



CHILDREN AND YOUTH

Promoting Family Centered Practice in the Pediatric Oncology Setting Through Program Development: Expansion of Therapy to Go

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Purpose of the Program

Occupational therapy (OT) contributes to the holistic care of young children with cancer through family-centered practice. Family-centered practice recognizes caregivers as essential partners in the therapeutic process, emphasizing collaboration and equipping families with the knowledge and resources needed to support their child's participation in meaningful occupations beyond direct therapy sessions (American Occupational Therapy Association [AOTA], 2020). In the pediatric oncology setting, family-centered practice is vital to a patient's developmental growth, as children enduring catastrophic diseases such as cancer are often limited in their occupational engagement by environmental and personal barriers. Caregivers play a critical role in supporting developmental experiences throughout a child's cancer journey. Equipping families with meaningful, developmentally appropriate activities can promote continued participation in everyday occupations such as play.

For a child, engagement in play is crucial to achieving developmental milestones. Play is defined in the Occupational Therapy Practice Framework as "active engagement in an activity that is intrinsically motivated, internally controlled, and freely chosen and that may include the suspension of reality" (AOTA, 2020 p. 34). For children receiving cancer treatment, play is not only a source of enjoyment but also a primary means through



which developmental skills are established and maintained. Therefore, ensuring opportunities for play despite medical challenges is an important component of pediatric oncology rehabilitation.

Context is the term used to describe the various patient-specific factors related to environmental and personal barriers (AOTA, n.d.). Each patient encountered by occupational therapists has a unique combination of environmental and personal factors within their context that influences participation in desired occupations such as play. “Environmental factors are aspects of the physical, social, and attitudinal surroundings in which people live and conduct their lives. Personal factors are the background of a person’s life and living and consist of the unique features of the person that are not part of a health condition or health state” (AOTA, 2020).

Understanding the influence of these environmental and personal factors is essential because they directly affect a child’s opportunities to engage in play, emphasizing the need for family-centered interventions that promote developmental participation across treatment settings. In this population, barriers to engagement in play may include the type of treatment received, sedation, hospitalization, housing arrangements, and access to available support.

Engagement in play can be greatly disrupted for the pediatric oncology population, resulting in the underdevelopment of their performance skills during this phase of required medical care (Sparrow et al., 2023). Although occupational therapy addresses developmental needs during direct intervention, caregivers often have limited resources to support therapeutic play and developmental skill acquisition outside of therapy sessions. To address these contextual barriers and extend developmental support beyond direct intervention, Therapy to Go was developed using principles from the



Developmental Frame of Reference and the Model of Playfulness (Bundy, 1997; Kramer & Hinojosa, 2010).

This family-centered program provides patients with developmentally appropriate items that facilitate developmental skill attainment. The contents of each Therapy to Go kit are individualized to the needs of the patient and are also influenced by recommendations received from rehabilitation staff involved in the patient's care. Each kit includes developmentally stimulating play items and associated educational handouts that provide caregivers with practical strategies for using the materials to support their child's development throughout oncology treatment.

Development of the Program

The Therapy to Go program evolved from a needs-based assessment that was conducted by assessing needs and gaps in the occupational therapy service delivery for young children receiving oncology- related treatment. Information was gathered through interdisciplinary collaboration with occupational therapists, speech therapists, physical therapists, and caregivers.

This collaboration aimed to identify barriers affecting children's opportunities for developmental play and occupational engagement during oncology treatment. The needs-based assessment revealed gaps between scheduled therapy sessions and children's daily routines across inpatient, outpatient, and home settings. Although children received direct rehabilitation services, families often lacked developmentally appropriate materials to support milestone acquisition outside of therapy. Treatment-related factors, including fatigue, medical procedures, hospitalizations, and abrupt transitions from home communities for specialized care, further limited access to familiar toys and opportunities for meaningful play. These findings demonstrated a need



for accessible developmental materials that families could use across settings to promote continued play, participation, and developmental progress.

The program began by supporting the needs of children presenting at an age range of 0–3 years. Appropriate developmental toy items were identified by collaborating with occupational therapists, speech therapists, and physical therapists. The following items were selected for inclusion in the Therapy to Go kits for these children: a puzzle, wooden blocks, a textured ball, a push-pull toy, a string with beads, a ring stacker, paper with large crayons, a rattle, and first word picture cards.

Patients were eligible for the Therapy to Go program if they were newly referred to rehabilitation services (occupational, physical, or speech therapy) and demonstrated developmental skills within the birth-to-3-year age range. The treating therapist identified eligible patients, collaborated with the interdisciplinary rehabilitation team to determine individualized developmental needs, and submitted desired items needed for patient to the program manager.

