Ladder Health

Reaching More Families: Technology-Enabled Developmental Therapy

Comprehensive care for early childhood development, backed by Boston Children's Hospital.

DEVELOPED & TESTED AT Boston Children's

✦ OVERVIEW

Ladder Health addresses critical access barriers in pediatric developmental therapy through a technology-enabled care model that delivers a superior experience for families. By combining virtual delivery, caregiver partnership, and engagement tools with strong clinical oversight, Ladder expands therapist capacity, improves family engagement, and delivers therapy in children's natural learning environments — making high-quality care accessible when and where families need it most.

This approach responds to an urgent and growing need. Approximately 17% of children in the United States experience developmental delays or disabilities that affect learning, communication, motor skills, or behavior.[1] For these children, early intervention is essential. A substantial body of research demonstrates that the first years of life represent a period of heightened brain plasticity, during which rapid brain growth makes developmental trajectories particularly responsive to environmental input and supportive intervention. Studies show that high-quality early developmental programs and caregiver-mediated interventions are associated with improved long-term outcomes in cognitive development, academic achievement, and functional independence.[2-7]

However, the benefits of developmental therapy extend well beyond early childhood. Children continue to develop critical skills throughout their school-age years, and ongoing therapeutic support during this period is vital for maintaining progress, building on early gains, and addressing emerging challenges in academic, social, and functional domains.

The evidence is compelling. The Abecedarian Project found that comprehensive early childhood education beginning in infancy led to higher academic achievement, a 7.3:1 return on investment, and lasting brain effects into adulthood.[4] Similarly, home-based early developmental intervention during the first three years significantly reduced socioeconomic disparities in cognitive outcomes, with children from lower-resource families showing gains that substantially narrowed developmental gaps by 36 months.[5]

And children with developmental delays and disabilities require continuity of targeted developmental intervention well beyond the first three years of life, with developmental surveillance also remaining important throughout the school years for ongoing identification of and intervention for delays and impairments.[8]

Yet access to this critical care remains severely limited across all age groups. Families often wait more than 90 days for initial evaluations, followed by additional delays before treatment begins. For Early Intervention (EI) services supporting children under age three, one safety-net population study found that only 43% receive an EI care plan within the federally mandated 45-day timeline, highlighting substantial access delays.[6] Ladder Health's platform demonstrates what's possible when access barriers are removed: families move from referral to first session in an average of 11.8 days, addressing the urgency that developmental intervention demands.

Administrative burden, fragmented service systems, and challenges coordinating care between healthcare providers and early intervention programs contribute substantially to delays in accessing developmental services.[9,10] Limited availability of school- and community-based therapy services further contributes to substantial unmet developmental therapy needs.[11]
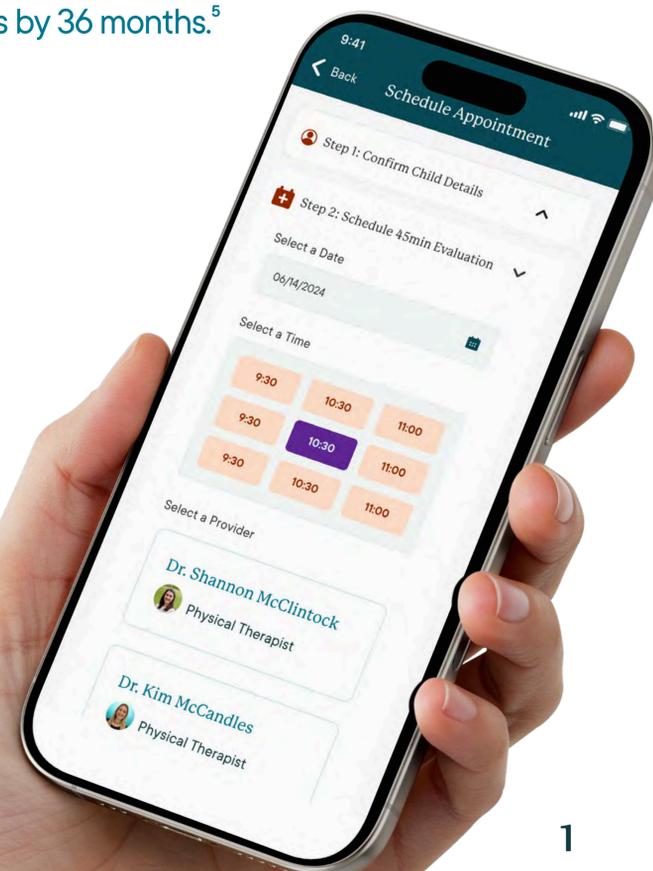
In rural areas, families may travel hours to reach a qualified therapist. Working parents struggle to attend recurring midweek appointments. For medically complex children with competing medical appointments, scheduling developmental therapy becomes nearly impossible. Some families, unaware of the importance of early intervention, prefer to wait to see if developmental concerns will resolve on their own or work with their child independently before seeking services.[9]

