

SUPPLEMENT

SPEECH/ LANGUAGE THERAPY FOR CHILDREN WITH NEURODEVELOPMENTAL DISORDERS – SUPPLEMENT



MARIJKE EYSEN, FABIAN DESIMPEL, ANS VAN GINCKEL

Title:	Speech/ language therapy for children with neurodevelopmental disorders – Supplement
Authors:	Marijke Eyssen (KCE), Fabian Desimpel (KCE), Ans Van Ginckel (KCE)
Project facilitator:	Nathalie Swartenbroekx (KCE)
Information specialist:	Nicolas Fairon (KCE)
External experts:	Annick Comblain (ULiège), Petra Warreyn (Onderzoeksgroep Ontwikkelingsdiversiteit, Universiteit Gent (Ugent))
Stakeholders:	Cinzia Agoni (Groupe d'Action qui dénonce le Manque de Places pour les personnes handicapées de grande dépendance (GAMP)), Sanae Bakkali Tahiri (Union Nationale des Mutualités Libres (UNML)), Christophe Barrea (Belgian Society of Pediatric Neurology (BSPN)), Patrick Beaufort (Conseil de l'Enseignement des Communes et des Provinces (CECP)), Julien Bodart (Agence wallonne pour une vie de qualité (AVIQ)), Laetitia Bokestael (Prodia, Vrij CLB (Centrum voor Leerlingenbegeleiding) Netwerk), Benjamin Carette (Iriscare), Sergio Cavallera (Fédération des Centres de Réadaptation Ambulatoire (FCRA)), Dave Ceule (Onafhankelijk Leven vzw), Allard Claessens (Downsyndroom Vlaanderen vzw), Eva Cloet (Centrum voor Ontwikkelingsstoornissen, Brussel (COS)), Katrijn Compennolle (Departement Zorg, Vlaanderen), Sarina Coniglio (AVIQ), Klaas Coopman (Centrum voor Ambulante Revalidatie (CAR Ter Eecken), Federatie Centra voor Ambulante Revalidatie), Thomas Dabeux (Inclusion asbl), Tom De Niels (COS, Gent), Georges Desquiers (Solidaris), Veronique Duchenne (Conseil Supérieur National des Personnes Handicapées (CSNPH)), Laetitia Duray-Maquestiau (Conseil supérieur des Centres psycho-médico-sociaux (CSCPMS)), Kris Evers (Expertisecentrum Autisme Leuven (ECA)), Laura Godeau (Rijksinstituut voor ziekte- en invaliditeitsverzekering – Institut national d'assurance maladie-invalidité (RIZIV - INAMI)), Ann Goeleven (UZ Leuven, KU Leuven), Bérengère Guccione (Iriscare), Marie Horlin (Centre Interfédéral pour l'égalité des chances (Unia)), Eddy Hoste (Centrum Taalontwikkelingsstoornissen (CETOS)), Lieve Kiebooms (Zorggroep Myna, Vlaamse Vereniging voor Kinder- en jeugdpsychiatrie (VVK)), Ronald Kloeck (Vereniging voor Infantiele Encefalopathie, hersenverlamming vzw), Lieve Krobea (Departement Zorg, Vlaanderen), Paul-André Leblanc (Secrétariat Général de l'Enseignement Catholique (SeGEC)), Stefaan Lefevere (Vlaamse Vereniging voor Logopedisten (VVL)), Christelle Maillart (Union Professionnelle des Logopèdes Francophones (UPLF)), Gisèle Marlière (CSNPH), Natallia Mastsepan (Nationale Hoge Raad voor Personen met een Handicap (NHRPH)), Rupal Mehta (Belgische beroepsvereniging voor Otorhinolaryngologie, Gelaat- en Halschirurgie), Marit Mellaerts (Vlaams Patiëntenplatform (VPP)), Benoîte Millet (Société Royale Belge d'Oto-Rhino-Laryngologie et de Chirurgie Cervico-Faciale (SRB ORL CCF)), Diane Estelle Ngatchou Djomo (Ligue des Usagers des Services de Santé (LUSS)), Jérémy Philippe (Fédération Des Etablissements Libres Subventionnés Indépendants Asbl (FELSI)), Julien Pot (Union Nationale des Mutualités Socialistes (UNMS)), Nathalie Saczuk (UPLF), Ruud Saerens (Onafhankelijke Ziekenfondsen (OZ)), Sarah Schaubroeck (Permanente Ondersteuningscel GO! CLB en Prodiagnostiek), Lut Schelpe (Referentiecentrum Autisme (RCA) UZ Brussel), Stefaan



External validators:	Singelée (Federatie Centra voor Ambulante Revalidatie), Martine Thys (Vlaamse Vereniging Autisme (VVA)), Bieke Van Deun (Solidaris), Hanne Van Diest (Landsbond van Neutrale Ziekenfondsen), Johan Van Dorst (Landsbond der Christelijke Mutualiteiten (LCM)), Viviane Van Elshocht (LCM), Maaïke Van Goethem (Prodia, Permanente Ondersteuningscel (POC) Onderwijsvereniging van Steden en Gemeenten (OVSG)), Heidi Van Grootel (RCA Antwerpen, Ziekenhuis Aan de Stroom (ZAS), Universitaire Kinder-en Jeugdpsychiatrie Antwerpen), Joke Vandereet (Expertisecentrum Autisme Leuven), Evelien Verschueren (RIZIV - INAMI), Margriet Verstreken (Antwerps Revalidatiecentrum (ARC), NKO dienst van ZAS campus Augustinus, Belgische beroepsvereniging van artsen-specialisten in de functionele en professionele revalidatie), Christine Vonckx (Vrij CLB Netwerk), Sophie Willekens (Kannet), An Wirix (COS Leuven -Limburg)
Acknowledgements:	Miet De Letter (UGent), Monica Melby-Lervåg (University of Oslo, Norway), Courtenay Norbury (University college of London, United Kingdom)
Reported interests:	Helena Van Deynse (KCE)
KCE members:	KCE is a federal institution funded by INAMI/RIZIV, by the Federal Public Service of Health, Food chain Safety and Environment, and by the Federal Public Service of Social Security. KCE's mission is to advise policymakers on decisions relating to health care and health insurance on the basis of scientific and objective research. It is expected to identify and shed light on the best possible solutions, in the context of an accessible, high-quality health care system with due regard for growing demand and budgetary constraints. KCE has no interest in companies (commercial or non-commercial, i.e. hospitals and universities), associations (e.g. professional associations, unions), individuals or organisations (e.g. lobby groups) that could be positively or negatively affected (financially or in any other way) by the implementation of the recommendations. All experts involved in the writing of the report or the peer-review process completed a declaration of interest form. Information on potential conflicts of interest is published in the colophon of this report. All members of the KCE Expert Team make yearly declarations of interest and further details of these are available upon request.
Reported interests:	Membership of a stakeholder group on which the results of this report could have an impact: Christophe Barrea (Belgian Society of Pediatric Neurology), Julien Bodart (AVIQ (Walloon Region), rehabilitation sector)), Allard Claessens (Downsyndroom Vlaanderen (parents' association)), Thomas Dabeux (Association representing people with intellectual disabilities. People currently partially excluded from speech therapy reimbursement), Eddy Hoste (CETOS vzw), Ronald Kloeck (Vereniging voor Infantiele Encefalopathie, hersenverlamming vzw), Paul-André Leblanc (SeGEC), Christelle Maillart (Speech therapists), Benoîte Millet (ENT revalidation), Julien Pot (Alternate representative at Logomut for Solidaris FR), Stefaan Singelée (Federatie Centra voor Ambulante Revalidatie), Viviane Van Elshocht (Landsbond der Christelijke Mutualiteiten), Margriet Verstreken (Medical director in a CAR, the ARC, Antwerps Revalidatiecentrum), Sophie Willekens (Kannet+ vzw, organization for and by people with disabilities), Petra Warreyn (European Association for Research on Learning and Instruction, WAIMH (World Association for Infant Mental Health) Vlaanderen)



Holder of intellectual property (patent, product developer, copyrights, trademarks, etc.): Miet De Letter (Patent, entitled: Analysis of evoked event-related potential data, granted on 07/11/2023, under no. US 11,810,470. This patent is not related to the KCE study)

Fees or other compensation for writing a publication or participating in its development: Christelle Maillart (Work at the UPLF is subject to duties for monitoring dossiers), Sarah Schaubroeck (Expert for the update of the Guideline for Intellectual Disability from the Quality Center for Diagnostics), Petra Warreyn (Copyrights for various publications related to supporting children with autism)

Participation in scientific or experimental research as an initiator, principal investigator or researcher: Ann Goeleven (KOTK studie HITCRAD – swallowing therapy head and neck oncology), Christelle Maillart (As part of my assignment as a teacher and researcher at the university, I conduct experimental research in the field of developmental language disorder (DLD) and communication disorders. None of the research I conduct or have published is covered by the above report), Diane Estelle Ngatchou Djomo (PhD in drug quality in LMICs), Petra Warreyn (Principal investigator/supervisor of studies on the language development of children with autism and the (pre)academic development of various target groups)

A grant, fees or funds for a member of staff or another form of compensation for the execution of research described above: Ann Goeleven (KOTK)

Consultancy or employment for a company, an association or an organisation that may gain or lose financially due to the results of this report: Julien Bodart (AVIQ (Walloon region)), Stefaan Singelée (Federatie Centra voor Ambulante Revalidatie)

Payments to speak, training remuneration, subsidised travel or payment for participation at a conference: Christelle Maillart (For research functions, the FNRS regularly intervenes to reimburse travel costs linked to presentations), Petra Warreyn (Honoraria for training courses on early childhood development and the diagnosis of developmental disorders)

Presidency or accountable function within an institution, association, department or other entity on which the results of this report could have an impact: Thomas Dabeux (Advocacy manager for an association representing people with intellectual disabilities. People currently partially excluded from speech therapy reimbursement), Kris Evers (Coordinator Expertise Center Autism Leuven), Ann Goeleven (Head of speech therapy service – CAR MUCLA UZ Leuven), Lieve Kiebooms (COMGGKJ (Committee for a New Mental Health Policy for Children and Young People): member of plenary session, co-chair of the working group on mental health and disabilities, member of the working group on For-K), Ronald Kloeck (Vereniging voor Infantiele Encefalopathie, hersenverlamming vzw), Paul-André Leblanc (President of the Higher Council for Education for Students with Special Needs), Christelle Maillart (Vice-President of the UPLF. The impact of the study could have consequences for the way speech therapists practice. This is why we are being consulted. The study has no impact on my academic duties), Stefaan Singelée (President of the Federatie Centra voor Ambulante Revalidatie, Director Centre for ambulatory rehabilitation Ter Kouter (Deinze)), Margriet Verstreken (Medical director of the ARC), Sophie Willekens (Secretary General Kannel + vzw, organization for and by people with disabilities), Petra Warreyn



(Member of the Board and General Assembly of the Inclusion Embassy)

Other possible interests that could lead to a potential or actual conflict of interest: Rupal Mehta (Secretary General, Belgian Professional Union for Otolaryngology (ENT), Head and Neck Surgery), Petra Warreyn (Professor education Speech/language therapists, Universiteit Gent)

Layout:

Ine Verhulst, Joyce Grijseels

Disclaimer:

- The external experts were consulted about a (preliminary) version of the scientific report. They did not co-author the scientific report and did not necessarily agree with its content.
- Subsequently, a (final) version was submitted to the validators. The validation of the report results from a consensus or a voting process between the validators. The validators did not co-author the scientific report and did not necessarily all three agree with its content.
- Finally, this report has been approved Choose an item. by the Executive Board.
- Only the KCE is responsible for errors or omissions that could persist. The policy recommendations are also under the full responsibility of the KCE.

Publication date:

29 april 2025

Project number:

2024-50-HSR

Domain:

Health Services Research (HSR)

MeSH:

Speech therapy; Language therapy; Child; Child, preschool; Neurodevelopmental Disorders

NLM Classification:

WL 340.3

Language:

English

Format:

Adobe® PDF™ (A4)

Legal depot:

D/2025/10.273/04

ISSN:

2466-6459

Copyright:

KCE reports are published under a “by/nc/nd” Creative Commons Licence <http://kce.fgov.be/content/about-copyrights-for-kce-publications>.



How to refer to this document?

Eyssen M, Desimpel F, Van Ginckel A. Speech/ language therapy for children with neurodevelopmental disorders – Supplement. Health Services Research (HSR) Brussels: Belgian Health Care Knowledge Centre (KCE). 2025. KCE Reports vol. D/2025/10.273/04.

This document is available on the website of the Belgian Health Care Knowledge Centre.

<https://doi.org/10.57598/R399S>



■ TABLE OF CONTENTS

LIST OF FIGURES	2
LIST OF TABLES	3
■ APPENDICES.....	5
1 SUPPLEMENT TO CHAPTER 1.....	5
1.1 LEGISLATION REGARDING REIMBURSEMENT OF SPEECH THERAPY IN BELGIUM (DUTCH - FRENCH).....	5
1.1.1 Bijlage bij het KB van 14 september 1984: artikel 36 - Annexe à l'A.R. du 14 septembre 1984 : article 36.....	5
1.1.2 De wet van 8 mei 2019 betreffende de tenlasteneming van logopedische verstrekkingen - La loi du 8 mai 2019 relative à la prise en charge des prestations de logopédie	7
1.1.3 Koninklijk besluit (17/07/2024) tot uitvoering van de wet van 8 mei 2019 betreffende de tenlasteneming van de logopedische verstrekkingen - Arrêté royal (17/07/2024) portant exécution de la loi du 8 mai 2019 modifiant la prise en charge des prestations de logopédie	7
1.2 NATIONAL HIGH COUNCIL FOR PERSONS WITH DISABILITIES (2023): LEGAL CONSIDERATIONS FOR REIMBURSEMENT OF MONODISCIPLINARY SPEECH/LANGUAGE THERAPY	9
1.3 LIST OF CENTRES FOR AMBULATORY REHABILITATION (CAR-CRA), AUTISM REFERENCE CENTRES AND CENTRES FOR DEVELOPMENTAL DISORDERS (COS) IN BELGIUM	10
1.4 DEFINITIONS NEURODEVELOPMENTAL DISORDERS.....	16
1.4.1 ICD-11 - World Health Organization (WHO) International Classification of Diseases (ICD)-11	16
1.4.2 DSM-5-TR - American Psychiatric Association (2022) Diagnostic and Statistical Manual of Mental Disorders	22
2 SEARCH STRATEGIES GUIDELINES	36
2.1 MEDLINE OVID	36
2.2 EMBASE	39
2.3 CINAHL.....	43
2.4 ERIC EDUCATION RESOURCES INFORMATION CENTER.....	46
3 SELECTION OF GUIDELINES	50
3.1 DATABASE SEARCH.....	50
3.2 GREY SEARCH.....	50
3.3 FULL TEXT EVALUATION	51
4 QUALITY APPRAISAL OF GUIDELINES	62
4.1 INTELLECTUAL DISABILITY (ID).....	62
4.2 AUTISM SPECTRUM DISORDER (ASD)	62

4.3	ATTENTION DEFICIT / HYPERACTIVITY DISORDER (ADHD).....	63
4.4	COMMUNICATION DISORDERS (CD)	63
4.5	SPECIFIC LEARNING DISORDER (LD).....	63
5	EXTRACTION TABLES OF GUIDELINES	77
5.1	LIST OF INCLUDED AND EXCLUDED GUIDELINES FOR DATA EXTRACTION.....	77
5.2	DATA EXTRACTION GUIDELINES	81
5.2.1	Intellectual disability (ID): included recommendations from GL	81
5.2.2	Autism spectrum disorder (ASD): included recommendations from GL	96
5.2.3	Attention-deficit/hyperactivity disorder (ADHD): included recommendations from GL	110
5.2.4	Communication disorders (CD): included recommendations from GL.....	111
5.2.5	Specific learning disorder (LD): included recommendations from GL.....	113
5.3	OVERVIEW OF THE SUMMARY POINTS OF THE RECOMMENDATIONS EXTRACTED FROM THE GL	114
5.3.1	Intellectual disability (ID): Summary Points	114
5.3.2	Autism spectrum disorder (ASD): Summary Points	122
5.3.3	Attention-deficit/hyperactivity disorder (ADHD): Summary Points	130
5.3.4	Communication disorders (CD): Summary Points	130
6	SEARCH STRATEGIES SYSTEMATIC REVIEWS.....	133
6.1	MEDLINE OVID	133
6.2	COCHRANE LIBRARY	138
6.3	EMBASE	143
6.4	CINAHL.....	148
6.5	ERIC EDUCATION RESOURCES INFORMATION CENTER.....	154
7	SELECTION OF SYSTEMATIC REVIEWS	159
7.1	DATABASE SEARCH.....	159
7.2	FULL TEXT EVALUATION	159
8	QUALITY APPRAISAL OF SYSTEMATIC REVIEWS	166
■	REFERENCES	169

LIST OF FIGURES

Figure 1 – Flow chart of study selection	52
Figure 2 – Flow chart of study selection	160



LIST OF TABLES

Table 1 – List of Centres for Ambulatory Rehabilitation (CAR-CRA) in Belgium.....	11
Table 2 – List of Autism Reference Centres¥	14
Table 3 – List of Centres for Developmental Disorders (COS)¥.....	15
Table 4 – International Classification of Diseases (ICD)-11 of neurodevelopmental disorders	17
Table 5 – Intellectual disability (ID): overview of included papers based on full-text evaluation	53
Table 6 – Intellectual disability (ID): overview of excluded papers based on full-text evaluation ...	54
Table 7 – Autism spectrum disorder (ASD): overview of included papers based on full-text evaluation	55
Table 8 – Autism spectrum disorder (ASD): overview of excluded papers based on full-text evaluation	56
Table 9 – Attention deficit / Hyperactivity disorder (ADHD): overview of included papers based on full-text evaluation	57
Table 10 – Attention deficit / Hyperactivity disorder (ADHD): overview of excluded papers based on full-text evaluation	58
Table 11 – Communication disorders (CD): overview of included papers based on full-text evaluation	60
Table 12 – Communication disorders (CD): overview of excluded papers based on full-text evaluation	60
Table 13 – Specific Learning Disorder (LD): overview of included papers based on full-text evaluation	61
Table 14 – Intellectual disability (ID): Quality appraisal (AGREE II)	64
Table 15 – Autism spectrum disorder (ASD): Quality appraisal (AGREE II)	66
Table 16 – Attention deficit / Hyperactivity disorder (ADHD): Quality appraisal (AGREE II)	69
Table 17 – Communication disorders (CD): Quality appraisal (AGREE II)	72
Table 18 – Specific Learning Disorder (LD): Quality appraisal (AGREE II)	74
Table 19 – Intellectual disability (ID): Guidelines included / excluded for data extraction	77
Table 20 – Autism spectrum disorder (ASD): Guidelines included / excluded for data extraction .	78
Table 21 – Attention deficit / Hyperactivity disorder (ADHD): Guidelines included / excluded for data extraction	79
Table 22 – Communication disorders (CD): Guidelines included / excluded for data extraction ...	80
Table 23 – Specific Learning Disorder (LD): Guidelines included / excluded for data extraction...	80
Table 24 – Intellectual disability (ID): included recommendations from GL	81
Table 25 – Autism spectrum disorder (ASD): included recommendations from GL	96
Table 26 – Attention-deficit/hyperactivity disorder (ADHD): included recommendations from GL	110
Table 27 – Communication disorders (CD): included recommendations from GL	112
Table 28– Systematic reviews: overview of included papers based on full-text evaluation	161



Table 29 – Systematic reviews: overview of excluded papers based on full-text evaluation	162
Table 30– Systematic reviews: Quality appraisal (AMSTAR 2): excluded studies	167
Table 31 – Systematic reviews: Quality appraisal (AMSTAR 2): studies included for data extraction	168



■ APPENDICES

1 SUPPLEMENT TO CHAPTER 1

1.1 Legislation regarding reimbursement of speech therapy in Belgium (Dutch - French)

1.1.1 *Bijlage bij het KB van 14 september 1984: artikel 36 - Annexe à l'A.R. du 14 septembre 1984 : article 36*

1.1.1.1 *Nederlands*

<http://www.ejustice.just.fgov.be/eli/bsluit/1984/09/14/2013000795/staatsblad>

Artikel 36, § 2 van de bijlage van het KB van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen bepaalt het volgende:

« (...) de verzekeringstegemoetkoming mag worden verleend voor zover de behandeling kan bijdragen tot een verbetering van de stoornissen;

(...)

b) aan de rechthebbende die één van de volgende taal- en/of spraakstoornissen heeft:

(...)

2° stoornissen in de receptieve en/of expressieve taalontwikkeling aangetoond door een taalttest waarvan het resultaat lager is dan of gelijk aan het 3de percentiel, waarbij er geen intelligentiestoornis is (totaal IQ van 86 of meer, gemeten met een individuele test) en geen ernstige gehoorstoornis (het gemiddelde gehoorverlies 2 bedraagt aan het beste oor niet meer dan 40 dB HL). Deze taalttests dienen voor te komen op een door de Commissie voor de overeenkomsten opgestelde limitatieve lijst;

(...)

f) aan de rechthebbende met dysfasie, dit wil zeggen ernstige expressieve en/of receptieve taalstoornissen die hardnekkig blijven voortduren na de vijfde verjaardag en die ernstig interfereren met de sociale communicatie en/of dagelijkse activiteiten waarbij mondeling taalgebruik komt kijken, in afwezigheid van een pervasieve ontwikkelingsstoornis, een gehoorstoornis (het gemiddelde gehoorverlies bedraagt aan het beste oor niet meer dan 40 dB HL), een intelligentiestoornis (performantieel of non-verbaal IQ of OQ (ontwikkelingsquotiënt) van 86 of meer, gemeten met een individuele test voorkomende op een door de Commissie voor de overeenkomsten met de logopedisten goedgekeurde limitatieve lijst. »

Eveneens in artikel 36 in §3, lid 1 wordt gesteld dat er nooit een verzekeringstegemoetkoming verleend wordt ingeval de rechthebbende:

- met taal-en/of spraakstoornissen of dysfasie buitengewoon onderwijs volgt (1°),
- gehuisvest wordt in een door deelstaten gesubsidieerde instelling waar de functie 'logopedist' deel is van de erkenningsnorm (2°),
- ter verpleging is opgenomen in een dienst die is erkend onder één van de kenletters G, T, A, Sp of K; (3°), (...),
- wordt gerevalideerd in een inrichting die met het RIZIV of met de gefedereerde entiteiten een overeenkomst heeft gesloten die met name de behandeling door een logopedist dekt (°5).

In zijn §3, lid 2 wordt gesteld dat verzekeringstegemoetkoming eveneens uitgesloten is van logopedische behandeling van: "stoornissen ten gevolge van psychiatrische aandoeningen of emotionele toestanden (...)".

1.1.1.2 Français

<http://www.ejustice.just.fgov.be/eli/arrete/1984/09/14/2013000795/moniteur>

L'article 36, §2 de l'annexe à l'A.R. du 14 septembre 1984 établissant la nomenclature des prestations de santé dispose ce qui suit :

« (...) l'intervention de l'assurance peut être accordée pour autant que le traitement puisse apporter une amélioration des troubles ;

(...)

b) au bénéficiaire qui présente un des troubles du langage et/ou de la parole suivants :

(...)

2° troubles du développement du langage, versant réceptif et/ou expressif, démontrés par un test du langage donnant un résultat inférieur ou égal au 3e percentile, en l'absence d'un trouble de l'intelligence (QI total de 86 ou plus, mesuré par test individuel) et en l'absence d'un trouble important de l'audition (perte auditive moyenne ne dépassant pas, à la meilleure oreille, 40 dB HL). Ces tests de langage doivent figurer dans une liste limitative approuvée par la Commission de conventions ;

(...)

f) au bénéficiaire atteint de dysphasie, c'est-à-dire des troubles sévères du langage réceptif et/ou expressif, persistant après le cinquième anniversaire et qui interfèrent gravement avec la communication sociale et/ou les activités quotidiennes faisant appel au langage oral, en l'absence d'un trouble envahissant du développement, d'un trouble auditif (perte auditive moyenne ne dépassant pas, à la meilleure oreille, 40 dB HL), d'un trouble d'intelligence [QI de performance ou non-verbal ou QD (quotient développemental) de 86 ou plus, mesuré par un test individuel figurant dans une liste de tests approuvée par la Commission de conventions avec les logopèdes].»

L'article 36, § 3, alinéa 1 dispose également qu'il n'y a jamais d'intervention de l'assurance dans les cas où le bénéficiaire :

- présentant des troubles du langage et/ou de la parole ou une dysphasie suit un enseignement spécial (1°),
- est hébergé dans une institution subsidiée par les communautés/régions et dans laquelle la fonction « logopède » est comprise dans les normes d'agrément (2°),
- est hospitalisé dans un service agréé sous l'un des indices G, T, A, Sp ou K (3°), (...),
- est rééduqué dans un établissement ayant conclu avec l'INAMI ou avec les entités fédérées une convention couvrant notamment le traitement par un logopède (°5).

Le §3, alinéa 2 dispose que l'intervention de l'assurance est également exclue dans les traitements logopédiques de : « troubles dus à des affections psychiatriques ou états émotionnels (...) ».



1.1.2 *De wet van 8 mei 2019 betreffende de tenlasteneming van logopedische verstrekkingen - La loi du 8 mai 2019 relative à la prise en charge des prestations de logopédie*

1.1.2.1 *Nederlands*

<http://www.ejustice.just.fgov.be/eli/wet/2019/05/08/2019202528/staatsblad>

De wet van 8 mei 2019 betreffende de tenlasteneming van de logopedische verstrekkingen stelt:

De Koning bepaalt, op basis van door de Commissie voor de overeenkomsten met de logopedisten goedgekeurd multidisciplinair onderzoek, de **cumulregels** die van toepassing zijn op de verstrekkingen van artikel 36 van de bijlage bij het koninklijk besluit van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen inzake verplichte verzekering voor geneeskundige verzorging en uitkeringen voor wat de samenloop van monodisciplinaire logopedie en multidisciplinaire revalidatie betreft voor kinderen met een intelligentiestoornis gedefiniëerd als een performantieel of non-verbaal IQ of OQ (ontwikkelingsquotiënt) van minder dan 86..

1.1.2.2 *Français*

<http://www.ejustice.just.fgov.be/eli/loi/2019/05/08/2019202528/moniteur>

La loi du 8 mai 2019 relative à la prise en charge des prestations de logopédie dispose que :

Le Roi fixe, sur la base d'une recherche pluridisciplinaire approuvée par la Commission de conventions avec les logopèdes, les **règles de cumul** qui sont d'application aux prestations de l'article 36 de l'annexe de l'arrêté royal du 14 septembre 1984 établissant la nomenclature des prestations de santé en matière d'assurance obligatoire soins de santé et indemnités, en ce qui concerne le cumul d'une logopédie monodisciplinaire avec une rééducation pluridisciplinaire pour les enfants atteints d'un trouble d'intelligence défini comme un QI de performance ou non-verbal ou un QD (quotient développemental) de moins de 86.

1.1.3 *Koninklijk besluit (17/07/2024) tot uitvoering van de wet van 8 mei 2019 betreffende de tenlasteneming van de logopedische verstrekkingen - Arrêté royal (17/07/2024) portant exécution de la loi du 8 mai 2019 modifiant la prise en charge des prestations de logopédie*

1.1.3.1 *Nederlands*

<http://www.ejustice.just.fgov.be/eli/bsluit/2024/07/17/2024007172/staatsblad>

Art 1 van het KB van 17/07/2024 bepaalt dat de tegemoetkoming van de verplichte ziekteverzekering mag worden verleend, voor zover de behandeling kan bijdragen tot een verbetering van de stoornissen, aan de rechthebbende met een totaal performantieel of non-verbaal IQ of OQ (ontwikkelingsquotiënt) lager dan 86, gemeten met een individuele test voorkomend op een door de Overeenkomstencommissie logopedisten - verzekeringsinstellingen goedgekeurde limitatieve lijst, voor de logopedische behandeling van de stoornissen voorzien in § 2, b) 2° en f) van artikel 36 van de bijlage bij het koninklijk besluit van 14 september 1984 tot vaststelling van de nomenclatuur van de geneeskundige verstrekkingen inzake verplichte verzekering voor geneeskundige verzorging en uitkeringen (...).

Deze tegemoetkoming moet worden toegekend conform de bepalingen beschreven in artikel 36 van de bijlage van het bovenvermelde koninklijk besluit van 14 september 1984.

Voor de rechthebbenden met een totaal performantieel of non-verbaal IQ of OQ (ontwikkelingsquotiënt) lager dan 70, gemeten met een individuele test voorkomend op een door de Overeenkomstencommissie logopedisten - verzekeringsinstellingen goedgekeurde limitatieve lijst,

kan deze tegemoetkoming enkel worden toegestaan op voorwaarde dat een multidisciplinair bilan inclusief logopedie werd gerealiseerd in een Centrum voor Ambulante Revalidatie erkend door de deelstaten. Dit bilan moet de doeltreffendheid aantonen van een monodisciplinaire logopedische behandeling.

Art 2 van het KB van 17/07/2024 bepaalt dat de bovenstaande cumulregels zullen ten laatste twee jaar na de inwerkingtreding ervan geëvalueerd worden op basis van een wetenschappelijke studie die een significant aantal patiënten opvolgt die een logopedische behandeling kregen in het kader van dit besluit.

Dit besluit treedt in werking op 01/09/2024.

Art. 1, derde lid treedt in werking op 1 juli 2025. Het behandelingsakkoord logopedie toegekend aan de in artikel 1 beschreven rechthebbende, tussen de datum van inwerkingtreding van dit besluit en 1 juli 2025, kan worden verlengd op voorwaarde dat een multidisciplinair bilan inclusief logopedie werd gerealiseerd in een Centrum voor Ambulante Revalidatie erkend door de gefedereerde entiteiten. Dit bilan moet de doeltreffendheid aantonen van een monodisciplinaire logopedische behandeling.

1.1.3.2 Français

<http://www.ejustice.just.fgov.be/eli/arrete/2024/07/17/2024007172/moniteur>

L'article 1 de l'AR du 17/07/2024 dispose que l'intervention de l'assurance obligatoire soins de santé peut être accordée, pour autant que le traitement puisse apporter une amélioration des troubles, au bénéficiaire ayant un QI de performance ou non-verbal ou QD (quotient développemental) total inférieur à 86, mesuré par un test individuel figurant dans une liste de tests approuvée par la Commission de conventions logopèdes-organismes assureurs, pour le traitement logopédique des troubles visés à l' § 2, b) 2° et f) de l'article 36 de l'annexe de l'arrêté royal du 14 septembre 1984 établissant la nomenclature des prestations de santé en matière d'assurance obligatoire soins de santé et indemnités (...).

Cette intervention doit être accordée conformément aux dispositions décrites à l'article 36 de l'annexe de l'arrêté royal du 14 septembre 1984 susmentionné.

Pour les bénéficiaires ayant un QI de performance ou non-verbal ou QD (quotient développemental) total inférieur à 70, mesuré par un test individuel figurant dans une liste de tests approuvée par la Commission de conventions logopèdes-organismes assureurs, cette intervention ne peut être accordée qu'à condition qu'un bilan multidisciplinaire incluant la logopédie ait été réalisé dans un Centre de Revalidation Ambulatoire reconnu par les entités fédérées. Ce bilan doit démontrer l'efficacité d'un traitement en logopédie monodisciplinaire.

L'article 2 de l'AR du 17/07/2024 dispose que les règles de cumul ci-dessus seront évaluées au plus tard deux années après leur entrée en vigueur, sur base d'une étude scientifique qui suit un nombre significatif de patients bénéficiant d'un traitement logopédique dans le cadre de ce présent arrêté.

Le présent arrêté entre en vigueur le 01/09/2024.

L'article, 1 alinéa 3 entre en vigueur le 1er juillet 2025. L'accord de traitement logopédique octroyé au bénéficiaire décrit à l'article 1, entre la date d'entrée en vigueur de cet arrêté et le 1er juillet 2025, peut être prolongé à condition qu'un bilan multidisciplinaire incluant la logopédie ait été réalisé dans un Centre de Revalidation Ambulatoire agréé par les entités fédérées. Ce bilan doit démontrer l'efficacité d'un traitement en logopédie monodisciplinaire.



1.2 National High Council for Persons with Disabilities (2023): Legal considerations for reimbursement of monodisciplinary speech/language therapy

Box 1 – National High Council for Persons with Disabilities (2023): Legal considerations for the reimbursement of monodisciplinary SLT in children with intellectual disability (ID) and autism spectrum disorder (ASD)

In the Advice 2023-21, the National High Council for Persons with Disabilities (NHRPH/CSNPH) expresses the following considerations:

For children with intellectual disability (ID), a multidisciplinary management approach (including SLT) is scientifically advocated. However, at least three legal considerations are called for in support of monodisciplinary SLT.

1. Because the IQ limit of 86 was imposed arbitrarily, the distinction between persons whose IQ > 86 and whose IQ < 86 cannot be objectively justified (Article 26 (1) of the United Nations Convention on the Rights of the Child (UN-CRC) , Article 25 (e) of the United Nations Convention on the Rights of Persons with Disabilities (UN-CRPD)).
2. The exclusion from reimbursement of monodisciplinary SLT affects the right to inclusive education, which should be guaranteed based on Article 18 (1), 23 and 24 (1) of the United Nations Convention on the Rights of the Child, as well as Article art. 24 (2) and 25 (a) of the United Nations Convention on the Rights of Persons with Disabilities.
3. Belgium must fulfil its international obligations in good faith under Article 26 of the Vienna Treaty. Those obligations include, as for example, the obligation to take into account the situation of children and their parents and to guarantee that no child is excluded from access to care (Article 23 (2) of the United Nations Convention on the Rights of the Child and Article 25(c) of the United Nations Convention on the Rights of Persons with Disabilities); and the child's right to the widest possible development and equal access to social security benefits (Article 6 (2), 18 (1) and 24 (1) of the United Nations Convention on the Rights of the Child, and Article 25 (e) of the United Nations Convention on the Rights of Persons with Disabilities).

Therefore, The National High Council for Persons with Disabilities supports the call launched by Unia to revise Article 36 in order to ensure that children with ID would have access to monodisciplinary SLT and to introduce the possibility to follow monodisciplinary and multidisciplinary procedures in parallel. The Council stresses the importance of a multidisciplinary approach and notes that monodisciplinary SLT is possible provided that cooperation with a multidisciplinary team is ensured (such as e.g., rehabilitation centres). It also stipulates that there is a need for more SLT in regular schools so that inclusive education can be effectively rolled out.

For children with autism spectrum disorder (ASD), SLT should start early and a multidisciplinary management approach (including SLT) is also scientifically advocated. However, the following legal considerations are called for in support of monodisciplinary SLT:

1. Persons with ASD are entitled to the same range of health services as other persons without ASD (Article 25(a) of the United Nations Convention on the Rights of Persons with Disabilities)
2. Because the nomenclature states that “disorders resulting from psychiatric disorders or emotional states” are excluded, reimbursement should be granted if no causal relationship can be demonstrated between the speech/language disorder and the

psychiatric disorder. This argument has been followed in a Belgian court judgment. It is supported by Article 25(e) of the United Nations Convention on the Rights of Persons with Disabilities and Article 26 (1) of the United Nations Convention on the Rights of the Child.

Therefore, the National High Council for Persons with Disabilities advocates that monodisciplinary SLT, or a combination of monodisciplinary SLT and multidisciplinary therapy including SLT, should be allowed and reimbursed, provided these monodisciplinary therapists collaborate with a multidisciplinary team. Alternatively, the entire exclusion of psychiatric disorders could be simply removed from the legal text.

For all children attending special education, Article 6 (2) of the United Nations Convention on the Rights of the Child, and Article 25 (a) of the United Nations Convention on the Rights of Persons with Disabilities support, among other, the child's right to the widest possible development. Therefore children attending special education should also receive reimbursement for monodisciplinary SLT.

Source: National High Council for Persons with Disabilities: <https://ph.belgium.be/nl/adviezen/advies-2023-21.html>

1.3 List of Centres for Ambulatory Rehabilitation (CAR-CRA), Autism Reference Centres and Centres for Developmental Disorders (COS) in Belgium

Main locations and additional sites, antennas, additional or collaborative sites (*) are listed separately and as published in the public resources. Below, some sites have been listed both as a main as well as antenna or collaborative location, or serve as an antenna location to yet another site. For these reasons, some locations appear multiple times in the tables; however, each unique geographical location (based on the site's address) was counted only once for presentation in the geographical maps (see Figure 1 in chapter 1). Sources: Vlaanderen Departement Zorg, Fédération des Centres de Réadaptation Ambulatoire, Ostbelgien Das Familienportal ; Vlaanderen Departement Zorg, AVIQ, participate-autism.be; Vlaanderen Jeugdhulp, Agentschap Opgroeien



Table 1 – List of Centres for Ambulatory Rehabilitation (CAR-CRA) in Belgium

<i>Institution*</i>	<i>Geographical Location</i>
<i>Region Flanders, Departement Zorg</i>	
Revalidatiecentrum De Poolster	Sint-Agatha-Berchem
CAR Brussel	Jette
Zeplin CAR Woluwe	Sint-Lambrechts-Woluwe
CAR Land van Halle & Asse	Halle
CAR Land van Halle & Asse	Zellik* (to Halle)
Antwerps Revalidatiecentrum	Antwerpen
CARrewiel	Westerlo
Carrewiel Mechelen	Mechelen* (to Westerlo)
Carrewiel Turnhout	Turnhout* (to Westerlo)
Carrewiel	Westerlo*
Universitair Revalidatiecentrum voor Communicatiestoornissen UZA	Edegem
Revalidatiecentrum Ter Linde	Bornem
Revalidatiecentrum Noorderkempen	Wuustwezel
CAR Antenne 3000	Leuven
UZ Gasthuisberg - Revalidatiecentrum voor Gehoor- en Spraakgestoorden	Leuven
Stadscampus UZ Leuven	Leuven*
UZ Gasthuisberg - Revalidatiecentrum voor Gehoor- en Spraakgestoorden	Leuven*
CAR DAT	Tienen
CAR DAT Aarschot	Aarschot* (to Tienen)
CAR DAT Tienen	Tienen*
Zeplin CAR Lovenjoel	Bierbeek
CAR Hasselt	Hasselt
CAR Hasselt	Hasselt*
CAR Genk	Genk* (to Hasselt)
CAR Genk	Genk
CAR Hasselt	Hasselt* (to Genk)
Centrum voor Spraak- en Taalpathologie	Bree
Centrum Ambulante Revalidatie Spermalie	Brugge
CAR 't Veld vzw	Zedelgem
CAR De Klinker	Knokke Heist
CAR Stappie	Oostende

<i>Institution*</i>	Geographical Location
Revalidatiecentrum Overleie	Kortrijk
CAR Accent	Kortrijk
CAR De Kindervriend	Kortrijk
Elora Centrum voor Ambulante Revalidatie	Nieuwpoort
CAR Therapeutisch Zorgpunt N	Roeselare
Centrum voor Ambulante Revalidatie Roeselare	Roeselare
CAR Noordhoek (St. Rembert)	Torhout
CAR De Klinker	Ieper
CAR Impuls	Gent
CAR Sint-Lievenspoort	Gent
UZ Gent Centrum voor gehoor- en spraakrevalidatie "Ter Sprake"	Gent
CAR Bolt	Drongen
CAR Oostakker	Oostakker
Centrum voor Functionele Revalidatie	Zelzate
CAR De Steijger	Destelbergen
Het Veer, centrum voor ambulante revalidatie vzw	Sint Niklaas
CAR 't Vlot	Beveren
Waas Revalidatiecentrum	Lokeren
CAR Kapelhof	Zele
Centrum voor Ambulante Revalidatie Buggenhout	Buggenhout
CAR De Hert	Aalst
CAR Horizon	Geraardsbergen
C.A.R. NOK-centrum	Ronse
CAR Wegwijs	Zottegem
Revalidatiecentrum Ter Eecken	Oudenaarde
CAR Ter Kouter	Deinze
CAR Ascendere	Eeklo
CAR Klim Op	Eeklo*
CAR De Springplank	Lede* (to Eeklo)
CAR De Locomotief	Ninove* (to Eeklo)
CAR De Schakel	Wetteren* (to Eeklo)
<i>Brussels Capital Region, COCOM</i>	
Centre Médical d'Audio-Phonologie	Forest



<i>Institution*</i>	Geographical Location
Nos Pilifs	Laeken
Les Blés d'Or	Uccle
Centre pour Handicapés Sensoriels	Uccle
Centre Comprendre & Parler	Woluwe St Lambert
<i>Walloon Region, AViQ</i>	
Le Cap	Tournai
C.R.F. L'Ancre (Asbl CRFPPT - L'Ancre)	Tournai
CHWAPI - Centre de l'Ouïe et de la Parole	Tournai
C.A.D.R.E. (CHU de Charleroi Ouïe & Parole)	Charleroi
Centre médical de rééducation logopédique de Mons asbl	Mons
CMAF - Centre Médical d'Audio-Phonologie	Montegnée
Centre de logopédie et de psychomotricité	Jamiooux
Centre Ouïe-Parole de Mouscron	Mouscron
CRA du CHU de Tivoli	La Louvière
C.R.A "C.E.L" (Le CEP+Le Saule) voir remarque	Kain
CRA Viva (8 sites) Le verboquet, le trait d'union, la mosaïque, la courte échelle, l'enjeu, le colibri, Jean Lenoir, l'Eveil - centre ENFANTS	Vottem
Le Maillet - Adultes	Beyne Heusay
Le Sablier - Adultes	Eben
L'Ancre -Adultes	Oupeye
L'Intervalle - Adultes	Vottem
ASBL « CRE »	Liège
Centre de rééducation ambulatoire du CPAS de Flémalle	Flémalle
Centre Bernadette	Geer
L'AnCrage - CRA Guidance et Prévention	Verviers
Clinique André Renard	Herstal
Centre de rééducation et traitement psychologique/CRE Seraing ASBL	Ougrée
Centre Henri Wallon	Vaux-Sous-Chèvremont
Centre l'Oiseau Bleu	Wanze
<i>Brussels Capital Region – Walloon Region, FWB</i>	
CRFNI - Erasme	Anderlecht
Clinique d'Audio-Phonologie CHU de Liège	Liège

<i>Institution*</i>	Geographical Location
<i>German Region, Ostbelgien</i>	
Beratungs- und Therapiezentrum	Eupen
Beratungs- und Therapiezentrum	St Vith

Main locations and additional sites, antennas, additional or collaborative sites () listed separately. Sources: Vlaanderen Departement Zorg, Fédération des Centres de Réadaptation Ambulatoire, Ostbelgien Das Familienportal

Table 2 – List of Autism Reference Centres*

<i>Institution</i>	Geographical Location
<i>Region Flanders, Departement Zorg</i>	
KULeuven – UZLeuven Universitair Psychiatrisch Centrum Expertise centrum voor autismespectrum stoornissen UZ Leuven (ECA Leuven) Campus Gasthuisberg	Leuven
KULeuven – UZLeuven, Campus Kortenberg (For adults)	Leuven*
Jessa Ziekenhuis	Hasselt* (to Leuven)
Ziekenhuis Netwerk Antwerpen – Referentiecentrum autismespectrumstoornissen Antwerpen Universitair Centrum Kinder- en Jeugdpsychiatrie, Ziekenhuis aan de stroom	Antwerpen
Centrum voor Ontwikkelingsstoornissen (COS Antwerpen UZA)	Edegem* (to Antwerpen)
Openbaar Psychiatrisch Zorgcentrum Geel (OPZ)	Geel* (to Antwerpen)
Oriëntatiecentrum voor volwassenen (OC-OLO Ronde)	Edegem* (to Antwerpen)
Universiteit Gent, Universitair Ziekenhuis Gent (Kinder- en jeugdpsychiatrie) – Referentiecentrum Autismespectrumstoornissen Gent Site Jan Palfijn	Gent
Centrum voor Ontwikkelingsstoornissen (COS Gent)	Gent
West-Vlaams Consultatiebureau voor Diagnostiek en Zorg (diagnostics Adults)	Roeselare* (to Gent)
Universitair Ziekenhuis Brussel – Referentiecentrum voor autismespectrum stoornissen UZ Brussel	Jette Vlezenbeek* (to Jette)



<i>Institution</i>	<i>Geographical Location</i>
Walloon region, AVIQ	
Centre de référence en autisme Jean-Charles Salmon	Mons
Centre de référence en autisme CHU-UCL Namur	Namur
Centre d'Action Pour l'Autisme en province de Luxembourg	Libramont* (to Namur)
Walloon region, FWB	
Centre de Référence Autisme de Liège	Liège
Brussels Capital region, COCOF and Iriscare	
Le Centre de Référence des troubles du spectre autistique des Cliniques universitaires Saint-Luc	Woluwe-Saint -Lambert
Le Centre de Référence pour le diagnostic et la prise en charge des troubles du spectre autistique de l'HUDERF (ULB)	Bruxelles (Laeken)

Main locations and additional, collaborative or antenna sites () listed separately. Sources: Vlaanderen Departement Zorg, AVIQ, participate-autism.be (French and Flemish website).

