

Focus on Pediatrics: Functional Mobility vs. Exercise



AMY MEYER, PT, ATP
Pediatric and Standing Specialist
PERMOBIL

WHAT IS MOBILITY? IS there a difference between functional mobility and physical activity or exercise? What is different when prescribing mobility devices for pediatric clients versus adults? How do we, as providers, account for these differences? Or ... do we?

Exercise vs. Mobility

People with physical disabilities, including children, need to be able to get around effortlessly in a reasonable amount of time throughout their day, accessing the same environments as

others without becoming fatigued. Sometimes moving a manual wheelchair or walking requires too much energy or risks shoulder damage, making a person non-functional.¹ For example, if a child

requires excessive energy to get to a classroom, he or she may not learn as effectively after getting there.² Powered mobility is an option that provides efficient functional mobility when walking or using a manual wheelchair proves to be non-functional.³

Consider Emily, a 7-year-old girl with spina bifida. She was using an ultra-lightweight manual wheelchair,

which, on the surface, appeared to be meeting her functional needs. However, her mom reported that Emily would come home from school, eat dinner and then be so tired she went directly to bed. This is not typical behavior for a child. Emily was so exhausted from pushing her wheelchair that she couldn't "be a kid" when she got home. Emily's therapy team decided she needed a power wheelchair to be independent and efficient with her mobility, and now she enjoys a full day of playing with her peers!

How do we assess the most appropriate functional mobility device for our clients? Often, we are forced to take a "clinic snapshot" of the patient, which is not always the most accurate method. Therefore, it is essential that we conduct a thorough subjective evaluation, asking the questions that will help us gain a better perspective on a person's individual situation and mobility needs. Additionally, a trial in the equipment is crucial. If considering a manual wheelchair, the patient should use the chair both in the clinic and outside if possible—navigating ramps, various terrains, etc. Document his or her efficiency using that equipment in a variety of environments.



Emily

Pediatric Differences

Anyone who is involved with pediatrics will attest to the fact that kids are not simply tiny adults. Children have distinct needs and require equipment that specifically meets those needs. Whether you're a part of the medical therapy model, the school therapy model, a teacher, a parent or just enjoy the company of young people—we all want kids to be kids!

Allowing differently abled children to have the opportunity to interact at the same level and in the same types of activities as their peers is essential for their overall development, for improving their self-image and confidence, and for helping them feel less isolated or

CONTINUED ON page 46

Anyone who is involved with pediatrics will attest to the fact that kids are not simply tiny adults.

*Focus on Pediatrics:
Functional Mobility
vs. Exercise*

different. Whether a child is in need of crutches, a manual wheelchair or a powered wheelchair, we need to be aware of that child's specific needs when prescribing his or her mobility equipment and seat functions.⁴

How do we decide what type of equipment is the most appropriate to meet the needs of our pediatric clients? The Medicare algorithm is a good framework to help decide on the general class of equipment. However, with children, we need to consider not only their home



Kendle

environments, but also all other areas of their lives: the classroom, the playground, the backyard, the ball field, the garden and wherever else children need to be.⁵

We must remember that a child's job is to play and explore the world every day in order to develop the same skills as children without mobility restrictions. We shouldn't restrict a child to the home environment when his or her peers are out and about

seeking experiences in the world! Our goal as a therapy team should be to integrate the child as much as possible into his or her world, allowing the child to function with peers independently.

We also need to keep children safe in the process—prevent the acceleration of disease progression and reduce the risk of developing secondary complications such as contractures, scoliosis, etc.—but only to the extent that they may also remain functional. There is a fine balance between position and function, and the challenge is to find the most appropriate device that can effectively manage both.

As I heard a representative from The Roho Group® say, "There comes a point in seating where skin wins." Likewise, there's also a point when function prevails over positioning. Let's face it: if someone is not comfortable or functional in his or her mobility device, he or she won't use it. Or, even worse, he or she will use it inappropriately, which increases risk for further injury or worsening secondary complications.

Negative Perceptions of Power Mobility

When considering power mobility, parents often wonder if their child will lose strength due to using a power wheelchair, or worry that a power wheelchair will keep the child from walking.⁶ Exercising is important for everyone; however, mobility and exercise are not one in the same.

