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Optimal child-led goal setting practices for school-aged children with a disability or delay: an international Delphi consensus study

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ABSTRACT

Aim: To achieve expert consensus on optimal child-led goal setting and evaluation practices for school-aged children (5 ≤ 17 years) who have a disability or delay.

Method: A three-round, eDelphi consensus design was used. In Round 1, expert allied health professionals identified factors important during child-led goal setting for: (i) planning, (ii) process steps and tools, and (iii) support strategies. Factors were collated into items for Rounds 2 and 3. Participants rated item agreement on a 7-point Likert scale. Consensus was determined as ≥75% of participants in agreement or disagreement.

Results: Sixty professionals from nine countries and six disciplines participated. Of 323 unique items generated, 159 (50%) reached consensus. Strong agreement was reached for goal setting and evaluation "process steps" and "support strategies" to engage children. It was strongly recommended that allied health professionals should tailor their processes to each child's individual needs, provide ability-specific strategies and resources, and empower children to share their perspectives. Fewer items reached consensus for "planning" and "tools" to guide child-led goal setting.

Interpretation: Professional experts agree that children can be actively involved in goal setting and evaluation. Future research should focus on tools and technologies to support child-led goal setting for children with diverse abilities.

> ➤ **IMPLICATIONS FOR REHABILITATION**
> - Professionals agree that children should be involved in goal setting to the greatest extent possible.
> - Children's readiness to participate relates to their cognition, communication, social-emotional skills, and motivation.
> - The goal setting process should be personalised and accessible for children.
> - Child-specific tools are needed to support children to share their perspectives.

Introduction

Child-led goal setting practices refer to approaches and tools that facilitate children's active involvement and autonomy in goal setting and evaluation [1]. Traditionally, professionals or caregivers have been the primary decision-makers regarding intervention priorities for children with disabilities and delays [2]. However, children with disabilities and delays have voiced a desire to have more autonomy in healthcare decisions [3,4]. Emerging research emphasises that including children in goal setting can enhance motivation, support engagement in intervention, and improve intervention outcomes [4–6]. Furthermore, building competence and confidence in goal setting at an early age supports the development of self-determination skills, which becomes the foundation for exercising choice and autonomy into adulthood [7].

Although child-led goal setting has the potential to yield significant benefits, its application in clinical practice is inconsistent [8]. Research has shown that in allied health practice, professionals' knowledge and skills in goal setting are amongst the most significant barriers [9]. Ambiguity about the process of goal setting can contribute to discrepancies between a professional's belief that they have engaged a client in goal setting and a client's perception of participation [10]. Furthermore, when clients are children, they may become excluded when the approaches and tools used do not account for their varying physical, cognitive, or communication abilities. As a result of these factors, children's healthcare service design and delivery continues to be largely adult-driven [11].

To better engage children and deliver intervention based on their priorities, standardised and child-specific goal setting practices are recommended [3, 9, 12]. However, there is insufficient guidance in the published literature to support clinicians and researchers in implementing child-led goal setting [2, 13]. A recent scoping review concluded that child-led goal setting and evaluation is a multi-phase process, which can be described using a new 6-phase framework called DECIDE. However, data showed

that children's involvement in the six DECIDE goal phases and the tools and approaches used to support each phase are inconsistent [14]. Furthermore, while interprofessional approaches to intervention planning and delivery are considered best practice [15,16], few studies had examined child-led goal setting and evaluation in an interprofessional context. There is a critical need to identify comprehensive, interprofessional clinical practices that can support clinicians and researchers to actively involve children through the DECIDE phases of goal setting and evaluation.

To start to address the gap in the literature and clinical practice surrounding child-led goal setting, the aim of this study was to seek consensus from clinical and research experts on child-led goal setting and evaluation practices recommended for use with school-aged children (aged 5 ≤ 17) who have a disability or delay.

Method

This study employed a three-round, electronic-Delphi consensus survey design [17,18]. A Delphi survey aims to address a knowledge gap through a structured, iterative process of consensus building using an expert panel [17]. This method was considered appropriate as (i) there is no published consensus for child-led goal setting practices, and substantial variation exists in clinical practice; (ii) the structured nature of the Delphi process, coupled with anonymity between participants, facilitates a systematic approach for collecting qualitative data; and (iii) opinions can be collected and synthesised from geographically and professionally diverse sources, thus ensuring the inclusion of a wide range of perspectives [19]. Ethics approval was obtained from The University of Queensland (reference number 20222/HE000042) and Australian Catholic University (2022-2712 R).

