



2011 FOOD COSTS FOR FAMILIES

Analysis of the proportion of the minimum wage
and income support benefit entitlements that
families need to purchase a healthy diet

Acknowledgements

Thank you to Kay Brereton from the Wellington Peoples Centre, Julie Mathie and Ashleigh Gordon who all contributed to the calculations made in this report.

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Citation Guide: Regional Public Health (2011): 2011 Food Costs for Families: Analysis of the proportion of the minimum wage and income support benefit entitlements that families need to purchase a healthy diet, Regional Public Health Information Paper September 2011, Lower Hutt.

Executive Summary

This paper updates the 2010 'Food Costs For Families' and provides evidence of the ongoing inequity and financial difficulties faced by many families on low incomes to purchase healthy food to meet their nutritional needs. The 2011 Otago University 'Food Costs Survey' was used to calculate the cost of a healthy eating pattern for eight low income families' scenarios. The percentage of each low income scenario required to purchase a healthy diet was calculated, based on the New Zealand Ministry of Health Nutritional Guidelines.

Improving the food choices of all New Zealanders is of great importance in stemming the growing burden of obesity and nutrition related diseases. Major determinants of food choices include both a family's income and the cost of food. Making healthy food more affordable would support those on low incomes to be able to eat well.

New Zealanders spend on average 18% of their income on food. An Australian paper suggests that no more than 25% of disposable income should be spent on food and 'food stress' is believed to be experienced when more than 30% of income is needed.

The findings of this 2011 analysis identifies that no improvements have been made in food affordability since 2010. Families need to spend between 23-52% of their net income and 43-89% once rent is deducted, to purchase a 'basic' healthy diet. With such a high percentage of income needed to purchase a 'basic' healthy diet, 'food stress' continues to be experienced. While neighbourhood geographic food accessibility is not considered in this paper, this has the potential to increase costs further for many low income families.

Food insecurity and its consequences of poor nutrition, obesity, and health related conditions are evident in families on low incomes. Agencies need to continue to work collaboratively to tackle issues of income adequacy and accessibility to lower cost healthy foods as part of the solution to achieve a reversal in these health trends.

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Purpose

Quantifying the proportion of both the minimum wage and state income support benefits that are necessary to purchase a 'healthy diet' is the main objective of this paper. An increased understanding of the barriers to accessing healthy foods especially for those on low income, supports Regional Public Health's role to improve health outcomes for high need populations. This project aims to work across sectors to highlight the role that access to income plays in health and to work towards equal opportunities to good health.

In 2010, the RPH paper 'Food Costs for Families' provided an analysis of the percentage of six income scenarios that families needed to purchase a healthy diet (based on Otago University 2009 food costs). This 2011 paper provides an updated revision of this work with the addition of two further income scenarios.

Incomes are derived from either the statutory minimum wage or income support benefits.

Analysis is derived from food costs based on the 2011 Otago University Food Cost survey [1]. Diets are based on the New Zealand Ministry of Health Nutritional Guidelines [2] for different ages and genders. The impact of the changes to GST, income, tax and inflation since this time are reflected in the results.

This work fits well with Regan's [3] research recommendations suggesting the need to build evidence and advocacy about the links between income and other social determinants of health and health outcomes. This is one means to reduce the inequitable effects of inadequate income on health and wellbeing.

Background

A nutritious diet is important in maintaining and improving health [2]. All people in the Wellington region and throughout New Zealand deserve access to good food, but unfortunately this is not always the case. The financial difficulties faced by many local families on low incomes to access adequate food was highlighted by a 2010 RPH 'Access to Health and Income Working Group Survey'. This survey identified that approximately 60% of participants at Benefits Rights Training days held in 2009 and 2010, were regularly requested to provide clients with advice on how to access a special needs grant for food and power [4].

One food bank operating from Wesley Community Action in Porirua East, Wellington, experienced a 51% greater demand for food parcels in the first six months of 2011 compared to the first six months of 2010 [5]. Nationally the Salvation Army [6] experienced a 4.5% increase in demand for food parcels from July 2010–July 2011 and a 27% increase over the past three years. A total of 68,750 food parcels were provided throughout New Zealand over this one year period.

Addressing income adequacy and the affordability of healthy food offers the potential to improve nutritional intake, health outcomes and reduce health care costs for vulnerable families.

Food Insecurity

Food insecurity is an internationally recognised term which has been defined as the "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable

ways" [7]. Based on responses to a series of eight statements, the 2008/09 nutrition survey [8] finds only 59.1% of households are *fully/almost food secure*, 33.7% are *moderately food secure*, and 7.3% are classified as having *low food security*. Comparison of the 1997 and 2008/09 nutrition surveys finds worsening food insecurity with the proportion of households classified as having *low food security* increasing for males from 1.6% to 5.6% and females from 3.8% to 8.8%. Those classified as *moderately food secure* rose over ten percentage points and households *fully/almost food secure* fell from 78.5% to 61.7% in males and from 73.0% to 56.6% in females. Feeling 'stressed' because of not having enough money for food was reported by Maori women, *sometimes* by 22.3% and *often* by 10.3% with even greater numbers in Pacific woman (31.3% *sometimes* and 11.2% *often*).

Food insecurity is most prevalent in females, in younger ages (25-44 years), those who have never been legally married or are separated/divorced or widowed, and those of Māori or Pacific ethnicity. Sole parent families, large households, those unemployed or actively looking for work, those receiving a means tested government benefit, and those living in highly deprived areas (NZ Dep deciles 7-10) are all more likely to be food insecure [9].

