


CIHR Team in Circumpolar Chronic Disease Prevention: Building a Chronic Disease Data Observatory



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Purpose of Presentation

- Data Sources for Building a Chronic Disease Data Observatory
 - Administrative Data
 - Strengths and Limitations
 - Examples from Previous Research
 - Future Plans
 - Survey Data
 - Strengths and Limitations
 - Canadian Community Health Survey: Preliminary findings

Major Project Goals

- ❑ To strengthen the health information systems of northern health agencies and Aboriginal organizations
- ❑ To improve capacity for generating region- and ethno-specific health information

How Will This Be Accomplished?

□ Participatory Process

- Collaborative – all phases of the research
- Equitable
- Strengths and skills of all partner groups are recognized
- Topic is important to all partners
- Benefit to partners

Administrative Data

- Records of health system contacts that contain numeric codes for diagnoses, procedures, and treatments
 - Hospital
 - Physician

Administrative Data

Strengths

- Population-based
- Longitudinal
- Increasing evidence for validity to monitor population health and patterns of care
- Chronic disease incidence/prevalence (diagnosed)

Limitations

- Gaps: geographic, time
- Continual need for validity assessment to monitor population health and health service use

Manitoba Example

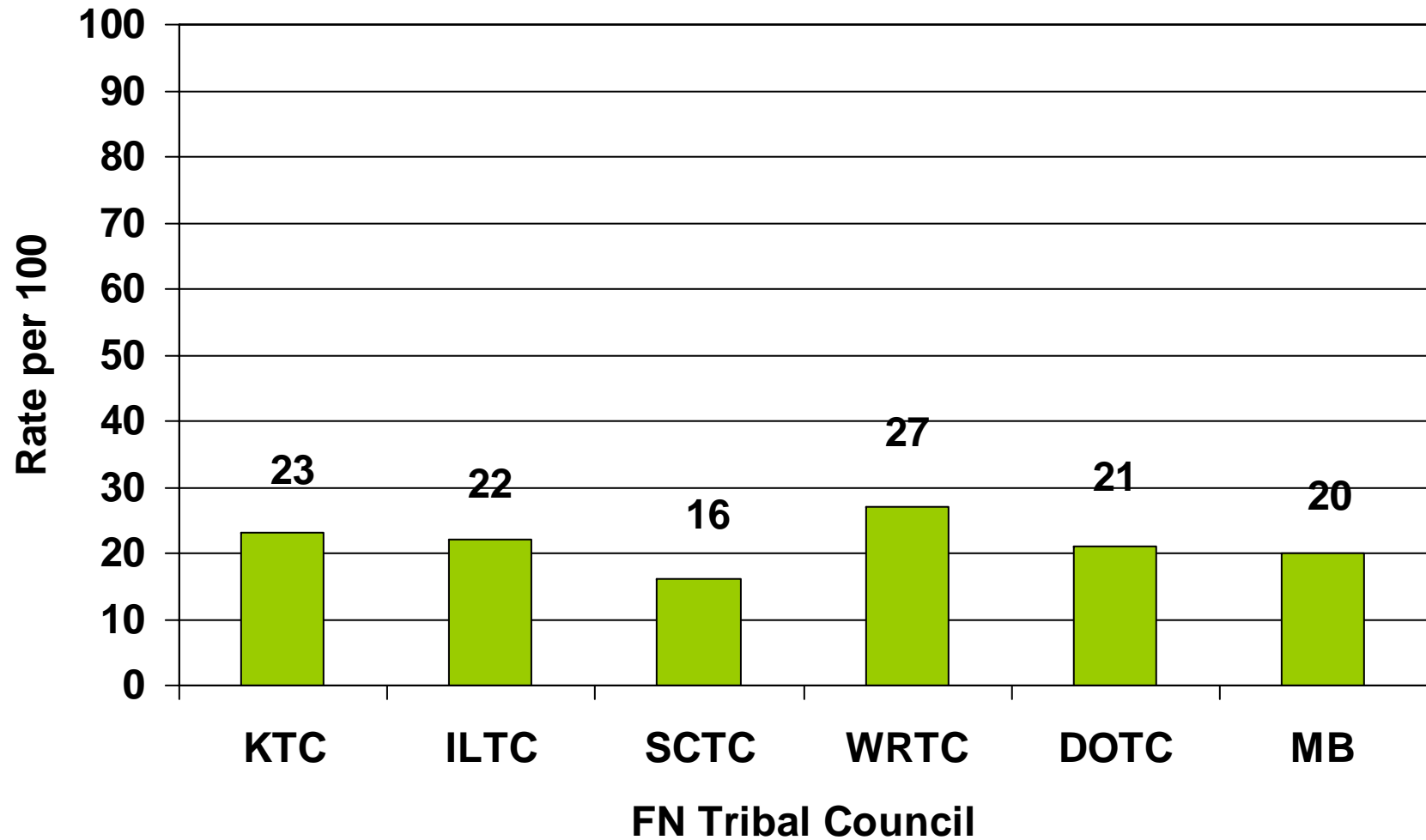
- Project: Health and Health Status of Manitoba First Nation's People

