

# Affordability of a Nutritious Diet for Income Assistance Recipients in Nova Scotia (2002-2010)

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## ABSTRACT

**Objective:** This study assessed the affordability of a basic nutritious diet for selected household types relying on Income Assistance (IA) by comparing potential incomes to the costs of the National Nutritious Food Basket (NNFB) and other essential expenditures in Nova Scotia from 2002 to 2010, and examined the adequacy of IA allowances during this time period.

**Method:** The cost of the NNFB was surveyed across a random sample of grocery stores in NS during five time periods: 2002, 2004/05, 2007, 2008 and 2010, and was factored into affordability scenarios for three household types relying on IA: a family of four, a lone mother with three children, and a lone male. Essential monthly expenses were deducted from total net income to determine if adequate funds remained for the NNFB.

**Results:** For each time period examined, the findings demonstrated that all household types faced a significant monthly deficit if they purchased a basic nutritious diet. In each household scenario, the potential monthly deficits increased from 2002 to 2010, ranging from \$112 in 2002 for a lone mother with three children to \$523 in 2010 for a lone male.

**Conclusion:** Despite increases in allowances, these findings suggest that the risk of food insecurity has increased for IA-dependent households in NS. To address this public health challenge, public health practitioners must advocate for integrated, progressive and sustainable social welfare policies that ensure that individuals and families relying on IA have adequate income and other supports to meet their basic needs, including access to a healthy diet.

**Key words:** Nutrition policy; income assistance; food security; community-based participatory research; poverty; welfare; social assistance, food costing

La traduction du résumé se trouve à la fin de l'article.

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Those affected by food insecurity in Canada are disproportionately represented by low-income individuals and families.<sup>1-3</sup> According to the Canadian Community Health Survey (CCHS), 7.7% of households in Canada reported experiencing moderate or severe food insecurity in 2007/08. Approximately one third (32.5%) of households with incomes in the lowest income decile were food insecure.<sup>3</sup> These statistics raise particular public health concerns given the negative and interrelated impacts of food insecurity on many aspects of health, including child development, social inclusion and chronic illness.<sup>4,5</sup>

Nova Scotia (NS) has consistently reported rates of food insecurity that are higher than the national average.<sup>1,3</sup> In 2007/08, 9.3% of Nova Scotians reported moderate or severe income-related food insecurity.<sup>3</sup> Rates of food insecurity among households relying on government social assistance programs are alarmingly high, and the inadequacy of such provincial programs in Canada has been consistently demonstrated in grey<sup>6-9</sup> and published literature.<sup>10-12</sup> At least 63.7% of food-insecure Nova Scotians named Income Assistance\* (IA) (also referred to as “social assistance”, “income support” and “welfare”) as their main source of income in 2007/08<sup>13</sup> and 4.7% of all citizens in NS reported accessing IA in 2008 (J. Rathbun, December 2, 2011, personal communication). In addition, in 2010 about 50% of Nova Scotians accessing food banks were IA recipients.<sup>14</sup>

\* IA is a provincial/territorial government program that provides financial assistance to those “who lack earned income and are not eligible for social insurance programs that target the unemployed, disabled, and elderly”.<sup>10,p.83</sup>

Food costing has commonly been used to monitor the risk of food insecurity and identify vulnerable population groups.<sup>15</sup> Food

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**Conflict of Interest:** None to declare.

**Table 1.** Potential Financial Impact of Purchasing a Basic Nutritious Diet on Monthly Funds Remaining for a Family of Four\* Relying on Income Assistance in Nova Scotia Between 2002 and 2010