Poor food quality and variety and nutritional adequacy have been associated with food insecurity [10]. Not surprisingly higher rates of obesity, type 2 diabetes, infectious diseases, poor mental health, greater psychological stress and poor academic development in

children are found where healthy food is less accessible [10-13]. Those people achieving healthier and higher cost diets conversely experience better health outcomes with lower body weight, waist circumference, body mass index, obesity and insulin resistance [14].

Food Costs

Otago University Food Costs Survey

Annual monitoring of food costs is undertaken by Department of Human Nutrition, Otago University [1]. Data collection is undertaken in the five main city centres and costs for individuals are calculated using specified amounts of each food category (e.g. meat, bread, eggs, fruit, etc) needed for one week. Requirements are based on the New Zealand Food and Nutrition Guidelines [1] to meet the nutritional needs of most healthy people appropriate for each age and gender group. Food costs are provided for a 'basic', 'moderate' and 'liberal' diet. The costs are calculated assuming home preparation of meals and that food is purchased from supermarkets. Shelf prices only are used (not specials or coupon prices) and the lowest priced alternative is recorded when more than one brand is available.

Not everyone however has easy access to a supermarket. Mapping of food outlet stores in Eastern Porirua, a neighbourhood with high deprivation [15] provides evidence that residents have limited access to a supermarket but very easy access to convenience stores (fast food outlets, bakeries, petrol stations and dairies) to purchase food [15]. These convenience stores appeared to be less likely to carry a healthy range of foods and some healthier alternatives were found to be more expensive. This serves as a reminder that the

use of supermarket derived food costs are likely to underestimate the true food costs incurred by those living in underserved areas, making real food costs even greater.

Cost of 'Healthy' Foods

Associations have been found between food cost and diet quality. A comprehensive assessment of food access and food costs based on three main food basket surveys in 160 representative grocery stores throughout Western Australia identified higher energy foods to be considerably cheaper when compared by weight to more highly perishable foods and those with a higher nutritional composition [16]. Similarly a recent systematic literature review found associations between lower cost food and higher energy density and higher costs foods with higher nutritional quality and density [14].

A New Zealand survey of a large number and range of food outlets in the Waikato found healthy foods more expensive than 'regular choices' and more available in urban areas. Supermarket electronic sales data locally also found healthy foods to be more expensive (excluding fruit and vegetables) than less healthy alternatives [17]. The annual Otago University food costs surveys in supermarkets also consistently show that leaner and more varied foods will cost considerably more than a less expensive 'basic' diet [1].

Food Affordability

Local and international evidence supports the strong relationship and importance of food costs on food choices. Several focus groups of Māori, Pacific and non ethnic focus group participants [9] [15] [17] were found high food

costs and a lack of income are major barriers for accessing healthy food. Participants of one study identified price as more important than taste, promotions, purchasing habits, convenience and environmental factors such as organically or locally produced foods [17].

A 2011 Oxfam public opinion survey [18] in seventeen developed and undeveloped countries raised concerns about food affordability and access to healthy food choices internationally. While New Zealanders were not surveyed, more than 77% of Australians identified the cost of food as the predominant concern in purchasing food for themselves and their families. Sixty-two percent had changed their eating patterns in the past two years and 33% related this to the higher cost of food.

While cost, availability and quality of foods did not differ in a recent survey of Adelaide supermarkets in different socioeconomic areas a lack of affordability for families on low income was established due to the much greater proportion of their income that needed to be spent on food (33% compared with the average of 17%) [19].

Proportion of Disposable Income Spent On Food

The 2010 Household Expenditure Survey (year ending 30 June) [20] found that the three largest components of household expenditure related to housing, food and transport costs. Nationally, 22% of household income was spent on housing (mortgages, rent payments, council rates and energy costs), 18% on food and 13% on transport. Average household spending on food increased \$15 (9.1%) to \$178 per week. Expenditure increased for most of the food subgroups including

restaurant meals and ready-to-eat food. Forty-four percent of food expenditure was spent on grocery items.

Kettings and Sinclair [21] cite that the only Australian benchmark available on an 'acceptable proportion' of disposable income of a low income family to be budgeted on food was published 18 years ago and this recommends one quarter or 20-25% as being appropriate. 'Food stress,' has been described as where people on low incomes are required to spend greater than 30% of their income to be able to eat healthily [22].

Income

The New Zealand Income Survey (NZIS) [23] provides a snap shot of income statistics for people and households revealing that many New Zealanders fall into the low income categories described in this paper. Results from the April to June quarter, 2010, reveal that the medianⁱ weekly income for *each individual* from all sources (including those with no source of income) fell slightly to \$529 weekly from \$538 in the June 2009 quarter [24]. In contrast the Household Economic Survey [20] shows the median annual *household* income derived from all regular sources (wages and salaries, self employment, superannuation, investments, government benefits), was \$63,237 and the average (mean) annual income was \$76,584, slightly lower than 2008/09 [25].

Perry's analysis [26] of the 2008 Household Economic Survey suggests that 20% of New Zealand children (216,000 individuals) in 2008

ⁱ The median is the point where half the people receive more and half receive less. The median is influenced less by high and low values than the average.

were living in relative poverty (based on 60% of the median income after housing costs are deducted). Forty-nine percent of single parent households were judged to live in relative poverty as were 12% of two parent households, 10% in households with one or more full time workers, 61% in households without a full time worker and 69% in 'workless' households.

