

Summary of 2010 Healthy Food Basket data across various Local Government Areas in Victoria

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Background

Access to an affordable and nutritious food supply has been recognised as an important determinant of people's nutrition and thus health outcomes(1). Food security is defined as regular access to safe, nutritionally adequate, culturally acceptable food from non-emergency sources(2). The cost and location of healthy food sources are only two elements of assessment of food security.

This report is the first to compare and analyse a larger collection of Victorian Healthy Food Basket data across various Local Government Areas in Victoria. This report includes details of surveys conducted across eight Local Government Areas during 2010.

Victorian Healthy Food Basket

The Victorian Healthy Food Basket (VHFB)(3) is a tool that assesses the affordability of a healthy diet over time. The VHFB provides both healthy food choices and foods that represent typical purchases of Victorians. The basket provides enough food to meet the nutritional needs of 4 different family types for a fortnight. These reference families include:

<i>Typical Family</i>	(44 year old male & female, 18 year old female & 8 year old male)
<i>Single Parent Family</i>	(44 year old female, 18 year old female & 8 year old male)
<i>Elderly Pensioner</i>	(71 year old female)
<i>Single Adult</i>	(adult male > 31 years)

The VHFB assesses affordability for each family type based on estimates of current government assistance as outlined in Table 1. The government assistance estimates below were calculated as at July 2010.

Table 1. VHFB family types and the estimated government assistance received as at July 2010

Family Type	Family composition used for government assistance estimate	Government assistance income per fortnight (\$)
Typical Family	Two unemployed parents with two fully dependent children (18 yr old full-time student and 8 yr old)	1282.86
Single Parent Family	Unemployed mother with two fully dependent children (18 yr old full-time student and 8 yr old)	999.20
Single Adult	Unemployed adult	462.80
Elderly Pensioner	Single pension	644.20

Methods of data collection

Cost of foods that make up the VHFB was collected from 110 stores across eight Local Government Areas (LGA) in Victoria during April to August 2010. Data was collected by Nutrition and Dietetics students of Monash University and staff of local Community Health Centres in the areas. The stores surveyed were classified into two store types for analysis. Store type 1 was a chain store (Coles, Woolworths, Safeway) and store type 2 was an independent store (IGA, Foodworks, other independent). The number of stores included in each LGA is summarised in Table 2.

Table 2. Number of stores included in VHFB dataset from various Local Government Areas across Victoria

Local Government Area	Number of chain stores surveyed	Number of independent stores surveyed	Total Number of stores surveyed
Latrobe City Council	8	7	15
Baw Baw Shire Council	4	4	8
Frankston City Council	9	6	15
Mornington Peninsula Shire	15	14	29
City of Boroondara	12	4	16
Hume City Council	7	7	14
Melton Shire Council	5	4	9
Moorabool Shire Council	1	3	4

Methods of statistical analysis

Spearman's rank-order correlation was used to assess relationships between cost and percentage of income, and LGA and Socio-Economic Index for Areas (SEIFA). Kruskal-Wallis test was used to see if there was a difference between the LGAs, and also between family types. Mann-Whitney U tests with a Bonferroni adjustment were performed on each pair of family type comparisons and LGA comparisons.

Results

The median cost and percentage of income required to purchase a VHFB for the four family types across various LGAs are shown in Tables 3 and 4.

Table 3. Median cost of a VHFB for various family types across different Local Government Areas in Victoria

Median cost of a VHFB per fortnight (\$)				
Local Government Area	Typical Family	Single Parent Family	Single Adult	Elderly
Frankston City Council	400.65	273.24	127.46	96.20
Baw Baw Shire Council	406.37	277.80	128.80	96.92
Latrobe City Council	411.03	281.44	127.03	97.82
City of Boroondara	411.44	283.63	128.08	98.80
Melton Shire Council	413.31	283.18	129.96	98.24
Hume City Council	418.00	283.12	133.73	100.34
Moorabool Shire Council	425.36	290.76	134.66	101.89
Mornington Peninsula Shire	429.60	292.97	137.57	103.38

Table 4. Median percentage of income required to purchase a VHFB for various family types across different Local Government Areas in Victoria

Percentage of income required to purchase a VHFB				
Local Government Area	Typical Family	Single Parent Family	Single Adult	Elderly
Frankston City Council	31%	27%	28%	15%
Baw Baw Shire Council	32%	28%	28%	15%
Latrobe City Council	32%	28%	27%	15%
City of Boroondara	32%	28%	28%	15%
Melton Shire Council	32%	28%	28%	15%
Hume City Council	33%	28%	29%	16%
Moorabool Shire Council	33%	29%	29%	16%
Mornington Peninsula Shire	33%	29%	30%	16%

The overall median of the eight LGAs VHFB cost for a Typical Family was \$417.24 (33% of income). The median cost for a Typical Family significantly differs across the eight LGAs, $\chi^2 (7, N=110) = 19.749, p=0.006$. The most expensive basket for a Typical Family was Mornington Peninsula Shire (\$429.60) while the least expensive was Frankston City Council (\$400.65). This is a cost difference of almost thirty dollars (\$28.95). A Typical Family will spend significantly more on a basket in Mornington Peninsula Shire compared

to Frankston City Council ($U=70, Z= -3.652, p=0.000$) and City of Boroondara ($U=94, Z= -3.272, p=0.001$). No other significant differences exist between any other LGA pair comparisons.

