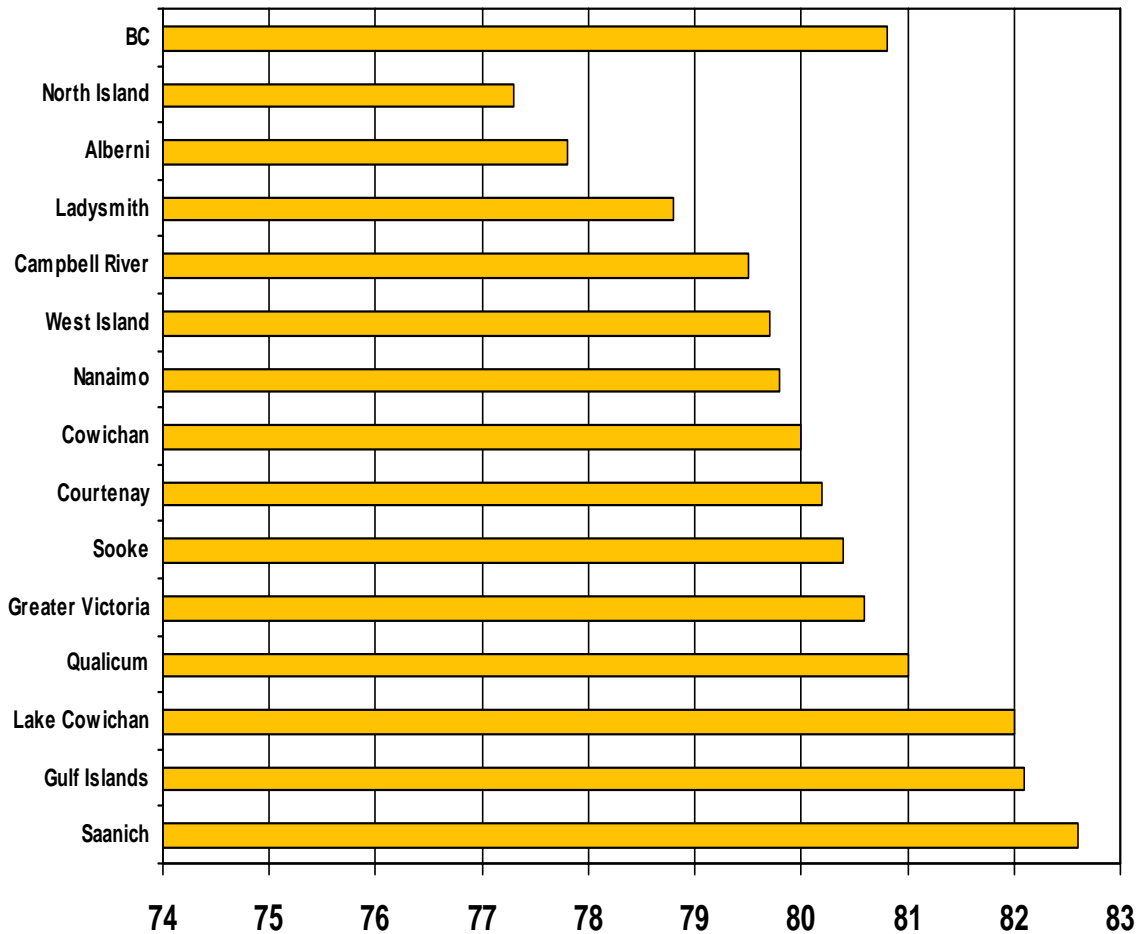


Understanding the Social Determinants of Health

The VIHA Service Area

Dr. Richard Stanwick
Chief Medical Health Officer
VIHA
May 8, 2006

Life Expectancy 2001- 2005



Life-expectancy in VIHA service area is very close to the provincial average at 80.4 years

Substantial variation in life-expectancy among VIHA LHA's

Over 5 years difference between Saanich and North Island

Age Standardized Mortality in VIHA 2000-2004

- ◆ Overall standardized mortality rate is very close to the provincial average
- ◆ Significantly lower SMR's for
 - ▶ Diabetes
 - ▶ Respiratory diseases
 - ▶ Motor vehicle crashes

Age Standardized Mortality in VIHA 2000-2004

- ◆ Significantly higher SMR's for
 - ▶ Falls (22% higher)
 - ▶ Suicide (13% higher)
 - ▶ Drug-related (15%)
 - ▶ Alcohol-related (12 %)
 - ▶ Cancers (6%)

Individual Variation in Health Status

The geographical variation in health status in the VIHA service area reflects the variation in health status at an individual level

When residents were asked to rate their own health status in the 2003 Canadian Community Health Survey-

24% rated it as excellent

37% as very good

15% as good

9% as fair

4% as poor

Very close to the rating obtained in the rest of the province

What Causes Variation In Health Status?

Key Determinants

1. [Income and Social Status](#)
2. [Social Support Networks](#)
3. [Education and Literacy](#)
4. [Employment/Working Conditions](#)
5. [Social Environments](#)
6. [Physical Environments](#)
7. [Personal Health Practices and Coping Skills](#)
8. [Healthy Child Development](#)
9. [Biology and Genetic Endowment](#)
10. [Health Services](#)
11. [Gender](#)
12. [Culture](#)

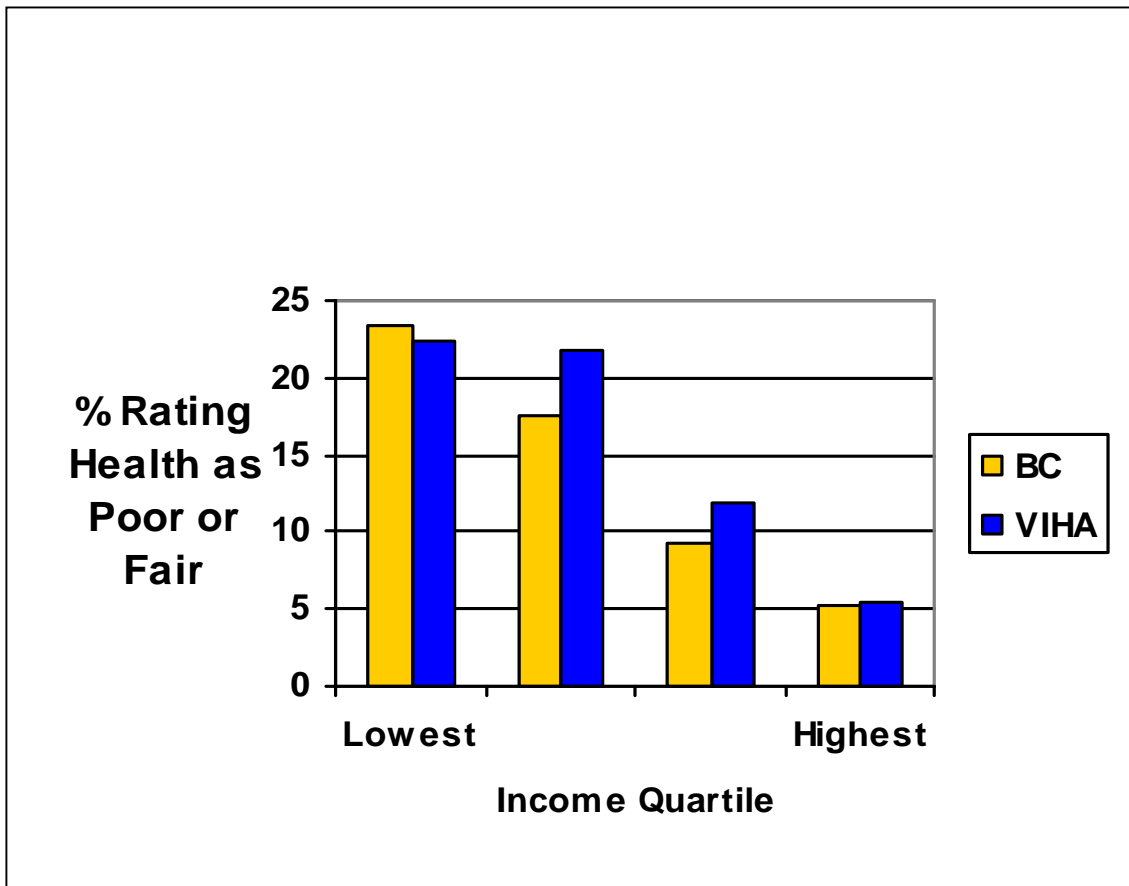
The Focus of This Presentation

“Most important are three intensely social risk factors. First is low social status, which in this context is less a matter of low material living standards themselves than of their social consequences..... Second comes poor social affiliations of all kinds, including lack of friends, being single, weak social networks, lack of involvement in community life and so on..... Third comes early childhood experiences.”

