

Introduction to Household Food Insecurity

2015-11-11

5 learning expectations for today:

- Think *big* and *systemic* (this is *public* health nutrition), especially for possible interventions

5 learning expectations for today:

- Think *big* and *systemic* (this is *public* health nutrition), especially for possible interventions
- Identify what food insecurity really means

5 learning expectations for today:

- Think *big* and *systemic* (this is *public* health nutrition), especially for possible interventions
- Identify what food insecurity really means
- What limitations are there for the measurement and definition, and associated over- or under-estimation

5 learning expectations for today:

- Think *big* and *systemic* (this is *public* health nutrition), especially for possible interventions
- Identify what food insecurity really means
- What limitations are there for the measurement and definition, and associated over- or under-estimation
- Differentiate between prevalence vs number

5 learning expectations for today:

- Think *big* and *systemic* (this is *public* health nutrition), especially for possible interventions
- Identify what food insecurity really means
- What limitations are there for the measurement and definition, and associated over- or under-estimation
- Differentiate between prevalence vs number
- How to predict household, community, city, or provincial food insecurity rates and use that to create interventions

Outline

- What food insecurity is
 - Stages
 - Measured
 - Categories
 - Limitations
- Food insecurity in Canada
 - Overall and by province
 - Composition of households
 - Predictors of food insecurity

But, before getting into food insecurity...

¹Universal Declaration of Human Rights, adopted by UN General Assembly in 1948

But, before getting into food insecurity...

Access to adequate food is a fundamental human right¹

¹Universal Declaration of Human Rights, adopted by UN General Assembly in 1948

²From the FAO Right to Food

But, before getting into food insecurity...

Access to adequate food is a fundamental human right¹

The right to adequate food is realized when every man, woman and child, alone or in community with others, has the physical and economic access at all times to adequate food or means for its procurement.²

¹Universal Declaration of Human Rights, adopted by UN General Assembly in 1948

²From the FAO Right to Food

Household food insecurity: another window into problems of nutrition inequity in Canada

"Food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life"

"Food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life"

- Individual/household level
- Society/food system level

Household food insecurity:

- *Insecure or inadequate access to food due to financial constraints*
- *Often called 'hunger'*

Household food insecurity:

- *Insecure or inadequate access to food due to financial constraints*
- *Often called 'hunger'*



Measuring 'hunger' on national surveys:

1994—National Longitudinal Survey of Children and Youth (NLSCY): Has your child ever experienced being hungry because the family has run out of food or money to buy food?

1996—National Population Health Survey (NPHS): Which of the following best describes the food situation in your household?

- Always enough food to eat
- Sometimes not enough food to eat
- Often not enough food to eat

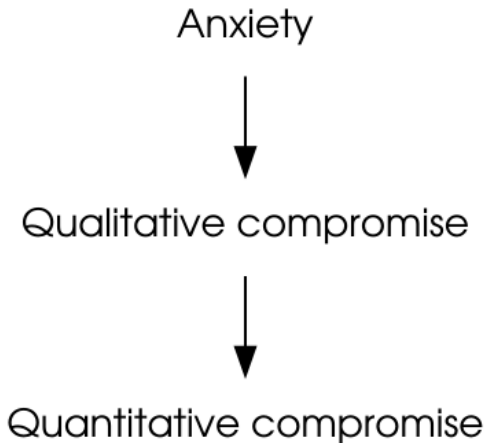
1998—NPHS: In the past 12 months, did you or anyone in your household

- Worry that there would not be enough food to eat because of a lack of money?
- Not eat the quality or variety of foods that you wanted because of a lack of money?
- Not have enough food to eat because of a lack of money?

Canadian Community Health Survey (CCHS)

- Conducted annually by Statistics Canada to monitor the health of the population.
- Surveys a nationally representative sample of approximately 60,000 Canadians, 12 years of age and older
- Omits people living on reserves and in institutions, members of the Armed Forces, and people who are homeless.