When children age out of early intervention at three, many experience service gaps or lose access entirely while managing new insurance requirements and provider networks, resulting in lost developmental time. These access barriers persist throughout childhood, affecting children who need continued support during their elementary and middle school years.

Traditional clinic-based models cannot scale to meet this demand. Persistent workforce shortages in pediatric physical, occupational, and speech therapy exist nationwide. Training new clinicians takes years, and geographic maldistribution leaves some regions chronically underserved. Even when appointments are available, practical barriers — transportation challenges, inflexible work schedules, childcare needs, and language barriers — disproportionately affect those who need services most. The conventional model, with appointments during business hours, forces working parents to choose between work and their child's therapy, limiting access and reducing the number of children each therapist can serve. In Ladder Health's experience to date, 44% of families choose appointments outside traditional 9-5 hours when given the option, revealing significant unmet demand for flexible scheduling that traditional clinic models cannot accommodate.

The current approach to developmental therapy is unsustainable. Technology-enabled care represents a scalable solution to address persistent access gaps in early intervention. The evidence represented here demonstrate that families engage meaningfully when barriers of transportation, scheduling and geographic isolation are removed, and that clinical outcomes remain strong when caregiver engagement is prioritized and sustained.

THE TRUE COST AND WHY DELAYS IN CARE ARE MORE EXPENSIVE THAN THEY APPEAR

Early childhood developmental programs represent one of the highest returns on investment in health and education policy. Economic analyses show that high-quality early childhood interventions can generate approximately $7-$12 in long-term societal savings for every dollar invested through reductions in special education costs, improved academic attainment, increased lifetime earnings, and decreased reliance on social services.[7,8]

The benefits of early intervention are immediate and cumulative. Early speech-language intervention improves expressive language development and is associated with reduced risk of later social and academic difficulties.[12]

Randomized clinical trial evidence further demonstrates that targeted physical therapy interventions, such as the START-Play program for infants with neuromotor disorders, improve cognitive and motor outcomes within the first year following treatment.[13] Consistent with these findings, clinical guidelines recommend prompt occupational and physical therapy for preterm and medically vulnerable infants, as early referral is associated with improved developmental outcomes compared with delayed intervention.[12]

Occupational therapy for sensory processing challenges improves occupational performance, social skills, and daily functioning, with sustained gains. A randomized controlled trial of a GAME-based early intervention incorporating sensory and cognitive activities demonstrated improvements in developmental domains, social-emotional functioning, and parent–child interaction among children with developmental delay.[14] In another study, children receiving occupational therapy for sensory processing challenges demonstrated significant improvements in occupational performance and individualized goal attainment, with gains maintained 6–12 months after intervention.[15]

Conversely, delayed care has compounding effects. Persistent developmental delays are associated with increased risk of later academic, social, and functional difficulties. Early identification and intervention can help mitigate these risks, whereas delayed recognition may allow gaps to widen over time.[16] When developmental needs are not addressed early, challenges may become more complex over time, affecting family well-being, educational participation, and long-term economic outcomes.

Considering the full economic impact, including special education costs that are two to three times higher than general education, behavioral interventions in adolescence, lost parental productivity, and reduced lifetime earnings for adults with untreated developmental challenges, the cost of delayed intervention far exceeds that of timely care. However, the current system creates these delays by design rather than by necessity.