	2002	2004/05	2007	2008	2010	% Change 2002-2010
<b>Monthly Gross Income</b>						
Personal Allowance†	\$360.00	\$368.00	\$400.00	\$408.00	\$428.00	+ 18.89%
Shelter Allowance‡	\$600.00	\$600.00	\$620.00	\$620.00	\$620.00	+ 3.33%
Transportation Allowance§	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	0.00%
Childcare Allowance	\$102.60	\$106.05	\$113.77	\$120.83	\$132.07	+ 28.72%
Canada Child Tax Benefit	\$531.40	\$564.15	\$605.41	\$616.83	\$640.24	+ 20.48%
GST/HST Benefit	\$55.00	\$57.83	\$59.00	\$60.33	\$63.00	+ 14.55%
<b>Total</b>	<b>\$1,949.00</b>	<b>\$1,996.03</b>	<b>\$2,098.18</b>	<b>\$2,125.99</b>	<b>\$2,183.31</b>	<b>+ 12.02%</b>
<b>Basic Monthly Expenses</b>						
Shelter	\$712.58	\$729.06	\$797.35	\$804.69	\$822.02	+ 15.36%
Power	\$121.37	\$129.09	\$146.15	\$144.87	\$161.67	+ 33.20%
Telephone	\$27.72	\$27.79	\$27.69	\$29.02	\$29.60	+ 6.78%
Transportation (private)	\$332.58	\$399.68	\$457.05	\$423.15	\$462.31	+ 39.01%
Childcare¶	\$102.60	\$106.05	\$113.77	\$120.83	\$132.07	+ 28.72%
Clothing, footwear, etc.	\$116.01	\$136.06	\$148.99	\$140.32	\$159.79	+ 37.74%
Personal care expenses	\$54.01	\$64.08	\$75.43	\$75.77	\$94.54	+ 75.04%
Household cleaning supplies	\$25.78	\$25.00	\$25.19	\$20.68	\$24.23	- 6.01%
<b>Total</b>	<b>\$1,492.65</b>	<b>\$1,616.81</b>	<b>\$1,791.62</b>	<b>\$1,759.33</b>	<b>\$1,886.23</b>	<b>+ 26.37%</b>
<b>Total Remaining for Food</b>	<b>\$456.35</b>	<b>\$379.22</b>	<b>\$306.56</b>	<b>\$366.66</b>	<b>\$297.08</b>	<b>- 34.90%</b>
<b>Cost of the 1998 NNFB**</b>	<b>\$572.90</b>	<b>\$617.42</b>	<b>\$648.33</b>	<b>\$673.62</b>	<b>\$725.28</b>	<b>+ 26.60%</b>
<b>Cost of the 2008 NNFB</b>					<b>\$770.65</b>	
<b>Funds Remaining Using 1998 NNFB</b>	<b>-\$116.55</b>	<b>-\$238.20</b>	<b>-\$341.77</b>	<b>-\$306.96</b>	<b>-\$428.20</b>	<b>- 267.40%</b>
<b>Funds Remaining Using 2008 NNFB</b>					<b>-\$473.57</b>	

\* Consists of a woman and a man aged 31-49 years, a boy aged 13 years, and a girl aged 7 years.  
 † Personal Allowance covers the cost of food, clothing and footwear, personal care expenses, and miscellaneous expenses for adults ≥19 years in the household.  
 ‡ Shelter Allowance covers the cost of rent, heat and electricity for the household.  
 § Transportation Allowance of up to \$150 per month is available per adult seeking employment and/or enrolled in an approved educational program.  
 || Transportation costs are based on the costs of owning and operating a private vehicle, from the Canadian Survey of Household Spending, second quintile.  
 ¶ Only childcare costs incurred are covered, up to a maximum of \$400/month, for those adults seeking employment and/or enrolled in an approved educational program. Based on the average cost of subsidized after-school care for all children aged ≤12 years.  
 \*\* NNFB, National Nutritious Food Basket.

costing utilizes the National Nutritious Food Basket\* (NNFB) to determine the cost of a basic nutritious diet; these data can be used to inform program planning and policy decision-making that supports and promotes safe, nutritious and accessible food for all Canadians.<sup>15,16</sup> The objective of this study was to assess the affordability of a basic nutritious diet for selected household types relying on IA by comparing potential incomes to the costs of the NNFB and other essential expenditures in NS from 2002 to 2010, and to examine the adequacy of IA allowances during this time period.

**METHODS**

To assess the adequacy of IA for purchasing a nutritious food basket, affordability scenarios for three family configurations were created: a family of four, a lone mother with three children, and a lone male. Using standardized measures, estimated monthly costs for shelter, power, childcare and other expenses were subtracted from estimated monthly incomes based on IA allowances, GST credits, and Child Tax Benefits to determine what funds, if any, were left to purchase the NNFB. Details on estimates for monthly household expenses can be found in Appendix 1.