Table 3 – List of Centres for Developmental Disorders (COS)*

<i>Institution</i>	<i>Geographical Location</i>
Region Flanders, Agentschap Opgroeien	
COS Leuven: UZLeuven Campus KartHuis	Leuven
Jessa Ziekenhuis & Zuid-Oost Limburg Genk	Hasselt* (to Leuven)
COS Antwerpen: UZAntwerpen	Edegem
COS Gent: UZGent	Gent
West-Vlaanderen: Therapeutisch Zorgpunt N	Roeselare* (to Gent)
COS Brussel: Universitair Ziekenhuis Brussel	Jette
Polikliniek Dilbeek	Dilbeek* (to Jette)
Revalidatieziekenhuis Inkendaal	Vlezenbeek* (to Jette)

Main locations and additional, collaborative or antenna sites () listed separately. Sources: Vlaanderen Jeugdhulp, Agentschap Opgroeien

1.4 Definitions neurodevelopmental disorders

1.4.1 ICD-11 - World Health Organization (WHO) International Classification of Diseases (ICD)-11

ICD-11 Definition (<https://icd.who.int>): Neurodevelopmental disorders are behavioural and cognitive disorders that arise during the developmental period that involve significant difficulties in the acquisition and execution of specific intellectual, motor, language, or social functions. Although behavioural and cognitive deficits are present in many mental and behavioural disorders that can arise during the developmental period (e.g., Schizophrenia, Bipolar disorder), only disorders whose core features are neurodevelopmental are included in this grouping. The presumptive etiology for neurodevelopmental disorders is complex, and in many individual cases is unknown.



Table 4 – International Classification of Diseases (ICD)-11 of neurodevelopmental disorders

Diagnostic group	Description	Comment
6A00 Disorders of intellectual development	Disorders of intellectual development are a group of etiologically diverse conditions originating during the developmental period characterised by significantly below average intellectual functioning and adaptive behaviour that are approximately two or more standard deviations below the mean (approximately less than the 2.3rd percentile), based on appropriately normed, individually administered standardized tests. Where appropriately normed and standardized tests are not available, diagnosis of disorders of intellectual development requires greater reliance on clinical judgment based on appropriate assessment of comparable behavioural indicators.	<u>Four levels:</u> • 0: mild; • 1: moderate; • 2: severe; • 3: profound. Sometimes, a provisional category (4) is assigned under the age of four when it is difficult to ascertain whether the observed impairments represent a transient delay ('Global Developmental Delay'), or in case it is not possible to conduct a valid assessment (e.g., blindness, pre-lingual deafness) <u>Boundary with Developmental Speech and Language Disorders:</u> In Developmental Speech and Language Disorders, individuals exhibit difficulties in understanding or producing speech and language or in using language in context for the purposes of communication that is markedly below what would be expected given the individual's age and level of intellectual functioning. If speech and language abilities are significantly below what would be expected based on intellectual and adaptive behaviour functioning in an individual with a Disorder of Intellectual Development, an additional diagnosis of Developmental Speech and Language Disorder may be assigned
6A01 Developmental speech or language disorders	Developmental speech or language disorders arise during the developmental period and are characterised by difficulties in understanding or producing speech and language or in using language in context for the purposes of communication that are outside the limits of normal variation expected for age and level of intellectual functioning. The observed speech and language problems are not attributable to regional, social, or cultural/ethnic language variations and are not fully explained by anatomical or neurological abnormalities. The presumptive aetiology for Developmental speech or language disorders is complex, and in many individual cases, is unknown.	

Diagnostic group		Description	Comment
	6A01.0 <i>Developmental speech sound disorder</i>	Developmental speech sound disorder is characterised by difficulties in the acquisition, production and perception of speech that result in errors of pronunciation, either in number or types of speech errors made or the overall quality of speech production, that are outside the limits of normal variation expected for age and level of intellectual functioning and result in reduced intelligibility and significantly affect communication. [...]	
	6A01.1 <i>Developmental speech fluency disorder</i>	Developmental speech fluency disorder is characterised by frequent or pervasive disruption of the normal rhythmic flow and rate of speech characterised by repetitions and prolongations in sounds, syllables, words, and phrases, as well as blocking and word avoidance or substitutions. The speech dysfluency is persistent over time. The onset of speech dysfluency occurs during the developmental period and speech fluency is markedly below what would be expected for age. [...]	
	6A01.2 <i>Developmental language disorder</i>	Developmental language disorder is characterised by persistent deficits in the acquisition, understanding, production or use of language (spoken or signed), that arise during the developmental period, typically during early childhood, and cause significant limitations in the individual's ability to communicate. The individual's ability to understand, produce or use language is markedly below what would be expected given the individual's age. The language deficits are not explained by another neurodevelopmental disorder or a sensory impairment or neurological condition, including the effects of brain injury or infection.	• Four subtypes: • 20: DLD with impairment of receptive and expressive language • Characterised by persistent difficulties in the acquisition, understanding, production, and use of language that arise during the developmental period, typically during early childhood, and cause significant limitations in the individual's ability to communicate. The ability to understand spoken or signed language (i.e., receptive language) is markedly below the expected level given the individual's age and level of intellectual functioning, and is accompanied by persistent impairment in the ability to produce and use spoken or signed language (i.e., expressive language) • 21: DLD with impairment of mainly expressive language • Characterised by persistent difficulties in the acquisition, production, and use of language that arise during the developmental period, typically during early childhood, and cause significant limitations in the individual's ability to communicate. The ability to produce and use spoken or signed language (i.e., expressive language) is markedly below the expected level given the individual's age and level of intellectual



Diagnostic group	Description	Comment																					
		functioning, but the ability to understand spoken or signed language (i.e., receptive language) is relatively intact • 22: DLD with impairment of mainly pragmatic language • Characterised by persistent and marked difficulties with the understanding and use of language in social contexts, for example making inferences, understanding verbal humour, and resolving ambiguous meaning. These difficulties arise during the developmental period, typically during early childhood, and cause significant limitations in the individual's ability to communicate. Pragmatic language abilities are markedly below the expected level given the individual's age and level of intellectual functioning, but the other components of receptive and expressive language are relatively intact. This qualifier should not be used if the pragmatic language impairment is better explained by Autism Spectrum Disorder or by impairments in other components of receptive or expressive language • 23: DLD with other specified language impairment •																					
6A02 Autism spectrum disorder	Autism spectrum disorder is characterised by persistent deficits in the ability to initiate and to sustain reciprocal social interaction and social communication, and by a range of restricted, repetitive, and inflexible patterns of behaviour, interests or activities that are clearly atypical or excessive for the individual's age and sociocultural context. The onset of the disorder occurs during the developmental period, typically in early childhood, but symptoms may not become fully manifest until later, when social demands exceed limited capacities. Deficits are sufficiently severe to cause impairment in personal, family, social, educational, occupational or other important areas of functioning and are usually a pervasive feature of the individual's functioning observable in all settings, although they may vary according to social, educational, or other context. Individuals along the spectrum exhibit a full range of intellectual functioning and language abilities.	There are several sub-types of autism spectrum disorder, depending on levels of intellectual and language development: <table border="1"> <thead> <tr> <th></th><th>Disorder of intellectual development</th><th>Impairment of functional language</th></tr> </thead> <tbody> <tr> <td>6A02.0</td><td>Disorder not present</td><td>Not present or Mild impairment</td></tr> <tr> <td>6A02.1</td><td>Disorder present</td><td>Not present or Mild impairment</td></tr> <tr> <td>6A02.2</td><td>Disorder not present</td><td>Impairment present</td></tr> <tr> <td>6A02.3</td><td>Disorder present</td><td>Impairment present</td></tr> <tr> <td>6A02.4</td><td>Disorder not present</td><td>Absence of functional language</td></tr> <tr> <td>6A02.5</td><td>Disorder present</td><td>Absence of functional language</td></tr> </tbody> </table>		Disorder of intellectual development	Impairment of functional language	6A02.0	Disorder not present	Not present or Mild impairment	6A02.1	Disorder present	Not present or Mild impairment	6A02.2	Disorder not present	Impairment present	6A02.3	Disorder present	Impairment present	6A02.4	Disorder not present	Absence of functional language	6A02.5	Disorder present	Absence of functional language
	Disorder of intellectual development	Impairment of functional language																					
6A02.0	Disorder not present	Not present or Mild impairment																					
6A02.1	Disorder present	Not present or Mild impairment																					
6A02.2	Disorder not present	Impairment present																					
6A02.3	Disorder present	Impairment present																					
6A02.4	Disorder not present	Absence of functional language																					
6A02.5	Disorder present	Absence of functional language																					

Diagnostic group	Description	Comment
6A03 Developmental learning disorder	Developmental learning disorder is characterised by significant and persistent difficulties in learning academic skills, which may include reading, writing, or arithmetic. The individual's performance in the affected academic skill(s) is markedly below what would be expected for chronological age and general level of intellectual functioning, and results in significant impairment in the individual's academic or occupational functioning. Developmental learning disorder first manifests when academic skills are taught during the early school years. Developmental learning disorder is not due to a disorder of intellectual development, sensory impairment (vision or hearing), neurological or motor disorder, lack of availability of education, lack of proficiency in the language of academic instruction, or psychosocial adversity.	There are several sub-types of developmental learning disorder, with impairment in reading (dyslexia), in written expression (dysorthography), in mathematics (dyscalculia), with other specific impairment, or unspecified.
6A04 Developmental motor coordination disorder	Developmental motor coordination disorder is characterised by a significant delay in the acquisition of gross and fine motor skills and impairment in the execution of coordinated motor skills that manifest in clumsiness, slowness, or inaccuracy of motor performance. Coordinated motor skills are markedly below that expected given the individual's chronological age and level of intellectual functioning. Onset of coordinated motor skills difficulties occurs during the developmental period and is typically apparent from early childhood. Coordinated motor skills difficulties cause significant and persistent limitations in functioning (e.g. in activities of daily living, school work, and vocational and leisure activities). [...]	
6A05 Attention deficit hyperactivity disorder	Attention deficit hyperactivity disorder is characterised by a persistent pattern (at least 6 months) of inattention and/or hyperactivity-impulsivity that has a direct negative impact on academic, occupational, or social functioning. There is evidence of significant inattention and/or hyperactivity-impulsivity symptoms prior to age 12, typically by early to mid-childhood, though some individuals may first come to clinical attention later. The degree of inattention and hyperactivity-impulsivity is outside the limits of normal variation expected for age and level of intellectual functioning. Inattention refers to significant difficulty in sustaining attention to tasks that do not provide a high level of stimulation or frequent rewards, distractibility and problems with organisation. Hyperactivity refers to excessive motor activity and difficulties with	There are several sub-types of ADHD: predominantly inattentive presentation; predominantly hyperactive-impulsive presentation; combined presentation; other specified presentation; and unspecified presentation.



Diagnostic group	Description	Comment
	remaining still, most evident in structured situations that require behavioural self-control. Impulsivity is a tendency to act in response to immediate stimuli, without deliberation or consideration of the risks and consequences. The relative balance and the specific manifestations of inattentive and hyperactive-impulsive characteristics varies across individuals and may change over the course of development. In order for a diagnosis to be made, manifestations of inattention and/or hyperactivity-impulsivity must be evident across multiple situations or settings (e.g., home, school, work, with friends or relatives), but are likely to vary according to the structure and demands of the setting. Symptoms are not better accounted for by another mental, behavioural, or neurodevelopmental disorder and are not due to the effect of a substance or medication.	
6A06 Stereotyped movement disorder	Stereotyped movement disorder is characterised by the persistent (e.g., lasting several months) presence of voluntary, repetitive, stereotyped, apparently purposeless (and often rhythmic) movements that arise during the early developmental period, are not caused by the direct physiological effects of a substance or medication (including withdrawal), and markedly interfere with normal activities or result in self-inflicted bodily injury. Stereotyped movements that are non-injurious can include body rocking, head rocking, finger-flicking mannerisms, and hand flapping. Stereotyped self-injurious behaviours can include repetitive head banging, face slapping, eye poking, and biting of the hands, lips, or other body parts.	There are three sub-types of stereotyped movement disorder: with or without self-injury; and unspecified.
6E60 Secondary neurodevelopmental syndrome	A syndrome that involves significant neurodevelopmental features that do not fulfill the diagnostic requirements of any of the specific neurodevelopmental disorders that is judged to be a direct pathophysiological consequence of a health condition not classified under mental and behavioural disorders (e.g., autistic-like features in Rett syndrome; aggression and self-mutilation in Lesch-Nyhan syndrome, abnormalities in language development in Williams syndrome), based on evidence from the history, physical examination, or laboratory findings. This category should be used in addition to the diagnosis for the presumed underlying disorder or disease when the neurodevelopmental problems are sufficiently severe to warrant specific clinical attention.	



Diagnostic group	Description	Comment
6A0Y/ 6A0Z Neurodevelopmental disorders, other/ unspecified		

1.4.2 DSM-5-TR - American Psychiatric Association (2022) Diagnostic and Statistical Manual of Mental Disorders

Table 4bis – DSM-5-TR - Neurodevelopmental disorders (extraction)

Diagnostic group	Diagnostic Criteria	
Intellectual developmental disorder (intellectual disability)	Intellectual developmental disorder (intellectual disability) is a disorder with onset during the developmental period that includes both intellectual and adaptive functioning deficits in conceptual, social, and practical domains. The following three criteria must be met: A. Deficits in intellectual functions, such as reasoning, problem solving, planning, abstract thinking, judgment, academic learning, and learning from experience, confirmed by both clinical assessment and individualized, standardized intelligence testing. B. Deficits in adaptive functioning that result in failure to meet developmental and sociocultural standards for personal independence and social responsibility. Without ongoing support, the adaptive deficits limit functioning in one or more activities of daily life, such as communication, social participation, and independent living, across multiple environments, such as home, school, work, and community. C. Onset of intellectual and adaptive deficits during the developmental period. <i>Note:</i> The term intellectual developmental disorder is used to clarify its relationship with the WHO ICD-11 classification system, which uses the term Disorders of Intellectual Development. The equivalent term intellectual disability is placed in parentheses for continued use. The medical and research literature use both terms, while intellectual disability is	Specifiers The various levels of severity are defined on the basis of adaptive functioning, and not IQ scores, because it is adaptive functioning that determines the level of supports required. Moreover, IQ measures are less valid in the lower end of the IQ range. Diagnostic Features The essential features of intellectual developmental disorder (intellectual disability) are deficits in general mental abilities (Criterion A) and impairment in everyday adaptive functioning, in comparison to an individual's age-, gender-, and socioculturally matched peers (Criterion B). Onset is during the developmental period (Criterion C). The diagnosis of intellectual developmental disorder is based on both clinical assessment and standardized testing of intellectual functions, standardized neuropsychological tests, and standardized tests of adaptive functioning. Criterion A refers to intellectual functions that involve reasoning, problem solving, planning, abstract thinking, judgment, learning from instruction and experience, and practical understanding. Critical components include verbal comprehension, working memory, perceptual reasoning, quantitative reasoning, abstract thought, and cognitive efficacy. Intellectual functioning is typically



Diagnostic group	Diagnostic Criteria	
	the term in common use by educational and other professions, advocacy groups, and the lay public. In the United States, Public Law 111-256 (Rosa's Law) changed all references to "mental retardation" in federal laws to "intellectual disability." Specify current severity F70 Mild F71 Moderate F72 Severe F73 Profound	measured with individually administered and psychometrically valid, comprehensive, and culturally appropriate tests of intelligence. Individuals with intellectual developmental disorder have scores of approximately two standard deviations or more below the population mean, including a margin for measurement error (generally ± 5 points). On tests with a standard deviation of 15 and a mean of 100, this involves a score of 65-75 (70 ± 5). Clinical training and judgment are required to interpret test results and assess intellectual performance. Deficits in adaptive functioning (Criterion B) refer to how well a person meets community standards of personal independence and social responsibility, in comparison to others of similar age and sociocultural background. Adaptive functioning involves adaptive reasoning in three domains: conceptual, social, and practical. The <i>conceptual (academic) domain</i> involves competence in memory, language, reading, writing, math reasoning, acquisition of practical knowledge, problem solving, and judgment in novel situations, among others. The <i>social domain</i> involves awareness of others' thoughts, feelings, and experiences; empathy; interpersonal communication skills; friendship abilities; and social judgment, among others. The <i>practical domain</i> involves learning and self-management across life settings, including personal care, job responsibilities, money management, recreation, self-management of behavior, and school and work task organization, among others. Intellectual capacity, education, motivation, socialization, personality features, vocational opportunity, cultural experience, and coexisting other medical conditions or mental disorders influence adaptive functioning. Adaptive functioning is assessed using both clinical evaluation and individualized, culturally appropriate, psychometrically sound measures. Differential Diagnosis The diagnosis of intellectual developmental disorder should be made whenever Criteria A, B, and C are met. (...)

Diagnostic group		Diagnostic Criteria	
			<i>Communication disorders and specific learning disorder</i> These neurodevelopmental disorders are specific to the communication and learning domains and do not show deficits in intellectual and adaptive behavior. They may co-occur with intellectual developmental disorder. Both diagnoses are made if full criteria are met for intellectual developmental disorder and a communication disorder or specific learning disorder. Comorbidity The most common co-occurring neurodevelopmental and other mental disorders are attention-deficit/hyperactivity disorder; depressive and bipolar disorders; anxiety disorders; autism spectrum disorder; stereotypic movement disorder (with or without self-injurious behavior); impulse-control disorders; and major neurocognitive disorder. Major depressive disorder may occur throughout the range of severity of intellectual developmental disorder.(...)
Communication disorders		Disorders of communication include deficits in language, speech, and communication. Speech is the expressive production of sounds and includes an individual's articulation, fluency, voice, and resonance quality. Language includes the form, function, and use of a conventional system of symbols (i.e., spoken words, sign language, written words, pictures) in a rule-governed manner for communication. Communication includes any verbal or nonverbal behavior (whether intentional or unintentional) that has the potential to influence the behavior, ideas, or attitudes of another individual.(...)	
	<i>Language disorder</i>	F80.2 A. Persistent difficulties in the acquisition and use of language across modalities (i.e., spoken, written, sign language, or other) due to deficits in comprehension or production that include the following: 1. Reduced vocabulary (word knowledge and use).	Differential Diagnosis <i>Intellectual developmental disorder (intellectual disability)</i> Language impairment is often the presenting feature of intellectual developmental disorder. However, the definitive diagnosis of intellectual developmental disorder may not be made until the child is able to complete standardized assessments. Language disorder can occur with varying degrees of intellectual ability, and a



Diagnostic group	Diagnostic Criteria	
	2. Limited sentence structure (ability to put words and word endings together to form sentences based on the rules of grammar and morphology). 3. Impairments in discourse (ability to use vocabulary and connect sentences to explain or describe a topic or series of events or have a conversation). B. Language abilities are substantially and quantifiably below those expected for age, resulting in functional limitations in effective communication, social participation, academic achievement, or occupational performance, individually or in any combination. C. Onset of symptoms is in the early developmental period. D. The difficulties are not attributable to hearing or other sensory impairment, motor dysfunction, or another medical or neurological condition and are not better explained by intellectual developmental disorder (intellectual disability) or global developmental delay.	discrepancy between verbal and nonverbal ability is not necessary for a diagnosis of language disorder. <i>Autism spectrum disorder</i> Autism spectrum disorder frequently manifests with delayed language development. However, autism spectrum disorder is often accompanied by behaviors not present in language disorder, such as lack of social interest or unusual social interactions (e.g., pulling individuals by the hand without any attempt to look at them), odd play patterns (e.g., carrying toys around but never playing with them), unusual communication patterns (e.g., knowing the alphabet but not responding to own name), and rigid adherence to routines and repetitive behaviors (e.g., flapping, spinning, echolalia).(...) Comorbidity Language disorder may be associated with other neurodevelopmental disorders in terms of specific learning disorder (literacy and numeracy), intellectual developmental disorder, attention deficit/hyperactivity disorder, autism spectrum disorder, and developmental coordination disorder. (...)
<i>Speech sound disorder</i>	F80.0 A. Persistent difficulty with speech sound production that interferes with speech intelligibility or prevents verbal communication of messages. B. The disturbance causes limitations in effective communication that interfere with social participation, academic achievement, or occupational performance, individually or in any combination. C. Onset of symptoms is in the early developmental period. D. The difficulties are not attributable to congenital or acquired conditions, such as cerebral palsy, cleft palate, deafness or hearing loss, traumatic brain injury, or other medical or neurological conditions.	Diagnostic Features Speech sound production describes the clear articulation of the phonemes (i.e., individual sounds) that in combination make up spoken words. Speech sound production requires both the phonological knowledge of speech sounds and the ability to coordinate the movements of the articulators (i.e., the jaw, tongue, and lips,) with breathing and vocalizing for speech.(...)
<i>Childhood-onset fluency disorder (stuttering),</i>	F80.81 Disturbances in the normal fluency and time patterning of speech that are inappropriate for the individual's age and language skills, persist	

Diagnostic group	Diagnostic Criteria	
	over time, and are characterized by frequent and marked occurrences of one (or more) of the following: 1. Sound and syllable repetitions. 2. Sound prolongations of consonants as well as vowels. 3. Broken words (e.g., pauses within a word). 4. Audible or silent blocking (filled or unfilled pauses in speech). 5. Circumlocutions (word substitutions to avoid problematic words). 6. Words produced with an excess of physical tension. 7. Monosyllabic whole-word repetitions (e.g., “I-I-I-I see him”). B. The disturbance causes anxiety about speaking or limitations in effective communication, social participation, or academic or occupational performance, individually or in any combination. C. The onset of symptoms is in the early developmental period. (Note: Later-onset cases are diagnosed as F98.5 adult-onset fluency disorder.) D. The disturbance is not attributable to a speech-motor or sensory deficit, dysfluency associated with neurological insult (e.g., stroke, tumor, trauma), or another medical condition and is not better explained by another mental disorder.	
<i>Social (pragmatic) communication disorder</i>	F80.82 A. Persistent difficulties in the social use of verbal and nonverbal communication as manifested by all of the following: 1. Deficits in using communication for social purposes, such as greeting and sharing information, in a manner that is appropriate for the social context. 2. Impairment of the ability to change communication to match context or the needs of the listener, such as speaking differently in a classroom than on a playground, talking differently to a child than to an adult, and avoiding use of overly formal language. 3. Difficulties following rules for conversation and storytelling, such as taking turns in conversation, rephrasing when misunderstood, and knowing how to use verbal and nonverbal signals to regulate interaction.	



Diagnostic group		Diagnostic Criteria	
		4. Difficulties understanding what is not explicitly stated (e.g., making inferences) and nonliteral or ambiguous meanings of language (e.g., idioms, humor, metaphors, multiple meanings that depend on the context for interpretation). B. The deficits result in functional limitations in effective communication, social participation, social relationships, academic achievement, or occupational performance, individually or in combination. C. The onset of the symptoms is in the early developmental period (but deficits may not become fully manifest until social communication demands exceed limited capacities). D. The symptoms are not attributable to another medical or neurological condition or to low abilities in the domains of word structure and grammar, and are not better explained by autism spectrum disorder, intellectual developmental disorder (intellectual disability), global developmental delay, or another mental disorder.	
	<i>Unspecified communication disorders</i>	This category applies to presentations in which symptoms characteristic of communication disorder that cause clinically significant distress or impairment in social, occupational, or other important areas of functioning predominate but do not meet the full criteria for communication disorder or for any of the disorders in the neurodevelopmental disorders diagnostic class. The unspecified communication disorder category is used in situations in which the clinician chooses <i>not</i> to specify the reason that the criteria are not met for communication disorder or for a specific neurodevelopmental disorder, and includes presentations in which there is insufficient information to make a more specific diagnosis.	
6A02 Autism spectrum disorder		F84.0 Persistent deficits in social communication and social interaction across multiple contexts, as manifested by all of the following, currently or by history (examples are illustrative, not exhaustive; see text in DSM-5-TR): 1. Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.	Specifiers (...) Regarding the specifier “with or without accompanying intellectual impairment,” understanding the (often uneven) intellectual profile of a child or adult with autism spectrum disorder is necessary for interpreting diagnostic features. Separate estimates of verbal and nonverbal skill are necessary (e.g., using

Diagnostic group	Diagnostic Criteria	
	2. Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication. 3. Deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers. B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text in DSM-5-TR): 1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases). 2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food every day). 3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests). 4. Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement). C. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities, or may be masked by learned strategies in later life). D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning. E. These disturbances are not better explained by intellectual developmental disorder (intellectual disability) or global developmental	untimed nonverbal tests to assess potential strengths in individuals with limited language). To use the specifier “with or without accompanying language impairment,” the current level of verbal functioning should be assessed and described. Examples of the specific descriptions for “with accompanying language impairment” might include no intelligible speech (nonverbal), single words only, or phrase speech. Language level in individuals “without accompanying language impairment” might be further described as speaks in full sentences or has fluent speech. Since receptive language may lag behind expressive language development in autism spectrum disorder, receptive and expressive language skills should be considered separately. Associated Features Many individuals with autism spectrum disorder also have intellectual and/or language impairment (e.g., slow to talk, language comprehension behind production). Even those with average or high intelligence usually have an uneven profile of abilities. (...) Differential Diagnosis (...) <i>Language disorders and social (pragmatic) communication disorder</i> In some forms of language disorder, there may be problems of communication and some secondary social difficulties. However, specific language disorder is not usually associated with abnormal nonverbal communication, nor with the presence of restricted, repetitive patterns of behavior, interests, or activities. When an individual shows impairment in social communication and social interactions but does not show restricted and repetitive behavior or interests, criteria for social (pragmatic) communication disorder, instead of autism spectrum disorder, may be met. The diagnosis of autism spectrum disorder supersedes that of social



Diagnostic group	Diagnostic Criteria	
	delay. Intellectual developmental disorder and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual developmental disorder, social communication should be below that expected for general developmental level. Note: Individuals with a well-established DSM-IV diagnosis of autistic disorder, Asperger's disorder, or pervasive developmental disorder not otherwise specified should be given the diagnosis of autism spectrum disorder. Individuals who have marked deficits in social communication, but whose symptoms do not otherwise meet criteria for autism spectrum disorder, should be evaluated for social (pragmatic) communication disorder. <i>Specify</i> current severity based on social communication impairments and restricted, repetitive patterns of behavior (see Table 2 in DSM-5-TR): Requiring very substantial support Requiring substantial support Requiring support <i>Specify if:</i> With or without accompanying intellectual impairment With or without accompanying language impairment <i>Specify if:</i> Associated with a known genetic or other medical condition or environmental factor (Coding note: Use additional code to identify the associated genetic or other medical condition.) Associated with a neurodevelopmental, mental, or behavioral problem <i>Specify if:</i> With catatonia (refer to the criteria for catatonia associated with another mental disorder)	(pragmatic) communication disorder whenever the criteria for autism spectrum disorder are met. Comorbidity Autism spectrum disorder is frequently associated with intellectual developmental disorder and language disorder (i.e., an inability to comprehend and construct sentences with proper grammar). (...)
Attention deficit/hyperactivity disorder	A. A persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development, as characterized by (1) and/or (2):	Comorbidity ADHD may co-occur in variable symptom profiles with other neurodevelopmental disorders, including specific learning disorder, autism spectrum disorder, intellectual developmental

Diagnostic group	Diagnostic Criteria	
	1. Inattention: Six (or more) of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities: Note: The symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or failure to understand tasks or instructions. For older adolescents and adults (age 17 and older), at least five symptoms are required. a. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities (e.g., overlooks or misses details, work is inaccurate). b. Often has difficulty sustaining attention in tasks or play activities (e.g., has difficulty remaining focused during lectures, conversations, or lengthy reading). c. Often does not seem to listen when spoken to directly (e.g., mind seems elsewhere, even in the absence of any obvious distraction). d. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., starts tasks but quickly loses focus and is easily sidetracked). e. Often has difficulty organizing tasks and activities (e.g., difficulty managing sequential tasks; difficulty keeping materials and belongings in order; messy, disorganized work; has poor time management; fails to meet deadlines). f. Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (e.g., schoolwork or homework; for older adolescents and adults, preparing reports, completing forms, reviewing lengthy papers). g. Often loses things necessary for tasks or activities (e.g., school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones). h. Is often easily distracted by extraneous stimuli (for older adolescents and adults, may include unrelated thoughts).	disorder, language disorders, developmental coordination disorder, and tic disorders.



Diagnostic group	Diagnostic Criteria	
	i. Is often forgetful in daily activities (e.g., doing chores, running errands; for older adolescents and adults, returning calls, paying bills, keeping appointments). 2. Hyperactivity and impulsivity: Six (or more) of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities: Note: The symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or a failure to understand tasks or instructions. For older adolescents and adults (age 17 and older), at least five symptoms are required. a. Often fidgets with or taps hands or feet or squirms in seat. b. Often leaves seat in situations when remaining seated is expected (e.g., leaves his or her place in the classroom, in the office or other workplace, or in other situations that require remaining in place). c. Often runs about or climbs in situations where it is inappropriate. (Note: In adolescents or adults, may be limited to feeling restless.) d. Often unable to play or engage in leisure activities quietly. e. Is often “on the go,” acting as if “driven by a motor” (e.g., is unable to be or uncomfortable being still for extended time, as in restaurants, meetings; may be experienced by others as being restless or difficult to keep up with). f. Often talks excessively. g. Often blurts out an answer before a question has been completed (e.g., completes people’s sentences; cannot wait for turn in conversation). h. Often has difficulty waiting his or her turn (e.g., while waiting in line). i. Often interrupts or intrudes on others (e.g., butts into conversations, games, or activities; may start using other people’s things without asking or receiving permission; for adolescents and adults, may intrude into or take over what others are doing). B. Several inattentive or hyperactive-impulsive symptoms were present prior to age 12 years.	

Diagnostic group	Diagnostic Criteria	
	C. Several inattentive or hyperactive-impulsive symptoms are present in two or more settings (e.g., at home, school, or work; with friends or relatives; in other activities). D. There is clear evidence that the symptoms interfere with, or reduce the quality of, social, academic, or occupational functioning. E. The symptoms do not occur exclusively during the course of schizophrenia or another psychotic disorder and are not better explained by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder, personality disorder, substance intoxication or withdrawal). <i>Specify whether:</i> F90.2 Combined presentation: If both Criterion A1 (inattention) and Criterion A2 (hyperactivity-impulsivity) are met for the past 6 months. F90.0 Predominantly inattentive presentation: If Criterion A1 (inattention) is met but Criterion A2 (hyperactivity-impulsivity) is not met for the past 6 months. F90.1 Predominantly hyperactive/impulsive presentation: If Criterion A2 (hyperactivity-impulsivity) is met and Criterion A1 (inattention) is not met for the past 6 months. <i>Specify if:</i> In partial remission: When full criteria were previously met, fewer than the full criteria have been met for the past 6 months, and the symptoms still result in impairment in social, academic, or occupational functioning. <i>Specify current severity:</i> Mild: Few, if any, symptoms in excess of those required to make the diagnosis are present, and symptoms result in no more than minor impairments in social or occupational functioning. Moderate: Symptoms or functional impairment between “mild” and “severe” are present. Severe: Many symptoms in excess of those required to make the diagnosis, or several symptoms that are particularly severe, are present, or the symptoms result in marked impairment in social or occupational functioning.	



Diagnostic group	Diagnostic Criteria	
Specific learning disorder	A. Difficulties learning and using academic skills, as indicated by the presence of at least one of the following symptoms that have persisted for at least 6 months, despite the provision of interventions that target those difficulties: 1. Inaccurate or slow and effortful word reading (e.g., reads single words aloud incorrectly or slowly and hesitantly, frequently guesses words, has difficulty sounding out words). 2. Difficulty understanding the meaning of what is read (e.g., may read text accurately but not understand the sequence, relationships, inferences, or deeper meanings of what is read). 3. Difficulties with spelling (e.g., may add, omit, or substitute vowels or consonants). 4. Difficulties with written expression (e.g., makes multiple grammatical or punctuation errors within sentences; employs poor paragraph organization; written expression of ideas lacks clarity). 5. Difficulties mastering number sense, number facts, or calculation (e.g., has poor understanding of numbers, their magnitude, and relationships; counts on fingers to add single-digit numbers instead of recalling the math fact as peers do; gets lost in the midst of arithmetic computation and may switch procedures). 6. Difficulties with mathematical reasoning (e.g., has severe difficulty applying mathematical concepts, facts, or procedures to solve quantitative problems). B. The affected academic skills are substantially and quantifiably below those expected for the individual's chronological age, and cause significant interference with academic or occupational performance, or with activities of daily living, as confirmed by individually administered standardized achievement measures and comprehensive clinical assessment. For individuals age 17 years and older, a documented history of impairing learning difficulties may be substituted for the standardized assessment. C. The learning difficulties begin during school-age years but may not become fully manifest until the demands for those affected academic	

Diagnostic group	Diagnostic Criteria	
	skills exceed the individual' s limited capacities (e.g., as in timed tests, reading or writing lengthy complex reports for a tight deadline, excessively heavy academic loads). D. The learning difficulties are not better accounted for by intellectual disabilities, uncorrected visual or auditory acuity, other mental or neurological disorders, psychosocial adversity, lack of proficiency in the language of academic instruction, or inadequate educational instruction. Note: The four diagnostic criteria are to be met based on a clinical synthesis of the individual' s history (developmental, medical, family, educational), school reports, and psychoeducational assessment. Coding note: Specify all academic domains and subskills that are impaired. When more than one domain is impaired, each one should be coded individually according to the following specifiers. <i>Specify if:</i> F81.0 With impairment in reading: Word reading accuracy-Reading rate or fluency-Reading comprehension Note: <i>Dyslexia</i> is an alternative term used to refer to a pattern of learning difficulties characterized by problems with accurate or fluent word recognition, poor decoding, and poor spelling abilities. If dyslexia is used to specify this particular pattern of difficulties, it is important also to specify any additional difficulties that are present, such as difficulties with reading comprehension or math reasoning. F81.81 With impairment in written expression: Spelling accuracy-Grammar and punctuation accuracy-Clarity or organization of written expression F81.2 With impairment in mathematics: Number sense-Memorization of arithmetic facts-Accurate or fluent calculation-Accurate math reasoning Note: <i>Dyscalculia</i> is an alternative term used to refer to a pattern of difficulties characterized by problems processing numerical information, learning arithmetic facts, and performing accurate or fluent calculations. If dyscalculia is used to specify this particular pattern of mathematic difficulties, it is important also to specify any additional difficulties that are	



Diagnostic group	Diagnostic Criteria	
	present, such as difficulties with math reasoning or word reasoning accuracy. <i>Specify</i> current severity: Mild: Some difficulties learning skills in one or two academic domains, but of mild enough severity that the individual may be able to compensate or function well when provided with appropriate accommodations or support services, especially during the school years. Moderate: Marked difficulties learning skills in one or more academic domains, so that the individual is unlikely to become proficient without some intervals of intensive and specialized teaching during the school years. Some accommodations or supportive services at least part of the day at school, in the workplace, or at home may be needed to complete activities accurately and efficiently. Severe: Severe difficulties learning skills, affecting several academic domains, so that the individual is unlikely to learn those skills without ongoing intensive individualized and specialized teaching for most of the school years. Even with an array of appropriate accommodations or services at home, at school, or in the workplace, the individual may not be able to complete all activities efficiently.	
Motor Disorders	See DSM-5-TR	
Other Neurodevelopmental disorders	See DSM-5-TR	

2 SEARCH STRATEGIES GUIDELINES

2.1 Medline Ovid

Date August 09, 2024

Database Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations, Daily and Versions <1946 to August 08, 2024>

Search strategy

1	intellectual disability/	61246
2	down syndrome/	26972
3	fragile x syndrome/	5818
4	prader-willi syndrome/	3376
5	williams syndrome/	1966
6	1 or 2 or 3 or 4 or 5	96137
7	idiocy.ab,ti,kf.	763
8	mental retardation.ab,ti,kf.	28920
9	(intellectual adj3 disabilit*).ab,ti,kf.	29816
10	(mental adj3 deficienc*).ab,ti,kf.	4800
11	(intellectual adj3 disorder?).ab,ti,kf.	2696
12	down syndrome.ab,ti,kf.	18108
13	trisomy 21.ab,ti,kf.	7222
14	frax# syndrome.ab,ti,kf.	14
15	fra x syndrome.ab,ti,kf.	146
16	fragile x syndrome.ab,ti,kf.	5754
17	williams syndrome.ab,ti,kf.	1998
18	beuren syndrome.ab,ti,kf.	791
19	supravalvar aortic stenosis.ab,ti,kf.	171
20	prader willi syndrome.ab,ti,kf.	3766
21	royer syndrome.ab,ti,kf.	3



22	7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21	91811
23	6 or 22	134052
24	exp communication disorders/	70575
25	(communication adj3 (disorder? or disabilit*)).ab,ti,kf.	3268
26	(communicative adj3 (disorder? or dysfunction?)).ab,ti,kf.	592
27	(language adj3 (disorder? or delay* or defic* or impair* or problem* or disabilit*)).ab,ti,kf.	18066
28	Anomia.ab,ti,kf.	867
29	dysnomia.ab,ti,kf.	65
30	(fluent adj3 (aphasia or dysphasia)).ab,ti,kf.	705
31	((jargon or posterior or psychosensory or receptive) adj3 (aphasia or dysphasia)).ab,ti,kf.	225
32	(receptive adj3 (aphasia or dysphasia)).ab,ti,kf.	102
33	(sensory adj3 (aphasia or dysphasia)).ab,ti,kf.	319
34	(sensory adj3 (aphasia or dysphasia)).ab,ti,kf.	319
35	(wernicke adj3 (aphasia? or dysphasia)).ab,ti,kf.	68
36	(Alexia adj2 Pure).ab,ti,kf.	252
37	Speech Disorder?.ab,ti,kf.	4241
38	aphasia.ab,ti,kf.	16879
39	articulation disorder?.ab,ti,kf.	326
40	dysarthria.ab,ti,kf.	7539
41	echolalia.ab,ti,kf.	315
42	mutism.ab,ti,kf.	2687
43	learning disabilit*.ab,ti,kf.	9481
44	specific learning disorder?.ab,ti,kf.	357
45	acalculia?.ab,ti,kf.	250
46	dyscalculia?.ab,ti,kf.	612



47	alexia?.ab,ti,kf.	965
48	word blindness*.ab,ti,kf.	82
49	reading disorder?.ab,ti,kf.	600
50	reading disabilit*.ab,ti,kf.	1478
51	dysphasia.ab,ti,kf.	1377
52	25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51	62734
53	24 or 52	102546
54	exp Autism Spectrum Disorder/	45862
55	autism.ab,ti,kf.	67917
56	autistic.ab,ti,kf.	18569
57	asperger.ab,ti,kf.	1414
58	asperger's.ab,ti,kf.	1112
59	kanner syndrome.ab,ti,kf.	11
60	kanner's syndrome.ab,ti,kf.	17
61	asd.ab,ti,kf.	38144
62	55 or 56 or 57 or 58 or 59 or 60 or 61	83550
63	54 or 62	86750
64	Attention Deficit Disorder with Hyperactivity/	36303
65	addh.ab,ti,kf.	126
66	adhd.ab,ti,kf.	34488
67	attention deficit disorder?.ab,ti,kf.	2601
68	attention deficit hyperactivity disorder?.ab,ti,kf.	33888
69	attention-deficit.ab,ti,kf.	38235
70	hyperkinetic syndrome.ab,ti,kf.	306
71	minimal brain dysfunction.ab,ti,kf.	533
72	65 or 66 or 67 or 68 or 69 or 70 or 71	46849



73	64 or 72	53177
74	23 or 53 or 63 or 73	342225
75	limit 74 to yr="2014-Current"	144887
76	guideline/	16386
77	practice guideline/	31958
78	critical pathways/	8079
79	exp clinical pathway/	8079
80	guidelines as topic/	42268
81	practice guidelines as topic/	129285
82	health planning guidelines/	4165
83	guideline?.ti,kf.	115056
84	recommenda*.ti,kf.	58095
85	76 or 77 or 80 or 81 or 82	212447
86	83 or 84	167545
87	85 or 86	305987
88	75 and 87	1188

Comments

2.2 Embase

Date 27 Aug 2024

Database Embase

Search strategy

#1	'intellectual impairment'/mj	17724
#2	'mental deficiency'/mj	37040
#3	'down syndrome'/mj	24902
#4	'fragile x syndrome'/mj	5801