Minimum Wage

The adult minimum wage applies to all employees aged 16 and over who are not new entrantsⁱⁱ or trainees [27]. The adult minimum wage as of 1 April 2011 was \$13.00 an hour. This equates to \$104 for an eight-hour day or \$520 for a 40-hour week or \$27,040 gross annually.

Data sourced from the New Zealand Income Survey [27] for the June quarter 2010, reveals that a high number of households receive a total income lower than the minimum wage. During this period over 40,000 or 19% of households in the Wellington region (and 21% in New Zealand), received a total gross weekly household income that was less than the minimum wage.

Income Support Benefits

The unemployment rate in the April to June 2011 quarter was steady at 6.5% with 154,000 unemployed [28]. At the end of March 2011, 332,000 working age people (18-64 years) were receiving a main social security benefitⁱⁱⁱ.

ⁱⁱ The New entrants minimum wage applies to employees aged 16 and 17 except for those who have completed 200 hours or three months of employment, whichever is shorter; or who are supervising or training other workers; or who are trainees.

ⁱⁱⁱ Includes Unemployment Benefits, Domestic Purposes Benefits – Sole Parent, Domestic Purposes Benefits – Care of Sick or Infirm, Domestic Purposes Benefits –

In the year ending March 2011, the number of recipients of a main benefit increased by 7,000 or two (2%) percent [29].

Housing Costs

The importance of housing for health is undeniable for both physical protection and psychological wellbeing [30]. For this reason these calculations have taken into account accommodation costs by deducting either private rental [31] or Housing New Zealand accommodation costs [32] prior to calculating the percentage of income available for food costs.

Average weekly household expenditure increased by 6.1% from June 2007 to June 2010 [20]. The largest change was experienced in housing and household utilities (comprising expenditure on rent, mortgage principal repayments, property maintenance and improvements, property rates, and household energy) which increased by \$40 to \$253. Rent was the largest component of this increase. Housing and utilities were the largest household expenditure making up one-quarter of total household net expenditure [20]. For households who paid rent, average weekly household expenditure on rent was \$242 in 2009/10, relatively unchanged from \$244 in 2008/09 but up from \$212 in 2006/07.

New Zealand Government 2010 Budget

From 1 October 2010, Goods and Services Tax (GST) increased from 12.5 to 15% [33]. All food attracts GST although renting of a dwelling is exempt from GST [34]. Income

Women Alone, Sickness Benefits, Sickness Benefits – Hardship, Emergency Maintenance Allowances, Invalid's Benefits, Widow's Benefits and Emergency Benefits

support (for all main benefits) and other payments (including Working for Families tax credits) increased by 2.02% from 1 October 2010, to compensate for this increase [33]. The '2010 Food Costs' paper [35] used these figures to calculate their impact and found in

theory that those on low incomes would not need to spend any greater proportion of their income on food than prior to these changes.

Method

Eight typical family scenarios and income sources were devised in 2011 (Table 1). The same six scenarios were used as in 2010 however two additional scenarios were added in 2011. The new scenarios represent a large family (2 adults and 6 children) on the minimum wage living in Housing NZ accommodation and that of a single male receiving the unemployment benefit.

The net total income was calculated for each family scenario using either the statutory minimum wage (as of 1st April 2011) [27] or income support benefits [36]. An accommodation supplement was included as appropriate [37]. Income received from the minimum wage or benefit was deemed the sole source of income for the purpose of these calculations, with the assumption that only one person in the household is employed.

The cost of eating a 'healthy diet' was calculated for each scenario (based in Wellington), using the 2011 Otago University Food Costs Survey [1]. The 'basic' food costs category has been used in the calculations. This 'basic' category includes most of the

commonly consumed fruits and vegetables and the lowest priced items within each food category.

The percentage of net income required to purchase adequate food to meet the Ministry of Health nutrition guidelines [2] was calculated (prior to rent being paid). The fixed cost of housing was then deducted from the net income to determine the proportion needed for food costs (after housing costs are paid). Private rental costs were based on those provided by Department of Building and Housing [31]. These market rents are those that tenants might be expected to pay within a specified area. Average rental costs within the low socio economic, Porirua/East Waitangirua area were utilised. Other housing costs were based on Housing NZ rentals [32].

Percentages of income needed to purchase a 'basic' healthy meal pattern calculated in 2011 were compared to the figures calculated in similar methods in 2010 (prior to the 2010 budget which made changes to Government Service Tax (GST) and income).

Scenario 1	Minimum Wage (Private Rental)	Single adult male
Scenario 2	Minimum Wage (Single Wage) (Private Rental)	2 adults / adolescent male / 10 year old (2 children)
Scenario 3 NEW	Minimum Wage (Housing NZ Accommodation)	2 adults / adolescent male and female / 10, 5, 4, 1 year old (6 children)
Scenario 4 NEW	Unemployment Benefit (Private Rental)	Single adult male
Scenario 5	Unemployment Benefit (Housing NZ Accommodation)	2 adults / adolescent male / 10 year old (2 children)
Scenario 6	Unemployment Benefit (Private Rental)	2 adults / adolescent male / 10 year old (2 children)
Scenario 7	Domestic Purposes Benefit (Private Rental)	Solo mother / 4 and 5 year old (2 children)
Scenario 8	Sickness Beneficiary (Private Rental)	2 adults / adolescent male and female / 10 and 1 year old (4 children)

Table 1: Typical family scenarios used to base income and food costs.