To obtain the cost of the NNFB, data from the NS Participatory Food Costing (PFC) project in 2002, 2004/05, 2007, 2008 and 2010 were used. A detailed description of the PFC Model and methods are presented elsewhere.<sup>8,17</sup> Essentially, monthly food costs were calculated for a variety of age and gender categories (Appendix 2) using a random sample of grocery stores across NS, stratified by District Health Authority, store size, and county. In each year of data

collection, trained food costers collected the lowest-possible prices of items specified in the NNFB.<sup>16</sup> From 2002 to 2008, prices were collected for the 66 food items that constituted the 1998 NNFB.<sup>18</sup> In 2010, prices were collected for the 67 food items contained in the updated 2008 NNFB,<sup>16</sup> and for purposes of comparison, a smaller, distributed sample was also collected using the 1998 NNFB.<sup>8</sup>

**Estimating monthly household incomes**

Income from IA for each of the three household scenarios was estimated using the NS IA program allowances reported as of June of each year. Incomes were calculated using the maximum available basic personal and shelter allowances. Where applicable, transportation and childcare allowances (criterion for each of which stipulates that employment is being sought or the adult is enrolled in an approved educational program) and federal/provincial tax benefits were included in the income estimate.

**Estimating monthly household expenses**

Monthly costs for items considered essential<sup>11†</sup> were estimated using reliable secondary data sources, such as Statistics Canada’s Survey of Household Spending (SHS), Canada Mortgage and Housing Corporation (CMHC), and Consumer Price Index (CPI) (see Appendix 1). The SHS reports median spending in NS for various income brackets, allowing us to choose appropriate, conservative and stable estimates. For shelter, CMHC NS data, which provide information for one-, two- and three-bedroom apartments, were used to adjust SHS rented accommodation figures to the appropriate household size. Costs at

\* The NNFB is a list of basic, minimally processed foods that are widely available and commonly eaten by most Canadians in amounts that can be used to calculate the cost of a healthy, balanced diet for various age and gender groups.<sup>15,18</sup>

† Items considered essential for a basic standard of living were essentially the same as those considered by Vozoris, Davis and Tarasuk (2002),<sup>11</sup> with the exception of subsidized childcare costs, which were added after NS PFC project stakeholder consultations.

**Table 2.** Potential Financial Impact of Purchasing a Basic Nutritious Diet on Monthly Funds Remaining for a Lone Mother With Three Children\* Relying on Income Assistance in Nova Scotia Between 2002 and 2010

Monthly Gross Income	2002	2004/05	2007	2008	2010	% Change 2002-2010
Personal Allowance†	\$180.00	\$184.00	\$200.00	\$204.00	\$214.00	+ 18.89%
Shelter Allowance‡	\$600.00	\$600.00	\$620.00	\$620.00	\$620.00	+ 3.33%
Transportation Allowance§	\$150.00	\$150.00	\$150.00	\$150.00	\$150.00	0.00%
Childcare Allowance	\$307.80	\$318.14	\$341.31	\$362.47	\$396.20	+ 28.72%
Canada Child Tax Benefit	\$793.63	\$851.99	\$913.74	\$930.66	\$965.24	+ 21.62%
GST/HST Benefit	\$64.50	\$67.83	\$69.17	\$70.75	\$73.83	+ 14.47%
Total	\$2,095.93	\$2,171.96	\$2,294.22	\$2,337.88	\$2,419.27	+ 15.43%
<b>Basic Monthly Expenses</b>						
Shelter	\$712.58	\$729.06	\$797.35	\$804.69	\$822.02	+ 15.36%
Power	\$121.37	\$129.09	\$146.15	\$144.87	\$161.67	+ 33.20%
Telephone	\$27.72	\$27.79	\$27.69	\$29.02	\$29.60	+ 6.78%
Transportation (private)	\$332.58	\$399.68	\$457.05	\$423.15	\$462.31	+ 39.01%
Childcare¶	\$307.80	\$318.14	\$341.31	\$362.47	\$396.20	+ 28.72%
Clothing, footwear, etc.	\$116.02	\$136.06	\$148.99	\$140.31	\$159.79	+ 37.73%
Personal care expenses	\$54.01	\$64.08	\$75.43	\$75.77	\$94.54	+ 75.04%
Household cleaning supplies	\$25.78	\$25.00	\$25.19	\$20.68	\$24.23	- 6.01%
Total	\$1,697.86	\$1,828.90	\$2,019.16	\$2,000.96	\$2,150.36	+ 26.65%
<b>Total Remaining for Food</b>	\$398.07	\$343.06	\$275.06	\$336.92	\$268.91	- 32.45%
<b>Cost of the 1998 NNFB**</b>	\$510.08	\$550.82	\$578.45	\$606.59	\$651.67	+ 27.76%
<b>Cost of the 2008 NNFB</b>					\$660.84	
<b>Funds Remaining Using 1998 NNFB</b>	-\$112.01	-\$207.76	-\$303.39	-\$269.67	-\$382.76	- 241.72%
<b>Funds Remaining Using 2008 NNFB</b>					-\$391.93	