👥 CURRENT MODELS CAN'T MEET THE NEED

Traditional clinic-based therapy scales linearly: serving more children requires hiring more therapists, leasing more clinical space, and increasing overhead proportionally. This creates natural limits on how quickly services can expand, especially in areas where recruiting therapists is difficult.

The conventional model, where families travel to a clinic for a 30- to 60-minute session once or twice per week, has inherent therapeutic limitations. For working families with children who have complex needs that require consistent, long-term intervention, this approach is often unsustainable. The same barriers that make it difficult for families to access care in the first place — transportation challenges, inflexible work schedules, childcare needs, unpredictable life circumstances — create significant obstacles to getting started with therapy and lead to significant drop-out once enrolled. As a result, many families who manage to secure appointments never begin treatment, and those who do start often cannot maintain consistent attendance to experience the full benefits of intervention.

High no-show rates waste scarce resources, with scheduled slots going unused. Research demonstrates that virtual care models substantially improve attendance, helping ensure children receive the consistent intervention they need while maximizing efficient use of provider time.[17-19]

Access barriers disproportionately affect vulnerable families. Those who could benefit most from developmental services, such as families facing economic hardship, living in underserved areas, or managing multiple stressors, are often least able to access them. This is not only inequitable but also economically inefficient, as untreated developmental delays lead to higher downstream costs in special education, behavioral interventions, and reduced family economic productivity.

These challenges have compounding effects. Therapists lose billable hours, making clinic financial viability more difficult. Children miss sessions, slowing their progress. Other families remain on waitlists for unused slots. All of this together means the system can serve only a fraction of children in need and often provides sub-optimal dosage.

🏃 A TECHNOLOGY-ENABLED, FAMILY-CENTERED MODEL

To address the current challenges in developmental therapy, we need solutions that serve more families without increasing costs, fit naturally into daily routines, and adapt to the unique circumstances of each family. Technology makes this possible by providing digital sessions that overcome distance barriers, supporting caregiver partnerships to improve outcomes, and making tools available that maintain family engagement between sessions.

🏠 DEVELOPMENT HAPPENS IN DAILY LIFE, NOT JUST IN THERAPY SESSIONS

Child development occurs daily, through every interaction and activity. Children practice communication during meals, develop motor skills during play, and build social understanding through daily routines. Traditional clinic-based therapy, even at its best, can only address a fraction of the moments where natural learning occurs. A 30-minute session once or twice per week represents less than 1% of a child's waking hours. The remaining 99% of learning happens at home, in the community, and during everyday activities. This reality underscores why therapy models must extend beyond the clinic walls and empower families to support development in the environments where children actually live and learn.

🎥 VIRTUAL CARE ELIMINATES GEOGRAPHIC AND LOGISTICAL BARRIERS

Virtual care changes who can get therapy and when. Families no longer need to travel long distances. Working parents can join sessions during breaks, and solo caregivers can participate from home without needing to find childcare or transportation. These advantages can determine whether families receive care. Removing logistical barriers also improves engagement. When families show up more consistently, children can make faster progress and therapists can serve their full caseload rather than losing half their slots to no-shows.

These advantages translate into measurable satisfaction. Families using Ladder Health's platform report a Net Promoter Score (NPS) of 90 — indicating strong endorsement and willingness to recommend the service to others. When care fits into family life rather than requiring families to reorganize around clinic schedules, both access and satisfaction improve.

👥 CAREGIVER COACHING MULTIPLIES THERAPEUTIC REACH

Caregiver-mediated therapy shifts the focus from direct work with the child to coaching the caregiver. Instead of the therapist working directly with the child for a brief, time-bound session, the therapist coaches the caregiver, teaching them techniques, strategies, and activities they can integrate throughout daily life. The parent becomes the primary interventionist, with the therapist serving as expert guide and support.

This model has several benefits:

- Practice happens every day rather than just once or twice a week during a clinic visit, dramatically increasing repetition and skill consolidation.

- Children build skills during real-life moments like meals, playtime, and bedtime routines, so it is easier for them to use these skills in daily life.

