

Cost and Affordability of a Nutritious Diet in Nova Scotia

Report on 2008 Participatory Food Costing



A project of the Nova Scotia Food Security Network
and Mount Saint Vincent University
in partnership with community partners, and
the Department of Health Promotion and Protection

Released April 2009



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Acknowledgements

This research would not have been possible without the contributions of a wonderful team of individuals and organizations throughout Nova Scotia. We are especially grateful to the extremely dedicated food costers and support people, and members of the Food Costing Working Group of the Nova Scotia Food Security Network who were instrumental in helping shape, guide and carry out all stages of the research (see list of partners and committee members on page 22 and 23). The ongoing cooperation of grocery stores throughout Nova Scotia is an essential piece of this research that is valued by all project partners. A dedicated team of staff and students have been involved in various aspects of this work. Thanks to Lesley Frank (Coordinator November 2006 – July 2008), Rebecca Green (Research Assistant until August 2008), Amanda Rogers (Research Assistant January 2009-Present), Marni Amirault (Research Assistant November 08-January 09) and MSVU Dietetic Interns Lesley Neil, Jessi Filmore and Sue Conlan. A special thanks to Michelle Florence (Coordinator August 2008 – Present) for all her work in coordinating this project, analysing the data, constructing the affordability scenarios and preparing this report. Thanks also to members of the Nova Scotia Food Security Network Steering Committee, Janet Rathbun (Department of Community Services), Vince Calderhead (Nova Scotia Legal Aid), and Lynn Langille (Department of Health Promotion and Protection) for their help in reviewing this report; to Dr. Ilya Blum for his support with data analysis; and to Derek Sarty for his work on the graphic design of this report. Finally we are especially grateful for funding from the Department of Health Promotion and Protection for Participatory Food Costing in support of Healthy Eating Nova Scotia (2005), and for their commitment to building food security in Nova Scotia.

Sincerely,
Dr. Patty Williams, Principal Investigator
Associate Professor and Canada Research Chair in Food
Security and Policy Change
Department of Applied Human Nutrition
Director, Participatory Action Research and Training Centre
on Food Security
Mount Saint Vincent University

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Building Food Security through Participatory Food Costing in Nova Scotia

Food Security means that all people, at all times, have access to nutritious, safe, personally acceptable and culturally appropriate foods that are produced, procured and distributed in ways that are sustainable, environmentally sound and socially just.¹ Food security is recognized as a key social determinant of health. Food insecurity is the opposite of food security. **Food insecurity** is often a reality for low-income households who do not have adequate resources to access enough healthy and safe food to enable individuals or families to meet their dietary needs and food preferences for an active and healthy life.² In households with inadequate income to meet basic needs, the food budget is the most flexible and is often used to cover other fixed costs such as shelter, power, and transportation. Income-related food insecurity has been shown to negatively impact physical, mental and social aspects of health.³

The Nova Scotia Food Security Network, Nova Scotia Nutrition Council, Atlantic Health Promotion Research Centre, Mount Saint Vincent University, collaborating Community Action Program for Children (CAPC) and Canada Prenatal Nutrition Program (CPNP) funded Family Resource Centres/Projects and other partners throughout Nova Scotia have been working together since 2000 to promote and support the development of policies and practices to build food security.

Participatory food costing was first conducted in Nova Scotia in 2002 with funding from Health Canada and has since been repeated in 2004/2005, 2007 and 2008 with the funding support from the Nova Scotia Department of Health Promotion and Protection.⁴⁻⁸ In this report we examine the cost and affordability of a basic nutritious diet in Nova Scotia in 2008.

Why is Income-Related Food Insecurity a Concern in Nova Scotia?

Income-related food insecurity is an ongoing issue for many Nova Scotians.

- In Nova Scotia, 14.6% of households (approximately 132,400 households) reported either moderate or severe income-related food insecurity in 2004. Nova Scotia was the only province with significantly higher levels of household food insecurity than the national average (9.2%).⁹
- 16,915 Nova Scotians accessed a food bank in March 2008.¹⁰

Women and children are more affected by income-related food insecurity than many other groups.

- In Nova Scotia, 33.4% of female led lone parent families reported experiencing income-related food insecurity in 2004.⁹
- 21% of families with three or more children in Nova Scotia reported moderate or severe income-related food insecurity in 2004.⁹
- Research in Nova Scotia demonstrates that low income mothers compromise the nutritional quality of their own diet to protect their children.¹¹
- 35% of Nova Scotians who accessed a food bank in March 2008 were children.¹⁰

Many Nova Scotians do not have an adequate income to meet basic needs.

- Households in the Atlantic Region relying on Income Assistance as their main source of income reported significantly higher levels of household income-related food insecurity (69.7%) in 2004 than households with other income sources.¹²
- Although Nova Scotia has seen modest increases in minimum wage and Income Assistance rates in the past several years, these rates have consistently been shown to be inadequate to allow individuals and families to meet their basic needs.^{4-7,13-14}

Using Food Costing to Monitor Food Security in Nova Scotia

Food costing has been used for several decades across Canada to monitor the cost of a basic nutritious diet. Food costing involves collecting prices of specified food items representing a basic nutritious diet. As part of the 2004/05 project,

Working Together for Ongoing Food Costing and Policy Solutions that Build Food Security, Nova Scotia's Department of Health Promotion and Protection funded the core partners (Nova Scotia Nutrition Council, Atlantic Health Promotion Research Centre, and collaborating CAPC and CPNP funded Family Resource Centres/Projects) to develop a model for sustainable food costing. The purpose of the model was to help monitor income-related food insecurity by estimating the cost and affordability of a basic nutritious diet in the province.¹⁵ The model was funded in support of *Healthy Eating Nova Scotia* (HENS), the government- and stakeholder-developed provincial healthy eating strategy.¹⁶ In this strategy, food security is one of four identified priority areas with a key objective of *increasing the proportion of Nova Scotians who have access to nutritious foods*.

What is Participatory Food Costing and Why is it Important?

Participatory food costing is a method of conducting food costing that includes the participation of those most affected by income-related food insecurity¹⁷ as well as those with the ability to have an impact on the issue. The Nova Scotia Participatory Food Costing Project uses a participatory research approach to food costing by involving community partners in decision making, in data collection and analysis, and in the use of research results to influence policy and help build food security in Nova Scotia. People involved in Family Resource Centres/Projects, Women's Centres and other community-based groups throughout Nova Scotia, many of whom have first hand experience with food insecurity or work with those experiencing food insecurity, are involved as partners, food costers and support people in their communities.

Participatory food costing provides much needed evidence to help inform policy and program change.⁴⁻⁸ Moreover, previous work in Nova Scotia has clearly shown that the process of working together on all stages of the research - from data collection to the use of results - helps build capacity for policy change at multiple levels, and ultimately contributes to building food security in Nova Scotia.¹⁸⁻²⁰

How was Food Costing Conducted?

The Survey Tool

Consistent with food costing in 2002, 2004/05 and 2007, a standardized tool called the *National Nutritious Food Basket (NNFB)*²¹ was used to conduct food costing in 2008. The NNFB was developed by Health Canada. It is a list of 66 foods that can be used to calculate the cost of a basic nutritious diet for 23 different age and gender groups. The food items in the NNFB are foods that are minimally processed, that are widely available in grocery stores, and that are commonly eaten by most Canadians in amounts that would provide a nutritionally adequate, balanced diet for various age and gender groups.

Where and When was this Project Completed?

The 2008 food costing was conducted in 46 grocery stores, located in various communities throughout District Health Authorities (DHAs) in Nova Scotia. A complete list of grocery stores in the province was used to generate a stratified random sample of stores, which considered community population size, store size, and location in one of the nine District Health Authorities in the province. Head offices of the major grocery chains were contacted for endorsement of the project and permission to conduct food costing in their stores. In order to minimize price fluctuations over time, food costing was conducted in all stores during the week of June 14th-18th, 2008.

Data Collection by Food Costers

With the support of Public Health Services, Family Resource Centres/Projects, and grocery stores, six regional food costing training sessions were held throughout Nova Scotia in May and June, 2008. Thirty-six people attended food costing training sessions. Others who had received training and carried out data collection in previous years did not attend formal training sessions. In some cases, experienced food costers provided refresher training to others in their organization.

Forty people from 13 different community-based organizations throughout Nova Scotia organized and carried out data collection. Twelve other people were involved to support food costers in their communities by providing organizational support. Food costers travelled in pairs to the selected grocery stores. Transportation and childcare costs were reimbursed in order to facilitate participation, and honoraria were provided to food costers to recognize their contributions to the data collection process. Food costers recorded the lowest available price of all 66 food items for specific product sizes in the 46 stores and mailed completed surveys to the provincial food costing coordinator. Surveys were then double checked by project staff and students, entered into a spreadsheet, checked twice for accuracy and analyzed with the help of a statistician.

Results: The Cost of a Basic Nutritious Diet in Nova Scotia in 2008

What is the Weekly Cost of a Basic Nutritious Diet in Nova Scotia for Different Age and Gender Groups?