\* Consists of a woman aged 31-49 years, two boys ages 7 and 10 years, and a girl aged 12 years.

† Personal Allowance covers the cost of food, clothing and footwear, personal care expenses, and miscellaneous expenses for adults ≥19 years in the household.

‡ Shelter Allowance covers the cost of rent, heat and electricity for the household.

§ Transportation Allowance of up to \$150 per month is available per adult seeking employment and/or enrolled in an approved educational program.

|| Transportation costs are based on the costs of owning and operating a private vehicle, based on the Canadian Survey of Household Spending, second quintile.

¶ Only childcare costs incurred are covered, up to a maximum of \$400/month, for those adults seeking employment and/or enrolled in an approved educational program. Based on the average cost of subsidized after-school care for all children aged ≤12 years.

\*\* NNFB, National Nutritious Food Basket.

each point were based on the most recent available data and adjusted forward or backward by published CPI when data for a particular time period were unavailable. Methods and sources for estimating basic living expenses were standardized to enable comparable findings across the five food costing cycles. Estimates were corrected for household size using an adjustment factor<sup>8</sup> (see Appendix 1). For each income and expense category, percent change figures from 2002 to 2010 were also calculated (see Tables 1-3).

## RESULTS

The results show that households relying on IA in NS were (to various degrees) consistently unable to meet their basic needs and may have compromised their dietary intakes in order to afford other essential, non-negotiable expenditures. The percent change estimates from 2002 to 2010 indicate that in all three scenarios, total household expenses increased more than household incomes. Monthly “funds remaining” have also diminished; for the family of four, by nearly 270%. The results indicate that IA recipients in NS in 2010 may have faced a greater risk of food insecurity compared to those in 2002.

### Family of four

From 2002 to 2010, a family of four relying on IA did not have sufficient funds to purchase a nutritiously adequate diet after other essential monthly expenses were met. As shown in Table 1, had this family purchased the NNFB in 2002, they would have experienced a monthly deficit of \$116.55. In 2010, this deficit would have increased to \$473.57.

### Lone mother with three children

A lone mother with three children relying on IA also did not have sufficient income to purchase a basic nutritious diet for herself and

her children. As shown in Table 2, purchasing the NNFB in 2002 would have left this family with a monthly deficit of \$112.01. By 2010, they would have faced a monthly deficit of \$391.93.

### Lone male

As illustrated in Table 3, a lone male aged 31 to 49 who relied on IA did not have sufficient monthly income between 2002 and 2010 to cover essential expenses including a basic nutritious diet. If a nutritious diet was purchased, the lone male would have faced a monthly deficit of \$381.74 in 2002 and \$523.32 in 2010.

## DISCUSSION

The household scenarios presented in this paper provide compelling evidence that despite increases in IA allowances, the costs of basic needs have increased at a faster rate. As such, a nutritious diet is out of reach for many households relying on IA in NS. Although employment and income support legislation are in place and are intended to protect society's most vulnerable population groups, we suggest that current IA allowances in NS place recipients' health at risk due to lack of access to an adequate diet. When expenses such as housing, power, childcare and transportation increase, nutrition can be compromised; for people living on low incomes, food becomes the most flexible part of their budget and is sacrificed to cover other essential costs.<sup>19,20</sup> Advocacy for and implementation of progressive and sustainable social policies are urgently required to ensure equitable health access across the population.

