

Summary Results Brief

Cost and affordability of healthy, equitable and more sustainable diets, and store food environments, in the APY Lands

May 2021

Why are these issues important?

Poor diet is a leading cause of preventable disease and premature death. Traditionally, Anangu ate bush foods and were healthy and strong, but now there are too many unhealthy food and drinks on the APY Lands. So Anangu are at increased risk of obesity and diet-related diseases such as type 2 diabetes, cardiovascular disease, some cancers and renal disease, which contribute to a high number of premature deaths.¹

Many factors affect dietary intake in remote Aboriginal communities, including low incomes, high transport costs, housing issues, and accessibility of healthy food and drinks.¹ Peoples' food choices are influenced by factors like the availability, placement, promotion and prices of healthy and unhealthy food and drinks in the stores.

This report presents the results of surveys conducted in stores in May 2021 to explore factors that influence food and drink choice in remote communities on the APY Lands. This information can assist communities, health and store committees, managers and workers to identify what can be improved to help people choose healthier diets.

How do we assess factors influencing food choice?

We calculated the cost, relative cost and affordability of current (unhealthy) diets and recommended (healthy, equitable and sustainable) diets, for a family of two adults and two children, using the Aboriginal and Torres Strait Islander Healthy Diets ASAP (Australian Standardised Affordability and Pricing) protocol.^{4,5} Food prices were collected in eight communities on the APY Lands and, for comparison, in a remote community and a roadhouse outside the APY Lands, and in Alice Springs.

The recommended diet contains healthy food and drinks that are most similar to traditional foods, in line with the Australian Dietary Guidelines.³ The current diet includes many 'discretionary' items – those food and drinks that are not a necessary part of a healthy diet and are high in added sugars, saturated fat, salt and/or alcohol.⁴ The recommended diet contains slightly less energy than the current diet, to help control excess weight gain.⁴

Household incomes were calculated based on the Aboriginal and Torres Strait Islander Healthy Diets ASAP (Australian Standardised Affordability and Pricing) protocol⁵, using national data from government agencies including the Australian Bureau of Statistics and Services Australia. When healthy diets cost more than 25% of household income, families suffer 'food stress',⁶ and healthy diets are not affordable when they cost more than 30% of household income.⁴

In each of the stores we also noted the availability, placement (location in the store) and promotion of healthy and unhealthy food and drinks using the Food Index for Remote Stores (FIRST) survey tool. This includes checking the availability and placement of various foods and drinks – including fruit and vegetables, sugar-sweetened drinks, baby foods and takeaway foods – as well as whether there are healthy or unhealthy foods at the checkouts, and the types of signage and posters in the stores.

To assess the changing costs of some food and drinks over time, we also collected prices using the ‘market basket’ survey tool, which has been used on the APY Lands since 2008. These results are included at Appendix 1.

In this report the stores and communities are coded to maintain anonymity.

Findings

Diet costs

The Healthy Diets ASAP approach calculates the price of current and healthy diets for a family of four in each community. The results allow us to:

- compare the cost of a healthy diet with that of the current diet in each place;
- compare the cost of a healthy diet and the current diet in different places;
- monitor changes over time.

Figure 1 shows the relative costs of the current (unhealthy) and recommended (healthy) diets for a family in the APY Lands (on average, and for each community surveyed) and in the comparison communities. More detailed results are provided in Appendix 2.

On the APY Lands, on average, the current (unhealthy) diet cost \$1,135 per fortnight per family. A healthy diet would cost \$847 per fortnight. The cost of the recommended (healthy) diet is on average 75% of the cost of the current (unhealthy) diet – so if families buy the recommended diet they would save on average \$288 per fortnight, and be healthier too!

A healthy diet cost less than the current (unhealthy) diet in all communities. The difference between the costs of current and recommended diets was greatest in the Mai Wiru stores on the APY Lands (71%), likely due to their store nutrition policies and pricing strategies.

Both diets were more expensive on the APY lands than in Alice Springs: the current (unhealthy) diet on average cost 13% (\$142) more per fortnight, while the recommended (healthy) diet was only 7% (\$58) more. However, as household incomes are significantly lower for families living on the APY Lands, the healthy diet would still be unaffordable.