- Caregivers learn new skills and become more confident, which helps them support their child's growth over time.

- The partnership between families and therapists grows stronger as trust builds and caregivers see how they help their child make progress.

From a capacity perspective, this sets a new standard. Therapists who reach children through direct service and family coaching can exponentially increase their reach. When combined with virtual delivery that eliminates drive time between appointments, the efficiency gains become even more substantial. Research on caregiver-mediated intervention shows outcomes comparable to or better than traditional therapist-delivered models, while needing fewer direct clinical hours.[20] When caregivers are equipped and supported, they become extraordinarily effective therapists for their own children.

This model allows therapists to extend their reach without expanding their capacity. Research supports that caregiver-mediated intervention can achieve outcomes comparable to traditional therapist-led models while requiring fewer direct clinical hours.[20-22] With proper training, coaching, and support, caregivers can become effective agents of therapeutic change for their own children, delivering intervention throughout daily routines and activities.

Early implementation of technology-enabled caregiver coaching models supports these advantages. Among families engaging with Ladder Health's platform, 76% achieve at least one treatment goal, with particularly strong outcomes in physical therapy (83% goal achievement) and speech-language pathology (75% goal achievement). These results demonstrate that when families are equipped with the right tools and guidance, they can effectively drive their child's progress.

💡 WHEN CAREGIVERS FEEL CONFIDENT, CHILDREN MAKE LASTING PROGRESS

Long-term developmental progress is significantly influenced by whether caregivers feel confident and able to support their child's growth.[23-25] Parental self-efficacy, the belief that one can effectively help their child, is strongly associated with better child developmental outcomes, improved family quality of life, and sustained gains after formal intervention ends.[26-28] This is why skilled therapists focus not just on working with children, but on building caregiver capacity and confidence to continue supporting development at home.

Traditional therapy models can unintentionally lower caregiver confidence. If the therapist is seen as the only expert who works with the child while parents just watch, families may feel they have to rely on professionals instead of feeling ready to help their child themselves. When therapy takes place only in the clinic, families may also find it hard to use what they've learned at home.

Caregiver-mediated intervention works differently. With this approach, the therapist sees the caregiver as the expert on their child and home, and shares specific skills and strategies the parent can use. This coaching model builds confidence through repeated success. Caregivers try a technique with their child, see it work, get feedback from the therapist, and start to believe they can support their child's development. This confidence lasts even after therapy ends, helping families keep their progress and stay engaged.

DIGITAL TOOLS HELP FAMILIES STAY CONNECTED AND MAKE PROGRESS.

It's not complicated algorithms that will drive the most significant advances in digital health. It's making care simpler to access and easier to fit into daily life. Modern platforms help families stay involved between therapy sessions by offering video libraries that show how to use different skills, activity ideas matched to each child's needs, clear progress tracking, messaging for questions outside appointments, easy scheduling on any device, and reminders that reduce the mental burden of remembering every detail.

These features are essential because they address key barriers to sustained family involvement. When caregivers can efficiently review techniques during play, share videos of new challenges and achievements, or observe evidence of their child's progress, engagement is maintained. This results in higher attendance, more consistent practice, and improved outcomes.

ARTIFICIAL INTELLIGENCE STRENGTHENS CLINICAL CAPACITY WHILE PRESERVING PROFESSIONAL JUDGMENT.

Applied responsibly under clinical supervision, artificial intelligence (AI) expands what's possible by handling time-intensive but routine work that doesn't require a therapist's full expertise. This includes gathering and organizing intake information, drafting session documentation, analyzing assessment data to highlight areas needing focus, suggesting evidence-based activities and content aligned with treatment goals, and generating family-friendly educational materials.

Beyond administrative tasks, AI can play an important role between therapy sessions by capturing insights about the child's development in real time rather than relying on weekly recall at appointments. AI tools can ask caregivers what they're observing day-to-day in the moment, whether a child tried a new word at dinner, showed frustration during play, or successfully mastered a new motor skill. This continuous learning creates a much richer, more accurate picture of the child's progress and challenges than what parents remember and articulate during a session days or weeks later. This information can then be used to actively maintain engagement and provide personalized, context-driven guidance to caregivers.