Richard Wilkinson. The Impact of Inequality. 2005 pg 25

Income and Health

Percent of Persons 12 and Over Who Rate Their Health As Poor or Fair By Income, 2003



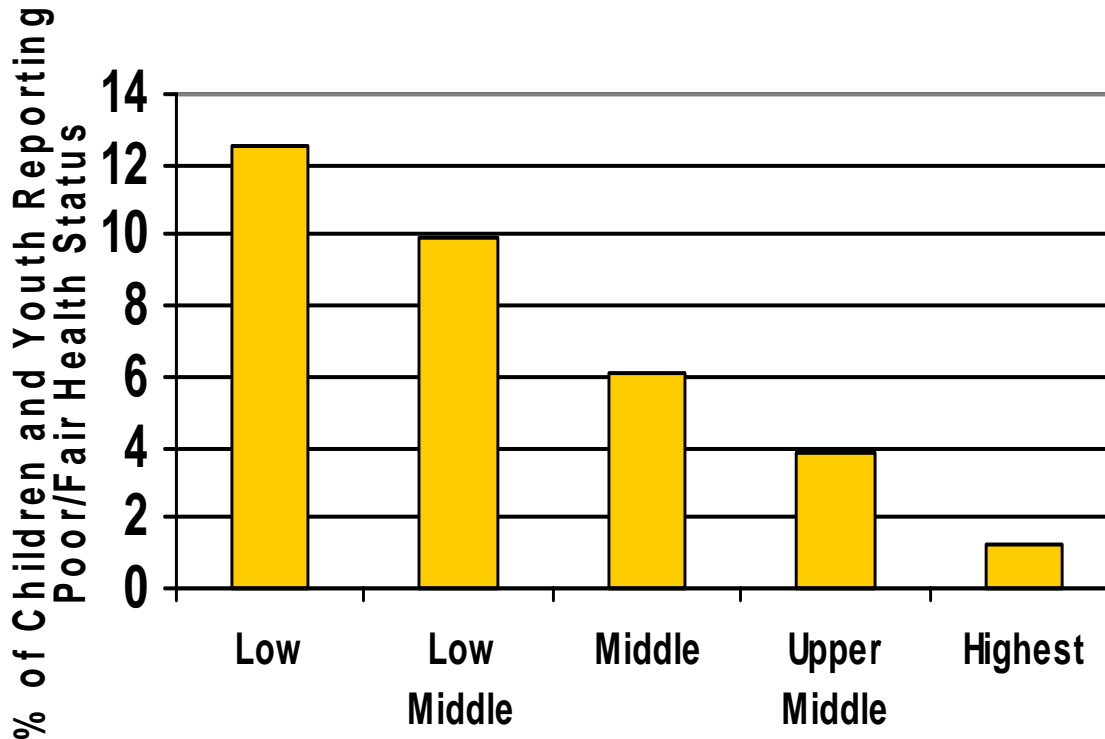
Strong income gradient provincially

Also present in VIHA service area but less dramatic because of higher rate of ill-health among lower-middle income group

We need to know more about this

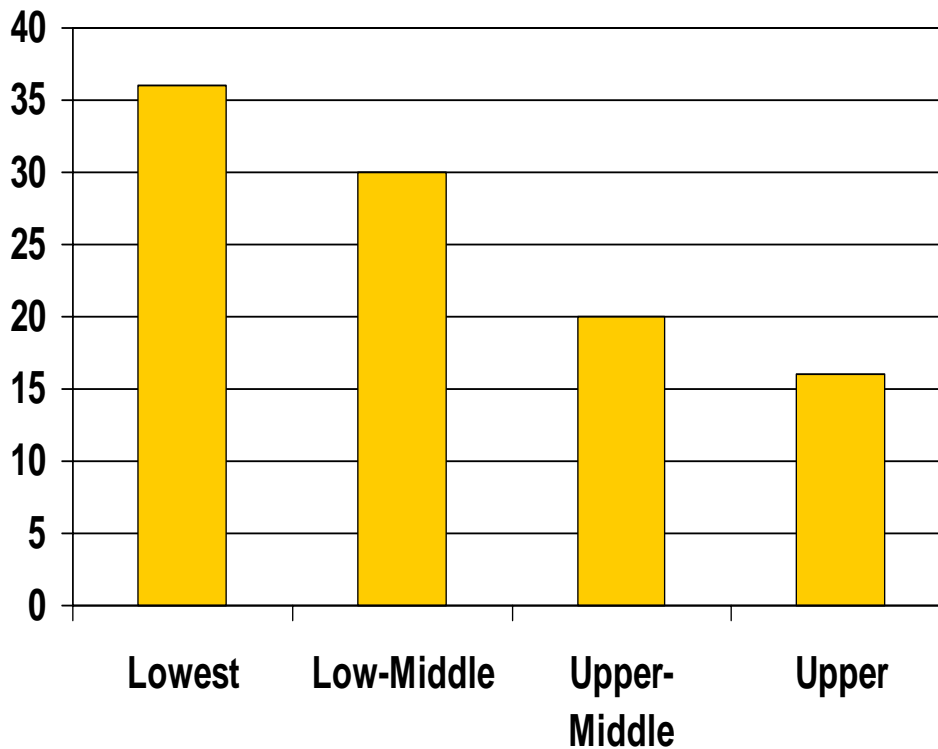
Only apparent in males

Percent of Children and Youth With Poor or Fair Health By Income. BC 2001



The income
gradient starts
young

% Reporting/ Fair or Poor Health By Income Among Persons Aged 65 & Over (BC 2003)