Conceptualization of household food insecurity underpinning food security module



Household Food Security Survey Module (HFSSM; on the CCHS since 2004)

18 questions, differentiating adults' and children's experiences over last 12 months:

- Worry about not having enough food
- Reliance on low-cost foods
- Not being able to afford balanced meals
- Adults/children skip meals
- Adults/children cut size of meals
- Adults/children not having enough to eat
- Adults/children not eating for whole day

"Because there wasn't enough money to buy food?"

Note: Prevalence estimates published by Statistics Canada and Health Canada only include moderate and severe food insecurity.

How do children experience food insecurity?

Current measures are based on adults' conceptualization and assumes adults manage household food situation, employing a sequence of strategies to minimize children's experiences of deprivation.

But children also take part in household food insecurity:

- Awareness at cognitive, emotional, and physical levels
- Take responsibility for managing food resources
- Participate in adult resource management strategies
- Initiate strategies to extend existing food resources and augment them

How do children experience food insecurity?

Current measures are based on adults' conceptualization and assumes adults manage household food situation, employing a sequence of strategies to minimize children's experiences of deprivation.

But children also take part in household food insecurity:

- Awareness at cognitive, emotional, and physical levels
- Take responsibility for managing food resources
- Participate in adult resource management strategies
- Initiate strategies to extend existing food resources and augment them

Implications for food security measurement: *Survey module may be underestimating the extent and severity of food insecurity experienced by children and adolescents.*

Health Canada's coding of food insecurity³

Food insecurity ≥ 2 affirmed in either category (not added together).

Category	10-item adult scale	8-item child scale
Food Secure	0-1 affirmed	0-1 affirmed
Moderately food insecure	2-5 affirmed	2-4 affirmed
Severely food insecure	≥ 6 affirmed	≥ 5 affirmed

³Determining Food Security Status, HC website

USDA codings of food insecurity definitions⁴

Food insecurity ≥ 3 affirmed in either category (not added together).

Category	10-item adult scale	8-item child scale
Food Secure	0-2 affirmed	0-1 affirmed
Low food security	3-5 affirmed	2-4 affirmed
Very low food security	≥ 6 affirmed	≥ 5 affirmed

⁴Food Security, USDA

Levels of food insecurity⁵

Food security status, based on 18 item questionnaire*			
Status	Interpretation	10 item adult food security scale	8 item child food security scale
Food secure	No report of income-related problems of food access.	No items affirmed	No items affirmed
Marginal food insecurity**	Some indication of worry or an income-related barrier to adequate, secure food access.	Affirmed no more than 1 item on either scale	
Moderate food insecurity	Compromise in quality and/or quantity of food consumed by adults and/or children due to a lack of money for food.	2 to 5 positive responses	2 to 4 positive responses
Severe food insecurity	Disrupted eating patterns and reduced food intake among adults and/or children	6 or more positive responses	5 or more positive responses

* Adapted from: Canadian Community Health Survey, cycle 2.2, Nutrition (2004): Income related Household Food Security in Canada.

** One item in either scale affirmed.

⁵Taken from the PROOF 2013 report

Why is marginal food insecurity it's own level?

Why is it/should it be distinct and not grouped with 'food secure'?

⁶Loopstra & Tarasuk, Journal of Hunger and Environmental Nutrition, 2013

⁷Coleman-Jensen, Social Indicators Research 2010

Why is marginal food insecurity it's own level?

Why is it/should it be distinct and not grouped with 'food secure'?