#5	'prader willi syndrome'/mj	4007
#6	'williams beuren syndrome'/mj	2413
#7	#1 OR #2 OR #3 OR #4 OR #5 OR #6	89873
#8	idiocy:ab,ti	497
#9	'mental retardation':ab,ti	37530
#10	(intellectual NEAR/3 disabilit*):ab,ti	40846
#11	(mental NEAR/3 deficienc*):ab,ti	2367
#12	(intellectual NEAR/3 disorder\$):ab,ti	3805
#13	'down syndrome':ab,ti	23732
#14	'trisomy 21':ab,ti	9918
#15	'frax\$ syndrome':ab,ti	33
#16	'fra x syndrome':ab,ti	158
#17	'fragile x syndrome':ab,ti	6737
#18	'williams syndrome':ab,ti	2383
#19	'beuren syndrome':ab,ti	941
#20	'supravalvar aortic stenosis':ab,ti	206
#21	'prader willi syndrome':ab,ti	4961
#22	'royer syndrome':ab,ti	2
#23	#8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22	118193
#24	#7 OR #23	154112
#25	'communication disorder'/exp/mj	40915
#26	(communication NEAR/3 (disorder\$ OR disabilit*)):ab,ti	4403
#27	(communicative NEAR/3 (disorder\$ OR dysfunction\$)):ab,ti	733
#28	(language NEAR/3 (disorder\$ OR delay* OR defic* OR impair* OR problem* OR disabilit*)):ab,ti	23666
#29	anomia:ab,ti	1200
#30	dysnomia:ab,ti	99



#31	(fluent NEAR/3 (aphasia OR dysphasia)):ab,ti	1257
#32	((jargon OR posterior OR psychosensory OR receptive) NEAR/3 (aphasia OR dysphasia)):ab,ti	443
#33	(receptive NEAR/3 (aphasia OR dysphasia)):ab,ti	246
#34	(sensory NEAR/3 (aphasia OR dysphasia)):ab,ti	514
#35	(wernicke NEAR/3 (aphasia\$ OR dysphasia)):ab,ti	463
#36	(alexia NEAR/2 pure):ab,ti	288
#37	'speech disorder\$':ab,ti	3815
#38	aphasia:ab,ti,kw	27125
#39	'articulation disorder\$':ab,ti	406
#40	dysarthria:ab,ti	13922
#41	echolalia:ab,ti	516
#42	mutism:ab,ti	3762
#43	'learning disabilit*':ab,ti	12442
#44	'specific learning disorder\$':ab,ti	461
#45	acalculia\$:ab,ti	328
#46	dyscalculia\$:ab,ti	701
#47	alexia\$:ab,ti	1156
#48	'word blindness*':ab,ti	64
#49	'reading disorder\$':ab,ti	698
#50	'reading disabilit*':ab,ti	1470
#51	dysphasia:ab,ti	2633
#52	#26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51	88975
#53	#25 OR #52	105346
#54	'autism'/exp/mj	65763
#55	autism:ab,ti	84157



#56	autistic:ab,ti	23740
#57	asperger:ab,ti	3077
#58	'kanner syndrome':ab,ti	12
#59	'kanner s syndrome':ab,ti	22
#60	asd:ab,ti	52475
#61	'asperger s syndrome':ab,ti	851
#62	#55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61	110307
#63	#54 OR #62	115994
#64	'attention deficit hyperactivity disorder'/mj	40795
#65	addh:ab,ti	196
#66	adhd:ab,ti	48722
#67	'attention deficit disorder\$':ab,ti	2905
#68	'attention deficit hyperactivity disorder\$':ab,ti	41737
#69	'attention-deficit':ab,ti	48028
#70	'hyperkinetic syndrome':ab,ti	414
#71	'minimal brain dysfunction':ab,ti	705
#72	#65 OR #66 OR #67 OR #68 OR #69 OR #70 OR #71	64612
#73	#64 OR #72	68778
#74	#24 OR #53 OR #63 OR #73	405880
#75	#74 AND [2014-2024]/py	196286
#76	'guideline'/de	142
#77	'practice guideline'/exp	761405
#78	'clinical pathway'/de	10484
#79	'health care planning'/de	116925
#80	guideline\$:ti,kw	160165
#81	recommenda*:ti,kw	0
#82	#76 OR #77 OR #78 OR #79 OR #80 OR #81	915603



#83	#75 AND #82	5134
#84	#83 NOT ('conference abstract'/it OR 'conference paper'/it OR 'conference review'/it)	3595
#85	#84 NOT [medline]/lim	972

Comments

2.3 Cinahl

Search date: 2024-08-21

Strategy:

(MH Intellectual Disability)

(MH Down Syndrome)

(MH Fragile X Syndrome)

(MH Prader-Willi Syndrome)

(MH Williams Syndrome)

S1 or S2 or S3 or S4 or S5

(TI idiocy) OR (AB idiocy)

(TI 'mental retardation') OR (AB 'mental retardation')

(TI (intellectual N3 disabilit*)) OR (AB (intellectual N3 disabilit*))

(TI (mental N3 deficienc*)) OR (AB (mental N3 deficienc*))

(TI (intellectual N3 disorder#)) OR (AB (intellectual N3 disorder#))

(TI 'down syndrome') OR (AB 'down syndrome')

(TI 'trisomy 21') OR (AB 'trisomy 21')

(TI 'frax# syndrome') OR (AB 'frax# syndrome')

(TI 'fra x syndrome') OR (AB 'fra x syndrome')

(TI 'fragile x syndrome') OR (AB 'fragile x syndrome')

(TI 'williams syndrome') OR (AB 'williams syndrome')

(TI 'beuren syndrome') OR (AB 'beuren syndrome')

(TI 'supravalvar aortic stenosis') OR (AB 'supravalvar aortic stenosis')

(TI 'prader willi syndrome') OR (AB 'prader willi syndrome')

(TI 'royer syndrome') OR (AB 'royer syndrome')

#8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22

S6 or S22

(MH "Communicative Disorders+")

(TI (communication N3 (disorder# or disabilit*))) OR (AB (communication N3 (disorder# or disabilit*)))

(TI (communicative N3 (disorder# or dysfunction#))) OR (AB (communicative N3 (disorder# or dysfunction#)))

(TI (language N3 (disorder# or delay* or defic* or impair* or problem* or disabilit*))) OR (AB (language N3 (disorder# or delay* or defic* or impair* or problem* or disabilit*)))

(TI Anomia) OR (AB Anomia)

(TI dysnomia) OR (AB dysnomia)

(TI (fluent N3 (aphasia or dysphasia))) OR (AB (fluent N3 (aphasia or dysphasia)))

(TI ((jargon or posterior or psychosensory or receptive) N3 (aphasia or dysphasia))) OR (AB ((jargon or posterior or psychosensory or receptive) N3 (aphasia or dysphasia)))

(TI (receptive N3 (aphasia or dysphasia))) OR (AB (receptive N3 (aphasia or dysphasia)))

(TI (sensory N3 (aphasia or dysphasia))) OR (AB (sensory N3 (aphasia or dysphasia)))

(TI (wernicke N3 (aphasia# or dysphasia))) OR (AB (wernicke N3 (aphasia# or dysphasia)))

(TI (Alexia N2 Pure)) OR (AB (Alexia N2 Pure))

(TI 'speech disorder#') OR (AB 'speech disorder#')

(TI aphasia) OR (AB aphasia)

(TI 'articulation disorder#') OR (AB 'articulation disorder#')

(TI dysarthria) OR (AB dysarthria)

(TI echolalia) OR (AB echolalia)

(TI mutism) OR (AB mutism)

(TI 'learning disabilit*') OR (AB 'learning disabilit*')

(TI 'specific learning disorder#') OR (AB 'specific learning disorder#')

(TI acalculia#) OR (AB acalculia#)

(TI dyscalculia#) OR (AB dyscalculia#)

(TI alexia#) OR (AB alexia#)

(TI 'word blindness*') OR (AB 'word blindness*')

(TI 'reading disorder#') OR (AB 'reading disorder#')

(TI 'reading disabilit*') OR (AB 'reading disabilit*')

(TI dysphasia) OR (AB dysphasia)

#26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 or #52

#25 or #53

(MH "Autism Spectrum Disorder")

(MH "Asperger Syndrome")

(TI autism) OR (AB autism)

(TI autistic) OR (AB autistic)

(TI asperger) OR (AB asperger)

(TI asperger's) OR (AB asperger's)



(TI 'kanner syndrome') OR (AB 'kanner syndrome')
 (TI "kanner's syndrome") OR (AB "kanner's syndrome")
 (TI asd) OR (AB asd)
 #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62
 #55 or #63
 (MH "Attention Deficit Hyperactivity Disorder")
 (TI addh) OR (AB addh)
 (TI adhd) OR (AB adhd)
 (TI 'attention deficit disorder#') OR (AB 'attention deficit disorder#')
 (TI attention deficit hyperactivity disorder#) OR (AB attention deficit hyperactivity disorder#)
 (TI attention-deficit) OR (AB attention-deficit)
 (TI hyperkinetic syndrome) OR (AB hyperkinetic syndrome)
 (TI minimal brain dysfunction) OR (AB minimal brain dysfunction)
 #66 OR #67 OR #68 OR #69 OR #70 OR #71 OR #72
 #65 or #73
 #24 or #54 or #64 or #74
 #75 AND [2014-2024]/py
 'clinical pathway'/de
 'clinical protocol'/exp
 'consensus'/exp
 'consensus development'/de
 'practice guideline'/exp
 'guideline'/de
 'health care planning'/de
 (TI 'position statement*') OR (AB 'position statement*')(TI OR 'policy statement*') OR (AB OR 'policy statement*')(TI OR 'practice parameter*') OR (AB OR 'practice parameter*')(TI OR 'best practice*') OR (AB OR 'best practice*')
 standards:ti,kw OR guideline:ti,kw OR guidelines:ti,kw
 ((practice OR treatment*) N3 guideline*):ab
 cpg:ti,kw OR cpgs:ti,kw
 consensus*:ti,kw
 (TI (((critical OR clinical OR practice) N3 (path OR paths OR pathway OR pathways OR protocol*))) OR (AB (((critical OR clinical OR practice) N3 (path OR paths OR pathway OR pathways OR protocol*))))
 recommendat*:ti,kw
 (TI (care N3 (standard OR path OR paths OR pathway OR pathways OR map OR maps OR plan OR plans))) OR (AB (care N3 (standard OR path OR paths OR pathway OR pathways OR map OR maps OR plan OR plans)))

(TI (algorithm* N3 (screening OR examination OR test OR tested OR testing OR assessment* OR diagnosis OR diagnoses OR diagnosed OR diagnosing))) OR (AB (algorithm* N3 (screening OR examination OR test OR tested OR testing OR assessment* OR diagnosis OR diagnoses OR diagnosed OR diagnosing)))

(TI (algorithm* N3 (pharmacotherap* OR chemotherap* OR chemotreatment* OR therap* OR treatment* OR intervention*))) OR (AB (algorithm* N3 (pharmacotherap* OR chemotherap* OR chemotreatment* OR therap* OR treatment* OR intervention*)))

#77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89 OR #90 OR #91 OR #92 OR #93

#76 and #94

Hits: 760

2.4 ERIC Education Resources Information Center

Date 2024-09-10, 2024-09-13 for communication disorders parts

Settings: peer reviewed only

Intellectual disabilities (132)

(guideline or guidelines or recommendation or recommendations or pathway or pathways) AND (descriptor:"Intellectual Disability" OR descriptor:"Down Syndrome" OR title:"idiocy" OR abstract:"idiocy" OR title:"mental retardation" OR abstract:"mental retardation" OR title:"intellectual disability" OR abstract:"intellectual disability" OR title:"intellectual disabilities" OR abstract:"(intellectual disabilities" OR title:"mental deficiency" OR abstract:"mental deficiency" OR title:"mental deficiencies" OR abstract:"mental deficiencies" OR title:"intellectual disorder" OR abstract:"intellectual disorder" OR title:"intellectual disorders" OR abstract:"intellectual disorders" OR title:"down syndrome" OR abstract:"down syndrome" OR title:"trisomy 21" OR abstract:"trisomy 21" OR title:"frax syndrome" OR abstract:"frax syndrome" OR title:"fra x syndrome" OR abstract:"fra x syndrome" OR title:"fragile x syndrome" OR abstract:"fragile x syndrome" OR title:"williams syndrome" OR abstract:"williams syndrome" OR title:"beuren syndrome" OR abstract:"beuren syndrome" OR title:"supravalvar aortic stenosis" OR abstract:"supravalvar aortic stenosis" OR title:"prader willi syndrome" OR abstract:"prader willi syndrome" OR title:"royer syndrome" OR abstract:"royer syndrome") pubyearmin:2014

=====

Communication disorders

Due to export constraints, the search has been sliced in multiple parts. Peer reviewed only.

I. (87)

(guideline or guidelines or recommendation or recommendations or pathway or pathways) AND (descriptor:"Communication Disorders" OR descriptor:"Language Impairments" OR descriptor:"Speech Impairments" OR title:"communication disorder" OR title:"communication disorders" OR title:"communication disability" OR title:"communication disabilities" OR abstract:"communication disorder" OR abstract:"communication disorders" OR abstract:"communication disability" OR abstract:"communication disabilities") pubyearmin:2014

II. (0)



(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND title:"communicative" AND (title:"disorder" OR title:"disorders" OR title:"dysfunction" OR title:"dysfunctions") pubyearmin:2014

IIb (14)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND abstract:"communicative" AND (abstract:"disorder" OR abstract:"disorders" OR abstract:"dysfunction" OR abstract:"dysfunctions") pubyearmin:2014

IIc (40)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND (abstract:"language disorder" OR abstract:"language disorders") pubyearmin:2014

IId (42)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND title:"language" AND (title:"disorder" OR title:"disorders") pubyearmin:2014

IIf (4)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND title:"language" AND (title:"delay" OR title:"delays" OR title:"delayed") pubyearmin:2014

IIg (14)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND (abstract:"language delay" OR abstract:"language delays") pubyearmin:2014

IIh (3)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND (title:"language" AND (title:"deficit" OR title:"deficits")) pubyearmin:2014

IIi (10)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND (abstract:"language deficit" OR abstract:"language deficits") pubyearmin:2014

part IIj (0)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND (title:"language" AND (title:"impairment" OR title:"impairments" OR title:"impaired")) pubyearmin:2014

part IIk (3)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways)
AND (abstract:"language language impairment" OR abstract:"language impairments" OR
abstract:"impaired language") pubyearmin:2014

part IIk (13)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways)
AND title:"language" AND (title:"problem" OR title:"problems") pubyearmin:2014

part III (23)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND
(abstract:"language problem" OR abstract:"language problems")) pubyearmin:2014

part IIIm (14)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND
title:"language" AND (title:"disability" OR title:"disabilities") pubyearmin:2014

part IIIn (10)

(guideline OR guidelines OR recommendation OR recommendations OR pathway OR pathways) AND
(abstract:"language disability" OR abstract:"language disabilities") pubyearmin:2014

part III (1)

(guideline or guidelines or recommendation or recommendations or pathway or pathways) AND

(title:"Anomia" OR abstract:"Anomia" OR title:"dysnomia" OR abstract:"dysnomia" OR (title:"fluent"
AND title:"aphasia") OR (title:"fluent" AND title:"dysphasia") OR (abstract:"fluent" AND
abstract:"aphasia") OR (abstract:"fluent" AND abstract:"dysphasia") OR ((title:"jargon" OR
title:"posterior" OR title:"psychosensory" OR title:"receptive" OR title:"sensory" OR title:"wernicke")
AND (title:"aphasia" OR title:"dysphasia")) OR ((title:"jargon" OR title:"posterior" OR
title:"psychosensory" OR title:"receptive") AND (title:"aphasia" OR title:"dysphasia")) OR
((abstract:"jargon" OR abstract:"posterior" OR abstract:"psychosensory" OR abstract:"receptive" OR
abstract:"sensory" OR abstract:"wernicke") AND (abstract:"aphasia" OR abstract:"dysphasia")) OR
((abstract:"jargon" OR abstract:"posterior" OR abstract:"psychosensory" OR abstract:"receptive")
AND (abstract:"aphasia" OR abstract:"dysphasia")) OR (title:"Alexia" AND title:"Pure"))
pubyearmin:2014

part IV (119)

(guideline or guidelines or recommendation or recommendations or pathway or pathways) AND (
title:"speech disorder" OR abstract:"speech disorder" OR title:"speech disorders" OR abstract:"speech
disorders" OR title:"aphasia" OR abstract:"aphasia" OR title:"articulation disorder" OR
abstract:"articulation disorder" OR title:"articulation disorders" OR abstract:"articulation disorders" OR
title:"dysarthria" OR abstract:"dysarthria" OR title:"echolalia" OR abstract:"echolalia" OR title:"mutism"
OR abstract:"mutism" OR title:"learning disability" OR abstract:"learning disability" OR title:"learning
disabilities" OR abstract:"learning disabilities" OR title:"specific learning disorder" OR
abstract:"specific learning disorder" OR title:"specific learning disorders" OR abstract:"specific
learning disorders" OR title:"acalculia" OR abstract:"acalculia" OR title:"acalculias" OR
abstract:"acalculias" OR title:"dyscalculia" OR abstract:"dyscalculia" OR title:"dyscalculias" OR



abstract:"dyscalculias" OR title:"alexia" OR abstract:"alexia" OR title:"alexias" OR abstract:"alexias" OR title:"word blindness" OR abstract:"word blindness" title:"reading disorder" OR abstract:"reading disorder" OR title:"reading disorders" OR abstract:"reading disorders" OR title:"reading disability" OR abstract:"reading disability" OR title:"reading disabilities" OR abstract:"reading disabilities" OR title:"dysphasia" OR abstract:"dysphasia") pubyearmin:2014

=====

AUTISM (275)

(guideline or guidelines or recommendation or recommendations or pathway or pathways) AND

(descriptor:"Autism Spectrum Disorders" OR title:"autism" OR abstract:"autism" OR title:"autistic" OR abstract:"autistic" OR title:"asperger" OR abstract:"asperger" OR title:"asperger's" OR abstract:"asperger's" OR title:"kanner syndrome" OR abstract:"kanner syndrome" OR title:"kanner's syndrome" OR abstract:"kanner's syndrome" OR title:"asd" OR abstract:"asd") pubyearmin:2014 pubyearmax:2020

=====

ADHD (42)

(guideline or guidelines or recommendation or recommendations or pathway or pathways) AND (

descriptor:"Attention Deficit Hyperactivity Disorder"

title:"addh" OR abstract:"addh" OR title:"adhd" OR abstract:"adhd" OR title:"attention deficit disorder" OR title:"attention deficit disorders" OR abstract:"attention deficit disorder" OR abstract:"attention deficit disorders" OR

title:"attention deficit hyperactivity disorder" OR title:"attention deficit hyperactivity disorders" OR abstract:"attention deficit hyperactivity disorder" OR abstract:"attention deficit hyperactivity disorders" OR

title:"attention-deficit" OR abstract:"attention-deficit" OR title:"hyperkinetic syndrome" OR abstract:"hyperkinetic syndrome" OR title:"minimal brain dysfunction" OR abstract:"minimal brain dysfunction") pubyearmin:2014

Total hits ERIC: 846

3 SELECTION OF GUIDELINES

3.1 Database search

A literature search was conducted by the information specialist (Nicolas Fairon, KCE) in the databases MEDLINE Ovid (August 8, 2024), Embase (August 27, 2024), CINAHL (August 21, 2024), and ERIC (Education Resources Information Center) (September 10-13, 2024). Search strategies (see Supplement 2) were tailored for each database to maximize relevance, utilizing both thesaurus terms and textwords. References were imported into Endnote for management and deduplication, resulting in a total of 3766 citations, reduced to 3335 after duplicate removal (Figure 1).

Based on title and abstract 3280 references were excluded and 55 references were retained.

The included references were subdivided into five topics. Based on Ti/Abstr, one publication (Wickstrom 2021 “Systematic Review: Recommendations for Rehabilitation in ASD and ID From Clinical Practice Guidelines”)¹ clearly dealt with 2 topics, and was included for both. This resulted in the following numbers of GL per topic: Intellectual disability (ID, N=14), Autism spectrum disorder (ASD, N=16), Attention deficit / Hyperactivity disorder (ADHD) (N=20), Communication disorders (CD) (N=5), Specific Learning Disorder (LD) (N=1).

3.2 Grey search

Additionally, the following websites were screened for relevant guidelines:

- GIN (<https://guidelines.ebmportal.com/>)
- NICE (<https://www.nice.org.uk/guidance/published>)
- SIGN (<https://www.sign.ac.uk/search-results>)
- National Health and Medical Research Council (NHMRC) (<https://www.nhmrc.gov.au/guidelines>)
- The international HTA database (<https://database.inahta.org/>)
- HAS (https://www.has-sante.fr/jcms/fc_2874928/fr/recherche-avancee)
- National Institute of Excellence in Health and Social Services (INESSS) (<https://www.inesss.qc.ca/en/publications/publications.html>)
- IQWiG (Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen) (<https://www.iqwig.de/en/>)
- WHO guidelines (<https://www.who.int/publications/who-guidelines>)
- Ebpracticenet (<https://ebpnet.be/nl>)
- AMWF guideline database (<https://register.awmf.org/de/start>)
- Richtlijndatabase (<https://richtlijndatabase.nl/>)

Search terms included: intellectual disability; down; intellectuel; intellectuelle; autism; autisme; language; speech; communication; language therapy ; langue; language; Sprache; ADHD; attention; learning; learning disorder; dyslexia; dyscalculia; dysgraphia; dyslexie

Detailed information on search results per website is available on request from the authors.

After removal of duplicates, 47 guidelines were retained from the website search. Two publications (WHO 2023 “Package of interventions for rehabilitation for ID and ASD”²; INESSS 2021 “State of knowledge: challenging behaviours - best practices in prevention, assessment and Intervention for people with an intellectual disability, physical disability or autism spectrum disorder”³ clearly dealt with two topics and were included for both. This resulted in the following numbers of GL from the website search per topic: ID: 15; ASD: 16; ADHD: 11; CD: 5; LD: 2.



3.3 Full text evaluation

In total, the database search and the website search yielded 102 publications for full text screening. Three of those publications were included in two topics. (ID: 29; ASD: 32; ADHD: 31; CD: 10; LD: 3).

- For the topic Intellectual disability (ID, N=29), based on full-text evaluation, 12 publications were included of which 2 publications with 2 references each (Wickstrom 2021 and WHO 2023;^{1, 2} Burdeus-Olavarietta 2023 and Van Eeghen 2023)^{4, 5} (Table 5). The reason for exclusion of 15 publications can be found in Table 6.
- Zollino 2019⁶, Fu 2020⁷, and Townend 2020⁸ are included in our list of publications, as well as in an included systematic review (SR) of guidelines (Haneveld 2024).⁹ This SR included 70 guidelines, of which 50 were published from 2014 onwards, and 21 met our inclusion criteria (Northrup 2021, De Vries 2017, Amin 2019, Auvin 2019, Fu 2020, Townend 2020, Solot 2019, Habel 2014, Duis 2022, Wirell 2022, Wirrell 2017, Andrade 2021, Cardenal-Muñoz 2022, Garzon 2016, Zollino 2019, Wakeling 2017, Wilson 2021, Pierpont 2014, Amin 2022, Trider 2017, Kline 2018).^{6-8, 10-27}
- For the topic Autism spectrum disorder (ASD, N=32), based on full-text evaluation, 14 publications were included of which 1 publication with 2 references (Wickstrom 2021, WHO 2023)^{1, 2} (Table 7). The reason for exclusion of 17 publications^a can be found in Table 8.

Two of the included publications were SRs of guidelines.

Amer 2022²⁸ had a search limit from November 2015 until March 2022 and included four GLs: Autism CRC 2018 (assessment and diagnosis only so excluded),²⁹ New Zealand Autism Guideline 2016 (living guideline, already included),³⁰ NICE 2017 (CG128, referral and diagnosis only so excluded),³¹ and SIGN 2019 (update from 2016, already included).³²

Chen 2024³³ searched for clinical guidelines for ASD management from January 2014 to December 2022 and included ten GLs: Subramanyam 2019 (India, non-OECD so excluded from our review),³⁴ New Zealand Autism Guideline 2022 (already included),³⁰ SIGN 2016 (already included),³² NICE 2017 (CG128, referral and diagnosis only so excluded),³¹ Howes 2018 (no rehabilitation, already excluded),³⁵ Fuentes 2021 (excluded since no GL),³⁶ Dalwai 2017 (India, non-OECD so excluded from our review),³⁷ Alenezi 2022 (Saudi Arabia, non-OECD so excluded from our review),³⁸ Zachor 2014 (excluded since no GL),³⁹ KCE 2014 (already included).⁴⁰

- For the topic Attention deficit / Hyperactivity disorder (ADHD, N=31) based on full-text evaluation, 15 publications were included of which 1 publication with 2 references (Feldman 2018, Clark 2018)^{41, 42} (Table 9). The reason for exclusion of 15 publications can be found in Table 10.

Two of the included publications were SRs of guidelines.

Andrade 2019⁴³ is a SR including 22 guidelines addressing ADHD, of which none met our inclusion criteria (a majority was published before 2014).

^a One guideline, INESSS 2021 "State of knowledge: challenging behaviours - best practices in prevention, assessment and Intervention for people with an intellectual disability, physical disability or autism spectrum disorder"³. Institut National d'Excellence en Santé et en Services Sociaux (INESSS). [State of knowledge: challenging behaviours - best practices in prevention, assessment and Intervention for people with an intellectual disability, physical disability or autism spectrum disorder]. 2021. Available from: <https://www.inesss.qc.ca/publications/repertoire-des-publications/publication/troubles-graves-du-comportement-meilleures-pratiques-en-prevention-en-evaluation-et-en-intervention-aupres-des-personnes-qui-presentent-une-deficience-intellectuelle-une-deficience-physique-ou-un-trouble-du-spectre-de-lautisme.html> that clearly dealt with two subtopics (ID and ASD) and that was included for both, was already excluded for the subtopic ID. Therefore the total of excluded guidelines for ASD is in fact 16 guidelines.

Amer 2019⁴⁴ is another SR including 6 guidelines of which 3 were published since 2014: NICE 2018,⁴⁵ NHMRC 2014 (AADPA GL updated in 2022),⁴⁶ and CADDRA 2014 (updated in 2020).⁴⁷ These three guidelines were already included in the list of retained publications.

- For the topic Communication disorders (CD, N=10) based on full-text evaluation, 3 publications were included of which 1 publication with 2 references (Neumann 2024, AWMF 2022)^{48, 49} (Table 11). The reason for exclusion of 6 publications can be found in Table 12.
- For the topic Specific Learning Disorder (LD, N=3) based on full-text evaluation, 2 publications were included of which 1 publication with 2 references (Galuschka 2016, AWMF 2015)^{50, 51} (Table 13).

Figure 1 – Flow chart of study selection

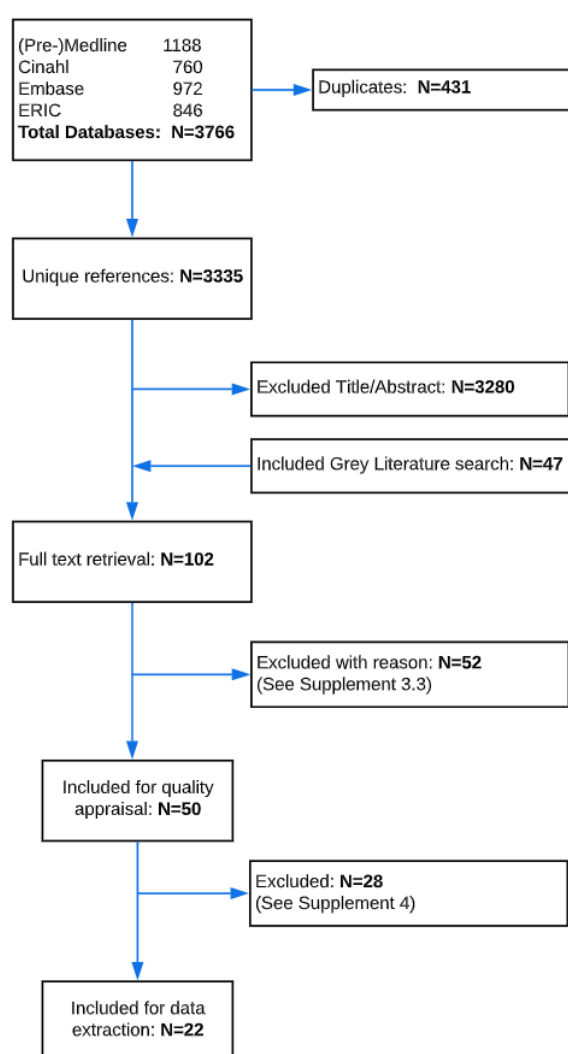




Table 5 – Intellectual disability (ID): overview of included papers based on full-text evaluation

Author/ Organization	Year	Title
<i>Zollino</i>	2019	Diagnosis and management in Pitt-Hopkins syndrome: First international consensus statement ⁶
<i>Fu</i>	2020	Consensus guidelines on managing Rett syndrome across the lifespan ⁷
<i>Townend</i>	2020	Development of consensus-based guidelines for managing communication of individuals with Rett syndrome ⁸
<i>Van Eeghen</i>	2023	Consensus recommendations on organization of care for individuals with Phelan-McDermid syndrome (European consensus guideline for Phelan-McDermid syndrome) ⁵
<i>Burdeus-Olavarrieta</i>	2023	Consensus recommendations on communication, language and speech in Phelan-McDermid syndrome (European consensus guideline for Phelan-McDermid syndrome) ⁴
<i>Latzer</i>	2024	Consensus guidelines for the diagnosis and management of succinic semialdehyde dehydrogenase deficiency ⁵²
<i>Haneveld</i>	2024	Improving care for rare genetic neurodevelopmental disorders: A systematic review and critical appraisal of clinical practice guidelines using AGREE II ⁹
<i>Wickstrom</i>	2021	Systematic Review: Recommendations for Rehabilitation in ASD and ID From Clinical Practice Guidelines ¹
<i>World Health Organization (WHO)</i>	2023	<i>Package of interventions for rehabilitation for disorders of intellectual development²</i>
<i>Nederlandse Vereniging voor Kindergeneeskunde</i>	2021	<i>Medische begeleiding van kinderen met downsyndroom⁵³</i>
<i>National Institute of Excellence in Health and Social Services (INESSS)</i>	2019	<i>L'autonomie des jeunes âgés de 6 à 21 ans qui présentent une déficience intellectuelle - Guide de pratique⁵⁴</i>
<i>National Institute for Health and Care Excellence (NICE)</i>	2022	<i>Disabled children and young people up to 25 with severe complex needs: integrated service delivery and organisation across health, social care and education (NG213)⁵⁵</i>
<i>Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (AWMF)</i>	2016	<i>S2k-Leitlinie Down-Syndrom im Kindes- und Jugendalter⁵⁶</i>
<i>AWMF</i>	2021	<i>S2k-Leitlinie Intelligenzminderung⁵⁷</i>

Guidelines obtained through the grey literature search are presented in italics in the table.

Table 6 – Intellectual disability (ID): overview of excluded papers based on full-text evaluation

Author/ Organization	Year	Title	Reason for exclusion
Sullivan (The College of Family Physicians of Canada)	2018	Primary care of adults with intellectual and developmental disabilities: 2018 Canadian consensus guidelines ⁵⁸	Population (adults)
Anaby	2018	Recommended practices to organize and deliver school-based services for children with disabilities: A scoping review ⁵⁹	Study type, no relevant GL included
Starr	2019	Older adults with intellectual disability: the National Institute for Health and Care Excellence (NICE) guidelines ⁶⁰	Study type (commentary)
Tsou (The Global Down Syndrome Foundation)	2020	Medical Care of Adults With Down Syndrome: A Clinical Guideline ⁶¹	Population (adults)
Bunt	2022	Medical Care for Adults With Down Syndrome: Guidelines From the Global Down Syndrome Foundation ⁶²	Study type (commentary)
van Gameren-Oosterom	2023	Clinical practice - latest insights in optimizing the care of children with Down syndrome ⁶³	Intervention (no rehabilitation)
<i>National Institute for Health and Care Research (NIHR)</i>	2020	<i>Access to primary and community health-care services for people 16 years and over with intellectual disabilities: a mapping and targeted systematic review⁶⁴</i>	<i>Intervention (no rehabilitation)</i>
<i>INESSS</i>	2021	<i>Troubles graves du comportement : meilleures pratiques en prévention, en évaluation et en intervention auprès des personnes qui présentent une déficience intellectuelle, une déficience physique ou un trouble du spectre de l'autisme⁶⁵</i>	<i>Study type (no GL)</i>
<i>INESSS</i>	2021	<i>Trajectoires de services menant à l'évaluation diagnostique des troubles neurodéveloppementaux chez les enfants de la naissance à sept ans⁶⁶</i>	<i>Intervention (no rehabilitation)</i>
<i>National Institute for Health and Care Excellence (NICE)</i>	2015	<i>Challenging behaviour and learning disabilities: prevention and interventions for people with learning disabilities whose behaviour challenges (NG11)⁶⁷</i>	<i>Population (specific symptom)</i>
<i>NICE</i>	2016	<i>Mental health problems in people with learning disabilities: prevention, assessment and management (NG54)⁶⁸</i>	<i>Population (specific symptom)</i>



<i>NICE</i>	<i>2018</i>	<i>Learning disabilities and behaviour that challenges: service design and delivery (NG93)⁶⁹</i>	<i>Population (specific symptom)</i>
<i>NICE</i>	<i>2018</i>	<i>Care and support of people growing older with learning disabilities (NG96)⁷⁰</i>	<i>Population (adults)</i>
<i>Centre intégré universitaire de santé et de services sociaux de la Capitale-Nation</i>	<i>2019</i>	<i>HTA Report: Identification des pratiques et des interventions psychosociales favorisant l'adaptation et la réadaptation des personnes adultes présentant le syndrome de Prader-Willi⁷¹</i>	<i>Population (adults)</i>
<i>Haute Autorité de Santé (HAS)</i>	<i>2020</i>	<i>Troubles du neurodéveloppement - Repérage et orientation des enfants à risque⁷²</i>	<i>Intervention (no rehabilitation)</i>

Guidelines obtained through the grey literature search are presented in italics in the table.

Table 7 – Autism spectrum disorder (ASD): overview of included papers based on full-text evaluation

Author/ Organization	Year	Title
<i>Zwaigenbaum</i>	<i>2015</i>	<i>Early Intervention for Children With Autism Spectrum Disorder Under 3 Years of Age: Recommendations for Practice and Research⁷³</i>
<i>Ameis</i>	<i>2018</i>	<i>Systematic review and guide to management of core and psychiatric symptoms in youth with autism⁷⁴</i>
<i>Amer</i>	<i>2022</i>	<i>AGREEing on Clinical Practice Guidelines for Autism Spectrum Disorders in Children: A Systematic Review and Quality Assessment²⁸</i>
<i>Chen</i>	<i>2024</i>	<i>Evaluation of the Quality of Management Guidelines for Children and Adolescents With Autism Spectrum Disorder³³</i>
<i>Wickstrom</i>	<i>2021</i>	<i>Systematic Review: Recommendations for Rehabilitation in ASD and ID From Clinical Practice Guidelines¹</i>
<i>World Health Organization (WHO)</i>	<i>2023</i>	<i>Package of interventions for rehabilitation for autism spectrum disorders²</i>
<i>Finnish Medical Society</i>	<i>2024</i>	<i>Autismikirjon häiriö [Autism spectrum disorder]⁷⁵</i>
<i>The Danish Health Authority</i>	<i>2021</i>	<i>National clinical guideline for the treatment of autism spectrum disorders in children and adolescents⁷⁶</i>
<i>KCE</i>	<i>2014</i>	<i>Management of autism in children and young people: a good clinical practice guideline⁴⁰</i>
<i>SIGN</i>	<i>2016</i>	<i>Assessment, diagnosis and interventions for autism spectrum disorders³²</i>
<i>Autism CRC</i>	<i>2022</i>	<i>National Guideline for supporting the learning, participation, and wellbeing of autistic children and their families in Australia⁷⁷</i>

<i>NICE</i>	<i>2021</i>	<i>Autism spectrum disorder in under 19s: support and management (CG170)⁷⁸</i>
<i>AWMF</i>	<i>2021</i>	<i>S3-Leitlinie Autismus-Spektrum-Störungen im Kindes-, Jugend- und Erwachsenenalter. Teil 2: Therapie.⁷⁹</i>
<i>Basque Office for Health Technology Assessment (OSTEBA)</i>	<i>2022</i>	<i>Trastornos del Espectro Autista: evidencia científica sobre la detección, el diagnóstico y el tratamiento⁸⁰</i>
<i>Whaikaha Ministry of Disabled People</i>	<i>2022</i>	<i>Aotearoa New Zealand Autism Guideline: He Waka Huia Takiwātanga Rau³⁰</i>

Guidelines obtained through the grey literature search are presented in italics in the table.

Table 8 – Autism spectrum disorder (ASD): overview of excluded papers based on full-text evaluation

Author/ Organization	Year	Title	Reason for exclusion
Zachor	2014	Recommendations for early diagnosis and intervention in autism spectrum disorders: an Italian-Israeli consensus conference ³⁹	Study type (no GL)
Crowe	2015	Autism: the management and support of children and young people on the autism spectrum (NICE Clinical Guideline 170) ⁸¹	Study type (commentary)
McGuire	2016	Irritability and Problem Behavior in Autism Spectrum Disorder: A Practice Pathway for Pediatric Primary Care ⁸²	Study type (no GL)
Howes (The British Association of Psychopharmacology)	2018	Autism Spectrum Disorder: consensus guidelines on assessment, treatment and research from the British Association for Psychopharmacology ³⁵	Intervention (no rehabilitation)
Chaplin	2018	BAP consensus guidelines on autism spectrum disorder ⁸³	Study type (commentary)
Sanchack	2020	Autism Spectrum Disorder: Updated Guidelines from the American Academy of Pediatrics ⁸⁴	Study type (commentary)
Hyman	2020	Identification, Evaluation, and Management of Children With Autism Spectrum Disorder ⁸⁵	Study type (no GL)
No authors listed	2021	Autism spectrum disorder in adults: diagnosis and management ⁸⁶	Study type (commentary)
Fuentes (MEDLINE)	2021	ESCAP practice guidance for autism: a summary of evidence-based recommendations for diagnosis and treatment ³⁶	Study type (no GL, narrative review)
Fuentes (CINAHL)	2021	ESCAP practice guidance for autism: a summary of evidence-based recommendations for diagnosis and treatment ³⁶	Study type (duplicate)



Yoo	2024	Understanding Evidence-Based Practice for Autism Spectrum Disorder: Korean Practice Clinical Guidelines ⁸⁷	Study type (no GL, narrative review)
<i>National Institute for Korean Medicine Development</i>	2021	<i>Korean Medicine Clinical Practice Guideline for Autism Spectrum Disorder⁸⁸</i>	Other (Reliable translation was not feasible)
<i>Autism CRC</i>	2023	<i>Australian National Guideline for the Assessment and Diagnosis of Autism Spectrum Disorders²⁹</i>	<i>Intervention (no rehabilitation)</i>
<i>NICE</i>	2021	<i>Autism spectrum disorder in adults: diagnosis and management (CG142)⁸⁹</i>	<i>Population (adults)</i>
<i>(INESSS*)</i>	<i>(2021)</i>	<i>(Troubles graves du comportement : meilleures pratiques en prévention, en évaluation et en intervention auprès des personnes qui présentent une déficience intellectuelle, une déficience physique ou un trouble du spectre de l'autisme³)</i>	<i>(Study type (no GL))</i>
<i>INESSS</i>	2021	<i>Évaluation des interventions de réadaptation pour les enfants âgés de 0 à 12 ans présentant un trouble du spectre de l'autisme⁹⁰</i>	<i>Study type (no GL)</i>
<i>NIHR</i>	2020	<i>Interventions based on early intensive applied behaviour analysis for autistic children: a systematic review and cost-effectiveness analysis⁹¹</i>	<i>Study type (no GL)</i>

Guidelines obtained through the grey literature search are presented in italics in the table.

*This guideline clearly dealt with two subtopics (ID and ASD) and was included for both. It was already excluded for the subtopic ID.

Table 9 – Attention deficit / Hyperactivity disorder (ADHD): overview of included papers based on full-text evaluation

Author/ Organization	Year	Title
<i>Feldman</i> <i>(Canadian Paediatric Society)</i>	2018	ADHD in children and youth: Part 2—Treatment ⁴¹
<i>Clark</i> <i>(Canadian Paediatric Society)</i>	2018	ADHD in children and youth: Part 3-Assessment and treatment with comorbid ASD, ID, or prematurity ⁴²
<i>Wolraich</i> <i>(American Academy of Pediatrics)</i>	2019	Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents ⁹²
<i>Andrade</i>	2019	A Systematic Review and Evaluation of Clinical Practice Guidelines for Children and Youth with Disruptive Behavior: Rigor of Development and Recommendations for Use ⁴³
<i>Amer</i>	2019	Appraisal of clinical practice guidelines for the management of attention deficit hyperactivity disorder (ADHD) using the AGREE II Instrument: A systematic review ⁴⁴

<i>Barbaresi</i>	2020	Society for Developmental and Behavioral Pediatrics Clinical Practice Guideline for the Assessment and Treatment of Children and Adolescents with Complex Attention-Deficit/Hyperactivity Disorder ⁹³
<i>Tourjman (CADDRA Guidelines Work GROUP)</i>	2022	Psychosocial Interventions for Attention Deficit/Hyperactivity Disorder: A Systematic Review and Meta-Analysis by the CADDRA Guidelines Work GROUP ⁹⁴
<i>May</i>	2023	The Australian evidence-based clinical practice guideline for attention deficit hyperactivity disorder ⁹⁵
<i>Nederlands Huisartsen Genootschap (NHG)</i>	2014	<i>NHG-Standaard ADHD</i> ⁹⁶
<i>NICE</i>	2018	<i>Attention deficit hyperactivity disorder: diagnosis and management (NG87)</i> ⁴⁵
<i>The Danish Health Authority</i>	2021	<i>National Clinical Guideline for the Assessment and Treatment of ADHD in Children and Adolescents</i> ⁹⁷
<i>Ministerio de Sanidad</i>	2017	<i>Guía de Práctica Clínica sobre las Intervenciones Terapéuticas en el Trastorno por Déficit de Atención con Hiperactividad (TDAH)</i> ⁹⁸
<i>AWMF</i>	2018	<i>S3-Leitlinie ADHS bei Kindern, Jugendlichen und Erwachsenen</i> ⁹⁹
<i>Finnish Medical Society</i>	2019	<i>ADHD (aktiivisuuden ja tarkkaavuuden häiriö)</i> ¹⁰⁰
<i>INESSS</i>	2018	<i>Optimal service trajectory for children, adolescents and young adults with attention deficit disorder with or without hyperactivity (ADHD) or related problems</i> ¹⁰¹
<i>Nederlandse Vereniging voor Psychiatrie</i>	2018	<i>ADHD bij kinderen</i> ¹⁰²

Guidelines obtained through the grey literature search are presented in italics in the table.

