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Title	Economic Evaluations of Speech and Language Therapy Interventions: A Scoping Review
Туре	Article
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Date	2025
Citation	Hill, James Edward, Kulkarni, Amit, Moll, Deborah, Meteyard, Lotte, Shelley, Louise, Chugg, Grace, Jones, Gemma, Benedetto, Valerio, Harris, Catherine orcid iconORCID: 0000-0001-7763-830X et al (2025) Economic Evaluations of Speech and Language Therapy Interventions: A Scoping Review. International Journal of Language & Communication Disorders (IJLCD), 60 (4). e70091. ISSN 1368-2822
Creators	Hill, James Edward, Kulkarni, Amit, Moll, Deborah, Meteyard, Lotte, Shelley, Louise, Chugg, Grace, Jones, Gemma, Benedetto, Valerio, Harris, Catherine, Doherty, Alison, Harrison, Joanna and Clegg, Andrew

It is advisable to refer to the publisher's version if you intend to cite from the work. https://doi.org/10.1111/1460-6984.70091

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Appendix 1: Data extraction form

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Appendix 2: Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			O. 17.02 "
Title	1	Identify the report as a scoping review.	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	3
INTRODUCTION			'
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	4-5
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	5
METHODS		•	
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	6
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	6-7
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	6
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Supplement file 1
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	7-8
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	7
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	7-8
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	N/A

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	8
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	9 - 10
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	14 - 70
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	N/A
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	14 - 70
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	14 - 70
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	71
Limitations	20	Discuss the limitations of the scoping review process.	73
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	72 -74
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	2

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMAScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi: 10.7326/M18-0850.

^{*} Where sources of evidence (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

[†] A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

[‡] The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

[§] The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

Appendix 2: Ovid MEDLINE Search Strategy

Ovid MEDLINE® ALL <1946 to October 19, 2023>

- 1 Speech Therapy/
- 2 Language Therapy/
- 3 ((speech or language or voice) adj3 (therap* or intervention* or treatment* or patholog* or rehabilitation or train* or clinic or clinics or service* or centre*1 or center*1).ti,ab,kf.
- 4 (speech therap* or language therap*).in.
- 5 or/1-4
- 6 Economics/
- 7 exp "Costs and Cost Analysis"/
- 8 Economics, Nursing/
- 9 Economics, Medical/
- 10 Economics, Pharmaceutical/
- 11 exp Economics, Hospital/
- 12 Economics, Dental/
- 13 exp "Fees and Charges"/
- 14 exp Budgets/
- 15 budget*.ti,ab,kf.
- 16 (economic* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic* or pharmaco-economic* or expenditure or expenditures or expense or expenses or financial or finance or finances or financed).ti,kf.

- 17 (economic* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic* or pharmaco-economic* or expenditure or expenditures or expense or expenses or financial or finance or finances or financed).ab. /freq=2
- 18 (cost* adj2 (effective* or utilit* or benefit* or minimi* or analy* or outcome or outcomes)).ab,kf.
- 19 (value adj2 (money or monetary)).ti,ab,kf.
- 20 exp models, economic/
- 21 economic model*.ab,kf.
- 22 markov chains/
- 23 markov.ti,ab,kf.
- 24 monte carlo method/
- 25 monte carlo.ti,ab,kf.
- 26 exp Decision Theory/
- 27 (decision* adj2 (tree* or analy* or model*)).ti,ab,kf.
- 28 or/6-27
- 29 5 and 28

30

Appendix 3: Reasons for exclusion at full paper screening

Author	Υ	DOI	Title	Link (Trial protocols)	R	Inc	Nots
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	1		treatments compared to	lateType=full&urlTitle=%2Fcentr			type
	5		usual speech pathology in	al%2Fdoi%2F10.1002%2Fcentral			
			people with problems	<u>%2FCN-</u>			
			communicating after	02442006&doi=10.1002%2Fcent			
			stroke	ral%2FCN-			
				02442006&type=central&conte			
				ntLanguage=			_
Ali, M., Ben Basat, A. Lifshitz, Berthier, M., Blom	2	10.1	Protocol for the		J	No	Stud
Johansson, M., Breitenstein, C., Cadilhac, D. A.,	0	080/	development of the		Н		У
Constantinidou, F., Cruice, M., Davila, G., Gandolfi,	2	0268	international population				type
M., Gil, M., Grima, R., Godecke, E., Jesus, L.,	1	7038	registry for aphasia after				
Jiminez, L. Martinez, Kambanaros, M., Kukkonen,		.202	stroke (I-PRAISE)				
T., Laska, A., Mavis, I., Mc Menamin, R., Mendez-		1.19					

