

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			
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

JB1 = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* 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 JB1 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).

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

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 pharmaco-economic* 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 pharmaco-economic* 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 limit 29 to english language

Appendix 3: Reasons for exclusion at full paper screening

Author	Year	DOI	Title	Link (Trial protocols)	Reviewer initials	Include (Full paper screening)	Notes
Actrn	2015	doi:	COMPARE - An evaluation of two different treatments compared to usual speech pathology in people with problems communicating after stroke	https://www.cochranelibrary.com/web/cochrane/content?templateType=full&urlTitle=%2Fcentral%2Fdoi%2F10.1002%2Fcentral%2FCN-02442006&doi=10.1002%2Fcentral%2FCN-02442006&type=central&contentTypeLanguage=	JH	No	Study type
Ali, M., Ben Basat, A. Lifshitz, Berthier, M., Blom Johansson, M., Breitenstein, C., Cadilhac, D. A., Constantinidou, F., Cruice, M., Davila, G., Gandolfi, M., Gil, M., Grima, R., Godecke, E., Jesus, L., Jiminez, L. Martinez, Kambanaros, M., Kukkonen, T., Laska, A., Mavis, I., Mc Menamin, R., Mendez-	2021	10.1080/02687038.2021.19	Protocol for the development of the international population registry for aphasia after stroke (I-PRAISE)		JH	No	Study type

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.		14813					
Anonymous	2022	10.1055/s-0042-1748191	Health Economics in Speech-Language Pathology		LS	No	Study type
Barrett, E. E. and ur, D.	2014	10.1007/s00455-014-9571-4	Dysphagia Research Society Annual Meeting and Post-Graduate Course		JH	No	Study type (indicates radiology cost)
Bidmead, Elaine, Nick Harrop, Dr, Reid, Tilly, Marshall, Alison and Southern, Veronica	2015	10.1108/cgij-06-2015-0020	"Teleswallowing": a case study of remote swallowing assessment		LS	No	Study type
Born, H. L., De Alarcon, A., Tabangin, M., Zacharias, S. and Kelchner, L.	2017	10.1177/0194599817717251	Business of Medicine/Practice Management		LS	No	Incorrect intervention
Brogan, Emily L., Kim, Joosup, Grimley, Rohan S., Wallace, Sarah J., Baker, Caroline,	20		The Excess Costs of Hospitalization for Acute Stroke in People With Communication Impairment: A Stroke123 Data Linkage		JH	no	inter

Thayabaranathan, Tharshanah, Andrew, Nadine E., Kilkenny, Monique F., Godecke, Erin, Rose, Miranda L. and Cadilhac, Dominique A.	2 3		Substudy			venti on
Collins, A., Burns, C. L., Ward, E. C., Comans, T., Blake, C., Kenny, L., Greenup, P. and Best, D.	2 0 1 7	10.1 177/ 1357 633X 1773 3020	Home-based telehealth service for swallowing and nutrition management following head and neck cancer treatment		L S	No Inter venti on:
Cronin, P., Reeve, R., McCabe, P., Viney, R. and Goodall, S.	2 0 1 7		The impact of childhood language difficulties on healthcare costs from 4 to 13 years: Australian longitudinal study		J H	no inter venti on
Crook, C. L. and Simpson, B.	2 0 1 1	10.1 111/ j.174 7- 4949 .201 1.00 684. x	UK Stroke Forum 2011 Abstracts, Glasgow, 29 November 2011–1 December 2011		L S	No Stud y type
Cup, E. H., Pieterse, A. J., Knuijt, S., Hendricks, H. T., van Engelen, B. G., Oostendorp, R. A. and van der Wilt, G. J.	2 0 0 7	10.1 080/ 0963 8280 6009 2670 2	Referral of patients with neuromuscular disease to occupational therapy, physical therapy and speech therapy: usual practice versus multidisciplinary advice		L S	No Inter venti on:
Dowling, F., Clarke, C. E., Patel, S., Woolley, R., Ives, N. J., Rick, C. E., Wheatley, K., Smith, C., Brady, M. and Sackley, C. M.	2 0 1 4	10.1 002/ mds. 2591 4	Abstracts of the Eighteenth International Congress of Parkinson's Disease and Movement Disorders, June 8-12, 2014,		J H	No Stud y type