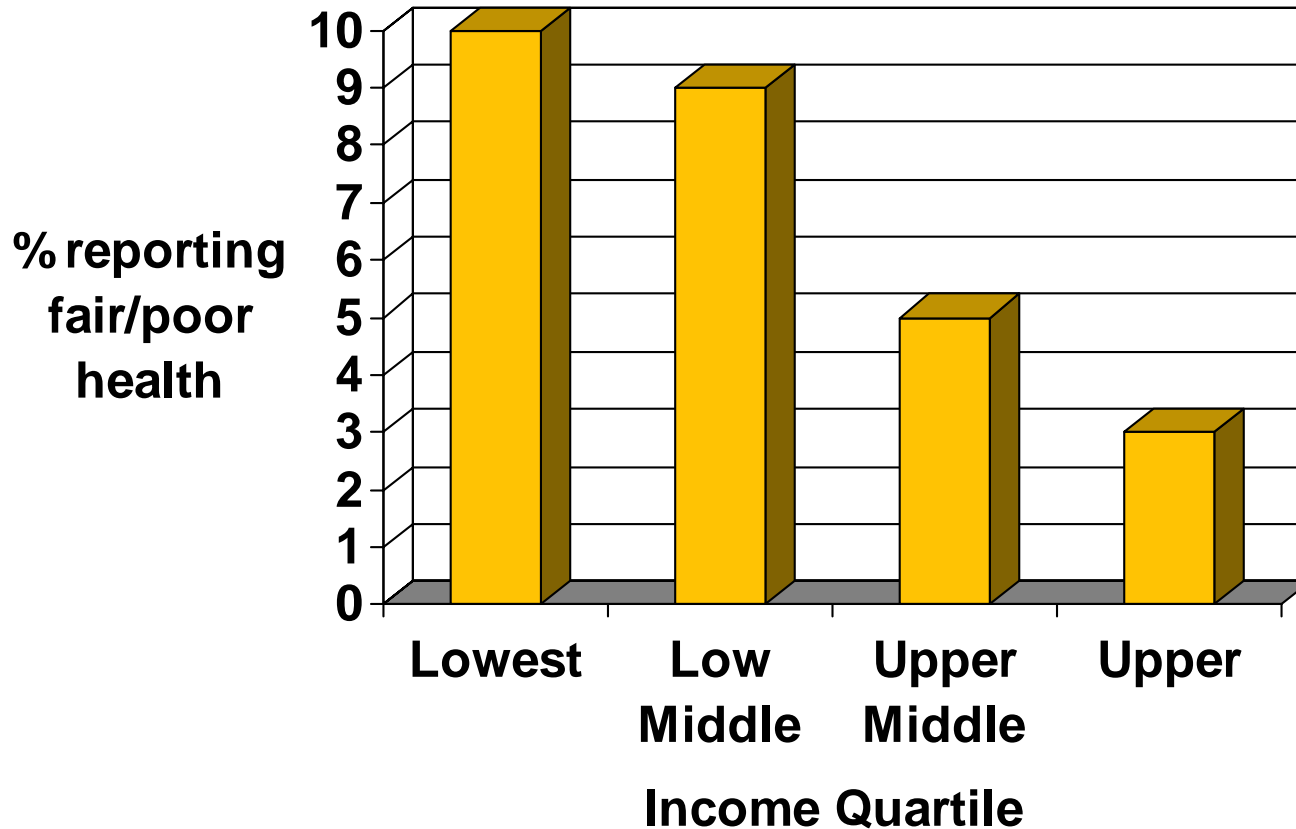
And it
continues to
be apparent
among the
elderly

The income gradient is remarkable in its consistency across population groups

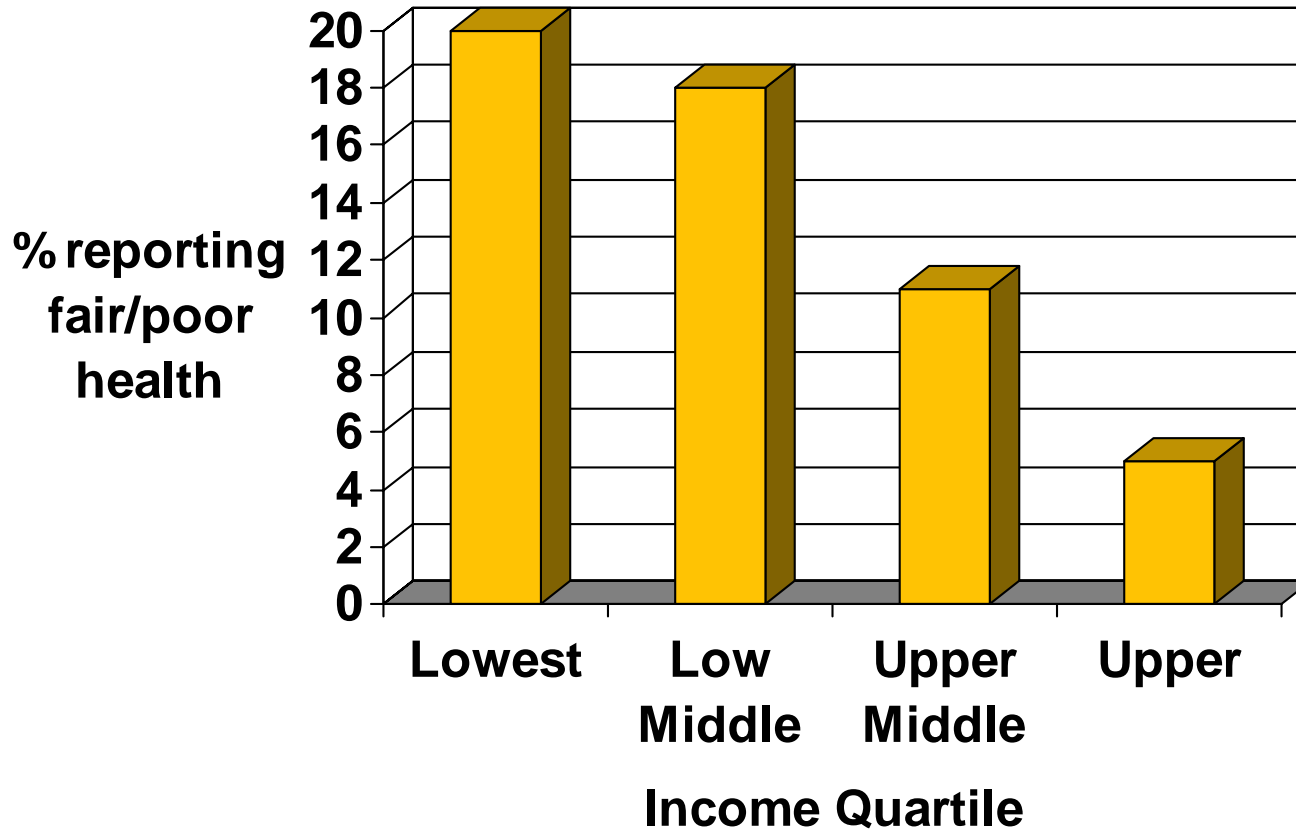
The next slides will illustrate this with the results of the 2003 Canadian Community Health Survey for the province as a whole