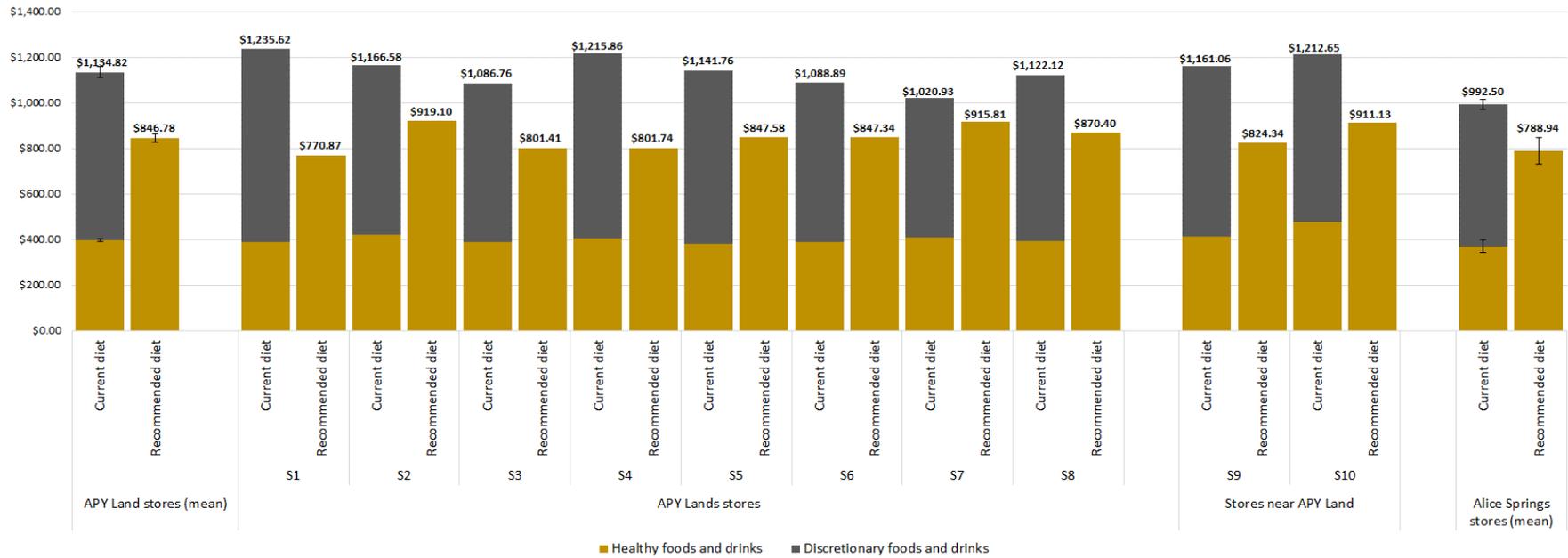


Figure 1: Total costs of current (unhealthy) and recommended (healthy) diets for the reference household per fortnight, May 2021