The National Nutritious Food Basket (NNFB) can be used to estimate the cost of eating a basic nutritious diet for a household of any size or composition.²¹ The cost was calculated for 23 different age and gender groups, including pregnant and breastfeeding women. The following tables provide a breakdown of the weekly cost of a basic nutritious diet in Nova Scotia in June 2008 for specific age and gender categories and stages of pregnancy or lactation.

Table 1: Average Weekly Costs of the National Nutritious Food Basket in Nova Scotia by Age and Gender Groups (June 2008)*

Sex	Age (years)	Cost per Week (\$)
Child	1	18.92
	2-3	19.95
	4-6	26.49
Boy	7-9	31.09
	10-12	38.59
	13-15	44.92
	16-18	51.27
Girl	7-9	29.86
	10-12	35.91
	13-15	38.22
	16-18	35.59
Man	19-24	47.97
	25-49	46.29
	50-74	41.94
	75+	38.26
Woman	19-24	36.23
	25-49	34.50
	50-74	33.78
	75+	32.86

*Based on weekly costs of purchasing a NNFB for individuals shown in each age group and gender category.

Table 2: Average Weekly Costs of the National Nutritious Food Basket in Nova Scotia for Pregnant and Lactating Women (June 2008)*

Stages of Pregnancy or Lactation	Age of Mother (Years)	Cost per Week (\$)
Trimester 1	13-15	42.51
Trimesters 2,3		44.88
Lactation		46.32
Trimester 1	16-18	41.71
Trimesters 2,3		45.16
Lactation		46.41
Trimester 1	19-24	40.88
Trimesters 2,3		43.64
Lactation		44.75
Trimester 1	25-49	39.16
Trimesters 2,3		41.65
Lactation		42.56

*Based on weekly costs of purchasing a NNFB for women at various stages of pregnancy or lactation.

Calculating the Cost of a Basic Nutritious Diet in Nova Scotia for the Reference Household of Four

The weekly costs in Tables 1 and 2, can be used to estimate the cost of a basic nutritious diet for a household of four.

The Reference “Scotia” Family consists of:
Male and Female both between 25 and 49 years of age
and two children, a girl aged 7 and a boy aged 13 years.

The steps below can be used to determine the cost of a nutritious food basket for the reference “Scotia” family for one week. Readers can use this guide to determine the cost of a basic nutritious diet for their household by following the instructions below.

Step 1: Write down the age and gender of all the people in your household.

The Scotia family ...
Female: between 25 and 49 years of age;
Male: between 25 and 49 years of age; and
Children: a girl aged 7 and a boy aged 13 years.

Step 2: Use Table 1 on page 7 to figure out the weekly costs of a nutritious diet for members of the family, based on the cost of the NNFB for each individual:

Mother:	\$34.50
Father:	\$46.29
Girl aged 7:	\$29.86
Boy aged 13:	\$44.92
<hr/>	
Total	\$155.57

Step 3: Since it costs a little more per person to feed smaller households and a little less to feed larger households, the total cost estimated in Step 2 will need to be adjusted accordingly. Use the following adjustment²² for household size:

- 1 person: increase costs by 15% (multiply food costs by 1.15)
- 2 persons: increase costs by 10% (multiply food costs by 1.1)
- 3 persons: increase costs by 5% (multiply food costs by 1.05)
- 4 persons: no change
- 5 persons: decrease costs by 5% (multiply food costs by .95)
- 6 persons: decrease costs by 10% (multiply food costs by .90)

Step 4: If you want to determine the monthly cost, multiply the weekly food costs for your household by 4.33 (\$155.57 x 4.33 = \$673.62)

Based on the 2008 food costing data, it would cost the Scotia family \$673.62 to purchase a basic nutritious diet each month. This household of four can be used as a **reference** for examining changes in the cost of a basic nutritious food basket over time. Additionally, differences in the cost of this basket can be calculated based on where food is purchased in the province and the size of store where food is purchased.

What has been the Change in the Cost of a Basic Nutritious Food Basket Over Time?

The cost of a basic nutritious food basket has steadily increased since participatory food costing was first conducted in Nova Scotia in 2002. The graph below shows the rise in the cost of this basket for a reference household of four. Food costing in Nova Scotia indicates that, since 2002, there has been an almost **18% increase** in the cost of the food basket for this reference household. In 2008 the monthly cost of the basic nutritious food basket was \$673.62. **The cost of the food basket is \$1208.64 greater per year, or \$100.72 greater per month in 2008 than it was in 2002.** This increase is consistent with the Consumer Price Index inflation rates for food in Nova Scotia since 2002.²³

Figure 1: The monthly cost of the National Nutritious Food Basket for the reference household of four in Nova Scotia: 2002-2008

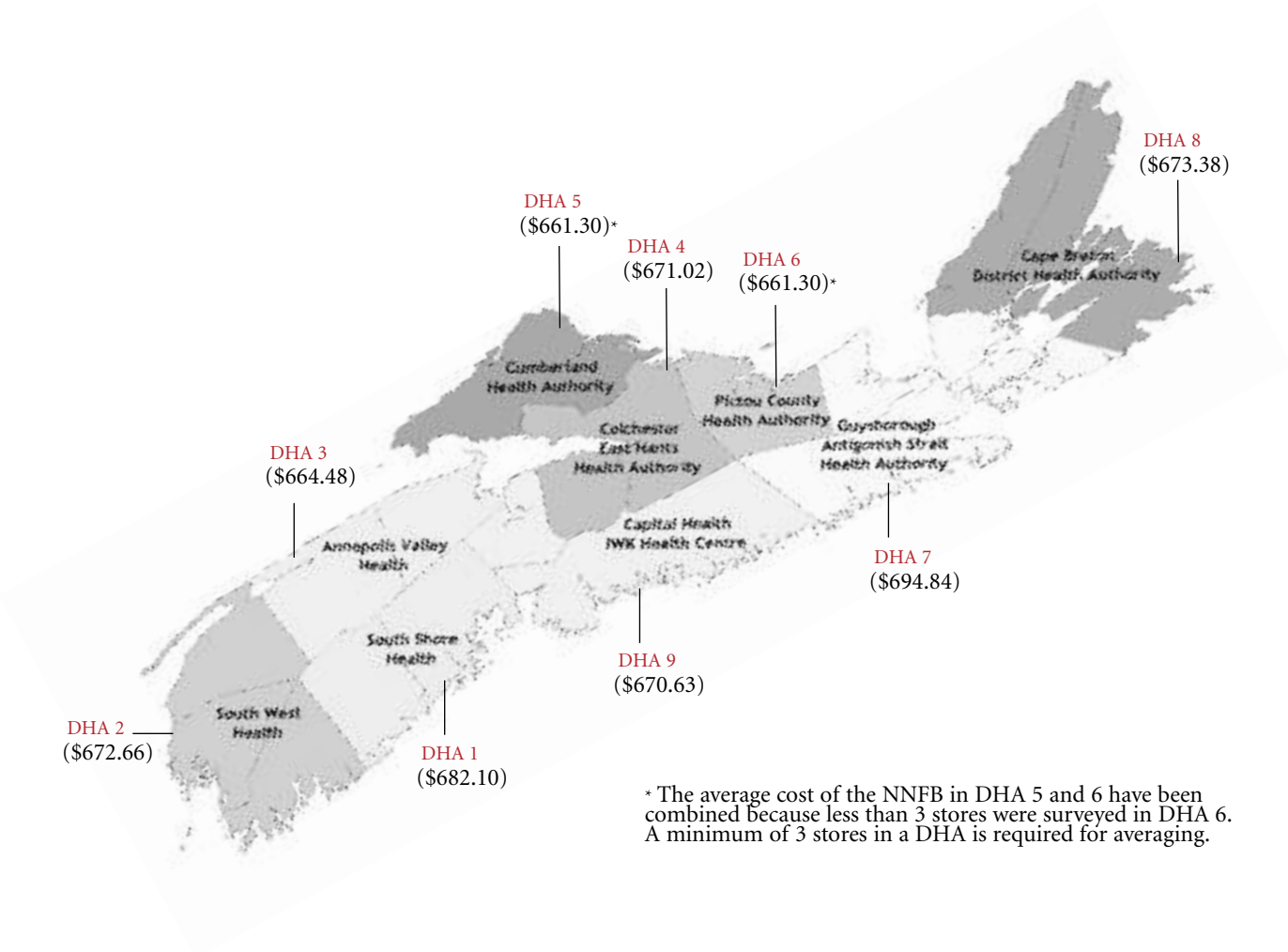


*The reference household of four is comprised of a male and female between the ages of 25-49, a girl aged 7 and a boy aged 13.

Does the Cost of a Basic Nutritious Diet Differ Across Nova Scotia?

Figure 2 shows the average monthly cost of a basic nutritious diet for the reference family of four in each District Health Authority (DHA) within Nova Scotia. The average cost of the NNFB for the reference household of four ranges across the province, but the differences between the regions are not statistically significant. This means that either no real difference exists in the cost of a basic nutritious food basket between these regions or that the number of stores where food costing data were collected in each region was too small to demonstrate a difference. Therefore, it is important to remember that comparisons between regions should not be made based on these estimates.