Sample-size does not support an analysis for the VIHA service area

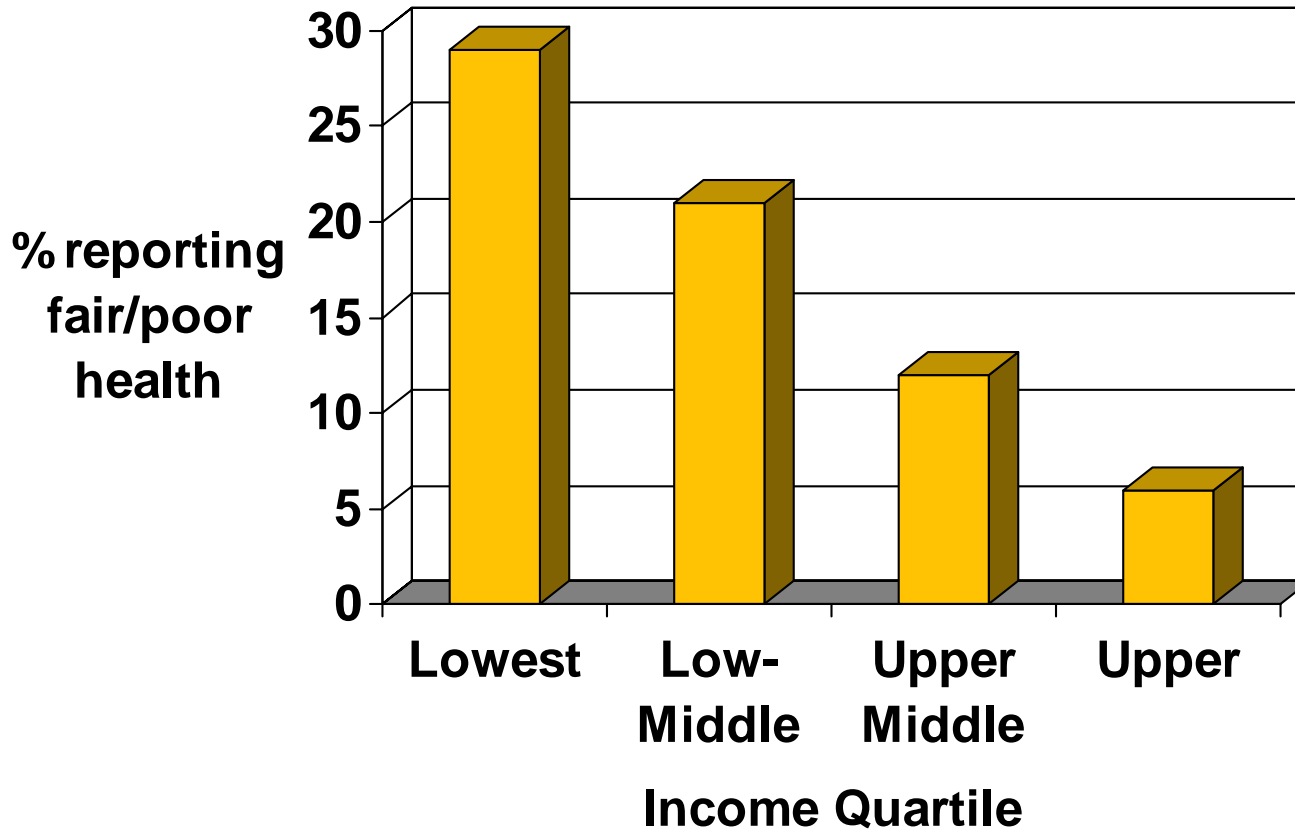
Working Population



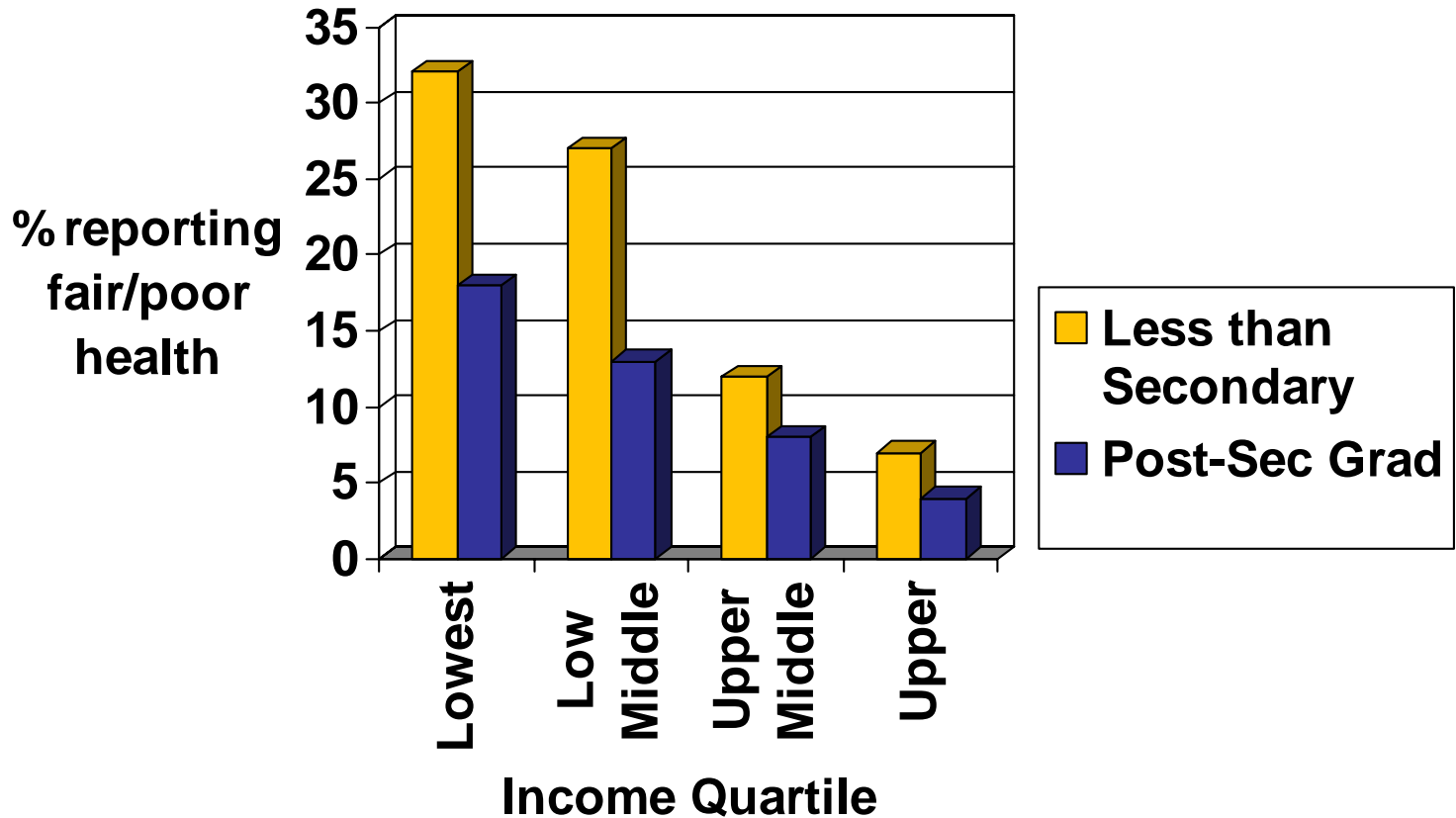
Immigrants



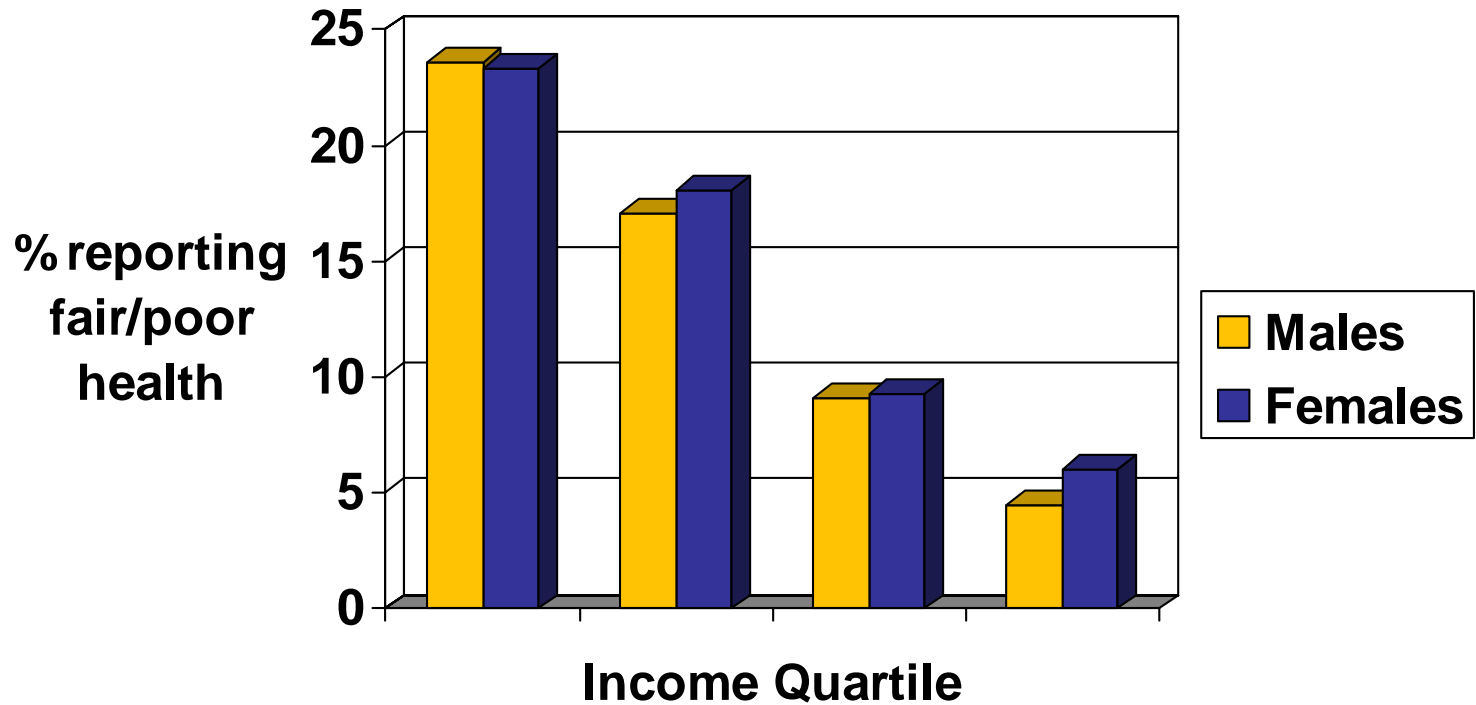
Aboriginal Persons



Most and Least Educated