- Marginally food insecure households report conditions of reduced food access and anxiety about the availability of food.
- Compared to food secure, they are more likely to show other indications of material hardship.
- e.g., Marginally food-insecure families were more likely to have borrowed money for rent; delayed bill payments and cancelled telephone, TV or internet services as a way to free up money for food.⁶
- Research in Canada and the US suggests that a 3-category definition is most appropriate because there are meaningful distinctions among marginal, moderate, and severe food insecurity.⁷

⁶Loopstra & Tarasuk, Journal of Hunger and Environmental Nutrition, 2013

⁷Coleman-Jensen, Social Indicators Research 2010

Compared to scales of other countries⁹

Comparing the experience of household food insecurity as captured across 22 scales and related ethnographies from 15 different countries:

Commonalities:

- Uncertainty and worry about food
- Inadequate food quality
- Insufficient food quantity

⁸Hamelin et al, 2002

⁹Coates et al, J Nutr, 2006

Compared to scales of other countries⁹

Comparing the experience of household food insecurity as captured across 22 scales and related ethnographies from 15 different countries:

Commonalities:

- Uncertainty and worry about food
- Inadequate food quality
- Insufficient food quantity

Consequences (vs core elements) of the experience:

- Hunger and other physiological consequences: present on most scales
- Alienation⁸: absent

Not on scales but recognized in ethnographic work:

- Social unacceptability

⁸Hamelin et al, 2002

⁹Coates et al, J Nutr, 2006

Limitations: HFSSM inconsistently conducted

Food security module is not always part of the common content, and on years when it has been optional, some provinces and territories have opted out.

Limitations: HFSSM inconsistently conducted

Food security module is not always part of the common content, and on years when it has been optional, some provinces and territories have opted out.

CCHS must underestimate the true prevalence of food insecurity in Canada because this survey does not include people living on reserves, homeless people, and residents in some remote locations.

Limitations: Difficult/impossible to compare across years

Inconsistent measurement on early surveys means that prevalence estimates cannot be compared over time. (NLSCY = National Longitudinal Survey of Children and Youth, NPHS = National Population Health Survey)

Survey	Measure	Prevalence
1994 NLSCY	Child hunger	1.20%
1996-97 NPHS	Household food insufficiency	4.00%
1998-99 NPHS	Worry, quality, quantity*	10.40%
2000-01 CCHS	Worry, quality, quantity*	14.70%
2004 CCHS (Cycle 2.2)	18-items**	9.20%
2007-08 CCHS	18-items**	7.70%

*response categories differ, so not comparable.

*differences in sampling limit comparability of the Food Security Module.

Note: Last two CCHS were moderate + severe only

Limitations: Incomplete data on full picture in Canada

Two other population subgroups that are very vulnerable to food insecurity but not included in national population health surveys:

- First Nations peoples living on reserves
- People who are homeless

On-reserve First Nations

- Kangiqsujuaq, Nunavik, PQ, 2002: 40% of households food insecure
- Kugaaruk, Nunavut, 2001: 83% of households food insecure
- Fort Severn, Ontario, 2002: 70% of households food insecure

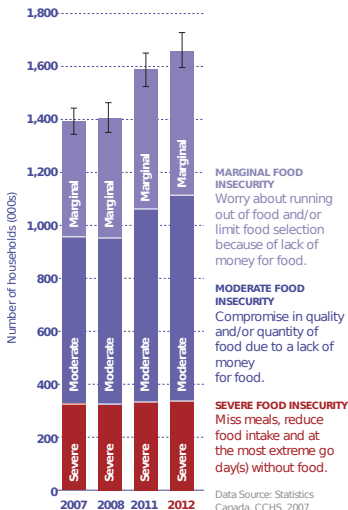
Food insecurity in Canada

Outline

- What food insecurity is
 - Stages
 - Measured
 - Categories
 - Limitations
- Food insecurity in Canada
 - Overall and by province
 - Composition of households
 - Predictors of food insecurity

Food insecurity over the last decade¹⁰

Household food insecurity



In 2012, 12.6% of Canadian households (1.7 million households, or 2.8 million adults and 1.15 million children) experienced food insecurity (includes marginal).