The contents of each Therapy to Go kit were tailored to the child's developmental needs and existing therapy goals, ensuring that each family received materials that were meaningful and relevant to their child's plan of care. Once assembled, the kit was delivered to the treating therapist, who introduced the program to the family during a treatment session. Therapists demonstrated the recommended play activities, reviewed the purpose of each item, and incorporated the materials into the child's home exercise program while providing caregivers with opportunities to practice the activities and ask questions.

Families kept the Therapy to Go kit to support developmental play across treatment settings, including the hospital, temporary housing, and the home. Each item included a



QR code linking caregivers to an online resource with detailed instructions and additional play ideas to encourage continued engagement outside of therapy sessions.

Expansion of Therapy to Go: Young School Age

In pediatric oncology, the environmental factors impede the continuum of advancement of developmental milestones because of the complex medical treatment required by the patients. This can result in patients being away from in-person learning and group play opportunities. Because of these known factors, it is crucial that we as practitioners fill the gaps to promote continued advancement.

Occupational Therapy Practitioners (OTPs) have a vital role in the cancer care continuum to ensure that children are engaging and participating in age-appropriate development and meaningful activities of daily living (ADLs). OTPs should increase providers' awareness of available services and programming to specifically promote age-appropriate skills in pediatric oncology patients (Braveman & Newman, 2025). As a result of this knowledge and from the needs-based assessment that was previously completed it was evident that expanding the program was vital and that continuing to fill the gap of providing family-centered care in the pediatric oncology setting was crucial. The results of an additional needs-based assessment utilizing feedback from parents indicated that, in the pediatric oncology setting, there was a large gap related to family-centered practice and continued advancement in developmental skills for patients aged 4–6 years.

The literature shows that many developmental milestones continue to be advanced through the ages of 4–6 years. According to the Peabody Motor Developmental Chart, a



Table 1

Skills That a Child Should Demonstrate Between 4 and 6 Years of Age

Skill category	Specific skills
Gross motor	Stands on one leg; jumps forward; kicks a ball forward 10 feet; stands on tiptoes without moving for 20 seconds; stands on one foot while bending forward without bending below the waist; runs and jumps without stopping and lands on two feet; steps forward twice, jumps, and lands on two feet.
Fine motor	Unbuttons three buttons in 75 seconds; draws intersecting lines; draws a square; grasps a crayon in the web space between the thumb and index finger; draws a person with nine parts; draws a rectangle; draws a diamond.
Hand-eye coordination	Folds paper in half; strings six beads; places eight pegs in a board; connects dots with a line; builds towers using alternating hands.
Object control	Strikes a moving ball with an open palm; bounces a ball and catches it with both hands; kicks a moving ball 7–10 feet; throws a ball 12 feet; bounces and catches a ball with one hand.

Note. Adapted from Stokes, N. A., Deitz, J. L., & Crowe, T. K. (1990). *The Peabody Developmental Fine Motor Scale: An interrater reliability study.* *American Journal of Occupational Therapy*, 44(4), 334–340.
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child in this age range should be able to demonstrate the skills listed in Table 1. In addition to the Peabody Developmental Motor Scales, developmental expectations outlined by the Centers for Disease Control and Prevention (CDC) were used to guide expansion of the Therapy to Go program. The CDC developmental milestone checklists provide age-specific expectations across social-emotional, language and communication, cognitive, and motor domains (Centers for Disease Control and Prevention [CDC], 2026). Incorporating these milestones ensured that Therapy to Go materials promoted development across multiple areas of occupation and aligned with expected developmental skills for each age group. Examples of developmental milestones expected by 4–6 years of age are provided in Table 2. Through the needs-based assessment, the category of “young school-aged” children was developed, reflecting the needs of patients aged 4–6 years. Therapy to Go for patients in this category provides the items shown in Figure 1.

Table 2

Examples of CDC Developmental Milestones Expected by 4 Years of Age (CDC, 2026)

Developmental domain	Examples of expected milestones by 4 years of age
Social/Emotional	- Engages in pretend play (e.g., teacher, superhero, dog) - Comforts others who are hurt or upset - Demonstrates awareness of safety - Adapts behavior to different environments (e.g., library, playground)
Language/Communication	- Uses sentences with four or more words - Recites portions of songs, stories, or nursery rhymes - Describes events from the day - Answers simple functional questions
Cognitive	- Identifies several colors - Predicts what comes next in familiar stories - Draws a person with three or more body parts
Movement/Physical Development	- Catches a large ball most of the time - Serves food or pours water with supervision - Unbuttons buttons - Uses a mature grasp on crayons or pencils

Note. Adapted from “Important Milestones: Your Child by Four Years,” by Centers for Disease Control and Prevention, 2026, <https://www.cdc.gov/act-early/milestones/4-years.html>.