This represents an entirely new window into child development - one that captures the granular, moment-to-moment changes that have historically been invisible to clinicians but are essential for understanding how children actually learn and grow in their natural environments.

AI-powered tools can also send timely reminders for home exercises, offer encouragement when families complete activities or reach goals, suggest appropriate practice opportunities based on the child's needs and daily routine, and provide gentle nudges when engagement drops. For example, if a family typically practices communication skills during breakfast, the system might send a contextual prompt with a simple activity idea that's easily added to that routine. This kind of intelligent, adaptive assistance helps families maintain momentum without overwhelming them, turning the therapist's guidance into sustained daily practice.

The key is that therapists retain complete clinical responsibility. AI handles the routine work, giving clinicians more time for complex, nuanced, relationship-centered work that only humans can do. With solid clinical oversight, AI enables therapists to serve more families while improving care quality by creating more time for direct patient care and ensuring families stay engaged with their care plan.

HOW THE PARTS WORK TOGETHER

This model can be successful because its components work together. Virtual delivery removes geographic and scheduling barriers, making attendance easier and improving show rates. When caregivers are involved, the partnership increases the impact of each therapist hour and ensures therapy happens daily in a child's natural, everyday environment. Engagement technology keeps families connected and motivated between sessions, strengthening caregiver-mediated intervention. AI can streamline administrative tasks, letting therapists focus on coaching and building relationships while reaching more families.

Together, these components build a model that scales with demand while keeping care grounded in each child's daily life and routines. The goal is to expand access to high-quality developmental therapy.

The model is gaining traction among referring pediatricians as well. Ladder Health generated 522 referrals from 148 unique providers in its first year, with new provider acquisition accelerating to 12 new referring providers monthly in the second half of the year. This growth indicates that clinicians are observing positive family experiences and integrating the platform into their practice workflows.

⭐ THE CLINICAL RATIONALE

There are also strong clinical reasons why a technology-enabled, caregiver-mediated intervention can be as effective, or even more so, for many children and families.

🏠 NATURAL ENVIRONMENTS

Generalization, which means helping children use learned skills in different settings, has long been a challenge in developmental therapy. For example, a communication skill learned in a therapy room may not carry over at home. Motor skills practiced in structured exercises might not show up on the playground.

Research demonstrates that skills are more likely to transfer when they are practiced in natural, functional contexts. A study of motor skill learning found that practicing in natural contexts led to significantly better skill acquisition and transfer compared to simulated contexts, supporting the use of authentic environments to facilitate learning outcomes.[29-31] For young children, this means daily routines like mealtimes, bath time, play, getting dressed, and going to parks. These everyday situations give children chances to practice communication, motor skills, and social interaction.

Virtual, caregiver-mediated therapy makes use of this benefit. Therapists guide parents to include therapeutic activities in daily routines instead of creating special "therapy time." For example, speech goals can be part of mealtime conversations, motor goals can be included in play, and sensory goals can shape bedtime routines. Since skills are taught and practiced in real-life situations from the start, children are more likely to use them naturally, without needing a separate step to transfer what they have learned.

📅 THERAPEUTIC DOSAGE

Traditional therapy typically delivers 30-60 minutes of intervention once or twice weekly. Caregiver-mediated intervention uses a very different approach to how much therapy children get. Instead of short, focused sessions, therapeutic activities happen throughout the day as part of normal routines and interactions. Caregivers who learn language strategies can use them many times each day during meals, play, and caregiving. Families working on motor skills can practice several times a day through regular play and movement.

Learning science research supports this approach. Children retain skills better when they encounter them repeatedly across different situations over time, rather than intensively in a single setting.[32-33] This principle underlies our caregiver-mediated model: by coaching caregivers to embed therapeutic activities throughout daily routines, children can receive frequent, distributed practice that optimizes learning and skill retention with less direct therapist-child contact time than traditional models require.

🚶 CAREGIVER-MEDIATED INTERVENTION

Caregiver-mediated intervention is based on decades of research spanning multiple disciplines and developmental domains.

