

Supplemental Table S1. Modified FAVVA index.

The Modified FAVVA index: Total score = 185	Scoring	Maximum score
1 Vegetables		
F1. How many different vegetables do you usually eat per day?		
<input type="radio"/> <1 per day <input type="radio"/> 1 per day <input type="radio"/> 2 per day <input type="radio"/> 3 per day <input type="radio"/> 4 per day <input type="radio"/> 5 per day <input type="radio"/> 6+ per day	0 1 2 3 4 5 6	6
F2. Potato boiled, mashed, baked (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F3. Pumpkin (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F4. Cucumber		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F5. Cauliflower (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F6. Green beans (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F7. Spinach (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F8. Cabbage or brussel sprouts (1 serving)		

<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F9. Peas (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 times per month <input type="radio"/> Once per week <input type="radio"/> 2-4 times per week <input type="radio"/> 5-6 times per week <input type="radio"/> Once per day <input type="radio"/> 2 or more times per day	0 1 2 3 4 5 6 7	7
F10. Broccoli (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 times per month <input type="radio"/> Once per week <input type="radio"/> 2-4 times per week <input type="radio"/> 5-6 times per week <input type="radio"/> Once per day <input type="radio"/> 2 or more times per day	0 1 2 3 4 5 6 7	7
F11. Carrots (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 times per month <input type="radio"/> Once per week <input type="radio"/> 2-4 times per week <input type="radio"/> 5-6 times per week <input type="radio"/> Once per day <input type="radio"/> 2 or more times per day	0 1 2 3 4 5 6 7	7
F12. Zucchini, eggplant, squash (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F13. Capsicum (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F14. Mushroom (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F15. Tomatoes (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month	0 1 2	5

<input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	3 4 5	
F16. Lettuce (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 times per month <input type="radio"/> Once per week <input type="radio"/> 2-4 times per week <input type="radio"/> 5-6 times per week <input type="radio"/> Once per day <input type="radio"/> 2 or more times per day	0 1 2 3 4 5 6 7	7
F17. Celery (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F18. Avocado (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F19. Onion, spring onion, leek (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F20. Soybeans, tofu (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F21. Baked beans (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F22. Other beans, lentils e.g. chick peas, split peas (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
Fruit		
F23. How many pieces of fruit do you eat per day (include all types)		

<input type="radio"/> None <input type="radio"/> <1 piece per day <input type="radio"/> 1 piece/day <input type="radio"/> 2 pieces/day <input type="radio"/> 3 pieces per day <input type="radio"/> 4+ pieces per day	0 1 2 3 4 5	5
F24. Canned/frozen fruit eg. peaches, two fruits (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F25. Pear (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F26. Apricot (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week <input type="radio"/> 2-4 per week <input type="radio"/> 5 or more per week	0 1 2 3 4 5	5
F27. Apple (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 times per month <input type="radio"/> Once per week <input type="radio"/> 2-4 times per week <input type="radio"/> 5-6 times per week <input type="radio"/> Once per day <input type="radio"/> 2 or more times per day	0 1 2 3 4 5 6 7	7
F28. Orange, mandarin, grapefruit (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 times per month <input type="radio"/> Once per week <input type="radio"/> 2-4 times per week <input type="radio"/> 5-6 times per week <input type="radio"/> Once per day <input type="radio"/> 2 or more times per day	0 1 2 3 4 5 6 7	7
F29. Banana (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 times per month <input type="radio"/> Once per week <input type="radio"/> 2-4 times per week <input type="radio"/> 5-6 times per week <input type="radio"/> Once per day <input type="radio"/> 2 or more times per day	0 1 2 3 4 5 6 7	7
F30. Peach, nectarine, plum or apricot (1 serving)		
<input type="radio"/> Never <input type="radio"/> Less than 1 per month <input type="radio"/> 1-3 per month <input type="radio"/> Once per week	0 1 2 3	5