Think of your routine: you drive to the gym to get on the treadmill. You drive to the park to ride your bicycle. We even drive around just to find the nearest parking spot at the mall. There are many ways for children with disabilities to develop strength and endurance. Studies have found that children typically do not lose gross motor function due to power wheelchair use. On the contrary, it has been shown that after receiving independence

through power mobility, gross motor skills actually improve as children are more motivated to move and do things for themselves!⁷

Caregiver Assistance vs. Independence

We hear it all the time from funding sources: "Children have 24-hour caregiver assistance." Sometimes funding sources see this as justification to deny power seat functions for young children, or possibly even deny power mobility or ultra-lightweight manual wheelchairs altogether! Studies have shown that without independent mobility, people develop dependency on others—"learned helplessness."⁸ Mobility opens doors for opportunity as well as responsibility—prerequisites for independence, confidence and a positive self-image and attitude.

Let's specifically discuss power seat functions for children. Often, we might be tempted to save some money by providing manual seat functions on a power wheelchair base, but at what cost to the patient? Sometimes manual seat functions are appropriate, but this is typically the exception rather than the rule. Just like learned helplessness develops with dependent mobility, the same applies to children who cannot effectively reposition themselves or reach objects without the assistance of someone else.

If a child has the ability to operate his or her own seat functions, an opportunity for independence is revealed. By giving children the ability to reposition themselves independently, they no longer need to ask for help (learning helplessness) but are empowered to fidget in their chair just like their peers do. Whether it's for postural stability, pressure relief or simply for sensory stimulation, kids should have the right to move.

Take, for example, Kendle, a 6-year-old with congenital muscular dystrophy. She has normal sensation

*Focus on Pediatrics:
Functional Mobility
vs. Exercise*

and is extremely weak (especially proximally). When recently talking to Kendle about her power seat functions (seat elevator and tilt), she had much to say! We had dinner together, and throughout the meal she used both seat functions multiple times—independently!

I asked Kendle why she needs her power tilt feature. She responded, “When my butt gets sore, I tilt. Or, when I am going down the ramp at our house, I tilt so that my head leans back.” Even a 6-year-old can figure out that when gravity assists her posture, she doesn’t have to work as hard and therefore has more energy to participate in her daily activities.

Kendle loves to draw and hopes to one day become a professional artist. There was a problem ... her shoulder weakness requires her upper extremities to be supported in order to effectively complete her drawings. Thankfully, that’s no longer a problem for Kendle; she uses her power seat elevator to access various table heights to give her arms proper support. Actually, during dinner, she needed to elevate her seat to access the table so she could feed herself (after completing her drawing, of course, which will go on my desk as a reminder of her beautiful spirit). Thanks, Kendle, for teaching me about how important independence is and how effective power seat functions can be—even in young children.

We need to keep pushing the envelope, advocating for our patients and fighting funding sources to approve the mobility equipment that our patients need and deserve in order to be fully INDEPENDENT. We will get through this crisis and there is light at the end of the tunnel. But, we need to make sure our voice is heard. We must continue to raise the bar for quality products in our industry! **D**

1. *Paralyzed Veterans of America (PVA). Preservation of Upper Limb Function Following Spinal Cord Injury: A Clinical Practice Guideline for Health-Care Professionals. Journal of Spinal Cord Medicine, 2005; 28(5): 434–470.*
2. *Franks CA, Palisano RJ, Darbee JC. The effect of walking with an assistive device and using a wheelchair on school performance in students with myelomeningocele. Physical Therapy, 1991; 71:570–579.*
3. *Leonard RB. A question of power. TeamRehab Report, May 1992, pp. 22–23.*
4. *Rehabilitation Engineering & Assistive Technology Society of North America. RESNA Position on the Application of Power Wheelchairs for Pediatric Users. Approved: April 23, 2008.*
5. *Wiarat, L, Darrah, J, Cook, A, Hollis, V & May, L. Evaluation of Powered Mobility Use in Home and Community Environments. Physical & Occupational Therapy in Pediatrics. 2003; 23(2):59–75.*
6. *Wiarat L, Darrah J, Hollis V, Cook A, May L. Research reports: mothers’ perceptions of their children’s use of powered mobility. Physical & Occupational Therapy in Pediatrics. 2004; 24(4): 3–21.*
7. *Dietz J, Swinith Y, White O. Powered mobility and preschoolers with complex developmental delays. American Journal of Occupational Therapy. 2002; 56: 86–96.*
8. *Stancliffe, S. Wheelchair Services and Providers: Discriminating Against Disabled Children? International Journal of Therapy and Rehabilitation. 2003; 10(4):152–158.*

ABOUT THE AUTHOR

Amy may be reached at 800.736.0925, ext. 312 or amy.meyer@permobilus.com.