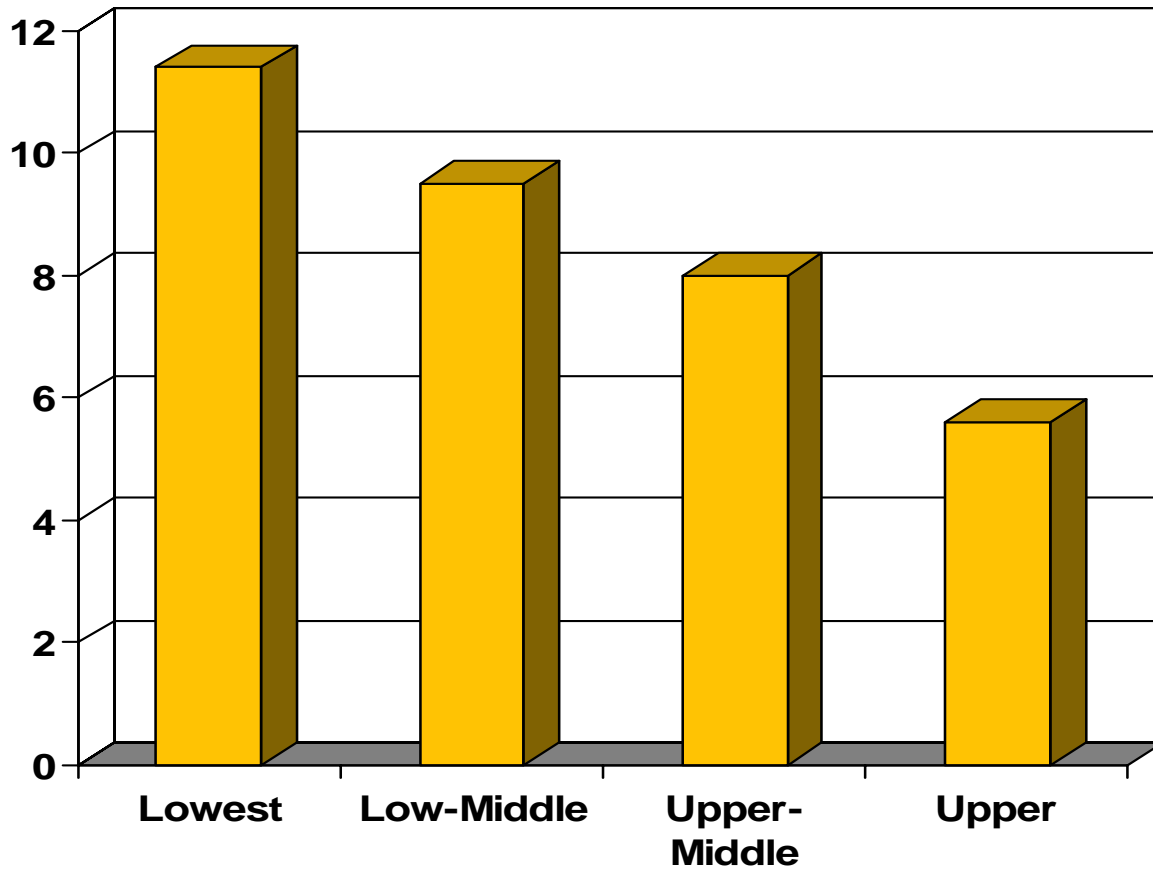


Males and Females

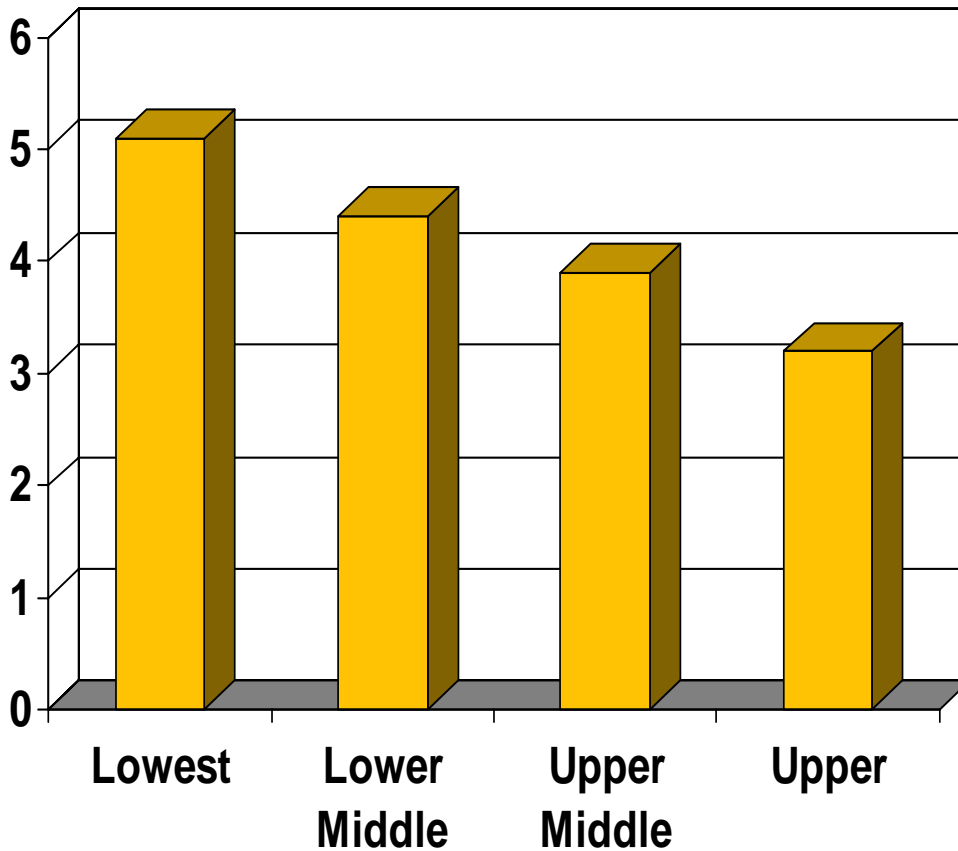


The gradient also has important implications for health service utilization

Percent of Income Group Who Have Been An Overnight Hospital Patient in the Last Twelve Months, BC 2003