- Partners:
 - Assembly of Manitoba Chiefs
 - Manitoba Health
 - Manitoba Centre for Health Policy (MCHP)
 - Centre for Aboriginal Health Research
 - Indian and Northern Affairs

Administrative Data Sources

- Hospital and physician data used to identify cases of:
 - Diabetes
 - 2 physician visits or 1 hospitalization over a two-year period
 - Heart Disease
 - Stroke
 - Hypertension
 - Arthritis

High Blood Pressure by Tribal Council



Crude provincial prevalence estimates, arthritis algorithms

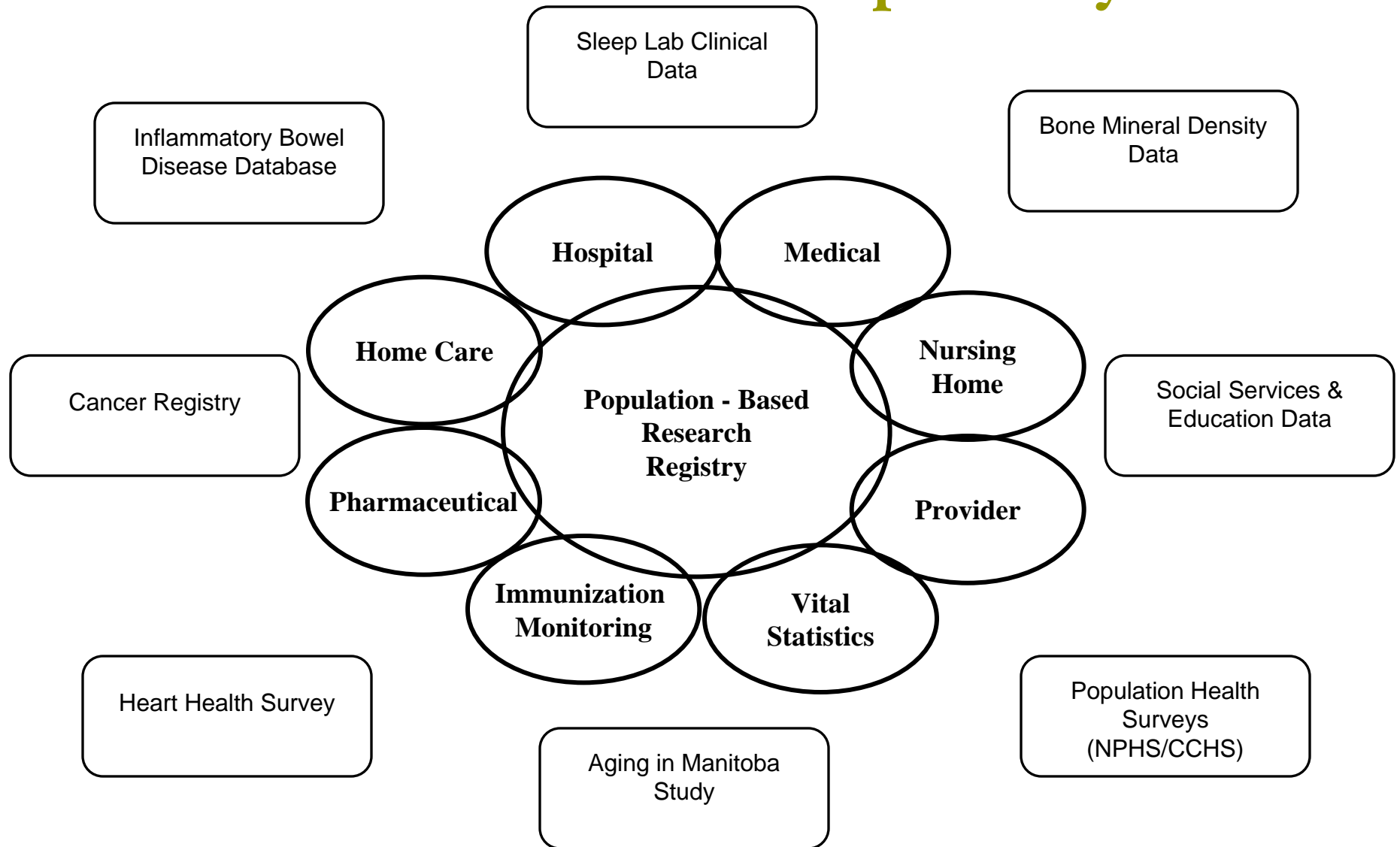
# Years	Algorithm		(%)
1	1	1+ P	18.8
	2	2+ P	9.2
	3	1+ H or 2+ P	9.4
	4	1+ H or 2+ P or (1 P & 2+ Rx)	12.0
3	5	1+ P	36.5
	6	2+ P	21.9
	7	1+ H or 2+ P	22.3
	8	1+ H or 2+ P or (1 P & 2+ Rx)	27.1
5	9	1+ P	47.3
	10	2+ P	31.1
	11	1+ H or 2+ P	31.5
	12	1+ H or 2+ P or (1 P & 2+ Rx)	37.4