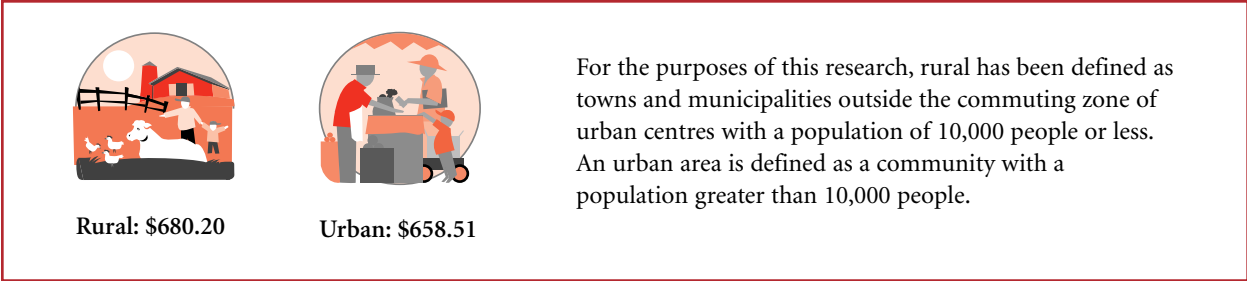
Figure 2: Monthly cost of the National Nutritious Food Basket by District Health Authority in Nova Scotia for the reference household of four (June 2008)



Does it Matter if you Live in an Urban or Rural Community?

While the cost of a basic nutritious food basket does not differ among DHAs in Nova Scotia, we found a statistically significant difference in the average monthly cost of a basic nutritious diet in grocery stores located in rural areas (\$680.20) compared with stores located in urban areas (\$658.51) within Nova Scotia (Figure 3). This finding is consistent with our previous food costing in 2002, 2004/05, and 2007.⁴⁻⁶

Figure 3: Average monthly cost of purchasing the National Nutritious Food Basket for the reference household of four in rural and urban areas of Nova Scotia (June 2008)



Does Store Size Influence How Much it Costs?

A basic nutritious diet purchased at smaller grocery stores costs on average \$32.30 more per month than the same basket purchased at larger grocery stores in Nova Scotia (Figure 4). This statistically significant difference is also consistent with findings from 2002, 2004/05, and 2007.

Figure 4: Average monthly cost of purchasing the National Nutritious Food Basket for the reference household of four in smaller and larger grocery stores in Nova Scotia (June 2008)



The Affordability of a Basic Nutritious Diet in Nova Scotia in 2008

Development of Affordability Scenarios

Having an adequate income to purchase a healthy diet is the most important factor in determining food security. In order to assess whether a household has enough money to purchase a basic nutritious diet, we created “affordability scenarios” using data on the cost of a basic nutritious diet in Nova Scotia along with data from other research on the cost of basic living expenses. These scenarios take into account how many people live in a household, their sex and age, and how much income they have coming into the household from various sources. Affordability scenarios were used to determine if Nova Scotians have sufficient income and income supports to purchase a basic nutritious diet. These scenarios provide context to the cost of a healthy diet relative to the cost of other basic expenses.

In the next section we look at five different household scenarios receiving different levels and sources of income and income supports:

- 1) a reference household of four consisting of two parents and two children;
- 2) a household of four consisting of a lone female parent and three children;
- 3) a household of five consisting of two parents and three children;
- 4) a household consisting of a lone pregnant female; and
- 5) a household consisting of a lone senior female.

These scenarios represent some of the types of households that have been shown to be at risk of food insecurity based on previous food security research in Nova Scotia^{5-8,24} and in a recent national population based survey.⁹

The scenarios provide a *monthly breakdown of all potential income and income supports, as well as basic living expenses* for each household. For wage earners, incomes were determined by calculating hourly rates of pay for a specific number of hours worked by members of the household. Employee payroll deductions (taxes, insurance premiums) were subtracted to determine a ‘disposable’ income. For Income Assistance (IA) recipients, incomes were calculated using the maximum basic personal and shelter allowances available from the Employment Support and Income Assistance program of the Nova Scotia Department of Community Services.²⁵ Transportation and child care allowances available through Income Assistance to adults seeking employment and/or enrolled in an educational program were also included in the scenarios. Households qualifying for Income Assistance may also be eligible for other special needs allowances, for example; special diet allowances, emergency dental care allowance or an annual school supplement. These allowances have not been included in the scenarios. Federal Child Tax benefits and Goods and Services Tax benefits were calculated by using annual income to determine monthly payments to households.

Conservative estimates of *basic living expenses* were determined using the best available data for June 2008 on the costs of shelter, utilities, telephone, transportation, clothing and footwear, childcare, personal care expenses and household cleaning supplies. For complete details on how incomes, income supports and living expenses were calculated, refer to the appendices available at <http://faculty.msvu.ca/foodsecurityprojects/>.

What Expenses are Not Included in the Affordability Scenarios?

In constructing the affordability scenarios, we included conservative estimates of basic living expenses. The calculations do not include many routine costs that many households would be faced with. Living expenses not considered in the affordability scenarios include but are not limited to:

- out of pocket healthcare expenses (e.g. co-pay amounts on prescriptions, over the counter medications, dental care),
- food purchased outside the home,
- nutritional supplements,
- many routine household operation expenses (e.g. appliances, maintenance),
- costs associated with physical activity and recreation, and
- educational expenses or reading material.

The scenarios also assume that households have no other extraordinary expenses such as credit card debt, ill family members, or family members with special needs. They also do not include the costs associated with having a baby, family emergencies, life insurance or saving for the future.

Reference Household of Four - Two Parent Household with Two Children

Table 3 presents the potential financial impact of purchasing a basic nutritious diet for the reference household of four using four different income scenarios. Our findings show that a basic nutritious diet for this household would cost, on average, \$673.62/month. The first scenario in Table 3 shows that, when the monthly costs for food, shelter, and other expenses considered essential for a basic standard of living are subtracted from the median Nova Scotian family income, this household would have \$1596.03 left for all other expenses each month. The second scenario shows that the household of four with a full time and a part time wage earner each working for \$12.45/hr has \$389.24 available for all other expenses each month. In both of these scenarios the households have sufficient income to purchase a basic nutritious diet with money left over for other living expenses.

In the third scenario, the household has one adult working full time and the other working part time for minimum wage. This household would likely face a deficit of at least \$134.52 each month if they were to purchase a basic nutritious diet, with no money remaining for other expenses. The fourth scenario shows the household of four relying on Income Assistance would face a deficit of at least \$421.71 each month if they were to purchase a basic nutritious diet.

These findings provide evidence that the reference household of four relying on minimum wages or Income Assistance simply cannot afford to purchase a basic nutritious diet.

Table 3: Affordability of a basic nutritious diet in Nova Scotia in June, 2008: Reference household of four with two parents and two children

Family Composition	Male & Female (25-49yrs), Boy 13yrs, Girl 7yrs	Male & Female (25-49yrs), Boy 13yrs, Girl 7yrs	Male & Female (25-49yrs), Boy 13yrs, Girl 7yrs	Male & Female (25-49yrs), Boy 13yrs, Girl 7yrs
Source of Income	Median NS Family Income ¹	Wages-\$12.45/hr ² (1FT, 1PT) ³	Minimum Wage, \$8.10/hr (1FT, 1PT)	Income Assistance (attending education program)
Monthly Disposable Income				
Gross Wages	\$5,325.00	\$3,234.51	\$2,104.38	\$0.00
Payroll Deductions	\$1,231.95	\$533.40	\$239.43	n/a
Federal Tax	(\$512.07)	(\$191.62)	(\$65.81)	n/a
Provincial Tax	(\$393.03)	(\$154.60)	(\$61.91)	n/a
Canada Pension	(\$234.72)	(\$131.23)	(\$75.30)	n/a
Employment Insurance	(\$92.13)	(\$55.95)	(\$36.41)	n/a
CTB ⁴	\$174.03	\$305.00	\$497.32	\$585.19
GST/HST ⁵	\$0.00	\$54.18	\$60.33	\$60.33
Personal Allowance	n/a	n/a	n/a	\$416.00
Shelter Allowance	n/a	n/a	n/a	\$620.00
Childcare Allowance ⁶	n/a	n/a	n/a	\$140.08
Transportation Allowance ⁷	n/a	n/a	n/a	\$300.00
Disposable Income	\$4,267.08	\$3,060.29	\$2,422.60	\$2,121.60
Basic Monthly Fixed Expenses				
Shelter	\$841.62	\$841.62	\$841.62	\$841.62
Power	\$132.00	\$132.00	\$132.00	\$132.00
Telephone	\$29.10	\$29.10	\$29.10	\$29.10
Other Basic Expenses				
Transportation	\$360.91	\$360.91	\$360.91	\$360.91
Childcare ⁸	\$267.81	\$267.81	\$153.88	\$140.08
Clothing, Footwear	\$229.83	\$229.83	\$229.83	\$229.83
Personal Care Expenses	\$102.57	\$102.57	\$102.57	\$102.57
Household Cleaning Supplies	\$33.59	\$33.59	\$33.59	\$33.59
Total Basic Expenses	\$1,997.43	\$1,997.43	\$1,883.50	\$1,869.70
Funds remaining for food	\$2,269.65	\$1,062.86	\$539.10	251.90
Nutritious Food Basket	\$673.62	\$673.62	\$673.62	\$673.62
Funds remaining for other expenses	\$1,596.03	\$389.24	(-\$134.52)	(-\$421.72)

1 Based on median family income of \$63,900, in 2006,²⁶ which was the most recent data available at the time of this research.