¹⁰From the PROOF project 2012 report

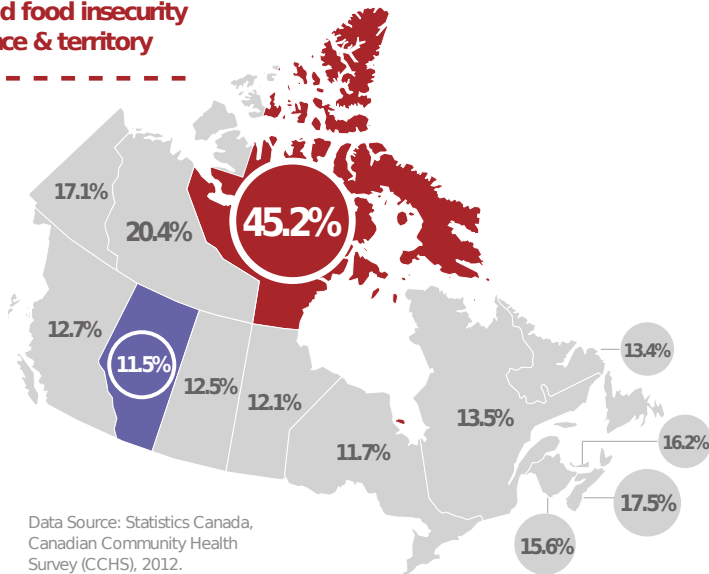
Food insecurity in Canada vs the US (using US definition)¹¹

Prevalence of Food Insecurity using USDA Measurement				
	Canada, 2012		US, 2012 ^{xvi}	
	Households (000s)	%	Households (000s)	%
Total food insecure	898.5	6.8%	17,632	14.5%
Low food security	570.4	4.3%	10,679	8.8%
Very low food security	328.1	2.5%	6,953	5.7%

¹¹From the PROOF project 2012 report

Household food insecurity in Canada (%) (2012)¹²

Household food insecurity by province & territory

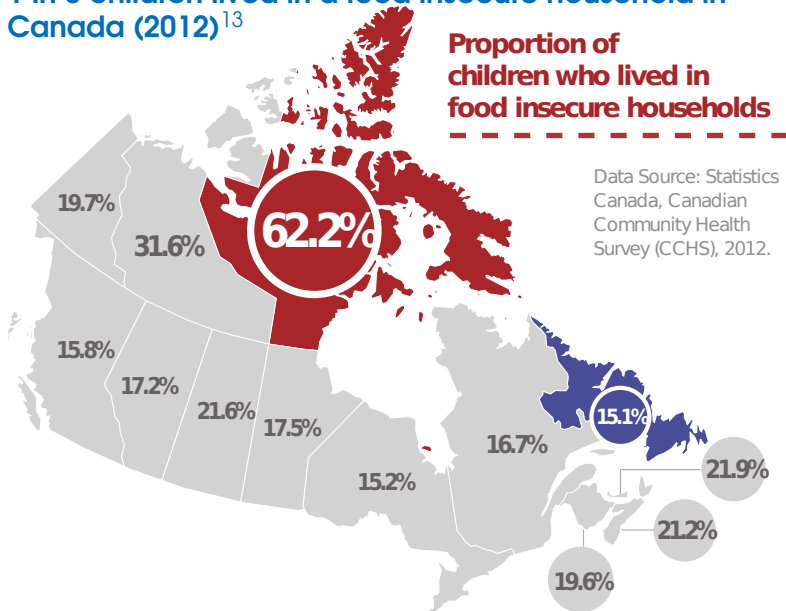


¹²From the PROOF project 2012 report

1 in 6 children lived in a food insecure household in Canada (2012)¹³

Proportion of children who lived in food insecure households

Data Source: Statistics Canada, Canadian Community Health Survey (CCHS), 2012.



¹³From the PROOF project 2012 report

Nunavut Inuit Child Health Survey, 2007-08

Random sample of 388 Inuit children, 3-5 yrs

18-item food security module, Health Canada's coding.