Orellana, C., Obrig, H., Ostberg, P., Robson, H., Sage, K., Van De Sandt-Koenderman, M., Sprecht, K., Visch-Brink, E., Wehling, E., Wielaert, S., Wallace, S. J., Williams, L. J. and Brady, M. C.		1481 3					
Anonymous	2 0 2 2	10.1 055/ s- 0042 - 1748 191	Health Economics in Speech-Language Pathology		LS	No	Stud y type
Barrett, E. E. and ur, D.	2 0 1 4	10.1 007/ s004 55- 014- 9571 -4	Dysphagia Research Society Annual Meeting and Post-Graduate Course		J	No	Stud y type (indi cates radio logy cost)
Bidmead, Elaine, Nick Harrop, Dr, Reid, Tilly, Marshall, Alison and Southern, Veronica	2 0 1 5	10.1 108/ cgij- 06- 2015 - 0020	"Teleswallowing": a case study of remote swallowing assessment		L S	No	Stud y type
Born, H. L., De Alarcon, A., Tabangin, M., Zacharias, S. and Kelchner, L.	2 0 1 7	10.1 177/ 0194 5998 1771 7251	Business of Medicine/Practice Management		L S	No	Incor rect inter venti on
Brogan, Emily L., Kim, Joosup, Grimley, Rohan S., Wallace, Sarah J., Baker, Caroline,	2		The state of the s	zation for Acute Stroke in People ment: A Stroke123 Data Linkage	J H	no	inter

Thayabaranathan, Tharshanah, Andrew, Nadine E., Kilkenny, Monique F., Godecke, Erin, Rose,	2 3		Substudy			venti on
Miranda L. and Cadilhac, Dominique A.						
Collins, A., Burns, C. L., Ward, E. C., Comans, T.,	2	10.1	Home-based telehealth	L	No	Inter
Blake, C., Kenny, L., Greenup, P. and Best, D.	0	177/	service for swallowing and	S		venti
	1	1357	nutrition management			on:
	7	633X	following head and neck			
		1773	cancer treatment			
		3020				
Cronin, P., Reeve, R., McCabe, P., Viney, R. and	2		The impact of childhood language difficulties on healthcare	J	no	
Goodall, S.	0		costs from 4 to 13 years: Australian longitudinal study	Н		inter
	1		, ·			venti
	7					on
Crook, C. L. and Simpson, B.	2	10.1	UK Stroke Forum 2011	L	No	Stud
·	0	111/	Abstracts, Glasgow, 29	S		у
	1	j.174	November 2011–1			type
	1	7-	December 2011			, ,
		4949				
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Cup, E. H., Pieterse, A. J., Knuijt, S., Hendricks, H.	2	10.1	Referral of patients with	L	No	Inter
T., van Engelen, B. G., Oostendorp, R. A. and van	0	080/	neuromuscular disease to	S		venti
der Wilt, G. J.	0	0963	occupational therapy,			on:
	7	8280	physical therapy and			
		6009	speech therapy: usual			
		2670	practice versus			
		2	multidisciplinary advice			
Dowling, F., Clarke, C. E., Patel, S., Woolley, R.,	2	10.1	Abstracts of the	J	No	Stud
Ives, N. J., Rick, C. E., Wheatley, K., Smith, C.,	0	002/	Eighteenth International	Н		У
Brady, M. and Sackley, C. M.	1	mds.	Congress of Parkinson's			type
, , , , , , , , , , , , , , , , , , , ,	4	2591	Disease and Movement			''
		4	Disorders, June 8-12, 2014,			