<input type="radio"/> 2-4 per week	4	
<input type="radio"/> 5 or more per week	5	
F31. Mango or paw-paw (1 serving)		
<input type="radio"/> Never	0	5
<input type="radio"/> Less than 1 per month	1	
<input type="radio"/> 1-3 per month	2	
<input type="radio"/> Once per week	3	
<input type="radio"/> 2-4 per week	4	
<input type="radio"/> 5 or more per week	5	
F32. Pineapple (1 serving)		
<input type="radio"/> Never	0	5
<input type="radio"/> Less than 1 per month	1	
<input type="radio"/> 1-3 per month	2	
<input type="radio"/> Once per week	3	
<input type="radio"/> 2-4 per week	4	
<input type="radio"/> 5 or more per week	5	
F33. Strawberries (1 serving)		
<input type="radio"/> Never	0	5
<input type="radio"/> Less than 1 per month	1	
<input type="radio"/> 1-3 per month	2	
<input type="radio"/> Once per week	3	
<input type="radio"/> 2-4 per week	4	
<input type="radio"/> 5 or more per week	5	
F34. Melon eg. watermelon, rockmelon (1 serving)		
<input type="radio"/> Never	0	5
<input type="radio"/> Less than 1 per month	1	
<input type="radio"/> 1-3 per month	2	
<input type="radio"/> Once per week	3	
<input type="radio"/> 2-4 per week	4	
<input type="radio"/> 5 or more per week	5	
	Maximum score	185

Supplemental Table S2. Differences in methods used to calculate the FAVVA index derived from the AES FFQ and the DQESv2 FFQ.

	Ashton et al 2018	Current study
FAVVA Item	AES item	DQESv2 item
Overall vegetable intake	Times per week vegetables consumed with evening meal	Number of different vegetables consumed per day
Sweet potato	Never – 5+ per week	<i>Not assessed</i>
Corn	Never – 5+ per week	<i>Not assessed</i>
Celery, cucumber	Assessed together	Assessed separately (Celery; Cucumber)
Overall fruit intake	8-point scale from None to 4+ per day	6-point scale from None to 4+ per day
Fruit salad	Never – 5+ per week	<i>Not assessed</i>
Dried fruit	Never – 5+ per week	<i>Not assessed</i>
Apple, pear	Assessed together	Assessed separately (Apples; Pears)
Peach, nectarine, plum, apricot	Assessed together	Assessed separately (Apricots; Peaches/nectarines)
Grapes, strawberries, blueberries	Assessed together	Assessed as Strawberries only
Maximum score	190	185

Abbreviations: AES, Australian Eating Survey; DQESv2, Dietary Questionnaire for Epidemiological Studies version 2; FAVVA, Fruit and Vegetable Variety index; FFQ, Food Frequency Questionnaire

Supplemental Table S3.

Coefficients and 95% confidence intervals per 100-gram baseline fruit and vegetable intake (g/day) as a predictor of 15-year (2001-2015) cumulative Medicare claims and costs (\$AUD) for Australian women born 1946-51, by baseline BMI category ($n=8833$).

2001 Fruit and vegetable intake	Medicare variable	Healthy weight $n=3743$	Overweight/obese $n=4971$	All $n=8833$
Fruit and Vegetable intake	Claims (n) ^a	-1.9 (-4.9, 1.0)	5.1 (2.1, 8.2)*	2.9 (0.7, 5.0)*
	Charge (\$) ^b	-170.0 (-390.2, 50.2)	323.5 (106.4, 540.6)*	159.3 (3.8, 314.7)*
	Benefit (\$) ^c	-124.4 (-285.0, 36.3)	269.1 (109.8, 428.4)*	139.0 (24.8, 253.2)*
	Gap (\$) ^d	-45.6 (-122.3, 31.0)	54.4 (-21.4, 130.2)	20.3 (-33.6, 74.1)
Fruit intake	Claims (n)	-3.0 (-6.9, 0.8)	7.2 (3.4, 11.1)*	3.7 (0.9, 6.4)*
	Charge (\$) ^b	-167.7 (-455.4, 120.0)	477.5 (200.1, 754.9)*	253.6 (52.9, 454.4)*
	Benefit (\$) ^c	-155.0 (-364.9, 54.9)	387.5 (184.0, 591.1)*	197.2 (49.7, 344.7)*
	Gap (\$) ^d	-12.7 (-112.9, 87.4)	89.9 (-6.9, 186.8)	56.4 (-13.1, 126.0)
Vegetable intake	Claims (n)	-0.8 (-7.5, 5.9)	3.6 (-3.2, 10.5)	3.3 (-1.5, 8.2)
	Charge (\$) ^b	-368.3 (-867.4, 130.7)	157.5 (-331.3, 646.4)	36.7 (-314.2, 387.5)
	Benefit (\$) ^c	-172.2 (-536.4, 191.9)	161.0 (-197.8, 519.8)	105.8 (-152.0, 363.6)
	Gap (\$) ^d	-196.1 (-369.7, -22.5)*	-3.5 (-174.1, 167.1)	-69.1 (-190.6, 52.4)