Participants and recruitment

Purposive and snowballing sampling techniques were used to recruit international professional experts through (i) author details on published papers that reported original data on goal setting and evaluation with children with disabilities or delays; or (ii) advertisements in professional organisations, social media, special interest groups, and professional communities of practice. There exists no universal definition of "expert" within healthcare; therefore, according to Delphi guidelines, criteria should be based on the study question [17, 20]. Participants were eligible for the expert panel if they were (i) an allied health professional eligible for registration with an appropriate professional body, (ii) practising in paediatrics in a clinical setting, in research, or in education at a tertiary institution, and (iii) had five or more years' professional experience.

eDelphi survey

Three eDelphi survey rounds were administered using the web-based software Qualtrics (Qualtrics, Provo, UT, USA. https://www.qualtrics.com) between July 2022 and April 2023. In Round 1, participants followed the electronic link to complete the consent form, demographic questionnaire, and survey questions. Implied consent was provided in subsequent survey rounds by ongoing survey completion. Anonymity between participants was maintained. All data was stored securely on the university's cloud-based software, Research Data Manager.

In Round 1, participants completed survey questions about demographic characteristics and experience with child-led goal

setting. Then, open-ended questions were posed to gain recommendations on three key factors of child-led goal setting, as outlined below:

1. **Planning considerations** *prior* to conducting child-led goal setting, i.e., (i) clinical frameworks to guide child-led goal setting and evaluation; (ii) factors that could indicate child readiness to be involved; and (iii) people who should be involved.
2. **Process steps and tools** to use *during* child-led goal setting, i.e., (i) process steps for goal setting and evaluation, and (ii) clinical tools which could be used with child self-respondents.
3. **Support strategies** to *facilitate* active child involvement, i.e., (i) strategies that could be used to support any/all children to be involved in goal setting and evaluation, and (ii) additional strategies for children with cognitive or communication difficulties.

Questions were developed for each section following a scoping review of research on child-led goal setting [14]. Items were not limited to the DECIDE terminology, to enable responses to be as expansive as needed to reflect current clinical practice. Task instructions and survey questions were piloted with three allied health professionals not involved in subsequent survey rounds to ensure clarity of wording.

For Round 2, participant responses generated in Round 1 were collated and represented as a list of unique item statements. Participants rated their agreement with each item on a seven-point Likert scale, from *very strongly disagree* [1] to *very strongly agree* [7]. Some items in the topics of "clinical frameworks" and "tools" for child-led goal setting were closely aligned with specific disciplines or countries. Therefore, participants were provided with an "*I don't know*" option to indicate if they were unfamiliar with the item. Items reaching 75% or greater "agreement" consensus were banked, and those reaching 75% or greater "disagreement" consensus were discarded.

In Round 3, items which had not yet reached consensus were re-offered, along with a summary of consensus items. These remaining items were rated again, and those reaching consensus were banked or discarded as relevant. Items not reaching consensus after Round 3 remained undecided.

Data analysis

Raw data were managed in Microsoft Excel. Qualitative content analysis was used to aggregate and analyse data from Round 1 and synthesise data following Round 3 [21]. First, open-ended responses were analysed inductively to code the data and cluster the codes into topics. Similar or repeated codes were condensed, and the remaining codes were converted into descriptive statements. These formed the items prior to Rounds 2 and 3. Statements were kept close to the participants' words to ensure the intended meaning was retained [22]. The final list of item statements was confirmed by all study authors.

Item ratings in Rounds 2 and 3 were analysed using descriptive statistics. Consensus was determined *a priori* as a minimum of 75% of participants in agreement (represented by a score of 5, 6 or 7) or disagreement (represented by a score of 1, 2 or 3) [23]. Strength of agreement was determined by calculating median scores and the interquartile range for each item [24]. Strength ratings were classified *a priori* as strong (median score ≥6 and IQR ≤1), moderate (score 5 < 6 and/or IQR >1), or none (score ≤4).

Following Round 3, a secondary analysis was completed on the items in "clinical frameworks" and "tools." Responses of "*I don't know*" were removed, and the percentage was recalculated to determine if consensus was reached amongst the subsample of those familiar with the item. This was completed to prevent results from becoming skewed by a disproportionate amount of "I don't know" responses and to identify potentially relevant items that are not recognised across all disciplines or countries. A decision matrix was used to group and display the final items (Table 1). To enhance the interpretability of results, consensus items generated in Method section, "Processes and tools used during child-led goal setting", were grouped deductively into the DECIDE framework goal phases.

Results

Participants

Sixty allied health professionals participated in Round 1 (Table 2). It was not possible to calculate the Round 1 survey response rate due to the snowballing recruitment technique. Forty-three participants continued to Round 2 (72% retention), and 42 participants completed Round 3 (70% retention). Professionals represented nine countries and six disciplines, including Occupational Therapy (48%), Physiotherapy (30%) and Speech and Language Pathology (17%). They reported a median of 20 years of experience working with children across a wide range of settings and population groups. Participants indicated a high level of experience in goal setting with children, with most professionals (86%) frequently or always involving children with disabilities or delays in goal setting. In contrast, fewer than half (41%) reported that they found it easy to involve children in goal setting, and less than a quarter (22%) found it easy to locate information on how to involve children in goal setting in clinical practice.

