

Physical Therapy Management of Children With Developmental Coordination Disorder: A 2026 Evidence-Based Clinical Practice Guideline From the American Physical Therapy Association Academy of Pediatric Physical Therapy

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The authors declare no conflict of interest. Dr Iverson is a Cognitive Orientation to daily Occupational Performance (CO-OP) instructor. This conflict was addressed by having volunteers external to the Guideline Development Group critically appraise the CO-OP literature, and she abstained from voting on recommendations based on CO-OP evidence. At the time this guideline was written, Dr Frazier was a PhD student in the Department of Kinesiology, University of Massachusetts, Amherst, Massachusetts.

The Academy of Pediatric Physical Therapy of the American Physical Therapy Association (APTA Pediatrics) welcomes comments on this guideline sent to dcdguidelines@gmail.com. This guideline may be reproduced for educational and implementation purposes.

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Background: Developmental coordination disorder (DCD) affects 5% of school-age children and is characterized by impaired motor coordination and planning, not better explained by other conditions. Motor difficulties negatively impact school performance, activities of daily living, and participation with family and peers and may persist into adulthood. The 2020 DCD Clinical Practice Guideline (2020 DCD CPG) set standards for the physical therapy management of children with DCD. **Purpose:** This 2026 DCD CPG provides an updated reference for physical therapists, families, healthcare professionals, educators, and researchers to improve clinical outcomes and inform future research. **Results and Conclusions:** The 2026 DCD CPG addresses: physical therapy contributions to the diagnostic process, examination/evaluation including recommended outcome measures; collaborative plans of care including referral to other providers and dosage considerations; shared decision-making to establish meaningful goals and home programs; evidence-based interventions including task-oriented approaches and community physical activities; progress monitoring; implementation and compliance recommendations; and research recommendations. (Pediatr Phys Ther 2026;38:297–333)

Key words: clinical practice guidelines, developmental coordination disorder, pediatrics, physical therapy

WHAT THIS EVIDENCE ADDS

Current evidence: The physical therapy management of developmental coordination disorder (DCD) is informed by a clinical practice guideline (CPG) published in 2020 (2020 DCD CPG).¹ To support implementation of the 2020 DCD CPG,¹ 3 resources were developed by the American Physical Therapy Association Academy of Pediatrics (APTA Pediatrics).²

Gap in the evidence: The 2020 DCD CPG¹ does not include evidence published after 2020.

How does this study fill this evidence gap? This 2026 DCD CPG was updated using evidence on the physical therapy management of DCD through January 2025, the Guideline Development Group's clinical and professional experience, trends in practice changes, and external review both by the general public and content experts, including a teenager with DCD and parents/caregivers of children with DCD.

Implications of all the evidence: This 2026 DCD CPG informs the physical therapy management of DCD on: physical therapy contributions to the diagnostic process, examination and evaluation including recommended outcome measures, collaborative plans of care including referral to other providers and dosage considerations, shared decision-making to establish meaningful goals and home programs, evidence-based interventions including task-oriented approaches to intervention and community physical activities, progress monitoring, transition to annual or semi-annual reassessments, implementation and compliance recommendations, and research recommendations.

The 2026 Developmental Coordination Disorder Clinical Practice Guideline (2026 DCD CPG) is an update of the 2020 Developmental Coordination Disorder Clinical Practice Guideline (2020 DCD CPG).¹ It is intended as a reference document to guide physical therapists' (PT) practice; to recommend research on the physical therapy management of developmental coordination disorder (DCD); and to inform other healthcare professionals, families, and educators about physical therapy evidence-based practice for DCD.

Critical appraisal methods, assigning levels of evidence to the literature, and summarizing evidence to assign grades to the recommended action statements followed international methodologies of evidence-based practice.³ This document provides the levels of evidence and grades (Tables 1 and 2) used to derive

the 11 action statements (Table 3) that are organized into 3 major headings: (1) physical therapy examination, evaluation, and referral of children with coordination difficulties, at risk for DCD or diagnosed with DCD; (2) physical therapy intervention for children at risk for DCD or diagnosed with DCD; and (3) monitoring children at risk for DCD or diagnosed with DCD. The clinical practice guideline (CPG) action statements and supporting evidence are organized using the National Academy of Medicine criteria for trustworthy CPGs.⁴ Evidence tables on examination, task-oriented approaches to intervention, and evidence-informed community physical activities are available in Supplemental Digital Content 1, Tables S2–S5, available at: <https://links.lww.com/PPT/A690>. Research recommendations follow each action statement.

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LEVELS OF EVIDENCE AND RECOMMENDATION GRADE CRITERIA

Levels of evidence are based on a combination of a risk of bias assessment and the quality of the tests or measures used in a study (Table 1). Recommendation grades A–C reflect levels of evidence in BRIDGE-Wiz software,⁵ which generates recommendations consistent with the Institute of Medicine transparency recommendations.⁴ Theoretical/foundational recommendations (grade D), based on basic science or theory, and best practice recommendations (grade P), based on current PT practice or topics that are difficult to research, are not generated by BRIDGE-Wiz software (Table 2). Research recommendations identify the need for studies where evidence is conflicting or missing.

Status Definitions

These terms in Table 3 and Table S1 indicate changes from the 2020 DCD CPG recommendations.¹

- **New**—the action statement was not in the prior version.
- **Upgraded**—the action statement grade was increased with new evidence.
- **Downgraded**—the action statement grade was decreased.
- **Updated**—the action statement had new evidence.
- **Revised**—the action statement was reworded for clarity.
- **Reaffirmed**—the action statement was unchanged.
- **Retired**—the action statement was withdrawn.

TABLE 1:
Levels of Evidence

Level	Criteria
I	Evidence obtained from high-quality diagnostic studies, prognostic or prospective studies, cohort studies or randomized controlled trials, meta-analyses, or systematic reviews (critical appraisal score >50% of criteria)
II	Evidence obtained from lesser-quality diagnostic studies, prognostic or prospective studies, cohort studies or randomized controlled trials, meta-analyses, or systematic reviews (eg, weaker diagnostic criteria and reference standards, improper randomization, no blinding, <80% follow-up) (critical appraisal score <50% of criteria)
III	Case-controlled studies or retrospective studies
IV	Case studies and case series
V	Expert opinion

TABLE 2:
Recommendation Grades for Action Statements

Grade	Recommendation	Quality of Evidence
A	Strong	A preponderance of level I studies, but at least one level I study directly on the topic supports the recommendation.
B	Moderate	A preponderance of level II studies, but at least one level II study directly on the topic supports the recommendation.
C	Weak	A single level II study at <25% critical appraisal score or a preponderance of level III and IV studies, including consensus statements by content experts, support the recommendation.
D	Theoretical/ Foundational	A preponderance of evidence from animal or cadaver studies, from conceptual/theoretical models/principles, from basic science/bench research, or from published expert opinion in peer-reviewed journals, supports the recommendation.
P	Best Practice	Recommended practice based on current clinical practice norms; exceptional situations where validating studies have not or cannot be performed and there is a clear benefit, harm, or cost; and/or the clinical experience of the guideline development group.
R	Research	There is an absence of research on the topic, or higher-quality studies conducted on the topic disagree with respect to their conclusions. The recommendation is based on these conflicting or absent studies.

SUMMARY AND STATUS OF ACTION STATEMENTS FOR THE 2026 DEVELOPMENTAL COORDINATION DISORDER CLINICAL PRACTICE GUIDELINE

TABLE 3:

Summary of Action Statements for the 2026 Developmental Coordination Disorder (DCD) Clinical Practice Guideline

Action Statement	Status	Page
I. PHYSICAL THERAPY EXAMINATION, EVALUATION, AND REFERRAL OF CHILDREN WITH COORDINATION DIFFICULTIES, AT RISK FOR DCD, OR DIAGNOSED WITH DCD		
[A] Action Statement 1: DOCUMENT TO INFORM THE 4 DSM-5-TR CRITERIA. Physical therapists who are examining a child referred for coordination difficulties should document the following to inform the 4 DSM-5-TR criteria when the signs and symptoms are suggestive of DCD. The following are recommended to inform each criterion when referring for a formal diagnosis: • Criterion A (motor performance deficits): MABC-3; • Criterion B (participation and ADL limitations): Little DCDQ or DCDQ; • Criterion C (early onset): parent/caregiver's report of onset of coordination concerns; and • Criterion D (no exclusionary conditions): parent/caregiver's report of other medical conditions and the physical therapist's evaluation suggest that the motor performance deficits are not better explained by another condition affecting movement. (Evidence Quality: I; Recommendation Strength: Strong)	New	
[P] Action Statement 2: COMPLETE A HISTORY AND SYSTEMS REVIEW. Physical therapists should obtain and document a comprehensive history and systems review for a child referred for coordination difficulties, at risk for DCD, or diagnosed with DCD. (Evidence Quality: V; Recommendation Strength: Best Practice)	Revised, Updated	
[A] Action Statement 3: EXAMINE ACTIVITY LIMITATIONS AND PHYSICAL PERFORMANCE. When a child presents with coordination difficulties, physical therapists should perform a comprehensive physical therapy examination and evaluation targeting participation priorities, which should include any combination of: • Measures of participation; • Measures of activity; • Movement analysis/observation; • Ecological assessment, if warranted; and • Assessments of body functions and structures, if warranted. (Evidence Quality: I; Recommendation Strength: Strong)	Revised, Upgraded	
[B] Action Statement 4: USE SHARED DECISION-MAKING TO ESTABLISH MEANINGFUL GOALS. For children at risk for DCD or diagnosed with DCD, physical therapists should use shared decision-making with the child and family to establish measurable child-centered functional goals based on their participation priorities during the initial and subsequent examinations. (Evidence Quality: II; Recommendation Strength: Moderate)	New	
[P] Action Statement 5: ESTABLISH COLLABORATIVE PLAN OF CARE. Physical therapists should use shared decision-making with the child, family, and other relevant service providers to establish a collaborative plan of care that may include referral of children to their primary care provider when signs and symptoms are suggestive of DCD and the child has not been diagnosed, and if there are red flags or concerns for other medical conditions. (Evidence Quality: V; Recommendation Strength: Best Practice)	New	
II. PHYSICAL THERAPY INTERVENTION FOR CHILDREN AT RISK FOR DCD OR DIAGNOSED WITH DCD^a		
[A] Action Statement 6: USE TASK-ORIENTED APPROACHES TO INTERVENTION. For children at risk for DCD or diagnosed with DCD, physical therapists should use and document task-oriented approaches to intervention, guided by the child's goals and meaningful activities, with body functions and structures interventions used only when directly supporting the achievement of the child's goals. (Evidence Quality: I; Recommendation Strength: Strong)	Revised, Updated	
[A] Action Statement 7: RECOMMEND COMMUNITY PHYSICAL ACTIVITIES. After appraising the appropriateness for the child, physical therapists should recommend evidence-informed, community physical activities to complement task-oriented approaches to intervention for children at risk for DCD or diagnosed with DCD. (Evidence Quality: I; Recommendation Strength: Strong)	Revised, Updated	
[A] Action Statement 8: USE SMALL GROUP OR INDIVIDUAL SESSIONS. For children at risk for DCD or diagnosed with DCD, physical therapists should document and deliver interventions using individual (1:1) or small group (1:4–6) sessions. (Evidence Quality: I; Recommendation Strength: Strong)	Updated	
[B] Action Statement 9: PROVIDE APPROPRIATE INTERVENTION DOSAGE. For children at risk for DCD or diagnosed with DCD, physical therapists should design episodic intervention plans with high practice frequencies, using a combination of direct services and home, school, and community opportunities. (Evidence Quality: II; Recommendation Strength: Moderate)	Revised	
[B] Action Statement 10: USE SHARED DECISION-MAKING TO ESTABLISH A HOME PROGRAM. For children at risk for DCD or diagnosed with DCD, physical therapists should use shared decision-making with the child, parents/caregivers, and other relevant service providers to establish a meaningful home program that may include education, coaching, motor skill practice, or community physical activities to support attainment of the child's goals and participation in activities with family and peers. (Evidence Quality: II; Recommendation Strength: Moderate)	Revised, Updated	

TABLE 3: CONTINUED

Action Statement	Status	Page
III. MONITORING CHILDREN AT RISK FOR DCD OR DIAGNOSED WITH DCD		
[P] Action Statement 11: MEASURE PROGRESS TOWARDS GOALS. For children at risk for DCD or diagnosed with DCD, physical therapists should regularly measure progress toward their goals to determine with parents/caregivers whether physical therapy interventions should be modified, new goals should be established, or if the children should be transitioned from direct intervention to annual or semi-annual physical therapy reevaluations. (Evidence Quality: V ; Recommendation Strength: Best Practice)	New	

Abbreviations: ADL, activities of daily living; DCD, developmental coordination disorder; DCDQ, Developmental Coordination Disorder Questionnaire; DSM-5-TR, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision; Little DCDQ, Little Developmental Coordination Disorder Questionnaire; MABC-3, Movement Assessment Battery for Children, Third Edition.

^aThe action statements in the physical therapy intervention section are not in sequence, but should be considered together as a whole.

Background of the 2026 Developmental Coordination Disorder (DCD) Clinical Practice Guideline

DCD is a neurodevelopmental condition characterized by impaired motor acquisition and function that persistently interferes with activities of daily living (ADLs), academic productivity, vocational activities, leisure, and play.⁶ Although the provision of physical therapy examination and intervention for coordination difficulties is well documented, individuals with coordination difficulties are often referred with diagnoses of dyspraxia, sensory integration disorder, or hypermobility rather than DCD.⁷ The 2019 update of the European Academy of Childhood Disability (EACD) International Clinical Practice Recommendations provided general healthcare recommendations for the assessment and management of DCD.⁸ The 2020 DCD CPG was developed to delineate specific physical therapy recommendations.¹ The 2026 DCD CPG updates the evidence on the management of children with coordination difficulties, at risk for DCD, or diagnosed with DCD, specific to physical therapy services. Current conventions are to update CPGs every 5 years. To support implementation of the DCD CPGs, resources developed by the Academy of Pediatric Physical Therapy of the American Physical Therapy Association (APTA Pediatrics) for PTs, other medical professionals, and parents/caregivers of children at risk for DCD or diagnosed with DCD are available at <https://pediatricapta.org/clinical-practice-guidelines/>.