Figure 1. Items included in the Therapy to Go kit for patients aged 4–6 years.



Note. Therapy to Go kit components for patients aged 4–6 years. Clockwise from top left: therapy putty, sensory color sorter, animal puzzle, handwriting activity workbook, scavenger hunt, and scissor activity. Images reproduced with permission from Together by St. Jude™.



For each item provided through the Therapy to Go program, there is a corresponding activity sheet accessible through a QR code. This provides parents with information regarding the item as well as ideas on how to play with it. The information on each activity sheet was created through collaboration with speech therapists, physical

Figure 2

Activity Sheet for the Scissors Skills Activity Pad.

Scissor Skill Activity



The following activities can be done with the Handy Scoopers or scissors given to your child in their Therapy to Go bag. You may do these activities at a table, on the floor, or on another flat surface.

Targeted skills

- Scissor skills
- Coordination of both sides of the body
- Fine motor strength
- Visual motor
- Language skills



Reminders

- Watch your child while they are using scissors.
- Be patient with your child. Give them enough time to complete each activity.
- Demonstrate and provide education to your child with each activity before having them complete the activity.
- Help your child as needed.

Activities

Using Handy Scoopers

Start with the Handy Scoopers if your child has trouble using scissors. This activity helps them build skills they will need to use scissors later.

During the activity, ask your child to say the words "open" and "close" to help them practice their language skills.



1. Ask your child to make a "thumbs up" with their dominant (strong) hand.
2. Have your child put their thumb into the smaller hole of the Handy Scoopers.
3. Have your child put their pointer and middle fingers into the bigger hole of the Handy Scoopers.
4. Let your child practice opening and closing the Handy Scoopers.
5. Ask your child to rip small pieces of construction paper.
6. Have your child roll each piece into a ball.
7. Ask your child to use the Handy Scoopers to pick up the balls of paper 1 at a time.
8. Have your child let go of the balls of paper.

You can also allow your child to pick up small items with the Handy Scoopers. Any motivating item for them that can be used with the Handy Scoopers will be great practice.

Using scissors to make small cuts

During this activity, ask your child to say words like "open" and "close" to help them build their language skills.

1. Ask your child to make a "thumbs up" with their dominant (strong) hand.
2. Have your child put their thumb into the smaller hole of the scissors.
3. Have your child put their pointer and middle fingers into the bigger hole of the scissors.
4. Let your child practice opening and closing the scissors.
5. Have your child hold the scissors upright.
6. Encourage your child to use their other hand to hold the paper still.
7. Ask your child to make small cuts along the edge of the paper.



Using scissors to cut shapes

Help your child practice cutting lines and shapes. Start with the easiest design (straight lines) and work toward the hardest designs (irregular shapes or designs).

Your child may not be able to cut all of the lines or shapes. That is OK.

Stop when the activity gets too hard or your child has finished all of the designs.

Straight lines

1. Draw simple, straight lines on a piece of construction paper.
2. Ask your child to make a "thumbs up" with their dominant (strong) hand.
3. Have your child put their thumb into the smaller hole of the scissors.
4. Have your child put their pointer and middle fingers into the bigger hole of the scissors.
5. Let your child practice opening and closing the scissors.
6. Have your child hold the scissors upright.
7. Encourage your child to use their other hand to hold the paper still.
8. Ask your child to cut the simple line that you drew.



Curved lines

1. Draw curved lines on a piece of construction paper.
2. Ask your child to make a "thumbs up" with their dominant (strong) hand.
3. Have your child put their thumb into the smaller hole of the scissors.
4. Have your child put their pointer and middle fingers into the bigger hole of the scissors.
5. Let your child practice opening and closing the scissors.
6. Have your child hold the scissors upright.
7. Encourage your child to use their other hand to hold the paper still.
8. Ask your child to cut the curved lines that you drew one at a time.

Simple shapes (circles and squares)

1. Draw large circles and squares on a piece of construction paper.
2. Ask your child to make a "thumbs up" with their dominant (strong) hand.
3. Have your child put their thumb into the smaller hole of the scissors.
4. Have your child put their pointer and middle fingers into the bigger hole of the scissors.
5. Let your child practice opening and closing the scissors.
6. Have your child hold the scissors upright.
7. Encourage your child to use their other hand to hold the paper still.
8. Ask your child to cut the simple shapes that you drew one at a time.