Table 10 – Attention deficit / Hyperactivity disorder (ADHD): overview of excluded papers based on full-text evaluation

Author/ Organization	Year	Title	Reason for exclusion
Bolea-Alamañac (the British Association for Psychopharmacology)	2014	Evidence-based guidelines for the pharmacological management of attention deficit hyperactivity disorder: update on recommendations from the BAP ¹⁰³	Intervention (no rehabilitation)
Van Avendonck	2015	[Summary of the Dutch College of General Practitioners' (NHG) practice guideline 'ADHD in children'] ¹⁰⁴	Study type (commentary)
Belanger (MEDLINE)	2018	Canadian Paediatric Society clinical practice recommendations for children and adolescents with attention-deficit hyperactivity disorder ¹⁰⁵	Study type (commentary)



Belanger (CINAHL)	2018	Canadian Paediatric Society clinical practice recommendations for children and adolescents with attention-deficit hyperactivity disorder ¹⁰⁵	Study type (duplicate)
Wolraich (CINAHL) (American Academy of Pediatrics)	2019	Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents ⁹²	Study type (duplicate)
Wolraich	2020	Subcommittee on Children and Adolescents with Attention-Deficit/Hyperactive Disorder. Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. ¹⁰⁶	Study type (erratum)
Dalrymple	2020	NICE guideline review: Attention deficit hyperactivity disorder: diagnosis and management (NG87) ¹⁰⁷	Study type (commentary)
Asherson	2022	Mainstreaming adult ADHD into primary care in the UK: guidance, practice, and best practice recommendations ¹⁰⁸	Population (adults)
Tourjman (EMBASE) (CADDRA Guidelines Work GROUP)	2022	Psychosocial Interventions for Attention Deficit/Hyperactivity Disorder: A Systematic Review and Meta-Analysis by the CADDRA Guidelines Work GROUP ⁹⁴	Study type (duplicate)
Coghill (MEDLINE) (European ADHD Guidelines Group)	2023	The management of ADHD in children and adolescents: bringing evidence to the clinic: perspective from the European ADHD Guidelines Group (EAGG) ¹⁰⁹	Study type (no GL)
Coghill (CINAHL) (European ADHD Guidelines Group)	2023	The management of ADHD in children and adolescents: bringing evidence to the clinic: perspective from the European ADHD Guidelines Group (EAGG) ¹⁰⁹	Study type (duplicate)
May (CINAHL)	2023	The Australian evidence-based clinical practice guideline for attention deficit hyperactivity disorder ⁹⁵	Study type (duplicate)
HAS	2014	<i>Conduite à tenir en médecine de premier recours devant un enfant ou un adolescent susceptible d'avoir un trouble déficit de l'attention avec ou sans hyperactivité¹¹⁰</i>	Intervention (no rehabilitation)
INESSS	2017	<i>Portraits décrivant les interventions pharmacologiques et non pharmacologiques entourant le trouble du déficit de l'attention¹¹¹</i>	Study type (no GL)

NIHR	2015	<i>Non-pharmacological interventions for attention-deficit/hyperactivity disorder (ADHD) delivered in school settings: systematic reviews of quantitative and qualitative research¹¹²</i>	<i>Study type (no GL)</i>
------	------	--	---------------------------

Guidelines obtained through the grey literature search are presented in italics in the table.

Table 11 – Communication disorders (CD): overview of included papers based on full-text evaluation

Author/ Organization	Year	Title
Neumann (AWMF)	2024	Interventions for Developmental Language Delay and Disorders ⁴⁸
AWMF	2022	<i>S3-Leitlinie Therapie von Sprachentwicklungsstörungen⁴⁹</i>
Finnish Medical Society	2019	<i>[Developmental language disorder (specific language difficulty, children and young people)]¹¹³</i>
INESSS	2017	<i>Organisation du continuum et de la dispensation des services aux enfants âgés de 2 à 9 ans présentant un trouble développemental du langage¹¹⁴</i>

Guidelines obtained through the grey literature search are presented in italics in the table.

Table 12 – Communication disorders (CD): overview of excluded papers based on full-text evaluation

Author/ Organization	Year	Title	Reason for exclusion
International Society for Augmentative and Alternative Communication (ISAAC)	2014	ISAAC Position Statement on Facilitated Communication ¹¹⁵	Study type (no GL)
Kiese-Himmel	2022	[Therapy of Language Disorders in Childhood: A Guideline is long overdue] ¹¹⁶	Study type (commentary)
Pospíšilová	2022	Guidelines for developmental dysphasia – version 2022 ¹¹⁷	Study type (no guideline)



Baixauli	2024	[Early indicators of childhood apraxia of speech in late talkers: general guidelines to intervention] ¹¹⁸	Study type (no guideline)
NIHR	2018	<i>Therapy interventions for children with neurodisabilities: a qualitative scoping study</i> ¹¹⁹	Study type (no guideline)
AWMF	2016	<i>S3-Leitlinie Redeflussstörungen, Pathogenese, Diagnostik und Behandlung</i> ¹²⁰	Population (stuttering)

Guidelines obtained through the grey literature search are presented in italics in the table.

Table 13 – Specific Learning Disorder (LD): overview of included papers based on full-text evaluation

Author/ Organization	Year	Title
Galuschka	2016	The Diagnosis and Treatment of Reading and/or Spelling Disorders in Children and Adolescents ⁵⁰
AWMF	2015	<i>S3-Leitlinie Diagnostik und Behandlung bei der Lese- und/oder Rechtschreibstörung</i> ¹²¹
AWMF	2018	<i>S3-Leitlinie Diagnostik und Behandlung der Rechenstörung</i> ¹²²

Guidelines obtained through the grey literature search are presented in italics in the table.

4 QUALITY APPRAISAL OF GUIDELINES

Among the remaining 50 publications, 1 publication with 2 references (Wickstrom 2021, WHO 2023)^{1, 2} was included for the subtopic ID as well as for the subtopic ASD. Some publications were systematic reviews including guidelines. The AGREE II instrument was used to evaluate the methodological quality of the identified GLs (<http://www.agreetrust.org/>). Details per subtopic are described in the next paragraphs. The full AGREE appraisals of the 38 guidelines taken into consideration can be found in the tables below (Table 14, Table 15, Table 16, Table 17, Table 18).

For reasons of quality assurance, it was decided to retain only GLs with a score of more than 60% on Domain 3 – Rigour of development.

4.1 Intellectual disability (ID)

For ID, based on full-text evaluation, 12 publications were included of which 2 publications with 2 references each (Wickstrom 2021 and WHO 2023; Burdeus-Olavarietta 2023 and Van Eeghen 2023).^{1, 2, 4, 5} (Table 5).

Zollino 2019⁶, Fu 2020⁷, and Townend 2020⁸ are included in our list of publications, as well as in an included systematic review of guidelines (Haneveld 2024).⁹ This SR included 70 guidelines, of which 50 were published from 2014 onwards, and 21 met our inclusion criteria (Northrup 2021, De Vries 2017, Amin 2019, Auvin 2019, Fu 2020, Townend 2020, Solot 2019, Habel 2014, Duis 2022, Wirell 2022, Wirrell 2017, Andrade 2021, Cardenal-Muñoz 2022, Garzon 2016, Zollino 2019, Wakeling 2017, Wilson 2021, Pierpont 2014, Amin 2022, Trider 2017, Kline 2018).^{6-8, 10-27}

The quality appraisal was not repeated for these guidelines as Haneveld et al. also used AGREE II.

Quality appraisal using the AGREE II tool was performed for the following guidelines (N = 8): AWMF 2016, AWMF 2021, NICE 2022, INESSS 2019, Nederlandse Vereniging voor Kindergeneeskunde 2021, WHO 2023, Latzer 2024, Burdeus-Olavarietta/Van Eeghen 2023.^{2, 4, 52-57} (see Table 1). One of these GL (WHO 2023) was also included for AGREE in the topic ASD. Of the 21 guidelines meeting our inclusion criteria in the SR of Haneveld, only one (Townend 2020) showed a score of more than 60% on Domain 3 – Rigour of development. For this reason, only the guideline of Townend 2020 was retained in our list of included guidelines with a sufficient high AGREE score (Table 19 in Supplement 5.1).

4.2 Autism spectrum disorder (ASD)

For the topic Autism spectrum disorder (ASD), based on full-text evaluation, 14 publications were included of which 1 publication with 2 references (Wickstrom 2021, WHO 2023)^{1, 2} (Table 7).

Quality appraisal using the AGREE II tool was performed for the following guidelines (N=11): Zwaigenbaum 2015, Ameis 2018, WHO 2023, Finnish Medical Society 2024, The Danish Health Authority 2021, SIGN 2016, Autism CRC 2022, NICE 2021, AMWF 2021, OSTEBA 2022, and Whaikaha Ministry of Disabled People (2022).^{2, 30, 32, 73-80} (see Table 15). One of these GL (WHO 2023) was also included for AGREE in the topic ID.

Two of the included publications were SRs of guidelines. These SRs did not contain GLs meeting the inclusion criteria, that had not yet been included on our search.

We did not perform quality appraisal on our own guideline (KCE 2014).⁴⁰ However, this GL was included in the SRs from Wickstrom 2021 and Chen 2024.^{1, 33} Their AGREE score for the Domain 3 – Rigour of development was 89,6% and 88% respectively, which is above our 60% inclusion threshold for Domain 3.



4.3 Attention deficit / Hyperactivity disorder (ADHD)

For the topic Attention deficit / Hyperactivity disorder (ADHD) based on full-text evaluation, 15 publications were included of which 1 publication with 2 references (Feldman 2018, Clark 2018)^{41, 42} (Table 9).

Two of the included publications were SRs of guidelines. These SRs did not contain GLs meeting the inclusion criteria, that had not yet been included in our search.

Quality appraisal using the AGREE II tool was performed for the following guidelines (N = 13): NHG 2014, The Danish Health Authority 2021, Ministerio de Sanidad 2017, AWMF 2018, INESSS 2018, Nederlandse Vereniging voor Psychiatrie 2018, Finnish Medical Society 2019, Canadian Paediatric Society 2018, NICE 2018, American Academy of Pediatrics 2019, Society for Developmental and Behavioral Pediatrics 2020, CADDRA 2020, AADPA 2022.^{41, 45-47, 92, 93, 96-102} (see Table 16).

4.4 Communication disorders (CD)

For the topic Communication disorders (CD) based on full-text evaluation, 3 publications were included of which 1 publication with 2 references (Neumann 2024, AWMF 2022)^{48, 49} (Table 11).

Quality appraisal using the AGREE II tool was performed for the following guidelines (N = 3): INESSS 2017, Finnish Medical Society 2019, AWMF 2022.^{49, 113, 114} (see Table 17)

One of these GLs (AWMF 2022) also proved to be relevant for the subtopics ID and ASD.

4.5 Specific Learning Disorder (LD)

For the topic Specific Learning Disorder (LD) based on full-text evaluation, 2 publications were included of which 1 publication with 2 references (Galuschka 2016, AWMF 2015)^{50, 51} (Table 13).

Quality appraisal using the AGREE II tool was performed for the following guidelines (N = 2): AWMF 2015 and AWMF 2018.^{121, 122} (see Table 18).

Table 14 – Intellectual disability (ID): Quality appraisal (AGREE II)

AGREE II items		Nederlandse Vereniging voor Kindergerenesees kunde 2021	European Phelan-McDermid syndrome GL 2023	AWMF 2016	AWMF 2021	NICE 2022	WHO 2023	INESSS 2019	Latzer 2024
Domain 1. Scope and Purpose	1. overall objective	6	6	6	7	7	7	7	7
	2. health question(s)	7	5	5	1	7	6	5	4
	3. population	7	7	7	6	7	5	7	6
	Domain score	94,4	83,3	83,3	61,1	100,0	83,3	88,9	77,8
Domain 2. Stakeholder Involvement	4. all relevant professional groups	6,5	5	4	6	7	6	6	6
	5. target population views and preferences	4,5	5,5	3	4	7	1	7	4
	6. target users	7	6	7	6	7	7	7	1
	Domain score	83,3	75,0	61,1	72,2	100,0	61,1	94,4	44,4
Domain 3. Rigour of Development	7. systematic search	4	6,5	1	1	7	6	7	7
	8. selection criteria	3,5	4,5	1	1	7	7	7	1
	9. strengths and limitations of evidence	5	2,5	1	1	7	6	7	7
	10. formulation of recommendations	3,5	5	6	6	7	6	7	6
	11. benefits, side effects and risks	5	3,5	2	2	6	6	5	4
	12. explicit link	5,5	4	3	1	7	5	7	6



	13. external review	3,5	1	4	4	7	2	6	1
	14. update procedure	7	6	5	7	6	1	1	3
	Domain score	60,4	52,1	31,3	31,3	95,8	64,6	81,3	56,3
Domain 4. Clarity of Presentation	15. specific and unambiguous	3,5	6	5	5	6	6	7	6
	16. different options for management	5,5	4,5	3	3	6	4	6	4
	17. key recommendations	5,5	6	1	1	7	2	7	1
	Domain score	63,9	75,0	33,3	33,3	88,9	50,0	94,4	44,4
Domain 5. Applicability	18. facilitators and barriers	6	4	3	5	7	6	6	1
	19. advice and tools	4,5	6,5	1	3	7	6	7	1
	20. possible resource implications	5,5	4	1	1	7	5	6	1
	21. monitoring and/or auditing criteria	1	1	1	1	4	1	1	1
	Domain score	54,2	47,9	8,3	25,0	87,5	58,3	66,7	0,0
Domain 6. Editorial Independence	22. editorially independent	7	7	4	5	3	5	5	5
	23. conflicts of interest	5	4,5	7	7	7	5	5	5
	Domain score	83,3	79,2	75,0	83,3	66,7	66,7	66,7	66,7

Table 15 – Autism spectrum disorder (ASD): Quality appraisal (AGREE II)

AGREE II items (*see footnote)		Zwaigenbaum 2015	Finnish Medical Society 2024	Ameis 2018	AWMF 2021	NICE 2021	Danish Health Authority 2021	OSTEBA 2022	Whaikaha- Ministry of Disabled People	Autism CRC 2022	SIGN 2016	WHO 2023
Domain 1. Scope and Purpose	1. overall objective	4	6,5	6	7	6,5	7	6	7	7	7	7
	2. health question(s)	1,5	2	5	6	6,5	7	6	6	6	6	6
	3. population	6	6,5	6	7	6,5	6	1	7	7	6	5
	Domain score	47,2	66,7	77,8	94,4	91,7	94,4	55,6	94,4	94,4	88,9	83,3
Domain 2. Stakeholder Involvement	4. all relevant professional groups	3,5	3,5	3	6	7	6	1	7	7	6	6
	5. target population views and preferences	1	4,5	1	4	6,5	6	1	6	6	3	1
	6. target users	2,5	5	2	7	6	6	1	6	7	6	7
	Domain score	22,2	55,6	16,7	77,8	91,7	83,3	0,0	88,9	94,4	66,7	61,1
Domain 3. Rigour of Development	7. systematic search	4	2	6	7	7	7	6	6	6	7	6
	8. selection criteria	2	1	7	7	7	7	6	6	6	4	7
	9. strengths and limitations of evidence	2,5	3,5	6	7	7	6	6	6	6	5	6
	10. formulation of	2,5	2	3	7	7	6	3	5	7	6	6



AGREE II items (*see footnote)		Zwaigenbaum 2015	Finnish Medical Society 2024	Ameis 2018	AWMF 2021	NICE 2021	Danish Health Authority 2021	OSTEBA 2022	Whaikaha- Ministry of Disabled People	Autism CRC 2022	SIGN 2016	WHO 2023
	recommendations											
	11. benefits, side effects and risks	1	3	5	6	7	7	4	5	7	6	6
	12. explicit link	3,5	4,5	4	6	5,5	7	4	6	6	7	5
	13. external review	1	1,5	1	1	6	7	1	6	7	7	2
	14. update procedure	1	2	1	6	3,5	6	1	6	7	7	1
	Domain score	19,8	24,0	52,1	81,3	87,5	93,8	47,9	79,2	91,7	85,4	64,6
Domain 4. Clarity of Presentation	15. specific and unambiguous	3,5	4	3	6	6,5	6	4	6	6	6	6
	16. different options for management	2,5	3,5	5	6	6,5	6	4	6	6	6	4
	17. key recommendations	3	6	4	6	7	7	4	6	7	7	2
	Domain score	33,3	58,3	50,0	83,3	94,4	88,9	50,0	83,3	88,9	88,9	50,0
Domain 5. Applicability	18. facilitators and barriers	1	4	1	6	3,5	6	1	6	6	6	6
	19. advice and tools	1	6	3	5	1,5	6	1	5	5	6	6

AGREE II items (*see footnote)		Zwaigenbaum 2015	Finnish Medical Society 2024	Ameis 2018	AWMF 2021	NICE 2021	Danish Health Authority 2021	OSTEBA 2022	Whaikaha- Ministry of Disabled People	Autism CRC 2022	SIGN 2016	WHO 2023
	20. possible resource implications	1,5	1	2	6	6,5	4	1	5	7	7	5
	21. monitoring and/or auditing criteria	1	1	1	1	1,5	4	1	3	3	6	1
	Domain score	2,1	33,3	12,5	58,3	37,5	66,7	0,0	62,5	70,8	87,5	58,3
Domain 6. Editorial Independence	22. editorially independent	2,5	1	1	5	6	5	5	5	5	5	5
	23. conflicts of interest	4	5,5	6	7	5,5	7	5	5	7	7	5
	Domain score	37,5	37,5	41,7	83,3	79,2	83,3	66,7	66,7	83,3	83,3	66,7

*We did not perform quality appraisal on our own guideline (KCE 2014).⁴⁰ However, this GL was included in de SRs from Wickstrom 2021 and Chen 2024.^{1, 33} Their AGREE score for the Domain 3 – Rigour of development was 89,6% and 88% respectively, which is above our 60% inclusion threshold for Domain 3.



Table 16 – Attention deficit / Hyperactivity disorder (ADHD): Quality appraisal (AGREE II)

AGREE II items		NHG 2014	Danish Health Authority 2021	Ministerio de Sanidad 2017	AWMF 2018	Canadian Paediatric Society 2018	INESSS 2018	Nederlandse Vereniging voor Psychiatrie	NICE 2018	Finnish Medical Society 2019	American Academy of Pediatrics 2019	Society for Developmental and Behavioral Pediatrics 2020	CADDRA Guideline 2020	AADPA 2022
Domain 1. Scope and Purpose	1. overall objective	5	6	6	6	4	6	6	7	4	5	5	3	7
	2. health question(s)	1	7	6	6	1	6	6	7	2	6	2	1	7
	3. population	3	6	6	6	4	4	6	7	6	7	6	4	7
	Domain score	33,3	88,9	83,3	83,3	33,3	72,2	83,3	100,0	50,0	83,3	55,6	27,8	100,0
Domain 2. Stakeholder Involvement	4. all relevant professional groups	6	6	5	6	3	6	7	7	6	4	4	4	6
	5. target population views and preferences	1	6	3	4	1	3	4	3	1	3	3	1	5
	6. target users	5	6	5	6	3	3	6	7	6	6	6	3	6
	Domain score	50,0	83,3	55,6	72,2	22,2	50,0	77,8	77,8	55,6	55,6	55,6	27,8	77,8
Domain 3. Rigour of Development	7. systematic search	4	7	4	7	1	5	3	7	4	7	1	4	6
	8. selection criteria	2	6	4	6	1	6	4	7	1	7	1	3	7

AGREE II items		NHG 2014	Danish Health Authority 2021	Ministerio de Sanidad 2017	AWMF 2018	Canadian Paediatric Society 2018	INESSS 2018	Nederlandse Vereniging voor Psychiatrie	NICE 2018	Finnish Medical Society 2019	American Academy of Pediatrics 2019	Society for Developmental and Behavioral Pediatrics 2020	CADDRA Guideline 2020	AADPA 2022
	9. strengths and limitations of evidence	1	6	3	7	1	6	4	7	4	6	4	5	7
	10. formulation of recommendations	4	6	5	7	3	7	5	6	2	3	3	2	6
	11. benefits, side effects and risks	4	7	3	6	4	5	6	7	4	6	6	1	6
	12. explicit link	5	7	6	6	3	6	4	7	5	6	3	2	7
	13. external review	1	7	5	5	3	5	4	7	4	6	1	1	5
	14. update procedure	3	6	4	6	1	1	6	6	1	3	1	1	7
	Domain score	33,3	91,7	54,2	87,5	18,8	68,8	58,3	95,8	35,4	75,0	25,0	22,9	89,6
Domain 4. Clarity of Presentation	15. specific and unambiguous	5	6	5	5	5	6	5	7	5	6	6	4	6
	16. different options for management	4	5	4	6	3	5	6	5	4	6	5	3	6



AGREE II items		NHG 2014	Danish Health Authority 2021	Ministerio de Sanidad 2017	AWMF 2018	Canadian Paediatric Society 2018	INESSS 2018	Nederlandse Vereniging voor Psychiatrie	NICE 2018	Finnish Medical Society 2019	American Academy of Pediatrics 2019	Society for Developmental and Behavioral Pediatrics 2020	CADDRA Guideline 2020	AADPA 2022
	17. key recommendations	5	7	6	5	4	6	5	7	6	6	6	2	7
	Domain score	61,1	83,3	66,7	72,2	50,0	77,8	72,2	88,9	66,7	83,3	77,8	33,3	88,9
Domain 5. Applicability	18. facilitators and barriers	3	6	3	4	1	6	6	4	5	6	6	1	6
	19. advice and tools	4	6	6	6	3	6	3	7	6	6	5	4	6
	20. possible resource implications	1	2	3	3	1	3	6	7	1	4	6	3	1
	21. monitoring and/or auditing criteria	1	5	3	3	1	6	1	6	1	4	1	1	1
	Domain score	20,8	62,5	45,8	50,0	8,3	70,8	50,0	83,3	37,5	66,7	58,3	20,8	41,7
Domain 6. Editori	22. editorially independent	3	5	5	7	1	7	6	3	1	4	1	4	5

AGREE II items		NHG 2014	Danish Health Authority 2021	Ministerio de Sanidad 2017	AWMF 2018	Canadian Paediatric Society 2018	INESSS 2018	Nederlandse Vereniging voor Psychiatrie	NICE 2018	Finnish Medical Society 2019	American Academy of Pediatrics 2019	Society for Developmental and Behavioral Pediatrics 2020	CADDRA Guideline 2020	AADPA 2022
	23. conflicts of interest	4	7	6	6	1	5	5	7	6	5	3	5	6
	Domain score	41,7	83,3	75,0	91,7	0,0	83,3	75,0	66,7	41,7	58,3	16,7	58,3	75,0

Table 17 – Communication disorders (CD): Quality appraisal (AGREE II)

AGREE II items		INESSS 2017	Finnish Medical Society 2019	AWMF 2022
Domain 1. Scope and Purpose	1. overall objective	6	5	6
	2. health question(s)	6	1	7
	3. population	6	6	6
	Domain score	83,3	50,0	88,9
Domain 2. Stakeholder Involvement	4. all relevant professional groups	6	4	7
	5. target population views and preferences	4	4	4



AGREE II items		INESSS 2017	Finnish Medical Society 2019	AWMF 2022
	6. target users	4	4	6
	Domain score	61,1	50,0	77,8
Domain 3. Rigour of Development	7. systematic search	6	2	6
	8. selection criteria	6	1	7
	9. strengths and limitations of evidence	7	3	7
	10. formulation of recommendations	6	2	7
	11. benefits, side effects and risks	6	4	5
	12. explicit link	5	5	7
	13. external review	5	2	1
	14. update procedure	1	1	7
	Domain score	70,8	25,0	81,3
Domain 4. Clarity of Presentation	15. specific and unambiguous	4	3	6
	16. different options for management	5	3	6
	17. key recommendations	6	5	1
	Domain score	66,7	44,4	55,6
Domain 5. Applicability	18. facilitators and barriers	6	5	3
	19. advice and tools	6	4	1

AGREE II items		INESSS 2017	Finnish Medical Society 2019	AWMF 2022
	20. possible resource implications	5	1	3
	21. monitoring and/or auditing criteria	7	1	1
	Domain score	83,3	29,2	16,7
Domain 6. Editorial Independence	22. editorially independent	7	1	6
	23. conflicts of interest	5	6	7
	Domain score	83,3	41,7	91,7

Table 18 – Specific Learning Disorder (LD): Quality appraisal (AGREE II)

AGREE II items		AWMF 2015	AWMF 2018
Domain 1. Scope and Purpose	1. overall objective	6	6
	2. health question(s)	7	7
	3. population	6	6
	Domain score	88,9	88,9
Domain 2. Stakeholder Involvement	4. all relevant professional groups	6	6
	5. target population views and preferences	4	4
	6. target users	6	4



AGREE II items		AWMF 2015	AWMF 2018
	Domain score	72,2	61,1
Domain 3. Rigour of Development	7. systematic search	6	5
	8. selection criteria	6	6
	9. strengths and limitations of evidence	3	5
	10. formulation of recommendations	5	6
	11. benefits, side effects and risks	5	4
	12. explicit link	4	6
	13. external review	5	3
	14. update procedure	4	7
	Domain score	62,5	70,8
Domain 4. Clarity of Presentation	15. specific and unambiguous	5	6
	16. different options for management	6	4
	17. key recommendations	1	1
	Domain score	50,0	44,4
Domain 5. Applicability	18. facilitators and barriers	1	6
	19. advice and tools	5	5
	20. possible resource implications	1	1



AGREE II items		AWMF 2015	AWMF 2018
	21. monitoring and/or auditing criteria	1	1
	Domain score	16,7	37,5
Domain 6. Editorial Independence	22. editorially independent	5	7
	23. conflicts of interest	7	7
	Domain score	83,3	100,0



5 EXTRACTION TABLES OF GUIDELINES

5.1 List of included and excluded guidelines for data extraction

Table 19 – Intellectual disability (ID): Guidelines included / excluded for data extraction

Authors, date & Title	AGREE II score: Rigour of Development*	Search limit	In/ Excluded
Nederlandse Vereniging voor Kindergeneeskunde (2021) - Medische begeleiding van kinderen met downsyndroom	60,4	July 2019	In
Burdeus-Olavarrieta and Van Eeghen (2023) - European consensus guideline for Phelan-McDermid syndrome	52,1		Ex
AMWF (2016) - S2k-Leitlinie Down-Syndrom im Kindes- und Jugendalter	31,3		Ex
AWMF (2021) - S2k-Leitlinie Intelligenzminderung	31,3		Ex
NICE (2022) - Disabled children and young people up to 25 with severe complex needs: integrated service delivery and organisation across health, social care and education (NG213)	95,8	March 2020	In
WHO (2023) - Package of interventions for rehabilitation for disorders of intellectual development	64,6	January 2019	In
INESSS (2019) - L'autonomie des jeunes âgés de 6 à 21 ans qui présentent une déficience intellectuelle - Guide de pratique	81,3	March 2018	In
Latzer (2024) - Consensus guidelines for the diagnosis and management of succinic semialdehyde dehydrogenase deficiency	56,3		Ex
Townend (2020) - Consensus-based guidelines for managing communication of individuals with Rett syndrome	68,8 (Haneveld)	April 2018	In
AWMF (2022)** - Therapie von Sprachentwicklungsstörungen Interdisziplinäre S3-Leitlinie (AMWF 049-015)	81,3	Decem 2021	In

*Only GLs with a score of more than 60% on Domain 3 – Rigour of development were retained

**Guideline obtained for Communication disorders (CD) but also relevant for Intellectual disability (ID).

Table 20 – Autism spectrum disorder (ASD): Guidelines included / excluded for data extraction

Authors, date & Title	AGREE II score: Rigour of Development*	Search limit	In/ Excluded
Zwaigenbaum (2015) - Early Intervention for Children With Autism Spectrum Disorder Under 3 Years of Age: Recommendations for Practice and Research	19,8		Ex
Finnish Medical Society (2024) - Autism spectrum disorder	24		Ex
Ameis (2018) - Systematic review and guide to management of core and psychiatric symptoms in youth with autism	52,1		Ex
AWMF (2021) - Autism-Spektrum-Störungen im Kindes-, Jugend- und Erwachsenenalter. Teil 2: Therapie. S3-LL (028 – 047)	81,3	November 2020	In
NICE (2021) - Autism spectrum disorder in under 19s: support and management (CG170)	87,5	March 2021 (Adapted to Belgian context in KCE 2014)	In
The Danish Health Authority (2021) - National clinical guideline for the treatment of autism spectrum disorders in children and adolescents	93,8	March 2020	In
OSTEBA (2022) - Autism spectrum disorder: scientific evidence on its detection, diagnosis and treatment	47,9		Ex
Whaikaha-Ministry of Disabled People and Ministry of Education (2022) - Aotearoa New Zealand Autism Guideline	79,2	Living guideline (see https://www.whaikaha.govt.nz/about-us/programmes-strategies-and-studies/guidelines/nz-autism-guideline/supporting-materials)	In
AutismCRC (2022) - National Guideline for supporting the learning, participation, and wellbeing of autistic children and their families in Australia	91,7	December 2021	In
SIGN (2016) - Assessment, diagnosis and interventions for autism spectrum disorders (CPG 145)	85,4	2014	In
KCE (2014) "Management of autism in children and young people: a Good Clinical Practice Guideline"	**see footnote	2013	In
WHO (2023)*** - Package of interventions for rehabilitation for autism spectrum disorders	64,6	January 2019	In



AWMF (2022)**** - Therapie von Sprachentwicklungsstörungen Interdisziplinäre S3-Leitlinie (AMWF 049-015)	81,3	Decem 2021	In
--	------	------------	----

*Only GLs with a score of more than 60% on Domain 3 – Rigour of development were retained

** We did not perform quality appraisal on our own guideline (KCE 2014).⁴⁰ However, this GL was included in de SRs from Wickstrom 2021 and Chen 2024.^{1, 33} Their AGREE score for the Domain 3 – Rigour of development was 89,6% and 88% respectively, which is above our 60% inclusion threshold for Domain 3.

*** Guideline obtained for Intellectual disability (ID) but also relevant for Autism spectrum disorders (ASD)

**** Guideline obtained for Communication disorders (CD) but also relevant for Autism spectrum disorders (ASD).

Table 21 – Attention deficit / Hyperactivity disorder (ADHD): Guidelines included / excluded for data extraction

Authors, date & Title	AGREE II score: of Rigour Development*	Search limit	In/ Excluded
NHG (2014) - NHG-Standaard ADHD	33,3		Ex
Sundhedsstyrelsen (2021) - National clinical guideline for the assessment and treatment of ADHD in children and adolescents	91,7	October 2020	In
Ministerio de Sanidad (2017) - Guía de Práctica Clínica sobre las Intervenciones Terapéuticas en el Trastorno por Déficit de Atención con Hiperactividad (TDAH)	54,2		Ex
AWMF (2018) - S3-Leitlinie ADHS bei Kindern, Jugendlichen und Erwachsenen	87,5	Septem 2016	In
Canadian Paediatric Society (2018) - ADHD in children and youth	18,8		Ex
INESSS (2018) - Optimal service trajectory for children, adolescents and young adults with attention deficit disorder with or without hyperactivity (ADHD) or related problems	68,8	June 2017	In
Nederlandse Vereniging voor Psychiatrie (2018) - ADHD bij kinderen	58,3		Ex
NICE (2018) - Attention deficit hyperactivity disorder: diagnosis and management (NG87)	95,8	April 2017	In
Finnish Medical Society (2019) - ADHD	35,4		Ex
American Academy of Pediatrics (2019) - Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents	75	November 2016	In



Society for Developmental and Behavioral Pediatrics (2020) - Clinical Practice Guideline for the Assessment and Treatment of Children and Adolescents with Complex Attention-Deficit/Hyperactivity Disorder	25		Ex
CADDRA (2020) - Canadian ADHD Practice Guidelines, 4.1 Edition	22,9		Ex
AADPA (2022) - The Australian evidence-based clinical practice guideline for attention deficit hyperactivity disorder	89,6	October 2021	In

**Only GLs with a score of more than 60% on Domain 3 – Rigour of development were retained*

Table 22 – Communication disorders (CD): Guidelines included / excluded for data extraction

Authors, date & Title	AGREE II score: Rigour of Development*	Search limit	In/ Excluded
INESSS (2017) - Organisation du continuum et de la dispensation des services aux enfants âgés de 2 à 9 ans présentant un trouble développemental du langage	70,8	October 2015	In
Finnish Medical Society (2019) - Developmental language disorder (specific language difficulty, children and young people)	25		Ex
AWMF (2022) - Therapie von Sprachentwicklungsstörungen Interdisziplinäre S3-Leitlinie (AMWF 049-015)	81,3	December 2021	In

**Only GLs with a score of more than 60% on Domain 3 – Rigour of development were retained*

Table 23 – Specific Learning Disorder (LD): Guidelines included / excluded for data extraction

Authors, date & Title	AGREE II score: Rigour of Development*	Search limit	In/ Excluded
AWMF (2015) - S3-Leitlinie Diagnostik und Behandlung bei der Lese- und/oder Rechtschreibstörung	62,5	July 2013	In
AWMF (2018) - S3-Leitlinie Diagnostik und Behandlung der Rechenstörung	70,8	2016	In

**Only GLs with a score of more than 60% on Domain 3 – Rigour of development were retained*



5.2 Data extraction guidelines

5.2.1 Intellectual disability (ID): included recommendations from GL

Table 24 – Intellectual disability (ID): included recommendations from GL

RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
1	Encourage the communication of children with Down syndrome by using various forms of supportive communication. Use a (unique) set of forms of communication tailored to the child and his communication partners, using one or more of the standardized methods of communication support available in the Netherlands. Think of spoken language in combination with supporting communication without aids (such as gestures and posture), with non-technical aids (use of referrers, written words / text, icons or photos) and with technical aids (such as voice button, voice computer or tablet).	Intervention	NVK 2021	Expert Opinion			See p31-36 The effectiveness of communicative support and speech language methods in children with Down syndrome has been little described in the literature. An SR included RCTs and quasi-RCTs in children with Down syndrome aged under six years (O'Toole 2018, including 3 comparative studies of communication support by parents: Girolametto 1998, Karaaslan 2013, Kaiser 2013). The total number of participants was 45. Conclusions It is uncertain, whether a combination of parent-mediated interventions with speech language therapy could (further) promote language development and effectiveness of (non-verbal) communication in children with Down syndrome under 6 years old, compared to speech-language therapy alone.
2	Align the choice of a particular strategy, form of communication or tool with the skills and capabilities of the child and its main communication partners.	Assessment	NVK 2021	Expert Opinion			Very low GRADE - Sources: (O'Toole, 2018, Cochrane systematic review: Parent-mediated interventions for promoting communication and language development in young children with Down syndrome)
3	Preferably start early (< 1 year) with speech therapy for children with down syndrome to stimulate speech language development and (non-verbal) communication. Preference is given to a speech therapist who has experience with and knowledge of children with down syndrome.	Intervention/ Practitioner	NVK 2021	Expert Opinion			No conclusions could be drawn about the effectiveness of other commonly used communication interventions in children with Down syndrome (such as Prompts for Restructuring Oral

RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
							Muscular Phonetic Targets; use of pictures, photos and pictograms; articulation therapy).
4	Encourage and support children and young people to give their views on their health, care, education and support, and express what they want and need. Take account of the communication needs of children and young people. If needed, consider getting support from a specialist to help them participate in discussions and decisions and express their views. Encourage parents and carers to think about how their child can give their own views and be involved in decisions. Ask them what services can do to support their child in communicating their views.	Assessment/ Practitioner	NICE 2022	Evidence-based		GRADE-CERQual: Moderate	RC1.1.8-1.1.10 See evidence review M: views and experiences of service providers (p.6-p18): moderate-quality <i>qualitative</i> evidence- See also evidence review A: Views and experiences of service users (p22): moderate-quality <i>qualitative</i> evidence
5	Enable children and young people to communicate their views in a way that is appropriate for their age, developmental level and communication abilities.	Aim (goal)	NICE 2022	Evidence-based		GRADE-CERQual: Low	RC1.1.16 -1.1.17 See evidence review M: views and experiences of service providers (p.18): low-quality <i>qualitative</i> evidence
6	Find out what communication formats and media the child or young person prefers (for example, children who are non-verbal might use alternative and augmentative communication). Communicate with them using their preferred format. Ensure the format allows them to use any inclusive terminology that is relevant to them.	Assessment	NICE 2022	Evidence-based		GRADE-CERQual: Low	
7	Education, health and social care practitioners should tell children and young people who use augmentative and alternative communication and their families and carers about any support and mentoring groups that could help them with communication and social interaction.	Intervention	NICE 2022	Expert Opinion			RC1.10.3 See evidence review I: suitability and accessibility of environments (p7-p11-p17-18): very-low quality evidence (no evidence available for this RC)



RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
8	Education, health and social care practitioners should refer disabled children and young people with severe complex needs to specialised augmentative and alternative communication services if they meet the eligibility criteria.	Setting/ Assessment	NICE 2022	Expert Opinion	Strong		RC1.10.5 See evidence review I: suitability and accessibility of environments (p7-11-17): very-low quality evidence (no evidence available for this RC)
9	Education, health and social care services should: - organise all the practitioners working with the child or young person into an interagency team - ensure that interagency teams include practitioners with the skills and experience to address all of the child or young person's needs (from birth to 25 years).	Setting/ Practitioner	NICE 2022	Evidence-based		GRADE: Very low	RC1.16.1 See evidence review G: promoting and maintaining inclusion, independence and wellbeing (p7-p10-p16)- very low quality evidence from five non-randomised studies (1 retrospective cohort study and 4 before and after studies) There was very low quality evidence of an important benefit when practitioners work together as part of an interagency team (3 studies: social coexistence program, collaborative life skills program, and a young adult team approach), rather than working individually, specifically in increasing the participation and inclusion and education achievement or attainment in disabled children and young people with severe complex needs. The committee felt strongly that working together in a co-ordinated way across education, health and social care services would improve the care and support received by children and young people. Therefore, it was recommended that services organise the existing practitioners working with the child or young person into an interagency team. The committee discussed the importance of interagency teams including practitioners with the skills and experience to address all of the child or young person's needs in order to operate effectively as qualitative evidence reflected that a

RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
							lack of skills, knowledge and training amongst professionals and staff was a barrier to working effectively with children and young people to meet their needs and manage behaviour (see evidence report K, sub-theme 11.1)
10	Interagency teams should ensure that the child or young person's needs are met in all settings (for example, if they communicate differently, make sure they have support at home and in school).	Setting	NICE 2022	Evidence-based		GRADE: Very low	RC1.16.3 See evidence review G: promoting and maintaining inclusion, independence and wellbeing (p7-p10-p17)-very low quality evidence from five non-randomised studies (1 retrospective cohort study and 4 before and after studies) There was evidence of an important benefit of a collaborative life skills program involving an active partnership of parents, teachers and school clinicians in increasing the participation and inclusion and education achievement or attainment in disabled children and young people with severe complex needs. This evidence (1 study) was very low quality so the committee did not recommend this specific intervention. However, they discussed the importance of collaborative working across education, health and social care services to ensure that the child or young person's needs are accounted for in all settings. For example, when a child or young person is experiencing difficulties at school, they may also require resolutions when at home, or in hospital. If these needs are not met in the other settings, it is likely to result in a detriment to the child or young person. Therefore, the committee recommended that interagency teams ensure that the child or young person's needs are met in all settings.



RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
11	Cognitive functions of language are often limited in people with DID. Therefore, the development group considers language therapy as essential for people with DID. To the knowledge of the development group, no severe harms are associated with the use of speech and language therapy in people with DID. The cost-benefit ratio in relation to the clinical benefits justifies the inclusion of this intervention in the Package of interventions for rehabilitation. Furthermore, speech and language therapy is considered as feasible and accepted by people with intellectual disability.	Intervention	WHO 2023	Expert Opinion			
12	The production of voice and speech is often limited in people with DID. Therefore, the development group considers the assessment of speech functions as essential for the determination of intervention needs. To the knowledge of the development group, no severe harms are associated with the assessment. The cost-benefit ratio in relation to the clinical benefits justifies the inclusion of the assessment in the Package of interventions for rehabilitation. Furthermore, the assessment is considered as feasible and accepted by people with DID.	Assessment	WHO 2023	Expert Opinion			
13	The production of voice and speech is often limited in people with DID. Therefore, the development group considers speech therapy as essential for people with DID. To the knowledge of the development group, no severe harms are associated with the use of speech therapy in people with DID. The cost-benefit ratio in relation to the clinical benefits justifies the inclusion of this intervention in the Package of interventions for	Intervention	WHO 2023	Expert Opinion			

RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	rehabilitation. Furthermore, speech therapy is considered as feasible and accepted by people with DID.						
14	Preschool classroom-based interventions (for children aged 3–5 years) should have multiple components, including: • curriculum design and development • social and communication skills training for the children • skills training in behavioural strategies for parents or carers • training on how to mediate the intervention for preschool teachers.	Intervention/ Setting	WHO 2023	Evidence-based	Strong	GRADE: Very low to low	NICE NG11, p.195; 9.4.1
15	Provision and training in the use of assistive products for communication by a speech and language therapist/pathologist is included in the resources required for rehabilitation in disorders of intellectual development.	Intervention/ Practitioner	WHO 2023	Evidence-based	Strong	GRADE: Very low	NICE NG54, p.267; 8.2.2.
16	The young person and his family should be educated from childhood so that the young person develops, among other things, the following skills: • Produce an effective message (e.g. answer yes or no, make a choice, request, communicate needs and desires, choose and convey the appropriate information based on the communication intent and the interlocutor); • understand a message (e.g., follow instructions, routine, schedule) or question; • Engaging with people in an appropriate manner (e.g., expressing interest, responding to questions and comments from others);	Aim (goal)	INESSS 2019	Expert Opinion			See Efficacité des interventions p.28 or Aide-mémoire p.9- Level of evidence Annexes p 21: The results of the scientific studies (five studies with a single case design, one comparative trial with random allocation, one study with a pre-post specification without control group (pre-post) and three systematic reviews) on the effectiveness of interventions are: • Intervention including techniques such as those used in applied behavioral analysis with the use of technological aids is effective for improving autonomy in daily life habits and



RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	- Participate in a dyad or group exchange (e.g., initiate, maintain and complete an exchange, adjust to context) - Deal with unsuccessful communication situations (e.g. message is misunderstood) - Use different communication media (e.g. phone, text, email, social networks).						communication among youth aged 6 to 21 with ID (level of evidence: high). The Picture Exchange Communication System (PECS) is effective in increasing communication skills among youth aged 6-21 with ID with autism spectrum disorder (ASD) (level of evidence: moderate).
17	From adolescence, the targeted skills are the same as those developed in childhood, adjusted to the contexts of adolescence and early adulthood. The combined use of multiple communication modes (e.g., oral, gestural, written) should be encouraged for expressive and receptive communication, even if the youth uses oral language partially (e.g. learned signs, natural gestures, written language, image supports, basis and high tech aids). The youth should be given maximum opportunities to communicate in all environments they are living in (e.g., through play, changing environmental conditions). Behavioural intervention techniques such as those used in applied behaviour analysis should be employed to develop the young person's communication skills.	Aim (goal)/ Intervention	INESSS 2019	Expert Opinion			- An intervention that includes a voice output device is effective in increasing communication skills among youth aged 6 to 21 with ID and ASD (evidence level: moderate). - Intervention that includes other low-tech communication aids such as images or photos, but does not follow the PECS system is effective in increasing communication skills among youth aged 6 to 21 with ID and ASD (level of evidence: low). - TEACCH intervention is not effective at increasing communication skills for students over 16 with severe ID (Level of evidence: low). - Training and mentoring of young people in neurotypical development, paired with youth with ID to promote communication and social interactions are not effective in increasing expressive and receptive communication for youth aged 10-21 with or without ASD (level of evidence: moderate).
18	For the young person who needs communication aids: The young person and his family should be supported by a multidisciplinary team in choosing types of communication aids: - Communication without technical assistance (e.g., oral language, natural gestures, learned signs) - Communication with technical aids without technology (e.g. symbolic objects, communication boards with images or pictograms or using written language, PECS system);	Intervention/ Setting	INESSS 2019	Evidence-based		Low to High	

RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	Communication with low-tech technical aids (e.g. voice-based devices such as BIGMack, GoTalk) or high-tech devices (e.g. touch tablets or smart phones equipped with specialized software for oral communication). The modes (e.g., oral, gestural, written) and technical aids chosen should be available at all times and their use should be widespread, to allow effective expressive and receptive communication in the different environments that the young person frequents.						
19	For the young person who needs communication assistance: The young person and his family should be educated from childhood so that the young person develops, in particular, the skills necessary to use a technical communication aid: - Know and understand the content of the communication aid (e.g., images and their meaning); - Properly handling the communication aid (e.g., moving a cursor, navigating between different pages or tables of communication); - To deal with unforeseen events (e.g. breakage, missing equipment); - Contribute to the adaptation of the contents of the communication aid, according to the evolution of the developmental needs. Behavioural intervention techniques such as those used in applied behaviour analysis should be employed to develop the ability to use a communication aid	Aim (goal)/ Intervention	INESSS 2019	Expert Opinion			



RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
20	Intellectual disability is understood to be a impairment of intellectual abilities, which manifests in the individual development and contributes to the level of an individual's general level of intelligence, such as cognition, language, motor, practical and social skills. In social law, it is generally agreed that for an intellectual disability the general level of intelligence is more than 2 standard deviations below the mean value of 100 (standard deviation 15). That is, an intellectual disability is present at an IQ of 70, determined by a standardized, in the case of a manifest or suspected speech development disorder non-verbal intelligence test with current standards (see ICD-10-GM-2022, German Institute for Medical Documentation and Information (DIMDI)). The ICD-11 (World Health Organization 2020) adopts this definition and classifies the Intellectual disability (Disorders of intellectual development, unspecified; Code 6A00.Z) in the more comprehensive classification of neurological developmental disorders, (as in the ICD-10) the period of early brain development is recognised as the time when the impairment occurs and a life-long perspective is taken. The prevalence is reported to be between 1 and 1.8%, with a gender ratio of approximately 1.6 men: 1 female affected. It should be borne in mind that prevalence data depend on the study, since they differ from age to age. Age differences in a population; they are highest in school age (up to 15 years). Language development disorders are common in children with an intellectual disability. Affected children have been shown to benefit from early speech therapy	Setting/ Practitioner/ Intervention	AWMF 2022	Expert Opinion	CCP		Statement 27 Clinical consensus point: strong consensus (100% agreement)



RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	intervention. In addition, educational support measures also appear to be useful.						
21	Children with language development disorders associated with intellectual disability should receive early speech therapy intervention according to their cognitive and general developmental level in a multi-professional setting. Therapy and support for language development in children with intellectual disability or a global developmental disorder should be communication-centered, taking into account the level of development and the underlying etiology, integrated into a comprehensive therapy and support concept and coordinated in an interdisciplinary treatment team.	Setting/ Practitioner/ Intervention	AWMF 2022	Evidence-based	B	1 to 2	Smith et al. (2020) (systematic review, meta-analysis), Katz and Lazcano-Ponce (2008) (non-systematic review)
22	The optimal treatment of a language development disorder associated with an intellectual disability should be a multidisciplinary, team-based and family-centered approach.	Setting	AWMF 2022	Evidence-based	A	1b	O'Hare and Bremner (2016), Marrus and Hall (2017), Tellegen and Sanders (2013) (systematic review, meta-analysis)
23	The aim of speech therapy interventions for children with a language development disorder associated with intellectual disability is to improve communicative and language skills and to maintain, establish or improve social participation. Any necessary prioritization of medical, therapeutic and educational interventions should be based on their respective importance for the patient's overall situation and the extent to which their physical functions, activity, independence, social participation and health-related quality of life can be improved.	Aim (goal)	AWMF 2022	Evidence-based	A	1b	Fürgang (2001) (NR), Roberts et al. (2008, 2009) (observational study), Seager et al. (2022) (systematic review)
24	For patients with intellectual disabilities, everyday practical skills should be the focus of support and	Aim (goal)	AWMF 2022	Evidence-based	A	1b	Häßler and Eggers (2012, p.799) (reference book), Seager et al.(2022)(systematic review)



RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	therapy, as should the expansion of their individual communicative possibilities.						
25	The conception of a speech therapy intervention for a language development disorder associated with intellectual disability should be based on the overall development of the patient, his/her communicative participation, the existing environmental factors and his/her main language disorders and symptoms, which have been determined in a comprehensive individual diagnosis of his/her phonological, semantic-lexical, morphological-syntactic and pragmatic abilities.	Assessment	AWMF 2022	Expert Opinion	CCP		Clinical consensus point, strong consensus (100% agreement) - Fidler et al. (2007) (non-systematic review), Roth and Worthington (2015) (textbook), Seager et al. (2022) (systematic review), Tomas and Vissers (2019) (textbook)
26	In therapy, the aim is to work on linguistic and non-linguistic target structures introduced in a developmentally logical sequence.	Aim (goal)	AWMF 2022	Evidence-based	B	2b	Dyer et al. (1987) (controlled study)
27	In speech therapy for children with speech development disorders or pronunciation/speech disorders, associated with intellectual disability, therapeutic methods shall be used that have proven to be effective in research for children who do not fall into this category. These are described in detail in chapters 3.1.1 (Therapy of pronunciation disorders), 3.1.2 (Therapy of lexical-semantic disorders), 3.1.3 (Therapy of morphological-syntactic disorders), 3.1.4 (Therapy of pragmatic-communicative disorders), 3.2.3 (Therapy of language development disorders associated with syndromes and multiple disabilities) and include input enrichment, modelling techniques, elicitation methods to create production opportunities and the use of visualization. In addition, methods of augmentative and alternative communication	Intervention	AWMF 2022	Evidence-based	A	1	Schlosser and Lee (2000) (systematic review, meta-analysis), Branson and Demchak (2009) (systematic review), Burgoyne et al. (2012) (randomized controlled trial), Costantino and Bonati (2014) (systematic review), Neil and Jones (2018) (systematic review, meta-analysis), Smith et al. (2020) (systematic review, meta-analysis), Kover (2018) (tutorial), Baxter et al. (2022) (randomized controlled trial), Moraleda-Sepúlveda (2022) (systematic review)

RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	(including sign language, electronic and non-electronic communication aids) shall be used in speech therapy.						
28	The respective combination and weighting of the methods should be tailored to the individual case, taking into account individual factors (age, awareness of the disorder, therapy goals, therapy phase). A multimodal communication concept, i.e. the use of different communication channels (e.g. spoken language, gestures, external communication aids) should be aimed for.	Intervention	AWMF 2022	Evidence-based	B	2b	Tamas et al. (2013) (quasi-experimental, randomized controlled trial), Abbeduto and Boudreau (2004) (non-systematic review), Häßler and Eggers (2012, p. 798) (textbook chapter)
29	In all syndromal disorders, child development can vary greatly from one individual to another, as the syndromes can show different areas of disorder and degrees of severity. This means that there can be no standardized treatment recommendations based solely on the diagnosis. In many syndromic disorders, speech development disorders are accompanied by associated learning disorders or intellectual disability of varying degrees, often including hearing disorders, and can range from discrete speech abnormalities to failure to acquire language.	Assessment/ Intervention	AWMF 2022	Expert Opinion	CCP		Statement 42 Clinical consensus point: strong consensus (100% agreement)
30	Children and adolescents with syndromic disorders require multi-professional therapy. Speech therapy measures should be embedded in this therapy concept.	Setting	AWMF 2022	Expert Opinion	CCP		Clinical consensus point: strong consensus (100% agreement)
31	Speech therapy can improve the spoken and written language skills of people with Down syndrome and shall be used.	Intervention	AWMF 2022	Evidence-based	A	1	Moraleda-Sepúlveda et al. (2022) (SR), Burgoyne et al. (2012) (RCT), Fey et al. (2013) (RCT), Yoder et al. (2014, 2015) (RCT), Moraleda-Sepúlveda et al. (2013) (RCT), Camarata et al. (2006) (BS), Van Bysterveldt et al. (2010) (BS)



RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
32	For children with Fetal Alcohol Spectrum Disorders (FASD), treatment of phonics and literacy skills can improve these and should be used.	Intervention	AWMF 2022	Evidence-based	B	1 to 2	Peadon et al. (2009) (SR), Adnams et al. (2007) (RCT)
33	In children with language development disorders associated with Rett syndrome, treatment of language and communication skills can be effective and should be considered.	Intervention	AWMF 2022	Evidence-based	0 (Open recommendation)	1 to 2 (moderate evidence for efficacy, often individual case studies)	Sigafoos et al. (2009, 2019) (SRs)
34	For children with speech and/or communication disorders in the context of a syndromic disorder, joint child- and parent-centered treatment shall be carried out; parental counseling is particularly important for interaction design and responsiveness.	Intervention	AWMF 2022	Evidence-based	A	1 to 2	Roberts et al. (2019) (SR), Fey et al. 2013 (RCT), Yoder et al. (2014, 2015) (RCTs), Hahn et al. (2014) (BS), Warren et al. (2010) (BS)
35	Children and young people are dependent on AAC if they are threatened or affected (temporarily or permanently) by a profound impairment of their receptive and expressive communication skills and their development, and this poses a risk or restriction to their participation in social life.	Aim (goal)	AWMF 2022	Expert Opinion	CCP		Statement 43 Clinical consensus point: strong consensus (100% agreement)
36	AAC can compensate for temporary or permanent impairments and limitations in spoken and written language skills, communication, activity and participation for children with (severe) language development disorders associated with syndromic diseases and multiple disabilities and shall be used for these children.	Intervention	AWMF 2022	Evidence-based	A	1	Langarika-Rocafort et al. (2021) (SR), Leonet et al. (2022) (SR), Millar et al. (2006) (SR, MA), Walker and Snell (2013) (MA, SR)
37	When selecting and organizing vocabulary in AAC, it should be taken into account that children use the core vocabulary more frequently than the peripheral vocabulary. Furthermore, individual, developmental	Assessment	AWMF 2022	Expert Opinion	CCP	5	Baker et al. (2000), Beukelman et al. (1991)

RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	and environmental aspects should be taken into account.						
38	AAC measures to promote language development should follow a common pedagogical and therapeutic concept for the selection and organization of vocabulary, regardless of the AAC strategies and systems used.	Intervention	AWMF 2022	Evidence-based	B	2	Pina et al. (2020) (scoping review), Cress & Marvin (2003)
39	Every individual with Rett syndrome should be supported by a multidisciplinary team.	Setting	Townend 2020	Expert Opinion			A two-phase Delphi survey was built on statements and recommendations extracted from a review of over 300 pieces of literature combined with survey responses from communication professionals and caregivers (650 participants from 43 countries). All statements that reached a pre-determined threshold of at least 70% agreement were incorporated into guidelines that consist of 268 statements and recommendations. See "Rett syndrome communication guidelines: a handbook for therapists, educators and families" Appendix 1: p.76 and further. Evidence tables have also been compiled to complement the consensus-based guidelines, with one table corresponding to each statement or recommendation, e.g. Table 5 in Townend et al.. For the current report, a selection of 12 most relevant recommendations from the different sections was made. Evidence tables were requested from the authors three times without response.
40	The team should incorporate all significant communication partners and may include the individual with Rett syndrome, their parents/other family members, AAC specialists, Speech-Language	Practitioner	Townend 2020	Expert Opinion			



RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	Pathologists, Occupational Therapists, Physical Therapists, Rett specialist staff, and other key people in the individual's life. At a minimum, the team will consist of the Speech-Language Pathologist, parents or other family members/caregivers, and the individual with Rett syndrome.						
41	Professionals who are working in isolation (e.g., working as independent practitioner) should connect with the other members of the broader team who are working with the individual and family so that support, advice, and recommendations are coordinated.	Practitioner	Townend 2020	Expert Opinion			
42	The individual and their family may be referred to a Rett Specialist Clinic or Expertise Center in order to get a diagnosis, for specialized assessment and advice, or for a second-opinion at any point following diagnosis.	Setting/ Assessment	Townend 2020	Expert Opinion			
43	Communication professionals attached to a Rett Specialist Clinic or Expertise Center should be available to offer advice and support to, and answer questions from, locally treating therapists.	Setting	Townend 2020	Expert Opinion			
44	Assessment should consider the opportunities and barriers to communication that may be present in various environments (e.g., home, school, and social settings). Observations should be conducted in a range of communication environments and with a range of communication partners.	Assessment/ Setting	Townend 2020	Expert Opinion			
45	Due to the complexity of their communication needs, assessment of individuals with Rett syndrome should be part of a team process.	Assessment/ Setting	Townend 2020	Expert Opinion			

RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
46	The outcome of the assessment should not rely on the judgement of one professional in isolation.	Assessment/ Setting	Townend 2020	Expert Opinion			
47	At the time of diagnosis, individuals with Rett syndrome should be referred for AAC evaluation.	Assessment	Townend 2020	Expert Opinion			
48	It is preferable that intervention takes place in a naturalistic context.	Setting	Townend 2020	Expert Opinion			
49	Communication intervention and management should start early and be lifelong.	Intervention	Townend 2020	Expert Opinion			
50	Interventions for developing or maintaining sound production, spoken words, or sentences should be combined with aided AAC.	Intervention	Townend 2020	Expert Opinion			

5.2.2 Autism spectrum disorder (ASD): included recommendations from GL

Table 25 – Autism spectrum disorder (ASD): included recommendations from GL

RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
1	Recommendation regarding the need to formulate concrete, individual therapy goals (C.1.1) [...] Each person with an autism spectrum disorder and, in the case of children and adolescents, the parents or guardians should be involved in the formulation of concrete therapy goals [...] The main goals of therapy are the improvement of autistic core symptoms in the areas of social interaction and communication (area A) as well as stereotypical and repetitive behaviour and stressful sensory and special interests (area B). [...] the individual learning possibilities of the	Aim	AWMF 2021	Expert Opinion		CCP	Strong consensus (>95% agreement)



RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	person with autism spectrum disorder should be taken into account with regard to the therapy planning. [...] The promotion of receptive and expressive language skills should also be chosen as an important therapy goal for children who cannot yet speak actively.						
2	Recommendation regarding the supply structure (C.3.2) Case management: If care measures are indicated or necessary, these measures should be coordinated, networked and agreed upon by one source in order to avoid gaps, duplications, ineffective or even harmful interventions. [...]	S	AWMF 2021	Expert Opinion		CCP	Strong consensus (>95% agreement)
3	Recommendation regarding therapist competencies (C.3.3) All health and social care professionals working with people with autism spectrum disorders should therefore have the following competencies: 1. Sound, scientifically based knowledge of autism spectrum disorder and the needs of patients and their families; [...] In a multidisciplinary team or network, a licensed specialist should be responsible for case management.	P/S	AWMF 2021	Expert Opinion		CCP	Strong consensus (>95% agreement)
4	Recommendation regarding autism-specific psychosocial therapies for young children and preschoolers (C.4.2.2) In young children and preschoolers, regardless of developmental age and cognitive skills, autism-specific therapy should be carried out early, at the latest from the age of 2 years or directly after diagnosis. [...]	I/S	AWMF 2021	Evidence-based	A	2 to 3	Evidence mainly related to psychosocial interventions developed for autism-related behaviour, outcomes on language development reported in many studies Authors' Comment : "Due to the large number of underlying studies, please

RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	Therapy shall include individualized parent-child therapy in which parents are instructed to interact with the child in a nurturing manner at home, and therapy should include specific, individualized exercises with the child to build and practice new social-interactive, communication, language, cognitive, and daily living skills. [...] These exercises with the child should be carried out with the involvement of the parents/primary caregivers either in a therapeutic institution or, if the spatial and staffing conditions there are appropriate, in the kindergarten. And/or the parents/primary caregivers should be systematically guided by professional therapists in a therapeutic setting or at home to implement the exercises with the child at home. [...]						refer to the detailed discussion in the background text of this chapter (see long version) and the NICE children's guideline"
5	Statement regarding psychosocial therapy to promote social interaction and communication in all age ranges, all cognitive skills - adverse effects (C.4.2.10): children, adolescents and adults, regardless of cognitive skills In the case of psychosocial interventions, no undesirable effects have been reported to date if they are carried out correctly, although they have rarely been systematically investigated.	I	AWMF 2021	Evidence-based (Statement)	A	1 to 3	Authors' Comment: "Sources: Due to the large number of underlying studies, please refer to the detailed discussion in the background text of this chapter (see long version) and the NICE children's guideline."
6	Recommendation regarding promotion of language and verbal communication (C.5.1.1) In toddlers and preschoolers (with and without intelligence impairment), the language support for ASD should initially be based on comprehensive, low-frequency (approx. 2 hours/week) psychosocial therapy methods including [...] flexible practice of receptive language skills (vocabulary), natural reinforcement of	I	AWMF 2021	Evidence-based	A to C	1 to 3	Almirall 2016, Brignell 2018a, Brignell 2018b, Chenausky 2016, Dawson 2010, Geretsegger 2014, Hardan 2015, Kasari 2014, NICE 2013, Reichow 2018, Roberts 2011, Schreibman & Stahmer 2014, Wetherby 2014. Majority approval (50% - 75% approval)



RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	spontaneous sounds (including stereotyped ones) and successive expressive language skills (Level B) The setting should include therapist-based work with the child as well as intensive involvement and guidance of the parents so that learned skills can be generalized in everyday life. (Level A) Children who have difficulties in learning non-verbal communication principles in the context of the above-mentioned therapy and do not make sufficient linguistic progress can be given additional support to build up non-verbal and verbal communication by using picture cards or visual symbols combined with linguistic sounds (computer-based/speech output devices) [...] (Level C) For children of primary school age who do not (yet) speak (with and without intellectual disability), the above methods can be further applied to children of early primary school age with the aim that children of this age also learn to communicate verbally. If picture cards are used, further attempts should be made at the same time to stimulate verbal expressions. (Level C)						
7	Recommendation regarding the promotion of non-verbal communication in non-speaking individuals with ASD (C. 5.1.2) Non-speaking children from late primary school age, adolescents and adults with and without intellectual impairment: If children, adolescents and adults do not learn to speak after correct and sufficiently long use of the above-mentioned therapy methods, a picture card system or also a device that outputs speech via visual symbols can	I	AWMF 2021	Expert Opinion		CCP	Strong consensus (>95% agreement)

RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	be used to promote communication with other persons. [...]						
8	In children and adolescents with language development disorders associated with autism spectrum disorders, language development-specific therapy methods can be used in addition to autism-specific support in accordance with the guidelines	I	AWMF 2022	Expert Opinion		CCP	Strong consensus (100% agreement)
9	Consider offering language intervention for children aged 18 months-6 years with autism with delayed or deviant language development. If there are concerns about delayed or deviant language development, a language assessment for the child's age group can be obtained from the language assessment tools provided to municipalities by the Ministry of Children and Education. The language assessment is done in collaboration with the daycare centre or school. A language intervention in this context is an intervention that aims to prevent or treat language delay or deficit and/or promote the child's expressive language and/or language understanding. The intervention must be delivered by a professional, either directly to the child or to the parents who implement the intervention at home. The working group believes that the language intervention should have a minimum duration of 10 sessions and should target the child's language skills and development.	A/I/S	The Danish Health Authority (2021)	Evidence-based	Weak	Very low	The evidence base for the focused question is 3 systematic reviews, which were used as sources for 10 randomised trials. This was supplemented with 1 randomised trial from an updated search. The evidence base is thus 11 randomised trials published in 11 articles. The quality of the evidence is rated "very low" due to several methodological shortcomings. Flow charts are available on the Danish Health Authority's website.
10	The initial assessment of children may be undertaken by an individual practitioner. If there are ongoing concerns, a multidisciplinary assessment is recommended.	A/S	New Zealand Guideline 2022	Evidence-based		Fair	Living Guideline- evidence tables for this part date from 2009



RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
11	Preferably, a multidisciplinary team of health care practitioners experienced in autism should undertake diagnostic assessment of young people and adults suspected of being autistic. In the absence of an assessment team, a health care practitioner trained and highly experienced in the autism spectrum may undertake diagnostic assessment.	A/P/S	New Zealand Guideline 2022	Evidence-based		Fair	Living Guideline- evidence tables for this part date from 2009 Authors' comment (p.62): A multidisciplinary specialist assessment team involves a group of professionals working collaboratively to assess the child. This team usually includes at least two or three members drawn from the following professions: paediatricians, child and adolescent psychiatrists, clinical or educational psychologists, speech-language therapists and occupational therapists.
12	Health New Zealand should have in place processes that ensure: a. referral pathways for children and adults (...) are clearly understood by professionals b. services are coordinated within and across sectors c. multidisciplinary, multiagency assessments are provided d. all services are provided in a timely manner.	A/S	New Zealand Guideline 2022	Expert Opinion		C	
13	A coordinated approach to planning and implementing services should be developed to meet the identified needs of an autistic individual, including linkage or integration and coordination of multiple services	S	New Zealand Guideline 2022	Expert Opinion		GPP	
14	Communication should be seen as a high-priority learning area, and communication goals should be included in individual plans for all autistic children and young people.	Aim	New Zealand Guideline 2022	Evidence-based		Good	Living Guideline- evidence tables for this part date from 2009
15	The assessment and development of communication and social goals should	A/I	New Zealand	Expert Opinion		C	

RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	complement each other. Teaching of the two areas should be carried out in parallel.		Guideline 2022				
16	Supports should take place in natural settings, using natural routines and natural consequences.	S	New Zealand Guideline 2022	Evidence-based		Good	Living Guideline- evidence tables for this part date from 2009
17	The communicative demands of the environment should be assessed.	A/S	New Zealand Guideline 2022	Expert Opinion		C	Authors' comment p119: "The most effective communication assessments are those performed by members of a multidisciplinary team in conjunction with assessments of other aspects of development."
18	All autistic children should have an assessment and support suggestions by a speech-language therapist with expertise in the autism spectrum at a minimum of once a year, more often in early childhood.	A/P	New Zealand Guideline 2022	Expert Opinion		GPP	Authors' comment p118: "Children will benefit from communication goals that are carefully planned and implemented by teachers and carers throughout the curriculum and throughout the day, rather than in one-to-one therapy sessions in a clinical setting on a more intermittent basis. Speech-language therapists will need skills in scaffolding teachers' and carers' learning to support such an approach [...]".
19	In choosing a supportive approach, strategy, practitioner or therapist, the following principles for ethical practice are recommended: [...] • Provide access to communication modalities that facilitate an autistic person's ability to process and express (e.g., augmentative and alternative communication (AAC) devices, signing, quiet space).	I	New Zealand Guideline 2022	Expert Opinion		GPP	Authors' comment p120: "There is a considerable body of evidence to support the use of augmentative communication strategies with autistic children and young people." Living Guideline- evidence tables for this part date from 2009
20	Supports should be individualised for each child and family, and practitioners should work in	I	AutismCR C 2022	Expert Opinion	Strong	GPP	Recommendation 2, 18



RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	partnership with the child and family to consider goals [...]						
21	Practitioners should coordinate the supports they deliver with other relevant service providers and service systems.	S	AutismCR C 2022	Expert Opinion	Conditional	GPP	Recommendation 57
22	A diagnostic assessment, alongside a profile of the individual's strengths and weaknesses, carried out by a multidisciplinary team which has the skills and experience to undertake the assessments, should be considered as the optimum approach for individuals suspected of having ASD.	A/P/S	SIGN 2016	Expert Opinion	Conditional		p.13: "Research evidence on multidisciplinary compared to single assessment is limited. NICE identified one lowquality study which compared clinical diagnosis by a single practitioner with that of a panel. [...]"
23	All children and young people with ASD should have a comprehensive evaluation of their speech and language and communication skills, which should inform intervention.	A	SIGN 2016	Evidence-based	Strong	3	p15: A wide range of speech and language and communication assessments are available but there is limited evidence to support the use of one assessment instrument over another
24	Parent-mediated intervention programmes are used to both advance the development and communication of an affected child and to offer practical advice and support to parents. Parent-mediated intervention programmes should be considered for children and young people of all ages who are affected by ASD, as they may help families interact with their child, promote development and increase parental satisfaction, empowerment and mental health.	I	SIGN 2016	Expert Opinion	Conditional	1++	p21: A well-conducted Cochrane review of parent-mediated early intervention for young children (aged 1–6 years) with ASD identified 17 studies, all of which had a risk of bias and used a variety of interventions, intensity and treatment duration. Results were inconsistent and inconclusive. There was a statistically significant benefit from parent-child interaction for joint attention. Small improvements were also seen in language comprehension and expression and reduction in parental stress, although these results need to be substantiated by further, larger RCTs.

RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
25	Interventions to support communicative understanding and expression in individuals with ASD, such as the Picture Exchange Communication System and the use of environmental visual supports (eg in the form of pictures or objects), should be considered.	I	SIGN 2016	Evidence-based	Conditional	1 to 3	p22: For PECS, two meta-analyses reported small to moderate improvements in communication. Learners with ASD alone (with or without comorbid speech impairment) had better outcomes than learners with ASD and comorbid intellectual disability [...] A few included studies reported speech improvements [...] Most evidence of benefit was amongst preschool age children, although some studies also included adolescents and adults [...]. A number of studies were identified that assessed [...] the use of visual timetabling, operationalising through short stories or the use of speech bubbles or cartoons. The number of participants in each study was very small and the study populations were heterogeneous, making it difficult to generalise from their findings.
26	Choice of interventions to support communication in children and young people with ASD should be informed by effective assessment.	A	SIGN 2016	Expert Opinion	Strong		p21: Many of the strategies implemented to support communication are designed and managed by speech and language therapists, working in combination with a wide range of professionals and in partnership with parents.
27	Interventions to support social communication should be considered for children and young people with ASD, with the most appropriate intervention being assessed on an individual basis.	A/I	SIGN 2016	Evidence-based	Conditional	1 to 2	p22: A Cochrane review of five RCTs of 196 young people of average or above average intelligence with ASD (aged 6 – 21 years) showed that social skills groups improve overall social competence (weighted mean difference between treatment and control groups



RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
							0.47, 95% CI 0.16 to 0.78, p=0.003). All the studies had some risk of bias, and the review concluded that further studies are needed to substantiate these results. (1++). Eleven studies were identified in another systematic review which showed short-term benefit in parent-reported social skills, although the quality of the studies was low [...]. (2-) Three systematic reviews of the use of computer-based interventions (CBI) concluded that, although the studies identified were small and of low quality, CBI showed promising results for social skills related outcomes. Results were seen across an age range of three to 29 years and IQ between 55 and 99 (2+). The evidence does not clarify which of these approaches is the most effective.
28	Adapting the communicative, social and physical environments of children and young people with ASD may be of benefit (options include providing visual prompts, reducing requirements for complex social interactions, using routine, timetabling and prompting and minimising sensory irritations).	I	SIGN 2016	Expert Opinion			
29	Access to support from staff trained in applied behaviour analysis-based technologies (eg Picture Exchange Communication System, discrete trial training, task analysis, prompting, fading or shaping) to build independence in adaptive, communication and social skills should be considered for children with ASD.	I/P	SIGN 2016	Evidence-based	Conditional	1 to 2	p23: Evidence for this RC is based on evidence for EIBI (Early intensive behavioural intervention programmes). Ten well-conducted systematic reviews (level of evidence: 1 to 2) assessed the quality of trials on EIBI as low to moderate due to the complexities of conducting long-term studies. Early intervention based on high-intensity



RC n°	Recommendation (RC) (as mentioned in GL)	Dom ain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
							behaviour analysis over extended timeframes, was associated with improvement in cognitive functioning, language skills, adaptive behavior, including social competence and daily living skills in some groups of young children. Not all improvements were maintained at long-term follow up (...) There are problems with small sample sizes, non-randomisation and partial blinding, these constitute biases that make it possible that the conclusions may change in the light of further evidence. EIBI, based on the principles of ABA delivered with an intensive (>15 hours per week) and comprehensive approach can positively affect some children with ASD. A Cochrane review concluded that while EIBI cannot be recommended universally it should be considered on a case-by-case basis.
30	All children and young people with ASD should have a comprehensive evaluation of their speech and language and communication skills, which should inform intervention.	copy	WHO 2023	Evidence-based	Strong	3	SIGN 2016: p.16; 4.3.1
31	Based on expert consensus speech therapy is recommended in autistic children with identified speech and language problems.	copy	WHO 2023	Expert Opinion	Strong		KCE 2014: p.102; Tab. 18-RC99
32	Based on expert consensus speech and language problems in children with autism should be addressed within a personalized project including functional objectives in the field of verbal or non-verbal communication. This programme could include augmentative communication, such as	copy	WHO 2023	Expert Opinion	Strong		KCE 2014: p.102; Tab.18- RC96



RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	Picture Exchange Communication System (PECS) and should be initiated early on.						
33	Access to support from staff trained in applied behaviour analysis-based technologies (PECS), discrete trial training, task analysis, prompting, fading or shaping) to build independence in adaptive, communication and social skills should be considered for children with ASD.	copy	WHO 2023	Evidence-based	Conditional	1 to 2	SIGN 2016: p.24; 6.3.1
34	Interventions to support communicative understanding and expression in individuals with ASD, such as the PECS and the use of environmental visual supports (e.g. in the form of pictures or objects), should be considered.	copy	WHO 2023	Evidence-based	Conditional	1 to 3	SIGN 2016: p.22; 6.2.1
35	Based on expert consensus the guideline development group provided a recommendation to use augmentative communication (such as PECS) for children with autism and impairment in adaptive behaviour.	copy	WHO 2023	Expert Opinion	Strong		KCE 2014: p.101; Tab.18- RC92
36	All staff working with children and young people with autism should have an understanding of autism.	P	KCE 2014	Expert Opinion			RC1-KCE 2014: p.95-96: Table 18 – domain 1: organisation and delivery of care
37	Children and young people with autism should have access to a key worker approach in order to manage and coordinate treatment, care and support, including the management of transitions, for the child or young person with autism and their family and carers.	P/S	KCE 2014	Expert Opinion			RC3-KCE 2014: p.95-96: Table 18 – domain 1: organisation and delivery of care
38	All children and young people with autism should have access to healthcare and social care services, including mental health services. Services should be adapted to the level of care specialisation the child needs. Services should be within a reasonable distance from their homes.	S	KCE 2014	Expert Opinion			RC8-KCE 2014: p.95-96: Table 18 – domain 1: organisation and delivery of care

RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	Access should take the level of functional impairment into account but should not be restricted based on a child's intellectual ability, autism diagnosis, or any other eligibility criteria.						
39	A coherent multidisciplinary approach is needed.	S	KCE 2014	Expert Opinion			RC9-KCE 2014: p.95-96: Table 18 – domain 1: organisation and delivery of care
40	Define a framework and quality criteria for multi (trans) disciplinary approach in the same or in different institutions.	S	KCE 2014	Expert Opinion			RC10-KCE 2014: p.95-96: Table 18 – domain 1: organisation and delivery of care
41	A therapeutic team should establish a framework for an individualized work plan and should identify a coordinator.	I/S	KCE 2014	Expert Opinion			RC11-KCE 2014: p.95-96: Table 18 – domain 1: organisation and delivery of care
42	Develop a personalised program based on evaluation with appropriate tools and on observation in daily life, and in agreement with the patient, the parents and all professionals involved.	A	KCE 2014	Expert Opinion			RC15-KCE 2014: p.95-96: Table 18 – domain 1: organisation and delivery of care
43	A person who had a comprehensive training (including all the important aspects of ASS) will be responsible for overseeing and/or delegating the coordination task.	P/S	KCE 2014	Expert Opinion			RC17-KCE 2014: p.95-96: Table 18 – domain 1: organisation and delivery of care
44	The Reference Centres for Autism have a specific but not exclusive role in supporting the networking. Referrals should include all relevant collaborators.	S	KCE 2014	Expert Opinion			RC25-KCE 2014: p.95-96: Table 18 – domain 1: organisation and delivery of care
45	Diagnostic and therapeutic teams should collaborate closely. Professionals who intervene only occasionally should consult the team.	P/S	KCE 2014	Expert Opinion			RC28-KCE 2014: p.95-96: Table 18 – domain 1: organisation and delivery of care
46	Professionals should not work in isolation but share experiences with peers or be supervised.	P	KCE 2014	Expert Opinion			RC34-KCE 2014: p.95-96: Table 18 – domain 1: organisation and delivery of care
47	In children and young people with autism, consider a specific social-communication	Aim/I /P/S	KCE 2014	Expert Opinion			KCE 2014: p.97; Table18- RC37



RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	intervention for the core feature of impaired reciprocal social communication and interaction. This intervention should include play-based strategies with parents, carers and teachers to increase joint attention, engagement and reciprocal communication in the child or young person. Strategies should: - be adjusted to the child or young person's developmental level; - aim to increase the parents', carers', teachers' or peers' understanding of, and sensitivity and responsiveness to, the child or young person's patterns of communication and interaction; - include techniques to expand the child or young person's communication, interactive play and social routines. The intervention should be delivered by a trained professional. For preschool children consider parent, carer or teacher mediation. For schoolaged children consider peer mediation.						
48	Based on expert consensus speech and language problems in children with autism should be addressed within a personalized project including functional objectives in the field of verbal or non-verbal communication. This program could include PECS, should be initiated early on, include speech and language therapy and involve the parents. The indication for speech therapy should be determined independent of the child's IQ and should be integrated in a multidisciplinary approach.	I/S	KCE 2014	Expert Opinion			KCE 2014: p. 106: Table 19 (Summary of recommendations) Regroups KCE recommendations 96,98,99,100,101
49	(Based on expert consensus speech and language problems in children with autism should be addressed within a personalized project including functional objectives in the field of verbal	I	KCE 2014	Expert Opinion			KCE 2014: p.102; Table18- RC96

RC n°	Recommendation (RC) (as mentioned in GL)	Domain*	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
	or non-verbal communication.) This program could include augmentative communication, such as PECS and should be initiated early on.						

*Domain: Aim: Aim (goal); A: Assessment; I: Intervention; P: Practitioner; S: Setting

5.2.3 Attention-deficit/hyperactivity disorder (ADHD): included recommendations from GL

Table 26 – Attention-deficit/hyperactivity disorder (ADHD): included recommendations from GL

RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
1	The disorders that occur with the greatest frequency include oppositional defiant behavior (in children) and other conduct disorders, tic disorders, specific developmental disorders (of motor function, language, scholastic skills), anxiety disorders, depressive disorders, autism spectrum disorders and, from adolescence onward, substance use disorders and personality disorders; these should be monitored, diagnosed based on the appropriate evidence and treated according to the respective guidelines.	Assessment	AWMF 2018	Evidence-based	Strong	Moderate	p.85. Coexisting disorders occur frequently, can have adverse effects on the prognosis and require special therapeutic measures. The disorders that occur with the greatest frequency include oppositional defiant behavior and other conduct disorders, tic and Tourette disorders, specific developmental disorders (of motor function, language, scholastic skills), anxiety disorders, depressive disorders, autism spectrum disorders and, from adolescence onward, substance use disorders and personality disorders.
2	Coexisting disorders should be treated in accordance with practice guidelines. When deciding which disorder should be treated first, the severity of the disorder, amongst others, should be considered.	Assessment	AWMF 2018	Expert Opinion			100% agreement



RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
3	In the evaluation of a child or adolescent for ADHD, the primary care clinician (PCC) should include a process to at least screen for comorbid conditions, including emotional or behavioral conditions (eg, anxiety, depression, oppositional defiant disorder, conduct disorders, substance use), developmental conditions (eg, learning and language disorders, autism spectrum disorders), and physical conditions (eg, tics, sleep apnea).	Assessment	AAP	Evidence-based	Strong	B	KAS 3 - see Table 4
4	The PCC, if trained or experienced in diagnosing comorbid conditions, may initiate treatment of such conditions or make a referral to an appropriate subspecialist for treatment. After detecting possible comorbid conditions, if the PCC is not trained or experienced in making the diagnosis or initiating treatment, the patient should be referred to an appropriate subspecialist to make the diagnosis and initiate treatment	Setting	AAP	Evidence-based	Positive	C	KAS 7 - see Table 10

5.2.4 Communication disorders (CD): included recommendations from GL

Comment:

We extracted 3 recommendations and a statement from the AWMF 2022 guideline on Developmental Language Disorders which are applicable to the scope of the current study.

Other sections of the AWMF 2022 guideline on Developmental Language Disorders are included in the respective recommendation table of ID and ASD.

