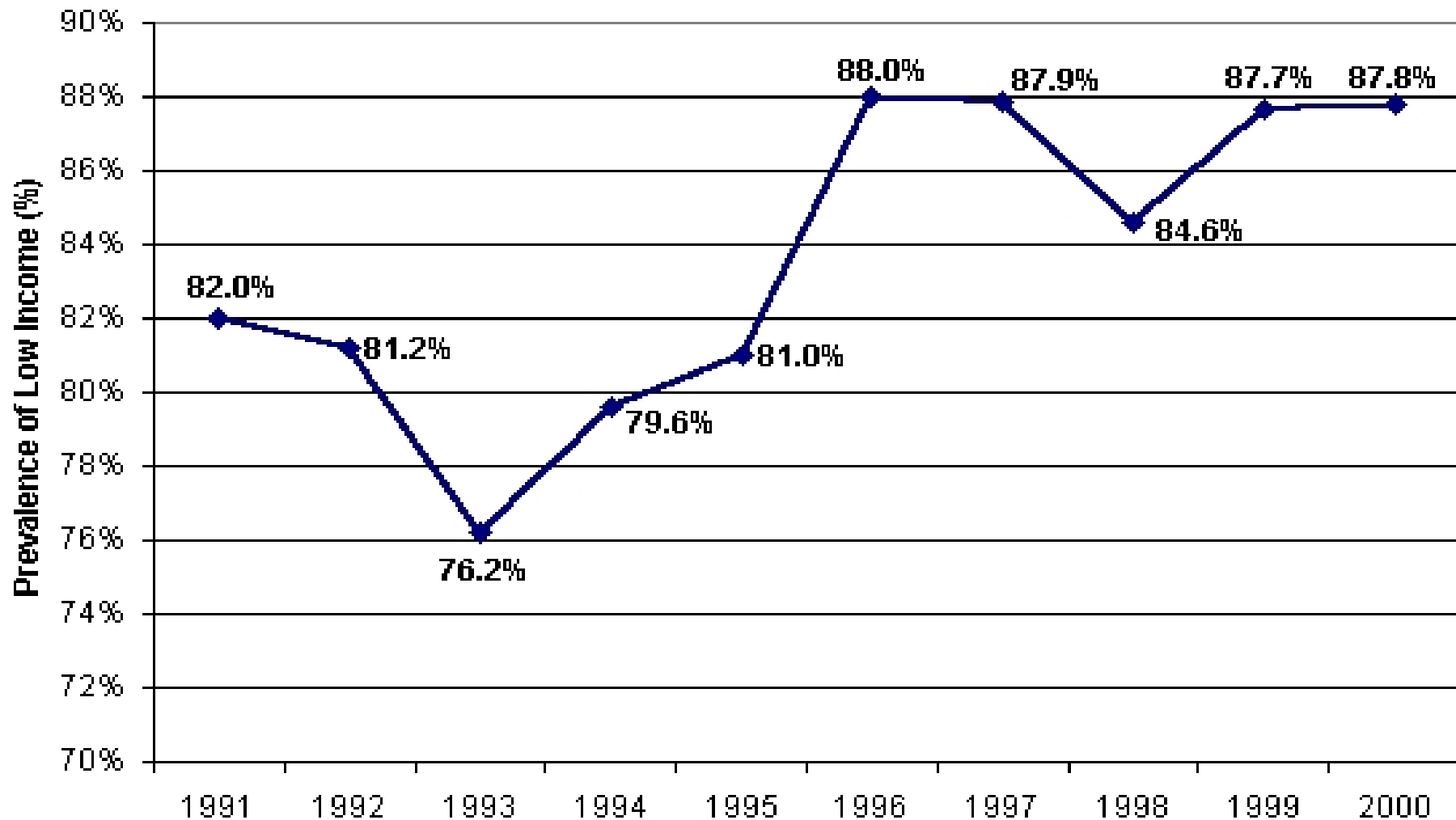
- Children (19% poor); single mothers (60%); unattached female seniors
 - Homeless
 - Unemployed - stress, risk factors
 - Aborigines, migrants, minorities, disabled
- = Clustered disadvantages: “Social exclusion”

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E.g. Low Incomes : 1991-2000

Single mothers w/out paying jobs

**Prevalence of Low Income, Single Mothers Without Paying Jobs
1991-2000**



.....**health of single mothers**

- Worse health status than married (NPHS); higher rates chronic illness, disability days, activity restrictions
- 3x health care practitioner use for mental, emotional reasons = costly
- Longer-term single mothers have particularly bad health (Statcan)

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Low income children- at risk - 31 indicators

- More likely to have low birth weights, poor health, less nutritious foods
- Higher rates of hyperactivity, delayed vocabulary development, poorer employment prospects.
- Less organized sports, but higher injury rates, and 2x risk of death due to injury than children who are not poor.

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Aboriginal health reflects lower socioeconomic status

- Much higher rates of hypertension, circulatory & respiratory diseases, HIV/AIDS, teen pregnancy, fetal alcohol syndrome, etc.
- 3x diabetes rate
- 3x rates of suicide, mortality due to violence, alcohol-related accidents
- Nearly 10x TB rate: 61.5/100,000 cf 6.6 Can.

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A/c Roy Romanow.....:

- ***“If you’re at the bottom of the income ladder, odds are you’re going to find yourself at the bottom of the health ladder.”***
- ***“So, if we’re serious about making Canadians the healthiest people in the world, then we have to be serious about closing the gap between rich and poor.”***