Results

Hypothetical family scenarios were developed on which to base calculations of income and food costs. Food costs are based on those collected in March 2011 in the Otago University Food Costs Survey [1]. The proportion of income needed for the weekly food costs of a 'basic' healthy diet are calculated.

Scenario 1: Minimum Wage (Private Rental)

Single Male, 20 years

In this income scenario, a single male would receive the minimum wage of \$13.00 hourly. A minimum weekly wage would make this individual eligible to an accommodation supplement. This male would need to spend 14% (before rent), and 19.3% (after rent), of this net income to be able to purchase a diet that meets the Ministry of Health Nutrition Guidelines.

Table 2: Income and Housing Costs

Income and expenses 2011	On 30/09/10 [35]	From April 2011
Yearly gross income based on minimum wage \$13.00 X 40 hours [27] = \$520/week	\$26,520	\$27,040
Income tax [38] \$0 to 14,000 taxed at 10.5% \$14,000 to 48,000 taxed at 17.5% Total Tax	\$1750.00 <u>\$2629.20 +</u> \$4379.20	\$1470 \$2282 \$3752
Net income (after tax) Yearly Weekly	\$22,140.80 \$425.78	\$23,288 \$447.85
Accommodation supplement [37]	\$60.00 +	\$15.00 (Area 3) + [39]
Total net income (including income supplements)		\$462.00
Private rent (single person) [40]	\$189.00 -	\$125.00 - (Average rent, 2 bedroom house, Porirua East, shared)
Total net weekly income (after rent)	\$296.78	\$337.00

Table 2.1: Food Costs of a 'Basic' Balanced Diet in Wellington [41]

Weekly Food costs of a 'basic diet' [1]	On 30/09/10 [35]	From April 2011
Weekly food costs for a 20 year old male in Wellington [1, 9, 41]	\$61.00	\$65.00

Table 2.2 :Percentage of Income Required for a Healthy Diet

Income and food costs 2011	On 30/09/10 [35]	From April 2011
Weekly food costs for a 20 year old male in Wellington [1]	\$61.00	\$65.00
Total net income (prior to rent)	\$485.78	\$462.00
Total net week income (after rent)	\$296.78	\$337.00
Percentage total net income (prior to rent) to purchase a 'basic' balanced diet	12.5%	14.0%
Percentage of total net income (after rent) to purchase a 'basic' balanced diet	20.5%	19.3%

Scenario 2: Minimum Wage (Private Rental)

Male and Female Adult, Adolescent Male, 10 year old

One minimum wage is the sole income available for this family scenario of two adults and two children. This family would need to spend 33.5 % (before rent), and almost 50% (after rent), of their net minimum income to be able to meet the minimum requirements of the Ministry of Health Nutrition Guidelines

Table 3: Income and Housing Costs

Income and expenses 2011	On 30/09/10 [35]	From April 2011
Yearly gross income based on minimum wage \$13.00 X 40 hours [27] = \$520/week	\$26, 520	\$27,040.00
Income tax [38] \$0 to 14,000 taxed at 10.5% \$14,000 to 48.000 taxed at 17.5% Total Tax	\$1750.00 <u>\$2629.20 +</u> \$ 4379.20	\$1470 <u>\$2282</u> \$3752
Net income (after tax) Yearly Weekly	\$22,140.80 \$425.79	\$23,288 \$447.8
Income supplements Tax credits [42] Accommodation supplement [37]	\$206.00 + \$94.00 +	Family tax credit \$149 In work tax credit \$60 <u>Min family tax credit \$19</u> \$228.00+ \$101.00+
Total net income (including income supplements)	\$725.79	\$ 776.80 -
Private rent [31]	\$236.00 -	\$250.00 (2 bedroom house, Porirua East, Average)
Total net weekly income (after rent)	\$489.78	\$526.80

Table 3.1: Food Costs of a 'Basic' Balanced Diet in Wellington

Weekly Food costs of a 'basic diet' 2011 [1]	On 30/09/10 [35]	From April 2011
Male adults	\$61.00	\$65.00
Female adults	\$58.00	\$61.00
Adolescent male	\$77.00	\$82.00
10 year old	\$50.00	\$52.00
Total weekly food cost	\$246.00	\$260.00

Table 3.2: Percentage of Income Required for a Healthy Diet

Income and food costs	On 30/09/10 [35]	2011
Total weekly food cost	\$246.00	\$260.00
Total net income (prior to rent)	\$725.79	\$776.80
Total net income (after rent)	\$ 489.78	\$526.80
Percentage total net income (prior to rent) to purchase a 'basic' balanced diet	33.9 %	33.5%
Percentage of total net income (after rent) required to purchase a 'basic' balanced diet	50.2%	49.4%

Scenario 3: Minimum Wage (Housing NZ Accommodation)

Male and Female Adult, Adolescent Boy and Girl, 10, 5, 4 and 1 year old

One minimum wage is the sole income available for this family scenario of two adults and six children. This family would need to spend 44.4% (before rent), and 64.1% (after rent), of their net minimum income to be able to meet the minimum requirements of the Ministry of Health Nutrition Guidelines. This family would require \$424.00 to purchase a 'healthy diet' leaving them with \$237.15 each week for all remaining needs.