2 \$12.45/hr has been used as an example of a wage that may allow for the possibility of paying basic monthly expenses with some money left over at the end of the month for other expenses. \$12.45 was the average Canadian call centre wage in 2004.²⁷

3 FT= full time employment of 40 hours/week; PT= part time employment of 20 hours per week.

4 Canada Child Tax Benefit monthly payments.

5 Goods and Services Tax/ Harmonized Sales Tax credit (quarterly payment divided into monthly payments).

6 Income Assistance recipients may be eligible for up to \$400/month as a childcare allowance although only actual costs incurred will be covered. In order to qualify for childcare allowances, the recipient must be looking for work or enrolled in an educational program. This scenario assumes that the adults in this household are enrolled in an educational program.

7 These adults, if seeking employment and/or enrolled in an educational program, may also qualify for up to \$150/month to assist with associated transportation costs. This scenario assumes the receipt of a full transportation allowance for two people.

8 The childcare expenses for the household receiving Income Assistance assume a fully subsidized after school childcare space for the seven year old child. The household earning minimum wage receives a partial subsidy.

Household of Four - Lone Female Parent Household with Three children

Table 4 shows the potential financial impact of purchasing a basic nutritious diet for a female lone parent with three children who works for minimum wage or receives Income Assistance. A basic nutritious diet for a female led lone parent household with three children between the ages of 7 and 12 years costs, on average, \$606.59/month in 2008. Scenario one in Table 4 shows that this household would experience a deficit of at least \$497.74 each month after purchasing a basic nutritious diet on minimum wage earnings. In this household there would be no money to spare for out of pocket healthcare expenses, food purchased outside the home, costs associated with physical activities and recreation, educational expenses, emergencies or savings for unexpected expenses. Scenario two in Table 4 shows that the household relying on provincial Income Assistance would have a deficit of at least \$393.49 each month, assuming the family is receiving full transportation and childcare allowances.

These findings provide evidence that this female led lone parent household with three children relying on minimum wage earnings or Income Assistance simply cannot afford to purchase a basic nutritious diet.

Table 4: Affordability of a basic nutritious diet in Nova Scotia in 2008: Household of four- Lone female parent household with three children

Family Composition	Lone Female (24-49yrs) Boy 7-9yrs, Boy 10-12yrs, Girl 10-12yrs	Lone Female (24-49yrs) Boy 7-9yrs, Boy 10-12yrs, Girl 10-12yrs
Source of Income	Minimum Wage \$8.10/hr (FT) ¹	Income Assistance (attending education program)
Monthly Disposable Income		
Gross Wages	\$1,402.92	\$0.00
Payroll Deductions	\$204.81	n/a
Federal Tax	(\$65.81)	(n/a)
Provincial Tax	(\$59.72)	(n/a)
Canada Pension	(\$55.01)	(n/a)
Employment Insurance	(\$24.27)	(n/a)
WITB ²	\$59.18	(n/a)
CCTB ³	\$930.66	\$914.20
GST/HST ⁴	\$70.75	\$70.75
Personal Allowance	n/a	\$208.00
Shelter Allowance	n/a	\$620.00
Childcare Allowance ⁵	n/a	\$400.00
Transportation Allowance ⁶	n/a	\$150.00
Disposable Income	\$2,258.70	\$2,362.95
Basic Monthly Fixed Expenses		
Shelter	\$841.62	\$841.62
Power	\$132.00	\$132.00
Telephone	\$29.10	\$29.10
Other Basic Expenses		
Transportation	\$360.91	\$360.91
Childcare ⁷	\$420.23	\$420.23
Clothing, Footwear	\$229.83	\$229.83
Personal Care Expenses	\$102.57	\$102.57
Household Cleaning Supplies	\$33.59	\$33.59
Total Expenses	\$2,149.85	\$2,149.85
Funds remaining for food	\$108.85	\$213.10
Nutritious Food Basket	\$606.59	\$606.59
Funds remaining for other expenses	(-\$497.74)	(-\$393.49)

1 FT= full time employment of 40 hours/week.

2 Working Income Tax Benefit (divided into monthly payments). The WITB is intended to provide tax relief for eligible working low income individuals and families who are already in the workforce and to encourage other Canadians to enter the workforce.²⁸

3 Canada Child Tax Benefit monthly payments.

4 Goods and Services Tax/ Harmonized Sales Tax credit (quarterly payment divided into monthly payments).

5 Income Assistance recipients may be eligible for up to \$400/month as a childcare allowance although only actual costs incurred will be covered. In order to qualify for childcare allowances, the recipient must be looking for work or enrolled in an educational program. This scenario assumes that the adult in this household is enrolled in an educational program.

6 This adult, if seeking employment and/or enrolled in an educational program may also qualify for up to \$150/month to assist with associated transportation costs. This scenario assumes the receipt of a transportation allowance.

7 The childcare expenses for this household assume a subsidized after school childcare space for all three children.

Household of Five - Two Parent Household with Three Children

Table 5 shows the potential financial impact of purchasing a basic nutritious diet for a two parent household with three children, working for minimum wage or receiving Income Assistance. A basic nutritious diet for a two parent household with three children between the ages of 7 and 15 years would cost, on average, \$762.77/month in 2008. Scenario one in Table 5 shows that this household would experience a **deficit of at least \$386.86 each month** after purchasing a basic nutritious diet on minimum wage earnings. In this household there would be no money to spare for out of pocket healthcare expenses, food purchased outside the home, costs associated with physical activities and recreation, educational expenses, emergencies or savings for unexpected expenses. Scenario two in Table 5 shows that the household relying on provincial Income Assistance would have a **deficit of at least \$443.98 each month**, assuming the family is receiving full transportation and childcare allowances.

These findings provide evidence that a two parent household with three children relying on minimum wage earnings or Income Assistance simply cannot afford to purchase a basic nutritious diet.

Table 5: Affordability of a basic nutritious diet in Nova Scotia in 2008: Household of five with two parents and three children

Family Composition	Male & Female (25-49yrs) (Boy 13-15yrs, Girls 7-9yrs)	Male & Female (25-49yrs) (Boy 13-15yrs, Girls 7-9yrs)
Source of Income	Minimum Wage \$8.10/hr(FT) ¹	Income Assistance (attending education program)
Monthly Disposable Income		
Gross Wages	\$2,104.38	\$0.00
Payroll Deductions	\$239.43	n/a
Federal Tax	(\$65.81)	n/a
Provincial Tax	(\$61.91)	n/a
Canada Pension	(\$75.30)	n/a
Employment Insurance	(\$36.41)	n/a
CCTB ²	\$738.31	\$782.55
GST/HST ³	\$70.75	\$70.75
Personal Allowance	n/a	\$416.00
Shelter Allowance	n/a	\$620.00
Childcare Allowance ⁴	n/a	\$400.00
Transportation Allowance ⁵	n/a	\$300.00
Disposable Income	\$2,674.01	\$2,589.30
Basic Monthly Fixed Expenses		
Shelter	\$841.62	\$841.62
Power	\$132.00	\$132.00
Telephone	\$29.10	\$29.10
Other Basic Expenses		
Transportation	\$415.05	\$415.05
Childcare ⁶	\$447.82	\$420.23
Clothing, Footwear	\$264.30	\$264.30
Personal Care Expenses	\$126.71	\$126.71
Household Cleaning Supplies	\$41.50	\$41.50
Total Expenses	\$2,298.10	\$2,270.51
Funds remaining for food	\$375.91	\$318.79
Nutritious Food Basket	\$762.77	\$762.77
Funds remaining for other expenses	(-386.86)	(-\$443.98)

1 FT= full time employment of 40 hours/week.

2 Canada Child Tax Benefit monthly payments.

3 Goods and Services Tax/ Harmonized Sales Tax credit (quarterly payment divided into monthly payments).

4 Income Assistance recipients may be eligible for up to \$400/month as a childcare allowance although only actual costs incurred will be covered. In order to qualify for childcare allowances, the recipient must be looking for work or enrolled in an educational program. This scenario assumes the adults in this household to be enrolled in an educational program.

5 These adults, if seeking employment and/or enrolled in an educational program, may also qualify for up to \$150/month each to assist with associated transportation costs. This scenario assumes the receipt of a full transportation allowance for two people.