Purposes of the 2026 Developmental Coordination Disorder Clinical Practice Guideline

The 2026 DCD CPG update intends to assist PTs with examination, evaluation, and intervention of children with coordination difficulties, at risk for DCD, or diagnosed with DCD, to optimize activity and participation outcomes. It also informs the need for continued research related to the physical therapy management of DCD. This document replaces the 2020 DCD CPG.¹

The purposes of the 2026 DCD CPG are to:

- Appraise the current best evidence and recommend physical therapy examination and interventions for children (ages 3–18 years) with coordination difficulties, at risk for DCD, or diagnosed with DCD, to provide guidance and reduce variation in care.
- Inform healthcare professionals, families, and educators about physical therapy best practices for DCD.
- Identify areas for research to improve the evidence for physical therapy management of DCD.

Scope of the Guideline

The 2026 DCD CPG is based on the 2020 DCD CPG,¹ 2 systematic reviews (SR) on physical therapy examination and

evaluation⁹ and physical therapy interventions¹⁰ that summarize literature from January 2018 to June 2024, and critical appraisals of literature published from June 2024 to January 2025. Because there is more research literature on the physical therapy management of children at risk for DCD from ages 3 to 5 years, the age range of this guideline has been expanded to 3 to 18 years of age. It is assumed that PTs using this guideline have experience working with pediatric populations.

The CPG addresses the following:

- PTs' roles related to the diagnosis of DCD using the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR)⁶ criteria and the patient management process.
- Recommendations for screening, referral, examination, evaluation, intervention, and reassessment in settings where physical therapy services may be provided, within the International Classification of Functioning, Disability and Health categories of body functions and structures (BFS), activity, and participation.

This CPG does not specifically address:

- Handwriting examination and intervention, which is not a common area of expertise for PTs.
- Executive function or other psychological constructs that are better addressed by psychology.
- Management of children with DCD and coexisting neurodevelopmental or neurodivergent conditions. For children with DCD and coexisting conditions such as autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), or sensory differences, the PT will need to complete a thorough examination that addresses all areas of concern and coexisting conditions, then consider integration of evidence-based interventions for these coexisting conditions with those for DCD.

Changes in the 2026 Developmental Coordination Disorder Clinical Practice Guideline

The following changes to the 2020 DCD CPG were made in this 2026 DCD CPG:

- Four new action statements were added; 1 action statement was upgraded and revised; 4 action statements were revised and updated with new evidence; 1 action statement was updated with new evidence; 1 action statement was revised; and no action statements were retired.
- Action Statement 1 consolidated the DSM-5-TR criteria from the original 4 action statements, addressing the documentation necessary to inform these 4 criteria. It was upgraded to a Grade A Strong Recommendation based on CPGs, SRs, and studies on the psychometric properties of the Movement Assessment Battery for

Children, 2nd and 3rd editions (MABC-2, MABC-3), the Developmental Coordination Disorder Questionnaire (DCDQ), and the Little DCDQ.

- Action Statement 4 was added as a Grade B Moderate Recommendation to highlight the importance of using shared decision-making to establish meaningful goals.
- Action Statement 5 was added as a Grade P Best Practice Recommendation to highlight the importance of using shared decision-making to establish a collaborative plan of care.
- Action Statement 11 was added as a Grade P Best Practice Recommendation to highlight the importance of measuring progress toward goals and transitioning from direct intervention to annual or semi-annual physical therapy reevaluations when appropriate.
- Supplemental Digital Content 1, available at: <https://links.lww.com/PPT/A690>, includes 4 revised and updated evidence tables.

Statement of Intent

This CPG is intended to inform pediatric PTs, family members, educators, and other healthcare providers (eg, primary care providers, occupational therapists, and psychologists) who work with children aged 3 to 18 years with coordination difficulties, at risk for DCD, or diagnosed with DCD. This CPG does not establish a legal standard of care. Rather, it provides a synthesis of current, evidence-based physical therapy. This CPG is a summary of physical therapy recommendations, developed and reviewed in collaboration with healthcare practitioners, educators, parents of children with DCD, and teenagers with DCD.

The action statements included in this guideline are intended to serve as recommendations, not mandates. Following these recommendations does not ensure a specific outcome for every child, nor do they encompass all methods or approaches for achieving similar outcomes. Clinical decision-making should be individualized and involve collaboration with the child and their family, taking into account their values, expectations, and preferences; relevant clinical information; available examination and intervention options; and the clinician's professional scope and expertise. However, it is recommended that significant departures from accepted guidelines should be documented in medical or educational records, including a rationale for such decisions; clinicians are strongly encouraged to publish the clinical reasoning and results of alternative approaches.

METHODS

The Guideline Development Group (GDG) was approved by APTA Pediatrics to update the 2020 DCD CPG¹ in accordance with Academy procedures. APTA Pediatrics did not influence the guideline content, and there was no external funding to support this CPG revision. The purpose, scope, and content build on the 2020 DCD CPG.

Search Strategy

This 2026 DCD CPG update is based on 2 SRs of the physical therapy evidence for examination, evaluation, prognosis, and intervention of DCD from January 2018 to July 2024. Refer to Long et al⁹ and Iwamoto et al¹⁰ for details of the protocol registration, search strategy, study selection, study appraisal, data extraction, and results for the 49 included studies; 33 studies informed physical therapy examination and evaluation, and 16 studies informed physical therapy intervention of children with DCD.

The 2026 DCD CPG used the SR search protocol from Iwamoto et al¹⁰ and Long et al⁹ to include evidence post July 2024; refer to PROSPERO, registration number CRD42024510963.¹¹ A comprehensive search was conducted from July 2024 to January 2025 by a research librarian of 8 databases (CINAHL, clinicaltrials.gov, Cochrane library, Embase, PEDro, PsycINFO, PubMed, and Web of Science). Search terms included pediatric, DCD, and concepts related to physical therapy assessment, intervention, and prognosis for DCD. Searches were not restricted by language. The full search strategy by database is in Supplemental Digital Content 1, Table S6, available at: <https://links.lww.com/PPT/A690>. References of included studies were reviewed and experts in the field were contacted to identify additional relevant studies.

Selection Criteria

Studies were included based on the following criteria:

1. Study designs: SRs that inform physical therapy management of DCD, cohort studies that inform the psychometric properties of tests and measures used in the physical therapy management of DCD, quasi-randomized and randomized controlled trials (RCTs) of gross motor interventions, prognostic cohort studies, and qualitative studies that inform physical therapy management of DCD;
2. Population: children under the age of 18 diagnosed with or at risk for DCD, and if other ages or diagnoses were included, the results of children with DCD were statistically analyzed separately;
3. Examination: studies on the psychometric properties of tests and measures commonly used in the physical therapy management of DCD to screen children for DCD, inform diagnostic criteria, stratify children based on prognostic indicators, or measure motor outcomes in response to physical therapy intervention;
4. Intervention: gross motor intervention of at least 1 week duration with a comparison group consisting of standard care or a different intervention and a motor outcome measure that assessed participation, activity, or BFS using between-group statistics. For intervention studies, only RCTs, versus cohort studies and case studies, were included to report findings from the highest quality of evidence.

5. Prognosis: prognostic studies that predicted response to physical therapy intervention;
6. Qualitative: qualitative studies and surveys of children and teenagers with DCD, parents/caregivers or teachers of children with DCD, and PTs that manage children with DCD that directly inform the physical therapy management of DCD.

Studies were excluded based on the following criteria: (1) studies previously included in the 2020 DCD CPG,¹ (2) conference abstracts and dissertations, (3) literature and scoping reviews, (4) studies published in a language other than English when an adequate English translation could not be obtained through translation software, and (5) qualitative studies that identified a greater need for access to physical therapy but did not inform the content of physical therapy management of DCD.

Study Selection

Study titles and abstracts were screened using Covidence SR software (Veritas Health Innovation, Melbourne, Australia; available at www.covidence.org), using the inclusion and exclusion criteria, followed by full-text review. During the screening and full-text review, pairs of 10 reviewers independently reviewed the studies, data were compared for agreement, and discrepancies were resolved through discussion. Four studies were excluded during the full-text review: 2 for ineligible outcome,^{12,13} 1 for ineligible study design,¹⁴ and 1 for ineligible statistical analysis.¹⁵

Study Appraisal

Pairs of 10 reviewers independently appraised the studies using a risk of bias tool appropriate for the study type, data were compared for agreement, and discrepancies were resolved through discussion. Risk of bias was assessed using the Risk of Bias in Systematic Reviews (ROBIS)¹⁶ for SRs of assessment tools, Consensus-Based Standards for the Selection of Health Measurement Instruments (COSMIN)¹⁷ for studies on the psychometric properties of assessment tools, A Measurement Tool to Assess Systematic Reviews 2 (AMSTAR-2)¹⁸ for SRs of interventions, the revised Cochrane Risk of Bias tool (RoB2)¹⁹ for RCTs, the Critical Appraisal Skills Programme (CASP) for qualitative studies <https://casp-uk.net/casp-tools-checklists/>, and the Quality In Prognosis Studies (QUIPS)²⁰ for prognostic studies. Sources of funding were assessed to determine conflicts of interest.

Data Extraction

Data were extracted to maintain consistency with the 2020 DCD CPG¹ and the two 2025 DCD SRs.^{9,10} Refer to Supplemental Digital Content 1, Tables S2–S5, available at: <https://links.lww.com/PPT/A690>. Data elements extracted from each study were determined by mutual consensus of the GDG, then extracted independently by pairs of 10 reviewers; data were

compared for agreement and discrepancies were resolved through discussion.

Results

The 2026 DCD CPG search strategy and selection details are in Supplemental Digital Content 1, Figure S2, available at: <https://links.lww.com/PPT/A690>, which combines the searches from the 2 SRs^{9,10} and the additional search to update the evidence. Eight additional studies were included: 2 SRs^{21,22} informed physical therapy examination and evaluation, and 3 SRs,^{23–25} 2 RCTs,^{26,27} and 1 qualitative study²⁸ informed intervention.

Refer to Supplemental Digital Content 1, Table S2, available at: <https://links.lww.com/PPT/A690>, for details on the ROBIS quality rating, overall quality rating, aim, tests and measures reviewed, date range and studies, quality of evidence, and clinical implications of the SRs of tests and measures, including the 2 new SRs.^{21,22} Refer to Supplemental Digital Content 1, Table S3, available at: <https://links.lww.com/PPT/A690>, for details on the AMSTAR-2 score, overall quality rating, aim, intervention of interest and outcome measures, date range and studies, quality of evidence, relative effects, and clinical implications of the SRs interventions, including the 3 new SRs.^{23–25} Refer to Supplemental Digital Content 1, Tables S4 and S5, available at: <https://links.lww.com/PPT/A690>, for details on the study design, level of evidence, RoB2 score, participants' diagnostic criteria, intervention groups and participants, intervention parameters and setting, interventions, outcome measures, and clinical implications of the RCTs, including the 2 new RCTs.^{15,27} Please note, these tables include SRs and RCTs from the 2020 DCD CPG,^{29–36} the 2 SRs that informed this guideline,^{23,37,38} and the new SRs and RCTs included in this 2026 DCD CPG to provide a summary of the strongest evidence. Other study types were not included in the tables.

One new study was not included in the evidence tables because it was not an SR or an RCT, so the results are described here. Schoenmaker et al²⁸ sought to describe the teaching strategies used by PTs in individual physical therapy sessions of children with DCD; the study had adequate methodological quality. By analyzing 18 videos of physical therapy sessions using the OPTIMAL Strategies Observational Tool, they found that PTs generally used strategies to support autonomy (compared with therapist-controlled strategies) and enhance expectations (in contrast to lowering expectations) and used internal and external focus of attention to a similar extent. In addition, they found that strategies were used in combination almost half of the time.²⁸

Recommendation Formulation

Each 2020 DCD CPG recommendation was evaluated for its currency and consistency with the updated research literature by the GDG. The GDG's decision to develop a new recommendation or reaffirm, revise, upgrade, or retire an existing recommendation

was informed by the evidence, the GDG's clinical and professional experience, and trends in practice changes. Changes were proposed by GDG members and discussed by the group until consensus was achieved, then edits were made to the CPG.

External Review Procedures

A first draft of the 2026 DCD CPG was reviewed by an advisory panel representing teenagers with DCD, parents of children with DCD, and representatives from academia, education, medicine, occupational therapy, and physical therapy practice and research. A rating scale to assess clarity and implementation feasibility and an open-ended request for comments and edits were used to gather feedback. The first-round suggested edits were discussed by the GDG until consensus was achieved and changes were made to the CPG. Then, the document was reviewed by a member of the APTA Pediatrics and posted for public review on the APTA Pediatrics website. Invitations to review were distributed to APTA Pediatrics members via its electronic newsletters and through a social media posting. Nonmembers could review if notified by APTA Pediatrics members. The same rating scale to assess clarity and implementation feasibility and an open-ended request for comments and edits were used to gather feedback. The public review comments and suggested edits were discussed by the GDG until consensus was achieved and changes were made to the CPG.

All 11 action statements rated by the advisory panel and public were rated as clear and feasible by over 70% of reviewers, except for Action Statement 9 on providing appropriate intervention dosage that only 65% of reviewers rated as feasible and 35% as somewhat feasible. Suggested edits were addressed to clarify content and add additional items under risk, harm, and cost. Some reviewers requested production of parent, PT, and healthcare provider support documents, which were forwarded to the 2026 DCD CPG knowledge translation team.

Appraisal of Guidelines for Research and Evaluation II (AGREE II) Review

This CPG was evaluated by 4 external reviewers using Appraisal of Guidelines for Research and Evaluation II (AGREE II).³⁹ Domain scores for the 2026 DCD CPG ranged from 88% to 98%. The 4 reviewers agreed to recommend the 2026 DCD CPG for use. AGREE II scores were discussed by the GDG and edits were made to the CPG to address lower-scoring items by clarifying methodology. The final 2026 DCD CPG draft was submitted to *Pediatric Physical Therapy* for editorial review.

DEVELOPMENT OF THE GUIDELINE

Details on the development of the guideline are in Supplemental Digital Content 1, available at: <https://links.lww.com/PPT/A690>.

Plan for Updating the Guideline

Per current standards, this CPG will be reviewed for potential updates or reaffirmation within 5 years as the body of evidence expands. The guideline revision will be organized by Megan Frazier, PT, DPT, PCS.