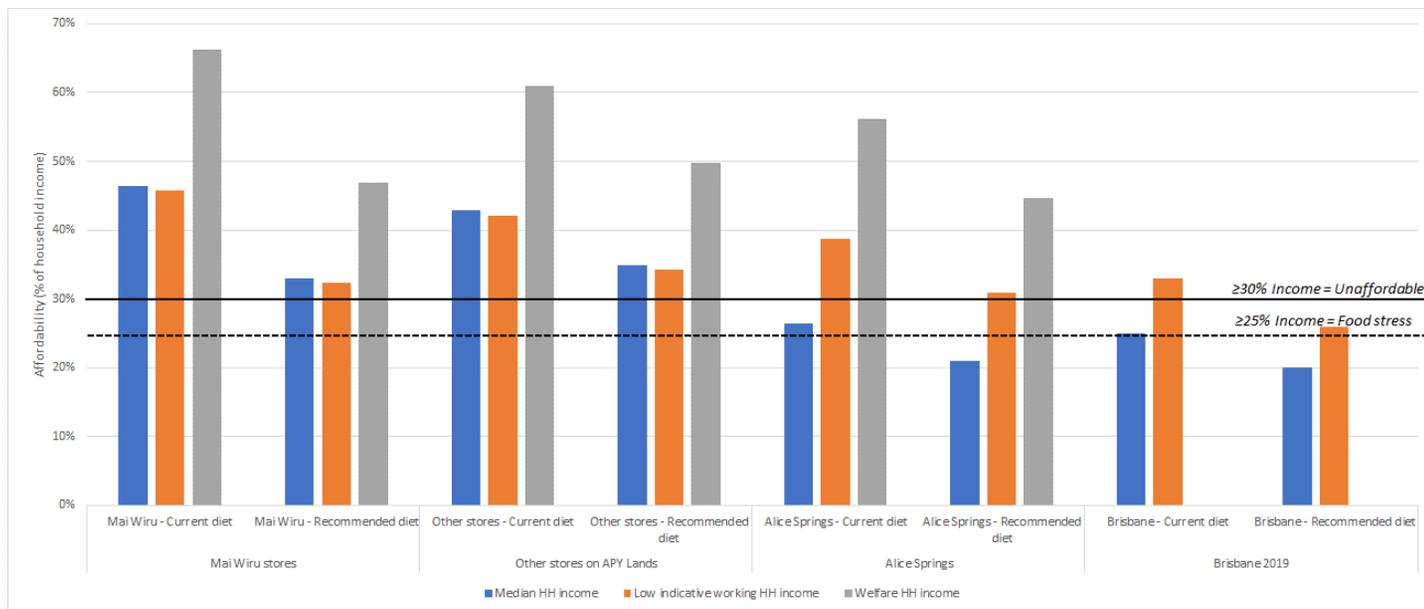


Figure 2: Affordability of current (unhealthy) and recommended (healthy) diets for households on the APY Lands, Alice Springs and Brisbane

Food stress and affordability

The median household income (that is, the middle of the range of incomes) per fortnight on the APY Lands was \$2,516. This is 33% (\$1,236) less than the median household income in Alice Springs, and 23% (\$732) less than in Greater Brisbane. The low indicative working household income on the APY Lands was \$2,559 per fortnight, and the income of households on welfare only was \$1,767 per fortnight.

To purchase the recommended diet, Anangu families on median household income would need to spend 34% of their income, those on low indicative income would need to spend 33% of their income, and those on welfare only would need to spend nearly half (49%) of their income. Therefore, healthy diets are not affordable for most families in the APY Lands.

For families with median income, indicative low income, and welfare income only, the recommended (healthy) diet would be 61%, 94% and 93% less affordable respectively in the APY Lands than in Alice Springs (Figure 2).

Detailed household income and diet affordability data are included in Appendix 3.

Store food environments

The total scores for product availability, placement (location in the store) and promotion in the nine remote community stores surveyed in Central Australia are shown in Table 1. Detailed survey results are included at Appendix 4.

Table 1: Total scores for availability, placement and promotion of food and drinks in remote community stores in May 2021

	APY Land stores								Com- parison store
	S1	S2	S3	S4	S5	S6	S7	S8	S9
Availability	81%	82%	80%	84%	78%	62%	70%	59%	87%
Placement	68%	92%	86%	86%	92%	28%	50%	33%	81%
Promotion	73%	62%	63%	63%	60%	40%	28%	33%	63%

Colour coding (scoring of survey results)
Green = Good (86%-100%)
Amber = Could be improved (70-85%)
Red = Poor (0-69%)

Changes over time

Since the previous surveys in 2019, the availability of healthy foods and drinks reduced in all stores. Product placement had improved in some stores (s3, s4), stayed the same in two (s2, s5), but was worse in others (s1, s6, s7, s9). Having greatly improved from 2018 to 2019, scores for product promotion had dropped significantly since the last survey, with overall results being poor in nearly all stores (except s1).

Key findings and opportunities for improvement

Detailed data in Appendix 4 shows that in terms of **availability**, most stores stocked a good range of healthy food and drinks, including excellent supply of fresh fruit and vegetables and wholegrain cereals. To improve their score, most stores need to increase the number of types of milk, cheese and yoghurt; stock only S26 from birth baby formula (no other types); increase the number of savoury (meat and vegetable based) 6m+ baby foods; and provide healthier takeaway options, such as sandwiches. Deep fryers are not recommended. Most stores also continue to stock sugary drinks larger than 600mL and fruit juice more than 250mL.

The main area for improvement continues to be **placement** of sugary drinks, recommended to be at the rear of the store or in a reduced access fridge. Few stores placed unhealthy choices (such as lollies, chocolates, chips/crisps) at the point of sale; but only three stores placed healthy snacks where they were easily accessible at the checkouts.