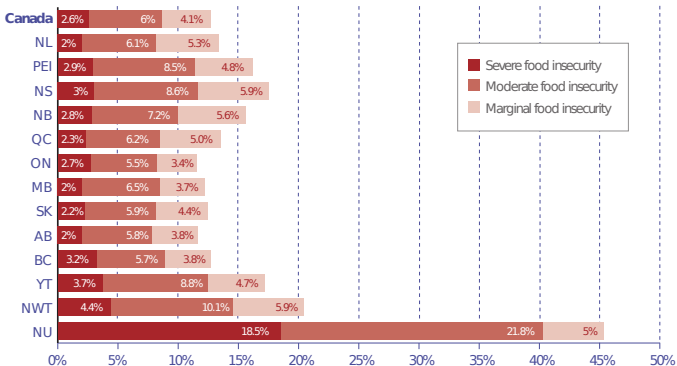
Results:

- Household food insecurity: 70%
- Child food insecurity: 56%
 - 31% moderate + 25% severe

Food insecurity by province as a percent of total food insecurity¹⁴

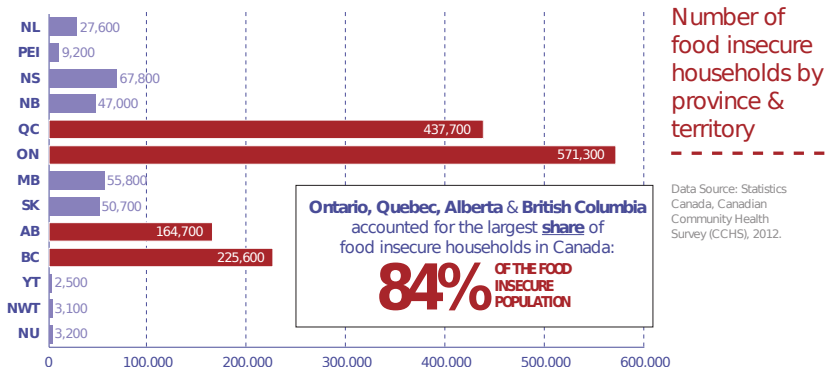
Household food insecurity in Canada by province & territory

Data Source: Statistics Canada, Canadian Community Health Survey (CCHS), 2012.



¹⁴From the PROOF project 2012 report

Food insecurity by province, by household count¹⁵

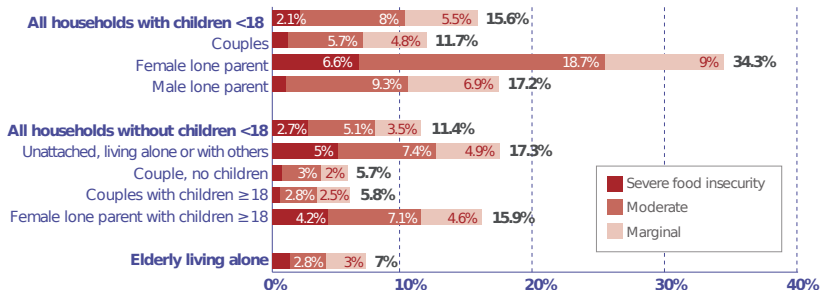


¹⁵From the PROOF project 2012 report

Composition of food insecure households¹⁶

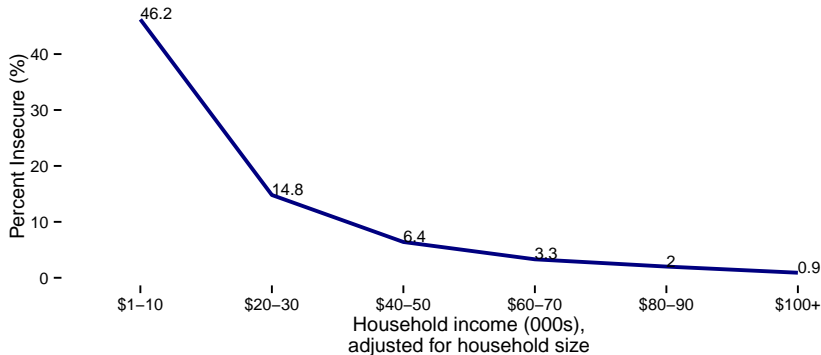
Food insecurity by household composition