Note: data are for 1998/99 – 2002/03

Future Plans

- Development and validation of chronic disease algorithms (rules to identify disease cases from administrative data)
 - Heart disease
 - Stroke
 - Arthritis
 - Parkinson's disease

MCHP Research Data Repository



National Health Survey Data

- Available from Statistics Canada through Regional Data Centres
 - Canadian Community Health Survey
 - Aboriginal Peoples Health Survey

Canadian Community Health Survey: Preliminary Results

□ Objective

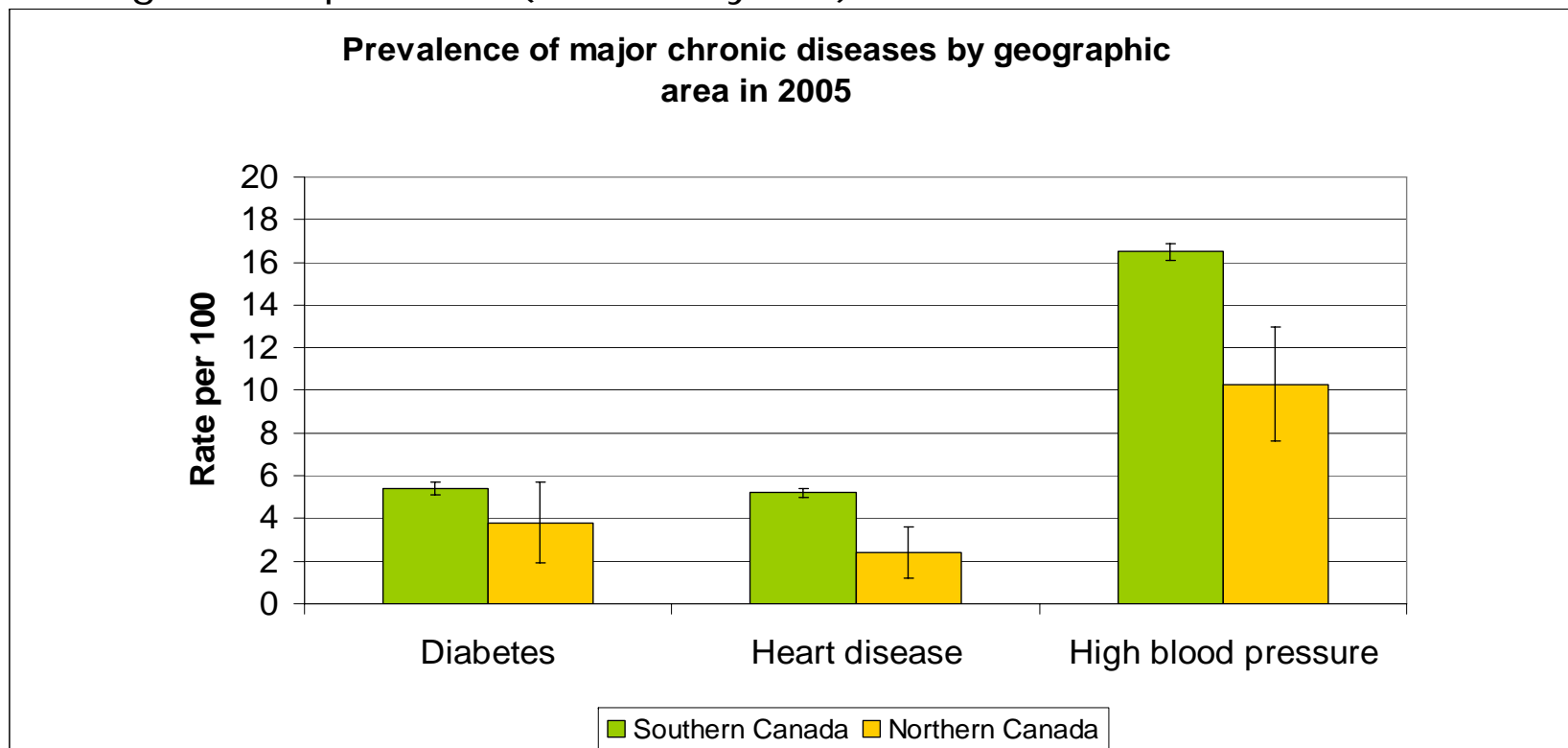
- To compare prevalence of major chronic diseases and risk factors in:
 - Populations of Northern Canada (NC) and Southern Canada (SC)
 - the populations in NC and SC over time

Methods

- Canadian Community Health Survey cycle 1.1 (2000/01) and 3.1. (2005)
- NC sample:
 - > 19 years old in the Yukon, Northwest Territories, and Nunavut
- SC sample:
 - > 19 years old in the rest of Canada
- Prevalence estimates, confidence intervals and z-tests of significance were generated using sampling weights
- Adjusted in both NC and SC populations by:
 - sex
 - age groups (20-29, 30-44, 45-54, 55-64, 65+)