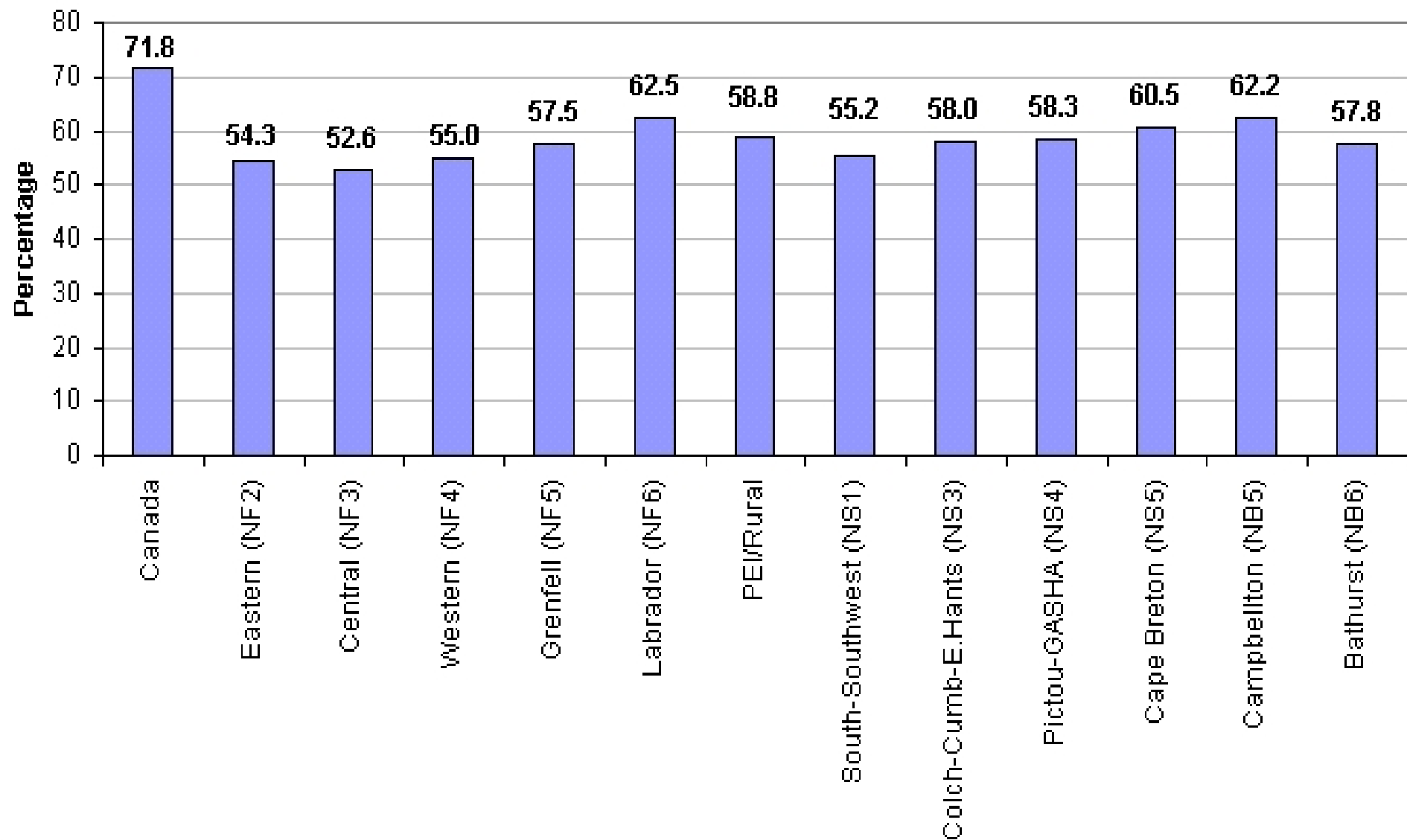
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Inequities within Atlantic Canada

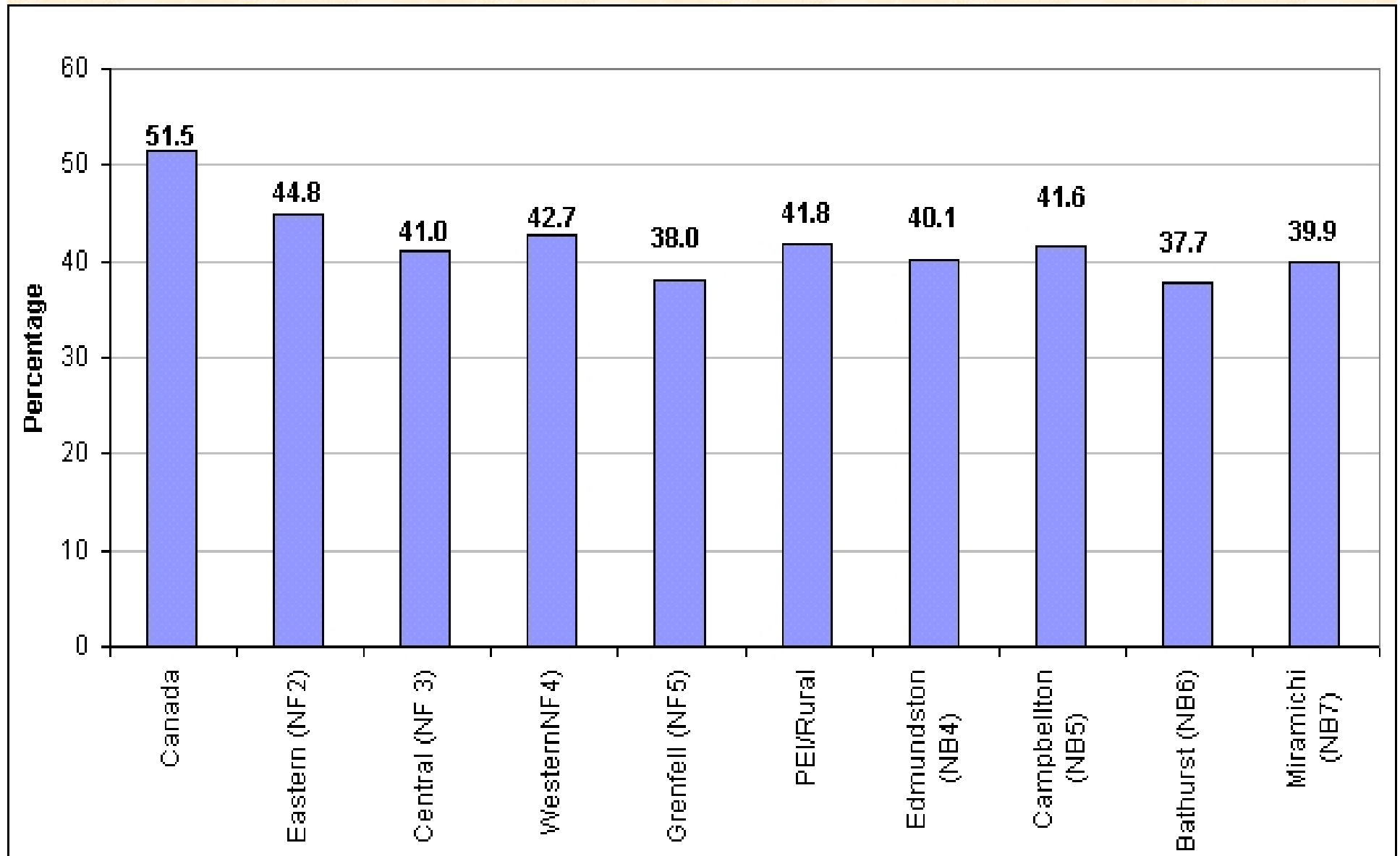
- Intra-provincial disparities: – largest cities closer to national pattern than to own “hinterlands.” E.g. Halifax unemployment less than national average and comparable health profile (cf Cape Breton)
- Low income areas with highest unemployment and lowest socioeconomic status have worse patterns of chronic disease, disability, and premature death