Consensus items

In Round 1, 323 items were generated, with a total of 137 reaching consensus after Round 2 and 159 after Round 3 (Figure 1). Items were grouped according to the decision matrix as follows:

- Group 1: Consensus items rated by all participants that met the construct of a child-led goal setting factor: n= 126 items reached consensus (Table 3–7)

- Group 2: Consensus items rated by a sub-sample of participants familiar with item that met the construct of a child-led goal setting factor: n= 5 items reached consensus (Tables 8–9)
- Group 3: Consensus items that did not meet the construct of a child-led goal setting factor: n= 25 (Supplemental Appendix 1)
- Group 4: Items that did not reach consensus or reached consensus disagreement: n= 167 (Supplemental Appendix 2)

Planning considerations prior to conducting child-led goal setting

Despite the large number of items generated from Round 1 (*n* = 34), only one item reached consensus which met the construct of a "clinical framework to guide child-led goal setting and evaluation": the *ENGAGE: Enhancing Child Engagement in Goal Setting Approach* [4] (Table 8). However, only 9 participants were familiar

Table 1. Decision matrix to guide data synthesis of items.

Item grouping	Decision-matrix criteria
Group 1	• ≥75 % of all participants agreed with this item, • AND the item met the construct of a child-led goal setting and evaluation (i) planning consideration, (ii) process step or tool, or (iii) support strategy
Group 2	• Following secondary analysis, ≥75 % of the participants who rated the item agreed with this item, • AND the item met the construct of a child-led goal setting and evaluation (i) planning consideration, (ii) process step or tool, or (iii) support strategy
Group 3	• ≥75 % of all participants agreed with this item • BUT the item did not meet the construct of a child-led goal setting and evaluation (i) planning consideration, (ii) process step or tool, or (iii) support strategy
Group 4	• <75 % of participants agreed with this item (no consensus) • OR ≥75% disagreed that this item represented a child-led goal setting and evaluation (i) planning consideration, (ii) process step or tool, or (iii) support strategy

Table 2. Participant demographic information.

| Participant demographics	n= (% of sample)		
	Round 1 *n* = 60	Round 2 *n* = 43	Round 3 *n* = 42
Professional discipline			
Occupational Therapy	29 (48)	22 (51)	19 (45)
Physiotherapy	18 (30)	13 (30)	13 (31)
Speech and Language Pathologist	10 (17)	7 (16)	8 (19)
Neuropsychologist	1 (2)	0 (0)	1 (2)
Music Therapist	1 (2)	1 (2)	0 (0)
Exercise Physiologist	1 (2)	0 (0)	0 (0)
Years of professional experience			
5 < 10	10 (17)	5 (12)	4 (10)
10 < 20	19 (32)	13 (30)	11 (26)
20 < 30	15 (25)	11 (26)	12 (29)
30 ≤ 50	16 (27)	14 (33)	14 (33)
Country of practice			
Australia	39 (65)	27 (63)	29 (69)
United Kingdom	9 (15)	5 (12)	3 (7)
Canada	3 (5)	1 (2)	2 (5)
Belgium	2 (3)	1 (2)	1 (2)
Netherlands	2 (3)	2 (5)	1 (2)
Israel	2 (3)	2 (5)	2 (5)
United States	1 (2)	1 (2)	1 (2)
Ireland	1 (2)	1 (2)	1 (2)
Brazil	1 (2)	1 (2)	1 (2)
Professional experience (participants could select >1 item)			
Clinical practice	55 (92)	39 (91)	37 (88)
Research	29 (48)	23 (54)	20 (48)
Tertiary education	22 (37)	19 (44)	17 (40)
Setting (participants could select >1 item)			
Community	25 (42)	18 (42)	15 (36)
Mainstream schooling	23 (38)	16 (37)	16 (38)
Specialist schooling	23 (38)	16 (37)	14 (33)
Private practice	23 (38)	16 (37)	15 (36)
Clinic	18 (30)	12 (28)	13 (31)
Rehabilitation centre	9 (15)	6 (14)	6 (14)
Acute hospital	6 (10)	3 (7)	4 (10)
Other	10 (17)	10 (23)	8 (19)
Clinical population (participants could select >1 item)			
Developmental delay	43 (72)	31 (72)	27 (64)
Autism Spectrum Disorder	40 (67)	28 (65)	25 (60)
Cerebral palsy	38 (63)	28 (65)	25 (60)
Intellectual impairment	35 (58)	25 (58)	21 (50)
Brain Injury	23 (38)	15 (35)	12 (29)
Language disorder	19 (32)	11 (26)	11 (26)
Other	24 (40)	18 (42)	20 (48)
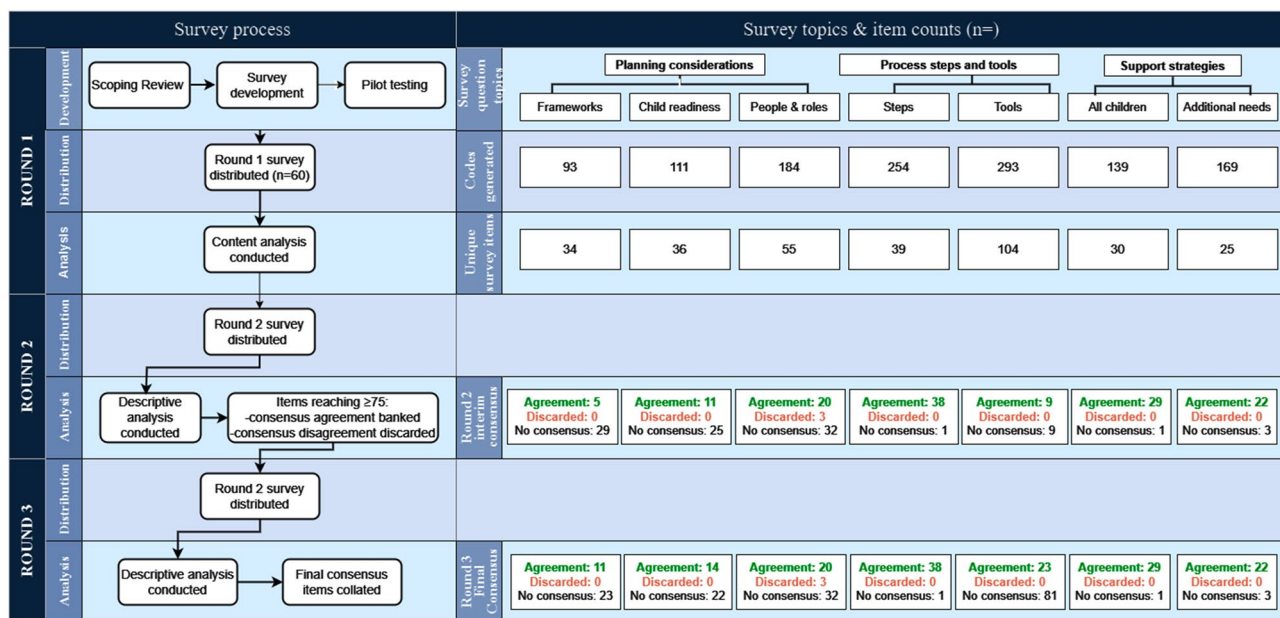
Figure 1. Delphi study process and item counts.