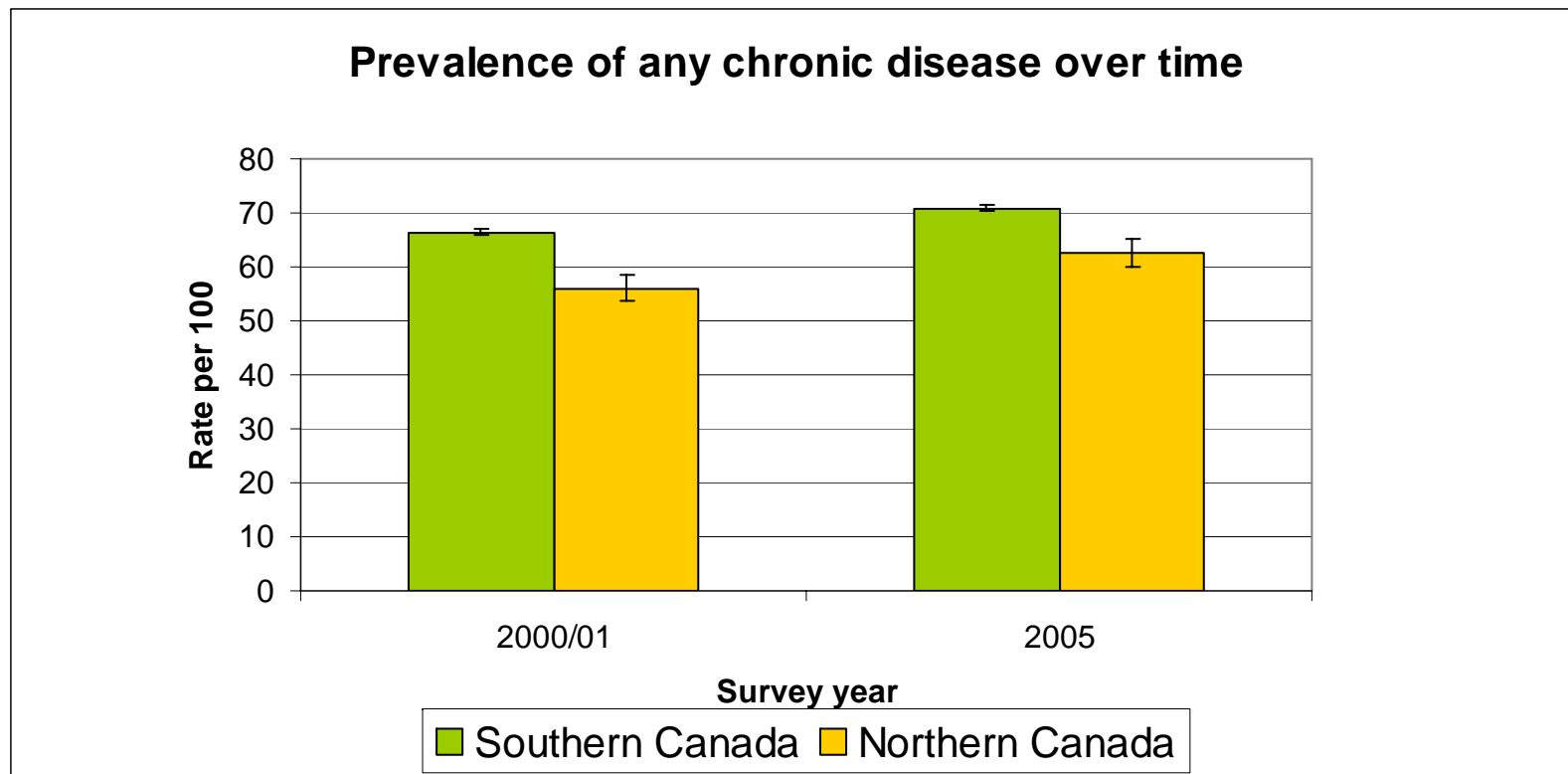
Results

- **In both Cycle 1.1 (2000/01) and Cycle 3.1 (2005)**
- Compared to NC respondents ($p < 0.05$), SC respondents had significantly higher prevalence of self-reported
 - diabetes (overall)
 - heart disease (overall, by sex)
 - high blood pressure (overall, by sex)