Data Source: Statistics Canada, Canadian Community Health Survey (CCHS), 2012.



¹⁶From the PROOF project 2012 report

Single best predictor of household food insecurity = income¹⁷



Food insecurity captures material deprivation: Product of income (size, stability, security), assets, savings, access to credit, shelter costs, other expenses (food medication, debt, etc).

¹⁷Data from CCHS 2011.

Household income-to-Low Income Measure (LIM) ratio¹⁸

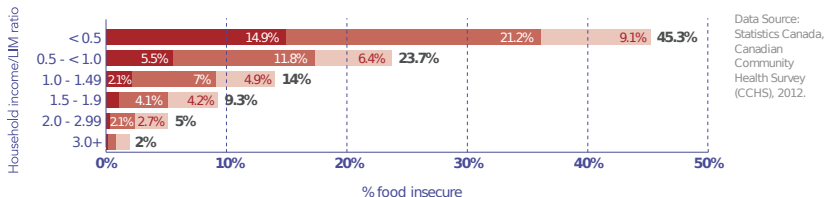
LIM is 50% of median household income, adjusted for household size.

¹⁸From the PROOF project 2012 report

Household income-to-Low Income Measure (LIM) ratio¹⁸

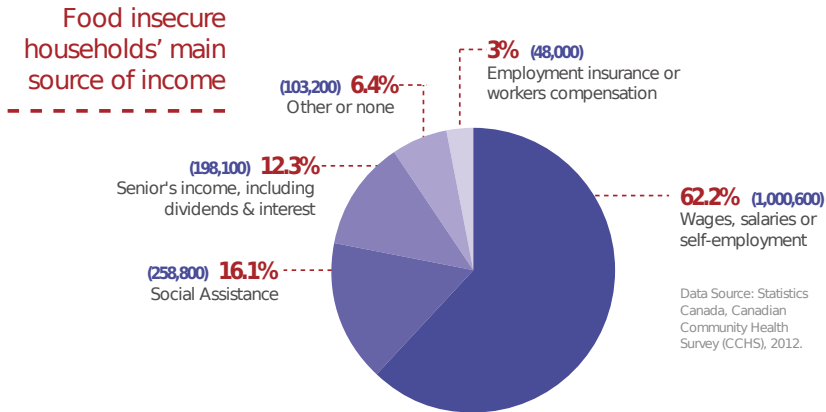
LIM is 50% of median household income, adjusted for household size.

Relationship between income and household food insecurity



¹⁸From the PROOF project 2012 report

Food insecure main source of income¹⁹



¹⁹From the PROOF project 2012 report

Why are so many households reliant on employment incomes food insecure?

²⁰McIntyre et al, Public Health Nutrition 2014

Why are so many households reliant on employment incomes food insecure?

- Low-waged jobs
- Short-term, part-time employment
- Single (vs dual) earner households
- Greater vulnerability among workers who are visible minorities and those with limited education²⁰

Combined with:

- Inadequate income transfers provided to supplement low employment incomes

²⁰McIntyre et al, Public Health Nutrition 2014

4 predictors, other than income, consistently seen in population survey analyses²¹

²¹McIntyre et al, CMAJ, 2000; Che & Chen, Health Reports, 2001; Vozoris & Tarasuk, J Nutr 2003; Ledrou & Gervais, Health Reports 2005; Health Canada, 2007; Tarasuk & Vogt, Can J Public Health 2009; Willows et al, Public Health Nutr 2008.