Table 3. Group 1 Delphi study consensus agreement items- planning considerations.

Topic	Item (n = x)	% consensus agreement	(Median; IQR) Strength of agreement
Consider who should be involved in goal setting and their role			
The child should	Be involved in goal setting	100	(6;1) **Strong**
	Identify their own goals	98	(6;2) Moderate
	Evaluate their own goals	88	(6;2) Moderate
The caregiver should	Be involved in goal setting	98	(6;2) Moderate
	Support the child's participation in goal setting	100	**(7;1) Strong**
	Be consulted about goals identified by the child	95	(6;2) Moderate
	Evaluate progress on the child's goals	86	(5;1) Moderate
Allied health professionals should	Be involved in goal setting	86	(5;2) Moderate
	Support the child's participation in goal setting	98	**(6;1) Strong**
	Be consulted about goals identified by the child	91	(5;1) Moderate
	Evaluate progress on the child's goals	77	(5;2) Moderate
Education staff should	Be involved in goal setting	77	(5;1) Moderate
	Support the child's participation in goal setting	95	(6;2) Moderate
	Be consulted about goals identified by the child	86	(5;1) Moderate
	Evaluate progress on the child's goals	77	(5;1) Moderate
Medical professionals should	Support the child's participation in goal setting	77	(5;1) Moderate
Other	Identify which other stakeholders should be involved in the goal process for that child	93	(6;2) Moderate
	Collaborate with other team members to ensure a coordinated approach to goal setting	98	**(6;1) Strong**
Consider the child's readiness to participate in goal setting			
Communication factors	The child can indicate their preferences	100	(6;2) Moderate
	The child can communicate in some way (either verbally or non-verbally)	98	(6;2) Moderate
	The child can make choices	98	(6;2) Moderate
	The child can respond to questions	93	(6;2) Moderate
	The child can communicate yes and no	93	(6;2) Moderate
	The child can understand the language used in the goal process	88	(6;2) Moderate
Cognitive factors	The child can understand the goal setting process	81	(5;1) Moderate
	The child can understand concepts such as like and dislike, easy/hard	83	(5;1) Moderate
	The child can follow simple instructions	76	(5;1) Moderate
Motivation factors	The child has an interest in an activity or occupation	98	**(6;1) Strong**
	The child has a desire to improve in an area	93	(5;1) Moderate
	The child has motivation to choose a goal	80	(5;1) Moderate
Social-emotional factors	The child can engage with the therapist in goal setting	88	(5;1) Moderate
	The child has rapport with the therapist	80	(5;1) Moderate

The items that reached 'strong agreement' are highlighted/bolded.

with this item. A further 9 items reached consensus but represented more general clinical frameworks or resources that inform therapeutic interactions and did not meet the construct of a child-led framework (Supplemental Appendix 1).