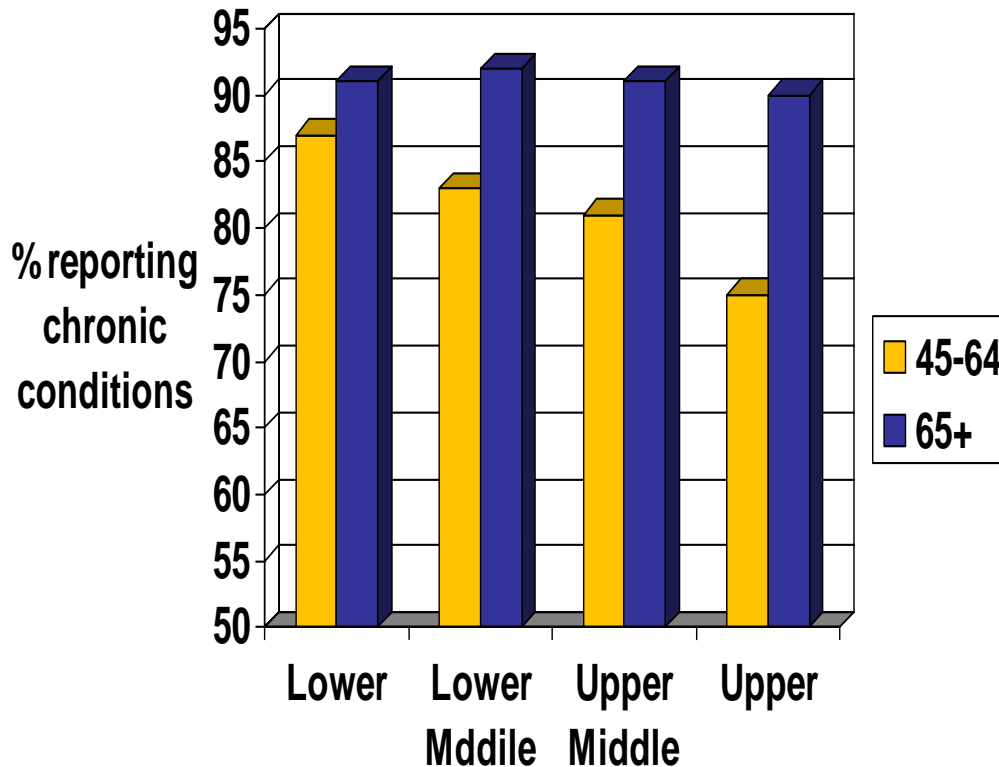


Average Family Physician Contacts During Previous 12 Months, BC 2003



The effects are also reflected in use of family physician services.

Chronic Conditions



The relationship between income and chronic conditions is primarily apparent for persons aged 45 to 64

It disappears after the age of 65

Income is related to the premature development of chronic health conditions

Data is for BC 2003

Chronic Conditions

Most chronic conditions in BC show an income gradient- allergies (other than food), arthritis, high blood pressure, mood disorders, cataracts, heart disease, anxiety disorders, diabetes, learning disorders, ulcers, chronic bronchitis.

Some do not- back problems, migraines, food allergies, asthma

Income-Related Chronic Diseases

Age-related chronic conditions, such as heart disease, tend to show an earlier onset among lower income groups

Consequently, the income gradient appears between ages 45 and 65

Other conditions such as mood disorders show an income gradient from younger ages

A Two-Way Street

The relationship between health and income works in both directions

Health Status can help to determine a person's Income

A person's Income can help to determine their Health Status

Health Affects Income

There are a variety of health conditions which have traditionally limited educational and employment opportunities

Physical disabilities

Learning disabilities

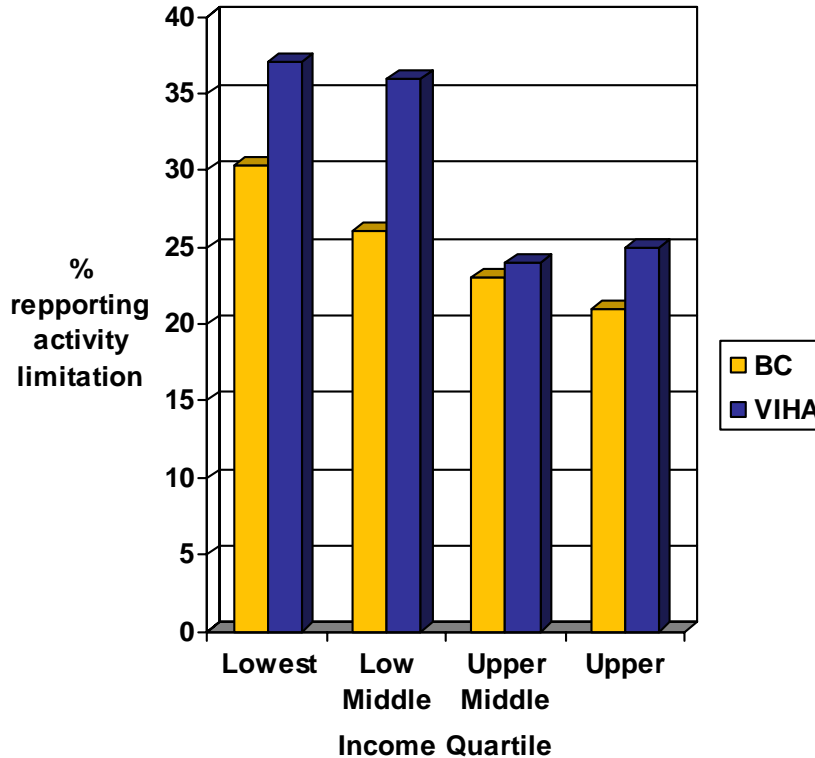
Development disorders

Mental illnesses

Activity Limitations

- ◆ 34% of VIHA population 12 and over report that they are sometimes or often restricted in their activities because of a chronic health condition
- ◆ 200,000 persons
- ◆ Significantly higher than the provincial rate of 27.3%
- ◆ Higher rate in both the elderly and non-elderly population

Activity Limitations by Income 2003 Persons Under the Age of 65



Strong income gradient provincially in prevalence of activity limitation

Strong income effect in VIHA but less of a gradient

Due to higher rates within lower middle income group

Reflects gradient in health status with higher rate of poor-fair health in this group

Activity Limitations and Social Assistance

- ◆ Many disabled persons are forced to rely on social assistance
- ◆ In Sept 2005, 12,000 VIHA residents were living on social assistance due to disabilities
- ◆ 1.7% of the adult population

INCOME AFFECTS HEALTH

Why does income appear to have such a strong influence on health status?

Number of factors at work.

It determines the type of housing and the type of neighbourhoods in which we live.

It effects our ability to participate in health-enhancing activities

It reflects the type of job we have.