			Stockholm, Sweden			
Ellis, C., Hardy, R. Y. and Lindrooth, R. C.	2017		Greater healthcare utilization and costs among Black persons compared to White persons with aphasia in the North Carolina stroke belt	JH	no	intervention
Ellis, C., Lindrooth, R. C. and Horner, J.	2014	10.1044/2013_AJSLP-13-0037	Retrospective cost-effectiveness analysis of treatments for aphasia: an approach using experimental data	JH	No	Study type
Ellis, C., Simpson, A. N., Bonilha, H., Mauldin, P. D. and Simpson, K. N.	2012		The One-Year Attributable Cost of Poststroke Aphasia	JH	no	intervention
Ellis, Charles, Peach, Richard K., Hardy, Rose Y. and Lindrooth, Richard C.	2017	10.1080/02687038.2017.1303440	The influence of race on SLP utilisation and costs among persons with aphasia	JH	No	Study type
Garcia, Jane Mertz, Garrett, Kathryn L., Pimentel, Jane T. and Garcia, Robert G.	2012	10.1080/02687030.2012.14300085	Clinical services for aphasia: A survey of university clinics	VB	No	Study type

		2				
Gaustad, J. V., Kleven, L., Kornør, H., Harboe, I., Flatby, A. V., Aakhus, E., Bystad, M. and Røste, I.	2 0 2 2	doi:	Transkraniell likestrømsbehandling for depresjon og afasi: fullstendig metodevurdering		V B	No inter venti on
Jacobs, Molly and Ellis, Charles	2 0 2 3		Aphasianomics: estimating the economic burden of poststroke aphasia in the United States		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)		A K	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. x	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

Mohammadpour, F., Basakha, M., Kamal, S. H. M. and Azari, N.	2022	10.186/s12962-022-00366-z	Costing the outpatient rehabilitation services: time-driven activity-based costing approach		DM	No	intervention
Moroney, L. B., Ward, E. C., Helios, J., Crombie, J., Burns, C. L., Blake, C., Comans, T., Chua, B., Kenny, L. and Hughes, B. G. M.	2020	10.1007/s00520-019-04992-x	Evaluation of a speech pathology service delivery model for patients at low dysphagia risk during radiotherapy for HNC		DM	No	intervention

Murray, S., Ginnelly, A. and Patel, K.	2019	10.1016/j.physio.2018.11.194	A therapy assistant in the intensive care unit (ICU): a pilot project		DM	No	intervention
n9y, R. B. R.	2023	doi:	Effect of Transcranial Stimulation associated with Speech Therapy on swallowing in the acute phase of Stroke	https://ensaiosclinicos.gov.br/rg/RBR-72n9y83	DM	No	intervention
Nct	2022	doi:	A Comparison of Language Intervention Programs	https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01508846/full	DM	No	intervention
Nct	2017	doi:	Adapted Solution Focused Therapy for People With Aphasia (SOFIA Trial)	https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01495612/full	DM	No	Study type
Nct	2020	doi:	Telerehabilitation for Post-stroke Patients	https://www.cochranelibrary.com/central/doi/10.1002/central/CN-02125127/full	DM	No	intervention
Nct	2022	doi:	Parent-implemented Social Communication Treatment in Preschool Children With Autism Spectrum Disorder	https://www.cochranelibrary.com/central/doi/10.1002/central/CN-02504108/full	DM	No	Study type