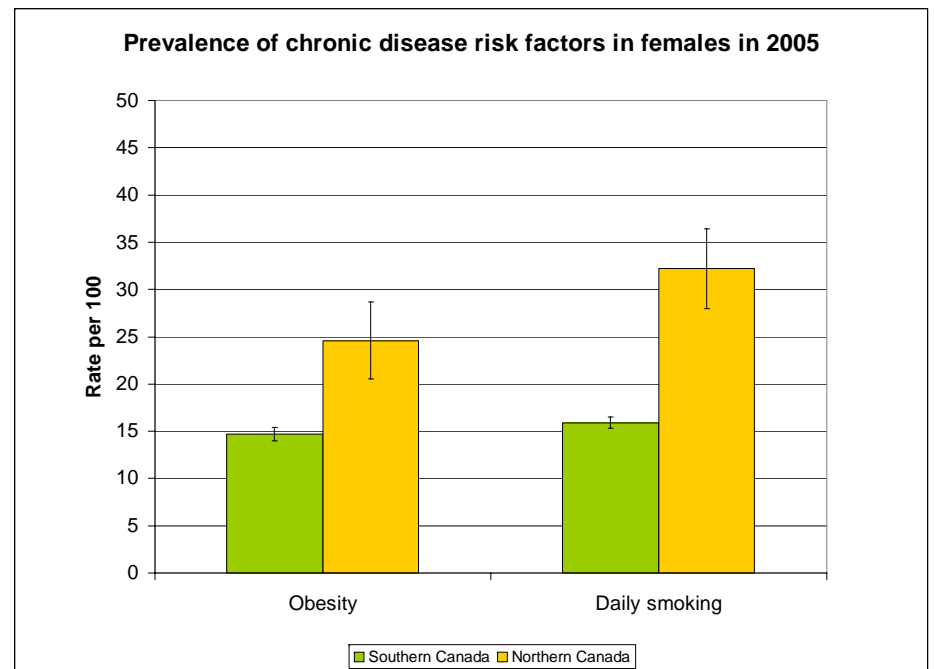
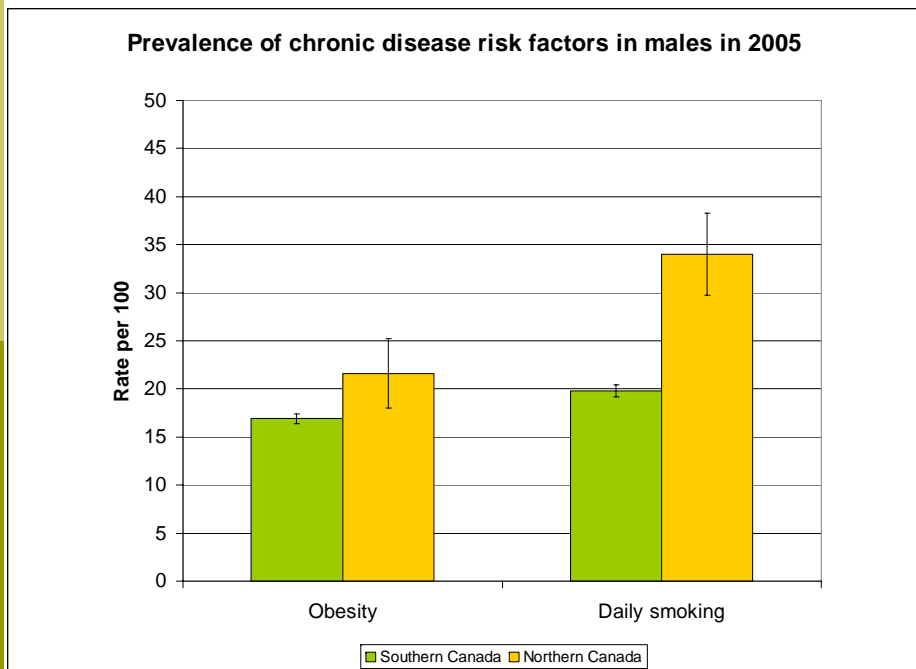
Results

- SC respondents had significantly higher prevalence of any chronic disease than NC respondents
- **Both SC and NC respondents reported significantly higher prevalence of any chronic disease in 2005 than in 2000/01**