Table 4: Income and Housing Costs

Income and expenses 2011	On 30/09/10 [35]	From April 2011
Yearly gross income based on minimum wage [27] \$13 X 40 hours = \$520 /week	NA	\$27,040
Income tax [38] \$0 to 14,000 taxed at 10.5% \$14,000 to 48.000 taxed at 17.5% Total Tax	NA NA	\$1470.00 \$2282.00 \$3752.00
Net Income (after tax) Yearly Weekly	NA NA	\$23,288.00 \$447.80
Income supplements Tax Credits [42]	NA	Family tax credit \$402.59 + In work tax credit \$105.00 + <u>Min family tax credit</u> <u>\$0.00</u> \$507.59
Total net income (including income supplements)	NA	\$955.39 -
Rent (Housing NZ accommodation)	NA	\$294.24 - (Area 3 [39])
Total net weekly income (after rent)	NA	\$661.15

Table 4.1: Food Costs of a 'Basic' Balanced Diet in Wellington

Weekly Food costs of a 'basic diet' 2011 [1]	On 30/09/10 [35]	From April 2011
Male adult	NA	\$65.00
Female adult	NA	\$61.00
Adolescent boy	NA	\$82.00
Adolescent girl	NA	\$68.00
10 year old	NA	\$52.00
5 year old	NA	\$35.00
4 year old	NA	\$33.00
1 year old	NA	\$28.00
Total weekly food cost	NA	\$424.00

Table 4.2: Percentage of Income Required for a Healthy Diet

Income and Food Costs	On 30/09/10 [35]	From April 2011
Total weekly food cost	NA	\$424.00
Total net income (prior to rent)	NA	\$955.39
Total net income (after rent)	NA	\$661.15
Percentage total net income (prior to rent) to purchase a 'basic' balanced diet	NA	44.4%
Percentage of total net income (after rent) required to purchase a 'basic' balanced diet	NA	64.1%

Scenario 4: Unemployment Benefit (Private Rental)

Male Adult, 20 year old

The Unemployment Benefit is the sole income available for this single male. This individual would need to spend 30.8 % (before rent), and almost 76 % (after rent), of net minimum income to be able to meet the minimum requirements of the Ministry of Health Nutrition Guidelines.

Table 5: Income and Housing Costs

Income and expenses	On 30/09/10 [35]	From April 2011
Income based on Unemployment Benefit [43]		
Net weekly rate after tax for single person (20-25 years)	NA	\$ 157.83
Family tax credits [44]		
Accommodation supplement	NA	\$53.00 +
Total net weekly income including tax credits	NA	\$210.83
Private Rent [40]	NA	\$125.00 - (Average rent, 2 bedroom house, Porirua East, shared)
Total net weekly income (after rent)	NA	\$85.83

Table 5.1: Food costs of a 'Basic' Balanced Diet in Wellington

Weekly Food costs of a 'basic diet' 2011 [1]	On 30/09/10 [35]	From April 2011
Male adult	NA	\$65.00
Total weekly food cost	NA	\$65.00

Table 5.2: Percentage of Income Required for a Healthy Diet

Income and food costs	On 30/09/10 [35]	From April 2011
Total weekly food cost	NA	\$65.00
Total net income from unemployment benefit	NA	\$210.83
Total net income from unemployment benefit minus rent	NA	\$85.83
Percentage total net income (prior to rent) to purchase a 'basic' balanced diet	NA	30.8%
Percentage total net income (after rent) to purchase a 'basic' balanced diet	NA	75.7%

Scenario 5: Unemployment Benefit (Housing NZ Accommodation)

Male and Female Adult, Adolescent Boy, 10 year old

The Unemployment Benefit is the sole income available for this family scenario of an adult male and female, an adolescent boy and a 10 year old child. This family lives in Housing NZ accommodation. They would need to spend 52% (before rent), and 70.5 % (after rent), of their net minimum income to be able to meet the minimum requirements of the Ministry of Health Nutrition Guidelines.

Table 6: Income and Housing Costs

Income and expenses 2011	On 30/09/10 [35]	From April 2011
Income based on Unemployment Benefit [43]		
Net weekly rate for married couple with one or more children	\$323.52	\$335.66
Family tax credits [43]		
(First or only child 16 years or older)	\$86.29 +	\$101.98 +
(Second or subsequent child 0-12 years)	\$59.98 +	\$61.19 +
Total net weekly income including tax credits	\$469.79	\$498.83
Housing NZ rent (25% of net income)	\$100.00 -	\$130.00 -
Total net weekly income (after rent)	\$369.79	\$368.83

Table 6.1: Food Costs of a 'Basic' Balanced Diet in Wellington

Weekly Food costs of a 'basic diet'2011 [1]	On 30/09/10 [35]	From April 2011
Male adult	\$61.00	\$65.00
Female adult	\$58.00	\$61.00
Adolescent male	\$77.00	\$82.00
10 year old	\$50.00	\$52.00
Total weekly food cost	\$246.00	\$260.00

Table 6.2: Percentage of Income Required for a Healthy Diet

Income and food costs	On 30/09/10 [35]	From April 2011
Total weekly food cost	\$246.00	\$260.00
Total net income from unemployment benefit	\$469.79	\$498.83
Total net income from unemployment benefit minus rent	\$369.79	\$368.83
Percentage total net income (prior to rent) to purchase a 'basic' balanced diet	52.4%	52.1%
Percentage total net income (after rent) to purchase a 'basic' balanced diet	66.5%	70.5%

Scenario 6: Unemployment Benefit (Private Accommodation)

Male and Female Adult, Adolescent Male, 10 year old

The Unemployment Benefit is the sole income available for this family scenario of an adult male and female, an adolescent boy and a 10 year old child. This family lives in private rental accommodation. They would need to spend 44% (before rent), and almost 77.5% (after rent), of their net minimum income to be able to meet the minimum requirements of the Ministry of Health Nutrition Guidelines.