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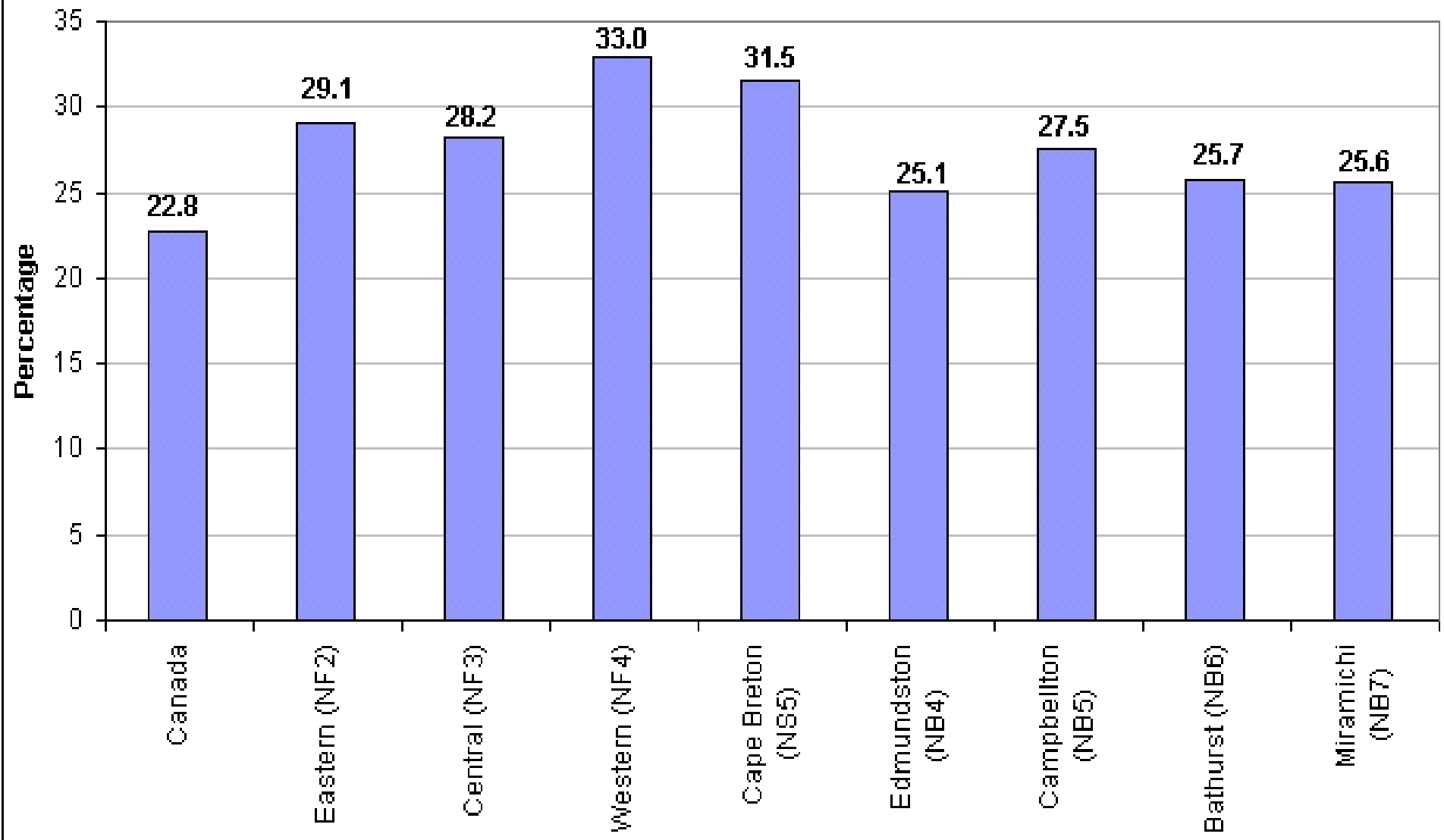
75% of Halifax, St. John's pop. 25-29 graduated high school *BUT*