Our results suggest that the overall adequacy of IA allowances relative to the cost of living, including food, has deteriorated significantly from 2002 to 2010. While our scenarios are specific to NS, it is plausible that they reflect the economic struggles and

**Table 3.** Potential Financial Impact of Purchasing a Basic Nutritious Diet on Monthly Funds Remaining for a Lone Male\* Relying on Income Assistance in Nova Scotia Between 2002 and 2010

<b>Monthly Gross Income</b>	<b>2002</b>	<b>2004/05</b>	<b>2007</b>	<b>2008</b>	<b>2010</b>	<b>% Change 2002-2010</b>
Personal Allowance	\$180.00	\$184.00	\$200.00	\$204.00	\$214.00	+ 18.89%
Shelter Allowance	\$235.00	\$285.00	\$300.00	\$300.00	\$300.00	+ 27.66%
Transportation Allowance†	\$11.36	\$13.60	\$21.15	\$22.14	\$22.55	+ 98.50%
GST/HST Benefit	\$18.00	\$18.92	\$19.33	\$19.75	\$20.67	+ 14.83%
<b>Total</b>	<b>\$444.36</b>	<b>\$501.52</b>	<b>\$540.48</b>	<b>\$545.89</b>	<b>\$557.22</b>	<b>+ 25.40%</b>
<b>Basic Monthly Expenses</b>						
Shelter	\$458.89	\$463.02	\$496.99	\$518.75	\$558.44	+ 21.69%
Power	\$71.86	\$76.07	\$85.35	\$84.58	\$92.21	+ 28.32%
Telephone	\$27.72	\$27.79	\$27.69	\$29.02	\$29.60	+ 6.78%
Transportation (public) ‡	\$11.36	\$13.60	\$21.15	\$22.14	\$22.55	+ 98.50%
Clothing, footwear, etc.	\$34.09	\$36.09	\$43.78	\$41.23	\$46.96	+ 37.75%
Personal care expenses	\$15.87	\$18.88	\$22.17	\$22.27	\$27.78	+ 75.05%
Household cleaning supplies	\$7.58	\$7.35	\$7.40	\$6.08	\$7.12	- 6.07%
<b>Total</b>	<b>\$627.37</b>	<b>\$642.80</b>	<b>\$704.53</b>	<b>\$724.07</b>	<b>\$784.66</b>	<b>+ 25.07%</b>
<b>Funds Remaining for Food</b>	<b>-\$183.01</b>	<b>-\$141.28</b>	<b>-\$164.05</b>	<b>-\$178.18</b>	<b>-\$227.44</b>	<b>- 24.28%</b>
<b>Cost of the 1998 NNFB§</b>	<b>\$198.73</b>	<b>\$213.67</b>	<b>\$223.13</b>	<b>\$230.51</b>	<b>\$248.38</b>	<b>+ 24.98%</b>
<b>Cost of the 2008 NNFB</b>					<b>\$295.88</b>	
<b>Funds Remaining Using 1998 NNFB</b>	<b>-\$381.74</b>	<b>-\$354.95</b>	<b>-\$387.18</b>	<b>-\$408.69</b>	<b>-\$475.82</b>	<b>- 24.65%</b>
<b>Funds Remaining Using 2008 NNFB</b>					<b>-\$523.32</b>	

\* Man aged 31-49 years.

† Transportation Allowance of up to \$150 per month is available per adult seeking employment and/or enrolled in an approved educational program.

‡ Costs for public transportation (bus and/or taxi fares) based on the Survey of Household Spending, second quintile.

§ NNFB, National Nutritious Food Basket.

potential risk of food insecurity faced by other Canadians relying on IA programs. Despite provincial governments in NS<sup>21,22</sup> and elsewhere<sup>9</sup> stating goals for reducing poverty and food insecurity, welfare incomes across all provinces and territories in Canada continue to be far below most socially accepted measures of adequacy.<sup>7</sup> The findings presented here also corroborate earlier grey<sup>9</sup> and published literature,<sup>11,12</sup> which used food costing data to demonstrate the inadequacy of provincial social welfare programs to meet basic needs.

