Economic evaluation of the e-Health *StandingTall* balance exercise programme for fall prevention in people aged 70 years and over

Contents: Supplementary material

Appendix 1: Bias-corrected & accelerated confidence intervals for incremental costs & health outcomes

Baseline utility values	EQ-5D-5L	AQoL-6D
Intervention	0.8916 (95% CI 0.8779 – 0.9052)	0.8544 (95% CI 0.8399 – 0.8689)
Control	0.8989 (95% CI 0.8874 – 0.9103)	0.8583 (95% CI 0.8450 – 0.8717)

Outcome	Incremental effect (Bias-corrected accelerated confidence interval)
Falls	0.312 (0.05 - 0.69)
Injurious falls	0.23 (0.04 - 0.50)
EQ5D	0.02 (-0.02 - 0.06)
AQOL	0.01 (-0.04 - 0.06)
Costs	1491 (-1324 - 45456)

Appendix 2: Characteristics of study participants at baseline (N=503)

Variable	Intervention (n=254)	Control (n=249)
Age (years)	77.1 (5.5)	77.7 (5.5)
Gender, female (%)	177 (69.7%)	162 (65.1%)
BMI (kg/m^2)	27.3 (4.5)	27.0 (4.9)
Living alone (%)	113 (44.5%)	104 (41.9%)
Education (years)	14.4 (4.1)	14.5 (4.4)
Owns a computer (%)	214 (85.0%)	220 (88.4%)
Uses a walking aid (%)	18 (7.1%)	20 (8.0%)
Fall in previous year (number)	0 [1]	0 [1]
EQ-5D-5L VAS (score range 0-100)	90 [15]	85 [15]
Medical conditions (number)	0 [1]	0 [1]
Montreal Cognitive Assessment (score range 0-30)	27 [3]	27 [3]
PHQ-9; score range (0 – 27)	2 [4]	2 [4]
Icon-FES; (score range 30 – 120)	53 (16)	55 (16)
Physiological fall risk (PPA score)	0.99 (0.74)	1.19 (0.87)
Timed up and go (seconds)	8.5 (3.3)	8.6 (3.0)

Note: values are mean (standard deviation), absolute (relative %) or median [IQR]; end of range indicating best score is underlined

Appendix 3: Scoping review search terms

Randomised controlled trials were identified via a PUBMED and MEDLINE database search that followed the PICO:

P	Older people (65+ years), community-dwelling, Australian-based
I	Home-based, exercise-based fall prevention programme, Australian-based
C	Usual care or a control
O	Fall risk, fall rate

Appendix 4: Costs by gender

	Males						Females					
	Intervention			Control			Intervention			Control		
	n	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD
Total costs	77	6,655	14,427	87	6,236	13,427	177	9,045	20,616	162	7,148	15,839
Cleaning	77	920	1,395	87	682	2,469	177	1,153	1,321	162	932	1,367
Hospital	77	2,553	12,590	87	2,668	11,003	177	4,304	19,359	162	3,140	14,779
General Practitioner	77	1,211	1,066	87	1,465	1,193	177	1,417	1,229	162	1,417	1,174
Occupational Therapy	77	48	157	87	81	256	177	110	451	162	78	236
Physiotherapy	77	322	664	87	387	793	177	536	1,021	162	684	1,274
Nurse	77	304	994	87	248	572	177	374	973	162	239	512
Transport & Shopping	77	94	281	87	66	204	177	113	266	162	70	160
Meals	77	84	348	87	25	73	177	55	251	162	40	242
Shower	77	224	1,039	87	180	836	177	89	361	162	113	432
Program	77	896	0	87	434	0	177	896	0	162	434	0
Falls	77	1.35	2.61	87	1.46	2.33	177	1.02	1.46	162	1.43	2.35
Injurious falls	77	0.70	1.78	87	0.85	1.37	177	0.67	1.08	162	0.94	1.84

Appendix 5: CHEERS Checklist:

Economic Evaluation of the eHealth *StandingTall* Balance Exercise Programme for Fall Prevention in Older People