Table 7: Income and Housing Costs

Income and expenses	On 30/09/10 [35]	From April 2011
Income based on Unemployment Benefit		
Net weekly rate for married couple with one or more children [45]	\$323.52	\$335.66
Family tax credit [43]		
(First or only child 16 years or older years)	\$86.29 +	\$88.04+
(Second or subsequent child 0-12 years)	\$59.98 +	<u>\$61.19+</u> \$149.00
Accommodation supplement	\$94.00 +	\$101.00+ (area 3) [39]
Total net weekly income including tax credits and accommodation supplement	\$563.79	\$585.89
Private Rent [31]	\$236.00 -	\$250.00 - (2 bedroom house, Porirua East, Average rent)
Total net weekly income (after rent)	\$327.79	\$335.89

Table 7.1: Food costs of a 'Basic' Balanced Diet in Wellington

Weekly Food costs of a 'basic diet' [1]	On 30/09/10 [35]	From April 2011
Male adult	\$61.00	\$65.00
Female adult	\$58.00	\$61.00
Adolescent male	\$77.00	\$82.00
10 year old	\$50.00	\$52.00
Total weekly food cost	\$246.00	\$260.00

Table 7.2: Percentage of Income Required for a Healthy Diet

Income and Food costs	On 30/09/10 [35]	From April 2011
Total weekly food cost	\$246.00	\$260.00
Total net income from unemployment benefit	\$563.99	\$585.89
Total net income from unemployment benefit (after rent)	\$327.76	\$335.89
Percentage total net income (prior to rent) to purchase a 'basic' balanced diet	43.6%	44.4%
Percentage total net income (after rent) to purchase a 'basic' balanced diet	75.8 %	77.4%

Scenario 7: Domestic Purposes Benefit (Private Rent)

Female Adult; Boy, 5 year old, Girl, 4 year old

The Domestic Purposes Benefit is the sole income available for this family scenario of an adult female, and a 4 and 5 year old child. This family lives in private rental accommodation. They would need to spend almost 24% (before rent), and 43.3% (after rent) of their net minimum income to be able to meet the minimum requirements of the Ministry of Health Nutrition Guidelines.

Table 8: Income and Housing Costs

Income and expenses 2011	On 30/09/10 [35]	From April 2011
Income based on Domestic Purposes Benefit [45] Net weekly rate for solo parent	\$278.04	\$288.47
Family tax credit [36]	\$86.29 + \$59.98 +	\$88.04+ <u>\$61.19+</u> \$149.00
Accommodation supplement [37]	\$102.00 +	\$110.00 + (Area 3) [39]
Total net income	\$526.31	\$547.70
Private rent [31]	\$236.00 -	\$250.00 - (2 bedroom house, Porirua East, Average rent)
Total net weekly income (after rent)	\$290.57	\$297.70

Table 8.1: Food costs of a 'Basic' Balanced Diet in Wellington

Weekly Food costs of a 'basic diet' [1]	On 30/09/10 [35]	From April 2011
Female adult	\$58.00	\$61.00
5 year old	\$34.00	\$35.00
4 years old	\$31.00	\$33.00
Total weekly food cost	\$123.00	\$129

Table 8.2: Percentage of Income Required for a Healthy Diet

Income and food costs	On 30/09/10 [35]	From April 2011
Total weekly food cost	\$123.00	\$129.00
Total net income from Domestic Purposes benefit	\$526.31	\$547.70
Total net income from Domestic Purposes benefit (after rent)	\$290.57	\$297.70
Percentage total net income (prior to rent) to purchase a 'basic' balanced diet	23.4%	23.6%
Percentage total net income (after rent) to purchase a 'basic' balanced diet	42.3 %	43.3%

Scenario 8: Sickness Benefit (Private Rent)

Male and Female Adult, Adolescent Boy, Adolescent Girl, 10 year old, 1 year old

The Sickness Benefit is the sole income available for this family scenario of an adult male and female, an adolescent boy and girl and a 10 and 1 year old child. This family lives in Housing NZ accommodation. They would need to spend 48.4% (before rent), and 89% (after rent) of their net minimum income to be able to meet the minimum requirements of the Ministry of Health Nutrition Guidelines. This rental allows for an average rent in a four bedroom house in Porirua East.

Table 9: Income and Housing Costs

Income and expenses	On 30/09/10 [35]	From April 2011
Income based on Sickness Benefit [45]		
Net weekly rate for married, civil union, de facto couple with one or more children	\$323.52	\$335.66
Family tax credit [36]		
First child aged 0-15 years	\$86.29 +	\$88.04+
Second subsequent child, aged 13-15	\$68.40 +	\$69.79+
Subsequent child, 0-12 years	\$59.98 +	\$61.19+
Subsequent child, 0-12 years	\$59.98 +	\$61.19+
		\$280
Accommodation supplement based on renting [46]	\$94.00 +	\$120.00 +
Total net income	\$692.17	\$735.66
Private rent [31]	\$236.00	\$331.00 - (4 bedroom house, Porirua East, Average rent)
Total net weekly income (after rent)	\$456.17	\$404.66