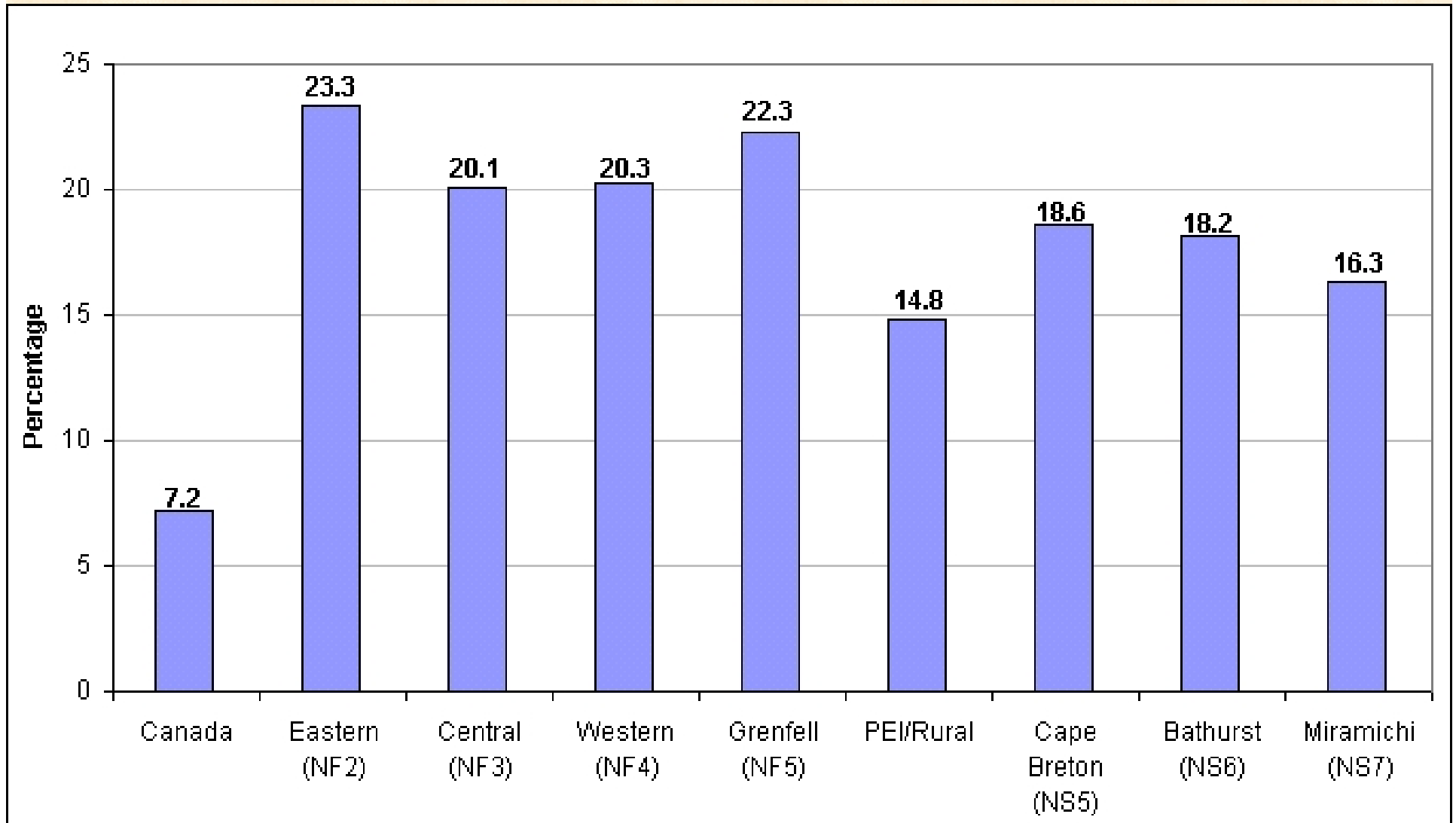
60% of Halifax, St. John's pop. 25-54 post-secondary grads *BUT*



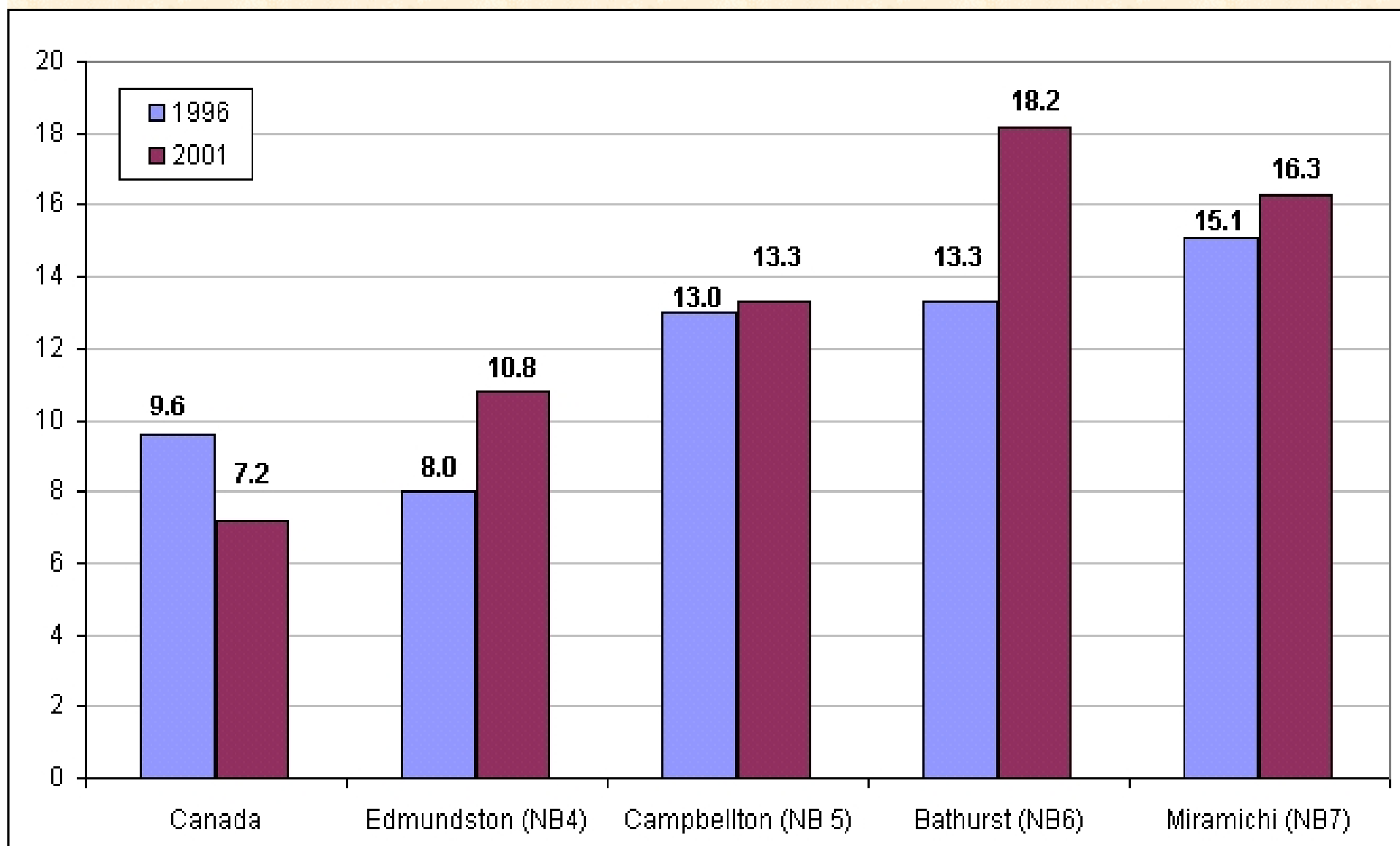
Low-income rates - children under 18 (%) - Atlantic cities cf nat. av. *BUT*