Only one store had price promotions and advertising of unhealthy choices. However, there is much room for improvement in **promotion** across the stores; for example by using shelf talkers and posters promoting healthy food and drinks and supporting practical promotion of healthy food choices in store (e.g. taste tests, cooking demonstrations). Many stores stocked bottled water for \$1 and fruit and vegetables at cost price or low margins to improve affordability of healthy choices.

What more can be done to improve affordability and availability of healthy diets in the APY Lands?

This research provides more information to support urgent policy actions to help build on Anangu expert knowledge about food and shift diets towards the relevant recommendations of the Australian Dietary Guidelines³ which are:

- Enjoy traditional foods whenever possible, and
- Choose store foods which are most like traditional foods.

While many stores are cross-subsidising the price of healthy foods and drinks on the APY Lands, survey findings show that more needs to be done in the APY Lands to improve affordability of healthy foods and drinks, to help improve nutrition and health outcomes. This could be achieved through subsidies to families, funding of community stores as essential services, and subsidising freight of healthy foods.⁸

Store surveys should be conducted regularly and results reported to communities help inform policies and programs. Community-led, multi-strategy programs involving both supply (availability, affordability, accessibility and acceptability) of healthy food and drinks, and demand-side measures, such as advertising, promotion and food-literacy programs building on traditional knowledge, can improve nutrition in Indigenous communities⁸ and should be implemented across all communities in the APY Lands.

Acknowledgements

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Further information about this study and findings is available from Professor Amanda Lee: Amanda.Lee@uq.edu.au

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Appendixes

Appendix 1: Food and drink prices over time

The cost of food and drinks in remote Aboriginal and Torres Strait Islander communities was monitored previously by pricing a single basket of ‘healthier’ food items and the FARA Food Affordability Calculator for Remote Communities. This tool was based on one of the Northern Territory Market Basket Survey data collection forms. However, the market basket contents are not consistent with current dietary guidelines (as it includes items like sugar that are not recommended) and does not accurately reflect what most people are eating (according to the national health survey) – which are among reasons why the Healthy Diets ASAP method was developed and is now used.

Prices were collected using the FARA tool to enable time-series comparison, to show the changing and variable costs of some food and drinks over a long period of time (Figure 3).

