

Appendix

Additional Methods

As further context, New Zealand is a fairly typical OECD country in terms of health spending (at 10.0% of GDP – slightly more than the OECD average of 9.3%). But 83% of health spending was funded by public sources in 2011 (which is well above the average of 72% in OECD countries). Residential care for the elderly in New Zealand is largely funded from social welfare budget and so is excluded from our analysis – given the health system perspective being taken. Nevertheless, the residential care costs that relate specifically to health (i.e., residential care hospital facilities) is captured in our analyses (via scaling up from Health Tracker costs – see the Methods in the main manuscript).

Future trends in health costs were not modelled as these are considered very uncertain due to reasons around the New Zealand economy’s dependency on commodity prices, recent expansion in the role of the government’s pharmaceutical purchasing agency, and potential future trade agreements that might limit the government’s capacity to constrain health costs.

Additional Results

Table A1: Types of costs (NZ\$) by the four sodium reduction interventions (expressed per adult in 2011, discount rate of 3%)

Intervention	Direct intervention cost	CVD health system costs	Non-CVD health system costs	Net cost
Baseline				
“Do nothing” comparator	–	16,000	54,500	70,500
Salt substitution at 59%	1.43	14,600	55,200	69,800
Salt substitution at 25%	1.43	15,400	54,800	70,200
Tight limits on sodium in bread	1.43	15,800	54,600	70,400
Modest limits on sodium in bread	1.43	15,900	54,500	70,400
Incremental to “Do Nothing” costs				
Salt substitution at 59%	1.43	-1310	660	-650
Salt substitution at 25%	1.43	-550	270	-270
Tight limits on sodium in bread	1.43	-200	98	-97
Modest limits on sodium in bread	1.43	-72	34	-36

Table A2: Scenario analysis relating to the four sodium reduction interventions (cost, health gain and cost-effectiveness per individual New Zealand adult)

Scenarios	Incremental cost per adult (NZ\$)	QALY gain per adult	ICER (cost per QALY)
<i>Salt substitution at 59%</i>			
3% discount rate	-650.31	0.127	Dominant
0% discount rate	-702.63	0.317	Dominant
6% discount rate	-478.06	0.059	Dominant
<i>Salt substitution at 25%</i>			
3% discount rate	-271.18	0.053	Dominant
0% discount rate	-294.29	0.130	Dominant
6% discount rate	-199.23	0.025	Dominant
<i>Tight limits on sodium in bread</i>			
3% discount rate	-125.06	0.0154	Dominant
0% discount rate	-175.35	0.0397	Dominant
6% discount rate	-71.03	0.0088	Dominant
<i>Modest limits on sodium in bread</i>			
3% discount rate	-35.93	0.0068	Dominant
0% discount rate	-37.11	0.0155	Dominant
6% discount rate	-28.34	0.0035	Dominant

Table A3. Age ranges in which the health gain occurs for all four salt interventions (discount rate of 3%)

Time period	Age when the QALYs are gained (i.e. not age in 2011)	Modest limits on sodium in bread (400mg/100g)			Tight limits on sodium in bread (280mg/100g)			Salt substitution at 25%			Salt substitution at 59%		
		QALYs gained	% of QALYs among 45+ year olds	% of QALYs among 55+ year olds	QALYs gained	% of QALYs among 45+ year olds	% of QALYs among 55+ year olds	QALYs gained	% of QALYs among 45+ year olds	% of QALYs among 55+ year olds	QALYs gained	% of QALYs among 45+ year olds	% of QALYs among 55+ year olds
In first 10 years (i.e., 2011 to 2020)	35-44	10			8			22			51		
	45-54	94	5.3%		110	5.5%		303	5.5%		716	5.4%	
	55-64	291	16.5%	17.4%	341	16.9%	17.9%	939	16.9%	17.9%	2,220	16.9%	17.8%
	65-69	256	14.5%	15.3%	295	14.7%	15.5%	814	14.6%	15.5%	1,928	14.6%	15.5%
	70-74	224	12.7%	13.4%	256	12.7%	13.5%	707	12.7%	13.5%	1,673	12.7%	13.4%
	75-84	513	29.1%	30.7%	579	28.7%	30.4%	1,598	28.7%	30.4%	3,787	28.7%	30.4%
	85-94	317	18.0%	19.0%	353	17.5%	18.53%	975	17.5%	18.65%	2,316	17.6%	18.6%
	95+	69	3.9%	4.1%	81	4.0%	4.3%	224	4.0%	4.3%	537	4.1%	4.3%
	Sum 45+	1,764	100%		2,016	100%		5,562	100%		13,177	100%	
Sum 55+	1,670		100%	1,906		100%	5,258		100%	12,461		100%	
In 2 nd 10 years (i.e., 2021 to 2030)	35-44												
	45-54	71	1.9%		185	2.0%		511	2.0%		-		
	55-64	464	12.3%	12.5%	1,226	13.4%	13.7%	3,382	13.3%	13.6%	1,207	2.0%	
	65-69	558	14.8%	15.1%	1,362	14.9%	15.2%	3,767	14.9%	15.2%	8,016	13.2%	13.5%
	70-74	438	11.6%	11.8%	1,105	12.1%	12.3%	3,054	12.0%	12.3%	8,978	14.8%	15.1%
	75-84	1,294	34.3%	34.9%	3,065	33.5%	34.2%	8,494	33.5%	34.2%	7,259	12.0%	12.2%
	85-94	788	20.9%	21.3%	1,822	19.9%	20.3%	5,062	20.0%	20.4%	20,322	33.5%	34.2%
	95+	162	4.3%	4.4%	393	4.3%	4.4%	1,102	4.3%	4.4%	12,180	20.1%	20.5%
	Sum 45+	3,777	100%		9,158	100%		25,372	100%		2,695	4.4%	4.5%
Sum 55+	3,706		100%	8,972		100%	24,862		100%	60,658	100%		
										59,451		100%	