Unemployment 2001 = 7% Halifax, 8.8% Charlottetown, 9.4% St. John's



Unemployment declines in sth NB but increases in nth NB 1996-2001



Income-employment-education divide impacts health

- E.g. Campbellton area = poorest self-rated health of 21 Atlantic Canada health districts
- 3rd lowest functional health status
- 2nd lowest rate of disability-free life expectancy (after Cape Breton)
- 2nd highest years of life lost due to cancer
- Nth NB suicide rate = 2x Canadian average

Ditto Nfld: E.g. eastern & northern NF – heart disease 50% higher than Canadian rate

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Cape Breton Case Study

- High unemployment (Sydney = 19%) and low-income rates,
- Much higher incidence of chronic illness, disability, and premature death than Halifax
- Highest age-standardized mortality rate in Maritimes
- Highest death rate from circulatory disease, heart disease in Maritimes – 30% above nat.av.

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Of 21 Atlantic health districts, CB has highest rates of:

- Cancer death (25% higher than the national average) and lung cancer
- Deaths due to bronchitis, emphysema, and asthma – 50%+ higher than national average
- High blood pressure– 21.7% (72% higher than the Canadian rate)

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Cape Breton = highest:

- Arthritis and rheumatism: 31% of women, 23% of men
- Activity limitation (34%)
- Lowest life expectancy = 72.8 (men) cf 75.4 in Canada; 79.4 (women) cf 81.2 in Canada
- “Hot spot” for injection drug use and communicable chronic diseases such as HIV/AIDs & Hepatitis C

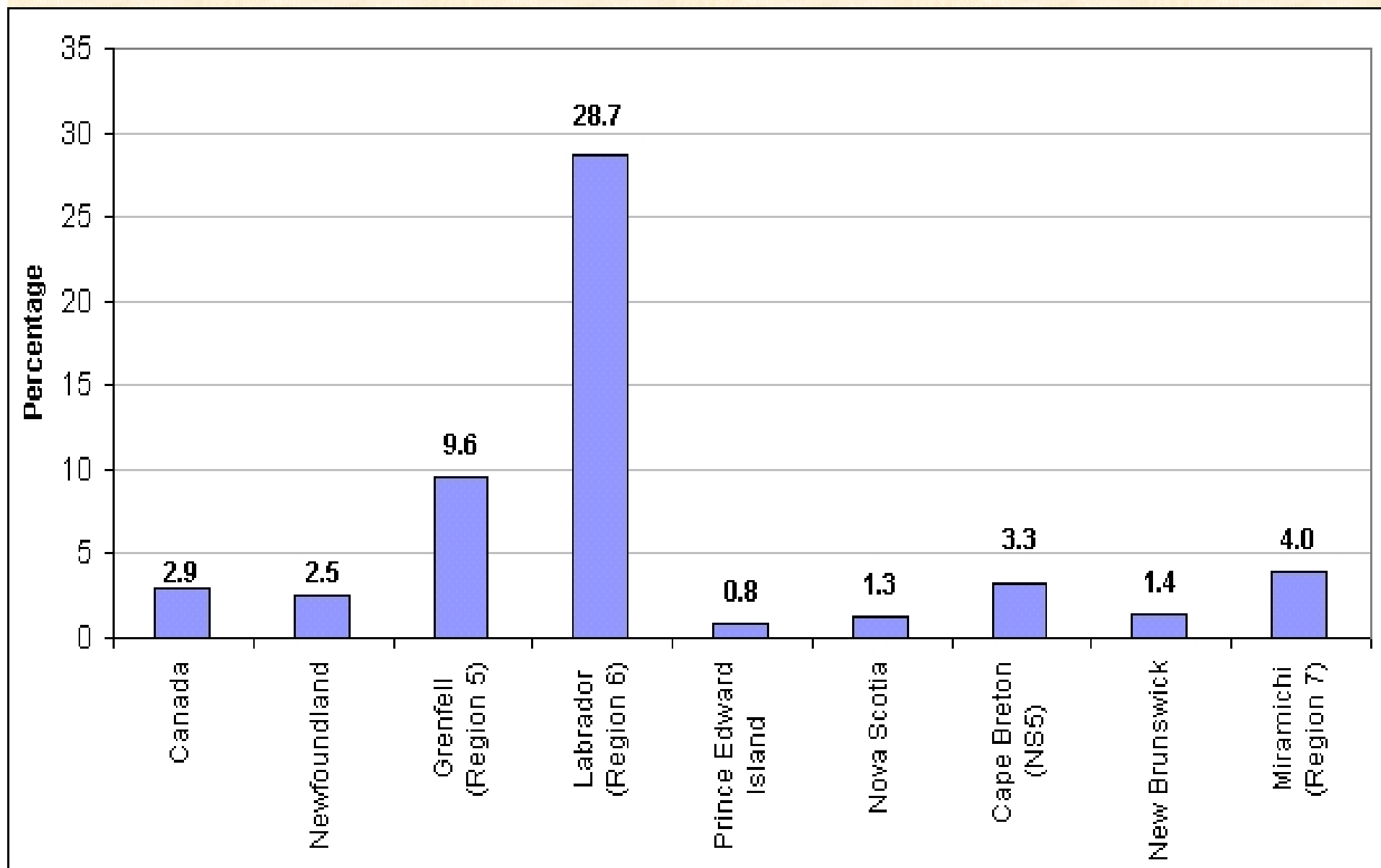
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Living with disabilities