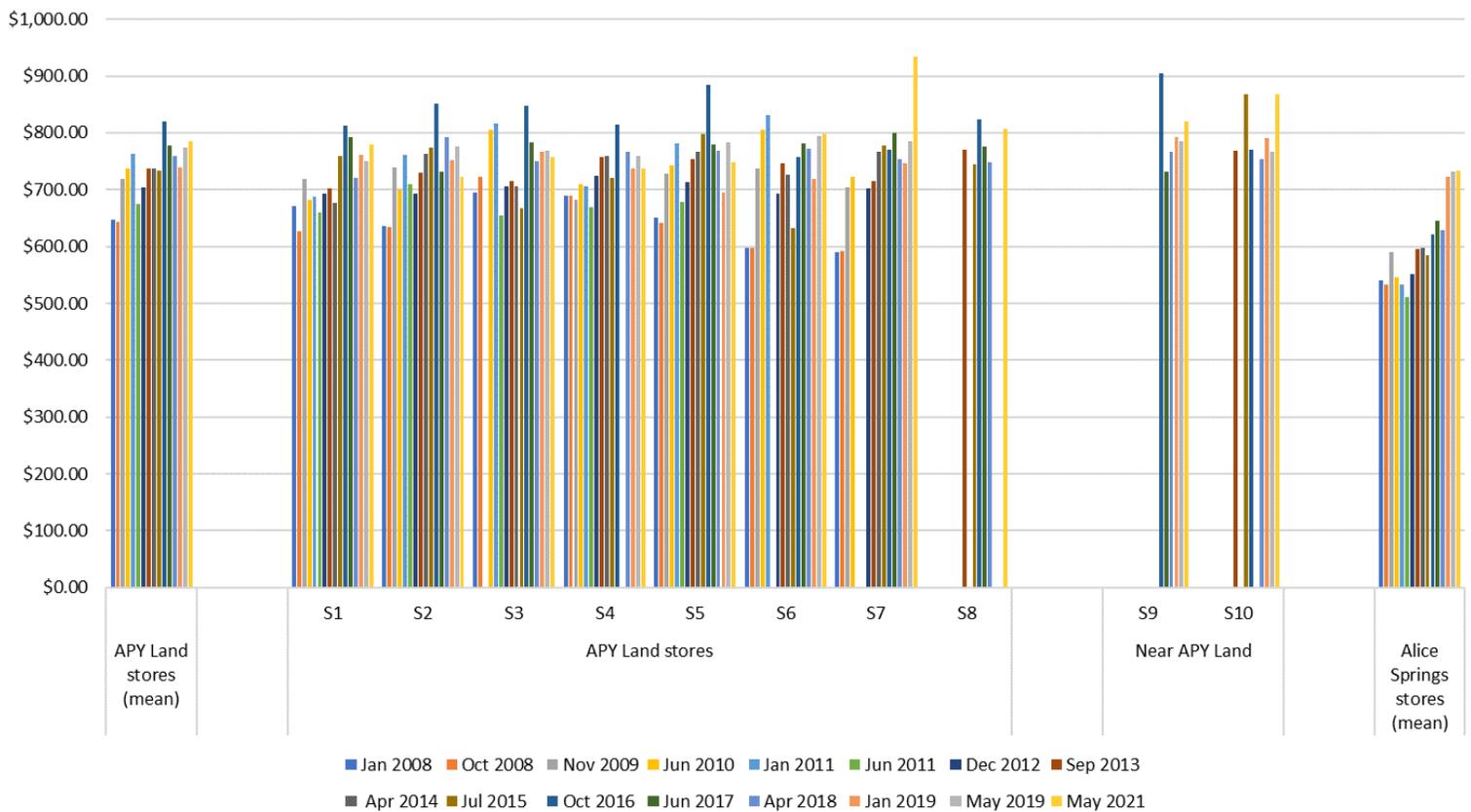


Figure 3: Market basket price time-series data 2008-2021

Appendix 2: Diet costs

Table 2 shows the detailed diet costs in the APY Lands (means of Mai Wiru stores and means of other stores) and Alice Springs, for the reference household of two adults and two children, per fortnight.

Table 2: Diet costs in the APY Lands and in Alice Springs, for a reference household of two adults and two children, per fortnight

Food/food groups	APY Lands (Mai Wiru stores)				APY Lands (other stores)				Alice Springs (mean)			
	Current diet		Recommended diet		Current diet		Recommended diet		Current diet		Recommended diet	
	Mean cost (A\$)	Proportion of total cost (%)	Mean cost (A\$)	Proportion of total cost (%)	Mean cost (A\$)	Proportion of total cost (%)	Mean cost (A\$)	Proportion of total cost (%)	Mean cost (A\$)	Proportion of total cost (%)	Mean cost (A\$)	Proportion of total cost (%)
Water, bottled	\$8.83	1%	\$8.83	1%	\$13.24	1%	\$13.24	2%	\$16.65	2%	\$16.65	2%
Fruit	\$66.38	6%	\$109.70	13%	\$75.01	7%	\$130.91	15%	\$64.98	7%	\$136.08	17%
Vegetables (& legumes)	\$41.49	4%	\$126.91	15%	\$47.10	4%	\$158.86	18%	\$44.94	5%	\$142.01	18%
Grain (cereal) foods	\$61.53	5%	\$156.07	19%	\$67.79	6%	\$176.33	20%	\$50.52	5%	\$134.03	17%
Lean meats, poultry, fish, eggs, nuts, seeds, and alternatives	\$136.93	12%	\$248.96	30%	\$114.30	11%	\$211.76	24%	\$132.43	13%	\$220.51	28%
Milk, yoghurt, cheese & alternatives	\$67.74	6%	\$165.87	20%	\$67.35	6%	\$173.74	20%	\$52.10	5%	\$128.67	16%
Unsaturated oils and spreads	\$1.41	0%	\$11.81	1%	\$1.57	0%	\$13.00	1%	\$1.19	0%	\$10.99	1%
Artificially sweetened beverages	\$12.41	1%	-	-	\$10.87	1%	-	-	\$7.72	1%	-	-
Sugar sweetened beverages	\$149.62	13%	-	-	\$90.52	8%	-	-	\$62.17	6%	-	-
Takeaway foods	\$198.70	17%	-	-	\$185.86	17%	-	-	\$191.27	19%	-	-
Alcoholic beverages	\$105.40	9%	-	-	\$105.40	10%	-	-	\$105.40	11%	-	-
All other discretionary choices	\$318.88	27%	-	-	\$298.29	28%	-	-	\$263.12	27%	-	-
Total diet	\$1,169.32	100%	\$828.14	100%	\$1,077.31	100%	\$877.85	100%	\$992.50	100%	\$788.94	100%
All healthy foods and drinks	\$396.72	34%	\$828.14	100%	\$397.24	37%	\$877.85	100%	\$621.97	63%	\$788.94	100%
All discretionary foods and drinks	\$772.60	66%	-	-	\$680.07	63%	-	-	\$370.53	37%	-	-