Language

The 2020 DCD CPG has been referenced up to this point, but will be used without reference hereafter. In contrast, this document is referred to as the "2026 DCD CPG" and the DSM-5-TR diagnosis of DCD will be referred to as "DCD". The phrase "primary care provider" is inclusive of pediatricians, developmental pediatricians, family or specialist physicians, advanced practice nurses, physician assistants, or other primary health-care providers. In this guideline, educators, coaches, or other community activity providers are referred to as "other relevant service providers" because they may play an important role in the life of the child and their family.

This CPG discusses the physical therapy management of children with either coordination difficulties, at risk for DCD, or diagnosed with DCD. Children referred to physical therapy due to concerns about coordination before having a formal diagnosis are described in this CPG as a "child with coordination difficulties." A child may be described as "at risk for DCD" or "probable DCD" during the examination process when some of the DSM-5-TR diagnostic criteria for DCD are identified. A child "diagnosed with DCD" has met all 4 of the DSM-5-TR criteria and has a formal diagnosis of DCD. The term "other or unspecified lack of coordination" may be a familiar International Statistical Classification of Diseases and Related Health Problems, version 10 (ICD-10) billing code that is not used as a diagnosis in this document but is described in Supplemental Digital Content 1, Table S7, available at: <https://links.lww.com/PPT/A690>.

DEVELOPMENTAL COORDINATION DISORDER

Children with DCD or at risk for DCD often have difficulty with coordination or motor planning tasks and activities that their peers typically master. These challenges can affect learning and social participation during the school years and later in life. What appears as poor coordination can be caused by many factors. It is through a comprehensive assessment process, ideally with a coordinated team of medical and healthcare providers, that DCD can be differentially identified, even when combined with other conditions.

DCD is an underrecognized and undersupported condition within the United States.⁷ Literature is evolving to provide a better understanding of DCD and to support optimal management and care for children with coordination difficulties, at risk for DCD, and diagnosed with DCD. This section provides a synopsis of the most recent literature, including informing the diagnostic process using the DCD DSM-5-TR, DCD

neurophysiology, psychological and social consequences, DCD throughout the lifespan, and physical therapy management.

Informing the Diagnostic Process for Developmental Coordination Disorder

DCD is defined as a neurodevelopmental disorder and subcategorized as a motor disorder in the DSM-5-TR.⁶ According to the DSM-5-TR, all 4 diagnostic components (Criteria A through D) must be met to confirm a diagnosis of DCD. Table 4 lists the required DSM-5-TR diagnostic criteria.

There is consensus that diagnosis and management of DCD requires an interprofessional team approach.^{40,41} This team may include the child and caregivers, the primary care provider, pediatric psychiatrists and neurologists, PTs, occupational therapists, speech-language pathologists, and other relevant service providers. Service coordination and collaboration are crucial to address function, participation, and the prevention of secondary consequences, while maintaining a child-centered and family-informed approach. Children diagnosed with DCD should also be screened for co-occurring conditions, such as ADHD and ASD.⁴² Pediatric PTs contribute their expertise in child development, motor control, motor learning, movement observation, functional training, and clinical reasoning. They often serve as key advocates and coordinators in both clinical and educational settings.

While PTs in the United States are not licensed to independently diagnose DCD, data gathered during a comprehensive physical therapy examination can contribute meaningfully to the diagnostic process. This data may support other findings used by a multidisciplinary team, inclusive of a PT, to arrive at a diagnosis.^{1,6,8,43} A formal diagnosis of DCD is typically made when a child is 5 years of age or older, as the diagnostic criteria can be more accurately applied then; however, signs of motor coordination difficulties may be evident much earlier.

Neurophysiology of Developmental Coordination Disorder

Research advances challenge the notion that DCD is mere clumsiness, highlighting instead a complex neurodevelopmental condition involving atypical sensory integration^{44,45} and

increased cognitive demands during motor tasks.^{46,47} Motor control difficulties common in DCD include difficulty with executive function, learning of new internal models, and difficulty with predictive control,^{48–50} all of which are linked to cognition. Neurophysiology studies provide growing evidence that children with DCD have altered development, activation, and function of cortical networks compared with typically developing peers,^{49–53} children with ASD,⁵⁴ or children with developmental dyslexia.⁵⁵ The prefrontal cortex shows greater activation in children with DCD during complex motor tasks, reflecting decreased automaticity.^{46,47} Meanwhile, brain regions associated with timing, motor control, and motor learning, such as the primary sensorimotor cortex, posterior superior temporal gyrus, cerebellum, and supplementary motor area, show lower activation in children with DCD compared with typically developing peers.^{48,56,57} Children with DCD show greater cortical activity on functional near-infrared spectroscopy when performing dual tasks,^{46,58} further suggesting that DCD is a motor–cognitive disability.⁴⁶

In addition to the cognitive differences, neurophysiology studies also accentuate the importance of sensorimotor integration differences in DCD. Children with DCD integrate visual and motor information differently than their peers⁵³ and use altered patterns of selection and prioritization between visual and somatosensory inputs.^{48,53,57} These sensorimotor differences negatively affect predictive motor control^{48,53,57} and increase cognitive interference.^{46,58} These outcomes underscore a broader understanding that DCD is not simply a motor disorder, but one that fundamentally alters sensory, motor, and cognitive processing.⁴⁸

Psychosocial Consequences Associated With Developmental Coordination Disorder

Children with DCD experience difficulties in self-concept related to their decreased levels of physical competence.^{48,59,60} Physical conditions frequently associated with DCD include hypotonicity or joint laxity,⁶¹ balance deficits,⁴⁹ being overweight or obese,⁶¹ and lower levels of physical activity.⁶² Children at risk for DCD demonstrate

TABLE 4:

Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR): Diagnostic Criteria Description for Developmental Coordination Disorder and Criteria Key⁶

	Diagnostic Criteria Description	Criteria Key
A	The acquisition and execution of coordinated motor skills are substantially below that expected, given the individual's chronological age and opportunity for skill learning and use. Difficulties are manifested as clumsiness (eg, dropping or bumping into objects) as well as slowness and inaccuracy of performance of motor skills (eg, catching an object, using scissors or cutlery, handwriting, riding a bike, or participating in sports).	Motor performance deficits
B	The motor skills deficit in criterion A significantly and persistently interferes with activities of daily living appropriate to chronological age (eg, self-care and self-maintenance) and affects academic/school productivity, prevocational and vocational activities, leisure, and play.	Participation and ADL limitations
C	The onset of symptoms is in the early developmental period.	Early onset
D	The motor skills deficits are not better explained by intellectual disability or visual impairment and are not attributable to a neurological condition affecting movement (eg, cerebral palsy, muscular dystrophy, and degenerative condition).	No exclusionary conditions

slower running speeds and lower cardiorespiratory fitness, both of which continue to worsen as they age compared with their peers.⁶³ Body composition and limitations in muscle strength and endurance, anaerobic capacity, and physical activity are all associated with poor motor performance in children with DCD.^{63,64}

Children with DCD may also experience a range of psychosocial challenges that contribute to a decreased quality of life,^{49,65} including elevated rates of depression and anxiety.^{59,61,66} Social difficulties are common with reduced peer interactions, increased risk of bullying,^{60,67–69} and less engagement in school and community activities.⁷⁰ Given these long-term consequences, early intervention is important for maximizing opportunities for success.

Developmental Coordination Disorder Throughout the Lifespan

The literature is expanding to include younger and older individuals at risk for or diagnosed with DCD. Early indicators of DCD can include delays in achieving motor milestones,^{12,13} frequent tripping (clumsy gait),⁷¹ less participation during recess,⁶³ decreased endurance with physical activity,⁷² and struggles with fine motor tasks such as handwriting and preparing a meal.⁷³ Although these signs may not meet full diagnostic criteria, they can suggest an increased risk for DCD. In such cases, standardized assessments and parent/caregiver or teacher completed questionnaires can aid in the early identification of motor coordination difficulties,⁷⁴ even if a formal diagnosis is deferred until age 5.^{9,75} Early identification and management of DCD may improve long-term prognosis for children with DCD.²⁵

Children with DCD continue to have symptoms into adolescence and adulthood.^{68,76–78} Adolescents with DCD may struggle with academic performance due to problems with organization, written expression, practical tasks, and participation in physical education.^{74,79} They often report higher levels of anxiety and lower levels of resilience, self-efficacy, and quality of life when compared with typical peers. These challenges can further influence long-term outcomes, including reduced participation in higher education and limitations in employment opportunities, particularly in jobs requiring manual dexterity or motor coordination.⁸⁰ Participants in a recent study described the far-reaching implications of living with DCD, noting struggles across all areas of life: at home, in school, with friends, and within their communities.⁷⁸ Despite these challenges, they also reported having access to various resources and strategies that helped them cope with daily difficulties.^{76,78}

Physical Therapy Management of Developmental Coordination Disorder

Effective management of DCD requires a comprehensive physical therapy examination and evaluation that reflects the heterogeneity of this population.⁹ An assessment of activity and participation limitations, related BFS impairments, and

environmental and contextual barriers should be included.⁸¹ Task-oriented approaches are recommended to enhance motor skills, with a focus on improving participation in personally meaningful activities and goals.¹⁰ In addition to task-oriented approaches, interventions may also target relevant underlying BFS impairments that directly impact function, as well as strategies to mitigate environmental and contextual barriers that hinder participation.⁴⁹ Figure 1 and Figure S1 describe the processes included in physical therapy management of DCD; clinicians may find it useful for educating children with DCD, families, primary care providers, teachers, and other relevant service providers.

ACTION STATEMENTS

I. PHYSICAL THERAPY EXAMINATION, EVALUATION, AND REFERRAL OF CHILDREN WITH COORDINATION DIFFICULTIES, AT RISK FOR DCD, OR DIAGNOSED WITH DCD

[A] Action Statement 1: DOCUMENT TO INFORM THE 4 DSM-5-TR CRITERIA. PTs who are examining a child referred for coordination difficulties should document the following to inform the 4 DSM-5-TR criteria when the signs and symptoms are suggestive of DCD. The following are recommended to inform each criterion when referring for a formal diagnosis:

- Criterion A (motor performance deficits): MABC-3;
- Criterion B (participation and ADL limitations): Little DCDQ or DCDQ;
- Criterion C (early onset): parent/caregiver's report of onset of coordination concerns; and
- Criterion D (no exclusionary conditions): parent/caregiver's report of other medical conditions and/or the PT's evaluation suggests that the motor performance difficulties are not better explained by another condition affecting movement.

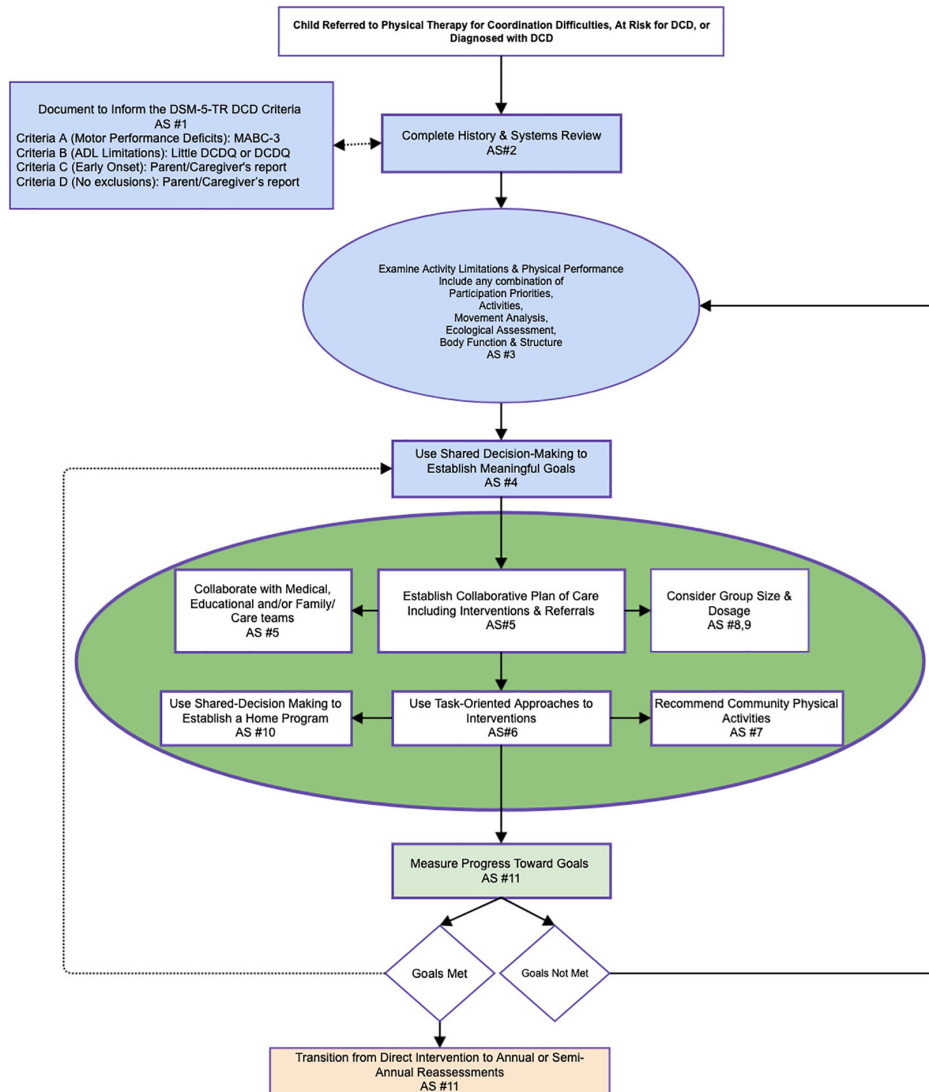
(Evidence Quality: I, Recommendation Strength: Strong)

Action Statement Profile. Aggregate Evidence Quality: Level I, based on CPGs, SRs, and studies on the psychometric properties of the MABC-3, Little DCDQ, and DCDQ.

Benefits:

- These 4 foci of information inform the DSM-5-TR criteria for a formal diagnosis of DCD.
- These 4 criteria may help parent(s)/caregiver(s) better appreciate the complex nature of their child's coordination challenges.
- Conducting standardized tests may elicit signs of other conditions needing follow-up.
- Standardized, norm-referenced motor tests can determine the degree of motor performance difficulty relevant to the DSM-5-TR criteria.