6 The childcare expenses for the household receiving Income Assistance assume a fully subsidized after school childcare space for two children. The household earning minimum wage receives a partial subsidy for the two children.

Household of One – Lone Adult Pregnant Female in the 2nd or 3rd Trimester

Table 6 shows the potential financial impact of purchasing a basic nutritious diet for a household of one lone adult female in her 2nd or 3rd trimester of pregnancy. The cost of a basic nutritious diet in 2008 for a 19-24 year old female in the 2nd or 3rd trimester of pregnancy was \$217.31/month. Scenario one of Table 6 shows that after the cost of a basic nutritious diet is factored in, a single female with full time minimum wage earnings would be left with \$129.33/month to cover all other potential expenses. Scenario two of Table 6 shows that this same lone adult female receiving Income Assistance would experience a **monthly deficit of at least \$468.93** if she were to purchase a basic nutritious diet. Scenario three of Table 6 shows that, even with an additional shelter allowance for the expectant mother, a lone adult female receiving Income Assistance in her third trimester would continue to experience a **monthly deficit of at least \$342.17** if she were to purchase a basic nutritious diet. In scenarios 2 and 3, this pregnant woman would not have money to spare for items such as out of pocket healthcare expenses, nutritional supplements, foods purchased outside the home or other living expenses. Moreover, costs associated with preparing for the arrival of an infant such as purchasing a crib, car seat, stroller, feeding equipment and diapers, etc. are not included in these scenarios.

These findings provide evidence that a lone pregnant adult female relying on Income Assistance simply would not be able to afford a basic nutritious diet. The scenario suggests that the same female working for minimum wage would have sufficient income to purchase a basic nutritious diet but with only \$129.33 left over for other living expenses, including expenses involved with expecting a baby.

**Table 6: Affordability of a basic nutritious diet in Nova Scotia in 2008:
Household of one – Lone pregnant female (2nd or 3rd trimester)**

Family Composition	Lone Pregnant Female (19-24yrs) 2 nd trimester	Lone Pregnant Female (19-24yrs) 2 nd trimester	Lone Pregnant Female (19-24yrs) 3 rd trimester
Source of Income	Minimum Wage \$8.10/hr(FT) ¹	Income Assistance (attending education program)	Income Assistance (attending education program)
Monthly Disposable Income			
Gross Wages	\$1,402.92	\$0.00	\$0.00
Payroll Deductions	\$204.81	n/a	n/a
Federal Tax	(\$65.81)	n/a	n/a
Provincial Tax	(\$59.72)	n/a	n/a
Canada Pension	(\$55.01)	n/a	n/a
Employment Insurance	(\$24.27)	n/a	n/a
CCTB	n/a	n/a	n/a
Maternal Nutritional Allowance ²	n/a	\$29.00	\$29.00
GST/HST ³	\$30.17	\$20.65	\$26.06
Personal Allowance	n/a	\$208.00	\$208.00
Shelter Allowance ⁴	n/a	\$300.00	\$570.00
Transportation Allowance ⁵	n/a	\$72.37	\$72.37
Disposable Income	\$1,228.28	\$630.02	\$905.43
Basic Monthly Fixed Expenses			
Shelter	\$540.25	\$540.25	\$658.90
Power	\$85.00	\$85.00	\$115.00
Telephone	\$29.10	\$29.10	\$29.10
Other Basic Expenses			
Transportation	\$72.37	\$72.37	\$72.37
Childcare	n/a	n/a	n/a
Clothing, Footwear	\$114.91	\$114.91	\$114.91
Personal Care Expenses	\$30.14	\$30.14	\$30.14
Household Cleaning Supplies	\$9.87	\$9.87	\$9.87
Total Expenses	\$881.64	\$881.64	\$1,030.29
Funds remaining for food	\$346.64	(-\$251.62)	(-\$124.86)
Nutritious Food Basket	\$217.31	\$217.31	\$217.31
Funds remaining for other expenses	\$129.33	(-\$468.93)	(-\$342.17)

1 FT= full time employment of 40 hours/week.

2 A Maternal Nutritional Allowance in the amount of \$29/month is available to expectant mothers from the date the caseworker is notified of the pregnancy or birth of a child up to and including 12 full months after the birth of the child.

3 Goods and Services Tax/ Harmonized Sales Tax credit (quarterly payment divided into monthly payments).

4 This adult, once in her third trimester of her pregnancy, will be eligible to receive the shelter allowance for two persons for up to \$570/month. The third scenario assumes the receipt of a full shelter allowance for two persons.

5 This adult, if seeking employment and/or enrolled in an educational program, may also qualify for up to \$150/month (the cost of transportation) to assist with associated transportation costs. This scenario assumes the receipt of a transportation allowance. This scenario also assumes the availability of public transportation.

Household of One – Lone Senior Female

Table 7 shows the potential financial impact of purchasing a basic nutritious diet for a household of one lone senior female aged 75+ years. The cost of a basic nutritious diet in 2008 for a 75+ year old female was \$163.63/month. Scenario one of Table 7 shows that after the cost of a basic nutritious diet is factored in, a lone female accessing Old Age Security, Canada Pension Plan (CPP) and the Guaranteed Income Supplement would be left with \$182.71/month to cover all other potential expenses. Scenario two of Table 7 shows that if this senior is not accessing the Guaranteed Income Supplement she would experience a **monthly deficit of at least \$134.54** if she were to purchase a basic nutritious diet. In this scenario, she would not have money to spare for items such as out of pocket healthcare expenses, foods purchased outside the home, educational expenses, emergencies, or savings for unexpected expenses. This scenario does include the cost of required Pharmacare co-payments and a personal emergency response device, designed to summon help in an emergency when the individual cannot reach the phone.

These findings provide evidence that a lone adult female aged 75+ years relying on Old Age Security and CPP alone, simply would not be able to afford a basic nutritious diet. The scenario suggests that the same lone female would have sufficient income to purchase a basic nutritious diet with money left over for other living expenses if she were to access the Guaranteed Income Supplement.

Table 7: Affordability of a basic nutritious diet in Nova Scotia in 2008: Household of one - Lone female aged 75+

Family Composition	Lone Female (75+yrs)	Lone Female (75+yrs)
Source of Income	Old Age Security ¹ Canada Pension Plan ² & Guaranteed Income Supplement GIS. ³	Old Age Security & Canada Pension Plan: Not accessing GIS. ⁴
Monthly Disposable Income		
Gross Wages	\$0.00	\$0.00
Old Age Security (taxable)	\$489.83	\$489.83
Guaranteed Income Supplement	\$452.04	n/a
Canada Pension Plan (taxable)	\$489.72	\$489.72
Income Deductions	\$163.95	\$24.99
Federal Tax	(\$94.74)	(\$24.99)
Provincial Tax	(\$69.21)	(\$0.00)
Canada Pension	n/a	n/a
Employment Insurance	n/a	n/a
GST/HST ⁵	\$30.17	\$26.00
Disposable Income	\$1,297.81	\$980.56
Basic Monthly Fixed Expenses		
Shelter	\$540.25	\$540.25
Power	\$85.00	\$85.00
Telephone	\$29.10	\$29.10
Other Basic Expenses		
Transportation ⁶	\$72.37	\$72.37
Clothing, Footwear, etc.	\$114.91	\$114.91
Personal Care Expenses	\$30.14	\$30.14
Pharmacare ⁷	\$31.83	\$31.83
Personal Emergency Response Device ⁸	\$38.00	\$38.00
Household Cleaning Supplies	\$9.87	\$9.87
Total Expenses	\$951.47	\$951.47
Funds remaining for food	\$346.34	\$29.09
Nutritious Food Basket	\$163.63	\$163.63
Funds remaining for other expenses	\$182.71	(-\$134.54)

1 This figure reflects the average monthly benefit to all recipients in 2008.
 2 This reflects the average monthly CPP benefit for retired persons in 2008 if the individual began collecting their benefit at the age of 65 years.
 3 To be eligible for the Guaranteed Income Supplement, seniors must be receiving an Old Age Security basic pension and meet certain income requirements. This reflects the average monthly benefit to a single person in 2008.
 4 The GIS benefit must be renewed annually through the income tax system.²⁹
 5 Goods and Services Tax/ Harmonized Sales Tax credit (quarterly payment divided into monthly payments).
 6 This scenario assumes availability of public transportation.
 7 The Nova Scotia Seniors' Pharmacare Program is a provincial drug insurance plan that helps seniors with the cost of their prescription drugs. GIS recipients or single persons with an annual income below \$18,000 are not required to pay the annual premium. The amount included in these scenarios represents the required co-payment.
 8 Estimated cost of the Personal Emergency Response Device is based on the cost of Northwood Intouch.

Can Households in Nova Scotia Afford a Basic Nutritious Diet?