Papathanasiou, I. and Heron, C.	1 9 9 8	10.3 109/ 1368 2829 8091 7941 8	Case weighting in a speech and language therapy service		L M	No	Stud y type
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Pennington, L., Roddam, H., Burton, C., Russell, I., Godfrey, C. and Russell, D.	2005	10.1191/02692155cr8780a	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	Study type
Schwarz, M., Coccetti, A., Cardell, E., Murdoch, A. and Davis, J.	2007	10.1080/17549507.2016.12	Management of swallowing in thrombolysed stroke patients: Implementation of a new protocol		GC	No	Study type

		21457				
Sitzman, T. and Britto, M.	2016	doi:	Cost effectiveness of alternative strategies in the treatment of velopharyngeal insufficiency following cleft palate repair		GC	No intervention
Slovarp, L. J., Jette, M. E., Gillespie, A. I., Reynolds, J. E. and Barkmeier-Kraemer, J. M.	2011	10.1007/s00408-021-00442-w	Evaluation and Management Outcomes and Burdens in Patients with Refractory Chronic Cough Referred for Behavioral Cough Suppression Therapy		GC	No Study type
Tam, A., Mac, S., Isaranuwachai, W. and Bayley, M.	2019		Cost-effectiveness of a high-intensity rapid access outpatient stroke rehabilitation program		JH	no intervention
Tarrant, M., Carter, M., Dean, S. G., Taylor, R. S., Warren, F. C., Spencer, A., Adamson, J., Landa, P., Code, C. and Calitri, R.	2018	10.1136/bmjopen-2018-025167	Singing for people with aphasia (SPA): a protocol for a pilot randomised controlled trial of a group singing intervention to improve well-being		GC	No intervention
Vallentin, T., Packham, T., Fleck, R. and Turkstra, L.	2018	10.1177/1747493018789543	World Stroke Congress Abstracts, 2018		<u>G</u> <u>J</u>	No Study type

van der Gaag, A. and Brooks, R.	2008701560376	10.1080/13682820701560376	Economic aspects of a therapy and support service for people with long-term stroke and aphasia		<u>G</u> <u>J</u>	No	inter venti on
Vohr, B. R., Oh, W., Stewart, E. J., Bentkover, J. D., Gabbard, S., Lemons, J., Papile, L. A. and Pye, R.	20001		Comparison of costs and referral rates of 3 universal newborn hearing screening protocols		J H	no	inter venti on
Wall, L. R., Kularatna, S., Ward, E. C., Cartmill, B., Hill, A. J., Isenring, E., Byrnes, J. and Porceddu, S. V.	20119	10.1007/s00455-018-	Economic Analysis of a Three-Arm RCT Exploring the Delivery of Intensive, Prophylactic Swallowing Therapy to Patients with		<u>G</u> <u>J</u>	No	inter venti on

		9960 -1	Head and Neck Cancer During (Chemo)Radiotherapy			
Weirather, Y. P., Korth, N., White, K. R., Downs, D. and WoodsKershner, N.	1 9 9 7		Cost analysis of TEOAE-based universal newborn hearing screening	J H	no	inter venti on
Weiss, Rita S.	1 9 8 0	doi:	Efficacy and Cost Effectiveness of an Early Intervention Program for Young Handicapped Children	<u>G</u> <u>J</u>	No (Co uld no t ret rie ve)	cann ot locat e pape r
Weiss, Rita S.	1 9 8 0	doi:	Efficacy of INREAL Intervention for Preschool and Kindergarten Language Handicapped and Bilingual (Spanish) Children	<u>G</u> <u>J</u>	No (Co uld no t ret rie ve)	cann ot locat e pape r
Werbaneth, K., Shum, J., Deane, S., Larrenaga, M., Tse, J. R., Bernier, E. and Vora, N.	2 0 1 8	doi:	Reducing costs and length of stay using standardized dysphagia evaluation in acute stroke patients	<u>G</u> <u>J</u>	No	Interv entio n
Yang, H. L., Yong, H. H. and Tan, D.	2 0 1 1	doi:	Reducing nursing home pneumonias: A cost- effective approach	<u>G</u> <u>J</u>	No	Interv entio n