- 3.2.1. Therapy of language development disorders in cases of intellectual disability and 3.2.3. Therapy for people with syndromes and multiple disabilities associated language development disorders > ID section



- 3.2.4. Therapy of speech development disorders in Autism spectrum disorders > ASD section

Table 27 – Communication disorders (CD): included recommendations from GL

RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
1	The models of collaboration between the child, the family and the clinicians should be determined according to the complexity of the child's and the family's needs and according to collaborative intent.	Setting	INESSS 2017	Expert Opinion			
2	The Ministry of Health and Social Services should, together with the Ministry of Education and Higher Education and the Ministry of Family, start reviewing how resources are allocated on the basis of the child's needs and on identifying the best service providers, based on the different stages of the child's life.	Setting	INESSS 2017	Expert Opinion			
3	There should be close and ongoing collaboration between the clinicians in the health and social services system and teachers or daycare educators.	Setting	INESSS 2017	Expert Opinion			
4	Children and young people with language development disorders need help and support integrated into everyday life and the classroom in early childhood or school education. This includes measures that improve language, task and text comprehension and learning and the acquisition of skills at school as well as the education-related improve participation despite the language development disorder and the associated language processing problems. Speech therapy and language-promoting measures and elements can be integrated into the pedagogical offerings in daycare centers and schools; this allows a high frequency of exercises to be achieved.	Setting	AWMF 2022	Statement 48			Statement 48



RC n°	Recommendation (RC) (as mentioned in GL)	Domain	GL	Level of Evidence (as mentioned in GL)	Strength of RC (as mentioned in GL)	GRADE (as mentioned in GL)	Supporting evidence (in GL)
5	Children with speech development disorders should receive evidence-based, disorder-specific, parent- or child-centered speech therapy. It should serve to develop age-appropriate language skills and performance and/or prevent possible negative psycho-emotional, social, cognitive, educational and occupational consequences. The approach in speech therapy should be development-oriented and geared towards undisturbed speech development as well as the individual developmental prerequisites of a child and possible comorbidities.	Aim (goal)	AWMF 2022	Evidence-based	Strong	A	Law et al. (2003, 2004, 2010)
6	In the case of a speech development disorder associated with a comorbidity, a multiprofessional treatment plan should be drawn up, taking into account speech therapy requirements.	Assessment/ Practitioner	AWMF 2022	Expert Opinion	CCP		79% agreement
7	The bio-psycho-social framework conditions of the child and its potential overstraining as well as other side effects of the language intervention(s) should be taken into account.	Intervention/ Assessment	AWMF 2022	Expert Opinion	CCP		100% agreement

5.2.5 Specific learning disorder (LD): included recommendations from GL

No recommendations relevant for the scope of this study. (e.g. IQ limits), from the following GL:

AWMF (2015) - S3-Leitlinie Diagnostik und Behandlung bei der Lese- und/oder Rechtschreibstörung ¹²¹; AWMF (2018) - S3-Leitlinie Diagnostik und Behandlung der Rechenstörung ¹²²

5.3 Overview of the Summary Points of the recommendations extracted from the GL

5.3.1 Intellectual disability (ID): Summary Points

SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence-based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
	Guidelines: Intellectual disability (ID)		
	ID: Summary points “Assessment” (A)		
ID-A1	The assessment of speech functions can be considered as essential for the determination of intervention needs for children and young people with ID. There can be no standardized treatment recommendations based solely on the diagnosis. As far as known, no severe harms are associated with the assessment. Furthermore, it is considered as feasible and accepted by people with intellectual disability.	12, 29	Expert opinion (WHO, AWMF)
ID-A2	For children and young people with ID and complex communication needs (e.g. Rett syndrome), assessment should be part of a team process and should not rely on the judgement of one professional in isolation.	45, 46	Expert opinion (Townend)
ID-A3	Children and young people with ID and complex communication needs (e.g. Rett syndrome), may be referred to a Specialist Clinic or Expertise Centre in order to get a diagnosis, for specialized assessment and advice, or for a second-opinion at any point following diagnosis. Education, health and social care practitioners should refer children and young people with severe complex needs to specialised augmentative and alternative communication (AAC) services for evaluation if they might benefit from it.	42, 8, 47	Expert opinion (Townend, NICE) (1GL- NICE: 1RC strong)
ID-A4	Assessment should consider the opportunities and barriers to communication that may be present in various environments (e.g., home, school, and social settings). Observations should be conducted in a range of communication environments and with a range of communication partners.	44	Expert opinion (Townend)



SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence-based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ID-A5	The conception of a speech therapy intervention for a language development disorder associated with intellectual disability should be based on the overall development of the patient, his/her communicative participation, the existing environmental factors and his/her main language disorders and symptoms, which have been determined in a comprehensive individual diagnosis of his/her phonological, semantic-lexical, morphological-syntactic and pragmatic abilities.	25	Expert opinion (AWMF)
ID-A6	The choice of a particular strategy, format of communication or tool should align with the skills and capabilities of the child and its main communication partners. The preferences of the child or young person as well as individual, development and environmental aspects should be taken into account.	2, 6, 37	Expert opinion (NVK, AWMF); Evidence-based (1GL) (NICE: 1RC GRADE-CERQual: Low)
ID-A7	Encourage and support children and young people to give their views, and express what they want and need. If needed, consider getting support from a specialist to help them participate in discussions and decisions. Ask parents and carers what services can do to support their child in communicating their views and be involved in decisions.	4	Evidence-based (1GL) (NICE: 1RC GRADE-CERQual: Moderate)
	ID: Summary points "Intervention" (I)		

SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence-based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ID-I1	Children with language development disorders associated with intellectual disability, including children with syndromal disorders, should receive early speech/language therapy according to their cognitive and general developmental level. Speech/language therapy is considered as essential for people with ID. As far as known, no severe harms are associated with the use of speech/language therapy in people with ID, and it is considered as feasible and accepted by people with ID. Therapy and support for speech/language development in children with intellectual disability or a global developmental disorder should be communication-centered, taking into account the level of development and the underlying etiology, and integrated into a comprehensive therapy and support concept. Therapeutic methods shall be used that have proven to be effective in research for children who do not fall into this category. In addition, methods of augmentative and alternative communication (including sign language, non-electronic and electronic communication aids) shall be used. In line with summary point ID-A6, the preferences of the child or young person should be taken into account.	11, 13, 20, 21, 27, 31, 32, 33	Expert opinion (WHO, AWMF); Evidence-based (1GL) (AWMF: 5RC grading 1 to 2) (1GL- AWMF: 5RC from strong RC to open RC)
ID-I2	Educational support measures also appear to be useful. More specifically, pre-school classroom-based interventions (for children aged 3–5 years) should have multiple components, such as social and communication skills training for the children, and training on how to mediate the intervention for preschool teachers.	14, 20	Expert opinion (AWMF); Evidence-based (1GL) (WHO: GRADE: Very low to low); (1GL-WHO: 1RC strong)
ID-I3	Preferably start early (< 1 year) with speech/language therapy by a specialized speech/language therapist to stimulate speech language development and (non-verbal) communication.	3, 49	Expert opinion (NVK, Townend)
ID-I4	Joint child- and parent-centered treatment shall be carried out; parental counseling is particularly important for interaction design and responsiveness	34	Evidence-based (1GL) (AWMF: 1RC level 1 to 2) (1GL-AWMF: 1RC strong)



SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence-based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ID-I5	In all disorders associated with intellectual disability, child development can vary greatly from one individual to another. This means that there can be no standardized treatment recommendations based solely on the diagnosis. Various forms of supportive communication should be used, tailored to the needs of the child and its communication partners. Think of spoken language in combination with supporting communication without aids (such as gestures and posture), with non-technical aids (use of referrers, written words / text, icons or photos) and with technical aids (such as voice button, voice computer or tablet). The combined use of multiple communication modes (e.g., oral, gestural, written) should be encouraged for expressive and receptive communication, even if oral language is partially used.	29, 1, 28, 17, 50	Expert opinion (AWMF, NVK, INESSS, Townend) Evidence-based (1GL) (AWMF: 1RC level2b) (1GL-AWMF: 1RC positive)
ID-I6	Provision of and training in the use of assistive products for communication shall be foreseen. AAC can compensate for temporary or permanent impairments and limitations in spoken and written language skills, communication, activity and participation for children with (severe) language development disorders associated with intellectual disability and shall be used for these children. The young person and his family should be supported by a multidisciplinary team in choosing types of communication aids, without technology (e.g. gestures, communication boards with images or pictograms, PECS system) or with technological assistance (e.g., voice-based devices, touch tablets with specialized communication software). Education, health and social care practitioners should tell children and young people who use AAC, and their families and carers, about any support that could help them. AAC measures to promote language development should follow a common pedagogical and therapeutic concept for the selection and organization of vocabulary, regardless of the AAC strategies and systems used.	7, 15, 18, 19, 36, 38	Expert opinion (NICE, INESSS) Evidence-based (3GL) (WHO: 1RC: GRADE: Very low/ INESSS: 1RC: Low to high/ AWMF: 1RC: level1/ AWMF: 1RC: level2) (WHO: 1RC strong-AWMF: 1 RC strong; 1RC positive)
	ID: Summary points "Setting" (S)		

SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence-based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ID-S1	The optimal treatment of a language development disorder associated with an intellectual disability should be a multidisciplinary, team-based and family-centered approach. Those children should receive early speech therapy intervention according to their cognitive and general developmental level in a multi-professional setting. Therapy and support should be communication-centered, integrated into a comprehensive therapy and support concept and coordinated in an interdisciplinary treatment team. For children and young people with ID and complex communication needs (e.g. Rett syndrome), assessment should be part of a team process and should not rely on the judgement of one professional in isolation.	22, 21, 30, 39, 45, 46	Expert opinion (AWMF, Townend) Evidence-based (1GL) (AWMF: 1RC level 1 to 2, 1RC level 1b) (1GL-AWMF: 1RC strong, 1RC positive)
ID-S2	Education, health and social care services should organise all the practitioners working with the child or young person into an interagency team and ensure that these interagency teams include practitioners with the skills and experience to address all of the child or young person's needs. Interagency teams should ensure that the child or young person's needs are met in all settings (for example, at home and in school).	9, 10	Evidence-based (1GL) (NICE: 2RC: GRADE: Very low).
ID-S3	Children and young people with ID and complex communication needs (e.g. Rett syndrome), and their family, may be referred to a specialist clinic or expertise center in order to get a diagnosis, for specialized assessment and advice, or for a second-opinion at any point following diagnosis. Communication professionals attached to a specialist clinic or expertise center should be available to offer advice and support to, and answer questions from, locally treating therapists.	42, 43	Expert opinion (Townend)
ID-S4	Education, health and social care practitioners should refer disabled children and young people with severe complex needs to specialised augmentative and alternative communication services if they meet the eligibility criteria. A young person who needs communication aids should be supported by a multidisciplinary team in choosing types of communication aids.	18, 8	Expert opinion (NICE) Evidence-based (1GL) (INESSS: 1RC Low to High) (1GL-NICE: 1RC strong)



SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence-based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ID-S5	Assessment should consider the opportunities and barriers to communication that may be present in various environments (e.g., home, school, and social settings). Observations should be conducted in a range of communication environments and with a range of communication partners. Interagency teams should ensure that the child or young person's needs are met in all settings (for example, at home and in school). It is preferable that interventions take place in settings that are as natural as possible, so that skills that are used frequently throughout the day can be taught and practised. Besides speech therapy intervention, educational support measures also appear to be useful. More specifically, pre-school classroom-based interventions (for children aged 3–5 years) should have multiple components, such as social and communication skills training for the children, and training on how to mediate the intervention for preschool teachers.	44, 48, 20, 14	Expert opinion (Townend , AWMF); Evidence-based (1GL) (WHO: GRADE: Very low to low) (1GL-WHO: 1RC strong)
	ID: Summary points "Practitioner" (P)		
ID-P1	To stimulate speech language development and (non-verbal) communication in children with ID, preference is given to a speech therapist who has experience with and knowledge of working with those children. Speech/language therapists shall also provide and train in the use of assistive products for communication. In addition, educational support measures also appear to be useful.	3, 15, 20	Expert Opinion (NVK, AWMF); Evidence-based (1GL) (WHO: 1RC: GRADE: Very low) (WHO: 1RC strong)
ID-P2	Encourage and support children and young people to give their views on their health, care, education and support, and express what they want and need. If needed, consider getting support from a specialist to help them participate in discussions and decisions and express their views. Encourage parents and carers to think about how their child can give their own views and be involved in decisions, and what services can support their child in communicating their views.	4	Evidence-based (1GL) (NICE: 1RC GRADE-CERQual: Moderate)

SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence-based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ID-P3	Children with language development disorders associated with intellectual disability should receive SLT in a multi-professional setting. The team should incorporate all significant communication partners and should include all practitioners needed to address all of the child or young person's needs (until young adulthood). It may include the individual with ID, their parents/other family members, AAC specialists, speech-language therapists, occupational therapists, physical therapists, ID specialist staff, and other key people in the individual's life. At a minimum, the team will consist of the speech-language therapist, parents or other family members/caregivers, and the individual with ID. Professionals who are working in isolation (e.g., working as independent practitioner) should connect with the other members of the broader team so that support, advice, and recommendations are coordinated.	21, 40, 41, 9	Expert Opinion (Townend) Evidence-based (2GL) (NICE: 1RC GRADE very low; AWMF: 1RC level 1 to 2) (1GL-AWMF: 1RC positive)
	ID: Summary points "Aims (Goal) of intervention" (Aim)		
ID-Aim1	The aim of speech therapy interventions for children with a language development disorder associated with intellectual disability is to improve communicative and language skills and to maintain, establish or improve social participation. Any necessary prioritization of medical, therapeutic and educational interventions should be based on their respective importance for the patient's overall situation and the extent to which their physical functions, activity, independence, social participation and health-related quality of life can be improved. For patients with intellectual disabilities, everyday practical skills should be the focus of support and therapy, as should the expansion of their individual communicative possibilities.	23, 24	Evidence-based (1GL) (AWMF: 2RC level 1b) (1GL-AWMF: 2RC strong)



ID-Aim2	The young person and his family should be educated from childhood so that the young person develops, among other things, the following skills: • Produce an effective message (e.g. answer yes or no, make a choice, request, communicate needs and desires, choose and convey the appropriate information based on the communication intent and the interlocutor); • understand a message (e.g., follow instructions, routine, schedule) or question; • Engaging with people in an appropriate manner (e.g., expressing interest, responding to questions and comments from others); • Participate in a dyad or group exchange (e.g., initiate, maintain and complete an exchange, adjust to context) • Deal with unsuccessful communication situations (e.g. message is misunderstood) • Use different communication media (e.g. phone, text, email, social networks). From adolescence, the targeted skills are the same as those developed in childhood, adjusted to the contexts of adolescence and early adulthood. The combined use of multiple communication modes (e.g., oral, gestural, written) should be encouraged for expressive and receptive communication, even if the youth uses oral language partially (e.g. learned signs, natural gestures, written language, image supports, basis and high tech aids). The youth should be given maximum opportunities to communicate in all environments they are living in (e.g., through play, changing environmental conditions). For the young person who needs communication assistance: The young person and his family should be educated from childhood so that the young person develops, in particular, the skills necessary to use a technical communication aid: • Know and understand the content of the communication aid (e.g., images and their meaning); • Properly handling the communication aid (e.g., moving a cursor, navigating between different pages or tables of communication); • To deal with unforeseen events (e.g. breakage, missing equipment); • Contribute to the adaptation of the contents of the communication aid, according to the evolution of the developmental needs.	16, 17, 19	Expert Opinion (AWMF)
----------------	--	------------	-----------------------

SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence-based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ID-Aim3	Enable children and young people to communicate their views in a way that is appropriate for their age, developmental level and communication abilities. Children and young people are dependent on AAC if they are threatened or affected (temporarily or permanently) by a profound impairment of their receptive and expressive communication skills and their development, and this poses a risk or restriction to their participation in social life. In therapy, the aim is to work on linguistic and non-linguistic target structures introduced in a developmentally logical sequence.	5, 35, 26	Expert opinion (AWMF) Evidence-based (2GL) (NICE: 1RC GRADE-CERQual: Low; AWMF: 1RC level 2b) (1GL-AWMF: 1RC positive)

5.3.2 Autism spectrum disorder (ASD): Summary Points

SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence-based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
	Guidelines: Autism Spectrum disorder (ASD)		
	ASD: Summary points “Assessment” (A)		



SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence- based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ASD- A1	A diagnostic assessment, alongside a profile of the individual's strengths and weaknesses, carried out by a multidisciplinary team which has the skills and experience to undertake the assessments, should be considered as the optimum approach for individuals suspected of having ASD. A comprehensive evaluation should inform intervention, with the most appropriate intervention being assessed on an individual basis. A personalised program should be developed based on evaluation with appropriate tools and on observation in daily life, and in agreement with the patient, the parents and all professionals involved. All autistic children should have an assessment and support suggestions by a speech-language therapist with expertise in the autism spectrum at a minimum of once a year, more often in early childhood. The assessment and development of communication and social goals should complement each other.	15, 18, 22, 23, 26, 27, 42 (and WHO RC 30)	Expert Opinion (SIGN, New Zealand Guideline, KCE) Evidence-based (2GL) (SIGN: 1RC level 3 and 1 RC level 1 to 2; WHO: 1RC level 3) (2GL- SIGN, WHO: 1 RC Strong; 1GL- SIGN: 1RC Conditional)
ASD- A2	Develop a personalised program based on evaluation with appropriate tools and on observation in daily life, and in agreement with the patient, the parents and all professionals involved. Daycare centre or school should be involved and the communicative demands of the environment should be assessed.	9, 17, 42	Expert Opinion (New Zealand Guideline, KCE) Evidence-based (1GL) (The Danish Health Authority: 1RC very low) (1GL The Danish Health Authority: 1RC Weak)

SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence- based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ASD-A3	Referral pathways for children should be clearly understood by professionals. Preferably, a multidisciplinary team of health care practitioners experienced in autism should undertake diagnostic assessment of young people suspected of being autistic. Multidisciplinary, multiagency assessments should be provided. In the absence of an assessment team, a health care practitioner trained and highly experienced in the autism spectrum may undertake diagnostic assessment. If there are ongoing concerns, a multidisciplinary assessment is recommended.	10, 11, 12	Expert Opinion (New Zealand Guideline) Evidence-based (1GL) (New Zealand Guideline: 2RC Fair)
	ASD: Summary points "Intervention" (I)		
ASD-I1	Speech and language problems in children with autism should be addressed within a personalized project including functional objectives in the field of verbal or non-verbal communication. This program should be initiated early on, include speech and language therapy and involve the parents. It could include augmentative and alternative communication (such as PECS). The indication for speech therapy should be determined independent of the child's IQ and should be integrated in a multidisciplinary approach. In children and adolescents with language development disorders associated with autism spectrum disorders, language development-specific therapy methods can be used in addition to autism-specific support in accordance with the guidelines. The assessment and development of communication and social goals should complement each other. Teaching of the two areas should be carried out in parallel. Speech/language therapy is recommended in autistic children with identified speech and language problems. For psychosocial interventions in general, if these interventions are carried out correctly, no undesirable effects have been reported to date in children and adolescents regardless of their cognitive skills, although they have rarely been systematically investigated.	4, 5, 6, 8, 9, 15, 24, 27, 31, 47, 48 (and WHO RC 32)	Expert opinion (AWMF 2022, New Zealand Guideline, SIGN, KCE, WHO) Evidence-based (3GL) (AWMF 2021: 1RC 2 to 3 and 2RC 1 to 3; The Danish Health Authority: 1RC very low; SIGN: 1RC 1 to 2) (1 GL- AWMF 2021: 2RC A and 1 RC A to C; 1 GL- The Danish Health Authority: 1 RC weak; 1 GL- SIGN: 2RC conditional; 1GL WHO: 1 RC strong)



SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence- based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ASD-I2	A therapeutic team should establish a framework for an individualized work plan. Speech and language problems in children with autism should be addressed within a personalized project including functional objectives. The indication for speech therapy should be determined independent of the child's IQ and should be integrated in a multidisciplinary approach. Supports should be individualised for each child and family, and practitioners should work in partnership with the child and family to consider goals.	4, 20, 27, 41, 48 (and WHO RC 31, 32)	Expert Opinion (AutismCRC, KCE, WHO) Evidence-based (2GL) (AWMF 2021: 1RC 2 to 3; SIGN: 1RC 1 to 2) (1GL- AWMF2021: 1RC A; 1GL- SIGN: 1RC Conditional)
ASD-I3	In toddlers and preschoolers (up to the age of 6 years) who have difficulties in learning non-verbal communication principles and do not make sufficient linguistic progress despite adequate therapy including receptive and expressive language skills, or in children and adolescents with or without intellectual disability who do not learn to speak, a program of augmentative communication such as the Picture Exchange Communication System (PECS), the use of environmental visual supports (eg in the form of pictures or objects), or also a device that outputs speech via visual symbols can be used to promote communication with other persons (computer-based/speech output devices). In young children and children of primary school age further attempts should be made at the same time to stimulate verbal expressions.	6, 7, 19, 25, 29, 48, 49 (and WHO RC 31,32,33,34,35)	Expert opinion (AWMF, KCE, WHO, New Zealand Guideline) Evidence-based (3GL) (SIGN: 1RC 1 to 3 and 1 RC 1 to 2; WHO: 1RC 1 to 3 and 1 RC 1 to 2; AWMF: 1RC 1to 3) (2GL- SIGN, WHO: 2RC conditional; 1GL- AWMF: 1RC level C)

SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence- based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ASD-I4	Adapting the communicative, social and physical environments of children and young people with ASD may be of benefit (options include providing visual prompts or signing, reducing requirements for complex social interactions, using routine, timetabling, prompting and minimising sensory irritations, or quiet space)	19, 25, 28 (and WHO RC 34)	Expert Opinion (New Zealand Guideline, SIGN) Evidence-based (2GL) (SIGN: 1RC 1 to 3; WHO: 1RC 1 to 3) (2GL- SIGN, WHO: 1RC Conditional)
	ASD: Summary points "Setting" (S)		
ASD-S1	Regarding intervention, a coherent multidisciplinary approach is needed. Practitioners should coordinate the supports they deliver, and measures should be coordinated, networked and agreed upon. Services should be coordinated within and across sectors. A framework and quality criteria for a multi (trans) disciplinary approach in the same or in different institutions should be defined. Diagnostic and therapeutic teams should collaborate closely. Professionals who intervene only occasionally should consult the team. Diagnostic assessment (see also section XXX) should preferably be undertaken by a multidisciplinary team of health care practitioners experienced in autism. Multidisciplinary, multiagency assessments should be provided. In the absence of an assessment team, a health care practitioner trained and highly experienced in the autism spectrum may undertake diagnostic assessment. If there are ongoing concerns, a multidisciplinary assessment is recommended.	2, 3, 10,11,12,13,21, 22,39,40,41,45, 48 (and WHO RC 32)	Expert Opinion (AWMF 2021, New Zealand Guideline, AutismCRC, SIGN, KCE, WHO) Evidence-based (1GL) (New Zealand Guideline: 2RC Fair) (1 GL- AutismCRC: 1RC Conditional; 1 GL- SIGN: 1RC Conditional; 1GL- WHO: 1RC Strong)



SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence- based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ASD-S2	Children and young people with autism should have access to a key worker approach in order to manage and coordinate treatment, care and support. Measures should be coordinated, networked and agreed upon by one source in order to avoid gaps, duplications, ineffective or even harmful interventions. Practitioners should coordinate the supports they deliver with other relevant service providers and service systems, and a multidisciplinary team or network should identify a coordinator responsible for case management. A person who had a comprehensive training (including all the important aspects of ASS) will be responsible for overseeing and/or delegating the coordination task.	2, 3, 21,37,41,43	Expert Opinion (AWMF 2021, AutismCRC, KCE) (1GL- AutismCRC: 1 RC Conditional)
ASD-S3	Services should be adapted to the level of care specialisation the child needs. Services should be within a reasonable distance from their homes. Access should take the level of functional impairment into account but should not be restricted based on a child's intellectual ability, autism diagnosis, or any other eligibility criteria. The (Belgian) Reference Centres for Autism have a specific but not exclusive role in supporting the networking.	38, 44	Expert Opinion (KCE)

SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence- based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ASD-S4	Supports should take place in natural settings, using natural routines and natural consequences. The communicative demands of the environment should be assessed. Therapy with young children up to the age of 6 years should be carried out with the involvement of the parents/primary caregivers either in a therapeutic institution or, if the spatial and staffing conditions there are appropriate, in the daycare centre or school. And/or the parents/primary caregivers should be systematically guided by professional therapists in a therapeutic setting or at home, to implement the exercises with the child at home. Teacher mediation should be considered as well.	4, 9, 16, 17, 47	Expert Opinion (New Zealand Guideline, KCE) Evidence-based (3GL) (AWMF 2021: 1RC 2 to 3; The Danish Health Authority: 1RC very low; New Zealand Guideline: 1RC Good) (1GL- AWMF 2021:1RC A; 1GL The Danish Health Authority: 1 RC weak)
	ASD: Summary points "Practitioner" (P)		
ASD-P1	All health and social care professionals working with people with autism spectrum disorders, including speech-language therapists, should have sound, scientifically based knowledge of autism spectrum disorder and the needs of patients and their families.	3, 22, 36, 47, 18	Expert Opinion (AWMF 2021, SIGN, KCE, New Zealand Guideline) (1 GL- SIGN: 1RC conditional)
ASD-P2	Preferably, a multidisciplinary team of health care practitioners experienced in autism should undertake diagnostic assessment of young people and adults suspected of being autistic. In the absence of an assessment team, a health care practitioner trained and highly experienced in the autism spectrum may undertake diagnostic assessment. Diagnostic and therapeutic teams should collaborate closely. Professionals who intervene only occasionally should consult the team. Professionals should not work in isolation but share experiences with peers or be supervised.	11, 45, 46	Expert Opinion (KCE) Evidence-based (1GL) (New Zealand Guideline: 1RC Fair)



SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence- based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
ASD- P3	Children and young people with autism should have access to a key worker approach in order to manage and coordinate treatment, care and support. A person who had a comprehensive training (including all the important aspects of ASS) will be responsible for overseeing and/or delegating the coordination task.	37, 43	Expert Opinion (KCE)
	ASD: Summary points "Aims (Goal) of intervention" (Aim)		
ASD- Aims1	There is a need to formulate concrete, individual therapy goals: Each person with an autism spectrum disorder and, in the case of children and adolescents, the parents or guardians should be involved in the formulation of concrete therapy goals. The main goals of therapy are the improvement of autistic core symptoms in the areas of social interaction and communication (area A) as well as stereotypical and repetitive behaviour and stressful sensory and special interests (area B). The individual learning possibilities of the person with autism spectrum disorder should be taken into account with regard to the therapy planning, and strategies should be adjusted to the child or young person's developmental level. Communication should be seen as a high-priority learning area, and communication goals should be included in individual plans for all autistic children and young people. The promotion of receptive and expressive language skills should also be chosen as an important therapy goal for children who cannot yet speak actively. Strategies should aim to increase the parents', carers', teachers' or peers' understanding of, and sensitivity and responsiveness to, the child or young person's patterns of communication and interaction.	1, 14, 47	Expert Opinion (AWMF2021, KCE) Evidence-based (1GL) (New Zealand Guideline: 1RC Good)

5.3.3 Attention-deficit/hyperactivity disorder (ADHD): Summary Points

SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence-based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
	Guidelines: ADHD		
	ADHD: Summary points "Assessment" (A)		
ADHD-A1	In the evaluation of a child or adolescent for ADHD, the primary care clinician should include a process to at least screen for comorbid conditions, including emotional or behavioral conditions (eg, anxiety, depression,...), developmental conditions (eg, learning and language disorders, autism spectrum disorders), and physical conditions (eg, tics,...). These comorbid conditions should be monitored, diagnosed based on the appropriate evidence and treated according to the respective guidelines. When deciding which disorder should be treated first, the severity of the disorder, amongst others, should be considered.	1, 2, 3	Expert Opinion (AWMF) Evidence-based (2GL) (AWMF: 1RC Moderate; AAP: 1RC level B) (1GL – AWMF: 1RC Strong; 1GL – AAP: 1RC Strong)
	ADHD: Summary points "Setting" (S)		
ADHD-S1	The primary care clinician, if trained or experienced in diagnosing comorbid conditions, may initiate treatment of such conditions or make a referral to an appropriate subspecialist for treatment. After detecting possible comorbid conditions, if the primary care clinician is not trained or experienced in making the diagnosis or initiating treatment, the patient should be referred to an appropriate subspecialist to make the diagnosis and initiate treatment.	4	Evidence-based (1GL) (AAP: 1RC level C) (1GL – AAP: 1RC Positive)



5.3.4 Communication disorders (CD): Summary Points

SP n°	Summary Points (SP)	RC n°	Expert opinion/Evidence-based (Level of Evidence, as reported in GL) (Strength of RC, as reported in GL)
	Guidelines: Communication Disorders (CD)		
	CD: Summary points "Assessment" (A)		
CD-A1	In the case of a speech development disorder associated with a comorbidity, a multiprofessional treatment plan should be drawn up, taking into account speech therapy requirements. The bio-psycho-social framework conditions of the child and its potential overstraining as well as other side effects of the language intervention(s) should be taken into account.	6, 7	Expert Opinion (AWMF)
	CD: Summary points "Intervention"/Aim (Goals) (I/Aim)		
CD-I1	The bio-psycho-social framework conditions of the child and its potential overstraining as well as other side effects of the language intervention(s) should be taken into account.	7	Expert Opinion (AWMF)
CD-Aim1	Children with speech development disorders should receive evidence-based, disorder-specific, parent- or child-centered speech therapy. It should serve to develop age-appropriate language skills and performance and/or prevent possible negative psycho-emotional, social, cognitive, educational and occupational consequences. The approach in speech therapy should be development-oriented and geared towards undisturbed speech development as well as the individual developmental prerequisites of a child and possible comorbidities.	5	Evidence-based (1GL) (AWMF: 1RC level A) (1GL – AWMF: 1RC Strong)
	CD: Summary points "Setting" (S)		
CD-S1	In the case of a speech development disorder associated with a comorbidity, a multiprofessional treatment plan should be drawn up, taking into account speech therapy requirements. The models of collaboration between the child, the family and the clinicians should be determined according to the complexity of the child's and the family's needs and according to collaborative intent.	1, 6	Expert Opinion (AWMF, INESSS)



CD-S2	There should be close and ongoing collaboration between the clinicians in the health and social services system and teachers or daycare educators. Children and young people with language development disorders need help and support integrated into everyday life and the classroom in early childhood or school education. Speech therapy and language-promoting measures and elements can be integrated into the pedagogical offerings in daycare centers and schools; this allows a high frequency of exercises to be achieved. The responsible Ministries of Health, Welfare and Education should start reviewing how resources are allocated on the basis of the child's needs and on identifying the best service providers, based on the different stages of the child's life.	2, 3, 4	Expert Opinion (AWMF, INESSS)
--------------	---	---------	-------------------------------



6 SEARCH STRATEGIES SYSTEMATIC REVIEWS

6.1 Medline Ovid

Date November 06, 2024

Database Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations, Daily and Versions <1946 to November 06, 2024>

Search strategy

1	intellectual disability/	61558
2	down syndrome/	27105
3	fragile x syndrome/	5850
4	prader-willi syndrome/	3402
5	williams syndrome/	1977
6	1 or 2 or 3 or 4 or 5	96642
7	idiocy.ab,ti,kf.	763
8	mental retardation.ab,ti,kf.	28960
9	(intellectual adj3 disabilit*).ab,ti,kf.	30515
10	(mental adj3 deficienc*).ab,ti,kf.	4807
11	(intellectual adj3 disorder?).ab,ti,kf.	2776
12	down syndrome.ab,ti,kf.	18300
13	trisomy 21.ab,ti,kf.	7286
14	frax# syndrome.ab,ti,kf.	14
15	fra x syndrome.ab,ti,kf.	146
16	fragile x syndrome.ab,ti,kf.	5802
17	williams syndrome.ab,ti,kf.	2017
18	beuren syndrome.ab,ti,kf.	797
19	supravalvar aortic stenosis.ab,ti,kf.	177
20	prader willi syndrome.ab,ti,kf.	3798



21	royer syndrome.ab,ti,kf.	3
22	"borderline intellectual functioning".ab,ti,kf.	288
23	7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22	92930
24	6 or 23	135183
25	exp communication disorders/	70913
26	(communication adj3 (disorder? or disabilit* or impairment?)).ab,ti,kf.	4902
27	(communicative adj3 (disorder? or dysfunction?)).ab,ti,kf.	594
28	(language adj3 (disorder? or delay* or defic* or impair* or problem* or disabilit* or impairment?)).ab,ti,kf.	18337
29	Anomia.ab,ti,kf.	875
30	dysnomia.ab,ti,kf.	66
31	Speech Disorder?.ab,ti,kf.	4287
32	aphasia.ab,ti,kf.	17084
33	articulation disorder?.ab,ti,kf.	333
34	dysarthria.ab,ti,kf.	7688
35	echolalia.ab,ti,kf.	318
36	mutism.ab,ti,kf.	2712
37	(learning adj3 (disabilit* or disorder? or impairment?)).ab,ti,kf.	18801
38	acalculia?.ab,ti,kf.	252
39	dyscalculia?.ab,ti,kf.	618
40	alexia?.ab,ti,kf.	968
41	word blindness*.ab,ti,kf.	82
42	(reading adj3 (disabilit* or disorder? or impairment?)).ab,ti,kf.	3059
43	dysphasia.ab,ti,kf.	1388
44	26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43	73947
45	25 or 44	112068



46	exp Autism Spectrum Disorder/	46620
47	Child Development Disorders, Pervasive/	6703
48	46 or 47	52043
49	autism.ab,ti,kf.	69392
50	autistic.ab,ti,kf.	19050
51	asperger.ab,ti,kf.	1419
52	asperger's.ab,ti,kf.	1117
53	kanner syndrome.ab,ti,kf.	11
54	kanner's syndrome.ab,ti,kf.	17
55	asd.ab,ti,kf.	39031
56	49 or 50 or 51 or 52 or 53 or 54 or 55	85301
57	48 or 56	89381
58	Attention Deficit Disorder with Hyperactivity/	36669
59	addh.ab,ti,kf.	126
60	adhd.ab,ti,kf.	35101
61	attention deficit disorder?.ab,ti,kf.	2625
62	attention deficit hyperactivity disorder?.ab,ti,kf.	34451
63	attention-deficit.ab,ti,kf.	38859
64	hyperkinetic syndrome.ab,ti,kf.	307
65	minimal brain dysfunction.ab,ti,kf.	533
66	59 or 60 or 61 or 62 or 63 or 64 or 65	47622
67	58 or 66	53953
68	Neurodevelopmental Disorders/	5480
69	Developmental Disabilities/	23067
70	68 or 69	28270
71	(child* adj3 mental disorder?).ab,ti,kf.	1288



72	(neurodevelopmental adj3 (disorder? or disabilit* or syndrome? or problem? or issue? or concern? or impairment? or outcomes)).ab,ti,kf.	30306
73	(developmental adj3 (disorder? or disabilit* or syndrome? or problem? or issue? or concern? or impairment? or outcomes)).ab,ti,kf.	38971
74	71 or 72 or 73	67672
75	70 or 74	83907
76	24 or 45 or 57 or 67 or 75	402264
77	exp "rehabilitation of speech and language disorders"/	11946
78	COMMUNICATION AIDS FOR DISABLED/	3089
79	77 or 78	14916
80	(language adj2 (therap* or training? or intervention? or rehabilitation or treat*)).ab,ti,kf.	5638
81	(speech adj2 (therap* or treat* or rehabilitation or training? or intervention?)).ab,ti,kf.	8408
82	(voice adj2 (intervention? or training? or therap* or rehabilitation or treat*)).ab,ti,kf.	3035
83	(vocal adj2 (intervention? or training? or therap* or rehabilitation or treat*)).ab,ti,kf.	1442
84	logopedic?.ab,ti,kf.	356
85	phoniatric?.ab,ti,kf.	817
86	orthophonist?.ab,ti,kf.	22
87	(communication adj3 (intervention? or training? or therap* or rehabilitation or treat*)).ab,ti,kf.	12924
88	(communication? adj2 (alternative or augmentative)).ab,ti,kf.	1830
89	(AAC adj (technique? or method? or tool? or process* or procedure?)).ab,ti,kf.	62
90	80 or 81 or 82 or 83 or 84 or 85 or 86 or 87 or 88 or 89	31029
91	79 or 90	39582
92	76 and 91	11793
93	exp child/	2234633



94	infant/	892813
95	adolescent/	2284587
96	93 or 94 or 95	3752186
97	child*.ab,ti,kf.	1785168
98	adolescent*.ab,ti,kf.	358373
99	teenager?.ab,ti,kf.	18026
100	infant?.ab,ti,kf.	488508
101	toddler?.ab,ti,kf.	15473
102	teen?.ab,ti,kf.	13425
103	adolescence.ab,ti,kf.	94161
104	young.ab,ti,kf.	613508
105	pediatric.ab,ti,kf.	386462
106	school.ab,ti,kf.	297114
107	preschool.ab,ti,kf.	32944
108	girl?.ab,ti,kf.	181824
109	boy?.ab,ti,kf.	174837
110	(("2" or "3" or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12" or "13" or "14" or "15" or "16" or "17") adj "year? old").ab,ti,kf.	218698
111	97 or 98 or 99 or 100 or 101 or 102 or 103 or 104 or 105 or 106 or 107 or 108 or 109 or 110	3148449
112	96 or 111	4995699
113	92 and 112	6594
114	((systematic review or systematic literature review or systematic scoping review or systematic narrative review or systematic qualitative review or systematic evidence review or systematic quantitative review or systematic meta-review or systematic critical review or systematic mixed studies review or systematic mapping review or systematic cochrane review or "systematic search and review" or systematic integrative review).ti. not comment.pt. not (protocol or protocols).ti. not medline.st.) or (Cochrane Database Syst Rev.ja. and review.pt.) or systematic review.pt.	330552
115	meta-analys*.ti.	215718



116	meta-analysis.pt.	211246
117	exp Technology Assessment, Biomedical/	12518
118	health technology assessment.ti,kf.	3182
119	HtA.ti,kf.	972
120	114 or 115 or 116 or 117 or 118 or 119	463091
121	((scoping or umbrella) adj review?).ti,kf.	30174
122	120 or 121	487392
123	113 and 122	240
124	limit 123 to yr="2020-2025"	118

Comments

6.2 Cochrane Library

Date 19/11/2024 09:19:28

Database Cochrane

Search strategy

#1	[mh ^"intellectual disability"]	1093
#2	[mh ^"down syndrome"]	552
#3	[mh ^"fragile x syndrome"]	126
#4	[mh ^"prader-willi syndrome"]	176
#5	[mh ^"williams syndrome"]	28
#6	#1 or #2 or #3 or #4 or #5	1925
#7	idiocy:ab,ti	1
#8	"mental retardation":ab,ti	1026
#9	(intellectual NEAR/3 disabilit*):ab,ti	1551
#10	(mental NEAR/3 deficienc*):ab,ti	37
#11	(intellectual NEAR/3 disorder?):ab,ti	154
#12	"down syndrome":ab,ti	980



#13	trisomy 21:ab,ti	174
#14	frax# syndrome:ab,ti	16
#15	"fra x syndrome":ab,ti	5
#16	"fragile x syndrome":ab,ti	185
#17	"williams syndrome":ab,ti	29
#18	"beuren syndrome":ab,ti	10
#19	"supravalvar aortic stenosis":ab,ti	0
#20	"prader willi syndrome":ab,ti	263
#21	"royer syndrome":ab,ti	0
#22	"borderline intellectual functioning":ab,ti	42
#23	#7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 or #22	4045
#24	#6 or #23	4525
#25	[mh "communication disorders"]	2590
#26	(communication NEAR/3 (disorder? or disabilit* or impairment?)):ab,ti	532
#27	(communicative NEAR/3 (disorder? or dysfunction?)):ab,ti	137
#28	(language NEAR/3 (disorder? or delay* or defic* or impair* or problem* or disabilit* or impairment?)):ab,ti	1317
#29	Anomia:ab,ti	82
#30	dysnomia:ab,ti	1
#31	(Speech NEAR/1 Disorder?):ab,ti	203
#32	aphasia:ab,ti	2035
#33	(articulation NEAR/1 disorder?):ab,ti	18
#34	dysarthria:ab,ti	411
#35	echolalia:ab,ti	5
#36	mutism:ab,ti	60
#37	(learning NEAR/3 (disabilit* or disorder? or impairment?)):ab,ti	1047



#38	acalculia?:ab,ti	1
#39	dyscalculia?:ab,ti	29
#40	alexia?:ab,ti	24
#41	(word NEXT/1 blindness*):ab,ti	1
#42	(reading NEAR/3 (disabilit* or disorder? or impairment?):ab,ti	243
#43	dysphasia:ab,ti	130
#44	#26 or #27 or #28 or #29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39 or #40 or #41 or #42 or #43	5627
#45	#25 or #44	6883
#46	[mh "Autism Spectrum Disorder"]	2768
#47	[mh ^"Child Development Disorders, Pervasive"]	617
#48	#46 or #47	2975
#49	autism:ab,ti	5137
#50	autistic:ab,ti	1576
#51	asperger:ab,ti	195
#52	"asperger's":ab,ti	195
#53	"kanner syndrome":ab,ti	0
#54	"kanner's syndrome":ab,ti	0
#55	asd:ab,ti	3196
#56	#49 or #50 or #51 or #52 or #53 or #54 or #55	6305
#57	#48 or #56	6400
#58	[mh ^"Attention Deficit Disorder with Hyperactivity"]	3878
#59	addh:ab,ti	35
#60	adhd:ab,ti	6269
#61	("attention deficit" NEAR/1 disorder?):ab,ti	504
#62	("attention deficit hyperactivity" NEAR/1 disorder?):ab,ti	4906
#63	attention-deficit:ab,ti	5474



#64	"hyperkinetic syndrome":ab,ti	38
#65	"minimal brain dysfunction":ab,ti	34
#66	#59 or #60 or #61 or #62 or #63 or #64 or #65	7483
#67	#58 or #66	7811
#68	[mh ^"Neurodevelopmental Disorders"]	295
#69	[mh ^"Developmental Disabilities"]	850
#70	#68 or #69	1133
#71	(child* NEAR/3 ("mental disorder" or "mental disorders")):ab,ti	92
#72	(neurodevelopmental NEAR/3 (disorder? or disabilit* or syndrome? or problem? or issue? or concern? or impairment? or outcomes)):ab,ti	2034
#73	(developmental NEAR/3 (disorder? or disabilit* or syndrome? or problem? or issue? or concern? or impairment? or outcomes)):ab,ti	2495
#74	#71 or #72 or #73	4404
#75	#70 or #74	4996
#76	#24 or #45 or #57 or #67 or #75	27005
#77	[mh "rehabilitation of speech and language disorders"]	946
#78	[mh ^"COMMUNICATION AIDS FOR DISABLED"]	100
#79	#77 or #78	1038
#80	(language NEAR/2 (therap* or training? or intervention? or rehabilitation or treat*)):ab,ti	2248
#81	(speech NEAR/2 (therap* or treat* or rehabilitation or training? or intervention?)):ab,ti	1579
#82	(voice NEAR/2 (intervention? or training? or therap* or rehabilitation or treat*)):ab,ti	646
#83	(vocal NEAR/2 (intervention? or training? or therap* or rehabilitation or treat*)):ab,ti	234
#84	logopedic?:ab,ti	32
#85	phoniatic?:ab,ti	24
#86	orthophonist?:ab,ti	1



#87	(communication NEAR/3 (intervention? or training? or therap* or rehabilitation or treat*)):ab,ti	3054
#88	(communication? NEAR/2 (alternative or augmentative)):ab,ti	102
#89	(AAC NEAR/1 (technique? or method? or tool? or process* or procedure?)):ab,ti	8
#90	#80 or #81 or #82 or #83 or #84 or #85 or #86 or #87 or #88 or #89	7166
#91	#79 or #90	7569
#92	#76 and #91	1978
#93	[mh "child"]	83242
#94	[mh ^"infant"]	31364
#95	[mh ^"adolescent"]	138801
#96	#93 or #94 or #95	193941
#97	child*:ab,ti	172239
#98	adolescent*:ab,ti	37079
#99	teenager?:ab,ti	1335
#100	infant?:ab,ti	48132
#101	toddler?:ab,ti	2406
#102	teen?:ab,ti	2091
#103	adolescence:ab,ti	3307
#104	young:ab,ti	48253
#105	pediatric:ab,ti	41342
#106	school:ab,ti	32873
#107	preschool:ab,ti	5033
#108	girl?:ab,ti	9714
#109	boy?:ab,ti	8427
#110	((("2" or "3" or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12" or "13" or "14" or "15" or "16" or "17") NEXT/1 ("year old" or "years old"))):ab,ti	17834



#111	#97 or #98 or #99 or #100 or #101 or #102 or #103 or #104 or #105 or #106 or #107 or #108 or #109 or #110	288714
#112	#96 or #111	389010
#113	#92 and #112	995
#114	#113 in Cochrane Reviews	36
#115	#114 with Cochrane Library publication date Between Jan 2020 and Dec 2024	8

Comments

6.3 Embase

Date 21 Nov 2024

Database Embase

Search strategy

#1	'intellectual impairment'/de	45898
#2	'mental deficiency'/de	69763
#3	'down syndrome'/de	42481
#4	'fragile x syndrome'/de	10495
#5	'prader willi syndrome'/de	7113
#6	'williams beuren syndrome'/de	4075
#7	#1 OR #2 OR #3 OR #4 OR #5 OR #6	168969
#8	idiocy:ab,ti,kw	569
#9	'mental retardation':ab,ti,kw	39280
#10	(intellectual NEAR/3 disabilit*):ab,ti,kw	43232
#11	(mental NEAR/3 deficienc*):ab,ti,kw	2712
#12	(intellectual NEAR/3 disorder\$):ab,ti,kw	3972
#13	'down syndrome':ab,ti,kw	24826
#14	'trisomy 21':ab,ti,kw	10746
#15	'frax? syndrome':ab,ti,kw	16



#16	'fra x syndrome':ab,ti,kw	163
#17	'fragile x syndrome':ab,ti,kw	7152
#18	'williams syndrome':ab,ti,kw	2517
#19	'beuren syndrome':ab,ti,kw	993
#20	'supravalvar aortic stenosis':ab,ti,kw	224
#21	'prader willi syndrome':ab,ti,kw	5191
#22	'royer syndrome':ab,ti,kw	2
#23	'borderline intellectual functioning':ab,ti,kw	362
#24	#8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23	123229
#25	#7 OR #24	199836
#26	'communication disorder'/exp	96931
#27	(communication NEAR/3 (disorder\$ OR disabilit*)):ab,ti,kw	4676
#28	(communicative NEAR/3 (disorder\$ OR dysfunction\$)):ab,ti,kw	744
#29	(language NEAR/3 (disorder\$ OR delay* OR defic* OR impair* OR problem* OR disabilit*)):ab,ti,kw	24593
#30	anomia:ab,ti,kw	1354
#31	dysnomia:ab,ti,kw	111
#32	(alexia NEAR/2 pure):ab,ti,kw	306
#33	'speech disorder\$':ab,ti,kw	4372
#34	aphasia:ab,ti,kw	27445
#35	'articulation disorder\$':ab,ti,kw	496
#36	dysarthria:ab,ti,kw	14478
#37	echolalia:ab,ti,kw	530
#38	mutism:ab,ti,kw	3907
#39	'learning disabilit*':ab,ti,kw	13290
#40	'specific learning disorder\$':ab,ti,kw	510
#41	acalculia\$:ab,ti,kw	365



#42	dyscalculia\$:ab,ti,kw	806
#43	alexia\$:ab,ti,kw	1220
#44	'word blindness*':ab,ti,kw	68
#45	'reading disorder\$:ab,ti,kw	779
#46	'reading disabilit*':ab,ti,kw	1653
#47	dysphasia:ab,ti,kw	2734
#48	#27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47	92433
#49	#26 OR #48	142670
#50	'autism'/exp	108852
#51	autism:ab,ti,kw	89705
#52	autistic:ab,ti,kw	25191
#53	asperger:ab,ti,kw	3657
#54	aspergers:ab,ti,kw	1550
#55	'kanner syndrome':ab,ti,kw	13
#56	'kanner s syndrome':ab,ti,kw	22
#57	asd:ab,ti,kw	54938
#58	#51 OR #52 OR #53 OR #54 OR #55 OR #56 OR #57	115381
#59	#50 OR #58	139200
#60	'attention deficit hyperactivity disorder'/de	85849
#61	addh:ab,ti,kw	206
#62	adhd:ab,ti,kw	51131
#63	'attention deficit disorder\$:ab,ti,kw	3741
#64	'attention deficit hyperactivity disorder\$:ab,ti,kw	43718
#65	'attention-deficit':ab,ti,kw	50298
#66	'hyperkinetic syndrome':ab,ti,kw	433
#67	'minimal brain dysfunction':ab,ti,kw	715