A variety of household conditions, such as the number of people in a household, age of household members, number of wage earners, wage levels, and access to both provincial and federal government income support programs, all contribute to the risk of food insecurity. Therefore, the extent of the deficits households would face if they were to purchase a basic nutritious diet will differ considerably depending on household circumstances. While the risk of food insecurity may differ by household circumstances, these findings illustrate that **both Income Assistance rates and minimum wage levels in Nova Scotia are still clearly inadequate to allow many families to afford to purchase a basic nutritious diet.**

A Closer Look at Various Household Types Relying on Minimum Wage Earnings

Of the four scenarios presented which looked at families relying on minimum wage, and based on the magnitude of the deficit at the end of the month, the female led lone parent household with three children experiences the greatest risk of food insecurity. The two parent household with two children and the two parent household with three children also face a significant monthly deficit and are at risk of food insecurity. The lone pregnant female relying on minimum wage would be in a somewhat better situation, with \$129.33 remaining after basic expenses. However, costs associated with expecting an infant such as the purchase of a crib, car seat, stroller, feeding equipment, clothing and diapers have not been factored into this scenario.

These scenarios illustrate the risk of food insecurity for both lone and dual income, minimum wage earning families with children. Even with federal supports for families with children such as the Canada Child Tax Benefit, our findings suggest that households with children are still at significant risk of food insecurity.

In each of the scenarios that include children, the availability of subsidized child care is assumed. Importantly, if subsidized spaces were not available, each of the households examined would face an even greater monthly deficit.

Overall, of the minimum wage household scenarios examined here, the lone parent household is at greatest risk of income-related food insecurity.

A Closer Look at Various Household Types Receiving Income Assistance

Four scenarios were presented that examined the affordability of a basic nutritious diet among households relying on Income Assistance. All of the households represented in these scenarios face significant monthly deficits and would be at risk of food insecurity. The two parent household with two children would have a monthly deficit of \$421.72, the female led lone parent family with three children would have a monthly deficit of \$393.49, and the two parent household with three children would have a monthly deficit of \$443.98 after basic living expenses. Two scenarios have been presented for the lone pregnant female relying on Income Assistance to account for the availability of an increased shelter allowance to pregnant women in the third trimester of pregnancy. Accessing this shelter allowance reduces the monthly deficit from \$468.93 without the shelter allowance to \$342.17 with the shelter allowance. However, in both scenarios the lone pregnant female is at significant risk of food insecurity.

In each of the scenarios, receipt of a transportation allowance is assumed. In the three scenarios with children, the availability of subsidized after school child care and the receipt of childcare allowance is also assumed. Importantly, without these supports, each of the households examined would face an even greater monthly deficit.

In all of the scenarios presented, families relying on Income Assistance face a significant monthly deficit and are at risk of food insecurity.

Comparing Income Supports Among Lone Senior Households

Two scenarios compare the affordability of a basic nutritious diet for a household consisting of a lone senior female, 75 years or older who is receiving the Guaranteed Income Supplement (GIS) to the same household where the GIS is not accessed. In the household where the GIS is accessed, there would be \$252.54 remaining after basic expenses to cover all other expenses each month including out of pocket health care expenses. In the household where the GIS is not accessed, there would be a monthly deficit of \$64.71 after basic expenses placing this individual at risk of food insecurity.

In this scenario, a senior female who lives alone and does not access the Guaranteed Income Supplement, faces a monthly deficit and is at risk of food insecurity.

What Have We Learned About the Cost and Affordability of a Basic Nutritious Diet Over Time?

Our findings show that the cost of a basic nutritious food basket has increased almost 18% since participatory food costing was first conducted in 2002. While we can compare the cost of a basic nutritious diet since 2002, it is more difficult to draw conclusions about the affordability of this basic nutritious food basket over time. Over the years we have examined and refined our methods for examining the affordability of a basic nutritious diet. For more on the comparability of the affordability of the basic nutritious food basket over time, refer to the appendices available at <http://faculty.msvu.ca/foodsecurityprojects/>.

Conclusions and Policy Implications of Food Costing Findings

This report examined the cost of a basic nutritious diet within the context of basic living expenses in 2008 in Nova Scotia and provides information about the potential risk of income-related food insecurity for Nova Scotians. Overall, it is clear that the vast majority of households represented by these scenarios simply cannot afford to purchase a basic nutritious diet. These findings indicate that amidst the significant restructuring of social programs that occurred in the 1990s and the current economic downturn, there is clearly still much collaborative and multi-sectoral work to be done to address the problem of food insecurity in Nova Scotia.

Our finding that many households relying on Income Assistance in Nova Scotia simply cannot afford to eat nutritiously highlights the need for further attention and policy change to Income Assistance rates in Nova Scotia. While modest increases to the shelter and personal allowance budget amounts have occurred over the last five years, similar increases have not been made to other allowances available to individuals and families such as the transportation allowance, special diet allowances and child care allowances. Current Income Assistance rates are inadequate to ensure that all Nova Scotian families have access to a basic nutritious diet. This is consistent with statistics from the HungerCount 2008 report released by Food Banks Canada which indicated that, in 2008, 54.9% of households assisted by food banks in Nova Scotia reported Income Assistance as their primary source of income.¹⁰

The results of the 2008 food costing also demonstrate that households relying on minimum wages are at risk of food insecurity. This conclusion supports the need for continued review of policies related to minimum wage in Nova Scotia. In 2008, almost 10% of households assisted by food banks reported employment as their primary source of income¹⁰ and, in 2006, 40% of low income children lived in families where at least one parent worked full-time throughout the year.³² In May, 2008 minimum wage in Nova Scotia was increased to \$8.10/hr. The Minimum Wage Review Committee of Nova Scotia Labour and Workforce Development recommended a minimum wage increase to \$9.65/hr by 2010.³³ The results of the food costing and affordability assessments suggest that it is essential to fully enact these recommendations, and to continue to monitor the cost of food and other basic living expenses against minimum wage levels to determine the adequacy of these rate increases to address income-related food insecurity over time.

An important aim of the Nova Scotia Participatory Food Costing Project is to gather evidence that can be used to inform policy and build capacity for policy change to support food security in the province. The affordability scenarios presented show that many Nova Scotians are at risk of food insecurity due to inadequate incomes, specifically families and individuals receiving Income Assistance and workers earning minimum wage.

Healthy eating is essential to health and development, from the prenatal and early childhood years throughout an individual's entire life. Healthy eating is also important in reducing the risk of chronic diseases such as heart disease and cancer, the two most prevalent chronic diseases in Nova Scotia.³⁴ It has been estimated that, independent of any other risk factor, healthy eating can prevent up to 30% of heart disease.³⁵ Individuals in food-insecure households are more likely to report poor or fair self-rated health, mental health problems, multiple chronic conditions (e.g. high blood pressure, heart disease, diabetes), as well as children's health problems.³⁶⁻³⁸ The consequences of food insecurity on physical and mental health, and social inclusion not only impact the individuals experiencing food insecurity but also their families, communities and the province as a whole.

The results of the 2008 food costing show that senior women who live alone and do not access the Guaranteed Income Supplement (GIS) may face a monthly deficit and are at risk of food insecurity. This finding supports the need for ongoing review of the adequacy and accessibility of income supports for seniors. A 2005 report estimates that the senior population in Nova Scotia is expected to grow by 80% over the next 20 years.³⁹ Almost one half of all senior women living by themselves in Nova Scotia live below the low income cut off.⁴⁰ The GIS was put in place to provide additional money on top of the Old Age Security pension to ensure that low- and moderately low-income seniors could meet their basic needs.⁴¹ While the affordability scenarios presented in this report demonstrate that the supplemental income provided by this federal program has the potential to improve household food security, lack of knowledge about the GIS, or problems in accessing the GIS may limit the potential positive impacts of this income support for seniors. In 2003, 137,000 Canadian seniors who were eligible for the GIS did not receive it.⁴² Women are more likely than men to neglect to subscribe to GIS when eligible.³⁹

The affordability scenarios presented in this report suggest that food insecurity is a reality for many Nova Scotian households. Inadequate income has been identified as the most important variable influencing household food security in Canada.^{9,43-44} There is growing evidence concerning the link between higher incomes, nutritional status and better health, showing that as household income increases so does the quantity and nutritional quality of the food purchased.⁴⁵ As income decreases, households are less likely to purchase fruits, vegetables and milk products.³⁶

A living wage allows individuals and families to meet their basic needs and participate in social and recreational activities that contribute to overall health and quality of life. Wages, levels of Income Assistance and levels of federal transfers need to equate to an adequate living wage. Social policy changes directed toward poverty reduction such as; improving child benefits and child care supports, increasing the availability of affordable housing, and ensuring the accessibility and availability of affordable transportation have the potential to result in greater food security for Nova Scotians.

Food security has been recognized as a key social determinant of health and is closely linked to and influenced by other social determinants of health such as income and social status, literacy, early childhood development and education.^{44,46-47} In a report to the Ministers of Community Services and Labour and Workforce Development in June 2008, the Nova Scotia Poverty Reduction Working Group identified eight target areas for action toward a strategy for the reduction of poverty in the province.⁴⁸ Targeted areas for action included: awareness and engagement; employment supports and income; disability issues; transportation; education skills and training; housing; child care and early child development; and health. The 2008 Report of the Poverty Reduction Working Group recommends the review and implementation of recommendations from the “Cost and Affordability of a Nutritious Diet in Nova Scotia” report,⁶ a positive step toward improving food security in Nova Scotia. There is great potential for government social policy initiatives to improve food security and ultimately the health and well being of all citizens. In the spirit of participatory research, Nova Scotians, including all levels of government, need to act on the results from the food costing research and work together to address policy change needed to ensure that all Nova Scotians have adequate resources to support their health and well-being.