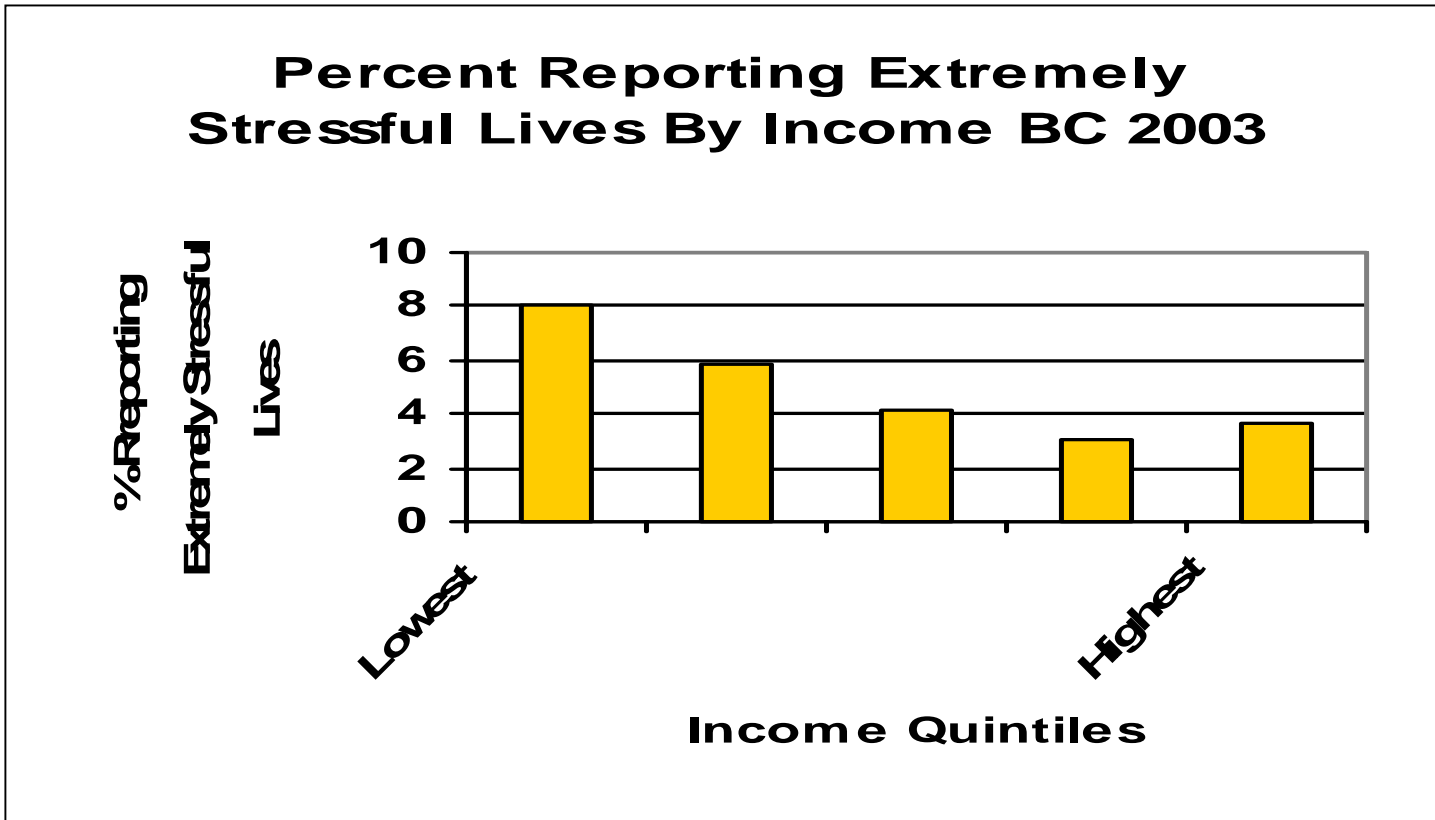
But most importantly.....

It Influences Our Exposure to Chronic Stress

“The point is to dispel a common misconception that ‘stress’ is predominantly a health risk for senior managers, stockbrokers, and others in positions of corporate and public responsibility. Acute stress in such contexts provides challenges which often will be exciting, stimulating and, after the event, emotionally and intellectually satisfying...high effort linked to high reward is generally health promoting. In contrast, ill health is associated with prolonged exposure to psychological demands when possibilities to control the situation are perceived to be limited and chances of reward are small

Brunner, E. and Marmot, M. Social organization, stress, and health. In Marmot, M. and Wilkinson, R. Social Determinants of Health. London: Oxford University Press, 2006, p. 13.

Income Affects Stress



And Stress Affects Health

Inhibits our immune system

Adversely affects our cardiovascular system and endocrine system

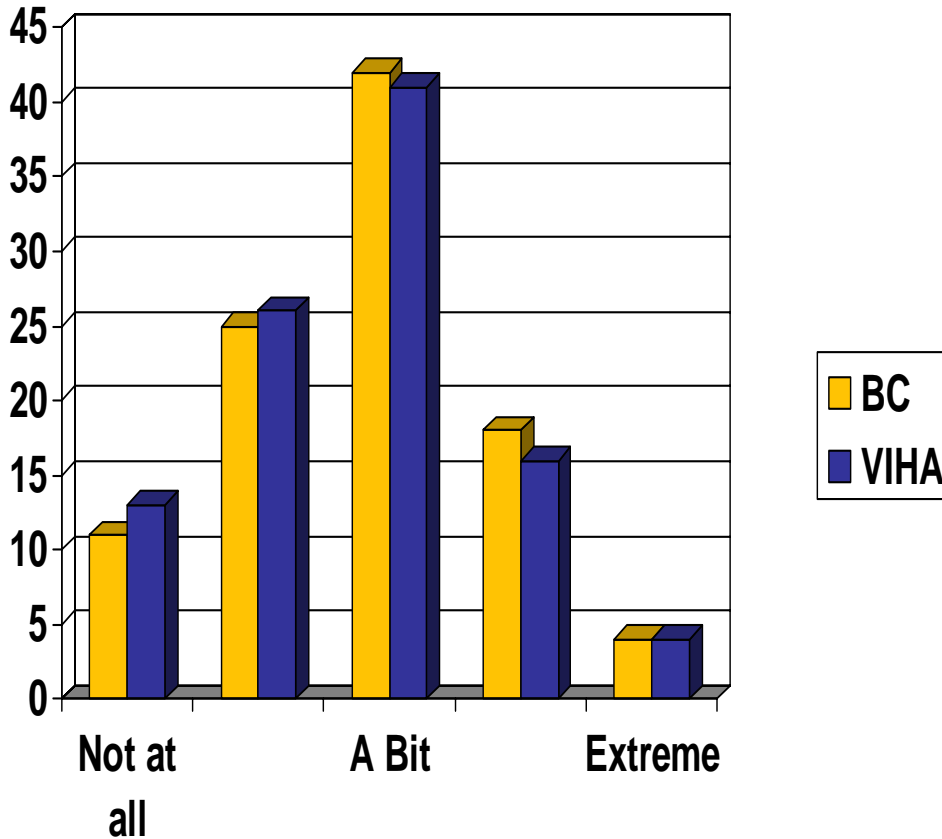
Contributes to substance abuse and other unhealthy behaviours

Engenders irritability and hostility, affecting interpersonal relationships

Can be passed from mother to infant-

High maternal stress contributes to low birth-weight which, in turn, is associated with a variety of childhood disorders and, in adulthood, a higher risk of cardiovascular disease

The Stress of Life



4% of VIHA residents report that their life is extremely stressful and another 16% report that it is quite stressful

Similar to provincial results

Who is stressed in VIHA?

Population Group	% reporting “quite a bit” or extreme stress in their lives
Permanently unable to work	54%
Social assistance recipients	47%
Single-parents	39%
Aboriginal persons	31%
Unemployed & looking for work	31%
Working moms	29%
Working, low income	26%
Working, high income	26%
VIHA population 12 and over	20%