Professionals reached consensus agreement for 14 items (39%) that may indicate that children are "ready" to be involved in goal setting (Table 3). These items were related to children's level of cognition (3 items), communication (6 items), motivation (3 items),

Table 4. Group 1 Delphi study consensus agreement items- DECIDE framework process steps.

Goal phase	Action item	% consensus agreement	(Median; IQR) Strength of agreement
DIRECT the child and family to goal setting	Schedule sufficient time to complete the therapy goal process	100	**(7; 1) Strong**
	Gain consent from the parents	98	**(7; 1) Strong**
	Establish a relationship with the child and build rapport so that the child feels comfortable	100	**(7; 1) Strong**
	Explain the role of the therapist to the child and family	98	**(7; 1) Strong**
	Explain the goal setting process to the child and family	98	**(7; 1) Strong**
	Explain what goal setting is and the reason for goals to the child and family	98	**(7; 1) Strong**
	Determine the level of involvement the child wants to have in the goal process	98	**(7; 1) Strong**
	Determine the child's expressive communication abilities and preferences	100	**(7; 1) Strong**
	Determine the child's receptive communication abilities and preferences	100	**(7; 1) Strong**
	Therapist tailors their communication to the child's communication abilities and preferences	100	**(7; 0) Strong**
	Gather information about the child's preferences, hobbies, and interests	100	**(7; 1) Strong**
ELICIT goal topics and priorities	Communicate with the child to identify goals that are meaningful to them	100	**(7; 0) Strong**
	Support the child to identify what is important to them in their everyday life	100	**(7; 0) Strong**
	Support the child to review everyday activities/occupations and indicate their perceived performance	95	**(7; 1) Strong**
	Support the child to identify what they want or need to do better, more of, or differently	100	**(7; 1) Strong**
	Explain to the child that there is no limit to the areas in which they can set goals	93	(6; 2) Moderate
	Explain to the child that their goals don't have to be the goals that their parents, therapists, or teachers have identified as important	98	**(6; 1) Strong**
	Support the child to prioritise their goals in order of importance	95	**(6; 1) Strong**
	Respectfully negotiate between the child and their caregiver if their goals are different	100	**(7; 1) Strong**
CONSTRUCT a goal statement	Help the child to formulate a statement which represents their chosen goal/s	93	**(6; 1) Strong**
	Use clinical / assessment information to understand the child's current performance in that goal and refine the goal/s	88	(6; 2) Moderate
	Determine what success would look like	100	**(6; 1) Strong**
	Guide the child and family to ensure the goals are realistic	95	**(6; 1) Strong**
	Guide the child and family to break down longer-term goals into short-term goals	98	**(6; 1) Strong**
	Guide the child and family to make goals SMART (Specific, Measurable, Achievable, Realistic/Relevant, Timed)	85	(6; 2) Moderate
INDICATE baseline performance	Use a validated goal-based outcome measure to rate the goal at baseline	91	(6; 2) Moderate
DEVELOP an action plan	Identify who is going to support goal attainment (child, caregiver, teacher etc)	100	**(7; 1) Strong**
	Specify a timeframe for the achievement of goals	93	(6; 2) Moderate
EVALUATE goal progress	Review goals with the child and family at regular time points	100	(6; 2) Moderate
	Use a validated goal-based outcome measure to review and measure change against the goal following intervention with the child and family	93	(6; 2) Moderate

The items that reached 'strong agreement' are highlighted/bolded.

Table 5. Group 1 Delphi consensus agreement items- DECIDE child-led goal setting and evaluation tools (alphabetical order).

	Consensus tool utility across DECIDE goal phases					
Tools to support child-led goal setting	DIRECT children to goal setting	ELICIT goal topics and priorities	CONSTRUCT a goal statement	INDICATE baseline goal performance	DEVELOP an action plan	EVALUATE goal progress after intervention
COPM: Canadian Occupation Performance Measure	Moderate 91 (6;2)			Moderate 91 (7;2)		Moderate 91 (7;2)
GAS: Goal Attainment Scale			Moderate 87 (6;2)	Moderate 92 (7;2)		Moderate 92 (7;2)
Non-standardised qualitative tools (such as child report)				Moderate 86 (5;1)		
SMART goal principles			Moderate 76 (5;1)			
Subjective assessment (e.g., observation)				Moderate 83 (5;1)		Moderate 83 (5;1)

Strength of agreement, percentage agreement, (mean; IQR).

and social-emotional skills (2 items). The only item to reach strong agreement was that "*a child has interest in an activity or occupation.*" No items related to age reached consensus.

Regarding "people involved in goal setting and their possible role," 17 items (41% of total items) reached agreement consensus (Table 3). There was strong agreement consensus that *children should be involved in goal setting*, and that *caregivers and allied health professionals should support children's participation in goal setting*. Moderate consensus was reached that *children should identify and evaluate their own goals*. In addition, professionals moderately agreed that *caregivers, allied health professionals, and* *education staff should be consulted about children's goals* and *evaluate goals identified by children*. Items related to other possible people and roles in goal setting demonstrated higher variation in responses. Comments from professionals indicated this was due to the dynamic and individualistic nature of goal setting.