- Cape Bretoners have an average disability-free life expectancy of only 61.8 years, seven fewer than the national average, and the lowest of all the 139 health regions in Canada
- Highest number of potential years of life lost due to both cancer (41% above national average) and circulatory diseases (65% above national average)

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Aboriginal population (%)

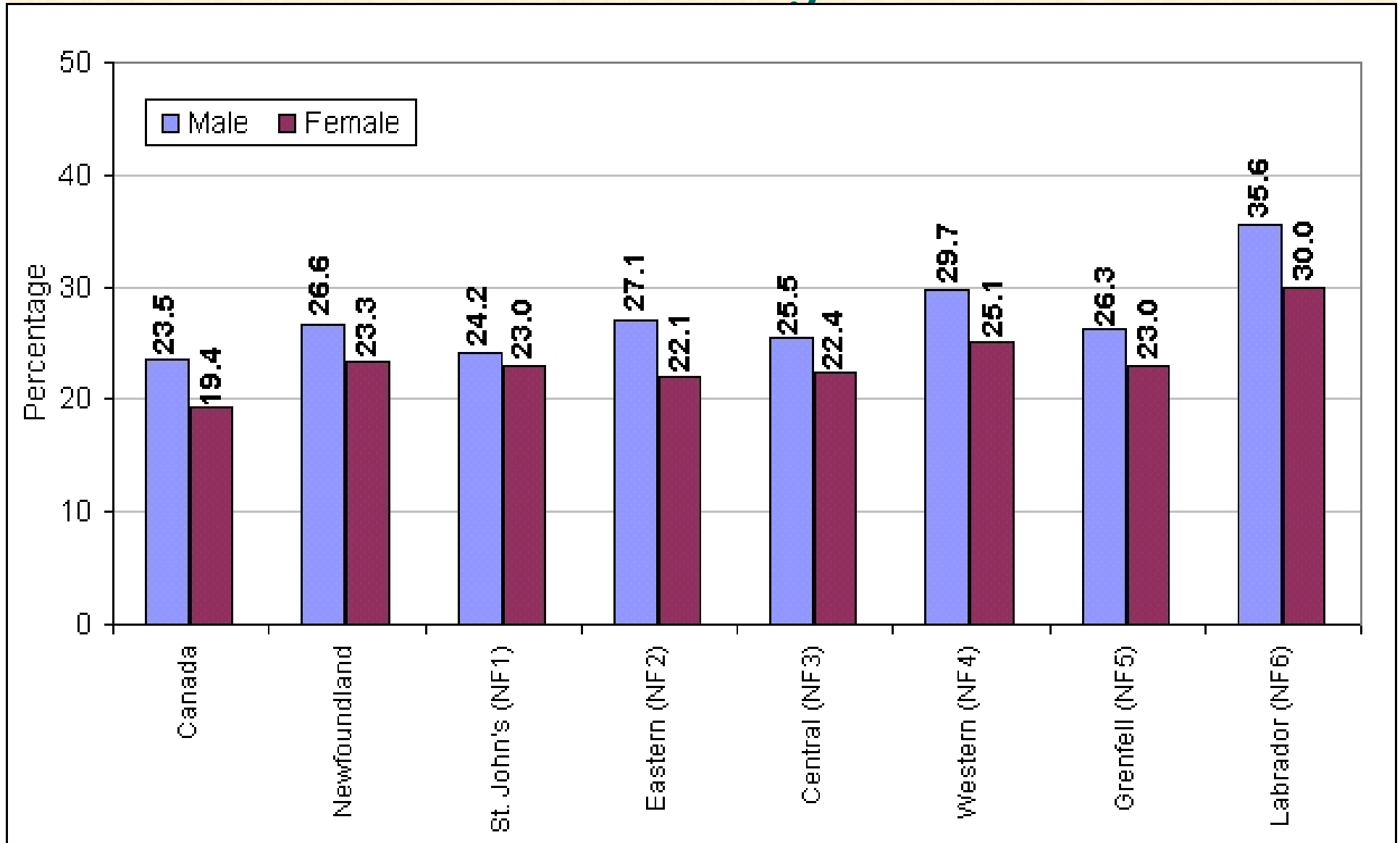


Labrador unique profile

- Infant mortality = 17.2/1,000 live births (St. John's = 5.6)
- Low birth weight = 6.8% - highest in Atlantic.Can
- Suicide = 19.2/100,000 (Nfld=7.3=lowest in Can)
- Injury deaths = 40/100,000 (St. John's = 16)
- Lung cancer deaths = 73/100,000 (Nfld-50)
- Respiratory deaths 50% higher than Cdn. rate
- Life expectancy = 74.9 (Can=78.3) - lowest Atl.Can
- PYLL=7,432/100,000 (St. John's = 5,205)

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Labrador: 36% men, 30% women are daily smokers