Moderate increases to IA allowances in NS from 2002 to 2010 have been insufficient to compensate for increased costs of living. Achieving food security for citizens living in low-income circumstances will require the implementation of a range of integrated, progressive and sustainable social policies. Regularly indexing the personal allowance portion of IA rates to reflect the actual cost of a basic nutritious diet is critical; however the sustainability of this option on its own is limited given lessening government budgets and increasing costs of living.

Addressing the rising costs of housing and other basic expenses can contribute to greater food security for low-income Canadians. Recent evidence suggests that families whose non-subsidized housing budget consumes more than 30% of their household expenditures have increased odds of food insecurity, and families in subsidized housing had less of a chance of food insecurity than those on waiting lists for such housing.<sup>23</sup> Other key strategies that will make a difference to Canadians on low income include strengthening federal child benefit payments and developing a public childcare system.<sup>6</sup>

Poverty reduction is a critical 'path' to improving food security. A growing body of research suggests that government investment in poverty reduction leads to both short- and long-term savings to offset initial investments.<sup>24-26</sup> For example, epidemiological evidence has shown that interventions aimed at lessening gaps between the rich and poor have positive impacts at multiple levels – including: physical health, mental health, drug abuse, education, imprisonment, obesity, social mobility, trust and community life,

violence, teenage pregnancies and child well-being – producing overall benefits for society.<sup>25</sup>

### Limitations

The affordability scenarios are conservative estimates of the costs of living. The scenarios involving children assume that the family has access to subsidized childcare; if not, their monthly deficit would be much greater. Currently, it is estimated that over 300 families in NS are waiting to be considered for subsidized childcare (D. Reimer, December 7, 2011, personal communication), suggesting that access to these supplementary supports is limited. Expenses such as out-of-pocket health care, foods purchased at restaurants or other retailers, household maintenance, and costs associated with managing a chronic disease or a disability are not considered in the scenarios. Therefore, it is likely that the actual cost of essential expenses is underestimated and the potential deficit faced by those relying on IA is even larger than reported.

The affordability scenarios presented in the analysis are hypothetical. They incorporate valid financial data, but do not reflect the actual numbers of IA recipients in NS who are food insecure, or take into account individual- and household-level coping strategies, such as accessing financial support or food from family, friends or charitable organizations. Additionally, the scenarios do not explore differences between rural and urban communities in NS. In rural communities, the costs of housing may be lower,<sup>27</sup> but food<sup>8</sup> and transportation may be more expensive.

### CONCLUSION

In NS, the provincial Healthy Eating Strategy<sup>22</sup> identifies food security as one of four priority areas, reflecting a commitment to ensure that all people, at all times, have access to enough healthy, safe food to meet their dietary needs. Further research could provide insight on the actual impact of IA policies on food security, and on which policy intervention(s) would have the most impact. However, our findings demonstrate an urgent need for public health practitioners to advocate for and support the development and

**Appendix 1.** Description of Monthly Expense Estimates for Selected Households Relying on Income Assistance in Nova Scotia (2002-2010)