Appendix 3: Household income and diet affordability data

Household incomes were calculated based on the Aboriginal and Torres Strait Islander Healthy Diets ASAP (Australian Standardised Affordability and Pricing) protocol.⁵ Healthy diets are not affordable when they cost more than 30% of household income.⁴

Table 3: Detailed diet affordability in the APY Lands and in Alice Springs (for a reference household of two adults and two children)

Household income type	APY LANDS					ALICE SPRINGS		
	Mai Wiru stores		Other stores			Income per fortnight (\$)	Healthy diet affordability (% of income)	Current diet affordability (% of income)
	Income per fortnight (\$)	Healthy diet affordability (% of income)	Current diet affordability (% of income)	Healthy diet affordability (% of income)	Current diet affordability (% of income)			
Median gross	2,516.20	33%	46%	35%	45%	3,752.42	21%	26%
Indicative low disposable	2,558.90	32%	46%	34%	44%	2,558.90	31%	39%
Welfare only	1,766.68	47%	66%	50%	64%	1,766.68	45%	56%

Appendix 4: Product availability, placement and promotion (detailed results of FIRST surveys)

Availability, placement (location in the store) and promotion of both healthy and unhealthy food and drinks were assessed in nine stores in Central Australia in May 2021 using the Food Index for Remote Stores (FIRST) survey tool.

Table 4: Availability of healthy and unhealthy food and drinks in remote community stores, May 2021

AVAILABILITY OF HEALTHY FOOD AND DRINKS	APY Land stores								Com- parison store
	S1	S2	S3	S4	S5	S6	S7	S8	S9
Weekly delivery of fresh, healthy food	100%	100%	100%	100%	100%	100%	100%	0%	100%
Number of types of vegetables (at least 15)	100%	100%	100%	73%	100%	100%	100%	100%	100%
Number of types of frozen/canned veg (at least 10)	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of types of fruit (at least 8)	100%	100%	100%	88%	100%	100%	100%	100%	100%
Number of types of full cream and reduced fat milk (fresh, UHT, dried)	50%	83%	67%	67%	67%	67%	83%	50%	67%
Number of types of full fat and reduced fat cheese and yoghurt	75%	25%	25%	25%	75%	75%	50%	25%	75%
Wholemeal/multigrain and "high fibre" white bread	100%	100%	100%	100%	100%	50%	100%	0%	100%
Number of types of wholegrain cereals e.g. Weetbix, rolled oats, quick oats, untoasted muesli, All Bran, Sultana Bran (at least 3)	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of types of lean red meat e.g. beef, veal, lamb, pork, kangaroo, mince (at least 5)	100%	100%	100%	100%	100%	100%	100%	100%	100%
At least one type of chicken, low fat tinned meat, lean (<10% fat) sausages, unsalted nuts; at least two types of tinned beans, tinned fish; eggs	100%	100%	100%	100%	100%	100%	100%	100%	100%
At least one type of monounsaturated or polyunsaturated oil and spread e.g. olive, canola, sunflower, safflower, peanut	100%	100%	100%	100%	100%	100%	100%	100%	100%
At least one type of iron enriched baby cereal 6m+, and at least 2 types each of meat and veg based baby foods 6m+, and 8m+; both jars and pouches	100%	100%	100%	83%	67%	67%	67%	100%	100%
S26 from birth baby formula and no other (un-recommended) infant formula	50%	100%	50%	100%	50%	50%	0%	50%	100%
At least 50% of all drinks are low sugar drinks (e.g. diet soft drinks or water)	100%	100%	61%	100%	100%	100%	100%	46%	100%
Store has a bubbler and/or offers free chilled drinking water	100%	100%	100%	100%	100%	0%	100%	0%	0%
At least one healthy takeaway meal, healthy sandwich, and at least two healthy snack packs	50%	25%	100%	No take-away	100%	25%	0%	100%	100%
Use of combi oven to prepare healthy takeaway choices	100%	100%	100%		100%	0%	0%	0%	100%
Does not use deep fryer	0%	0%	100%		0%	0%	0%	0%	100%
LIMITED OR NO AVAILABILITY OF CERTAIN UNHEALTHY FOOD AND DRINKS	S1	S2	S3	S4	S5	S6	S7	S8	S9
No sugary drinks (full strength soft drink, sports drinks, energy drinks) over 600mL and no fruit juice more than 250mL	0%	0%	0%	0%	0%	0%	0%	0%	0%
No unrecommended products (coconut oil, vegetable oils/spreads containing palm oil or trans fats >1%)	100%	100%	0%	100%	0%	0%	100%	100%	100%
Total score for availability	81%	82%	80%	84%	78%	62%	70%	59%	87%