Process steps and tools to use during child-led goal setting

Thirty-eight items (98% of total items) reached consensus agreement for "process steps" to be used during goal setting, with a majority of these (77%) reaching a strong recommendation level.

Table 6. Group 1 Delphi consensus agreement items- support strategies for all children.

Topic	Item	% consensus agreement	(Median; IQR) Strength of agreement
The child's perspective is important during goal setting	Listen to the child's perspective to understand what they want to do and the meaning behind their goal	100	**(7:1) Strong**
	Empower the child to have a voice in the goal setting process	100	**(7:1) Strong**
	Explain to the child that their perspective is important	100	**(7:1) Strong**
	Advocate to others the importance of the child's role in goal setting	100	**(7:1) Strong**
	Respect children's input and ideas	100	**(7:1) Strong**
	Ensure the goals identified are relevant to the child's wishes and needs	100	**(7:1) Strong**
	Respect neurodiversity	98	**(7:1) Strong**
	Have an open mind	100	**(7:0) Strong**
	Try not to have your own therapist agenda	95	**(7:1) Strong**
	Use positive and strengths-based communication	100	**(7:1) Strong**
	Place the child's needs and preferences at the centre of goal setting	95	(6;2) Moderate
	Support the child to identify goals which will build on their strengths	95	(6;2) Moderate
	Help the child to identify dreams for the future	98	(6;2) Moderate
The goal setting process is personalised and accessible	Individualise the goal process for each child to ensure that it is meaningful, accessible, and fun	100	**(7:0) Strong**
	Ensure the method of goal setting/review is appropriate for the child's age and developmental level	100	**(7:0) Strong**
	Ensure the child's understanding is supported throughout goal setting	100	**(7:0) Strong**
	Enable the child to express themselves using their preferred communication method	100	**(7:1) Strong**
	Be alert to the child's non-verbal communication	100	**(7:1) Strong**
	Use assistive technology appropriate to the child to support their access to goal setting	93	**(7:1) Strong**
	Use concrete goal options/examples or visuals where required to support the child to identify their own goals	95	(7;2) Moderate
	Use a goal setting tool to structure goal setting and support the child to be involved	86	(5;2) Moderate
	Use visuals to support the child to identify their own goals	93	(6;2) Moderate
	Use technology (e.g., websites, smartphones, apps) to support engagement with and /or involvement in goal setting	77	(5;2) Moderate
The family is supported during goal setting	Use a family-centred approach to understand the child in their family context	98	**(7:1) Strong**
	Provide family support so that the parents/caregivers can allow their child to lead goal setting	100	**(7:1) Strong**
Goals are dynamic and responsive to child needs	Determine barriers to achieving goals and provide the child with assistance to overcome these	100	**(6:1) Strong**
	Be aware that child and family priorities can change over time	100	**(7:1) Strong**
	Adjust goals in response to the child's cues, such as unhappiness or distress	100	**(7:1) Strong**
	Modify goal targets so that the child buys into the process	84	(6;2) Moderate

The items that reached 'strong agreement' are highlighted/bolded.

Table 7. Group 1 Delphi consensus agreement items- support strategies for children with communication and cognitive impairments.

Topic	Item	% consensus agreement	(Median; IQR) Strength of agreement
Communication impairments	Ensure a total communication approach (i.e., a combination of communication methods) is used so that the child has a range of means to communicate	100	**(7;1) Strong**
	Enable the child to use their Augmentative and Alternative Communication (AAC) system e.g., high-tech communication device, symbols, sign language, eye gaze	100	**(7;0) Strong**
	Provide the child with additional time to understand and answer goal-related questions	100	**(7;1) Strong**
	Involve the caregiver to the child's ensure communication needs are adequately supported	100	**(6;1) Strong**
	Interpret all behaviour as communicative	93	(6;2) Moderate
	Increase the support provided through visuals	98	(6;2) Moderate
	Break up goal discussions across several sessions	79	(6;2) Moderate
	Use the caregiver as an interpreter/communication partner	95	(6;2) Moderate
	Work with or have guidance from a Speech and Language Pathologist to support the child to choose goals	98	(6;2) Moderate
Cognitive impairments	Ensure the method of goal setting is appropriate for the child's cognitive level	98	**(7;1) Strong**
	Adapt goal setting tools as required to support the child's understanding e.g., use faces instead of numbers	98	**(7;1) Strong**
	Make no assumptions that the child can't be involved, and do not "gate-keep" on their behalf	95	**(7;1) Strong**
	Scaffold the goal discussion until the child has reached their maximum participation	93	**(7;1) Strong**
	Break goal setting into simpler steps as needed	93	**(7;1) Strong**
	Allow additional time, or several goal setting sessions, so that you can go at the child's pace	95	**(7;1) Strong**
	Consider and support attention issues	98	**(7;1) Strong**
	Consider and support memory difficulties	98	**(7;1) Strong**
	Understand the child's processing speed	98	**(7;1) Strong**
	Slow down your rate of speech	81	(6;2) Moderate
	Involve the caregivers and/or education staff more in the goal setting process	86	(6;2) Moderate
	Consult the child's psychologist and/or any cognitive assessments that have been undertaken	79	(6;2) Moderate
	Increase the support provided through visuals	90	(6;2) Moderate

The items that reached 'strong agreement' are highlighted/bolded.