Recommendations

Food insecurity negatively impacts the health and well being of many Nova Scotians and ultimately contributes to health disparities, increased health care costs, and social injustice. The partners of the Nova Scotia Provincial Participatory Food Costing Project invite federal, provincial and municipal governments to take action and demonstrate strong leadership in working across jurisdictions to address this critical issue.

Although the work of project partners has informed increases to the personal allowance portion of Income Assistance since 2003, further review and policy change is required to ensure that individuals and families have sufficient financial resources to meet basic needs for food, clothing and shelter. We encourage the **provincial government** to take action under the leadership of the Department of Community Services, Department of Finance, Office of Economic Development, Department of Agriculture and the Department of Labour & Environment in the following areas that relate to income and basic needs:

- Use the findings from the Nova Scotia Participatory Food Costing Project to index the personal allowance portion of Income Assistance rates to reflect the actual cost of a nutritious food basket based on family size and composition.
- Index shelter allowances to better reflect actual housing costs.
- Increase the number of subsidized child care spaces to reflect the number of children living below the low income cut-off¹ in Nova Scotia.
- Increase the number of affordable housing units to reflect the number of households who are in core housing need as defined by the Canada Mortgage and Housing Corporation⁴⁹ and work with community and advocacy groups and other stakeholders to develop an affordable housing strategy for Nova Scotia.

¹ A low income cut-off (LICO) is an income threshold below which a family will likely devote a larger share of its income to the necessities of food, shelter, and clothing than the average family.²²

- Further increase minimum wage rates to a “living wage” that reflects the daily costs of living in Nova Scotia.
- Increase awareness of, and access to, programs, services and supports, such as Income Assistance special needs allowances, for those with low incomes.
- Conduct policy analyses to explore strategies to protect the affordability of basic food staples and ensure equitable grocery prices between larger and smaller, and urban and rural stores.

We encourage the **federal government** to take leadership on the following recommendations:

- Develop and implement a federal poverty reduction strategy, including a new cost-shared social assistance program with the provinces that would focus on income adequacy and be guided by human rights principles, especially the right to an adequate standard of living.
- Ensure long term sustained financial support to federal programs including Canada Prenatal Nutrition Program, Community Action Program for Children, and Aboriginal Head Start that target and are highly successful in reaching many of the individuals and families most vulnerable to food insecurity.
- Improve the Working Income Tax Benefit to expand benefit eligibility to include all households with earned incomes below the most recent low income cut-off.
- Continue to review and implement changes to public pension systems to ensure income adequacy among Canadian seniors.
- Increase awareness of, and access to, programs, services and supports, such as the Guaranteed Income Supplement, for those with low incomes.
- Examine the Canada Child Tax Benefit to ensure that the benefit is adequate to prevent income-related food insecurity among Canadian families.
- Continue to develop other programs and supports for working families, including ensuring the availability of affordable child care, housing and public transportation.

We encourage **municipal governments** throughout Nova Scotia to collaborate with provincial and federal initiatives to address income-related food security. We recommend that municipal governments support local food initiatives and include food access issues in municipal planning.

Next Steps...

Through ongoing collaboration, we will continue to build capacity for improving food security at individual, community, organizational and systems levels. By working together, we can provide ongoing evidence to inform decision-making and strengthen capacity in our communities and political systems to support food security in Nova Scotia.

For more information on how you can help build food security in Nova Scotia see:

www.n SNC.ca

www.ahprc.dal.ca

www.foodthoughtful.ca

www.hpclearinghouse.ca

<http://faculty.msvu.ca/foodsecurityprojects/>

Research Team (November 2007 – April 2009)

Principal Investigator Patty Williams Associate Professor and Canada Research Chair in Food Security and Policy Change, Department of Applied Human Nutrition, MSVU

Food Costing Project Staff/Dietetic Interns

Sue Conlan BScAHN Student/Dietetic Intern, MSVU (01/09 – 04/09)
Jessi Fillmore BScAHN Student/Dietetic Intern, MSVU (04/08 – 07/08)
Michelle Florence Provincial Participatory Food Costing Coordinator, MSVU (08/08 – Present)
Lesley Frank Provincial Participatory Food Costing Coordinator, MSVU (11/07 – 07/08)
Rebecca Green Research Assistant, MSVU (11/07 – 07/08)
Lesley Neil MScAHN Student/Dietetic Intern, MSVU (04/08 – 07/08)
Amanda Rogers Research and Administrative Assistant, MSVU (01/09 – Present)

Food Costing Working Group of the Nova Scotia Food Security Network Steering Committee

Michelle Amero NS Department of Health Promotion & Protection (11/07 – 08/08)
Ilya Blum Department of Mathematics, MSVU
Michelle Florence Provincial Participatory Food Costing Coordinator, MSVU (08/08 – Present)
Lesley Frank Provincial Participatory Food Costing Coordinator, MSVU (11/07– 07/08)
Karen Fraser Cape Breton Family Resource Centre
Rebecca Green Ecology Action Centre Food Action Committee; MSVU
Christine Johnson Department of Human Nutrition, St. Francis Xavier University; NSNC
Tina Killam Parent's Place Yarmouth County Family Resource Centre
Rita MacAulay Public Health Services, CDHA; NSNC
Amy MacDonald Public Health Services, CDHA
James McGrath First Nations and Inuit Health Branch, Health Canada
Shelley Moran Public Health Services, SSHA; NSNC (11/07-07/08)
Michelle Murton NS Department of Health Promotion and Protection (08/08 – Present)
Debra Reimer Annapolis Valley Health Kids Action Program
Polly Ring Public Health Services, SSHA (08/08 – Present)
Denise Russell Dartmouth Family Resource Centre (11/07 – 10/08)
Patty Williams Department of Applied Human Nutrition, MSVU

Acronyms

AVHA- Annapolis Valley Health Authority
CDHA- Capital District Health Authority
CEHHA- Colchester East Hants Health Authority
GASHA- Guysborough Antigonish Straight Health Authority
MSVU- Mount Saint Vincent University
NSNC- Nova Scotia Nutrition Council
SSHA- South Shore Health Authority
SWHA- South West Health Authority

Partners and Collaborators

Atlantic Canadian Organic Regional Network
Atlantic Health Promotion Research Centre
Bridgewater Family Resource Centre
Canadian Mental Health Association Colchester East Hants Branch
Cape Breton Family Place
Dartmouth Family Resource Centre
Department of Health Promotion and Protection
Digby County Family Resource Centre
Ecology Action Centre
Family Matters Annapolis County Family Resource Centre
First Nations and Inuit Health Branch Atlantic Region
Health Canada, Atlantic Regional Office
Kids Action Program Annapolis Valley-Hants
Kids First Antigonish and Pictou
LEA's Place Women's Centre Sheet Harbour
Lunenburg Community Health Board
Maggie's Place Amherst
Maggie's Place Truro
Memory Lane Sackville
Mount Saint Vincent University
Mulgrave Park Tenancy Association Halifax
Nova Scotia Advisory Commission on AIDS
Nova Scotia Food Security Network
Nova Scotia Nutrition Council
Parent and Tot Meeting Place Halifax
Parent's Place Yarmouth County Resource Centre
Public Health Agency of Canada, Atlantic Regional Office
Public Health Services in all District Health Authorities
Queen's County Family Resource Centre
St. Francis Xavier University