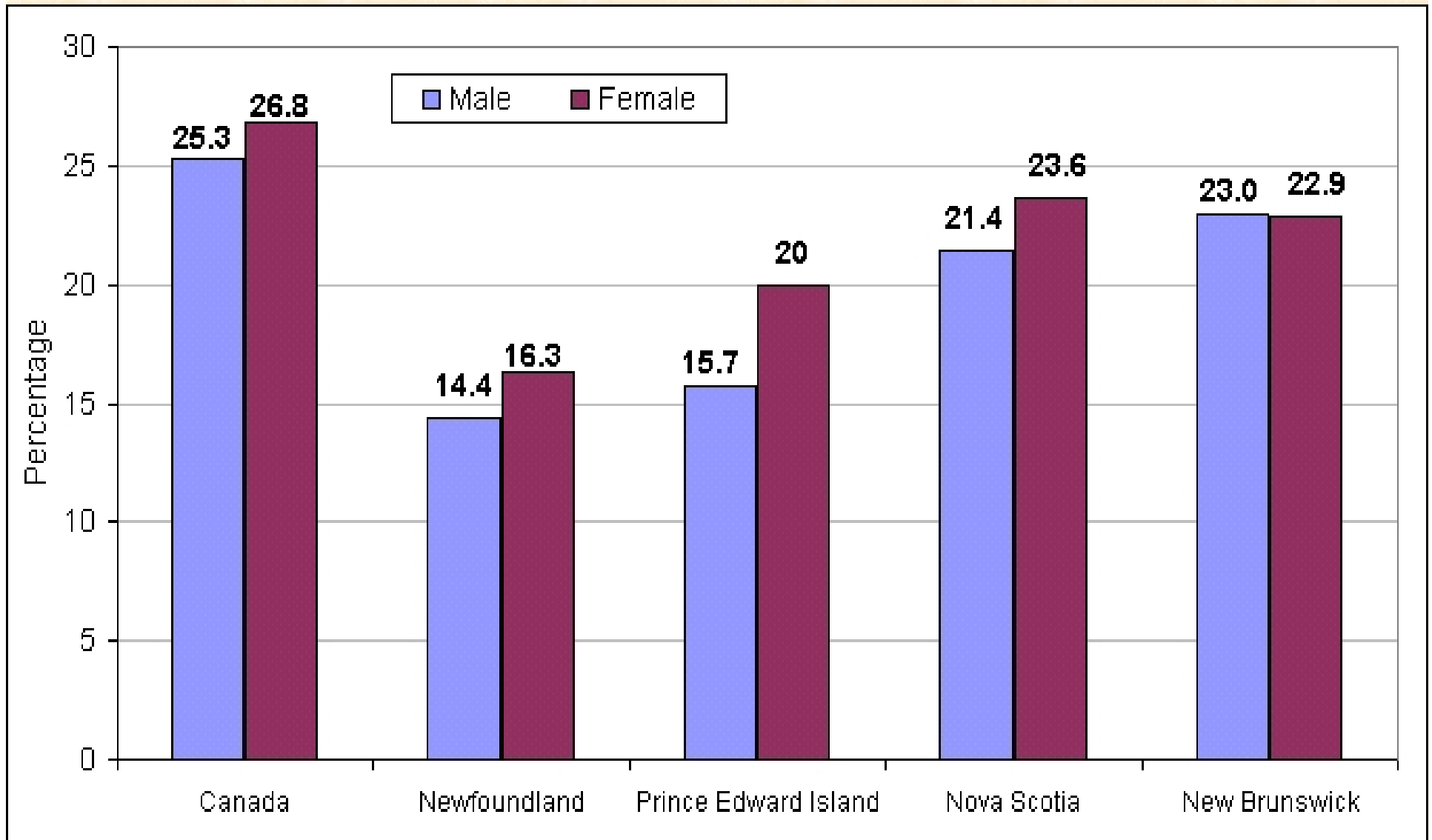
Pathways to health - material *and* social/psych

E.g. Nfld - tough economic conditions, *BUT*

- Lowest crime rates
- Lowest stress, depression levels
- Strongest voluntary sector
- Highest mental health, self-rated health, functional health

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% of population, 18+, reporting “quite a lot” of life stress, 2001.

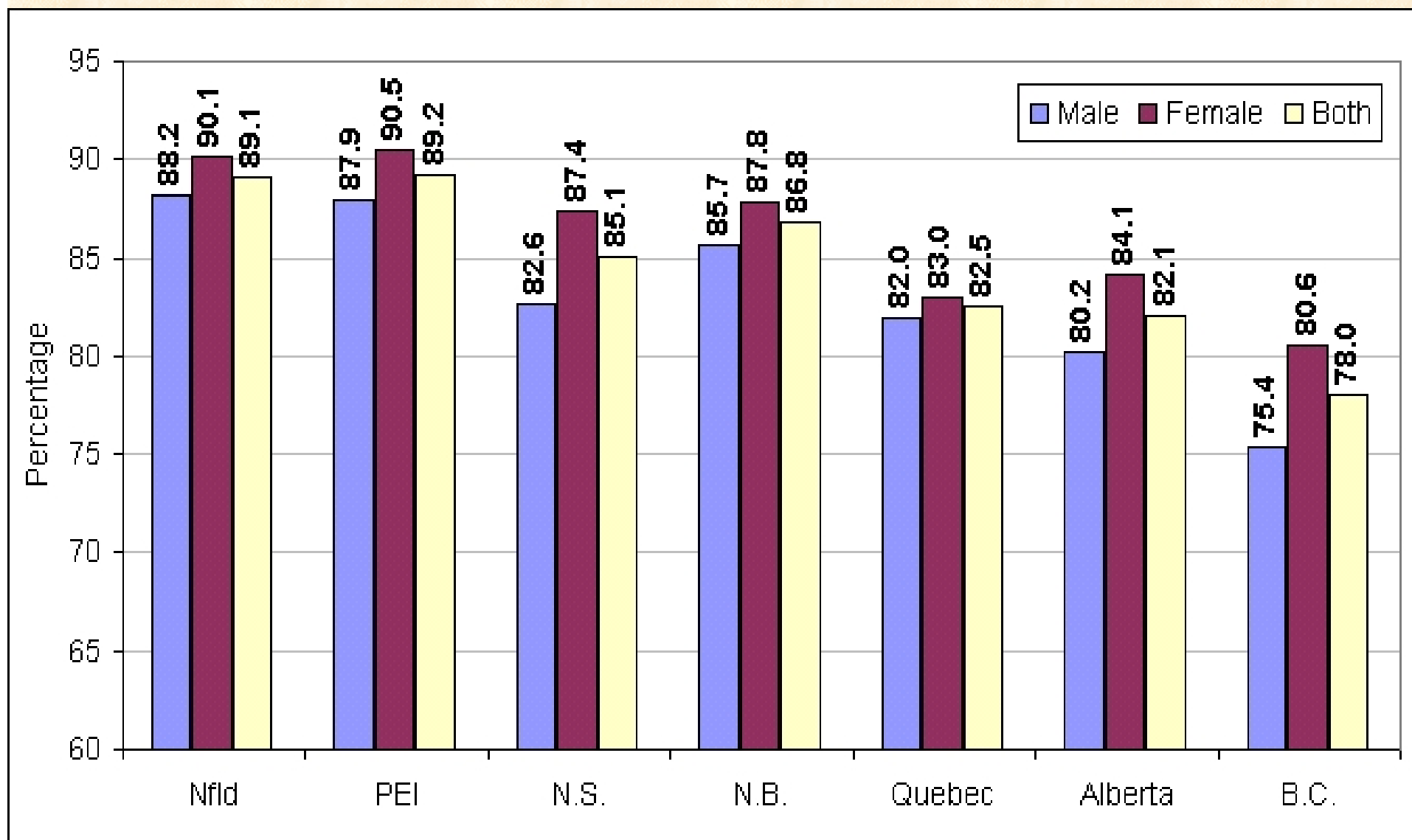


Social supports provide buffer in Atlantic Canada

- Social networks may play as important a role in protecting health, buffering against disease, and aiding recovery from illness as behavioural and lifestyle choices such as quitting smoking, losing weight, and exercising.
 - See: Mustard, J.F., & Frank, J. (1991). *The Determinants of Health*. (CIAR Publ. No. 5)