Physical Therapy Management of Developmental Coordination Disorder



Abbreviations
 ADL: Activities of daily living
 AS: Action Statement
 DCD: Developmental coordination disorder
 DCDQ: Developmental Coordination Disorder Questionnaire
 DSM-5-TR: The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, Text Revision
 MABC-3: Movement Assessment Battery for Children, 3rd Edition

Fig. 1. Physical therapy patient management algorithm for DCD. ADL, activities of daily living; AS, action statement; DCD, developmental coordination disorder; DCDQ, Developmental Coordination Disorder Questionnaire; DSM-5-TR, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision; MABC-3, Movement Assessment Battery for Children, Third Edition.

Risk, Harm, and Cost:

- Some of the tests are proprietary and have financial costs.
- A complete assessment may take up to 2 hours and may need to be conducted over multiple sessions, impacting travel and time costs to the family.
- When a child comprehends that they are not performing well, self-esteem may be affected.

Benefit–Harm Assessment: Preponderance of benefit.

Value Judgments: None.

Intentional Vagueness: The DSM-5-TR does not define “substantially below” or “early onset,” therefore, no thresholds are specified.

Role of Patient Preferences: Depending on the age, cognition, cooperation level of the child, and the child’s and family’s availability for testing, the parents/caregivers may request that

examinations occur over several shorter visits versus a single longer visit.

Exclusions: Children whose parents/caregivers are not seeking a formal diagnosis of DCD.

Policy Level: Providing documentation to inform a formal diagnosis of DCD may support access to appropriate care, consistent with the APTA Public Policy Priorities.⁸² Advocacy for PTs as primary care providers may reduce overall costs and facilitate access to services if PTs are permitted to provide the formal diagnosis when all 4 DSM-5-TR criteria are met.

Differences of Opinion: None.

Quality Improvement: Administrators can track the completeness of reports on the 4 DSM-5-TR criteria to determine strategies for improvement.

Implementation and Audit:

- Clinicians may need training on the assessment tools.
- Client records, including electronic health records or medical records, may need to be edited to account for test results.
- Budgets may need to plan for purchase of proprietary tests.
- Access resources on the CanChild website to support a DCD diagnosis. <https://canchild.ca/diagnoses/developmental-coordination-disorder/>
- Access resources on the Rehabilitation Measures Database for psychometric properties of standardized assessments. <https://www.sralab.org/rehabilitation-measures>.
- Audit documentation completeness.
- Clinical settings may audit the number of families who want or do not want a formal diagnosis for their child.

Supporting Information and Clinical Interpretation.

Despite its high prevalence and inclusion in diagnostic manuals for over 3 decades, DCD remains one of the most underdiagnosed and underresourced neurodevelopmental conditions within the United States.⁷ While PTs are not licensed to diagnose DCD, they play a critical role in contributing relevant clinical information that supports the 4 diagnostic criteria outlined in the DSM-5-TR. Therefore, when evaluating a child referred for coordination difficulties, PTs should document the following to inform the 4 DSM-5-TR criteria when the signs and symptoms are suggestive of DCD. However, if a child has already received a diagnosis of DCD, these assessments may not be indicated.

DSM-5-TR Criterion A (Motor Performance Deficits):

DSM-5-TR Criterion A (motor performance deficits) states that the acquisition and execution of coordinated motor skills must be substantially below that expected given the individual's chronological age and sufficient opportunities to acquire age-appropriate motor skills. These deficits may

manifest as clumsiness, slowness, and inaccuracy of fine and gross motor skills.⁶

For individuals aged 3 to 25 years 11 months, the MABC-3⁸³ is recommended to contribute evidence relevant to DSM-5-TR Criterion A (motor performance deficits). While research supporting its use in children with DCD was conducted using the MABC-2, the MABC-3 is recommended by the GDG due to its updated normative data. Extensive evidence underscores the MABC-2⁸⁴ as the most commonly used and studied test in DCD with robust normative data and moderate- to high-quality evidence supporting its measurement properties.²² Additionally, recent research has demonstrated that the MABC-2, when administered at age 3 years to those born very preterm, has excellent sensitivity and moderate specificity in predicting a DCD diagnosis at 4.5 years.⁸⁵

Other standardized clinical tests with adequate measurement properties to inform DSM-5-TR Criterion A (motor performance deficits) in decreasing order of the quality and availability of evidence include the DCDDaily,⁸⁶ Performance and Fitness test battery (PERF-FIT),⁸⁷ Körperkoordinationstest Für Kinder (KTK),⁸⁸ Bruininks–Oseretsky Test of Motor Proficiency, 3rd edition (BOT-3),⁸⁹ and Test of Gross Motor Development, 3rd edition (TGMD-3).⁹⁰ For a summary of each standardized clinical test and its measurement properties, refer to Huang et al.²²

DSM-5-TR Criterion B (Participation and ADL Limitations): DSM-5-TR Criterion B (participation and ADL limitations) states that a child's "motor skills deficit" described in Criterion A significantly and persistently interferes with "activities of daily living appropriate to chronological age (eg, self-care and self-maintenance) and impacts upon academic/school productivity, prevocational and vocational activities, leisure, and play."⁶

For children aged 3 to 4 years, the Little DCDQ is recommended to contribute evidence relevant to DSM-5-TR Criterion B (participation and ADL limitations). The Little DCDQ is clinically feasible since it is a 15-item parent questionnaire that is available at low cost at <https://www.dcdq.ca/>. There is moderate- to high-quality evidence supporting its reliability and validity as a clinical screening tool for children at risk for DCD, and cross-cultural adaptations have been developed with reference norms and cutoff scores.^{9,22}

For children aged 5 to 15 years, the DCDQ⁹¹ is recommended to contribute evidence relevant to DSM-5-TR Criterion B (participation and ADL limitations) for 4 reasons. First, the DCDQ is clinically feasible since it is a 15-item parent questionnaire that can be obtained free of charge at <https://www.dcdq.ca/>. Second, it has high diagnostic accuracy (Summary Receiver Operating Characteristic Area Under the Curve = 0.90, Standard Error = 0.04) and good predictive validity (sensitivity = 0.87, specificity = 0.83) with the DSM-4 and 5. Third, there is moderate- to high-quality evidence supporting its reliability and validity as a clinical screening tool for children at risk for DCD.^{22,92} Last, many

cross-cultural adaptations have been developed with reference norms and cutoff scores.^{9,22}

Other questionnaires with adequate measurement properties to inform DSM-5-TR Criterion B (participation and ADL limitations) in decreasing order of the quality and availability of evidence include the DCDDaily-Q,⁹³ Motor Observation Questionnaire for Teachers (MOQ-T),⁹⁴ and the MABC-3-Checklist (MABC-3-C).⁹⁵ For a summary of each questionnaire and its measurement properties, refer to Huang et al.²²

Additional insights into activity limitations related to participation can be obtained through self-reports, caregiver interviews, and other questionnaires or checklists, which provide valuable context to standardized measures. It is important to note that insufficient reliability has been reported on DCD questionnaires between parents/caregivers and teachers, so it may be appropriate to have parents/caregivers, teachers, and other relevant service providers answer separate DCD questionnaires for a comprehensive view of the child's activity limitations across home, school, and community environments.⁹

DSM-5-TR Criterion C (Early Onset): DSM-5-TR Criterion C (early onset) states that the symptoms begin during early development. The PT can use the parent/caregiver's report of the onset and examples of the coordination concerns to inform this criterion.

DSM-5-TR Criterion D (No Exclusionary Conditions): DSM-5-TR Criterion D (no exclusionary conditions) states that the motor performance deficits are not better explained by an intellectual disability, visual impairment, or other neurological condition affecting movement (eg, cerebral palsy and muscular dystrophy). The PT can use the parent/caregiver's report of other medical conditions and their clinical judgement if their evaluation suggests that the motor performance deficits are not better explained by another condition affecting movement.

Research Recommendation:

- Assess the psychometric properties of standardized assessments used to inform DSM-5-TR Criterion A (motor performance deficits) and Criterion B (participation and ADL limitations).
- Clarify the precision of DCD screening procedures to establish more specific symptoms associated with DSM-5-TR Criterion C (early onset) and Criterion D (no exclusionary conditions).

[P] Action Statement 2: COMPLETE A HISTORY AND SYSTEMS REVIEW. PTs should obtain and document a comprehensive history and systems review for a child referred for coordination difficulties, at risk for DCD, or diagnosed with DCD. (**Evidence Quality: V, Recommendation Strength: Best Practice**)

Action Statement Profile. Aggregate Evidence Quality: Level V, based on the APTA Guide to PT Practice, review articles, and expert clinical consensus.

Benefits:

- A history and systems review can identify symptoms consistent with the DSM-5-TR criteria or other conditions.
- A history and systems review ensures that other conditions that may cause a lack of coordination or delays in gross and fine motor skills are ruled out or that timely referral for additional testing occurs.

Risk, Harm, and Cost:

- Costs may be associated with a physical therapy evaluation, which includes a history and systems review.
- PTs unfamiliar with DCD may not identify those at risk for DCD from the history or systems review.

Benefit–Harm Assessment: Preponderance of benefit.

Value Judgements: PTs should perform a history and systems review for both children referred with a diagnosis of DCD and for children referred for coordination or motor skill difficulties.

Intentional Vagueness: None.

Role of Patient/Parent Preferences: Parents/caregivers may provide valuable information on the child's medical and developmental history. This may be more challenging to obtain in a school environment but should be pursued.

Exclusions: None.

Differences of Opinion: None.

Quality Improvement: PTs should document reviews of the neurological, musculoskeletal, integumentary, and cardiopulmonary systems to provide uniform data for more effective communication among clinicians and for entry in patient registries.

Implementation and Audit:

- Create or revise parent/caregiver history and systems review forms completed before the initial examination to assist with collecting the recommended data.
- Provide training to enhance history and systems review consistency and reliability.
- Audit incidences in which history and system reviews are consistent with DCD versus suggesting developmental delays or lack of coordination caused by other conditions.

Supporting Evidence and Clinical Interpretation. It is within the scope of physical therapy practice to screen for causes of developmental motor delay and decreased motor performance that affects participation in ADLs.⁴³ Screening for risk of DCD is most appropriate beginning between ages 3 and 5 years,^{85,96–99} even though using the DSM-5-TR diagnostic criteria is suggested at 5 years.¹⁰⁰ A history and systems review provides evidence that contributes to differential diagnosis.¹⁰¹ A physical therapy history and systems review should include an interview with the parent/caregiver, a review of medical

records, and observation of the child's movement. Parental concerns provide helpful information for detection of developmental problems in children.¹⁰⁰ Based on the results, the PT should either refer to the child's primary care provider if there are red flags or concerns for medical, developmental, emotional, or other exclusionary conditions (Criterion D) or continue to examine factors that contribute evidence relevant to the DSM-5-TR criteria for DCD. The following elements should be documented:

History^{61,102,103}:

- Reason for referral:
 - o determine movement, task, or activity limitation impact on participation priorities
- General intake data:
 - o date of birth
 - o date of examination
 - o gender
 - o reason for referral
 - o parent/caregiver concerns
 - o general health
 - o list of other service providers
 - o cultural or religious considerations
- Medical history:
 - o birth history
 - o prematurity¹⁰⁴
 - o low birth weight¹⁰⁴
 - o onset of symptoms that relate to motor concerns
 - o medications
 - o other medical conditions including vision or hearing concerns
 - o coexisting conditions such as ADHD and ASD
 - o events such as accidents or surgeries
 - o medical interventions
- Developmental history:
 - o milestones in gross/fine motor, language, and social/adaptive skill acquisition
 - o other areas of intellectual or developmental concern
 - o behavioral or emotional concerns
- Family history:

- o medical or developmental conditions that exist in the family, such as clumsiness, DCD, ADHD, specific learning disabilities, and intellectual disability
- Educational history:
 - o interventions received in early intervention or developmental preschool programs
 - o reports of difficulties with physical activities or academics
 - o special education services in school
 - o intellectual testing and determinations
- Participation history:
 - o home ADLs and chores
 - o activities with family and friends
 - o physical activity preferences that are motivating at home, school, and community
 - o fitness level
- Additional history may include, with parent/caregiver consent:
 - o reports secured from other professionals such as occupational therapists, speech-language pathologists, psychologists, primary care providers, teachers, or other relevant service providers

Systems Review: A systems review should be completed using questions or checklists to determine whether to refer to the child's primary care provider.¹⁰⁵ Specifically, the child should be screened for medical/developmental/emotional concerns or exclusionary conditions other than DCD. The PT should gather information about the conditions that may coexist with DCD or those considered for exclusionary differential diagnosis (Table 5).^{61,102,103,106}

The systems review includes:

- Musculoskeletal review:
 - o height and weight
 - o symmetry in joint range of motion
 - o muscle function and muscle mass
 - o history of acute onset of muscle weakness
 - o skeletal abnormalities
- Neuromuscular review:
 - o atypical and asymmetrical muscle tone

TABLE 5:

Common Coexisting Conditions and Exclusionary Differential Diagnoses for Children With Developmental Coordination Disorder

Coexisting Conditions (Not All-Inclusive) ⁶	Differential Diagnoses (Not All-Inclusive) ^{30,96}
• Autism spectrum disorder (ASD) • Attention deficit hyperactivity disorder (ADHD) • Dyslexia • Specific language disorder	• Cerebral palsy • Congenital syndromes • Genetic conditions • Intellectual disability • Malignancies • Musculoskeletal conditions • Neurodegenerative conditions • Toxic and teratogenic conditions • Traumatic brain injuries • Visual impairments

- o general coordination
- o fall history
- o toe walking
- o neurological signs (eg, hyperreflexia, ataxia, tremors, Gowers sign, and waddling gait)
- o cranial nerve screening
- o headaches or pain
- Integumentary review:
 - o signs and symptoms of trauma
 - o abnormal pigmentation
 - o color of skin and nail beds
- Cardiovascular/pulmonary review:
 - o vital signs
 - o activity level and endurance of the child at home, school, and in the community
- Cognitive/behavioral review:
 - o acute changes in cognitive function
 - o ability to follow instructions and communicate needs
 - o behavioral regulation and attention
 - o ability to interact with adults and peers
- Vision review:
 - o history of acute changes in visual function
 - o history of treated or untreated visual impairments or diagnoses

Research Recommendation:

- Clarify how medical, educational, and participation history and screening factors influence the child's functional outcomes and physical therapy diagnosis and prognosis.