References

1. Fairholm J. (1998). Urban agriculture and food security initiatives in Canada: A Survey of Canadian Non-Governmental Organizations. *IDRC Cities Feeding People Series*, Report 25.
2. Food and Agriculture Organization. (1996). *Rome declaration on world food security and world food summit plan of action*. Economic Social Development Department. Rome, Italy.
3. Vozoris, N. & Tarasuk, V. (2003). Household food insufficiency is associated with poorer health. *Journal of Nutrition* 133:120-126.
4. Atlantic Health Promotion Research Centre, Family Resource Centres/Projects & Nova Scotia Nutrition Council. (2004). *Participatory Food Security Projects Phase I and II. Building food security in Nova Scotia: Using a participatory process to collect evidence and enhance the capacity of community groups to influence policy*. Halifax, N.S.
5. Nova Scotia Participatory Food Security Projects. (2007). *Working together to build food security in Nova Scotia: Participatory food costing 2004/05*. Halifax, N.S.
6. Nova Scotia Participatory Food Projects. (2008). *Cost and affordability of a nutritious diet in Nova Scotia*. Report of 2007 Food Costing. Halifax, N.S.
7. Williams, P., Johnson, C., Kratzmann, M., et al. (2006). Can households earning minimum wage in Nova Scotia afford a nutritious diet? *Canadian Journal of Public Health*;97(6):430-434.
8. Green R., Williams, P., Johnson, C.S. & Blum, I. (2008). Can Canadian seniors on public pensions afford a nutritious diet? *Canadian Journal of Aging*;27(1):69-79.
9. Health Canada. (2007). Canadian Community Health Survey (CCHS) Cycle 2.2, Nutrition (2004). *Income-Related Household Food Security in Canada*. Office of Nutrition Policy and Promotion, Health Products and Food Branch. Ottawa, ON.
10. Canadian Association of Food Banks. (2008). *Hunger Counts 2008*. Toronto, ON. Available at: http://foodbankscanada.ca/documents/HungerCount_en_fin.pdf. Accessed on: February 20, 2009.
11. McIntyre L., Glanville, N., Raine, K., Dayle, J., Anderson, B. & Battaglia, N. (2003). Do low income lone mothers compromise their nutrition to feed their children? *Canadian Medical Association Journal*;168(6):686-691.
12. Health Canada. (2007). Canadian Community Health Survey, Cycle 2.2, Nutrition (2004): *Income Related Household Food Security in Canada: Supplementary Data Tables*. Office of Nutrition Policy and Promotion Health Products and Food Branch. Ottawa, ON.
13. Ross, R., Harper, L., MacDonald, B. & Smith MacDonald, L. (2006). *Survival strategies: women on Employment Support & Income Assistance (ESIA) in Nova Scotia provide their key recommendations for policy reform*. Status of Women Canada, Women's Program.
14. Workman, W. & Jacobs, J. (2002). *Undermining wages in Nova Scotia: The minimum wage from 1976-2002*. Canadian Centre for Policy Alternatives. Halifax, N.S.
15. Food Costing Working Group of the Nova Scotia Participatory Food Security Projects. (2005). *Working together for ongoing food costing and policy solutions to build food security: A proposed model of ongoing food costing in Nova Scotia*. Report submitted to Nova Scotia Health Promotion and Protection on behalf of Atlantic Health Promotion Research Centre, Collaborating Family Resource Centres/Projects in Nova Scotia, Nova Scotia Nutrition Council. Halifax, N.S.

16. The Healthy Eating Action Group of the Nova Scotia Alliance for Healthy Eating and Physical Activity in partnership with the Office of Health Promotion. (2005). *Healthy Eating Nova Scotia (HENS)*. Available at <http://www.gov.ns.ca/ohp/repPub/HealthyEatingNovaScotia2005.pdf>. Accessed on: February 20, 2009.
17. Travers K. (1997). Reducing inequities through participatory research and community empowerment. *Health Education Behaviour*;24(3):344-56.
18. Williams, P., Gillis, D., Barro, K., et al. (2005). *Mobilization for food security through participatory action research*. Mount Saint Vincent University Research and Scholarship Open House (Poster), Halifax, Nova Scotia.
19. Lyons, R., Allain, M., Crowell, S., et al. (2007). "Twelve Canadian portraits: Health promotion in the provinces and territories 1994-2006 The Atlantic provinces: A region favourable or not for health promotion". Chapter 12. In edition by O'Neill, M., Dupere, S., Pederson, A. & Rootman, I. Canadian Scholarly Press. Toronto, ON.
20. Johnson, C.P. (2004). Evaluating capacity building for food security: An assessment of a participatory food costing project. MSc Thesis, Mount Saint Vincent Univeristy. Halifax, NS.
21. Lawn, J. (1998). *National Nutritious Food Basket*. Health Canada. Ottawa, ON.
22. Statistics Canada. (2007). *Low income cut-offs for 2006 and low income measures for 2005*. Minister of Industry. Ottawa, ON.
23. Statistics Canada. (2008). *Consumer Price Index summary tables*. Available at: <http://cansim2.statcan.gc.ca/cgi-win/cnsmcgi.exe?LANG=e&ResultTemplate=CST&CORCMD=GETEXT&CORTYP=1 &CORRELTYP=5&CORID=2301>. Accessed on: February 20, 2009.
24. Amero, M. (2008). *Are provincial and federal income supports adequate to support the consumption of a nutritious diet for pregnant and breastfeeding women in Nova Scotia?* MSc Thesis, Dalhousie University. Halifax, N.S.
25. Nova Scotia Employment Support and Income Assistance Manual. (2008). Available at: www.gov.ns.ca/coms/employment/documents/ESIA_Manual/ESIA_Policy_Manual.pdf. Accessed on: February 20, 2009.
26. Statistics Canada. (2006). *Statistics Canada summary table: median total income, by family type, by province and territory*. Available at: http://www40.statcan.gc.ca/l01/cst01/famil108_b-eng.htm. Accessed on: February 20, 2009.
27. Akyeampong, E. (2005). Business support services. *Perspectives on Labour and Income*;6(5):5-9.
28. Canada Revenue Agency. (2009). Working Income Tax Benefit. Available at: <http://www.cra-arc.gc.ca/bnfts/wtb/menu-eng.html>. Accessed on: February 27, 2009.
29. Service Canada. (2009). *Guaranteed Income Supplement*. Available at: <http://www.hrsdc.gc.ca/eng/isp/pub/oas/gismain.shtml>. Accessed on: March 18, 2009.
30. Nova Scotia Pharmacare. Available at: http://www.gov.ns.ca/health/Pharmacare/seniors_pharmacare/seniors_pharmacare_q_n_a.asp. Accessed on: February 20, 2009.
31. Northwood Intouch. Available at: <http://northwoodintouch.com/>. Accessed on: February 20, 2009.
32. Rothman, L. & Noble, A. (2008). *Family security in insecure times: The case for a poverty reduction strategy for Canada*. 2008 Report Card on Child and Family Poverty in Canada. Campaign 2000 special tabulation: Statistics Canada Survey of Labour and Income Dynamics (SLID) masterfile data (1993 – 2006).

33. Minimum Wage Review Committee. (2009). Report. Available at: http://www.crfa.ca/news/2009/speak_out_nova_scotia_minimum_wage_review_report.pdf. Accessed on: February 20, 2009.
34. Colman, R. (2002). The Cost of Chronic Disease in Nova Scotia. *GPI Atlantic*. Report. Available at: <http://www.gpiatlantic.org/pdf/health/chronic.pdf>. Accessed on: February 20, 2009.
35. Iqbal, R., Anand, S., Ounpuu, S., et al. (2008). Dietary patterns and the risk of acute myocardial infarction in 52 countries: results of the INTERHEART study. *Circulation*;118:1929-37.
36. Che, J. & Chen, J. (2001). Food insecurity in Canadian households. *Health Report*;12(4):11-22.
37. Ricciuto, L., Tarasuk, V. & Yatchew, A. (2006). Socio-demographic influences on food purchasing among Canadian households. *European Journal of Clinical Nutrition*;60(6):778-90.
38. McIntyre, L., Glanville, N., Officer, S., Anderson, B., Raine, K. & Dayle, J. (2002). Food insecurity of low-income lone mothers and their children in Atlantic Canada. *Canadian Journal of Public Health*;93(6):411-5.
39. Nova Scotia Seniors' Secretariat. (2005a). *Seniors' statistical profile, Province of Nova Scotia*. Halifax, N.S.
40. Nova Scotia Seniors' Secretariat. (2005b). *Strategy for positive aging in Nova Scotia*. Communications Nova Scotia. Halifax, N.S.
41. Service Canada. (2009). *Guaranteed Income Supplement*. Available at: <http://www.hrsdc.gc.ca/eng/isp/pub/oas/gismain.shtml>. Accessed on: February 20, 2009.
42. National Advisory Council on Aging. (2005). *Seniors on the margins: Aging in poverty in Canada*. Minister of Public Works and Government Services Canada. Ottawa, ON.
43. Ledrou, I. & Gervais, J. (2005). Food insecurity. *Statistics Canada Health Reports*;16(3):47-51.
44. Power, E. (2005). Determinants of healthy eating among low-income Canadians. *Canadian Journal of Public Health*;96(3):37-42.
45. Ricciuto, L. & Tarasuk, V. (2007). An examination of income-related disparities in the nutritional quality of food selections among Canadian households from 1986 - 2001. *Social Science & Medicine*;64:186-198.
46. McIntyre, L. (2003). Food security: More than a determinant of health. *Policy Options*;March:46-51.
47. Public Health Agency of Canada. (2004). *The social determinants of health: An overview of the implications for policy and the role of the health sector*. Available at: http://www.phac-aspc.gc.ca/phsp/phdd/overview_implications/01_overview.html. Accessed on: February 20, 2009.
48. Poverty Reduction Working Group. *Report of the Poverty Reduction Working Group*. (2008). Available at: http://www.gov.ns.ca/coms/specials/poverty/documents/Poverty_Reduction_Working_Group_Report.pdf. Accessed on: February 19, 2009.
49. Canadian Mortgage and Housing Corporation. (2009). *Affordable Housing*. Available at: http://www.cmhc-schl.gc.ca/en/corp/faq/faq_002.cfm#4. Accessed on: March 18, 2009.

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