Section/item	Item No	Recommendation	Reported on page No/line No
Title and abstract			
Title	1	Identify the study as an economic evaluation or use more specific terms such as "cost-effectiveness analysis", and describe the interventions compared.	1
Abstract	2	Provide a structured summary of objectives, perspective, setting, methods (including study design and inputs), results (including base case and uncertainty analyses), and conclusions.	3
Introduction			
Background and objectives	3	Provide an explicit statement of the broader context for the study.	5-6
		Present the study question and its relevance for health policy or practice decisions.	5-6
Methods			
Target population and subgroups	4	Describe characteristics of the base case population and subgroups analysed, including why they were chosen.	6-8
Setting and location	5	State relevant aspects of the system(s) in which the decision(s) need(s) to be made.	6-10
Study perspective	6	Describe the perspective of the study and relate this to the costs being evaluated.	5-6
Comparators	7	Describe the interventions or strategies being compared and state why they were chosen.	6-7
Time horizon	8	State the time horizon(s) over which costs and consequences are being evaluated and say why appropriate.	6, 10
Discount rate	9	Report the choice of discount rate(s) used for costs and outcomes and say why appropriate.	8-9

Choice of health outcomes	10	Describe what outcomes were used as the measure(s) of benefit in the evaluation and their relevance for the type of analysis performed.	7-8
Measurement of effectiveness	11a	Single study-based estimates: Describe fully the design features of the single effectiveness study and why the single study was a sufficient source of clinical effectiveness data.	7-8
	11b	Synthesis-based estimates: Describe fully the methods used for identification of included studies and synthesis of clinical effectiveness data.	N/A
Measurement and valuation of preference based outcomes	12	If applicable, describe the population and methods used to elicit preferences for outcomes.	N/A
Estimating resources and costs	13a	Single study-based economic evaluation: Describe approaches used to estimate resource use associated with the alternative interventions. Describe primary or secondary research methods for valuing each resource item in terms of its unit cost. Describe any adjustments made to approximate to opportunity costs.	8-9
	13b	Model-based economic evaluation: Describe approaches and data sources used to estimate resource use associated with model health states. Describe primary or secondary research methods for valuing each resource item in terms of its unit cost. Describe any adjustments made to approximate to opportunity costs.	N/A
Currency, price, date, and conversion	14	Report the dates of the estimated resource quantities and unit costs. Describe methods for adjusting estimated unit costs to the year of reported costs if necessary. Describe methods for converting costs into a common currency base and the exchange rate.	8-9
Choice of model	15	Describe and give reasons for the specific type of decision analytical

model used. Providing a figure to show model structure is strongly recommended. | N/A |

Assumptions	16	Describe all structural or other assumptions underpinning the decision-analytical model.	N/A
Analytical methods	17	Describe all analytical methods supporting the evaluation. This could include methods for dealing with skewed, missing, or censored data; extrapolation methods; methods for pooling data; approaches to validate or make adjustments (such as half cycle corrections) to a model; and methods for handling population heterogeneity and uncertainty.	8-10
Results			
Study parameters	18	Report the values, ranges, references, and, if used, probability distributions for all parameters. Report reasons or sources for distributions used to represent uncertainty where appropriate. Providing a table to show the input values is strongly recommended.	Tables 1-2
Incremental costs and outcomes	19	For each intervention, report mean values for the main categories of estimated costs and outcomes of interest, as well as mean differences between the comparator groups. If applicable, report incremental cost-effectiveness ratios.	10-12, Table 2, Table 3
Characterising uncertainty	20a	Single study-based economic evaluation: Describe the effects of sampling uncertainty for the estimated incremental cost and incremental effectiveness parameters, together with the impact of methodological assumptions (such as discount rate, study perspective).	10-12, Table 3, Figures 1-2
	20b	Model-based economic evaluation: Describe the effects on the results of uncertainty for all input parameters, and uncertainty related to the structure of the model and assumptions.	N/A
Characterising heterogeneity	21	If applicable, report differences in costs, outcomes, or cost effectiveness that can be explained by variations between subgroups of patients with different baseline characteristics or other observed variability in effects that are not reducible by more information.	11-12, Table 3
Discussion			

Study findings, limitations, generalisability, and current knowledge	22	Summarise key study findings and describe how they support the conclusions reached. Discuss limitations and the generalisability of the findings and how the findings fit with current knowledge.	10-15
Other			
Source of funding	23	Describe how the study was funded and the role of the funder in the identification, design, conduct, and reporting of the analysis. Describe other non-monetary sources of support.	16
Conflicts of interest	24	Describe any potential for conflict of interest of study contributors in accordance with journal policy. In the absence of a journal policy, we recommend authors comply with International Committee of Medical Journal Editors recommendations.	16