* $p<0.05$; linear regression modelling with adjustment for area of residence, ability to manage on current income and total energy intake.

Abbreviations: BMI, body mass index; FAVVA, Fruit and Vegetable Variety index

Note: Women with 'Underweight' BMI were excluded from analysis due to small sample size ($n=113$).

^a Number of healthcare services received under the Medicare Benefits Schedule

^b Total cost of services (as charged by healthcare provider)

^c Amount paid back to the patient by Medicare

^d Out-of-pocket costs paid by the patient

Supplemental Table S4.

Coefficients and 95% confidence intervals (CI) per 100-gram change in daily fruit and vegetable intake (2001-2013) as a predictor of 15-year (2001-2015) cumulative Medicare claims and costs (\$AUD) for Australian women born 1946-51, by BMI category ($n=6955$).

Change in intake 2001-2013	Medicare variable	Healthy weight $n=3007$	Overweight/obese $n=3857$	All $n=6955$
Fruit and Vegetable intake	Claims (n) ^a	-3.0 (-7.1, 1.1)	-7.7 (-11.7, -3.7)*	-6.5 (-9.4, -3.6)*
	Charge (\$) ^b	-114.0 (-424.8, 196.8)	-650.4 (-946.7, -354.1)*	-480.0 (-694.7, -265.2)*
	Benefit (\$) ^c	-157.7 (-383.1, 67.7)	-458.1 (-673.5, -242.8)*	-374.2 (-530.7, -217.7)*
	Gap (\$) ^d	43.7 (-65.7, 153.0)	-192.3 (-297.0, -87.5)*	-105.8 (-181.1, -30.5)*
Fruit intake	Claims	-1.1 (-6.2, 4.0)	-5.2 (-10.3, -0.07)*	-4.4 (-8.1, -0.7)*
	Charge	-15.6 (-403.6, 372.3)	-547.5 (-926.4, -168.5)*	-393.3 (-665.4, -121.3)*
	Benefit	-64.5 (-345.9, 216.9)	-358.4 (-633.8, -82.9)*	-288.4 (-486.7, -90.1)*
	Gap	7.0 (-73.0, 207.0)	-201.7 (-341.2, -62.0)*	-105.0 (-200.3, -9.6)*
Vegetable intake	Claims	-10.6 (-19.4, -1.9)*	-20.1 (-28.8, -11.5)*	-16.7 (-23.0, -10.5)*
	Charge	-477.9 (-1142.0, 186.2)	-1404.1 (-2047.1, -761.1)*	-1046.1 (-1508.5, -583.7)*
	Benefit	-540.3 (-1021.9, -58.7)*	-1062.1 (-1529.5, -594.7)*	-872.0 (-1208.9, -535.0)*
	Gap	62.4 (-171.3, 296.0)	-342.0 (-569.2, -114.8)*	-174.1 (-336.2, -12.0)*

* $p < 0.05$; linear regression modelling with adjustment for area of residence, ability to manage on current income, total energy intake and baseline fruit and vegetable consumption.

Abbreviations: BMI, body mass index; FAVVA, Fruit and Vegetable Variety index.

Note: Women with 'Underweight' BMI were excluded from analysis due to small sample size ($n=91$).

^a Number of healthcare services received under the Medicare Benefits Schedule

^b Total cost of services (as charged by healthcare provider)

^c Amount paid back to the patient by Medicare

^d Out-of-pocket costs paid by the patient