			Stockholm, Sweden			
Ellis, C., Hardy, R. Y. and Lindrooth, R. C.	2 0 1 7		Greater healthcare utilization and costs among Black persons compared to White persons with aphasia in the North Carolina stroke belt	J	no	inter venti on
Ellis, C., Lindrooth, R. C. and Horner, J.	2 0 1 4	10.1 044/ 2013 _AJS LP- 13- 0037	Retrospective cost- effectiveness analysis of treatments for aphasia: an approach using experimental data	J	No	Stud Y type
Ellis, C., Simpson, A. N., Bonilha, H., Mauldin, P. D. and Simpson, K. N.	2 0 1 2		The One-Year Attributable Cost of Poststroke Aphasia	Н	no	inter venti on
Ellis, Charles, Peach, Richard K., Hardy, Rose Y. and Lindrooth, Richard C.	2 0 1 7 li n k	10.1 080/ 0268 7038 .201 7.13 0344 0	The influence of race on SLP utilisation and costs among persons with aphasia	J	No	Stud Y type
Garcia, Jane Mertz, Garrett, Kathryn L., Pimentel, Jane T. and Garcia, Robert G.	2 0 0 2	10.1 080/ 0268 7030 1430 0085	Clinical services for aphasia: A survey of university clinics	V B	No	Stud y type

Gaustad, J. V., Kleven, L., Kornør, H., Harboe, I., Flatby, A. V., Aakhus, E., Bystad, M. and Røste, I.	2 0 2	doi:	Transkraniell likestrømsbehandling for depresjon og afasi:	V B	No	inter venti
	2		fullstendig metodevurdering			on
Jacobs, Molly and Ellis, Charles	2 0 2 3		Aphasianomics: estimating the poststroke aphasia in the Un	J H	no	inter venti on
Konst, Emmy M., Prahl, Charlotte, Weersink-Braks, Hanny, De Boo, Theo, Prahl-Andersen, Birte, Kuijpers-Jagtman, Anne M. and Severens, Johan L.	2 0 0 4	doi:	Cost-effectiveness of infant orthopedic treatment regarding speech in patients with complete unilateral cleft lip and palate: a randomized three-center trial in the Netherlands (Dutchcleft)	AK	No	inter venti on
Law, J., Zeng, B., Lindsay, G. and Beecham, J.	2 0 1 2	10.1 111/ j.146 0- 6984 .201 1.00 084.	Cost-effectiveness of interventions for children with speech, language and communication needs (SLCN): a review using the Drummond and Jefferson (1996) 'Referee's Checklist'	A K	No	Stud y type

Mahammadaana E. Dasabha M. Kanail C. H. M.	_	10.1	Casting the autostics!	Ъ	NI.	
Mohammadpour, F., Basakha, M., Kamal, S. H. M.	2	10.1	Costing the outpatient	D M	No	
and Azari, N.	0	186/	rehabilitation services:	IVI		inter
	2	s129	time-driven activity-based			venti
	2	62-	costing approach			on
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		0036				
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Moroney, L. B., Ward, E. C., Helios, J., Crombie, J.,	2	10.1	Evaluation of a speech	D	No	
Burns, C. L., Blake, C., Comans, T., Chua, B., Kenny,	0	007/	pathology service delivery	M		inter
L. and Hughes, B. G. M.	2	s005	model for patients at low			venti
	0	20-	dysphagia risk during			on
		019-	radiotherapy for HNC			
		0499	. ,			
		2-x				

Murray, S., Ginnelly, A. and Patel, K.	2 0 1 9	10.1 016/ j.phy sio.2 018. 11.1 94	A therapy assistant in the intensive care unit (ICU): a pilot project		D M	No	inter venti on
n9y, R. B. R.	2 0 2 3	doi:	Effect of Transcranial Stimulation associated with Speech Therapy on swallowing in the acute phase of Stroke	https://ensaiosclinicos.gov.br/rg /RBR-72n9y83	D M	No	inter venti on
Nct	2 0 0 2	doi:	A Comparison of Language Intervention Programs	https://www.cochranelibrary.co m/central/doi/10.1002/central/ CN-01508846/full	D M	No	inter venti on
Nct	2 0 1 7	doi:	Adapted Solution Focused Therapy for People With Aphasia (SOFIA Trial)	https://www.cochranelibrary.co m/central/doi/10.1002/central/ CN-01495612/full	D M	No	Stud y type
Nct	2 0 2 0	doi:	Telerehabilitation for Post- stroke Patients	https://www.cochranelibrary.co m/central/doi/10.1002/central/ CN-02125127/full	D M	No	inter venti on
Nct	2 0 2 2	doi:	Parent-implemented Social Communication Treatment in Preschool Children With Autism Spectrum Disorder	https://www.cochranelibrary.co m/central/doi/10.1002/central/ CN-02504108/full	D M	No	Stud y type