[A] Action Statement 3: EXAMINE ACTIVITY LIMITATIONS AND PHYSICAL PERFORMANCE. When a child presents with coordination difficulties, PTs should perform a comprehensive physical therapy examination and evaluation targeting participation priorities, which should include any combination of:

- Measures of participation
- Measures of activity
- Movement analysis/observation
- Ecological assessment if warranted
- Assessments of body function and structure (BFS) if warranted

(Evidence Quality: I, Recommendation Strength: Strong)

Action Statement Profile. Aggregate Evidence Quality: Level I, based on CPGs, SRs, and studies on the psychometric properties of selected tests.

Benefits:

- Documenting participation and activity limitations, along with BFS impairments that contribute to restricted participation, is essential for guiding the plan of care. This documentation establishes a baseline for objectively

measuring intervention outcomes and supports appropriate referrals to other specialists when indicated.

- Standardized tools or checklists contribute to group data that may help interpret service impact.
- Movement observations can guide the PT to more specific tests and measures.

Risk, Harm, and Cost:

- Proprietary standardized assessments have associated costs or online versions may not be compatible with electronic health record firewalls.
- Standardized motor tests may be misinterpreted if PTs are unfamiliar with the tests or typical child development.
- PTs may require training to enhance consistency and reliability for using standardized measures.
- Available standardized measures may not address the full breadth of participation restrictions and activity limitations.
- PTs unfamiliar with DCD may not identify those at risk for DCD through movement observation/analysis if unfamiliar with atypical movement profiles.

Benefit–Harm Assessment: Preponderance of benefit.

Value Judgements: Documenting limitations that affect participation priorities in the home, school, and community is part of the physical therapy examination.⁹¹

- PTs should consider the child's social, emotional, and cognitive levels, culture, and primary language to determine the most appropriate standardized outcome measure and administration method.
- Standardized tests are preferred objective measures of motor performance.
- PTs should hypothesize how specific BFS impairments may affect activities or participation before testing. Careful test selection should be based on experience with the test, availability, and clinical necessity.

Intentional Vagueness: A combination of measures is recommended to provide a more complete picture of a child's abilities and limitations; however, there is no specific combination recommended except that BFS measures should not be the sole foci that direct intervention.

Role of Patient/Parent Preferences: Parents/caregivers, teachers, and other relevant service providers provide valuable information on the effect of motor impairments across a variety of settings, including the home, school, and community.

Exclusions: None.

Differences of Opinion: None.

Quality Improvement:

- Documentation of activity limitations affecting participation at home, school, and community provides data to identify common activity profiles of children with

coordination difficulties, at risk for DCD, or diagnosed with DCD.

- Documenting motor performance on a standardized, norm-referenced motor test provides uniform data for patient registries.
- Standardized outcome measures objectively inform the effectiveness of physical therapy intervention.
- Observational movement analysis contributes to clinical decisions to rule out or refer for other conditions that may affect coordination and supports value-based care.

Implementation and Audit:

- Create or revise examination documentation forms or electronic records to include measures of participation and activity limitations, data collected from standardized, norm-referenced motor tests, observational movement analysis, and ecological assessments, if applicable.
- Clinicians may require training to perform consistent administration, scoring, and interpretation of reliable standardized assessments.
- Access resources on the CanChild website to support examination of children with DCD. <https://canchild.ca/diagnoses/developmental-coordination-disorder/>
- Access resources on the Rehabilitation Measures Database for psychometric properties of standardized assessments. <https://www.sralab.org/rehabilitation-measures>.
- Audit use of standardized assessments and intervention outcomes.
- Audit the incidences in which observational movement analyses identify movement difficulties associated with DCD or other conditions.

Supporting Evidence and Clinical Interpretation. When a child presents with coordination difficulties, PTs should perform a comprehensive physical therapy examination and evaluation, which should include any combination of measures of participation, measures of activity, movement analysis/observation, ecological assessment if warranted, and assessments of BFS if warranted. For details on the evidence supporting this recommendation, see Supplemental Digital Content 1, Table S2, available at: <https://links.lww.com/PPT/A690>.

Establishment and Assessment of Participation Priorities: Identifying the child's participation priorities at the onset helps guide PTs in performing a child-centered, comprehensive examination. Participation restrictions are often the primary reason children with coordination difficulties seek physical therapy services. Improvements in participation are frequently considered the ultimate indicators of success for both the child and their family. A comprehensive assessment of participation priorities allows the PT to establish relevant, measurable goals and implement interventions that promote participation.

PTs should identify the child's needs and priorities by performing comprehensive interviews and assessments with the child, parents/caregivers, and Individualized Educational Plan

(IEP) team if applicable. If children and families/caregivers experience difficulty expressing their participation priorities, tools such as the Perceived Efficacy and Goal Setting System (PEGS),^{41,107} the Children's Assessment of Participation and Enjoyment (CAPE),¹⁰⁸ and the Preferences for Activities of Children (PAC),¹⁰⁹ can be used to help identify participation priorities.

Standardized Assessment of the Participation Priorities: Standardized participation measures are used to establish a baseline for the client-centered participation priorities and are subsequently reassessed following intervention to evaluate outcomes and effectiveness.

The Canadian Occupational Performance Measure (COPM)¹¹⁰ is a widely used tool to identify and prioritize the child's participation priorities and subsequent goals through a semi-structured interview. If a child is unable to complete the COPM (eg, secondary to age), parents/caregivers may assist and provide answers for the child. This tool promotes interprofessional practice to meet the child's needs by facilitating multidisciplinary intervention goals based on the identified participation priorities. For children with DCD, recent low-quality evidence supports that the COPM is responsive to change with intervention, with a high effect size of 1.65.¹¹¹ Improvements in participation may be demonstrated through progress across multiple activity-related goals or by achieving a singular overarching goal, depending on the participation priorities and the interventions' foci.

To complement standardized measures, additional participation data can be obtained through self-reports, parent/caregiver interviews, and various questionnaires or checklists.¹¹² These supplementary methods provide valuable insights into the child's participation in everyday activities and the potential impact of interventions.

Standardized Assessment of Activity Limitations Related to Participation Priorities: Many standardized questionnaires and standardized motor assessments can be used to assess activity limitations related to participation priorities. For a comprehensive summary of each standardized assessment and its measurement properties, refer to Huang et al.²² Additional insights into activity limitations related to participation priorities can be obtained through self-reports, caregiver interviews, and other questionnaires or checklists, which may provide individualized context to standardized measures.

Standardized Questionnaires: Standardized questionnaires are commonly used to evaluate performance in activities related to participation. In decreasing order of evidence strength, they are the DCDQ,⁹¹ Little DCDQ,¹¹³ DCDDaily-Q,¹¹⁴ MOQ-T,¹¹⁵ and the MABC-3-C.⁹⁵ Of these questionnaires, the DCDQ and Little DCDQ have the strongest measurement properties and quality of evidence for evaluating activity related to participation in children with DCD,²² and per Action Statement 1, are recommended to inform DSM-5-TR Criterion B (participation and ADL limitations).

Standardized Motor Assessments: Standardized motor assessments are commonly used to evaluate motor performance related to participation. In decreasing order of evidence strength, they are the MABC-3,⁸³ DCDDaily,⁸⁶ PERF-FIT,¹¹⁶ KTK,⁸⁸ BOT-3,⁸⁹ and TGMD-3.⁹⁰ Of these motor tests, the MABC-2⁸⁴ has the strongest measurement properties and quality of evidence for evaluating motor performance in children with DCD,²² and per Action Statement 1, the MABC-3⁸³ is recommended to inform DSM-5-TR Criterion A (motor performance deficits). Note that the MABC-3 is recommended by the GDG due to its updated normative data, but the research supporting its use in children with DCD was conducted using the MABC-2. While moderate-quality evidence supports the use of the MABC-2 as a responsive tool for measuring intervention outcomes for children with DCD,¹¹¹ the suitability of the MABC-3 as an outcome measure for physical therapy intervention may vary depending on the child's participation priorities.

Observational Movement Analysis of Participation Priorities: Observational movement analysis describes a child's kinesiological strategies for functional task completion.¹¹⁷ A systematic movement analysis of the activities for which the family/caregiver is seeking physical therapy should be documented and include comments about movement quality characteristics. Movement analysis may also occur during standardized tests of activity and participation. In either instance, movement analysis may lead to further tests of BFS. For example, if a child is observed to be lacking control/stability while stair climbing, the PT may hypothesize deficits in strength or balance and specifically examine these BFS.

A proposed framework for pediatric observational movement analysis includes 11 observable constructs and a movement continuum from initial conditions to preparation, initiation, execution, termination, and outcome.^{118–120} Prioritization of movement tasks to be analyzed should be determined based on the child's participation goals.

Observational movement analysis constructs include^{118–120}:

- Symmetry: agreement of external kinetics and kinematics
- Speed: rate of change of velocity from start to finish
- Amplitude: range of movement
- Alignment: relationship of body segments to one another
- Postural control/verticality
- Stability
- Coordination/smoothness
- Sequencing
- Timing
- Accuracy
- Symptom provocation

Of the observable constructs, children with DCD typically present with challenges in speed, amplitude, stability,^{121,122} coordination and smoothness, sequencing, and timing.¹²³ Gait in this population has been characterized by increased step

width and more variability in double limb stance and stride time.¹²⁴ While overall gait speed has been found to be similar to that of typically developing children, children with DCD use a strategy of increased cadence with shorter step length to match pace with their peers.¹²⁵ The differences observed in gait and other functional movement are suggestive of less mature patterns than age-matched peers.

After completing movement analyses, the PT should determine whether the activity is not impaired, impaired, or is not able to be performed or completed, based on the movement quality characteristics and age norms. This determination should be followed by consultation with the child's primary care provider if there are significant concerns about signs or symptoms inconsistent with DCD.

Ecological Assessment of Participation Priorities if Warranted: Ecological assessments, also called observational assessments,^{126,127} are informal checklists used to identify activity and participation restrictions in the child's natural environment. These assessments are frequently used in school settings due to their alignment with the Individuals With Disabilities Education Act (IDEA)¹²⁸ and the Americans with Disabilities Act (ADA).^{127,129,130} These laws emphasize the importance of functional performance within the least restrictive environment in educational contexts. Ecological assessments allow a PT to identify a child's strengths, needs, and barriers to participation. They also enable the PT to observe the quality of movement and examine possible impairments of coordination, endurance, strength, and balance that may limit a child's participation specific to meaningful environments. By conducting an ecological assessment, PTs can pinpoint the specific parameters that define meaningful participation for each child, which may not be achievable through an impairment-based examination.¹²⁷

Ecological assessments are well supported as best practice to assist in developing intervention strategies to directly improve participation in the child's natural environment. The APTA Guide to Physical Therapist Practice⁴³ reinforces this concept. Motor control and motor learning theories consider the task, environment, and person as overlapping factors allowing for movement.^{129,131} By observing a child in the environment in which functional performance is required, PTs can better understand how to plan intervention strategies to target the participation priorities,¹³² inclusive of environmental adaptations or alterations.

Standardized Assessment of Body Functions and Structures Related to Participation Priorities if Warranted: If specific impairments are hypothesized to be limiting the child's ability to participate at their desired level, the PT should examine the relevant BFS. The GDG does not recommend routinely assessing all BFS, only those BFS that are hypothesized to directly impact the participation priorities. Therefore, specific tests are not recommended in this CPG. PTs are advised to rely on movement analysis of both the

participation priorities and standardized motor assessments to guide their choice of tests.

Aertssen et al¹³³ reviewed 23 studies comparing children with DCD to their typical developing peers across 28 field-based tests. These tests were categorized into isometric strength, muscle endurance, muscle power, anaerobic sprint, and test batteries. While the review only recommended the shuttle run item of the Bruininks–Oseretsky Test of Motor Performance, 2nd edition (BOT-2) or the 10×5-m sprint for assessing anaerobic capacity in children with DCD, the authors suggested using the most valid and reliable tools tested in children with typical development until more evidence becomes available.

Key recommendations for assessment tools include¹³³:

- Anaerobic capacity: shuttle run item of the BOT-2, 10×5-m sprint
- Isometric strength: handheld dynamometry
- Muscle endurance: bent knee push-up, functional strength measurement (eg, lateral step-up, sit-to-stand test, lifting a box, and stair climbing test), test battery (eg, jumping a distance of 7 m on 2 ft and 1 ft and climbing wall bars), and Resistance Training Skills Battery for Children (eg, push-up, step-up, body-weight squat, standing overhead press, front support with chest touches, and suspended row)
- Muscle power: vertical jump, standing long jump, functional strength measurement (eg, overarm throwing, standing long jump, underarm throwing, and chest pass), and fitness test (eg, standing broad jump and 20-m sprint).

When interpreting the results of these assessments, it is crucial to consider characteristics of children with DCD, such as motor planning impairments, which may affect performance outcomes and potentially skew interpretations.^{9,133} Subsequently, BFS impairments should be viewed as one facet for addressing greater participation and not as intervention goals.

Research Recommendation:

- Examine the psychometric properties specific to the DCD population of standardized assessments commonly used in the physical therapy management of children with DCD.
- Develop or clarify standardized participation and activity measures that are responsive to change for short intervention durations of 8 to 12 weeks, the typical duration of physical therapy intervention for children with DCD.
- Identify movement quality characteristics and key activities to observe in infants and young children that predict DCD.
- Conduct longitudinal studies of participation to inform intervention decisions and an understanding of participation restrictions over the lifespan.

[B] Action Statement 4: USE SHARED DECISION-MAKING TO ESTABLISH MEANINGFUL GOALS. For children at risk for DCD or diagnosed with DCD, PTs should use shared decision-making with the child and family to establish measurable, child-centered functional goals based on their participation priorities during the initial and subsequent examinations. (**Evidence Quality: II, Recommendation Strength: Moderate**)

Action Statement Profile. Aggregate Evidence Quality: Level II, based on an SR of intervention efficacy based on outcome.¹³⁴

Benefits:

- Focuses the intervention sessions.
- Creates meaningful goals that help motivate children and parents/caregivers to adhere to their home programs.
- Defines the conditions that would indicate successful attainment of goals.
- Goals are coordinated with the child, family, and all relevant service providers.

Risk, Harm, and Cost:

- If goals are not achievable, children and their parents/caregivers may experience disappointment.