Expense Category	Explanation of Monthly Estimate	Source	Additional Comments
Shelter	Median values from SHS* "rented living quarters" (2009) for a second quintile NS family were used to estimate shelter costs. 2009 SHS data were adjusted to June 2010 using CPI.† The 2009 SHS data were also used and adjusted using CPI for 2002-2008. CMHC‡ average rent calculations were used to adjust SHS "rented living quarter" amounts to 1- and 3-bedroom apartment sizes.	SHS*, CPI†, CMHC‡	SHS second quintile estimates include the cost of heat and hot water.
Power	Conservative estimates for 1- and 3-bedroom apartments were determined using the NS Power Energy Calculator. <sup>28</sup> The 3-bedroom was based on an 1100 usage kilowatt per hour (kWh) per month and the 1-bedroom was based on a 600 usage kWh per month. The kWh per month was then multiplied by the domestic rate for the appropriate year. There is a monthly base rate of \$10.83 that is added plus tax to the kWh per month calculation to determine the overall monthly total for power usage.	NS Power™	Assumed to be an additional expense above estimates used for shelter.
Telephone	Monthly cost of the lowest cost service provider in NS. Basic service rate from 2010 adjusted back to 2002 using CPI.	Aliant™	Does not include installation charges, supplementary phone options or long distance plans/charges.
Transportation (private and public)	Based on SHS estimates 2002-2009. Adjusted to 2010 estimates using CPI. To calculate private transportation, the SHS median amount for "operation of owned and leased automobiles and trucks" was used. To calculate public transportation, the SHS median amount for "public transportation" was used.	SHS*, CPI†	SHS data (spending/household) was converted to spending/individual, then adjusted for various family sizes using a scalar of 80.1%.§
Childcare	In 2010, average after-school childcare costs \$12/day (D. Reimer, Sept. 5, 2011, personal communication). Full subsidy amount for after-school care is \$5.90/day/child. Families eligible for subsidies pay \$6.10/day/child. Rates were multiplied by 21.65 days/month for monthly rates. <sup>29</sup> The monthly childcare rate for 2010 was adjusted using CPI to calculate childcare rates for 2002-2009. Costs for all other years estimated along a linear regression.	NS Childcare Funding Review, NS Department of Community Services	Assumed fully subsidized rates while IA recipient attending an educational program. IA provides a childcare allowance of up to \$400/month per family, but only the portion spent on childcare is received. Subsidized rates are only available for children aged ≤12 years. <sup>29</sup>
Clothing, footwear, etc.	Based on Survey of Household Spending (SHS) estimates 2002-2009. Adjusted to 2010 estimates using CPI.	SHS*§	SHS data (spending/household) were converted to spending/individual, then adjusted for various family sizes using a scalar of 80.1%.§
Personal care expenses and household cleaning supplies	Based on SHS estimates 2002-2009. Adjusted to 2010 estimates using CPI.	SHS*§	SHS data (spending/household) were converted to spending/individual, then adjusted for various family sizes using a scalar of 80.1%.§
Food	Weekly NNFB cost for various age and gender groups.	NNFB   (1998 and 2008), food costing data 2002-2010 (see Appendix 1)	Adjusted for economies of household size¶ and then converted to monthly costs according to standardized procedures.

\* SHS, Survey of Household Spending, Statistics Canada, 2002-2009. In all scenarios, amount from the Second Quintile are used (the second lowest socio-economic bracket surveyed) as these figures are assumed to represent the spending habits of an individual or family on Income Assistance (IA).

† CPI, Consumer Price Index, Statistics Canada, 2002-2010.

‡ CMHC, Canada Mortgage and Housing Corporation, Nova Scotia Highlights, 2010.

§ SHS data are reported by spending/average household size. Because average family sizes vary from 2002-2010, costs were standardized to spending/individual by dividing by average family size. A scalar of 80.1% was used to estimate costs for each additional family member as per the Social Planning and Research Council of BC (2001).<sup>30</sup>

|| NNFB, National Nutritious Food Basket.

¶ Household Size Adjustment Factor: 1 person – increase cost by 15%; 2 people – increase cost by 10%; 3 people – increase cost by 5%; 4 people – no change; 5 people – decrease cost by 5%; 6 people – decrease cost by 10%.

implementation of integrated, progressive and sustainable social welfare policies that ensure that individuals and families relying on IA have adequate income and other supports to meet their basic needs, including access to a healthy diet. Strategies should include regular indexing of the personal allowance portion of IA rates to reflect the actual cost of a basic nutritious diet, as well as other supports for individuals and families to help alleviate the public health impact of poverty.