Papathanasiou, I. and Heron, C.	1	10.3	Case weighting in a speech	L	No	Stud
	9	109/	and language therapy	M		у
	9	1368	service			type
	8	2829				, ,
		8091				
		7941				
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Pennington, L., Roddam, H., Burton, C., Russell, I., Godfrey, C. and Russell, D. Schwarz, M., Coccetti, A., Cardell, E., Murdoch, A.	2 0 0 5 5	10.1 191/ 0269 2155 05cr 8780 a	Promoting research use in speech and language therapy: a cluster randomized controlled trial to compare the clinical effectiveness and costs of two training strategies	LM	No	Stud y type
and Davis, J.	0 1 7	080/ 1754 9507 .201 6.12	swallowing in thrombolysed stroke patients: Implementation of a new protocol	C	INO	y type

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Sitzman, T. and Britto, M.	2	doi:	Cost effectiveness of	G	No	
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	6		velopharyngeal			on
			insufficiency following cleft			
			palate repair			
Slovarp, L. J., Jette, M. E., Gillespie, A. I., Reynolds,	2	10.1	Evaluation and	G	No	Stud
J. E. and Barkmeier-Kraemer, J. M.	0	007/	Management Outcomes	C		У
	2	s004	and Burdens in Patients			type
	1	08-	with Refractory Chronic			
		021-	Cough Referred for			
		0044	Behavioral Cough			
		2-w	Suppression Therapy			
Tam, A., Mac, S., Isaranuwatchai, W. and Bayley,	2		Cost-effectiveness of a high-intensity rapid access outpatient	J	no	
M.	0		stroke rehabilitation program	Н		inter
	1					venti
	9					on
Tarrant, M., Carter, M., Dean, S. G., Taylor, R. S.,	2	10.1	Singing for people with	G	No	
Warren, F. C., Spencer, A., Adamson, J., Landa, P.,	0	136/	aphasia (SPA): a protocol	С		inter
Code, C. and Calitri, R.	1	bmj	for a pilot randomised			venti
	8	open	controlled trial of a group			on
		-	singing intervention to			
		2018	improve well-being			
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Vallentin, T., Packham, T., Fleck, R. and Turkstra, L.	2	10.1	World Stroke Congress	<u>G</u>	No	Stud
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and a Constant Burth B	_	10.1	Francis and the first	_	N.	ľ
van der Gaag, A. and Brooks, R.	2	10.1	Economic aspects of a	<u>G</u>	No	_
	0	080/	therapy and support	<u>J</u>		inter
	0	1368	service for people with			venti
	8	2820	long-term stroke and			on
		7015	aphasia			
		6037				
		6				
Vohr, B. R., Oh, W., Stewart, E. J., Bentkover, J. D.,	2		Comparison of costs and referral rates of 3 universal newborn	J	no	
Gabbard, S., Lemons, J., Papile, L. A. and Pye, R.	0		hearing screening protocols	Н		inter
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	1					on
Wall, L. R., Kularatna, S., Ward, E. C., Cartmill, B.,	2	10.1	Economic Analysis of a	<u>G</u>	No	
Hill, A. J., Isenring, E., Byrnes, J. and Porceddu, S. V.	0	007/	Three-Arm RCT Exploring	Ī		inter
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	9	55-	Prophylactic Swallowing			on
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		018-	Therapy to Patients with			

		2255		T		
		9960	Head and Neck Cancer			
		-1	During			
			(Chemo)Radiotherapy			
Weirather, Y. P., Korth, N., White, K. R., Downs, D.	1		Cost analysis of TEOAE-based universal newborn hearing	J	no	
and WoodsKershner, N.	9		screening	Н		inter
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Weiss, Rita S.	1	doi:	Efficacy and Cost	G	No	cann
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	8		and Kindergarten	1 7	uld	locat
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Werbaneth, K., Shum, J., Deane, S., Larrenaga, M.,	2	doi:	Reducing costs and length	<u>G</u>	No	entio
Tse, J. R., Bernier, E. and Vora, N.	0		of stay using standardized	<u> 1</u>		n
	1		dysphagia evaluation in			
	8		acute stroke patients			
Yang, H. L., Yong, H. H. and Tan, D.	2	doi:	Reducing nursing home	<u>G</u>	No	Interv entio
	0		pneumonias: A cost-	Ī		n
	1		effective approach			
	1					