4 predictors, other than income, consistently seen in population survey analyses²¹

- Lack of home ownership
- First Nations, Inuit, or Metis status
- Lone-motherhood
- Reliance on social assistance

²¹ McIntyre et al, CMAJ, 2000; Che & Chen, Health Reports, 2001; Vozoris & Tarasuk, J Nutr 2003; Ledrou & Gervais, Health Reports 2005; Health Canada, 2007; Tarasuk & Vogt, Can J Public Health 2009; Willows et al, Public Health Nutr 2008.

Our social safety net:

- A myriad of federal and provincial programs designed to support people facing financial hardships, e.g. Employment Insurance, welfare, disability supports, old-age pensions, subsidized housing, tax credits, etc.
- None of these programs are specifically designed to achieve household food security, and they appear to yield very different results.

65% of households reliant on social assistance are food insecure

- Incomes fall below basic living costs in most jurisdictions.
- Limits on allowable assets mean likely no savings, so no capacity to buffer sudden increases in expenses or interruptions in income.
- Most provinces *do not index* social assistance incomes to inflation.

65% of households reliant on social assistance are food insecure

- Incomes fall below basic living costs in most jurisdictions.
- Limits on allowable assets mean likely no savings, so no capacity to buffer sudden increases in expenses or interruptions in income.
- Most provinces *do not index* social assistance incomes to inflation.

Being on social assistance almost guarantees food insecurity.

Why are social assistance recipients so vulnerable?

Incomes fall below basic living costs in most jurisdictions, as evidenced by Nutritious Food Basket costing comparisons.

Why are social assistance recipients so vulnerable?

Incomes fall below basic living costs in most jurisdictions, as evidenced by Nutritious Food Basket costing comparisons.

The exception: Newfoundland and Labrador

- Poverty Reduction Strategy launched in 2006, tackling breadth and depth of poverty.
- Social assistance benefits were increased and indexed to inflation.
- Asset limits and earnings exemptions were raised

Benefits to senior citizens

7% of households reliant on seniors' incomes are food insecure (2012)

- Compared to 11% reliant on employment and 65% reliant on social assistance

Benefits to senior citizens

7% of households reliant on seniors' incomes are food insecure (2012)

- Compared to 11% reliant on employment and 65% reliant on social assistance

Seniors have:

- Guaranteed annual incomes (*indexed* to inflation)
- Drug coverage
- Transit subsidies
- 'Seniors day' discounts
- Often own their home

²²Emery et al, Prev Med. 2013

Benefits to senior citizens

7% of households reliant on seniors' incomes are food insecure (2012)

- Compared to 11% reliant on employment and 65% reliant on social assistance

Seniors have:

- Guaranteed annual incomes (*indexed* to inflation)
- Drug coverage
- Transit subsidies
- 'Seniors day' discounts
- Often own their home

Turning 65 drops the risk of food insecurity in half for low-income adults²²

²²Emery et al, Prev Med. 2013

5 learning expectations for today:

- Think *big* and *systemic* (this is *public* health nutrition), especially for possible interventions
- Identify what food insecurity really means
- What limitations are there for the measurement and definition, and associated over- or under-estimation
- Differentiate between prevalence vs number
- How to predict household, community, city, or provincial food insecurity rates and use that to create interventions

For next week, please read:

Seligman HK, Schillinger D. Hunger and socioeconomic disparities in chronic disease. *New England Journal of Medicine*, 2010; 363(1): 6-9.

Kirkpatrick et al. Child hunger and long-term adverse consequences for health. *Archives of Pediatrics and Adolescent Medicine*. 2010; 164(8):754-762.

Tarasuk et al. Chronic Physical and Mental Health Conditions among Adults May Increase Vulnerability to Household Food Insecurity. *Journal of Nutrition* 2013.