Benefit–Harm Assessment: Preponderance of benefit.

Value Judgments: None.

Intentional Vagueness: No specific number of goals is recommended.

Role of Patient Preferences: Parents/caregivers and the child should participate in shared decision-making to establish meaningful, contextually relevant, and measurable goals. Families are expected to share the results of medical or other testing that might inform the prognosis for achieving the goals.

Exclusions: None.

Policy Level: Local educational and federal regulations may inform how often goals are set and the degree of required documentation.

Differences of Opinion: None.

Quality Improvement: Using measurable goals supports analysis of success in meeting children's goals relative to their episodes of care.¹³⁴

Implementation and Audit:

- PTs may need training in eliciting and writing measurable, functional, and contextually relevant goals.
- Access resources on the Rehabilitation Measures Database for psychometric properties of standardized measures. <https://www.sralab.org/rehabilitation-measures>.
- Audit goals that are documented for their measurability and functional/contextual relevance.

Supporting Evidence and Clinical Interpretation. Effective intervention begins with establishing child-centered, functional, measurable goals in collaboration with the child,

parents/caregivers, and relevant service providers (eg, IEP team and outpatient rehabilitation services). Child-centered goals must be meaningful and relevant to what the child wants, needs, or is expected to do in their environment. Collaborative goal-setting helps the PT understand the child's activities, perceived needs, limitations, and strengths. It guides the PT, child, and family to focus the plan of care on their participation priorities.^{134–137}

Shared decision-making is a process in which clinicians and the child and their family make decisions together using the best available evidence, balancing risks and expected outcomes with the child and family's preferences and values.¹³⁷ Incorporating shared decision-making enhances the child's satisfaction and adherence to interventions, particularly when goals align with the cultural and social expectations for participation.^{8,137,138} This approach also improves perceived quality of care, motivation, and tracking of progress among children and families.^{139–142}

Parents/caregivers report the desire to collaborate during goal development because they want to leverage the PT's knowledge to help ensure goals are appropriate and attainable.^{140,141} If children and families voice difficulty establishing participation priorities, the PT can facilitate goal development through the use of tools such as the PEGS system, described in Action Statement 3.

Functional goals can be written as whole or part of the participation-related task.¹³¹ An example of a whole goal might be playing a game of kickball at recess, whereas goals for kicking or catching a playground ball, or running to a base, would be part of a larger participation goal. If progress toward activity and participation goals is unable to be met, it is appropriate to assess the BFS that may impede the progress of the goal. Intervention may be required to address BFS impairments or incorporate environmental adaptations that directly support the achievement of participation goals,^{10,49,87} but impairment-based goals should not be created in isolation. Solely addressing impairments may not directly improve activity or participation.

Goals should be specific and measurable, including who will complete what task and how, under what conditions, and in a specific time frame.¹³⁵ Activity- and participation-based goals may lack standardized ways to measure baseline, progress, or attainment. Three options can be used to rate the child's performance objectively and are responsive to change with therapeutic intervention: the COPM,^{110,111,143,144} Goal Attainment Scaling (GAS),^{111,143–145} and the Performance Quality Rating Scale (PQRS).¹⁴⁶ All 3 provide structure to define a range of outcomes for each goal. The goals can then be objectively measured at baseline and at regular intervals by the PT (eg, GAS and PQRS) and/or the parent/caregiver (eg, COPM) to track progress and attainment. Multiple tools, such as the COPM and PQRS, can be used together to document progress by both the PT and parent/caregiver for a more comprehensive picture of the child's progress.

Education: Although therapists may intend to create collaborative child-centered goals, many parents/caregivers feel they are not adequately involved in the goal-setting process.¹⁴¹ Angeli et al found low agreement between what the parents/caregivers and therapists believed the goals were that the child was working toward in therapy.¹⁴¹ Goal agreement may improve with appropriate caregiver and therapist goal-setting education.¹⁴¹ Many therapists may not be familiar with all 3 recommended goal-setting options. Therapists must receive education about the tools and proper interviewing techniques to ensure they incorporate the child's and parent/caregiver's perspectives into their measurable therapy goals.¹⁴¹

Research Recommendation:

- Determine best practices for using shared decision-making to establish measurable, child-centered, functional goals for children at risk for DCD or diagnosed with DCD based on the participation priorities of the child and family.

[P] Action Statement 5: ESTABLISH COLLABORATIVE PLAN OF CARE. PTs should use shared decision-making with the child, family, and other relevant service providers to establish a collaborative plan of care that may include referral of children to their primary care provider when signs and symptoms are suggestive of DCD and the child has not been diagnosed or if there are red flags or concerns for other medical conditions. (Evidence Quality: V, Recommendation Strength: Best Practice)

Action Statement Profile. Aggregate Evidence Quality: Level V, based on CPGs, the APTA Guide to PT Practice, review articles, and expert clinical consensus.

Benefits:

- Referral to the child's primary care provider may assist in timely attainment of a DCD diagnosis, differential diagnosis, and/or referral to other healthcare or educational professionals to ensure timely, coordinated interventions.
- Shared decision-making to establish a collaborative plan of care may result in improved adherence to the plan of care and better clinical outcomes.
- Collaboration among healthcare providers and relevant service providers could lower the overall cost of care.

Risk, Harm, and Cost: There may be time and financial costs for referral to the child's primary care provider or other professionals.

Benefit–Harm Assessment: Preponderance of benefit.

Value Judgements: Care provided by a team of professionals may improve outcomes and ensure that coexisting conditions and those beyond the scope of the PT are addressed.

Intentional Vagueness: None.

Role of Patient/Parent Preferences: Parents/caregivers may provide information regarding additional developmental or behavioral concerns, their preferences for physical therapy

management, the resources available to support goal attainment, and their views on whether they wish to pursue a formal diagnosis for their child. These considerations should be thoughtfully incorporated into the child's plan of care.

Exclusions: Children who do not meet the diagnostic criteria for DCD (Table 4) should be fully examined by appropriate healthcare professionals to initiate an appropriate plan of care.

Differences of Opinion: None.

Quality Improvement: This recommendation promotes interprofessional collaboration for children with DCD and may result in earlier identification and the implementation of more comprehensive, multidisciplinary intervention strategies.

Implementation and Audit:

- Training for healthcare and educational professionals who see children suspected of DCD may be needed to ensure that children are provided referrals.
- PTs should share the 2026 DCD CPG and APTA Pediatrics knowledge translation resources with primary care and other healthcare and education professionals in their geographic area.
- Physical therapy documentation should include information supporting the reason for referral.
- Access resources on the CanChild website to support collaborating with school personnel. <https://canchild.ca/diagnoses/developmental-coordination-disorder/>
- Audit child and parent/caregiver satisfaction with the plan of care and its development process.

Supporting Evidence and Clinical Interpretation.
Shared Decision-Making to Establish Collaborative Plans of Care: PTs should use shared decision-making¹³⁷ with the child, parents/caregivers, and other members of the medical and educational team to establish a collaborative plan of care to meet the child's goals established in Action Statement 4. The plan may include a combination of direct physical therapy intervention using task-oriented approaches at school and/or in the clinic, evidence-informed community physical activities, and home program activities implemented by the parents/caregivers or other relevant service providers, as detailed in Action Statements 6, 7, and 10. In addition, the dosage and use of individual versus group sessions should be determined for each aspect of the plan of care, as detailed in Action Statements 8 and 9. Using shared decision-making ensures that the child, parents/caregivers, and clinician agree on how interventions will be delivered, by whom, how often, and what to do if adherence dwindles. Readers are referred to Moore and Kaplan¹³⁷ for a review of shared decision-making techniques.

Referrals: PTs should refer to the child's primary care provider if there are red flags or concerns related to medical, developmental, emotional, or other conditions.¹⁰² Examples of red flags requiring immediate referral include: history of

trauma, headaches or blurred vision, deterioration in motor skills, or significant hypertonia or hypotonia.¹⁰² Referrals may occur after the initial screening, following the examination, or anytime throughout the episode of care if concerns arise.

Informing a DCD diagnosis: When parents/caregivers desire a diagnosis of DCD and if the information gathered from Action Statements 1 to 3 indicates below age level coordination concerns or DCD is suspected, the PT should provide a physical therapy report to the child's primary care provider, psychologist, or interprofessional team. This report should include information relevant to the DSM-5-TR criteria for DCD. This supports timely diagnosis, allowing the medical professional or team to evaluate the 4 DSM-5-TR criteria using their own findings along with the PT's documentation. The PT may also provide general information on DCD, such as diagnostic details (Table 4) or the physical therapy patient management algorithm for DCD (Figure 1), and other supplemental tools designed for this guideline.

Research Recommendations:

- Data are needed on the number of children with coordination difficulties, at risk for DCD, or diagnosed with DCD who are examined by PTs and are referred for concerns about coexisting or exclusionary conditions, or confirmation of the DCD diagnosis. These data would establish the incidence of conditions discovered during the examination process and the effectiveness of referral patterns.
- Investigate best practices for how PTs can use shared decision-making with a collaborative team to establish a comprehensive, multidisciplinary plan of care for DCD.

II. PHYSICAL THERAPY INTERVENTION FOR CHILDREN AT RISK FOR DCD OR DIAGNOSED WITH DCD

A Action Statement 6: USE TASK-ORIENTED APPROACHES TO INTERVENTION. For children at risk for DCD or diagnosed with DCD, PTs should use and document task-oriented approaches to intervention, guided by the child's goals and meaningful activities, with BFS interventions used only when directly supporting the achievement of the child's goals. (**Evidence Quality: I, Recommendation Strength: Strong**)

Action Statement Profile. Aggregate Evidence Quality: Level I based on high-quality SRs with meta-analyses and RCTs.

Benefits:

- Improved outcomes in children receiving task-oriented approaches, such as motor skill training and the Cognitive Orientation to daily Occupational Performance (CO-OP) approach, compared with standard care or no intervention.

- Increased confidence, increased cognitive-strategy use, and neuroplastic changes have been demonstrated with the CO-OP approach.¹³⁴

Risk, Harm, and Cost:

- Intervention costs may be a burden for families.
- PTs without pediatric experience may provide less effective interventions if their knowledge of the condition is limited.
- PTs require additional training to use CO-OP in its entirety.

Benefit–Harm Assessment: Preponderance of benefits.

Value Judgements: PTs should choose interventions targeted toward the child's goals to enhance participation at home, school, and in the community.

Intentional Vagueness: None.

Role of Patient/Parent Preferences: Targeting intervention toward child and family-centered goals

may improve adherence to intervention plans and home programs.

Exclusions: None.

Differences of Opinion: None.

Quality Assurance: This recommendation may reduce unwarranted practice variations and provide consumers with guidance for evidence-based interventions.

Implementation and Audit:

- Documentation forms and electronic records may need to be revised to include specific task-oriented approaches to intervention.
- Access resources on the CanChild website to support task-oriented approaches to intervention. <https://can-child.ca/diagnoses/developmental-coordination-disorder/>
- Audit the types of task-oriented approaches to determine their overall benefits to children.
- Audit PT adherence to providing task-oriented approaches as the first-choice intervention or reasons for deviating from the recommendation.

Supporting Evidence and Clinical Interpretation. PTs should use task-oriented approaches to intervention that target the child's goals and are guided by activities that are meaningful to the child. Task-oriented approaches are based on theories of motor control and motor learning and focus on goal attainment.^{10,49,134,147,148} The 2 task-oriented approaches with the strongest evidence are motor skill training^{10,49,87,147,149} and CO-OP.¹³⁴ For further details on the evidence supporting this recommendation, refer to Supplemental Digital Content 1, Tables S3 and S4, available at: <https://links.lww.com/PPT/A690>.

Common principles of task-oriented approaches include:

- Part to whole practice
- Task-specific practice with multiple repetitions

- Task-specific practice in variable environments and contexts
- Progressive increases in environmental and task demands
- Facilitated self-discovery using individualized methods (eg, video viewing of task practice and guidance toward task components that are modifiable)
- Appropriate feedback, including augmented feedback, external feedback, and internal feedback¹⁵⁰

Motor skill training: Motor skill training focuses on the practice of specific motor skills. Examples of motor skill training include fundamental motor skills intervention²⁶ and physical education interventions focusing on specific motor skills.¹⁴⁹ Many RCTs support improvement in motor skill outcomes after motor skill training.^{26,27,149,151} Refer to Supplemental Digital Content 1, Table S4, available at: <https://links.lww.com/PPT/A690> for details on the RCTs investigating motor skills training.

In addition, many SRs support large effect sizes for motor skill interventions, compared with standard care or no intervention.^{10,25,49,147,148} However, most of these SRs included community physical activities, such as active video gaming (AVG), aquatics, soccer, and trampoline training as part of the analysis, and reported moderate to high heterogeneity secondary to the variety of intervention approaches, clinical settings (school, community, home), intervention doses, child-chosen goals, intervention methods (group vs. individual) and diagnostic variation in the sample groups (at risk for DCD vs. probable DCD).^{25,49,134,147,148}

Cognitive Orientation to daily Occupational Performance (CO-OP): The CO-OP approach integrates motor control, motor learning, and cognitive behavioral theories.¹³⁴ The benefits of CO-OP for children with DCD include increased goal attainment, increased confidence, increased cognitive-strategy use, and neuroplastic changes.¹³⁴ Brain imaging has revealed measurable changes to cerebellar and cortical gray matter volume after CO-OP, supporting that CO-OP induces neuroplastic adaptations in brain regions involved in motor planning, execution, and cognitive control.^{56,152}

Results are consistent across studies that CO-OP effects positive changes, but the quality of evidence of CO-OP for children with DCD is mixed and varies by outcome. There is moderate quality of evidence for improved performance of child-chosen goals, low-quality evidence for changes in participation, and very low quality of evidence for changes in general motor skills and performance of an untrained activity as indicators of generalization and transfer.¹³⁴ These findings highlight the importance of choosing impactful goals that target the participation priorities and focusing intervention on the child's goals. Training is required to perform CO-OP with fidelity.¹³⁴

Body Functions and Structures Interventions: Interventions to reduce BFS impairments are recommended when it is hypothesized that improving underlying deficits

will support attainment of the child's goals.¹⁵³ It is important to note that impairment-based interventions alone do not have a significant impact on motor performance⁴⁹ and are not recommended in isolation. The GDG recommends that PTs use task-oriented approaches *combined* with targeted impairment-based interventions only when relevant to the child's goals.

