

Empowering Parenthood: Designing Accessible Equipment for Parents with Physical Disabilities

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Background

Parents with disabilities face significant barriers when caring for young children due to a lack of adaptive equipment designed to meet their mobility and functional needs. Mainstream baby gear often assumes able-bodied caregivers, excluding many families from safe and independent caregiving. This lack of inclusive design contributes to physical strain, emotional distress, and dependency on others—ultimately limiting parenting autonomy. Currently, there are very few commercially available products that address this gap. This project seeks to address this critical equity issue by exploring adaptive solutions and conceptualizing inclusive stroller designs that center the needs of disabled parents.

Method

This project was rooted in lived experience as a disabled parent navigating the physical and emotional challenges of caring for a young child. Rather than using formal research methods, the process focused on community-informed reflection through personal experiences and participation in peer-led online spaces where disabled parents share struggles, adaptations, and support. Through informal discussions with other mothers in similar positions, common challenges began to surface. One of the most pressing concerns was the lack of baby gear that supports accessibility and independence. These shared perspectives helped shape the direction of this project. To bring initial ideas to life, the project utilized AI-assisted design tools to create conceptual mockups of an adaptive stroller compatible with wheelchairs. These visuals served as a springboard for exploring potential product features that prioritize safety, function, and dignity for both parent and child. The process was deeply reflective and iterative, grounded in both real-world caregiving experience and a commitment to imagining a more inclusive future in parenting design.

Final Product

The final product of this project is a pitch video designed to introduce and advocate for inclusive innovation in the baby gear industry. The video presents a real-world accessibility gap in parenting tools and proposes a vision for change, grounded in lived experience and inclusive design principles. It aims to serve as a catalyst for industry innovation, pushing for the development of adaptive baby gear that meets the needs of parents with disabilities—particularly wheelchair users and individuals with mobility challenges. Key components of the project leading to the video include:

- Identified a severe lack of commercially available strollers and carriers compatible with wheelchairs or mobility devices.
- Conceptualized a front-attaching stroller prototype that enables wheelchair users to push their child independently and safely.
- Created visual concept art using AI tools and began outlining potential materials and design specifications for future prototyping.

The pitch is intended not only as a demonstration of leadership, but also as an invitation for collaboration—with designers, occupational therapists, engineers, and advocates—to carry this work forward and make inclusive parenting a design standard, not an afterthought.

AI Visualizations



Findings

Commercial options for accessible baby gear are nearly nonexistent. Most mainstream parenting equipment is designed around able-bodied assumptions, unintentionally excluding disabled caregivers from independently and safely caring for their children. This creates not only a barrier to equitable parenting but can also negatively affect the child’s development and caregiver well-being. This project revealed a clear and urgent innovation opportunity in the adaptive product space. While some products are labeled as accessible, many are either missing from retailer websites or difficult to locate—suggesting that products must often conform to able-bodied expectations to gain enough traction to stay on the market. The lack of visibility and commercial viability for these tools perpetuates a cycle of exclusion. Despite limited resources, the use of AI tools enabled early-stage conceptualization of adaptive designs and demonstrated how technology can support accessibility-focused innovation. These findings reflect both the challenges and the possibilities: disabled parents are not being fully served by current markets, yet their experiences offer a powerful foundation for reimagining what inclusive parenting gear could—and should—look like.

Next Steps

To move this project from concept to real-world impact, the following steps are recommended:

- Secure a provisional patent to protect the intellectual property of the adaptive stroller design while continuing to refine and develop the concept.
- Partner with university engineering or design departments to create CAD models or physical prototypes that reflect functional and aesthetic goals.
- Explore funding opportunities through disability-focused grants, assistive technology pilot programs, or Medicaid waiver support.
- Engage clinicians, therapists, and parent advocates to provide insight on safety, usability, and family-centered adaptations.
- Work toward long-term goals of full patenting, licensing, or public release of the product to ensure sustainable access.
- Pitch the concept to major baby gear manufacturers such as Graco, Evenflo, or Britax to explore co-design, production, or licensing opportunities.

These next steps aim to ensure that disabled parents are no longer left behind by design—and that inclusive parenting tools become a norm, not an exception.

Reflections

This project gave me the opportunity to step into leadership by addressing a problem I know firsthand: the lack of accessible parenting equipment for people with mobility disabilities. Rather than relying on traditional research methods, I leaned into my own experience and the shared experiences of other disabled parents to guide this work. That approach helped me understand how powerful lived experience can be in identifying gaps and proposing real-world solutions. The project aligns with the values of the LEND program. It is family-centered because it focuses on making sure all parents—regardless of ability—can care for their children with dignity and independence. It reflects cultural competence by calling attention to how ableism shapes product design and access. And it supports interdisciplinary practice by connecting ideas across design, healthcare, and disability advocacy. What I take away from this is that leadership doesn’t always have to look like research papers or formal studies. Sometimes it looks like using your voice, your experience, and your vision to push for change where it’s needed. This project helped me clarify that I have something important to contribute—and that there’s space in this field for leaders like me.