Table 9.1: Food costs of a 'Basic' Balanced Diet in Wellington

Weekly Food costs of a 'basic diet' [1]	On 30/09/10 [35]	From April 2011
Male adult	\$61.00	\$65.00
Female adult	\$58.00	\$61.00
Adolescent male	\$77.00	\$82.00
Adolescent female	\$64.00	\$68.00
10 year old	\$50.00	\$52.00
1 year old	\$27.00	\$28.00
Total weekly food cost	\$337.00	\$356.00

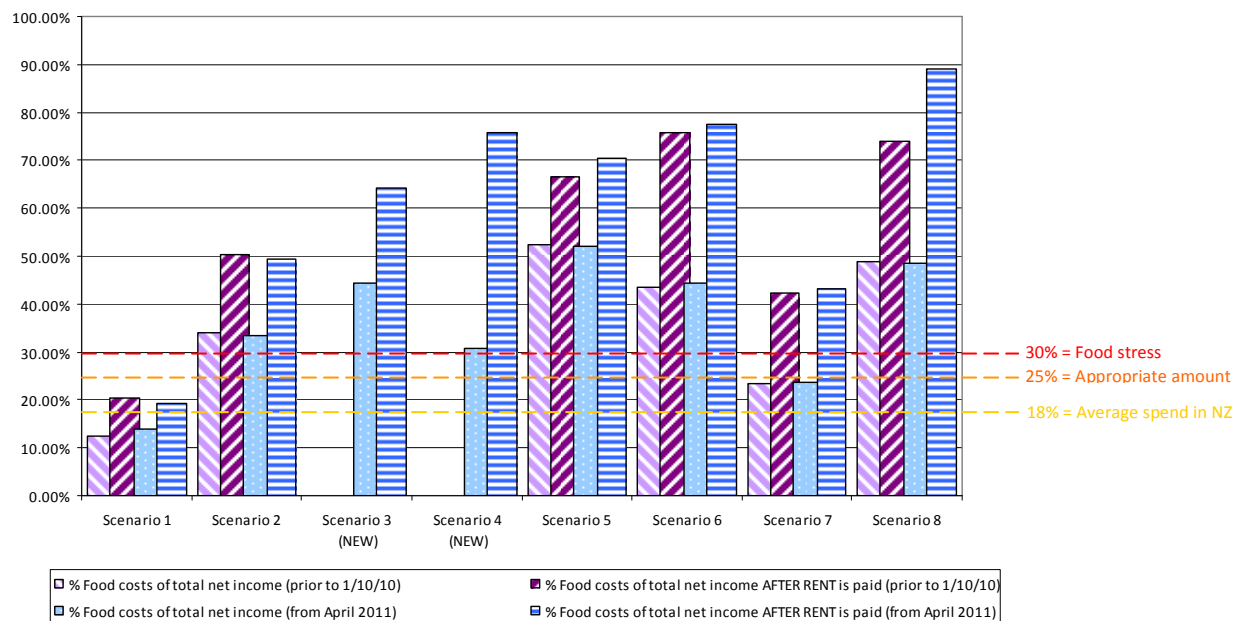
Table 9.2: Percentage of Income Required for a Healthy Diet

Income and food costs	On 30/09/10 [35]	From April 2011
Total weekly food cost	\$337.00	\$356.00
Total net income from Sickness Benefit	\$692.17	\$735.66
Total net income from Sickness Benefit (after rent)	\$456.17	\$404.66
Percentage total net income (prior to rent) to purchase a 'basic' balanced diet	48.7%	48.4%
Percentage total net income (after rent) to purchase a 'basic' balanced diet	73.9 %	89.0%

Income Source	% Food costs of total net income (on 30/09/10) [35]	% Food costs of total net income AFTER RENT (on 30/09/10) [35]	% Food costs of total net income (from April 2011)	% Food costs of total net income AFTER RENT (from April 2011)
Scenario 1	12.5%	20.5%	14%	19.3%
Scenario 2	33.9%	50.2%	33.5%	49.4%
Scenario 3 (NEW)	NA	NA	44.4%	64.1%
Scenario 4 (NEW)	NA	NA	30.8%	75.7%
Scenario 5	52.4%	66.5%	52.1%	70.5%
Scenario 6	43.6%	75.8%	44.4%	77.4%
Scenario 7	23.4%	42.3%	23.6%	43.3%
Scenario 8	48.7%	73.9%	48.4%	89.0%

Table 10: Percentage of food costs of net income before and after rent is paid (based on one adult working a 40 hour week or receiving a benefit allowance)

Graph 1 : Percentage of Income for Basic Healthy Diet



Discussion

While food insecurity and its impact on health are well recognised, this paper quantifies and provides up-to-date evidence of this issue. Results from these 2011 calculations are remarkably similar to those identified in 2010 with all families continuing to need to spend a high percentage of their income to purchase a healthy diet. These results illustrate the lack of affordability of healthy eating for many families on low incomes. The lack of improvement in the financial ease of purchasing a healthy diet supports the need for continuing advocacy on this issue. It is perhaps surprising that these results do not show greater increases in difficulty due to the evidence of rising food prices [47, 48] and increased use of food banks [5].

The percentage of food costs were derived from both the net income and income remaining after essential fixed accommodation costs were deducted. The percentage of food costs derived solely from net income allow for a comparison to be made with standards or benchmarks identified in this paper. Calculations which take into account accommodation highlight the realities faced by many people on low incomes to make ends meet.