Interventions for Preschool and Kindergarten-Aged Children With Coordination Difficulties: School-based interventions are now being developed and tested for children under 6 years of age with coordination difficulties or at risk for DCD, with positive results.^{149,154} Identifying and providing targeted task-oriented approaches to intervention earlier in childhood has the potential to positively impact the motor trajectory of children with coordination difficulties and improve their future motor function.

Research Recommendation:

- Determine the efficacy of task-oriented approaches focusing on specific motor skills to improve motor performance and participation of children with or at risk for DCD.
- Determine the efficacy of early task-oriented approaches during preschool or kindergarten on the motor trajectory of children with or at risk for DCD.
- Determine the mechanisms supporting change with task-oriented approaches to intervention.
- Determine best practice methods for tailoring task-oriented approaches to the individual needs or contexts of children with DCD.

[A] Action Statement 7: RECOMMEND COMMUNITY PHYSICAL ACTIVITIES. After appraising the appropriateness for the child, PTs should recommend evidence-informed, community physical activities to complement task-oriented approaches to intervention for children at risk for or diagnosed with DCD. (Evidence Quality: I, Recommendation Strength: Strong)

Action Statement Profile. Aggregate Evidence Quality: Level I based on CPGs, SRs, and RCTs

Benefits:

- Evidence-informed physical activities may improve outcomes when combined with task-oriented interventions.
- Evidence-informed physical activities may reinforce the child's goals and may promote child participation in physical activities with family and peers in the community.

Risk, Harm, and Cost:

- Most evidence-informed, community physical activities require a trained specialist and/or occur in an environment outside of school or clinic settings.

- Specific evidence-informed, community physical activities may not be available in all geographic regions.
- The costs of evidence-informed, community physical activities may be a burden for families, due to program fees, time, travel, and equipment.
- Active video gaming may decrease time spent playing outdoors.¹⁵⁵
- Instructors or coaches in community settings may not be familiar with DCD and thus may need guidance in appropriate instructional strategies for children with DCD.

Benefit–Harm Assessment: Preponderance of benefit.

Value Judgments: PTs should recommend the strongest evidence-informed physical activities to augment task-oriented approaches that align with the child's goals and engage the child. Participation in physical activities within the community that are enjoyable for the child may improve self-confidence and quality of life outcomes.

Intentional Vagueness: The list of evidence-informed physical activities is limited to published studies and may not represent all activities that might reinforce the child's goals. There is no clear evidence that individual or small group sports should be recommended over larger team sports for children with DCD. However, extrapolation of evidence about possible anxiety in larger groups¹⁵⁶ and less participation of children with DCD in team sports¹⁵⁷ suggests that individual or small group sports may be preferable. The choice of community physical activities should incorporate shared decision-making with the child, the family, and knowledge of available community opportunities.

Role of Patient/Parent Preferences: Parents/caregivers or the child should inquire about or explore community activities in which their child could successfully participate or that would help improve motor skill performance.

Exclusions: None.

Differences of Opinion: None.

Quality Improvement: Documentation of participation in evidence-informed physical activities may improve data to understand how they may contribute to motor skill performance and components of physical fitness.

Implementation and Audit:

- Create or revise documentation forms and electronic records to include the type and dosage of physical activities in which the child participates to inform dosing of the physical therapy plan of care.
- PTs should create lists of community resources for children with DCD and providers familiar with DCD, as a family resource (eg, camps or other community activities).
- Audit the types and dosage of physical activities to determine the effects on children at risk for DCD or diagnosed with DCD.

Supporting Evidence and Clinical Interpretation. Evidence-informed physical activities are intended to complement physical therapy intervention and should not replace task-oriented approaches to intervention. These activities typically: (1) take place in the home or community, (2) align with the goals of the child and their parent/caregiver, and (3) are not generally part of direct physical therapy intervention. Such activities may include task-oriented approaches, strategies to address BFS impairments, initiatives to promote physical fitness, or activities that encourage age-appropriate engagement with peers or family members. For further details on the evidence supporting this recommendation, refer to Supplemental Digital Content 1, Tables S3 and S5, available at: <https://links.lww.com/PPT/A690>.

Level I and II Evidence From Small Randomized Controlled Trials. Physical Activities: These physical activities described in small RCTs have demonstrated the potential to improve motor performance of children with DCD:

- Equine therapy to improve gait parameters,¹⁵⁸
- Futsal taught using a specific approach to improve motor proficiency,¹⁵⁹
- Table tennis to improve aiming and catching skills,¹⁶⁰
- Tai chi or muscle power training to reduce falls,¹⁶¹
- Trampoline training to improve motor performance,¹⁶²
- Taekwondo (TKD)'s effectiveness is inconsistent. One RCT found no significant difference between TKD and jogging for improving motor skills and balance,¹⁶³ while another demonstrated improved single-leg balance control compared with no intervention.^{121,164}

Active video gaming (AVG)¹⁶⁵: AVG refers to interactive gaming that involves physical activity, as opposed to passive, handheld gaming devices. Two SRs examined AVG's effectiveness.^{166,167} One review found that most children enjoyed and adhered to AVG interventions.¹⁶⁷ Both reviews found low-quality evidence supporting benefits for activity and BFS outcomes, including strength, anaerobic performance, and aerobic fitness.^{166,167} The reviews noted that studies often found similar results to control or comparison groups. The only RCT published since these SRs found similar results between AVG and task-oriented training.¹⁶⁸ Due to a small sample size, the study may not have had sufficient power to detect a statistically significant difference between the intervention groups. An important finding from one study was that children in the AVG group spent less time outside on the weekends.¹⁵⁵ Therefore, PTs must educate children and their parents/caregivers not to displace AVG with other productive physical activities.

Enhancing physical activity participation: The Clinical Practice Guideline to Enhance Physical Activity Participation for Children With DCD in Canada includes 50 recommendations to promote and enhance the participation and integration of children with DCD into physical activities that occur in the home, school, community, or rehabilitation clinic.¹⁶⁹ While this

guideline does not review specific activities, it provides strategies and considerations for parents, instructors, and clinicians when selecting activities, modulating difficulty, and providing feedback and supervision to enhance success.

Research Recommendation:

- Clarify the efficacy of evidence-informed community physical activities to improve motor performance or increase participation in physical activities or recreation for children at risk for or with a diagnosis of DCD.

[A] Action Statement 8: USE SMALL GROUP OR INDIVIDUAL SESSIONS. For children at risk for DCD or diagnosed with DCD, PTs should document and deliver interventions using individual (1:1) or small group (1:4–6) sessions. (**Evidence Quality: I, Recommendation Strength: Strong**)

Action Statement Profile. Aggregate Evidence Quality: Level I based on SRs and results from intervention studies using small and large groups.

Benefits:

- Improved outcomes have been demonstrated in children receiving individual and small group interventions.
- Physical therapy delivered in small groups (1:4–6) to address both social and motor objectives may be delivered at a lower cost and be most applicable in camp or community settings.

Risk, Harm, and Cost:

- Child anxiety may increase if groups are too large.
- Social group dynamics are unpredictable and may impact individual outcomes.
- Time constraints for small group sessions may be limiting for parents and children.
- Space and resource availability may be limited.
- Group-based charges may not be covered by third party payers.

Benefit–Harm Assessment: Preponderance of benefit.

Value Judgements: Caution should be taken when using group-based interventions by monitoring each child for signs of increased anxiety, avoidance of group participation, or lack of enjoyment. Children should be given the opportunity to express how they feel about an intervention method.

Intentional Vagueness: None.

Role of Child/Parent Preferences: Parents/caregivers and other relevant service providers provide valuable information on the effects that an intervention may have on their child. Children may have preferences for either individual or small group sessions that should be considered when developing interventions.

Exclusions: None.

Differences of Opinion: None.

Quality Improvement: Documentation of outcomes and the sessions using group versus individual approaches can contribute to patient registries.

Implementation and Audit:

- Documentation forms may need to be revised to include group and individual options.
- Audit the types of interventions using group and individual sessions and the outcome measures used.

Supporting Evidence and Clinical Interpretation. There is evidence to support both small group (1:4–6) and individual intervention sessions as beneficial for children with coordination difficulties, at risk for DCD, or who have a diagnosis of DCD.^{10,148,170} The evidence is inconclusive on whether an individual approach is superior for improving motor performance, components of physical fitness, or quality of life outcomes compared with a group-based approach.^{148,170} Large effect sizes on motor performance were found for both group (Cohen $d = 1.46$) and individual (Cohen $d = 1.05$) sessions.¹⁴⁸ A combination of group and individual sessions also yielded significant improvements in performance and satisfaction with ADLs.¹⁷⁰

The exact ratio for group-based intervention needs further investigation. Recommendations on the ideal group size cannot be determined based on the data, but we know that groups of between 4 and 6 children have been used, are manageable, and effective with one therapist and an optional assistant.¹⁴⁸ PTs should be aware of adverse events reported for children participating in a large group with a 5:11 ratio compared with 3 smaller groups with ratios of 2 to 3:4 to 5.¹⁵⁶ Children in the large group with the 5:11 ratio showed higher anxiety and lower levels of enjoyment, even though parents noted a decrease in peer problems and an improvement in rate of function as measured using the Children Activity Scale.¹⁵⁶ The GDG recommends that PTs be mindful of each child's response during group sessions. A combination of small group and individual sessions could be used to encourage participation with peers, generalize skills within natural circumstances, and address individual goals. The child's comfort with and benefit from group interventions must be considered a priority over any potential cost savings by providing physical therapy in groups.

Research Recommendation:

- Clarify the factors that influence decisions about group versus individual sessions, such as participants' sociocultural factors, motor impairment severity, or diagnostic status of at risk for DCD versus diagnosed with DCD.
- Determine optimal combinations of group and/or individual sessions for improving motor performance of children with DCD.

[B] Action Statement 9: PROVIDE APPROPRIATE INTERVENTION DOSAGE. For children at risk for DCD or diagnosed with DCD, PTs should design episodic intervention plans with high practice frequencies, using a combination of direct services and home, school, and community opportunities. (**Evidence Quality: II, Recommendation Strength: Moderate**)

Action Statement Profile. Aggregate Evidence Quality: Level II based on an SR with a meta-analysis.

Benefits:

- Improved physical therapy outcomes with appropriate intervention frequency and duration.
- Combining direct physical therapy services with home practice and community/recreation activities promotes appropriate social participation for children and families.

Risk, Harm, and Cost:

- Increased energy, cost, and time associated with increasing intervention dosage.
- Increased demands on space and resources in different settings.
- Increasing dosage may cause increased anxiety and decreased enjoyment for the child.

Benefit-harm Assessment: Preponderance of benefits.

Value Judgements: A higher practice frequency is necessary to achieve short-term outcomes. However, the practice schedule design may be dependent on the PT's experience to creatively encourage practice with non-PTs (eg, parents/caregivers, teachers, physical education teachers, paraprofessionals, coaches, and community activity providers). More home/community-based opportunities for practice may be optimal depending on financial resources. PTs need to closely collaborate with the child/family to adapt the plan of care based on the child's responses and the parent/caregiver resources.

Intentional Vagueness: None.

Role of Patient/Parent Preferences:

- Child and parent/caregiver adherence to the home program directed by the PT is needed to obtain the optimal dosage for benefits.
- Parents/caregivers and the child need to accurately report their ability to implement a recommended intervention plan based on their resources and the child's capacity.

Exclusions: None.

Differences of Opinion: None.

Quality Assurance:

- Dosage recommendations for clinicians and consumers provide guidance for evidence-based interventions including the time commitment needed to see meaningful improvement.
- Objective data on intervention dosages (physical therapy, home programs, and evidence-informed physical activities) contribute to patient registries.

Implementation and Audit:

- Documentation forms and electronic records may need to be revised to include intervention approaches (physical therapy, home or school practice, and evidence-informed physical activities) and dosage parameters. PTs

should document practice frequencies from direct service, home, or school practice, and evidence-informed physical activities to the extent practical.

- Audit intervention approaches and respective dosages to determine the overall benefits to children.

Supporting Evidence and Clinical Interpretation. The literature on therapeutic dosage is quite variable. Yu et al⁴⁹ conducted an SR of 66 studies on motor skills training for children with DCD, which yielded 18 studies for a meta-analysis. Therapeutic dosages were reported as the length of sessions, total number of sessions/week, total number of weeks, and total minutes of sessions; practice schedules were not provided solely as direct intervention by a PT, but included a variety of delivery methods and service providers.⁴⁹ Interventions varied: 44% were task-oriented, 15% process-oriented (focused on BFS), 18% combined task-oriented and process-oriented, and 23% were undefined.⁴⁹

Yu et al⁴⁹ found the session totals were highly variable, ranging from 10 minutes to 6 hours, 1 to 5 times per week for 4 to 24 weeks (180–2500 minutes). The most significant factors that impacted immediate motor performance in the meta-analysis were the total minutes of intervention (approximately 100/wk) and the frequency of sessions per week.⁴⁹ Practice schedules of 4 to 5 times per week (Hedges $g = 1.67$, $P < .001$; large effect),⁴⁹ over at least 9 weeks (Hedges $g = 0.93$, $P < .001$; large effect),⁴⁹ regardless of the length of the sessions or total number of sessions, resulted in significant improvement in motor performance. However, even 2 to 3 times per week (Hedges $g = 0.80$, $P = .008$; large effect)⁴⁹ and once a week (Hedges $g = 0.38$, $P = .003$; small effect) resulted in improved short-term motor performance gains with increased practice over time.

The GDG is not recommending a single definitive prescribed dosage for intervention at this time. The evidence supports frequent practice scheduled over several weeks, or until the goal-related outcomes are achieved. The PT should determine the number of direct intervention sessions needed to achieve a cumulative practice schedule of 100 minutes per week for an average of 9 weeks to achieve a goal-related task, depending on the goal complexity and the child's motor limitations. The practice schedule may include a combination of direct intervention sessions, home program practice, or practice with school personnel, and community physical activities related to the intervention outcomes. An optimal example of this type of schedule is: 1 to 2 direct physical therapy sessions/week, with a home program and/or additional time to practice during the school day for school-based settings. Community physical activities should be recommended to complement the primary physical therapy intervention. Measurable progress toward the child's goals would determine the duration of intervention. This sample schedule may be implemented in a variety of settings but may need to be modified based on child motivation, parent/

caregiver needs and resources, school practice opportunities, goal complexity, and the child's baseline performance.