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Social Supports in Atlantic Canada: % reporting high levels; age 12+, 2001



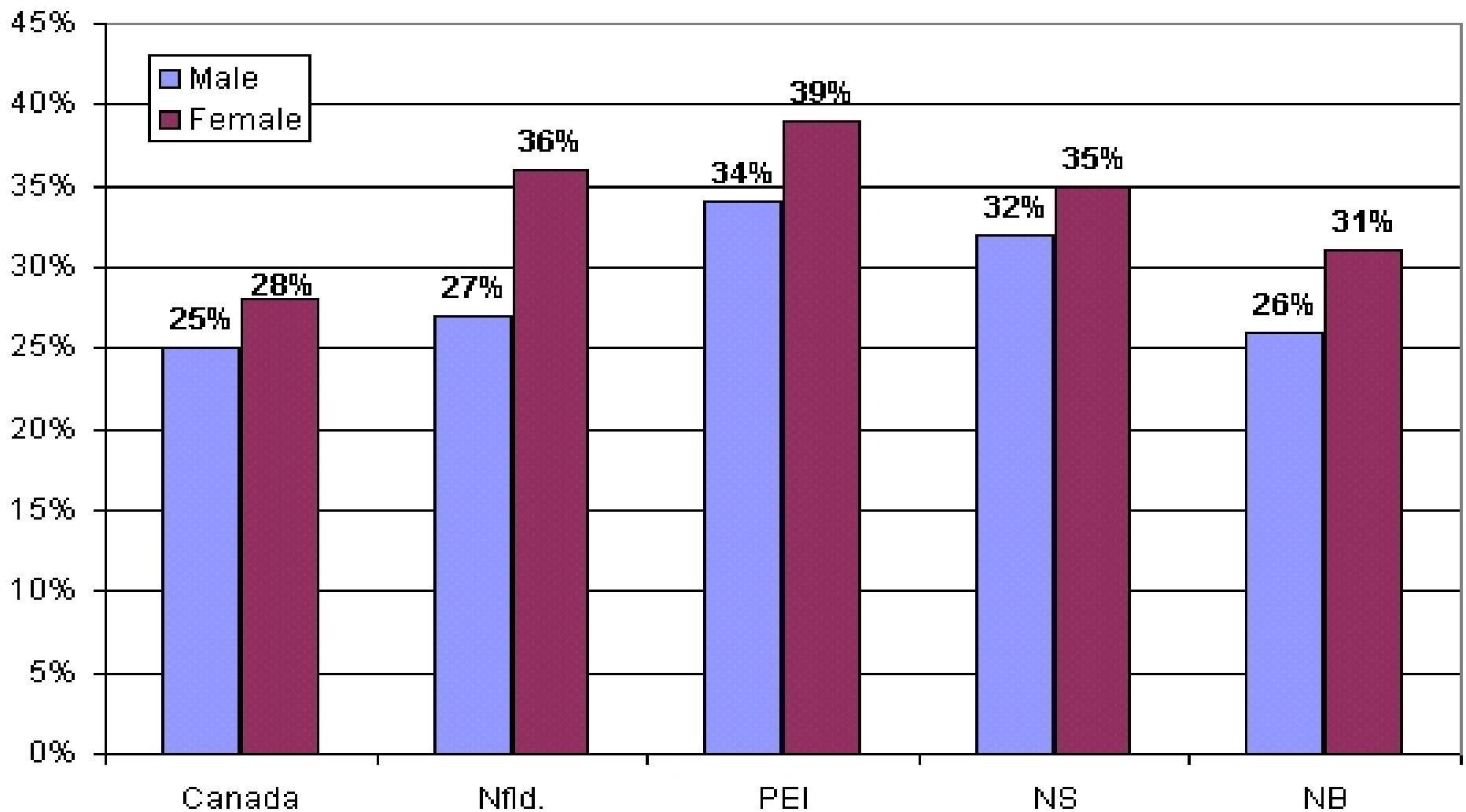
Social Supports- Volunteerism - a saving grace

- Health Canada uses volunteerism as a key indicator of a “supportive social environment” that can enhance health.
- All four Atlantic provinces = highest rates of volunteer work in the country.
- Volunteerism rests on narrower, more fragile base - fewer volunteers - longer hours

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Volunteerism: Atlantic Provinces lead (formal rate)

Volunteer Participation Rates: Population 15+, 2000



Socioeconomic determinants of health are modifiable:

- **Social programs:** E.g. Supplemental nutrition proven cost-effectiveness: WIC = 3:1
 - **Social reforms:** Reduce social inequities: up minimum wage; pay equity (gender and part-time work); daycare; equalization, etc.
- + Attend to regions with greatest needs: E.g. Cape Breton, Nth NB, Rural Nfld, Labrador

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New pop. health strategies:

- Can address root causes rather than individual behaviours alone
- Support more equitable distribution of public and private resources
- Emphasize costs: reducing poverty and inequality can cut health costs
- include all levels and sectors of govt – incl. outside of the "traditional" health domain

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Learn from best practices

E.g. Sweden

- Coordinated, comprehensive plan.
Improving public health is explicit national goal coordinating all elements of Swedish govt. policy
- Population health lens: organized around social determinants of health
- Focused on wellness rather than disease

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Achieving Health for All

- Complex problems require complex solutions
- Complex solutions require working across sectors
- Working across sectors requires common values and political will
- Political will can create the opportunities for all to achieve optimum physical, mental, social and economic health

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Creating a Healthier Canada for our Children



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