Twenty-nine consensus items aligned closely with the DECIDE goal phases, including *Direct the child and family to goal setting* (10 items); *Elicit goal topics and priorities* (8 items); *Construct a goal statement* (6 items); *Indicate baseline performance* (1 item); *Develop an action plan* (2 item); and *Evaluate goal progress* (2 items) (Table 4). The 9 additional items that reached consensus in this topic represented steps that are part of the broader therapeutic process, as they do not specifically relate to goal setting with children and families (Supplemental Appendix 1).

Variation was present in responses related to "clinical tools" that can be used with a child self-respondent during DECIDE framework goal phases, with all tools only reaching moderate consensus. Five tools reached consensus in the whole sample of participants that can support children to "Elicit" goal topics and priorities: the *Canadian Occupation Performance Measure (COPM)* [25], to "Construct a goal statement": the *Goal Attainment Scale (GAS)* [26] and *SMART goal principles* [27], and "Indicate" and "Evaluate" goal performance: *COPM, GAS, Non-standardised qualitative tools (such as child-report),* and *subjective assessment (e.g., observation)* (Table 5). A further four tools reached consensus in the sub-sample of participants familiar with the item: *Goal-based outcome measure (GBO), F-words goal sheet,* the *Perceived Efficacy and Goal Setting System (PEGS)* [28] and *Visual Analogue Scale (VAS)* (Table 9). No tools specifically supported the phase of "Direct" children to goal setting or "Develop" an action plan.

Support strategies

There was strong consensus for "strategies" that professionals can use to support children's active involvement in goal setting. Consensus was reached for 29 strategies (97%) to support all children (Table 6), as well as additional strategies to support children with communication impairments (9 strategies, 90%) or cognitive impairments (13 strategies, 87%) (Table 7). Topics that

emerged in this factor were *children's perspective are placed centrally during goal setting* (13 items); *the goal setting process is personalised and accessible for children* (10 items); *families are supported during goal setting* (2 items); and *goals are dynamic and responsive to children and family needs* (4 items).

Discussion

Expert paediatric allied health professionals in this study reached consensus that children with disabilities and delays should be involved in goal setting and evaluation to the greatest extent possible. Our study indicates that allied health professionals can play a crucial role in supporting child involvement in goal setting by (i) empowering children to share their perspective, (ii) tailoring the process to children's individual requirements and capabilities, (iii) employing a range of child-specific strategies and resources to promote involvement and engagement. Implementation of these recommendations in clinical practice and research can enhance the involvement of children across the DECIDE framework goal phases.

Professionals emphasise that the inclusion of children with disabilities and delays in goal setting should not be dependent on their age. Instead, it is important to consider their developmental level of communication, cognition, motivation, and the strength of the therapeutic relationship when determining if children are ready to be involved. In the domain of communication, professionals agree that children's ability to communicate in some reliable way should be prioritised over verbal expression alone. Regarding cognition, readiness is linked to children's ability to understand and follow the stages of the goal setting process. These findings differ from the usual criteria used in research, such as clinical trials, where age, IQ score, or verbal skills are commonly used as prerequisites for inclusion in goal setting. Results can assist researchers to develop and employ more functional criteria for including children in goal setting. Furthermore, clinicians can implement the recommended supports and strategies so that all children, including those with cognitive and communication impairments, can more frequently participate in goal setting.

Our findings build on previous research by providing expert consensus from professionals on the clinical practices that can support the involvement of children across DECIDE goal phases. There was strong consensus that health professionals should take proactive actions to "Direct" children to goal setting, by: (i) allocating sufficient time, (ii) building rapport with children, and (iii) equipping children and family with information about the purpose and process of goal setting. Professionals should communicate directly with the child to "Elicit" their preferences and priorities and guide the child and family to "Construct" and document meaningful goal statements based on these priorities. To address

Table 8. Group 2 Delphi study consensus agreement items- clinical frameworks which can guide process of child-led goal setting.

Topic	Item (n = x)	% consensus agreement	(Median; IQR) Strength of agreement	Number of participants in sub-sample (n=)
Clinical framework	ENGAGE approach: Enhancing Child Engagement in Goal Setting approach	75	(5;1) Moderate	9

Table 9. Group 2 Delphi consensus agreement items- DECIDE child-led goal setting and evaluation tools (alphabetical order).