In speech and language therapy, parent-implemented language interventions are highly effective for young children. A 2019 systematic review and meta-analysis in *JAMA Pediatrics* documented strong evidence that when parents are trained to implement communication interventions, children demonstrate significant improvements in language development, communication skills, and engagement.[34] This evidence supports coaching parents to embed language-building strategies throughout daily activities - an approach that can deliver therapeutic dosage far exceeding what weekly clinic sessions alone provide, while maintaining strong child outcomes.

And in early intervention for autism, caregiver coaching is now a key part of evidence-based practice. Research shows that when parents learn specific ways to interact with their children, kids improve in communication, social skills, and development, and these gains last even after the intervention ends.[35]

For motor development, caregiver-led interventions help with both large and small movements. Research on home programs for children with cerebral palsy and other motor delays shows that when parents learn the right activities and techniques, children make real progress.[36-37]

Evidence also supports virtual delivery of caregiver coaching. Multiple studies conducted during and after the COVID-19 pandemic found that telehealth-delivered parent coaching maintained treatment fidelity and child outcomes comparable to traditional service delivery. Critically, families often preferred virtual delivery due to convenience and receiving coaching in their natural environment. [38-41]

With careful implementation, proper training, and ongoing support, caregiver-mediated intervention is a clinically sound approach with clear advantages for many families and developmental goals.

👥 CASE EXAMPLES

The following examples show how this model impacts real families:

CASE 1 - Access: At her three-year well-child check, a child was identified with expressive language delay. She was older than the EI eligibility threshold. No nearby outpatient clinics accepted the family's insurance or offered Spanish-speaking services. At initial evaluation, the child communicated mainly through gestures and single words. By discharge from Ladder Health, she was using two-to-three word phrases to comment, requesting wants and needs, and participating in reciprocal conversations. The platform eliminated barriers due to language accessibility, insurance acceptance, geographic limitations, and extended wait times that were preventing the family from accessing timely care.

CASE 2 - Engagement: 30-month-old twins were referred for speech-language pathology following the identification of expressive language delay at a well-child visit. The mother initially did not share the pediatrician's concerns, but was willing to pursue an evaluation because the platform could accommodate back-to-back Saturday morning appointments, the only time the whole family was available. What began as reluctant participation became regular engagement. Mom, dad, and grandmother attended all 12 weekly sessions in varying combinations until successful discharge, when both twins were meeting age-appropriate language milestones. This case illustrates how meeting families within their existing routines can turn initial hesitation into sustained commitment to care.

CASE 3 - Caregiver Empowerment: A six-year-old child was referred for occupational therapy due to family concerns of emotional regulation and impulsivity. At initial evaluation, the child struggled with transitions, volume regulation in social settings, hyperactivity before bedtime, and distinguishing safe from unsafe behaviors. By discharge from Ladder Health, all goals were met. The family had learned to use social stories, transition rituals, visual cues, and calming strategies to help the child manage these challenges. The platform eliminated the need for ongoing clinical intervention by giving caregivers the tools and confidence to support their child's continued growth at home.

CASE 4 - Medical Complexity: A child born at 23 weeks as a twin was referred for occupational therapy at age 27 months to focus on feeding. Having spent much of her early life relying on a g-tube for nutrition, she was limited to purees and could not tolerate any introduction of textured foods. All attempts resulted in vomiting, gagging, and total refusal. Her mother's primary goal was increasing oral feeding and ultimately weaning from the g-tube. By discharge from Ladder Health, the child was independently self-feeding a variety of solid foods, including fish, oatmeal, and fruit. The family was able to engage in specialized feeding therapy in a timely manner during an important developmental window.

🚩 THE WAY AHEAD

The pediatric developmental therapy access crisis will not resolve on its own. Workforce shortages are expected to worsen, and traditional care models have reached their limits. Wait lists keep growing, if services are even available. For many children, there is nowhere to turn. Children are missing critical developmental windows, not because interventions do not exist, but because they cannot access them.