Using scissors for cutting with the activity pad

During this activity, ask your child to take their time and get as close to the line as they can.

Ask your child to say the words "cut on the line" as well as "go" and "stop" to help them practice their language skills.

If your activity sheet has pictures, encourage your child to name the colors, shapes, objects, animal sounds, or anything else they see.

1. Find a design from the scissor skills activity pad that matches your child's skill level with scissors.
2. Ask your child to cut along the lines.





therapists, and colleagues from the Occupational Therapy department. Figure 2 shows the activity sheet for the scissor skills activity pad:

Conclusion and Plans

It is planned to expand the Therapy to Go program to all age ranges to benefit our specific population of pediatric oncology patients. The Therapy to Go program is easily accessible through QR codes, for both the 0–3-years and 4-6 years age category. Having appropriate information for a given age range category available on the Together by St. Jude website, which is an online educational resource providing families and caregivers with resources throughout a child's care journey. Providing the Therapy to Go activity sheets on the Together website will enable families to easily locate information pertaining to advancing developmental milestones, thereby promoting age-appropriate skills and toy items to patients in the home setting. The continued advancement of the program demonstrates the need for and importance of OTPs in advancing programming focusing on family-centered practice in the pediatric oncology setting.

Case Example

This case study is an example of a patient who would qualify for the Therapy to Go program as expanded to serve young school-aged children:

Brody is a male patient who is 5 years of age with a diagnosis of medulloblastoma. He presents to St. Jude Children's Research Hospital for cancer treatment. His family has traveled from out of state, which limited the items they were able to bring with them. He will be at St. Jude for 6 weeks then will return home for a 4-week break before returning to St. Jude for 6–8 months to receive oncology-related treatment according to his medical plan of care. He is receiving occupational therapy, speech therapy, and physical therapy services at St. Jude. Brody has undergone surgery to remove a mass, resulting in right-hand ataxia, diplopia, and overall decreased balance. He was referred by his



occupational therapist for the Therapy to Go program, and the following items were provided: therapy putty, a scissor skills activity (with handy scoopers also provided), a color shape sorter, an animal puzzle, a handwriting workbook, and a scavenger hunt. The activity sheets were provided for each item. Following interdisciplinary collaboration, the occupational therapist introduced the Therapy to Go program during an occupational therapy treatment session.

Comprehensive parent education was provided regarding each item included in the program, including hands-on demonstration of activities with the patient to promote caregiver carryover. Parents also received QR codes linked to corresponding activity sheets, allowing convenient access to instructions and ideas for incorporating each item into daily routines.

The Therapy to Go program was designed to support continued participation in therapeutic activities within the family's housing environment as well as during any subsequent inpatient hospitalizations. To evaluate implementation and address any questions, the occupational therapist completed follow-up with the family to assess frequency of use and provide additional guidance as needed.

Parents reported positive feedback regarding the program. They indicated that their child engaged with the Therapy to Go activities approximately two to three times per week, with the scavenger hunt being his favorite activity. The family shared, "We feel that the program has increased his engagement in tasks he has not been interested in since surgery." This feedback suggests that the program promoted meaningful participation in therapeutic activities beyond the clinical setting while supporting caregiver confidence and home-based carryover.



Conclusion

Overall, this case study demonstrates the potential value of the Therapy to Go program in supporting participation beyond the traditional therapy setting, particularly within the pediatric oncology population. Children and families undergoing cancer treatment are often displaced from their typical environments for extended periods, resulting in decreased opportunities for play and engagement in meaningful occupations. The positive caregiver feedback received in this case suggests that the Therapy to Go program helped bridge this gap by increasing the child's engagement in activities that had previously declined following surgery.

Although this report represents a single case, it highlights the importance of identifying barriers to occupational engagement outside of therapy sessions and developing innovative, family-centered interventions to address those barriers. Programs such as Therapy to Go have the potential to extend the reach of occupational therapy beyond the clinic or hospital room by empowering caregivers with the resources and confidence to facilitate therapeutic play and skill development within natural environments. Occupational therapy practitioners are uniquely positioned to evaluate their own clinical settings, identify unmet needs, and develop creative, evidence-informed solutions that enhance continuity of care. By addressing gaps in service delivery, practitioners can promote occupational participation and strengthen family-centered care.

Occupational therapy practitioners should critically examine their own practice and consider opportunities to expand the impact of occupational therapy beyond direct treatment sessions. Integrating family-centered, occupation-based programs into everyday practice has the potential to improve carryover and ultimately enhance outcomes for children and their families.



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