Tools to support child-led goal setting	Consensus tool utility across DECIDE goal phases					
	DIRECT children to goal setting	ELICIT goal topics and priorities	CONSTRUCT a goal statement	INDICATE baseline goal performance	DEVELOP an action plan	EVALUATE goal progress after intervention
Goal-Based Outcome Measure		Moderate 75 (5;1) n = 21				
F-Words Goal Sheet		Moderate 80 (5;1) n = 31				
PEGS: Perceived Efficacy and Goal Setting System		Moderate 76 (5;3) n = 22				
Visual Analogue Scale				Moderate 93 (5;0), n = 31		Moderate 93 (5;0), n = 31

Strength of agreement, percentage agreement, *(mean; IQR), number of participants in sub-sample.*

child goals, professionals should support children to "Develop" an action plan by identifying who will support their goal attainment. Furthermore, validated goal-based outcome measures should be used with children to "Indicate" their baseline performance and "Evaluate" goals after the intervention, alongside the children's subjective viewpoints of goal progress. Health professionals can utilise these recommendations to implement child-led goal setting, guided by the DECIDE framework, on an individual and organisational level.

The context of child-led goal setting is important, and results emphasised the pivotal role the family plays. There was consensus that caregivers should support children's participation in goal setting, and that the goal setting process should be underpinned by family-centred practice values. It has been widely acknowledged that child and caregiver viewpoints on goal priorities often differ, and this potential conflict can be of concern to health professionals [29–31]. In this study, participants recommended several strategies to address the potential power imbalance between adults and children prior to, and during, goal setting. Strategies include (i) advocating to others on behalf of children regarding their role in goal setting, (ii) explaining to the children that their goals can be different to their parents, (iii) supporting the family so that they can allow their child to lead goal setting and evaluation, and (iv) respectfully negotiating between children and caregiver if their goals are different. The use of these strategies can enable professionals to centre children's voices during goal setting and evaluation whilst ensuring other perspectives, such as those of primary caregivers and other significant adults, are acknowledged.

It is evident that health professionals are drawing from a wide range of clinical resources to support their clinical practices related to goal setting and evaluation with children. Although a substantial number of clinical tools and frameworks were identified during the initial survey round, many did not align with the construct of child-led goal setting and evaluation or were discipline-specific. Only a few tools, such as the COPM and the GAS, achieved consensus in the whole sample of participants. Furthermore, only one framework specifically developed for child-led goal setting reached consensus, the Enhancing Child Engagement in Goal Setting Approach (ENGAGE) [4]. However, only a small number of participants were familiar with the approach, limiting the generalisability of this recommendation. Variation in responses may reflect the lack of available or well-recognised clinical resources to support child-led goal setting in a multidisciplinary context. The lack of suitable child-led tools possibly contributes to the dominance of therapist-led or parent-proxy goal setting that currently exists in paediatric clinical practice [2]. Further research is necessary to develop appropriate child-led tools and technologies that cater to broader populations of children and to develop necessary training for professionals and families.

The findings of this study can be utilised to design child-centred approaches, tools, and technologies for child-led goal setting and evaluation. Professionals recommended that processes and resources used for goal setting should be adapted to meet the needs of children, considering their individual strengths, abilities, and developmental stage. Moreover, common topics emerged from the results regarding the value of visuals, structure, scaffolding, and assistive technology in supporting all children, especially those with significant disabilities and delays. These recommendations are consistent with previous research supporting the need for flexible, child-specific, and technology-based approaches and tools to enable children to have more autonomy in goal setting and evaluation [11]. Future research should integrate the insights of both children and health professionals to co-design child-led tools and approaches.

Limitations

While the inclusion of international perspectives is a strength of this study, it is important to acknowledge that the expert panel inclusion criteria may have limited the contribution from culturally and linguistically diverse participants or participants from low-income countries. Future iterations of this study are required for culturally diverse populations, as well as First Nations children and families. Many recommendations from this study are likely to be universally applicable in an intervention setting; however, it is recognised that disability is a culturally influenced construct [32]. Careful consideration should be given to how the division of decision-making responsibilities and the roles of children, families, and professionals during goal setting are viewed within different cultural groups.

Allied health professionals were identified as experts in this study for the purpose of providing recommendations regarding clinical practices and resources, as they are most likely to guide child-led goal setting processes in interprofessional teams. However, children and families can offer valuable insights into their preferences for sharing goals and priorities [4, 33]. Gaining the perspectives of children with disabilities and delays and their families regarding child-led goal setting is a priority for future research, especially during the co-design of goal setting processes and materials.

Conclusion

In this study, allied health professionals collectively advocated for the inclusion of children with disabilities and delays in goal setting. Strong consensus emerged regarding procedural steps and strategies which can facilitate allied health professionals to implement child-led goal setting practices. Embracing this child-led approach ensures that the viewpoints and preferences of children can become the foundation for ongoing service delivery and evaluation. Findings emphasise avenues for future research, including the need for child-led goal setting tools that can enhance engagement of children with diverse abilities, and training for professionals to implement child-led goal setting recommendations in clinical practice.

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