Technology-enabled, caregiver-partnered therapy is a practical new approach. Virtual delivery removes geographic barriers and scheduling constraints. Caregiver partnership multiplies therapist impact by turning weekly sessions into daily progress. Engagement tools keep families connected and motivated between sessions. AI support gives therapists more time for the complex clinical work only they can do.

✦ THE ECONOMIC CASE IS COMPELLING

Healthcare innovation often requires upfront investment that pays off slowly over time. Technology-enabled developmental therapy is different: the benefits begin almost immediately, even as longer-term value continues to accrue.

When show rates improve, the same number of therapists can serve more families. This efficiency gain reduces wait lists and improves financial stability of the entire system. Insurers see better value for their reimbursement dollars. Most importantly, more children get the services they need during critical developmental windows.

But the strongest economic argument is about prevention. Children who receive timely intervention require less intensive services later. As mentioned previously, research consistently demonstrates that every dollar invested in quality early intervention generates high returns through reduced special education needs, decreased behavioral interventions, higher lifetime earnings, and improved family economic stability.[7,8] For payers, employers, school systems, and society broadly, expanding access to developmental therapy is one of the highest-value investments available.

🔭 THE CASE FOR MOVING FORWARD

Early results are promising. Families who previously could not access care due to distance, scheduling, or system capacity constraints are now receiving developmental therapy. Access is measurably faster, family satisfaction is high, and sustained referral growth suggests pediatricians are gaining confidence in the platform and are willing to integrate it into their practice workflows. While longer-term outcome data are still being gathered, early clinical evidence suggests the model is delivering meaningful progress for the children and families it serves.

▊▊▊ IMPLEMENTATION FACTORS

Successful implementation of technology-enabled developmental therapy requires close attention to several essential factors.

The quality of clinical care should always be the starting point. Technology is most useful when it strengthens the therapeutic relationship rather than distracting from it. This requires continuing licensed therapist oversight of all clinical decisions and treatment planning, using evidence-based intervention approaches regardless of delivery method, establishing clear protocols for when in-person assessment or intervention is necessary, collecting outcome data systematically to verify children are making progress, and maintaining feedback loops for therapists and families to report concerns about model effectiveness.

Therapist support is essential. Technology-enabled therapy asks therapists to work differently. They're coaching caregivers rather than working directly with children. They're conducting assessments through video rather than hands-on evaluation. They're using new tools. This requires experience in virtual delivery techniques and caregiver coaching approaches, ongoing clinical supervision and peer consultation, platform designs that reduce rather than increase administrative burden, attention to therapist satisfaction and burnout prevention, and recognition that not every therapist will prefer virtual work.

And not all families are suited for virtual care. While many families thrive with virtual, caregiver-mediated intervention, it's not the right fit for everyone. Some children benefit more from hands-on manipulation by a skilled therapist. Some families lack stable internet access or a quiet space for virtual visits. Some caregivers face language barriers or confidence issues that make coaching less effective without in-person support.

The goal is to expand options so that more families can access the type of care that works best for them. A well-designed healthcare delivery system offers both virtual and in-person options, helps families transition between them as needs change, and ensures no one falls through the cracks.

Equity requires deliberate effort. As Ladder Health continues to grow, making sure the platform serves families across the full socioeconomic spectrum will be a central focus. Technology has the potential to expand access for underserved populations, but only if implementation actively addresses it:

- Designing low-bandwidth cellular access options for families with limited internet connectivity

- Offering multilingual support and culturally adapted materials

- Ensuring platforms are accessible for families with varying digital literacy levels

- Training therapists in culturally responsive care delivery

- Monitoring utilization and outcome data to identify and address disparities

Without this intentional focus, technology risks worsening existing inequities. Ultimately, the families facing the greatest barriers to traditional therapy, like those with transportation challenges, inflexible work schedules, limited English proficiency, or geographic isolation, should be the primary beneficiaries of expanded access.

◤ WHAT'S NEEDED NOW

No single entity can do this alone. Change requires coordinated effort across payers, providers, families, and policymakers.