Figures from the Otago University Food Costs Survey [1] were collected in March 2011 and so are likely to represent lower food prices than available at the time of this analysis [47, 49]. The food costs used may also be lower than can realistically be achieved for some families as costs have been derived from supermarkets which are not always readily accessed [15]. Expectations are that all meals

will be prepared from raw ingredients at home however New Zealand research suggests that this would rarely be the case in most families today [50]. The 'basic' food costs used in these calculations, while adequate to provide for the food needs of most families, may be insufficient for those with special dietary needs such as for diabetes and heart disease. The more expensive 'moderate' or 'liberal diets' outlined in the Otago University Food Costs Survey [1] may reflect eating patterns more suitable for those with diabetes or heart disease as they allow for leaner, higher fibre and more varied needs. Low income families with special dietary needs will be further financially disadvantaged unless extra funds are available through sources such as the Work and income Disability Allowance [51].

Private rental costs this year were derived from Department of Building and Housing average rents [52] and not, as in 2010, from Work and Income average regional rents [40]. This makes it difficult to directly compare 2010 and 2011 results (after rent). The jump in some percentages, identified in this 2011 paper, is likely to be related to the use of these different, and probably more realistic, rents being used. These rents anecdotally however remain lower than available in some Wellington communities especially for large families. This analysis does not take into consideration any other costs such as personal hygiene products, household and laundry cleaners, prescriptions, costs associated with physical activity, personal health and dental needs, clothing and footwear, transport, telephones and heating.

The minimum wage was sufficient to cover the cost of a 'basic' healthy diet of a single male (Scenario 1) with 14 % of net income and over 19% of income after rent, being needed to cover these costs. Rent was based on a shared house at \$125.00 per person each week. A single male on the unemployment benefit (Scenario 4) will be much worse off than if he were working, needing to spend 30.8% of his net income or almost 76% of his income after a rent of \$125 to be able to purchase a healthy diet. This would leave this beneficiary with just \$20 each week to purchase all other expenses including personal and household cleaning products, power, transportation and clothing.

A larger family with six children living on one minimum wage (Scenario 3) but in Housing NZ accommodation [32] would spend 44% of net income on food prior to rent and 64% after rent. This family would have \$237.00 remaining each week for all other expenses (not quite \$30.00 for each person).

Having a job does not prevent food insecurity. A family of four (Scenario 2) receiving the minimum wage needed to spend almost 34% of net income or 50% after deducting rent to purchase a healthy diet. This was very similar to figures calculated in 2010.

The family scenarios which receive their sole source of income from the unemployment, domestic purposes or sickness benefit were worse off than those employed. A family receiving the Unemployment Benefit and living in Housing New Zealand accommodation (Scenario 5) would need to spend 52.4% of net income and about 70% after accommodation costs to purchase a healthy diet.

A family of four in similar circumstances (on the Unemployment Benefit) but renting a house (Scenario 6) at \$250.00 a week (based on Department of Building and Housing Average Rents in Porirua East) [52] would need to spend over 44% of net income and 77.4% after rental costs. A sole beneficiary on the Domestic Purposes Benefit with two young children (Scenario 7) needed again over 23% of net income or 43.3% after rent to purchase food to meet a healthy eating pattern. The use of younger children in this scenario has helped minimise these percentages. Once food costs for older children are substituted these percentages increase considerably.

Almost 49% of net income or 89% after rent is required for a Sickness Beneficiary to purchase food to meet the needs of a family with two adults and four children (Scenario 8). This calculation allowed for an average rental for a four bedroom house in Porirua East at \$331.00. Food expenses would be \$356.00 if a healthy 'basic' diet were to be consumed. A disposable income of only \$48.60 each week (or \$8.00 per person) would remain after rent and food for this family of six (four children), to purchase all other needs.

Families on low incomes and benefits are required to spend between 23.6% (Scenario 7) and 52.1% (Scenario 5) of their net income to purchase a healthy 'basic' diet. This is a very high percentage compared to both the national average of 18% [20] and an Australian benchmark of 20-25% [21] which has been identified as a reasonable amount of disposable income to be budgeted on food.

This 2011 report finds the purchasing power of low income families is similar to that revealed in the 2010 food costs paper despite the

increasing GST since 2010 [33]. The percentages, however, remain much higher than desirable and will continue to contribute to the 'stress' in purchasing a 'healthy' diet [9]. Families earning low incomes and receiving benefits need to spend a high proportion of their income to purchase a healthy diet and are likely to have little option but to compromise their food choices to be able to provide for the many competing expenses of daily life. The knowledge that poor food choices can stem from a lack of money raises concern about the feasibility, futility and ethics of promoting healthy diets to such groups.

This report has once again highlighted the extent of the financial difficulties faced by people on low incomes and, in particular, the difficulties and inequity in purchasing basic healthy food to meet essential dietary needs. Improving food choice, obesity and nutrition related disease risk, especially amongst low socioeconomic groups, will require much more than developing personal budgeting, cooking and nutrition skills. An collaborative approach between varying sectors is needed to carefully consider the potential solutions to improving access to healthy affordable foods for vulnerable groups such as pricing strategies [14], taxation, subsidies and community action [53] [9].

Recommendations

Regional Public Health recommends continuing with:

- monitoring the percentage of low incomes required to purchase a 'basic' healthy eating pattern
- working with stakeholders to familiarise them with issues of food insecurity
- creating public debate to raise understanding of this issue
- working collaboratively to find 'solutions' to increasing the availability of affordable healthy foods in vulnerable communities to enable all people to eat a healthy diet
- developing a New Zealand recognised standard or benchmark for assessing the percentage of low incomes appropriate to spend on food.

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