Research Recommendation:

- Develop standardized methods for documenting intervention dosages.
- Clarify the optimal dosages for task-oriented approaches and community physical activity that result in long-term motor performance improvements, accounting for motor impairment severity or diagnostic status of at risk for DCD versus diagnosed with DCD.

[B] Action Statement 10: USE SHARED DECISION-MAKING TO ESTABLISH A HOME PROGRAM. For children at risk for DCD or diagnosed with DCD, PTs should use shared decision-making with the child, parents/caregivers, and other relevant service providers to establish a meaningful home program that may include education, coaching, motor skill practice, or community physical activities to support attainment of the child's goals and participation in activities with family and peers. (**Evidence Quality: II, Recommendation Strength: Moderate**)

Action Statement Profile. Aggregate Evidence Quality: Level II based on 2 CPGs, cohort and outcomes studies, and qualitative research on perspectives of parents/caregivers.

Benefits:

- Shared decision-making empowers parents/caregivers and other relevant service providers to implement activities that reinforce the child's goals.
- Shared decision-making enhances the relevance of education and home programs that support goal achievement.
- Education provides the parents/caregivers or other relevant service providers with strategies to address both current and future motor concerns in the home and community.
- Home programs contribute to the overall practice dosage, and higher dosages correlate with faster changes in motor performance.

Risk, Harm, and Cost:

- Time and energy required for implementation of home activities may be a burden for the child and their families.
- Parents/caregivers or other relevant service providers may have difficulty applying instructions.
- Parents/caregivers or other relevant service providers may decrease the intensity of home management activities if they perceive that the PT is implementing the intervention.
- Not implementing home activities may risk physical inactivity for children and diminish the potential for meaningful goal achievement.

Benefit–Harm Assessment: Preponderance of benefit.

Value Judgements: None.

Intentional Vagueness: None.

Role of Patient/Parent Preferences: Parents/caregivers are encouraged to participate in shared decision-making to learn strategies to help their child achieve motor tasks that complement or are not addressed by physical therapy. Parents/caregivers may not be able to implement home management activities if it places an undue burden on the family for time or finances.

Exclusions: None.

Differences of Opinion: None.

Quality Improvement: Documentation of home management participation provides data to understand the effect of practice on physical therapy outcomes within a comprehensive plan of care.

Implementation and Audit:

- Access APTA Pediatrics supplemental tools to provide families with resources to learn about DCD. <https://pediatricapta.org/clinical-practice-guidelines/>
- Access resources on the CanChild website to support home management activities. <https://canchild.ca/diagnoses/developmental-coordination-disorder/>
- Develop community relationships with individuals or groups that offer individual or small group physical activities to provide families with home program options.
- Create or revise documentation forms and electronic records to include education on strategies and home programs provided to parents.
- Create methods to track adherence and barriers to home management activities.
- Create educational materials that explain task analysis, task-specific training, and motor learning principles for the lay reader.
- Clinicians may need training in shared decision-making; techniques are described in the literature.¹³⁷
- Audit child and/or parent/caregiver satisfaction with home programs and/or community resources that augment direct physical therapy.

Supporting Evidence and Clinical Interpretation. Consistent with the European Academy of Childhood Disability guidelines, PTs should use shared decision-making to establish a meaningful home program with the child, family, and other relevant service providers.⁸ This may include discussing the different home management options, including education, coaching, and recommendations on teaching methods, motor skill practice, or community activities. Specific focus should be on establishing a feasible home program that supports attainment of the child's goals, increased fitness opportunities, and increased participation in activities with family and peers. The home management program should include activities that the child enjoys, and the family can realistically implement into their daily routine.

One home management option is instruction on effective teaching methods and motor learning techniques to implement at home, school, or in the community.⁸ Small qualitative studies investigating parents' experiences of a CO-OP home program found that parents enjoyed seeing their children experience successes and the difference these made in their children's lives.¹⁷¹ However, parents reported 3 challenges: (1) finding the time to do the home programs, (2) shifting children's attitudes and existing parent–child relationships because CO-OP requires that children are guided to perform tasks versus having tasks done for them, and (3) difficulty implementing CO-OP at home, which parent/caregivers felt could have been improved by more practice under therapist supervision.¹⁷¹

Education about practice, repetition for motor learning, and attaining new skills supports physical therapy interventions and the general health of the child. Parents/caregivers and other relevant service providers may need training and directed practice in task-oriented methods and principles of motor learning to encourage a child's success.⁸ A thorough list of specific adult education methods used for parents of children with DCD does not exist in the literature. Parents/caregivers should be directed to the CanChild M.A.T.C.H. framework, which suggests that they: (1) **Modify** the environment, (2) **Alter** expectations, (3) **Teach** strategies, (4) **Change** the environment, and (5) **Help** by understanding.¹⁷² <https://canchild.ca/en/diagnoses/developmental-coordination-disorder>

Examples of teaching strategies the PT should encourage with parents/caregivers and other relevant service providers gathered from DCD studies and other task-oriented, motor learning literature include:

- breaking the task into smaller, simple components;
- beginning with decreased environmental and task demands;
- repetition of task components followed by whole task practice;
- gradually increasing task demands until the child can generalize skills to perform the task;
- gradually modifying feedback strategies to support independent task performance; and
- encouraging self-discovery of problem areas and motor imagery if appropriate.⁸¹

Another home management option is promoting and enhancing participation in physical activities with family and peers. A good resource for strategies to enhance physical activity for children with DCD is the Clinical Practice Guideline to Enhance Physical Activity Participation for Children With DCD in Canada.¹⁶⁹ This CPG includes 50 recommendations to promote and enhance the participation and integration of children with DCD into physical activities that occur in the home, school, community, or rehabilitation clinic.¹⁶⁹

Research Recommendation:

- Investigate how PTs can collaborate with and coach parents/caregivers and other relevant service providers to facilitate long-term training effects and general health of children with or at risk for DCD.

III. Monitoring Children at Risk for DCD or Diagnosed With DCD

[P] Action Statement 11: MEASURE PROGRESS TOWARDS GOALS. For children at risk for DCD or diagnosed with DCD, PTs should regularly measure progress toward their goals to determine with parents/caregivers whether physical therapy interventions should be modified, new goals should be established, or if the children should be transitioned from direct intervention to annual or semi-annual physical therapy reevaluations. (Evidence Quality: V; Recommendation Strength: Best Practice)

Action Statement Profile. Aggregate Evidence Quality: Review articles and expert clinical consensus.

Benefits:

- Transitioning from direct intervention when activity/participation goals are met is a cost-efficient method of care.
- An annual or semi-annual physical therapy reevaluation may be beneficial to review goals, consider goal-oriented reinitiation of direct physical therapy, review home management suggestions and activity modifications and progressions, review evidence-informed community physical activity options, make appropriate referrals as concerns change with increasing age, and provide the child's primary care provider and other relevant service providers with a summary of the child's current motor performance.

Risk, Harm, and Cost: Reevaluations and possible subsequent interventions may add to the cost of care.

Benefit–Harm Assessment: Preponderance of benefit.

Value Judgements: An annual or semi-annual physical therapy reevaluation is in the best interest of the child, reflects family-centered care, and acknowledges that DCD is a developmental condition that may require episodic intervention over many years.

Intentional Vagueness: The GDG is vague about the timing for reevaluation of children with DCD. Timelines for follow-up are not discussed in the literature and are at the discretion of the PT in consultation with the parent/caregiver, child's primary care provider, and other professionals. Families should be encouraged to request physical therapy reevaluations following growth spurts or when new movement challenges are not responding to family-initiated modifications.

Role of Patient/Parent Preferences:

- Parents/caregivers may choose not to reinitiate direct physical therapy if it places undue burden on the family for travel, time, or finances.

- Parents should be advised that once their child is transitioned to annual or semi-annual evaluations, they may request physical therapy reevaluations if they have new concerns or goals for their child, and resources are available for services.
- The impact of DCD on quality of life across the lifespan^{68,77,80} should be discussed with parents/caregivers over the episode of care and at discharge, along with guidance about how PTs can assist with adaptations as needs arise.
- The impact of DCD on quality of life should be queried with adolescents with DCD to address concerns about receiving episodic interventions and challenges that arise with age and social demands.⁷⁸

Exclusions: None.

Differences of Opinion: None.

Quality Improvement: Long-term data about frequency and dosage of physical therapy episodes of care may allow therapists to share information with parents about the expected amount and types of lifetime interventions for a child with DCD.

Implementation and Audit:

- Educate parents/caregivers about the potential need for periodic episodes of physical therapy care based on child or parent/caregiver goals. Reasons to reinitiate direct physical therapy would be functional decline or new functional goals important for the child's participation in the home, school, or community.
- Access resources on the Rehabilitation Measures Database for updated psychometric properties of standardized assessments, including minimal clinically important difference: <https://www.sralab.org/rehabilitation-measures>.
- Audit the number of times direct physical therapy is reinitiated and the overall frequency and dosage of physical therapy or referral to other services per year, per child.

Supporting Evidence and Clinical Interpretation. PTs coordinate and communicate about the child's progress toward their goals throughout an episode of care to ensure optimal management of the child with DCD.⁴³ Consultation with the child's primary care provider, specialists, parents/caregivers, and/or other relevant service providers to discuss progress, ongoing concerns, and potential referrals is part of physical therapy management with children with DCD.⁴³

Throughout the episode of care, the child's progress toward their goals should be remeasured on a regular basis. Once the goals have been achieved or the child's progress has plateaued, a comprehensive reevaluation should be performed as outlined in Action Statements 2 to 5, to determine, with shared decision-making, if PT intervention should be modified, new goals should be established, or if the child should be

transitioned from direct intervention to annual or semi-annual physical therapy reevaluations.

Since most children with DCD do not outgrow their motor limitations,^{8,102} regular physical therapy reevaluations are necessary throughout childhood to review concerns, goals, consider goal-oriented reinitiation of direct physical therapy, review home management suggestions and activity modifications and progressions, review community physical activity options, make appropriate referrals, and provide the child's primary care provider and other relevant service providers with a summary of the child's current motor performance. Parents/caregivers should be educated that their child with or at risk for DCD may require multiple physical therapy episodes of care throughout childhood, and also should be educated on when a physical therapy reassessment is indicated.

Research Recommendations:

- Develop long-term follow-up data to study children with DCD to describe factors and adaptations contributing to successful adult life.
- Determine the extent to which adolescents and adults with DCD benefit from physical therapy interventions to address specific goals related to school, recreation, or employment.

2026 DEVELOPMENTAL COORDINATION DISORDER CLINICAL PRACTICE GUIDELINE SUMMARY

Summary

A review of the literature through January 2025 reaffirms and updates the 2020 DCD CPG. The 2026 DCD CPG includes 11 graded action statements that address physical therapy contributions to the diagnostic process, examination and evaluation including recommended outcome measures, shared decision-making to establish meaningful goals and home programs, collaborative plans of care including referral to other providers and dosage considerations, evidence-based intervention including task-oriented approaches to intervention and community physical activities, progress monitoring, transition to annual or semi-annual reassessments, implementation and compliance recommendations, and research recommendations. Strategies for guideline implementation, additional methodological processes, evidence tables, and a summary of research recommendations are available in Supplemental Digital Content 1, available at: <https://links.lww.com/PPT/A690>. Flow sheets for examination and intervention for DCD and summaries for families and professionals are available as supplemental tools on the APTA Pediatrics website (<https://pediatricapta.org/clinical-practice-guidelines/>).

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ABBREVIATIONS:

2020 DCD CPG, Physical Therapy Management of Developmental Coordination Disorder: An Evidence-Based Clinical Practice Guideline Published by the Academy of Pediatric Physical Therapy of the American Physical Therapy Association;

2026 DCD CPG, Physical Therapy Management of Children With Developmental Coordination Disorder: A 2026 Evidence-Based Clinical Practice Guideline From the American Physical Therapy Association Academy of Pediatric Physical Therapy;

ADHD, attention deficit hyperactivity disorder;

ADLs, activities of daily living;

AGREE II, Appraisal of Guidelines for Research & Evaluation, version 2;

AMSTAR-2, A Measurement Tool to Assess Systematic Reviews, version 2;

APTA, American Physical Therapy Association;

APTA Pediatrics, Academy of Pediatric Physical Therapy of The American Physical Therapy Association;

ASD, autism spectrum disorder;

AVG, active video gaming;

BOT-2, Bruininks–Oseretsky Test of Motor Proficiency, 2nd edition;

BOT-3, Bruininks–Oseretsky Test of Motor Proficiency, 3rd edition;

BFS, body functions and structures;

CAPE, Children's Assessment of Participation and Enjoyment;

CASP, Critical Appraisal Skills Programme;

CO-OP, Cognitive Orientation to daily Occupational Performance;

COPM, Canadian Occupational Performance Measure;

COSMIN, Consensus-Based Standards for the Selection of Health Measurement Instruments;

CPG, clinical practice guideline;

DCD, developmental coordination disorder;

DCDQ, Revised Developmental Coordination Disorder Questionnaire 2007;

DSM-5-TR, Diagnostic Statistical Manual for Mental Disorders, Fifth Edition, Text Revision;

GAS, Goal Attainment Scaling;

GDG, Guideline Development Group;

IDEA, Individuals with Disabilities Education Act;

IEP, Individualized Educational Plan;

KTK, Korperkoordinationstest Fur Kinder;

Little DCDQ, Little Developmental Coordination Disorder Questionnaire;
MABC-2, Movement Assessment Battery for Children, 2nd edition;
MABC-3, Movement Assessment Battery for Children, 3rd edition;
MABC-3-C, Movement Assessment Battery for Children Checklist, 3rd edition;
MOQ-T, Motor Observation Questionnaire for Teachers;
PAC, Preferences for Activities of Children;
PEGS, Perceived Efficacy and Goal Setting Program;
PERF-FIT, Performance and Fitness Test;
PQRS, Performance Quality Rating Scale;
PT, physical therapist;
QUIPS, Quality in Prognosis Studies;
RCT, randomized controlled trial;
RoB2, Revised Cochrane Risk of Bias Tool;
ROBIS, Risk of Bias Tool for Systematic Reviews;
SR, systematic review;
TGMD-3, Test of Gross Motor Development, Third Edition;
TKD, Taekwondo.

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