Payers can provide permanent reimbursement parity between virtual and in-person services and recognize caregiver-mediated intervention as a legitimate, evidence-based approach worthy of appropriate payment. Current payment models often do not align with technology-enabled care. Critically, payers must reimburse for the valuable clinical activities that occur between visits. The check-ins, personalized guidance, progress monitoring, and caregiver coaching that drive care plan adherence and produce measurable outcomes are interventions that maintain engagement, capture real-time developmental data, and ensure families implement treatment plans effectively in daily life. Current payment models fail to recognize these essential components of therapeutic work. Alternative payment approaches should include case rates and bundled payments for episodes of care that reward outcomes rather than session counts, value-based arrangements that recognize the cost savings from improved show rates and reduced wait times, and AI-facilitated engagement that supports caregiver implementation.

Policymakers should advance several important policy changes. These include establishing permanent telehealth parity across all payers instead of relying on temporary pandemic-era allowances, enabling interstate licensure portability and compacts so therapists can serve families across state lines (which is especially important for rural and border communities), updating billing codes and reimbursement structures to recognize caregiver coaching as a legitimate service delivery model, and developing regulatory frameworks that support responsible use of artificial intelligence and engagement technology while guaranteeing appropriate clinical oversight.

Health systems can invest in the infrastructure needed for technology-enabled care. This includes digital equity initiatives to ensure underserved families have access to devices and connectivity, and integration with existing healthcare information technology systems to allow for more seamless referral, care coordination and feedback loops.

Researchers should consider partnering with digital health projects to strengthen the evidence base by conducting rigorous, longitudinal studies that move the field beyond early indicators and into definitive outcomes. Although early results are promising, stronger evidence from larger samples and longer follow-up periods is needed. This includes studies that compare virtual, caregiver-mediated intervention to traditional approaches, long-term outcome studies tracking developmental progress beyond initial treatment periods, effectiveness research with diverse populations and diagnostic categories, and cost-benefit analyses that show return on investment for payers and health systems.

The current system is failing families. A significant portion of children experience developmental delays. Wait times are excessive, administrative complexity makes navigation nearly impossible for families already managing competing appointments and daily demands, and access barriers prevent children from getting care during the critical window when it matters most. Traditional clinic-based models cannot scale to meet demand, workforce shortages persist nationwide, and working families face impossible choices between employment and their child's therapy. The result is difficulty getting started and following through, leaving children without the consistent intervention required to achieve meaningful outcomes.

The stakes are high. Children don't get a second chance at critical developmental periods. Families can't wait years for services to become available. And society bears the long-term costs when preventable delays compound into chronic disabilities.

A new model is possible and necessary. Technology-enabled care that combines virtual delivery, caregiver coaching, and AI-powered engagement tools can eliminate access barriers, extend therapist capacity, and deliver therapy where development actually happens - in children's daily lives. The evidence supports the approach. Families and health systems are ready. What's needed now is the will to change how developmental therapy is delivered, the investment to make that change happen at scale, and the commitment to ensuring that every child, regardless of where they live or their family circumstances, can access the expert care they need to thrive.

Technology should not replace human connection or clinical expertise. Instead, it should extend its reach to those who need it most. The only thing standing between families and better care is the decision to change how we deliver it.

Ladder Health
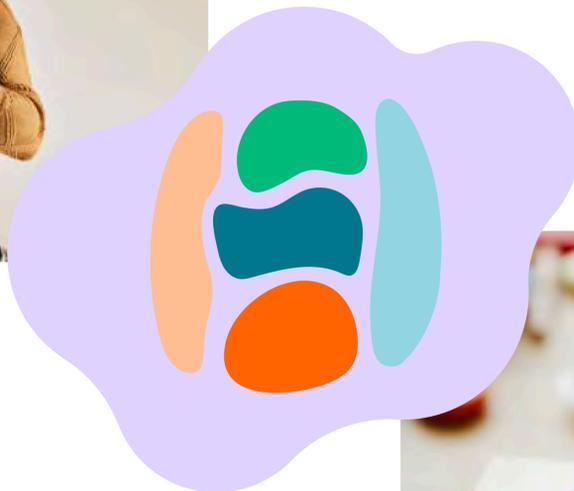
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