Overall a Typical Family is required to spend a significantly greater percentage of income on the purchase of a VHFB compared to all other family types ($p=0.000$). Conversely the Elderly Pensioner will spend significantly less percentage income on a basket compared to all other family types ($p=0.000$). There is no significant difference in the percentage of income spent by a Single Parent Family compared to a Single Adult ($p=0.734$).

Table 5. Local Government Area Index of Relative Socio-Economic Disadvantage and median VHFB cost for the Typical Family

Local Government Area	LGA Index of Relative Socio-Economic Disadvantage	Median basket cost for Typical Family
Latrobe City Council	951	411.03
Hume City Council	965	418.00
Frankston City Council	997	400.65
Baw Baw Shire Council	1001	406.37
Melton Shire Council	1010	413.31
Moorabool Shire Council	1012	425.36
Mornington Peninsula Shire	1026	429.60
City of Boroondara	1104	411.44

Key:
■ Least disadvantaged
Least expensive
SEIFA: 1054 - 1104
COST: \$401 - \$410
■ Intermediate disadvantage
Intermediate expense
SEIFA: 1003 - 1053
COST: \$411 - \$420
■ Most disadvantaged
Most expensive
SEIFA: 951 - 1002
COST: \$421 - \$430

Table 5 describes the cost of a VHFB for the Typical Family and the Socio-Economic Index for Areas (SEIFA) for each of the eight LGAs. No relationship was found between LGA SEIFA and cost of a basket ($p=0.318$). When each LGA was examined separately, there was a significant, weak correlation between Typical Family basket cost and SEIFA by postcode in the Mornington Peninsula Shire ($r=0.422, p=0.022$). Furthermore analysis by LGA including all family type data showed a weak relationship between percentage of income and SEIFA by postcode in Mornington Peninsula Shire ($r=0.217, p=0.019$) and also in Baw Baw Shire Council ($r=0.356, p=0.045$).

Figure 1 highlights the geographical location of the various LGAs and the equivalent median basket costs for a Typical Family. There was no relationship between the cost of a basket and location of LGA ($r = -0.098, (p=0.325)$).

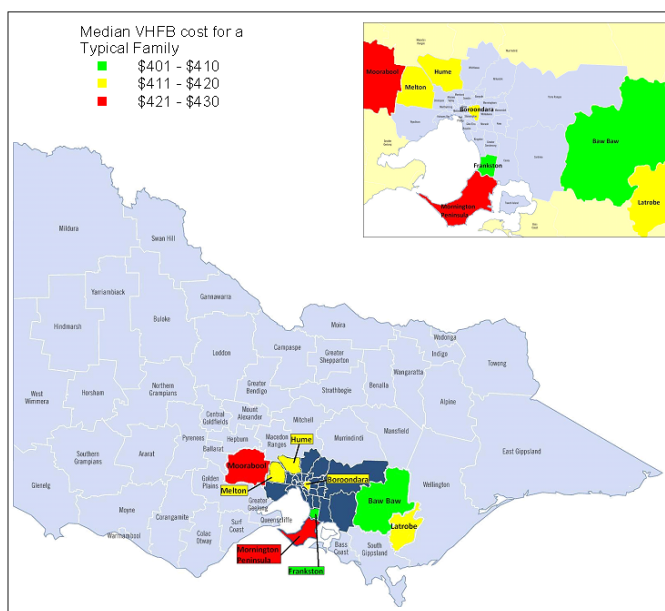


Figure 1. Map of Victoria and median VHFB cost for the Typical Family in 8 Local Government Areas

A significant relationship was also found between Typical Family basket cost and store type, in that large chain supermarkets (store type 1) were less cost than independent stores (store type 2) ($r=0.523$, $p=0.000$) ($U=586$, $Z= -5.464$, $p=0.000$).

Discussion

The results of this report provide information into food costs across 8 different Local Government Areas in Victoria. This data shows that healthy food continues to be unaffordable for some sub-groups in the population.

The present findings are consistent with previous studies that also show substantial variation in the cost of the same basket of food in different stores(4, 5). It was found that the basket cost and percentage of income required was significantly less at Chain stores compared to Independent stores. This may reflect greater buying power in larger chain stores(6). However there remains unexplained variation in food cost.

The current results suggest that the Typical Family will spend a greater percentage of their income on healthy food compared to all other family types. The Typical Family needs to spend up to 33% of their income in order to consume a nutritionally adequate diet. Other work has shown that an unemployed family spends approximately 30% of their welfare income on food(7), which is much higher than that of the average Australian (17%)(8). Taking into consideration indispensable household expenses, it has been proposed that food should account for a maximum of 30% of income in order to remain affordable(9).

This current data is not without limitations. The sample of Victorian LGAs represented only 11% of LGAs across Victoria. Some stores were excluded from the analysis as they did not meet all of the VHFB criteria or were unable to be accessed on the day of the survey. The data was cross-sectional in nature. Longitudinal data would provide a more robust picture of food cost over time. Previous work has described that the cost of food has increased over time(10). The restriction of the VHFB to not include generic products in stores such as Aldi means that the costs reported may not be the cheapest basket available. A further limitation of the

study is that the basket prices were collected over a five month period throughout the autumn/winter months which may have resulted in the prices of fresh fruit and vegetables being influenced by seasonal variation. There is limited evidence on how seasons affect the price of fruit and vegetables in the VHFB.

This work highlights that the cost of food relative to income for low income groups continues to be of concern and that some areas in Victoria have higher food prices. There is a need to undertake further state-wide VHFB research across all LGAs over time. Monitoring the cost of healthy food is an important strategy towards addressing food insecurity in Victoria.

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