#68	#61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67	67275
#69	#60 OR #68	94156
#70	'mental disease'/de	331795
#71	'developmental disorder'/exp	67177
#72	#70 OR #71	394400
#73	((child* NEAR/3 mental):ab,ti,kw) AND disorder\$:ab,ti,kw	7003
#74	(neurodevelopmental NEAR/3 (disorder\$ OR disabilit* OR syndrome\$ OR problem\$ OR issue\$ OR concern\$ OR impairment\$ OR outcomes)):ab,ti,kw	40323
#75	(developmental NEAR/3 (disorder\$ OR disabilit* OR syndrome\$ OR problem\$ OR issue\$ OR concern\$ OR impairment\$ OR outcomes)):ab,ti,kw	52104
#76	#73 OR #74 OR #75	94368
#77	#72 OR #76	454968
#78	#25 OR #49 OR #59 OR #69 OR #77	880500
#79	'speech and language rehabilitation'/exp	25008
#80	'communication aid'/exp	3538
#81	#79 OR #80	28286
#82	(language NEAR/2 (therap* OR training\$ OR intervention\$ OR rehabilitation OR treat*)):ab,ti,kw	8398
#83	(speech NEAR/2 (therap* OR treat* OR rehabilitation OR training\$ OR intervention\$)):ab,ti,kw	12784
#84	(voice NEAR/2 (intervention\$ OR training\$ OR therap* OR rehabilitation OR treat*)):ab,ti,kw	3723
#85	(vocal NEAR/2 (intervention\$ OR training\$ OR therap* OR rehabilitation OR treat*)):ab,ti,kw	1701
#86	logopedic\$:ab,ti,kw	548
#87	phoniatic\$:ab,ti,kw	1092
#88	orthophonist\$:ab,ti,kw	36
#89	(communication\$ NEAR/3 (intervention\$ OR training\$ OR therap* OR rehabilitation OR treat*)):ab,ti,kw	18580



#90	(communication\$ NEAR/2 (alternative OR augmentative)):ab,ti,kw	2334
#91	(aac NEAR/1 (technique\$ OR method\$ OR tool\$ OR process* OR procedure\$)):ab,ti,kw	203
#92	#82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89 OR #90 OR #91	44349
#93	#81 OR #92	59905
#94	#78 AND #93	15962
#95	'child'/exp	3556042
#96	'adolescent'/exp	2033933
#97	#95 OR #96	4535677
#98	child\$:ab,ti,kw	2349475
#99	adolescent\$:ab,ti,kw	472768
#100	teenager\$:ab,ti,kw	26403
#101	infant\$:ab,ti,kw	568128
#102	toddler\$:ab,ti,kw	20152
#103	teen\$:ab,ti,kw	18488
#104	adolescence:ab,ti,kw	109211
#105	young:ab,ti,kw	819072
#106	pediatric:ab,ti,kw	599117
#107	school:ab,ti,kw	384911
#108	preschool:ab,ti,kw	46171
#109	girl\$:ab,ti,kw	247655
#110	boy\$:ab,ti,kw	238975
#111	((('2' OR '3' OR '4' OR '5' OR '6' OR '7' OR '8' OR '9' OR '10' OR '11' OR '12' OR '13' OR '14' OR '15' OR '16' OR '17') NEAR/1 "year\$ old")):ab,ti,kw	0
#112	#98 OR #99 OR #100 OR #101 OR #102 OR #103 OR #104 OR #105 OR #106 OR #107 OR #108 OR #109 OR #110 OR #111	4056226
#113	#97 OR #112	5976766

#114	#94 AND #113	8214
#115	#114 AND [2020-2025]/py	2423
#116	'meta-analysis'/exp	334246
#117	'meta-analysis'	469583
#118	'systematic review'/exp	493758
#119	'systematic review'	611737
#120	((scoping OR umbrella) NEAR/1 review\$):ti,kw	30456
#121	#116 OR #117 OR #118 OR #119 OR #120	813963
#122	#115 AND #121	190
#123	#122 NOT ('conference abstract'/it OR 'conference paper'/it OR 'conference review'/it)	173
#124	#123 NOT [medline]/lim	40

Comments

6.4 Cinahl

Date November 24, 2024 10:23:23 PM

Database Cinahl

Search strategy

S1	SU intellectual disability	29,115
S2	SU down syndrome	8,159
S3	SU fragile x syndrome	1,129
S4	SU prader-willi syndrome	830
S5	SU williams syndrome	599
S6	S1 or S2 or S3 or S4 or S5	38,516
S7	(TI idiocy) OR (AB idiocy)	17
S8	(TI 'mental retardation') OR (AB 'mental retardation')	3,425
S9	(TI (intellectual N3 disabilit*)) OR (AB (intellectual N3 disabilit*))	15,817



S10	(TI (mental N3 deficienc*)) OR (AB (mental N3 deficienc*))	141
S11	(TI (intellectual N3 disorder#)) OR (AB (intellectual N3 disorder#))	1,171
S12	(TI 'down syndrome') OR (AB 'down syndrome')	7,386
S13	(TI 'trisomy 21') OR (AB 'trisomy 21')	1,449
S14	(TI 'frax# syndrome') OR (AB 'frax# syndrome')	13
S15	(TI 'fra x syndrome') OR (AB 'fra x syndrome')	1
S16	(TI 'fragile x syndrome') OR (AB 'fragile x syndrome')	1,047
S17	(TI 'williams syndrome') OR (AB 'williams syndrome')	728
S18	(TI 'beuren syndrome') OR (AB 'beuren syndrome')	89
S19	(TI 'supravalvar aortic stenosis') OR (AB 'supravalvar aortic stenosis')	26
S20	(TI 'prader willi syndrome') OR (AB 'prader willi syndrome')	873
S21	(TI 'royer syndrome') OR (AB 'royer syndrome')	0
S22	TI('borderline intellectual functioning') OR AB('borderline intellectual functioning')	163
S23	S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 or S18 or S19 or S20 or S21 or S22	29,118
S24	S6 or S23	46,624
S25	(MH "Communicative Disorders+")	41,737
S26	(TI (communication N3 (disorder# or disabilit*))) OR (AB (communication N3 (disorder# or disabilit*)))	2,872
S27	(TI (communicative N3 (disorder# or dysfunction#))) OR (AB (communicative N3 (disorder# or dysfunction#)))	247
S28	(TI (language N3 (disorder# or delay* or defic* or impair* or problem* or disabilit*))) OR (AB (language N3 (disorder# or delay* or defic* or impair* or problem* or disabilit*)))	9,569
S29	(TI Anomia) OR (AB Anomia)	357
S30	(TI dysnomia) OR (AB dysnomia)	8
S31	(TI (Alexia N2 Pure)) OR (AB (Alexia N2 Pure))	59
S32	(TI 'speech disorder#') OR (AB 'speech disorder#')	2,534



S33	(TI aphasia) OR (AB aphasia)	7,189
S34	(TI 'articulation disorder#') OR (AB 'articulation disorder#')	159
S35	(TI dysarthria) OR (AB dysarthria)	2,224
S36	(TI echolalia) OR (AB echolalia)	81
S37	(TI mutism) OR (AB mutism)	485
S38	(TI 'learning disabilit*') OR (AB 'learning disabilit*')	9,667
S39	(TI 'specific learning disorder#') OR (AB 'specific learning disorder#')	208
S40	(TI acalculia#) OR (AB acalculia#)	40
S41	(TI dyscalculia#) OR (AB dyscalculia#)	145
S42	(TI alexia#) OR (AB alexia#)	188
S43	(TI 'word blindness*') OR (AB 'word blindness*')	14
S44	(TI 'reading disorder#') OR (AB 'reading disorder#')	428
S45	(TI 'reading disabilit*') OR (AB 'reading disabilit*')	737
S46	(TI dysphasia) OR (AB dysphasia)	294
S47	S26 or S27 or S28 or S29 or S30 or S31 or S32 or S33 or S34 or S35 or S36 or S37 or S38 or S39 or S40 or S41 or S42 or S43 or S44 or S45 or S46	33,078
S48	S25 or S47	56,810
S49	(MH "Autism Spectrum Disorder")	31,563
S50	(MH "Asperger Syndrome")	1,548
S51	(MH "Child Development Disorders, Pervasive")	1,705
S52	S49 or S50 or S51	33,602
S53	(TI autism) OR (AB autism)	31,158
S54	(TI autistic) OR (AB autistic)	6,694
S55	(TI asperger) OR (AB asperger)	1,383
S56	(TI asperger's) OR (AB asperger's)	1,383
S57	(TI 'kanner syndrome') OR (AB 'kanner syndrome')	7
S58	(TI "kanner's syndrome") OR (AB "kanner's syndrome")	0



S59	(TI asd) OR (AB asd)	14,253
S60	S53 or S54 or S55 or S56 or S57 or S58 or S59	37,169
S61	S52 or S60	43,376
S62	(MH "Attention Deficit Hyperactivity Disorder")	19,830
S63	(TI addh) OR (AB addh)	9
S64	(TI adhd) OR (AB adhd)	15,745
S65	(TI 'attention deficit disorder#') OR (AB 'attention deficit disorder#')	7,937
S66	(TI attention deficit hyperactivity disorder#) OR (AB attention deficit hyperactivity disorder#)	7,300
S67	(TI attention-deficit) OR (AB attention-deficit)	8,552
S68	(TI hyperkinetic syndrome) OR (AB hyperkinetic syndrome)	39
S69	(TI minimal brain dysfunction) OR (AB minimal brain dysfunction)	13
S70	S63 OR S64 OR S65 OR S66 OR S67 OR S68 OR S69	19,283
S71	S62 or S70	25,395
S72	MH Developmental Disabilities	11,999
S73	MH Mental Disorders Diagnosed in Childhood	3,758
S74	S72 or S73	15,666
S75	AB(child* N3 mental disorder#)or TI(child* N3 mental disorder#)	1,124
S76	AB(neurodevelopmental N3 (disorder# or disabilit* or syndrome# or problem# or issue# or concern# or impairment# or outcomes))	6,457
S77	TI(neurodevelopmental N3 (disorder# or disabilit* or syndrome# or problem# or issue# or concern# or impairment# or outcomes))	2,768
S78	AB(developmental N3 (disorder# or disabilit* or syndrome# or problem# or issue# or concern# or impairment# or outcomes))	13,621
S79	TI(developmental N3 (disorder# or disabilit* or syndrome# or problem# or issue# or concern# or impairment# or outcomes))	7,129
S80	S75 or S76 or S77 or S78 or S79	24,986
S81	S74 or S80	34,399
S82	S24 or S48 or S61 or S71 or S81	175,030



S83	MH "rehabilitation of speech and language disorders"	1,159
S84	MH "Communication Aids for Persons with Disabilities"	2,090
S85	(MH "Rehabilitation, Speech and Language+")	10,455
S86	S83 or S84 or S85	12,054
S87	AB(language N2 (therap* or training# or intervention# or rehabilitation or treat*))	4,646
S88	TI(language N2 (therap* or training# or intervention# or rehabilitation or treat*))	1,643
S89	TI(speech N2 (therap* or treat* or rehabilitation or training# or intervention#))	1,717
S90	AB(speech N2 (therap* or treat* or rehabilitation or training# or intervention#))	5,227
S91	AB(voice N2 (intervention# or training# or therap* or rehabilitation or treat*))	1,636
S92	TI(voice N2 (intervention# or training# or therap* or rehabilitation or treat*))	818
S93	AB(vocal N2 (intervention# or training# or therap* or rehabilitation or treat*))	645
S94	TI(vocal N2 (intervention# or training# or therap* or rehabilitation or treat*))	286
S95	AB logopedic# OR TI logopedic#	121
S96	AB phoniatic# OR TI phoniatic#	190
S97	AB orthophonist# OR TI orthophonist#	13
S98	AB(communication N3 (intervention# or training# or therap* or rehabilitation or treat*))	8,904
S99	TI(communication N3 (intervention# or training# or therap* or rehabilitation or treat*))	2,394
S100	AB(communication# N2 (alternative or augmentative))	1,696
S101	TI(communication# N2 (alternative or augmentative))	751
S102	AB(AAC N1 (technique# or method# or tool# or process* or procedure#))	165
S103	TI(AAC N1 (technique# or method# or tool# or process* or procedure#))	9



S104	S87 OR S88 OR S89 OR S90 OR S91 OR S92 OR S93 OR S94 OR S95 OR S96 OR S97 OR S98 OR S99 OR S100 OR S101 OR S102 OR S103	22,157
S105	S86 or S104	29,369
S106	S82 and S105	10,484
S107	MH child+	771,178
S108	MH adolescence+	619,430
S109	(MH "Minors (Legal)")	830
S110	S107 or S108 or S109	1,137,616
S111	AB child* OR TI child*	595,068
S112	AB adolescent* OR TI adolescent*	166,158
S113	AB teenager# OR TI teenager#	6,920
S114	AB infant# OR TI infant#	121,374
S115	AB toddler# OR TI toddler#	7,800
S116	AB teen# OR TI teen#	10,010
S117	AB adolescence OR TI adolescence	26,829
S118	AB young OR TI young	180,346
S119	AB pediatric OR TI pediatric	173,897
S120	AB school OR TI school	163,130
S121	AB preschool OR TI preschool	13,816
S122	AB girl# OR TI girl#	51,787
S123	AB boy# OR TI boy#	45,681
S124	AB(("2" or "3" or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12" or "13" or "14" or "15" or "16" or "17") N1 "year# old")	13,040
S125	TI(("2" or "3" or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12" or "13" or "14" or "15" or "16" or "17") N1 "year# old")	986
S126	S111 OR S112 OR S113 OR S114 OR S115 OR S116 OR S117 OR S118 OR S119 OR S120 OR S121 OR S122 OR S123 OR S124 OR S125	1,074,208
S127	S110 or S126	1,548,743

S128	S106 and S127	5,343
S129	(TI (systematic* n3 review*)) or (AB (systematic* n3 review*)) or (TI (systematic* n3 bibliographic*)) or (AB (systematic* n3 bibliographic*)) or (TI (systematic* n3 literature)) or (AB (systematic* n3 literature)) or (TI (comprehensive* n3 literature)) or (AB (comprehensive* n3 literature)) or (TI (comprehensive* n3 bibliographic*)) or (AB (comprehensive* n3 bibliographic*)) or (TI (integrative n3 review)) or (AB (integrative n3 review)) or (JN "Cochrane Database of Systematic Reviews") or (TI (information n2 synthesis)) or (TI (data n2 synthesis)) or (AB (information n2 synthesis)) or (AB (data n2 synthesis)) or (TI (data n2 extract*)) or (AB (data n2 extract*)) or (TI (medline or pubmed or psyclit or cinahl or (psycinfo not "psycinfo database") or "web of science" or scopus or embase)) or (AB (medline or pubmed or psyclit or cinahl or (psycinfo not "psycinfo database") or "web of science" or scopus or embase)) or (MH "Systematic Review") or (MH "Meta Analysis") or (TI (meta-analy* or metaanaly*)) or (AB (meta-analy* or metaanaly*))	318,843
S130	TI((scoping or umbrella) N1 review#)	15,885
S131	S129 OR S130	325,256
S132	(S128 AND S131)	326
S133	S132 AND PY 2020-2025	159
S134	S133 - Exclude MEDLINE records	155
S135	S134 - Peer Reviewed	154

Comments

6.5 ERIC Education Resources Information Center

Search date: 24/11/2024

Due to the user interface of <https://eric.ed.gov/>, the search strategy was splitted in multiple smaller parts. The Peer review checkbox was always checked.

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND (descriptor:"Intellectual Disability" OR descriptor:"Down Syndrome" OR title:"idiocy" OR abstract:"idiocy" OR title:"mental retardation" OR abstract:"mental retardation" OR title:"intellectual disability" OR abstract:"intellectual disability" OR title:"intellectual disabilities" OR abstract:"(intellectual disabilities" OR title:"mental deficiency" OR abstract:"mental deficiency" OR title:"mental deficiencies" OR abstract:"mental deficiencies" OR title:"intellectual disorder" OR abstract:"intellectual disorder" OR title:"intellectual disorders" OR abstract:"intellectual disorders" OR title:"down syndrome" OR abstract:"down syndrome" OR title:"trisomy 21" OR abstract:"trisomy 21"



OR title:"frax syndrome" OR abstract:"frax syndrome" OR title:"fra x syndrome" OR abstract:"fra x syndrome" OR title:"fragile x syndrome" OR abstract:"fragile x syndrome" OR title:"williams syndrome" OR abstract:"williams syndrome" OR title:"beuren syndrome" OR abstract:"beuren syndrome" OR title:"supravalvar aortic stenosis" OR abstract:"supravalvar aortic stenosis" OR title:"prader willi syndrome" OR abstract:"prader willi syndrome" OR title:"royer syndrome" OR abstract:"royer syndrome") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND (descriptor:"Communication Disorders" OR descriptor:"Language Impairments" OR descriptor:"Speech Impairments" OR title:"communication disorder" OR title:"communication disorders" OR title:"communication disability" OR title:"communication disabilities" OR abstract:"communication disorder" OR abstract:"communication disorders" OR abstract:"communication disability" OR abstract:"communication disabilities") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND title:"communicative" AND (title:"disorder" OR title:"disorders" OR title:"dysfunction" OR title:"dysfunctions") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND abstract:"communicative" AND (abstract:"disorder" OR abstract:"disorders" OR abstract:"dysfunction" OR abstract:"dysfunctions") pubyearmin:2020

Ilc

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND (abstract:"language disorder" OR abstract:"language disorders") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND title:"language" AND (title:"disorder" OR title:"disorders") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND title:"language" AND (title:"delay" OR title:"delays" OR title:"delayed") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR



descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND (abstract:"language delay" OR abstract:"language delays") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND (title:"language" AND (title:"deficit" OR title:"deficits")) pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND (abstract:"language deficit" OR abstract:"language deficits") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND (title:"language" AND (title:"impairment" OR title:"impairments" OR title:"impaired")) pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND (abstract:"language impairment" OR abstract:"language impairments" OR abstract:"impaired language") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND title:"language" AND (title:"problem" OR title:"problems") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND (abstract:"child" OR abstract:"children" or abstract:"adolescent" or abstract:"adolescents" or abstract:"teenager" or abstract:"teenagers") AND (abstract:"language problem" OR abstract:"language problems")) pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND

title:"language" AND (title:"disability" OR title:"disabilities") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR



descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND (abstract:"language disability" OR abstract:"language disabilities") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND

(title:"Anomia" OR abstract:"Anomia" OR title:"dysnomia" OR abstract:"dysnomia" OR (title:"fluent" AND title:"aphasia") OR (title:"fluent" AND title:"dysphasia") OR (abstract:"fluent" AND abstract:"aphasia") OR (abstract:"fluent" AND abstract:"dysphasia") OR ((title:"jargon" OR title:"posterior" OR title:"psychosensory" OR title:"receptive" OR title:"sensory" OR title:"wernicke") AND (title:"aphasia" OR title:"dysphasia"))) OR ((title:"jargon" OR title:"posterior" OR title:"psychosensory" OR title:"receptive") AND (title:"aphasia" OR title:"dysphasia")) OR ((abstract:"jargon" OR abstract:"posterior" OR abstract:"psychosensory" OR abstract:"receptive" OR abstract:"sensory" OR abstract:"wernicke") AND (abstract:"aphasia" OR abstract:"dysphasia")) OR ((abstract:"jargon" OR abstract:"posterior" OR abstract:"psychosensory" OR abstract:"receptive") AND (abstract:"aphasia" OR abstract:"dysphasia")) OR (title:"Alexia" AND title:"Pure")) pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND (title:"speech disorder" OR abstract:"speech disorder" OR title:"speech disorders" OR abstract:"speech disorders" OR title:"aphasia" OR abstract:"aphasia" OR title:"articulation disorder" OR abstract:"articulation disorder" OR title:"articulation disorders" OR abstract:"articulation disorders" OR title:"dysarthria" OR abstract:"dysarthria" OR title:"echolalia" OR abstract:"echolalia" OR title:"mutism" OR abstract:"mutism" OR title:"learning disability" OR abstract:"learning disability" OR title:"learning disabilities" OR abstract:"learning disabilities" OR title:"specific learning disorder" OR abstract:"specific learning disorder" OR title:"specific learning disorders" OR abstract:"specific learning disorders" OR title:"acalculia" OR abstract:"acalculia" OR title:"acalculias" OR abstract:"acalculias" OR title:"dyscalculia" OR abstract:"dyscalculia" OR title:"dyscalculias" OR abstract:"dyscalculias" OR title:"alexia" OR abstract:"alexia" OR title:"alexias" OR abstract:"alexias" OR title:"word blindness" OR abstract:"word blindness" title:"reading disorder" OR abstract:"reading disorder" OR title:"reading disorders" OR abstract:"reading disorders" OR title:"reading disability" OR abstract:"reading disability" OR title:"reading disabilities" OR abstract:"reading disabilities" OR title:"dysphasia" OR abstract:"dysphasia") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication") AND

(descriptor:"Autism Spectrum Disorders" OR title:"autism" OR abstract:"autism" OR title:"autistic" OR abstract:"autistic" OR title:"asperger" OR abstract:"asperger" OR title:"asperger's" OR abstract:"asperger's" OR title:"kanner syndrome" OR abstract:"kanner syndrome" OR title:"kanner's syndrome" OR abstract:"kanner's syndrome" OR title:"asd" OR abstract:"asd") pubyearmin:2020 pubyearmax:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR



descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication")
AND (

descriptor:"Attention Deficit Hyperactivity Disorder"

title:"addh" OR abstract:"addh" OR title:"adhd" OR abstract:"adhd" OR title:"attention deficit disorder"
OR title:"attention deficit disorders" OR abstract:"attention deficit disorder" OR abstract:"attention
deficit disorders" OR

title:"attention deficit hyperactivity disorder" OR title:"attention deficit hyperactivity disorders" OR
abstract:"attention deficit hyperactivity disorder" OR abstract:"attention deficit hyperactivity disorders"
OR

title:"attention-deficit" OR abstract:"attention-deficit" OR title:"hyperkinetic syndrome" OR
abstract:"hyperkinetic syndrome" OR title:"minimal brain dysfunction" OR abstract:"minimal brain
dysfunction") pubyearmin:2020

(systematic review OR systematic reviews OR meta-analysis or meta-analyses OR umbrella review
or umbrella reviews or scoping review or scoping reviews) AND (descriptor:"Speech Therapy" OR
descriptor:"Speech Improvement" OR descriptor:"Augmentative and Alternative Communication")
AND (title:'borderline intellectual functioning' or abstract:'borderline intellectual functioning')
pubyearmin:2020



7 SELECTION OF SYSTEMATIC REVIEWS

7.1 Database search

A systematic literature search was conducted by a medical information specialist (Nicolas Fairon, KCE) to identify relevant studies. The following electronic databases were searched: MEDLINE (via Ovid), Cochrane Library, Embase (via Ovid), Cinahl, and ERIC (Education Resources Information Center), covering the publication period from 01/01/2020 to 2024 included. The search date took into account the most recent search dates of the guidelines that were included based on the AGREE evaluation (see Supplement 5.1). Notably, the most recent search date in the included guidelines for Specific learning disorder (LD) was 2016, and not 2019. However, since in the compulsory Belgian health insurance a reimbursement for speech therapy in children with LD is already foreseen without restrictions in function of IQ, and given the limited time for research conduction (see Scientific report 2.1), an additional search for SR for LD from 2017 to 2019 was considered not to be a priority.

The searches were performed between November 7 and November 25, 2024, with no restrictions on language.

The search strategies were developed using a combination of controlled vocabulary (e.g., MeSH terms, Emtree terms) and free-text keywords, tailored to the indexing systems of each database. Boolean operators, truncation, and proximity operators were applied as appropriate to ensure a comprehensive retrieval of relevant studies. This process adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, ensuring transparency and reproducibility in the identification of literature. The detailed search strategies are provided in Supplement 6. References were imported into Endnote for management and deduplication, resulting in a total of 752 citations, reduced to 544 after duplicate removal (Figure 2).

Based on title and abstract screening according to the PICO criteria, 486 references were excluded and 58 references were retained. Meta-analysis of a large number (>100 cases) of experimental single case design studies was accepted.

7.2 Full text evaluation

In a second step, the remaining papers were screened by reading the full-text according to the PICO criteria. Studies dealing with language disorders or speech sound disorders were only included if a specific subgrouping by intellectual ability levels or by other comorbidities was presented. The list of included papers and excluded papers with reason for exclusion can be found in the Tables below (Table 28, Table 29). A total of 15 publications was included for quality appraisal.

Figure 2 – Flow chart of study selection

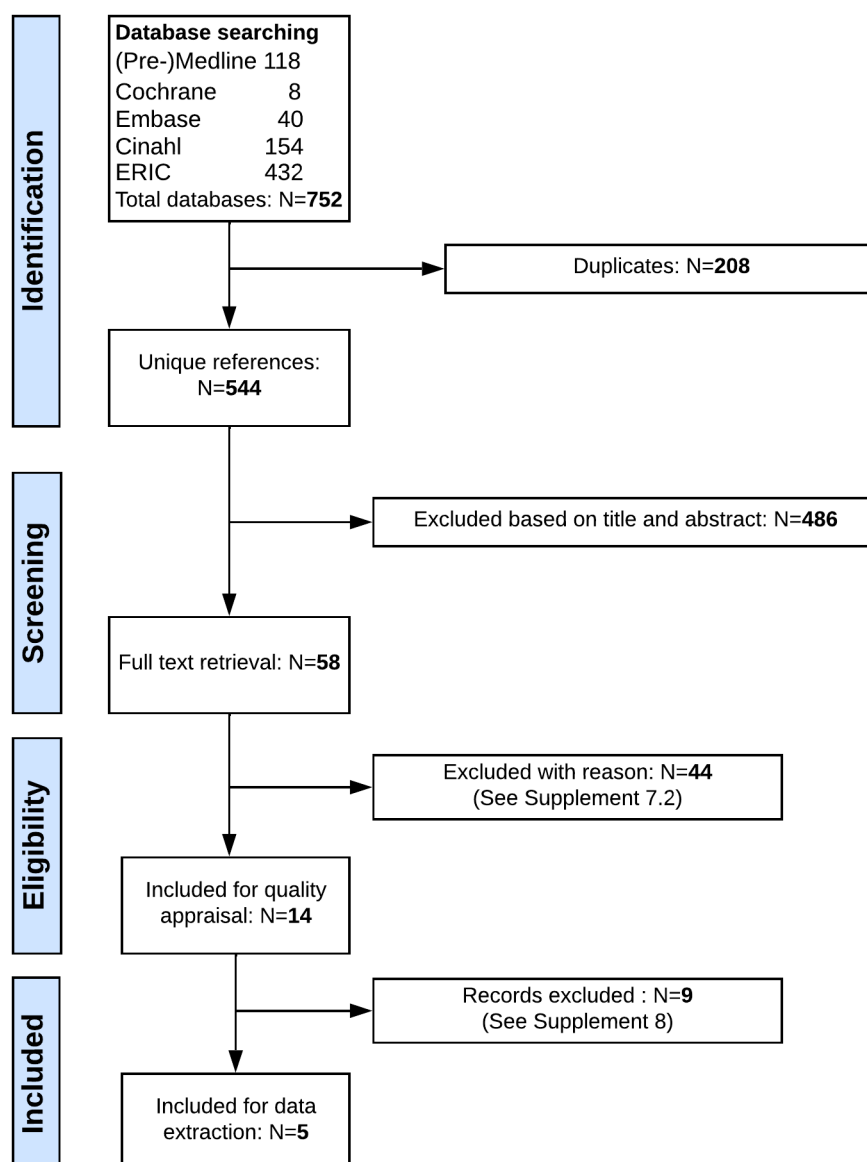




Table 28– Systematic reviews: overview of included papers based on full-text evaluation

Author	Year	Title
Carruthers, S. et al.	2020	Beyond intervention into daily life: A systematic review of generalisation following social communication interventions for young children with autism. ¹²³
Donolato, E. et al.	2023	Oral language interventions can improve language outcomes in children with neurodevelopmental disorders: A systematic review and meta-analysis. ¹²⁴
Ganz, J. B. et al.	2023	Participant characteristics predicting communication outcomes in AAC implementation for individuals with ASD and IDD: a systematic review and meta-analysis. ¹²⁵
Osman, H. A. et al.	2023	A Systematic Review of the Efficacy of Early Initiation of Speech Therapy and Its Positive Impact on Autism Spectrum Disorder. ¹²⁶
Ouyang, Y. et al.	2024	Comparison of the efficacy of parent-mediated NDBIs on developmental skills in children with ASD and fidelity in parents: a systematic review and network meta-analysis. ¹²⁷
Pak, N. S. et al.	2023	Long-Term Effects of Early Communication Interventions: A Systematic Review and Meta-Analysis. ¹²⁸
Peterson, A. K. et al.	2020	A Systematic Review of Academic Discourse Interventions for School-Aged Children With Language-Related Learning Disabilities. ¹²⁹
Sandbank, M. et al..	2023	Autism intervention meta-analysis of early childhood studies (Project AIM): updated systematic review and secondary analysis. ¹³⁰
Seager, E. et al.	2022	A systematic review of speech, language and communication interventions for children with Down syndrome from 0 to 6 years. ¹³¹
Smith, E. et al.	2020	Children with Down syndrome can benefit from language interventions; Results from a systematic review and meta-analysis. ¹³²
McDaniel, J et al.	2022	Effectiveness of Responsivity Intervention Strategies on Prelinguistic and Language Outcomes for Children with Autism Spectrum Disorder: A Systematic Review and Meta-Analysis of Group and Single Case Studies. ¹³³
Simeone, P.J. et al.	2023	Miniature Linguistic Systems for Individuals With Autism Spectrum Disorder: A Systematic Review and Meta-Analysis. ¹³⁴
Yorke, M. Y. et al.	2021	Foundational Reading Interventions Adapted for Individuals Who Require Augmentative and Alternative Communication (AAC): A Systematic Review of the Research. ¹³⁵
Ganz, J.B. et al.	2023	Considering Instructional Contexts in AAC Interventions for People with ASD and/or IDD Experiencing Complex Communicative Needs: A Single-Case Design Meta-Analysis. ¹³⁶

Table 29 – Systematic reviews: overview of excluded papers based on full-text evaluation

Author	Year	Title	Reason for exclusion
<i>Dada, S. et al..</i>	2021	The effects of augmentative and alternative communication interventions on the receptive language skills of children with developmental disabilities: A scoping review. ¹³⁷	study design
<i>de Groot, A. et al.</i>	2024	Evidence-based decision-making in the treatment of speech, language, and communication disorders in Down syndrome; a scoping review. ¹³⁸	study design
<i>Ellison, K. S. et al.</i>	2021	Telehealth and Autism Prior to and in the Age of COVID-19: A Systematic and Critical Review of the Last Decade. ¹³⁹	study design
<i>Fan, S. et al.</i>	2022	Effect of language therapy alone for developmental language disorder in children: A meta-analysis. ¹⁴⁰	population
<i>Frizelle, P. et al.</i>	2021	The Influence of Quantitative Intervention Dosage on Oral Language Outcomes for Children With Developmental Language Disorder: A Systematic Review and Narrative Synthesis. ¹⁴¹	population
<i>Fuller, E. A. et al.</i>	2020	The Effects of Early Intervention on Social Communication Outcomes for Children with Autism Spectrum Disorder: A Meta-analysis. ¹⁴²	study design
<i>Korkalainen, J. et al. .</i>	2023	Motor Speech Interventions for Children With Cerebral Palsy: A Systematic Review. ¹⁴³	study design
<i>Kunnari, S. et al.</i>	2024	Intervention studies with group design targeting expressive phonology for children with developmental speech and language disorder: A systematic review and meta-analysis. ¹⁴⁴	population
<i>Pacia, C. et al.</i>	2022	A Systematic Review of Family-Mediated Social Communication Interventions for Young Children with Autism. ¹⁴⁵	study design, intervention-comparator
<i>Pak, N. S. et al. .</i>	2023	Comparing Interventions With Speech-Generating Devices and Other Augmentative and Alternative Communication Modes: A Meta-Analysis. ¹²⁸	intervention-comparator
<i>Papadopoulos, A. et al.</i>	2024	The Effectiveness of Lee Silverman Voice Treatment (LSVT LOUD) on Children's Speech and Voice: A Scoping Review. ¹⁴⁶	study design
<i>Pope, L. et al.</i>	2024	The Effect of Naturalistic Developmental Behavioral Interventions and Aided AAC on the Language Development of Children on the Autism Spectrum with Minimal Speech: A Systematic Review and Meta-analysis. ¹⁴⁷	study designs, intervention (comparator)



Author	Year	Title	Reason for exclusion
<i>Sandbank, M. et al. .</i>	2020	Intervention Effects on Language in Children With Autism: A Project AIM Meta-Analysis. ¹⁴⁸	timeframe, updated by more recent publication by same research group
<i>Segura-Pujol, H. et al.</i>	2021	Treatment intensity for developmental language disorder: A systematic review. ¹⁴⁹	population
<i>Senter, R. et al. .</i>	2023	Speech-Language Pathology Interventions for Children With Executive Function Deficits: A Systematic Literature Review. ¹⁵⁰	study design
<i>Tarvainen, S. et al.</i>	2021	Oral language comprehension interventions in school-age children and adolescents with developmental language disorder: A systematic scoping review. ¹⁵¹	population
<i>Adam, E. et al.</i>	2022	Using sign languages with autistic children: A literature review. ¹⁵²	study design
<i>Baixauli, I. et al.</i>	2023	A review of dialogic reading intervention in children with developmental language disorder. ¹⁵³	population
<i>Logan, K. et al. .</i>	2022	A systematic search and appraisal of intervention characteristics used to develop varied communication functions in children with autism who use aided AAC. ¹⁵⁴	study design
<i>Rinaldi, S. et al.</i>	2021	Efficacy of the treatment of developmental language disorder: A systematic review. ¹⁵⁵	population
<i>Donolato, E. et al.</i>	2024	Correction to "Oral language interventions can improve language outcomes in children with neurodevelopmental disorders: A systematic review and meta-analysis". ¹⁵⁶	outcome
<i>Biggs, EE. et al.</i>	2023	Review of the Evidence Base for Peer Network Interventions for Students With Intellectual and Developmental Disabilities. ¹⁵⁷	study design, comparator (intervention)
<i>Blackburn, C et al.</i>	2023	A systematic review of interventions for echolalia in autistic children. ¹⁵⁸	study design, countries
<i>Cabbage, K L. et al.</i>	2024	Literacy-Based Intervention for Children With Speech Sound Disorders: A Review of the Literature. ¹⁵⁹	population
<i>Curiel, E. S. L. et al.</i>	2020	Systematic Review of Matrix Training for Individuals With Autism Spectrum Disorder. ¹⁶⁰	study design
<i>Favot, K. et al.</i>	2021	The Effects of Oral Narrative Intervention on the Narratives of Children with Language Disorder: a Systematic Literature Review. ¹⁶¹	study design

Author	Year	Title	Reason for exclusion
<i>Holbrook, S. et al.</i>	2020	Speech Prosody Interventions for Persons With Autism Spectrum Disorders: A Systematic Review. ¹⁶²	study design
<i>Jensen de Lopez, K M. et al.</i>	2022	Efficacy, model of delivery, intensity and targets of pragmatic interventions for children with developmental language disorder: A systematic review. ¹⁶³	population
<i>Lane, J D. et al.</i>	2023	Systematic Review of Naturalistic Language Interventions in Schools: Child- and Adult-Level Outcomes for Verbal Communication. ¹⁶⁴	population, study design
<i>Maseri, M. et al.</i>	2021	The Implementation of Application Software to Improve Verbal Communication in Children with Autism Spectrum Disorder: A Review. ¹⁶⁵	outcome
<i>Masud, A. B. et al.</i>	2023	Functional Communication Training in Inclusive School Settings for Students With Intellectual and Developmental Disabilities: A Literature Review. ¹⁶⁶	study design
<i>Mohapatra, B et al.</i>	2020	The contribution of cognition to the rehabilitation of language and communication deficits. ¹⁶⁷	population
<i>Becky, C et al.</i>	2022	Augmentative and Alternative Communication for Children with Intellectual and Developmental Disability: A Mega-Review of the Literature. ¹⁶⁸	study design
<i>Cabbage, K L. et al.</i>	2020	Treatment Approach Considerations for Children with Speech Sound Disorders in School-Based Settings. ¹⁶⁹	study design/publication type
<i>Syriopoulou-Delli, C.K. et al.</i>	2022	Effectiveness of Different Types of Augmentative and Alternative Communication (AAC) in Improving Communication Skills and in Enhancing the Vocabulary of Children with ASD: A Review.. ¹⁷⁰	study design
<i>Klefbeck, K</i>	2023	Educational Approaches to Improve Communication Skills of Learners with Autism Spectrum Disorder and Comorbid Intellectual Disability: An Integrative Systematic Review. ¹⁷¹	study design
<i>Langarika-Rocafort, A et al.</i>	2021	A Systematic Review of Research on Augmentative and Alternative Communication Interventions for Children Aged 6-10 in the Last Decade. ¹⁷²	population, study design
<i>Lund, S.K. et al.</i>	2020	Comparing Augmentative and Alternative Communication Interventions on Requesting Skills for Children with Complex Communication Needs. ¹⁷³	study design
<i>Neal, C et al.</i>	2022	Narrative Interventions for Children Who Use Augmentative and Alternative Communication: A Call and Plan for Future Research. ¹⁷⁴	study design/publication type



Author	Year	Title	Reason for exclusion
<i>Muharib, R. et al.</i>	2024	Effects of Interventions Involving Tablet-Based Speech-Generating Devices for Individuals with ASD: A Meta-Analysis. ¹⁷⁵	study design
<i>Sigafoos, J. et al.</i>	2023	Updated Systematic-Narrative Review on Communication Intervention in Rett Syndrome: 2010-2022. ¹⁷⁶	study design, comparator (intervention)
<i>Tambyraja, S.R. et al.</i>	2020	Embedding Evidence-Based Practices to Address Literacy in School-Based Speech-Language Therapy. ¹⁷⁷	population, study design/publication type
<i>Tapp, M.C. et al.</i>	2021	Systematic Review of Mand Training Parameters for Students with Intellectual and Developmental Disabilities in School Settings. ¹⁷⁸	study design
<i>Galuschka, K. et al.</i>	2020	Effectiveness of Spelling Interventions for Learners with Dyslexia: A Meta-Analysis and Systematic Review. ¹⁷⁹	population

8 QUALITY APPRAISAL OF SYSTEMATIC REVIEWS

Quality appraisal was performed using the AMSTAR 2 Checklist (<https://amstar.ca/>), with interpretation of weakness and critical domains adapted to this field of study and research questions. First, the 7 critical domains (domain 2-4-7-9-11-13-15) as described by Shea et al (2017) ¹⁸⁰ were evaluated for the 15 included full text publications. However, in this field there is only a scarcity of literature of the highest quality without any major flaw. Therefore, the second domain (a priori study design) is not considered critical, and the seventh domain (list of excluded studies and rationale) is not considered critical provided a flowchart with global summary of full text exclusion reasons is presented. Taking these considerations into account, studies presenting critical flaws were excluded. For the remaining 6 studies, the AMSTAR 2 appraisal was completed for the 9 non-critical domains. (Table 30, Table 31) These 6 publications were retained for data extraction.



Table 30– Systematic reviews: Quality appraisal (AMSTAR 2): excluded studies

AMSTAR 2 Items [‡]	Carruthers 2020 ¹²³	Osman 2024 ¹²⁶	Ouyang 2024 ¹²⁷	Pak 2023 ¹²⁸	Petersen 2020 ¹²⁹	Smith 2020 ¹³²	Simeone 2023 ¹³⁴	Yorke 2021 ¹³⁵	Ganz 2023b ¹³⁶
1. PICO									
2. A priori study design*	N	N	N	Y	N	N	Y	Y	Y
3. Inclusion study designs									
4. Comprehensive literature search*	PY	PY	PY	PY	N	PY	PY	PY	PY
5. Duplicate study selection									
6. Duplicate data extraction									
7. List of excluded studies and rationale*	Y	N	N	Y	N	N	N	N	N
8. Characteristics of included studies provided									
9. Assessment of RoB*	N	Y	Y	Y	Y	Y	Y	Y	N
10. Sources of funding reported									
11. Appropriate methods to combine findings*	-	-	N	N	N	N	N	N	Y
12. Assessment of impact RoB in included studies on results MA									
13. RoB assessment used in interpretation of results and in conclusions*	N	N	N	N	Y	Y	Y	Y	N
14. Explanation for and discussion of any observed heterogeneity									
15. Adequate investigation of publication bias and its impact on the results*	-	-	N	Y	N	N	N	N	Y
16. Potential sources of conflict of interest reported									

RoB: risk of bias. Y: Yes. PY: Partial Yes. N : No. “-“: No meta-analysis. *critical domains of the AMSTAR II checklist. ‡Only critical domains were evaluated.