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**Appendix 2.** Average Monthly Cost of a National Nutritious Food Basket (NNFB)\* for Relevant Age and Gender Groups in Nova Scotia Between 2002 and 2010

Sex	Age (yrs)†	1998 NNFB				2008 NNFB		
		Cost/mo.‡ 2002	Cost/mo. 2004/05	Cost/mo. 2007	Cost/mo. 2008	Sex	Age (yrs)	Cost/mo. 2010
Child	1	\$69.06	\$74.04	\$78.68	\$81.92	Boy	2-3	\$115.44
	2-3	\$72.18	\$77.77	\$82.36	\$86.38		4-8	\$148.43
	4-6	\$95.13	\$102.88	\$108.99	\$114.70		9-13	\$194.59
Boy	7-9	\$112.54	\$121.28	\$125.79	\$134.62	Girl	14-18	\$267.16
	10-12	\$140.12	\$151.59	\$159.60	\$167.09		2-3	\$113.23
	13-15	\$164.19	\$177.27	\$186.49	\$194.50		4-8	\$144.02
Girl	16-18	\$189.05	\$204.25	\$213.69	\$222.00	Man	9-13	\$119.25
	7-9	\$108.64	\$117.13	\$123.62	\$129.29		14-18	\$198.66
	10-12	\$130.16	\$140.73	\$148.87	\$155.49		19-30	\$257.29
Man	13-15	\$138.73	\$149.82	\$158.30	\$165.49	Woman	31-50	\$233.47
	16-18	\$130.64	\$140.68	\$148.00	\$154.10		51-70	\$225.59
	19-24	\$178.05	\$191.91	\$200.39	\$207.71		19-30	\$200.57
Woman	25-49	\$172.81	\$185.80	\$194.03	\$200.44		31-50	\$198.57
	19-24	\$133.62	\$143.63	\$151.03	\$156.88		51-70	\$178.57
	25-49	\$127.26	\$137.22	\$144.19	\$149.39			

\* The 1998 NNFB included a list of food items based on the food purchasing patterns of Canadian households and nutrition recommendations at that time. In 2008, Health Canada updated the tool to reflect current dietary recommendations and consumption patterns for Canadians; and the age categories differ slightly from 1998 to 2008. The 1998 and 2008 NNFB includes a list of 66 and 67 foods that are used to calculate the cost of a basic nutritious diet for 23 and 20 different age and gender groups, respectively.<sup>16,18</sup>

† yrs, years.  
‡ mo, month.

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## RÉSUMÉ

**Objectif :** Évaluer l'abordabilité d'un régime alimentaire nutritif de base pour certains types de ménages qui comptent sur l'aide au revenu (AR) en comparant le revenu potentiel aux coûts du Panier de provisions nutritif (PPN) et d'autres dépenses essentielles entre 2002 et 2010, et examiner si les prestations d'AR étaient suffisantes durant cette période.

**Méthode :** Nous avons calculé le coût du PPN dans un échantillon aléatoire d'épicerie en Nouvelle-Écosse durant cinq périodes de temps (2002, 2004-2005, 2007, 2008 et 2010), ce qui nous a permis de construire des scénarios d'abordabilité pour trois types de ménages comptant sur l'AR : une famille de quatre personnes, une mère de famille monoparentale avec trois enfants, et un homme seul. Les dépenses mensuelles essentielles ont été déduites du revenu net total pour déterminer s'il restait des fonds suffisants pour acheter le PPN.

**Résultats :** Pour chaque période examinée, nos constatations montrent que tous les types de ménages accusent un déficit mensuel important s'ils achètent les produits d'un régime alimentaire nutritif de base. Dans chaque scénario, le déficit mensuel potentiel a augmenté entre 2002 et 2010, allant de 112 \$ en 2002 pour une mère de famille monoparentale avec trois enfants à 523 \$ en 2010 pour un homme seul.

**Conclusion :** Malgré les hausses des prestations, ces résultats montrent que le risque d'insécurité alimentaire s'est accru pour les ménages néo-écossais comptant sur l'AR. Pour aborder ce problème de santé publique, les praticiens de la santé publique doivent promulguer des politiques d'aide sociale intégrées, progressistes et durables qui garantissent que les particuliers et les familles comptant sur l'AR disposent d'un revenu suffisant et d'autres mesures de soutien pour satisfaire leurs besoins fondamentaux, dont l'accès à une alimentation saine.

**Mots clés :** politique nutritionnelle; aide au revenu; sécurité alimentaire; recherche participative communautaire; pauvreté; aide sociale; assistance sociale, calcul des coûts des aliments