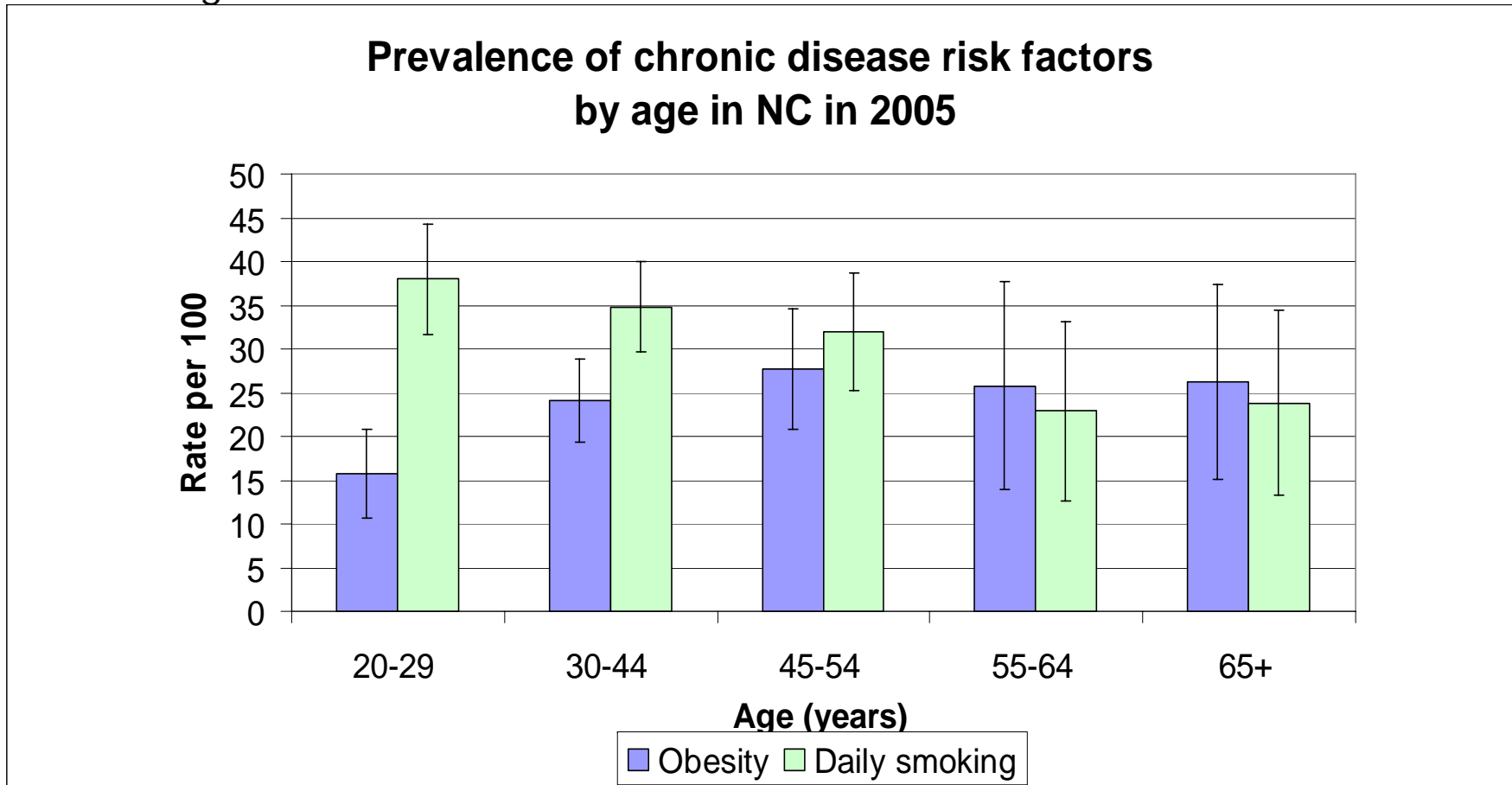
Results

- In both 2000/01 (Cycle 1.1) and 2005 (Cycle 3.1), NC respondents had significantly higher prevalence of obesity and smoking compared with SC respondents (total population and by sex)



Results

- NC respondents had higher levels of chronic disease risk factors in all age groups than SC respondents
- Prevalence of daily smoking was highest in the youngest age group investigated



Summary

- ❑ Prevalence of several major chronic diseases were higher in SC populations than in NC populations in 2000/01 and 2005
- ❑ However, the prevalence of key chronic disease risk factors, were higher in NC populations than in SC populations in 2000/01 and 2005
- ❑ The proportion of people having any chronic disease has increased significantly over time although prevalence of reported daily smoking appears to be decreasing
- ❑ The results signal a need for continued monitoring of chronic disease in NC populations