Table 31 – Systematic reviews: Quality appraisal (AMSTAR 2): studies included for data extraction

AMSTAR 2 Items*	Donolato 2023 ¹²⁴	Sandbank 2023 ¹³⁰	Ganz 2023a ¹²⁵	Seager 2022 ¹³¹	McDaniel 2022 ¹³³
PICO	Y	Y	Y	Y	Y
A priori study design*	Y	N	Y	N	N
Inclusion study designs	Y	Y	N	N	N
Comprehensive literature search*	PY	PY	PY	PY	PY
Duplicate study selection	Y	Y	N	Y	Y
Duplicate data extraction	Y	Y	N	N	Y
List of excluded studies and rationale*	N	N	N	N	PY
Characteristics of included studies provided	Y	PY	PY	Y	Y
Assessment of RoB*	Y	Y	Y	Y	Y
Sources of funding reported	N	N	N	N	Y
Appropriate methods to combine findings*	Y	Y	Y	-	Y
Assessment of impact RoB in included studies on results MA	N	Y	Y	-	Y
RoB assessment used in interpretation of results and in conclusions*	Y	Y	Y	Y	Y
Explanation for and discussion of any observed heterogeneity	Y	Y	Y	Y	Y
Adequate investigation of publication bias and its impact on the results*	Y	Y	Y	-	Y
Potential sources of conflict of interest reported	Y	Y	Y	Y	Y
Quality Rating	Moderate	Moderate	Moderate to low	Moderate to low	Moderate

RoB: risk of bias. Y: Yes. PY: Partial Yes. N : No. "-": No meta-analysis. *critical domains of the AMSTAR II checklist.*All domains were evaluated



■ REFERENCES

1. Wickstrom J, Dell'Armo K, Salzman E, Hooker JL, Delehanty A, Bishop S, et al. Systematic Review: Recommendations for Rehabilitation in ASD and ID From Clinical Practice Guidelines. *Arch Rehabil Res Clin Transl*. 2021;3(3):100140.
2. World Health Organization (WHO). Package of interventions for rehabilitation. Module 5. Neurodevelopmental disorders. Geneva: 2023. Available from: <https://www.who.int/publications/i/item/9789240071193>
3. Institut National d'Excellence en Santé et en Services Sociaux (INESSS). [State of knowledge: challenging behaviours - best practices in prevention, assessment and Intervention for people with an intellectual disability, physical disability or autism spectrum disorder]. 2021. Available from: <https://www.inesss.qc.ca/publications/repertoire-des-publications/publication/troubles-graves-du-comportement-meilleures-pratiques-en-prevention-en-evaluation-et-en-intervention-aupres-des-personnes-qui-presentent-une-deficience-intellectuelle-une-deficience-physique-ou-un-trouble-du-spectre-de-lautisme.html>
4. Burdeus-Olavarrieta M, Nevado J, van Weering-Scholten S, Parker S, Swillen A. Consensus recommendations on communication, language and speech in Phelan-McDermid syndrome. *Eur J Med Genet*. 2023;66(5):104745.
5. van Eeghen AM, Stemkens D, Fernández-Fructuoso JR, Maruani A, Hadzsiev K, van Balkom IDC. Consensus recommendations on organization of care for individuals with Phelan-McDermid syndrome. *Eur J Med Genet*. 2023;66(7):104747.
6. Zollino M, Zweier C, Van Balkom ID, Sweetser DA, Alaimo J, Bijlsma EK, et al. Diagnosis and management in Pitt-Hopkins syndrome: First international consensus statement. *Clin Genet*. 2019;95(4):462-78.
7. Fu C, Armstrong D, Marsh E, Lieberman D, Motil K, Witt R, et al. Consensus guidelines on managing Rett syndrome across the lifespan. *BMJ Paediatr Open*. 2020;4(1):e000717.
8. Townend GS, Bartolotta TE, Urbanowicz A, Wandin H, Curfs LMG. Development of consensus-based guidelines for managing communication of individuals with Rett syndrome. *Augment Altern Commun*. 2020;36(2):71-81.
9. Klein Haneveld MJ, Hieltjes IJ, Langendam MW, Cornel MC, Gaasterland CMW, van Eeghen AM. Improving care for rare genetic neurodevelopmental disorders: A systematic review and critical appraisal of clinical practice guidelines using AGREE II. *Genet Med*. 2024;26(4):101071.
10. Northrup H, Aronow ME, Bebin EM, Bissler J, Darling TN, de Vries PJ, et al. Updated International Tuberous Sclerosis Complex Diagnostic Criteria and Surveillance and Management Recommendations. *Pediatr Neurol*. 2021;123:50-66.
11. de Vries P, Leclezio L, Wilmshurst J, Fieggen G, Gottlich E, Jacklin L, et al. Diagnosis, monitoring and treatment of tuberous sclerosis complex: A South African consensus response to international guidelines. *South African Medical Journal*. 2017;107:368.
12. Amin S, Kingswood JC, Bolton PF, Elmslie F, Gale DP, Harland C, et al. The UK guidelines for management and surveillance of Tuberous Sclerosis Complex. *Qjm*. 2019;112(3):171-82.
13. Auvin S, Bissler JJ, Cottin V, Fujimoto A, Hofbauer GFL, Jansen AC, et al. A step-wise approach for establishing a multidisciplinary team for the management of tuberous sclerosis complex: a Delphi consensus report. *Orphanet J Rare Dis*. 2019;14(1):91.
14. Solot CB, Sell D, Mayne A, Baylis AL, Persson C, Jackson O, et al. Speech-Language Disorders in 22q11.2 Deletion Syndrome: Best Practices for Diagnosis and Management. *Am J Speech Lang Pathol*. 2019;28(3):984-99.
15. Habel A, Herriot R, Kumararatne D, Allgrove J, Baker K, Baxendale H, et al. Towards a safety net for management of 22q11.2 deletion syndrome: guidelines for our times. *Eur J Pediatr*. 2014;173(6):757-65.

16. Duis J, Nespeca M, Summers J, Bird L, Bindels-de Heus K, Valstar MJ, et al. A multidisciplinary approach and consensus statement to establish standards of care for Angelman syndrome. *Mol Genet Genomic Med*. 2022;10(3):e1843.
17. Wirrell EC, Hood V, Knupp KG, Meskis MA, Nabbout R, Scheffer IE, et al. International consensus on diagnosis and management of Dravet syndrome. *Epilepsia*. 2022;63(7):1761-77.
18. Wirrell EC, Laux L, Donner E, Jette N, Knupp K, Meskis MA, et al. Optimizing the Diagnosis and Management of Dravet Syndrome: Recommendations From a North American Consensus Panel. *Pediatric Neurology*. 2017;68:18-34.e3.
19. Andrade DM, Berg AT, Hood V, Knupp KG, Koh S, Laux L, et al. Dravet syndrome: A quick transition guide for the adult neurologist. *Epilepsy Res*. 2021;177:106743.
20. Cardenal-Muñoz E, Auvin S, Villanueva V, Cross JH, Zuberi SM, Lagae L, et al. Guidance on Dravet syndrome from infant to adult care: Road map for treatment planning in Europe. *Epilepsia Open*. 2022;7(1):11-26.
21. Garzon MC, Epstein LG, Heyer GL, Frommelt PC, Orbach DB, Baylis AL, et al. PHACE Syndrome: Consensus-Derived Diagnosis and Care Recommendations. *J Pediatr*. 2016;178:24-33.e2.
22. Wakeling EL, Brioude F, Lokulo-Sodipe O, O'Connell SM, Salem J, Blik J, et al. Diagnosis and management of Silver-Russell syndrome: first international consensus statement. *Nat Rev Endocrinol*. 2017;13(2):105-24.
23. Wilson JL, Gregory A, Kurian MA, Bushlin I, Mochel F, Emrick L, et al. Consensus clinical management guideline for beta-propeller protein-associated neurodegeneration. *Dev Med Child Neurol*. 2021;63(12):1402-9.
24. Pierpont ME, Magoulas PL, Adi S, Kavamura MI, Neri G, Noonan J, et al. Cardio-facio-cutaneous syndrome: clinical features, diagnosis, and management guidelines. *Pediatrics*. 2014;134(4):e1149-62.
25. Amin S, Monaghan M, Aledo-Serrano A, Bahi-Buisson N, Chin RF, Clarke AJ, et al. International Consensus Recommendations for the Assessment and Management of Individuals With CDKL5 Deficiency Disorder. *Front Neurol*. 2022;13:874695.
26. Trider CL, Arra-Robar A, van Ravenswaaij-Arts C, Blake K. Developing a CHARGE syndrome checklist: Health supervision across the lifespan (from head to toe). *Am J Med Genet A*. 2017;173(3):684-91.
27. Kline AD, Moss JF, Selicorni A, Bisgaard AM, Deardorff MA, Gillett PM, et al. Diagnosis and management of Cornelia de Lange syndrome: first international consensus statement. *Nat Rev Genet*. 2018;19(10):649-66.
28. Amer YS, Alenezi S, Bashiri FA, Alawami AH, Alhazmi AS, Aladamawi SA, et al. AGREEing on Clinical Practice Guidelines for Autism Spectrum Disorders in Children: A Systematic Review and Quality Assessment. *Children (Basel)*. 2022;9(7).
29. Autism CRC. A National Guideline for the assessment and diagnosis of Autism Spectrum Disorders in Australia. Brisbane: 2018.
30. Whaikaha – Ministry of Disabled People and Ministry of Education. Aotearoa New Zealand Autism Guideline: He Waka Huia Takiwātanga Rau: Third edition. Wellington: 2022.
31. National Institute for Health and Clinical Excellence (NICE). Autism spectrum disorder in under 19s: recognition, referral and diagnosis (CG128). 2017.
32. Scottish Intercollegiate Guidelines Network (SIGN). Assessment, diagnosis and interventions for autism spectrum disorders (SIGN145). Edinburgh: 2016.
33. Chen H, Ge S, Yao P, Yang T, Cao X, Sun D. Evaluation of the Quality of Management Guidelines for Children and Adolescents With Autism Spectrum Disorder. *Psychol Rep*. 2024;332941241269510.



34. Subramanyam AA, Mukherjee A, Dave M, Chavda K. Clinical Practice Guidelines for Autism Spectrum Disorders. *Indian J Psychiatry*. 2019;61(Suppl 2):254-69.
35. Howes OD, Rogdaki M, Findon JL, Wichers RH, Charman T, King BH, et al. Autism spectrum disorder: Consensus guidelines on assessment, treatment and research from the British Association for Psychopharmacology. *J Psychopharmacol*. 2018;32(1):3-29.
36. Fuentes J, Hervás A, Howlin P. ESCAP practice guidance for autism: a summary of evidence-based recommendations for diagnosis and treatment. *Eur Child Adolesc Psychiatry*. 2021;30(6):961-84.
37. Dalwai S, Ahmed S, Udani V, Mundkur N, Kamath SS, MK CN. Consensus Statement of the Indian Academy of Pediatrics on Evaluation and Management of Autism Spectrum Disorder. *Indian Pediatr*. 2017;54(5):385-93.
38. Alenezi S, Alyahya AS, AlKhalifah SM, Bakhsh HR, Alismail EH, Aldhalaan H, et al. Saudi Expert Consensus-Based Autism Spectrum Disorder Statement: From Screening to Management. *Children*; 2022.
39. Zachor DA, Curatolo P. Recommendations for early diagnosis and intervention in autism spectrum disorders: an Italian-Israeli consensus conference. *Eur J Paediatr Neurol*. 2014;18(2):107-18.
40. Veereman G, Holdt Henningsen K, Eyssen M, Benahmed N, Christiaens W, Bouchez M-H, et al. Management of autism in children and young people: a good clinical practice guideline. Good Clinical Practice (GCP). Brussels: Belgian Health Care Knowledge Centre (KCE); 2014. KCE Reports (233)
41. Feldman ME, Charach A, Bélanger SA. ADHD in children and youth: Part 2-Treatment. *Paediatr Child Health*. 2018;23(7):462-72.
42. Clark B, Bélanger SA. ADHD in children and youth: Part 3-Assessment and treatment with comorbid ASD, ID, or prematurity. *Paediatr Child Health*. 2018;23(7):485-90.
43. Andrade BF, Courtney D, Duda S, Aitken M, Craig SG, Szatmari P, et al. A Systematic Review and Evaluation of Clinical Practice Guidelines for Children and Youth with Disruptive Behavior: Rigor of Development and Recommendations for Use. *Clin Child Fam Psychol Rev*. 2019;22(4):527-48.
44. Amer YS, Al-Joudi HF, Varnham JL, Bashiri FA, Hamad MH, Al Salehi SM, et al. Appraisal of clinical practice guidelines for the management of attention deficit hyperactivity disorder (ADHD) using the AGREE II Instrument: A systematic review. *PLoS One*. 2019;14(7):e0219239.
45. National Institute for Health and Clinical Excellence (NICE). Attention deficit hyperactivity disorder: diagnosis and management (NG87). 2018.
46. ADHD Guideline Development Group. Australian evidence-based clinical practice guideline for Attention Deficit Hyperactivity. Melbourne: Australasian ADHD Professionals Association.; 2022.
47. CADDRA - Canadian ADHD Resource Alliance. Canadian ADHD Practice Guidelines, 4.1 Edition. Toronto: 2020.
48. Neumann K, Kauschke C, Fox-Boyer A, Lüke C, Sallat S, Kiese-Himmel C. Clinical practice guideline: Interventions for Developmental Language Delay and Disorders. *Dtsch Arztebl Int*. 2024;121(5):155-62.
49. Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (AWMF). S3-Leitlinie Therapie von Sprachentwicklungsstörungen. 2022. Available from: <https://register.awmf.org/de/leitlinien/detail/049-015>
50. Galuschka K, Schulte-Körne G. The Diagnosis and Treatment of Reading and/or Spelling Disorders in Children and Adolescents. *Dtsch Arztebl Int*. 2016;113(16):279-86.

51. Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (AWMF). S3-Leitlinie Diagnostik und Behandlung von Kindern und Jugendlichen mit Lese- und / oder Rechtschreibstörung. 2015.
52. Tokatly Latzer I, Bertoldi M, Blau N, DiBacco ML, Elsea SH, García-Cazorla À, et al. Consensus guidelines for the diagnosis and management of succinic semialdehyde dehydrogenase deficiency. *Mol Genet Metab.* 2024;142(1):108363.
53. Nederlandse Vereniging voor Kindergeneeskunde. Medische begeleiding van kinderen met downsyndroom. 2021. Available from: [https://richtlijnendatabase.nl/richtlijn/medische begeleiding van kinderen met downsyndroom/startpagina - medische begeleiding van kinderen met downsyndroom.html](https://richtlijnendatabase.nl/richtlijn/medische_begeleiding_van_kinderen_met_downsyndroom/startpagina_-_medische_begeleiding_van_kinderen_met_downsyndroom.html)
54. Institut National d'Excellence en Santé et en Services Sociaux (INESSS). L'autonomie des jeunes âgés de 6 à 21 ans qui présentent une déficience intellectuelle - Guide de pratique. 2019. Available from: <https://www.inesss.qc.ca/publications/repertoire-des-publications/publication/lautonomie-des-jeunes-ages-de-6-a-21-ans-qui-presentent-une-deficience-intellectuelle.html>
55. National Institute for Health and Clinical Excellence (NICE). Disabled children and young people up to 25 with severe complex needs: integrated service delivery and organisation across health, social care and education (NG213). 2022.
56. Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (AWMF). S2k-Leitlinie Down-Syndrom im Kindes- und Jugendalter. 2016.
57. Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (AWMF). S2k-Leitlinie Intelligenzminderung. 2021.
58. Sullivan WF, Diepstra H, Heng J, Ally S, Bradley E, Casson I, et al. Primary care of adults with intellectual and developmental disabilities: 2018 Canadian consensus guidelines. *Can Fam Physician.* 2018;64(4):254-79.
59. Anaby DR, Campbell WN, Missiuna C, Shaw SR, Bennett S, Khan S, et al. Recommended practices to organize and deliver school-based services for children with disabilities: A scoping review. *Child: Care, Health and Development.* 2019;45(1):15-27.
60. Starr JM. Older adults with intellectual disability: the National Institute for Health and Care Excellence (NICE) guidelines. *Age Ageing.* 2019;48(1):14-5.
61. Tsou AY, Bulova P, Capone G, Chicoine B, Gelaro B, Harville TO, et al. Medical Care of Adults With Down Syndrome: A Clinical Guideline. *Jama.* 2020;324(15):1543-56.
62. Bunt CW, Bunt SK. Medical Care for Adults With Down Syndrome: Guidelines From the Global Down Syndrome Foundation. *Am Fam Physician.* 2022;105(4):436-7.
63. van Gameren-Oosterom HBM, Weijerman ME, van Wieringen H, de Winter JP, van Wermeskerken AM. Clinical practice - latest insights in optimizing the care of children with Down syndrome. *Eur J Pediatr.* 2023;182(5):2027-39.
64. National Institute for Health and Care Research (NIHR). Access to primary and community health-care services for people 16 years and over with intellectual disabilities: a mapping and targeted systematic review. 2020. Available from: <https://njl-admin.nihr.ac.uk/document/download/2031641>
65. Institut National d'Excellence en Santé et en Services Sociaux (INESSS). Troubles graves du comportement : meilleures pratiques en prévention, en évaluation et en intervention auprès des personnes qui présentent une déficience intellectuelle, une déficience physique ou un trouble du spectre de l'autisme. 2021. Available from: <https://www.inesss.qc.ca/publications/repertoire-des-publications/publication/troubles-graves-du-comportement-meilleures-pratiques-en-prevention-en-evaluation-et-en-intervention-aupres-des-personnes-qui-presentent-une-deficience-intellectuelle-une-deficience-physique-ou-un-trouble-du-spectre-de-lautisme.html>
66. Institut National d'Excellence en Santé et en Services Sociaux (INESSS). Trajectoires de services menant à l'évaluation diagnostique des troubles neurodéveloppementaux chez les



- enfants de la naissance à sept ans. 2021. Available from: <https://www.inesss.qc.ca/publications/repertoire-des-publications/publication/trajec-toires-de-services-menant-a-levaluation-diagnostique-des-troubles-neurodeveloppementaux-chez-les-enfants-de-la-naissance-a-sept-ans.html>
67. National Institute for Health and Clinical Excellence (NICE). Challenging behaviour and learning disabilities: prevention and interventions for people with learning disabilities whose behaviour challenges (NG11). 2015.
 68. National Institute for Health and Clinical Excellence (NICE). Mental health problems in people with learning disabilities: prevention, assessment and management (NG54). 2016.
 69. National Institute for Health and Clinical Excellence (NICE). Learning disabilities and behaviour that challenges: service design and delivery (NG93). 2018.
 70. National Institute for Health and Clinical Excellence (NICE). Care and support of people growing older with learning disabilities (NG96). 2018.
 71. Centre intégré universitaire de santé et de services sociaux de la Capitale-Nation. HTA Report: Identification des pratiques et des interventions psychosociales favorisant l'adaptation et la réadaptation des personnes adultes présentant le syndrome de Prader-Willi. 2019. Available from: https://www.ciuss-capitalenationale.gouv.qc.ca/sites/d8/files/docs/MissionUniversitaire/ETMISSS/ETMI-Classique_Prader_Willi.pdf
 72. Haute Autorité de Santé (HAS). Troubles du neurodéveloppement - Repérage et orientation des enfants à risque. 2020. Available from: https://www.has-sante.fr/jcms/p_3161334/fr/troubles-du-neurodeveloppement-reperage-et-orientation-des-enfants-a-risque
 73. Zwaigenbaum L, Bauman ML, Choueiri R, Kasari C, Carter A, Granpeesheh D, et al. Early Intervention for Children With Autism Spectrum Disorder Under 3 Years of Age: Recommendations for Practice and Research. *Pediatrics*. 2015;136 Suppl 1(Suppl 1):S60-81.
 74. Ameis SH, Kassee C, Corbett-Dick P, Cole L, Dadhwal S, Lai MC, et al. Systematic review and guide to management of core and psychiatric symptoms in youth with autism. *Acta Psychiatr Scand*. 2018;138(5):379-400.
 75. Finnish Medical Society. Autismikirjon häiriö [Autism spectrum disorder] [Web page]. 2024 [cited 2 September 2024]. Available from: <https://www.kaypahoito.fi/hoi50131>
 76. The Danish Health Authority. National klinisk retningslinje for behandling af autismespektrumforstyrrelser hos børn og unge. 2021.
 77. Autism CRC. National Guideline for supporting the learning, participation, and wellbeing of autistic children and their families in Australia. Brisbane: 2022.
 78. National Institute for Health and Clinical Excellence (NICE). Autism spectrum disorder in under 19s: support and management (CG170). 2021.
 79. Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (AWMF). S3-Leitlinie Autismus-Spektrum-Störungen im Kindes-, Jugend- und Erwachsenenalter. Teil 2: Therapie. 2021.
 80. Basque Office for Health Technology Assessment (OSTEBA). Trastornos del Espectro Autista: evidencia científica sobre la detección, el diagnóstico y el tratamiento. 2022.
 81. Crowe BH, Salt AT. Autism: the management and support of children and young people on the autism spectrum (NICE Clinical Guideline 170). *Arch Dis Child Educ Pract Ed*. 2015;100(1):20-3.
 82. McGuire K, Fung LK, Hagopian L, Vasa RA, Mahajan R, Bernal P, et al. Irritability and Problem Behavior in Autism Spectrum Disorder: A Practice Pathway for Pediatric Primary Care. *Pediatrics*. 2016;137 Suppl 2:S136-48.
 83. Chaplin S. BAP consensus guidelines on autism spectrum disorder. *Prescriber*. 2018;29(5):13-7.

84. Sanchack KE. Autism Spectrum Disorder: Updated Guidelines from the American Academy of Pediatrics. *American Family Physician*. 2020;102(10):629-31.
85. Hyman SL, Levy, Susan E., Myers, Scott M. Executive Summary: Identification, Evaluation, and Management of Children With Autism Spectrum Disorder. *Pediatrics*. 2020;145(1):1-5.
86. National Institute for Health and Clinical Excellence (NICE). Autism spectrum disorder in adults: diagnosis and management (CG142). 2021.
87. Yoo HJ. Understanding Evidence-Based Practice for Autism Spectrum Disorder: Korean Practice Clinical Guidelines. *Soa Chongsonyon Chongsin Uihak*. 2024;35(1):1.
88. National Institute for Korean Medicine Development. Korean Medicine Clinical Practice Guideline for Autism Spectrum Disorder. 2021. Available from: https://nikom.or.kr/nckm/module/practiceGuide/view.do?guide_idx=156&progress=E&mds_code=&disease_code=&gubun=&code_gubun=mds&agency=&continent=&sortField=&sortType=&language=kor&country=%2C&continent_str=&search_type=all&search_text=&viewPage=5&guide_idx=&progress_jq=&title=&disease_code_etc1=&agency_jq=&country=&cert_yn=&release_date=&menu_idx=14
89. National Institute for Health and Clinical Excellence (NICE). Autism spectrum disorder in adults: diagnosis and management (CG142). 2021.
90. Institut National d'Excellence en Santé et en Services Sociaux (INESSS). Évaluation des interventions de réadaptation pour les enfants âgés de 0 à 12 ans présentant un trouble du spectre de l'autisme. 2021. Available from: <https://www.inesss.qc.ca/publications/repertoire-des-publications/publication/evaluation-des-interventions-de-readaptation-pour-les-enfants-ages-de-0-12-ans-presentant-un-trouble-du-spectre-de-lautisme.html>
91. National Institute for Health and Care Research (NIHR). Interventions based on early intensive applied behaviour analysis for autistic children: a systematic review and cost-effectiveness analysis. 2020. Available from: <https://njl-admin.nihr.ac.uk/document/download/2033093>
92. Wolraich ML, Hagan JF, Jr., Allan C, Chan E, Davison D, Earls M, et al. Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. *Pediatrics*. 2019;144(4).
93. Barbaresi WJ, Campbell L, Diekroger EA, Froehlich TE, Liu YH, O'Malley E, et al. Society for Developmental and Behavioral Pediatrics Clinical Practice Guideline for the Assessment and Treatment of Children and Adolescents with Complex Attention-Deficit/Hyperactivity Disorder. *J Dev Behav Pediatr*. 2020;41 Suppl 2S:S35-s57.
94. Tourjman V, Louis-Nascan G, Ahmed G, DuBow A, Côté H, Daly N, et al. Psychosocial Interventions for Attention Deficit/Hyperactivity Disorder: A Systematic Review and Meta-Analysis by the CADDRA Guidelines Work GROUP. *Brain Sci*. 2022;12(8).
95. May T, Birch E, Chaves K, Cranswick N, Culnane E, Delaney J, et al. The Australian evidence-based clinical practice guideline for attention deficit hyperactivity disorder. *Aust N Z J Psychiatry*. 2023;57(8):1101-16.
96. Nederlands Huisartsen Genootschap (NHG). NHG-Standaard ADHD [Web page].2014 [cited 2 September 2024]. Available from: <https://richtlijnen.nhg.org/standaarden/adhd-bij-kinderen>
97. The Danish Health Authority. Udredning og behandling af ADHD hos børn og unge. 2021. Available from: <https://www.sst.dk/da/udgivelser/2021/NKR-ADHD-hos-boern-og-unge>
98. Ministerio de Sanidad. Guía de Práctica Clínica sobre las Intervenciones Terapéuticas en el Trastorno por Déficit de Atención con Hiperactividad (TDAH). 2017. Available from: https://portal.guiasalud.es/wp-content/uploads/2018/12/GPC_574_TDAH_IACS_compl.pdf
99. Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (AWMF). S3-Leitlinie ADHS bei Kindern, Jugendlichen und Erwachsenen. 2018.
100. Finnish Medical Society. ADHD (aktiivisuuden ja tarkkaavuuden häiriö) [Web page].2019 [cited 2 September 2024]. Available from: <https://www.kaypahoito.fi/hoi50061>



101. Institut National d'Excellence en Santé et en Services Sociaux (INESSS). Optimal service trajectory for children, adolescents and young adults with attention deficit disorder with or without hyperactivity (ADHD) or related problems. 2018. Available from: <https://www.inesss.qc.ca/en/publications/publications/publication/optimal-service-trajectory-for-children-adolescents-and-young-adults-with-attention-deficit-disorder-with-or-without-hyperactivity-adhd-or-related-problems.html>
102. Nederlandse Vereniging voor Psychiatrie. ADHD bij kinderen. 2018. Available from: https://richtlijndatabase.nl/richtlijn/adhd_bij_kinderen
103. Bolea-Alamañac B, Nutt DJ, Adamou M, Asherson P, Bazire S, Coghill D, et al. Evidence-based guidelines for the pharmacological management of attention deficit hyperactivity disorder: update on recommendations from the British Association for Psychopharmacology. J Psychopharmacol. 2014;28(3):179-203.
104. van Avendonk MJ, Hassink-Franke LJ, Stijntjes F, Wiersma T, Burgers JS. [Summary of the Dutch College of General Practitioners' (NHG) practice guideline 'ADHD in children']. Ned Tijdschr Geneesk. 2015;159:A8395.
105. Bélanger SA. Canadian Paediatric Society clinical practice recommendations for children and adolescents with attention-deficit hyperactivity disorder. Paediatr Child Health. 2018;23(7):431-2.
106. Wolraich ML, Hagan JF, Allan C, et al; Subcommittee on Children and Adolescents with Attention-Deficit/Hyperactive Disorder. Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. Pediatrics. 2019;144(4):e20192528. Pediatrics. 2020;145(3).
107. Dalrymple RA, McKenna Maxwell L, Russell S, Duthie J. NICE guideline review: Attention deficit hyperactivity disorder: diagnosis and management (NG87). Arch Dis Child Educ Pract Ed. 2020;105(5):289-93.
108. Asherson P, Leaver L, Adamou M, Arif M, Askey G, Butler M, et al. Mainstreaming adult ADHD into primary care in the UK: guidance, practice, and best practice recommendations. BMC Psychiatry. 2022;22(1):640.
109. Coghill D, Banaschewski T, Cortese S, Asherson P, Brandeis D, Buitelaar J, et al. The management of ADHD in children and adolescents: bringing evidence to the clinic: perspective from the European ADHD Guidelines Group (EAGG). Eur Child Adolesc Psychiatry. 2023;32(8):1337-61.
110. Haute Autorité de Santé (HAS). Conduite à tenir en médecine de premier recours devant un enfant ou un adolescent susceptible d'avoir un trouble déficit de l'attention avec ou sans hyperactivité. 2014. Available from: https://www.has-sante.fr/jcms/c_1362146/fr/conduite-a-tenir-en-medecine-de-premier-recours-devant-un-enfant-ou-un-adolescent-susceptible-d-avoir-un-trouble-deficit-de-l-attention-avec-ou-sans-hyperactivite
111. Institut National d'Excellence en Santé et en Services Sociaux (INESSS). Portraits décrivant les interventions pharmacologiques et non pharmacologiques entourant le trouble du déficit de l'attention. 2017. Available from: <https://www.inesss.qc.ca/publications/repertoire-des-publications/publication/portraits-decrivant-les-interventions-pharmacologiques-et-non-pharmacologiques-entourant-le-trouble-du-deficit-de-lattention-avec-ou-sans-hyperactivite-tdah-chez-les-quebecois-de-25-ans-et-moins.html>
112. National Institute for Health and Care Research (NIHR). Non-pharmacological interventions for attention-deficit/hyperactivity disorder (ADHD) delivered in school settings: systematic reviews of quantitative and qualitative research. 2015. Available from: <https://njl-admin.nihr.ac.uk/document/download/2003034>
113. Finnish Medical Society. Developmental Language Disorder (DLD). [Web page]. 2019 [cited 2 September 2024]. Available from: <https://www.kaypahoito.fi/en/ccs00076>
114. Institut National d'Excellence en Santé et en Services Sociaux (INESSS). Organisation du continuum et de la dispensation des services aux enfants âgés de 2 à 9 ans présentant un trouble développemental du langage. 2017. Available from:

- <https://www.inesss.qc.ca/publications/repertoire-des-publications/publication/organisation-du-continuum-et-de-la-dispensation-des-services-aux-enfants-ages-de-2-a-9-ans-presentant-un-trouble-developpemental-du-langage-trouble-primaire-du-langage.html>
115. ISAAC Position Statement on Facilitated Communication. Augmentative and Alternative Communication. 2014;30(4):357-8.
 116. Kiese-Himmel C. [Therapy of Language Disorders in Childhood: A Guideline is long overdue]. Laryngorhinootologie. 2022;101(1):45-50.
 117. L. P. Guidelines for developmental dysphasia – version 2022. Cesk Slov Neurol N. 2022;85(6):515-20.
 118. Baixauli I, Senent-Capuz N. [Early indicators of childhood apraxia of speech in late talkers: general guidelines to intervention]. Medicina (B Aires). 2024;84 Suppl 1:65-71.
 119. National Institute for Health and Care Research (NIHR). Therapy interventions for children with neurodisabilities: a qualitative scoping study. 2018. Available from: <https://njl-admin.nihr.ac.uk/document/download/2011980>
 120. Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (AWMF). S3-Leitlinie Redeflussstörungen, Pathogenese, Diagnostik und Behandlung. 2016.
 121. Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (AWMF). S3-Leitlinie Diagnostik und Behandlung bei der Lese- und/oder Rechtschreibstörung. 2015.
 122. Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften (AWMF). S3-Leitlinie Diagnostik und Behandlung der Rechenstörung. 2018.
 123. Carruthers S, Pickles A, Slonims V, Howlin P, Charman T. Beyond intervention into daily life: A systematic review of generalisation following social communication interventions for young children with autism . Autism Research. 2020;1(3):506-22.
 124. Donolato E, Toffalini E, Rogde K, Nordahl-Hansen A, Lervag A, Norbury C, et al. Oral language interventions can improve language outcomes in children with neurodevelopmental disorders: A systematic review and meta-analysis. Campbell Syst Rev. 2023;19(4):e1368.
 125. Ganz JB, Pustejovsky JE, Reichle J, Vannest KJ, Foster M, Pierson LM, et al. Participant characteristics predicting communication outcomes in AAC implementation for individuals with ASD and IDD: a systematic review and meta-analysis. Augmentative and Alternative Communication. 2023;39(1):7-22.
 126. Osman HA, Haridi M, Gonzalez NA, Dayo SM, Fatima U, Sheikh A, et al. A Systematic Review of the Efficacy of Early Initiation of Speech Therapy and Its Positive Impact on Autism Spectrum Disorder. Cureus. 2023;15(3):e35930.
 127. Ouyang Y, Feng J, Wang T, Xue Y, Mohamed ZA, Jia F. Comparison of the efficacy of parent-mediated NDBIs on developmental skills in children with ASD and fidelity in parents: a systematic review and network meta-analysis. BMC Pediatr. 2024;24(1):270.
 128. Pak NS, Chow JC, Dillehay KM, Kaiser AP. Long-Term Effects of Early Communication Interventions: A Systematic Review and Meta-Analysis. J Speech Lang Hear Res. 2023;66(8):2884-99.
 129. Peterson AK, Fox CB, Israelsen M. A Systematic Review of Academic Discourse Interventions for School-Aged Children With Language-Related Learning Disabilities. Lang Speech Hear Serv Sch. 2020;51(3):866-81.
 130. Sandbank M, Bottema-Beutel K, Crowley LaPoint S, Feldman JI, Barrett DJ, Caldwell N, et al. Autism intervention meta-analysis of early childhood studies (Project AIM): updated systematic review and secondary analysis. BMJ. 2023;383:e076733.
 131. Seager E, Sampson S, Sin J, Pagnamenta E, Stojanovik V. A systematic review of speech, language and communication interventions for children with Down syndrome from 0 to 6 years. Int J Lang Commun Disord. 2022;57:441-63.



132. Smith E, Hokstad S, Naess KB. Children with Down syndrome can benefit from language interventions; Results from a systematic review and meta-analysis. *J Commun Disord.* 2020;85:105992.
133. McDaniel J, Brady NC, Warren SF. Effectiveness of Responsivity Intervention Strategies on Prelinguistic and Language Outcomes for Children with Autism Spectrum Disorder: A Systematic Review and Meta-Analysis of Group and Single Case Studies. *J Autism Dev Disord.* 2022;52:4783-816.
134. Simeone PJ, Schlosser RW, Frampton SE, Shane HC, Wendt O. Miniature Linguistic Systems for Individuals With Autism Spectrum Disorder: A Systematic Review and Meta-Analysis. *J Speech Lang Hear Res.* 2023;66:1802-25.
135. April MY, Jessica Gosnell C, Nina P, Emily S, Christina G, Carley S. Foundational Reading Interventions Adapted for Individuals Who Require Augmentative and Alternative Communication (AAC): A Systematic Review of the Research. *J Dev Phys Disabil.* 2021;33(4):537-82.
136. Jay BG, James EP, Joe R, Kimberly JV, Margaret F, April NH, et al. Considering Instructional Contexts in AAC Interventions for People with ASD and/or IDD Experiencing Complex Communicative Needs: A Single-Case Design Meta-Analysis. *Rev J Autism Dev Disord.* 2023;10(4):615-29.
137. Dada S, Flores C, Bastable K, Schlosser RW. The effects of augmentative and alternative communication interventions on the receptive language skills of children with developmental disabilities: A scoping review. *Int J Speech Lang Pathol.* 2021;23(3):247-57.
138. de Groot A, van Hout R, Eijvoogel N, de Vries E, van Well G. Evidence-based decision-making in the treatment of speech, language, and communication disorders in Down syndrome; a scoping review. *J Intellect Disabil.* 2024;17446295241283659.
139. Ellison KS, Guidry J, Picou P, Adenuga P, Davis TE, 3rd. Telehealth and Autism Prior to and in the Age of COVID-19: A Systematic and Critical Review of the Last Decade. *Clin Child Fam Psychol Rev.* 2021 Sep;24(3):599-630.
140. Fan S, Ma B, Song X, Wang Y. Effect of language therapy alone for developmental language disorder in children: A meta-analysis. *Front Psychol.* 2022;13:922866.
141. Frizelle P, Tolonen AK, Tulip J, Murphy CA, Saldana D, McKean C. The Influence of Quantitative Intervention Dosage on Oral Language Outcomes for Children With Developmental Language Disorder: A Systematic Review and Narrative Synthesis. *Lang Speech Hear Serv Sch.* 2021;52(2):738-54.
142. Fuller EA, Kaiser AP. The Effects of Early Intervention on Social Communication Outcomes for Children with Autism Spectrum Disorder: A Meta-analysis. *J Autism Dev Disord.* 2020;50(5):1683-700.
143. Korkalainen J, McCabe P, Smidt A, Morgan C. Motor Speech Interventions for Children With Cerebral Palsy: A Systematic Review. *J Speech Lang Hear Res.* 2023;66(1):110-25.
144. Kunnari S, Chaves SS, Chacon-Moscoso S, Alves DC, Ozbic M, Petinou K, et al. Intervention studies with group design targeting expressive phonology for children with developmental speech and language disorder: A systematic review and meta-analysis. *Int J Lang Commun Disord.* 2024;59(6):2686-2705.
145. Pacia C, Holloway J, Gunning C, Lee H. A Systematic Review of Family-Mediated Social Communication Interventions for Young Children with Autism. *Rev J Autism Dev Disord.* 2022;9(2):208-34.
146. Papadopoulos A, Voniati L, Ziavra N, Tafiadis D. The Effectiveness of Lee Silverman Voice Treatment (LSVT LOUD) on Children's Speech and Voice: A Scoping Review. *Brain Sc.* 2024;14(9).
147. Pope L, Light J, Laubscher E. The Effect of Naturalistic Developmental Behavioral Interventions and Aided AAC on the Language Development of Children on the Autism

- Spectrum with Minimal Speech: A Systematic Review and Meta-analysis. *J Autism Dev Disord*. 2024; doi: 10.1007/s10803-024-06382-7..
148. Sandbank M, Bottema-Beutel K, Crowley S, Cassidy M, Feldman JI, Canihuate M, et al. Intervention Effects on Language in Children With Autism: A Project AIM Meta-Analysis. *J Speech Lang Hear Res*. 2020;63(5):1537-60.
 149. Segura-Pujol H, Briones-Rojas C. Treatment intensity for developmental language disorder: A systematic review. *Int J Speech Lang Pathol*. 2021;23(5):465-74.
 150. Senter R, Chow JC, Willis EC. Speech-Language Pathology Interventions for Children With Executive Function Deficits: A Systematic Literature Review. *Lang Speech Hearing Serv Sch*. 2023;54(1):336-54.
 151. Tarvainen S, Launonen K, Stolt S. Oral language comprehension interventions in school-age children and adolescents with developmental language disorder: A systematic scoping review. *Autism Dev Lang Impair*. 2021;6:23969415211010423.
 152. Adam E, Cruveiller V. Using sign languages with autistic children: A literature review. *Neuropsychiatr. Enfance Adolesc*. 2022;70(1):8-19.
 153. Baixauli I, Berenguer C, Roselló B, Miranda A. A review of dialogic reading intervention in children with developmental language disorder. *Medicina*. 2023;83:58-63.
 154. Logan K, Iacono T, Trembath D. A systematic search and appraisal of intervention characteristics used to develop varied communication functions in children with autism who use aided AAC. *Res. Autism Spectr. Disord*. 2022;90.
 155. Rinaldi S, Caselli MC, Cofelice V, D'Amico S, De Cagno AG, Corte GD, et al. Efficacy of the treatment of developmental language disorder: A systematic review. *Brain Sci*. 2021;11(3).
 156. Donolato E, Toffalini E, Rogde K, Nordahl-Hansen A, Lervåg A, Norbury C, et al. Correction to "Oral language interventions can improve language outcomes in children with neurodevelopmental disorders: A systematic review and meta-analysis". *Campbell Syst Rev*. 2024;20(20):e1391.
 157. Biggs EE, Robison SE. Review of the Evidence Base for Peer Network Interventions for Students With Intellectual and Developmental Disabilities. *Remedial Spec Educ*. 2023;44(1):43-59.
 158. Blackburn C, Tueres M, Sandanayake N, Roberts J, Sutherland R. A systematic review of interventions for echolalia in autistic children. *Int J Lang Commun Disord*. 2023;58(6):1977-93.
 159. Cabbage KL, Algeo-Nichols D. Literacy-Based Intervention for Children With Speech Sound Disorders: A Review of the Literature. *Perspectives of the ASHA Special Interest Groups*. 2024;9(4):960-83.
 160. Curiel ESL, Axe JB, Sainato DM, Goldstein H. Systematic Review of Matrix Training for Individuals With Autism Spectrum Disorder. *Focus Autism Other Dev Disabil*. 2020;35(1):55-64.
 161. Favot K, Carter M, Stephenson J. The Effects of Oral Narrative Intervention on the Narratives of Children with Language Disorder: a Systematic Literature Review. *J Dev Phys Disabil*. 2021;33(4):489-536.
 162. Holbrook S, Israelsen M. Speech Prosody Interventions for Persons With Autism Spectrum Disorders: A Systematic Review. *Am J Speech Lang Pathol*. 2020;29(4):2189-205.
 163. Jensen de López KM, Kraljević JK, Struntze ELB. Efficacy, model of delivery, intensity and targets of pragmatic interventions for children with developmental language disorder: A systematic review. *Int J Lang Commun Disord*. 2022;57(4):764-81.
 164. Lane JD, Graley D, Shepley C, Lynch KM. Systematic Review of Naturalistic Language Interventions in Schools: Child- and Adult-Level Outcomes for Verbal Communication. *Remedial Spec Educ*. 2023;44(4):319-31.



165. Maseri M, Mamat M, Yew HT, Chekima A. The Implementation of Application Software to Improve Verbal Communication in Children with Autism Spectrum Disorder: A Review. *Children (Basel)*. 2021;8(11):1-19.
166. Masud AB, Walker VL, Carpenter ME, Anderson A. Functional Communication Training in Inclusive School Settings for Students With Intellectual and Developmental Disabilities: A Literature Review. *J Positive Behav Interventions*. 2023;25(4):239-52.
167. Mohapatra B. The contribution of cognition to the rehabilitation of language and communication deficits. *Int J Ther Rehabil*. 2020;27(11):1-16.
168. Becky C, Wendy M, Qi W, Christine D, Jay G. Augmentative and Alternative Communication for Children with Intellectual and Developmental Disability: A Mega-Review of the Literature. *J Develop Phys Dis*. 2022;34(1):1-42.
169. Cabbage KL, DeVeney SL. Treatment Approach Considerations for Children with Speech Sound Disorders in School-Based Settings. *Top Lang Disorders*. 2020;40(4):312-25.
170. Christine KS-D, Gkiolnta E. Effectiveness of Different Types of Augmentative and Alternative Communication (AAC) in Improving Communication Skills and in Enhancing the Vocabulary of Children with ASD: A Review. *Rev J Autism Develop Dis*. 2022;9(4):493-506.
171. Klefbeck K. Educational Approaches to Improve Communication Skills of Learners with Autism Spectrum Disorder and Comorbid Intellectual Disability: An Integrative Systematic Review. *Scand J Educat Res*. 2023;67(1):51-68.
172. Langarika-Rocafort A, Idoiaga Mondragon N, Roman Etxebarrieta G. A Systematic Review of Research on Augmentative and Alternative Communication Interventions for Children Aged 6-10 in the Last Decade. *Lang Speech Hear Serv Sch*. 2021;52(3):899-916.
173. Lund SK, Keis E, SanFelippo K. Comparing Augmentative and Alternative Communication Interventions on Requesting Skills for Children with Complex Communication Needs. *EBP Briefs*. 2020; 14: 3.
174. Neal C, Brady N. Narrative Interventions for Children Who Use Augmentative and Alternative Communication: A Call and Plan for Future Research. *Perspectives of the ASHA Special Interest Groups*. 2022;7(6):1619-29.
175. Muharib R, Walker V, Dunn W. Effects of Interventions Involving Tablet-Based Speech-Generating Devices for Individuals with ASD: A Meta-Analysis. *J Autism Dev Dis*. 2024;54(12):4496-514.
176. Sigafoos J, Roche L, O'Reilly MF, Lancioni GE, Marschik PB. Updated Systematic-Narrative Review on Communication Intervention in Rett Syndrome: 2010-2022. *Augment Altern Commun*. 2023;39(4):241-55.
177. Tambyraja SR, Schmitt MB. Embedding Evidence-Based Practices to Address Literacy in School-Based Speech-Language Therapy. *Top Lang Disorders*. 2020;40(4):341-56.
178. Tapp MC, Pennington RC, Clausen AM, Carpenter ME. Systematic Review of Mand Training Parameters for Students with Intellectual and Developmental Disabilities in School Settings. *Educat Training Autism Dev Disabil*. 2021;56(4):437-53.
179. Galuschka K, Görgen R, Kalmar J, Haberstroh S, Schmalz X, Schulte-Körne G. Effectiveness of spelling interventions for learners with dyslexia: a meta-analysis and systematic review. *Educat Psych*. 2020;55(1):1-20.
180. Shea BJ, Reeves BC, Wells G, Thuku M, Hamel C, Moran J, et al. AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *BMJ*. 2017;358:j4008.