Stress and Social Support

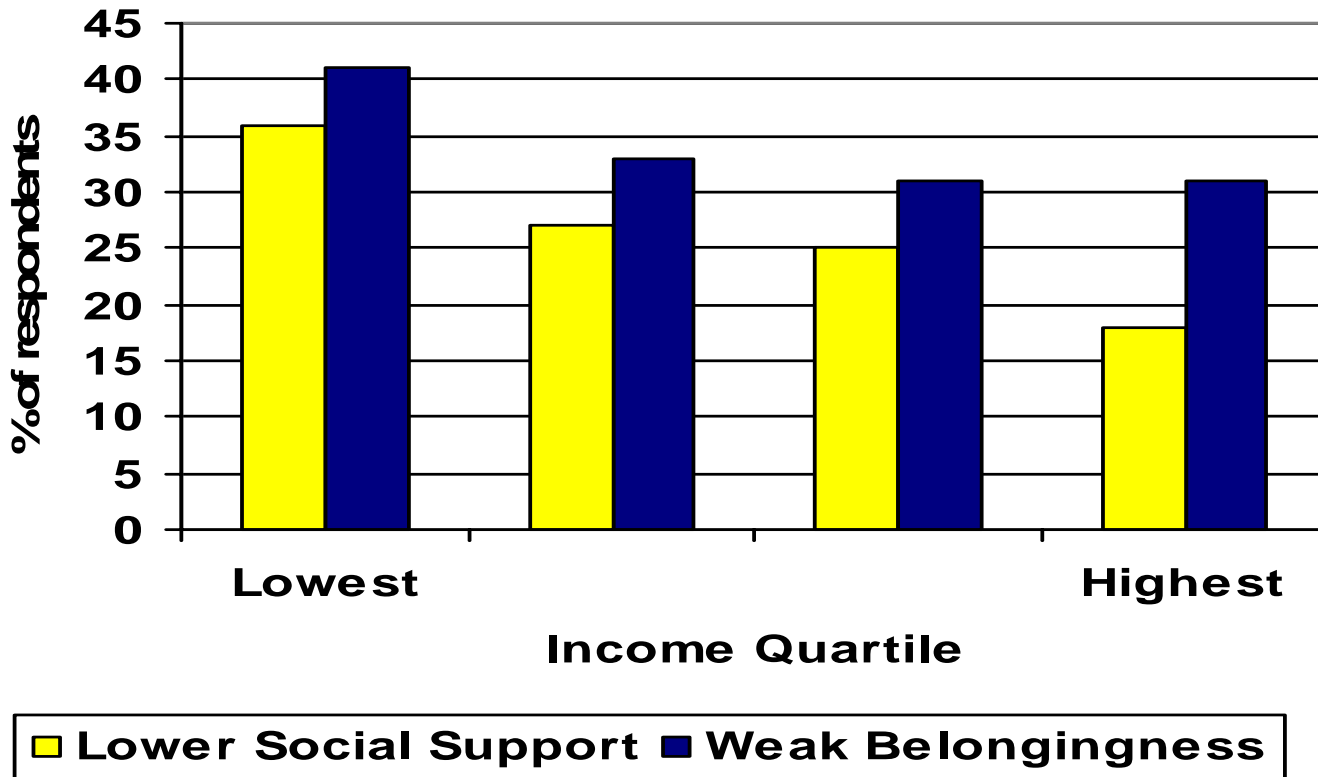
Strong social supports are an important buffer against the effects of stress

Friends, families and colleagues play a critical role in helping us to cope with the stresses of life

People who lack social supports are more likely to suffer the health consequences of stressful lives

Unfortunately the availability of social supports also shows a relationship with income

Percent of the BC Population Reporting Low Social Support (2001) and Weak Community Belongingness(2003) by Income



The Double Whammy

As we move down the income hierarchy-

We are more likely to be exposed to chronic stress

And less likely to have social supports to help us cope with the stress

Early Child Development

Child Risk Factors	VIHA vs BC
Children in care/ 1,000 (2004)	32% higher
Child abuse/ 1,000 (2003)	18 % higher
Teen pregnancies / 1000 females 15-17 (2004)	24% higher
Percent of children & youth on social assistance (2004)	28% higher
% of 18 yr olds who do not graduate	19% higher
Juvenile serious crime rate	28% higher

Variability Among LHA's

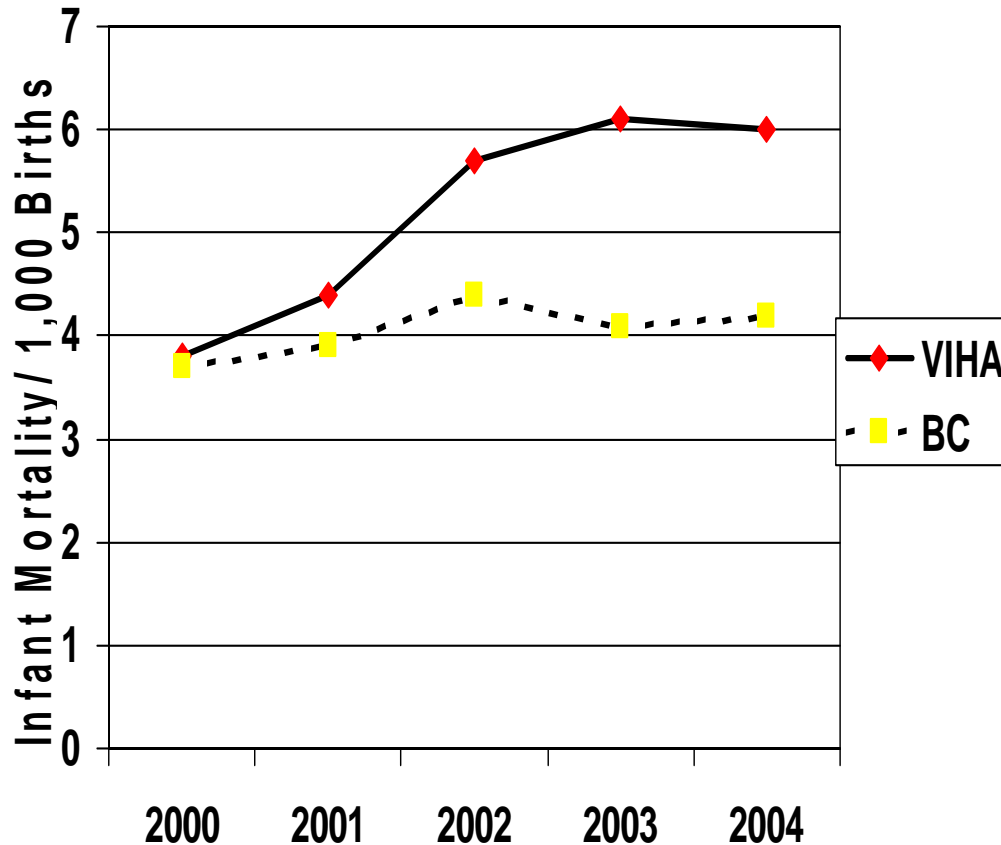
BC Stats has developed a composite measure of children-at-risk based on a number of economic, health, educational and crime indicators

Substantial variation among VIHA LHA's

In 2004, four VIHA LHA's fell into the highest risk quartile among all LHA's in the province- Alberni, North Island, Lake Cowichan and Nanaimo

Two LHA's fell into the lowest-risk quartile- Saanich and Gulf Islands

Infant Mortality



Infant mortality rates climbed in VIHA between 2000 and 2004

Diverged from provincial rates

Infant Mortality Rate 1999-2003

Qualicum	2.5
Sooke	3.2
Cowichan	3.7
Saanich	4.0
Greater Victoria	4.3
Alberni	4.7
Nanaimo	4.7
Campbell River	4.7
Ladysmith	5.7
West Island	5.9
Courtenay	6.7
Lake Cowichan	8.7
Gulf Islands	8.7
North Island	16.6
BC	4.0

There is a dramatic variation among LHA's in infant mortality

Conclusions: Health and Wealth in VIHA Service Area

Good News

The VIHA service area contains some of the healthiest and wealthiest areas of the province.

Bad News

It also contains some of the least healthy and least wealthy areas of the province

Conclusions: The Income Gradient of Health

Good News

The income gradient of health appears to be less pronounced in the VIHA service area than in the province as a whole

Bad News

The reason it is less pronounced is because of higher rates of ill health and activity limitations among persons in the lower middle income group

The Population Health Approach

- ✓ Focus on the health of populations, not just individuals
- ✓ Invest upstream by addressing root causes
- ✓ Base decisions on evidence
- ✓ Apply multiple strategies
- ✓ Collaborate across levels and sectors
- ✓ Employ mechanisms to engage citizens
- ✓ Increase accountability for health outcomes

What Populations?

If we are to reduce health-inequities, we must do a better job of addressing the needs of specific populations groups

Groups which have

- Poorer health status

- Higher stress

- Lower incomes

- Weaker social supports

Priority Populations

Persons who are unable to work due to disabilities

Separated persons and single parents

Social assistance recipients

Children in need of protection

Aboriginal persons

Others?

How Do We Do It?

- ✓ Invest upstream by addressing root causes
- ✓ Base decisions on evidence
- ✓ Apply multiple strategies
- ✓ Collaborate across levels and sectors
- ✓ Employ mechanisms to engage citizens
- ✓ Increase accountability for health outcomes