Colour coding (scoring of survey results)
Green = Good (100-86%)
Amber = Could be improved (85-70%)
Red = Poor (69-0%)

Table 5: Placement of healthy and unhealthy food and drinks in stores, May 2021

PLACEMENT OF HEALTHY AND UNHEALTHY FOOD AND DRINKS IN STORES	APY Land stores								Com-parison store
	S1	S2	S3	S4	S5	S6	S7	S8	S9
Fresh fruit and vegetables at front of store or in line of sight from front of store	50%	100%	100%	100%	100%	0%	0%	0%	100%
Healthy snack foods at point of sale: fruit (fresh fruit, fresh fruit salad and dried fruit), cheese/fish and crackers, boiled eggs	33%	100%	100%	67%	100%	0%	33%	0%	33%
Water fridge at front of store	100%	100%	100%	100%	100%	100%	0%	0%	100%
Sugary drinks are at rear of store or in reduced access fridge	25%	50%	50%	50%	50%	0%	100%	0%	50%
No unhealthy choices at easy access point of sale; no lollies, chocolates, chips/crisps, nutella or other	100%	100%	100%	100%	100%	50%	100%	100%	100%
Healthy food predominately at eye level and predominately at ends of aisles; unhealthy choices out of reach of infants and children	100%	100%	67%	100%	100%	17%	67%	100%	100%
Total score for product placement	68%	92%	86%	86%	92%	28%	50%	33%	81%

Colour coding (scoring of survey results)
Green = Good (100-86%)
Amber = Could be improved (85-70%)
Red = Poor (69-0%)

Table 6: Promotion of healthy and unhealthy food and drinks in stores, May 2021

PROMOTION OF HEALTHY AND UNHEALTHY FOOD AND DRINKS IN STORES	APY Land stores								Com-parison store
	S1	S2	S3	S4	S5	S6	S7	S8	S9
Plain water \$1, fruit and vegetables at cost price or low margins, low margins on other core food groups	100%	100%	100%	100%	100%	0%	67%	0%	100%
Signage and posters promoting healthy products; signage and posters price promoting healthy food and water; warning signage and posters on unhealthy drinks; general nutrition posters present. (Signage and posters must be consistent with ADGs and Infant Feeding Guidelines.)	40%	70%	80%	80%	60%	40%	0%	0%	80%
No price promotion/advertising of unhealthy choices (sugary drinks, confectionary, chocolate, crisps, fried takeaway food or fried chips)	100%	100%	100%	100%	100%	100%	50%	100%	100%
Does not display signage or posters inconsistent with nutrition evidence base (e.g. baby food posters promoting choking hazard, advertising unhealthy foods and drinks such as fruit roll ups, fad diet products)	100%	100%	100%	100%	100%	100%	50%	100%	100%
Support and promote different types of practical promotion of healthy choices (e.g. taste tests, cooking demonstration, provision of recipes etc) (at least two different activities within the past month)	0%	0%	0%	0%	0%	0%	0%	0%	0%
Displays shelf talkers promoting healthy products	100%	0%	0%	0%	0%	0%	0%	0%	0%
Total score for product promotion	73%	62%	63%	63%	60%	40%	28%	33%	63%