

Table 1.

Characteristics of Home Program and Perceptual-Motor Program

Home Program	Perceptual-Motor Program
1. Family focused; training occurred once weekly in the home	1. Child focused; occurred twice weekly in a pediatric outpatient setting
2. Time spent primarily interacting in triad of caregiver/parent/child but focused on training caregiver	2. Time spent primarily in dyad of therapist/child modeling for parent; focus on prompting child to problem solve
3. Setting up child within existing home routines and home equipment	3. Setting up environment that works for small subset of currently available sitting skill, with suggestion that the activity could be replicated at home
4. Static focus on positioning to decrease errors and repositioning child with prescribed supports when errors occur	4. Dynamic focus on child-initiated movement within and between positions; errors accepted. Child guided to solve problem with touch cues.

Table 2.
Comparison of Interventions: Examples









Goal	Home Program	Description	Perceptual-Motor Program	Description
Play in prop sitting for 1 minute		Supported sitting with boppy and couch to give partial support and allow sitting practice		Support in front flexible to encourage light leaning; touch cues to add small, constant adjustments to reach
Reach at shoulder level without propping in sitting		Provide toy that requires reaching higher; pillow behind to protect if child falls back		Light touch cue at mid/low back to encourage alternate strategy of trunk that eases attempt to reach up
Reach outside of base of support		Provide static support and moving toy to encourage trunk movement		Therapist cues child to lean into support to adapt base of support and perceive a new strategy to follow a moving toy
Begin to transition out of sitting		Put toys on other side of support (parent's legs) to encourage movement out of sitting		As child follows moving toy, therapist provides gentle pressure into support, suggesting a transition path



Figure 1.

Three children at sitting stage 1 and respective center-of-pressure (COP) tracings in the first row. The first picture shows an infant with typical development, the second picture shows an infant with spastic quadriplegic cerebral palsy (CP), and the third picture shows an infant with athetoid CP. Beneath the COP tracings are examples of the linear and nonlinear measures. RMS (AP)=linear measure of overall postural variability, the standard deviation of the length samples in the anterior-posterior direction; sway path=linear measure of the velocity of the COP; ApEn (AP)=approximate entropy, a measure quantifying the regularity or predictability of the COP in the anterior-posterior direction.

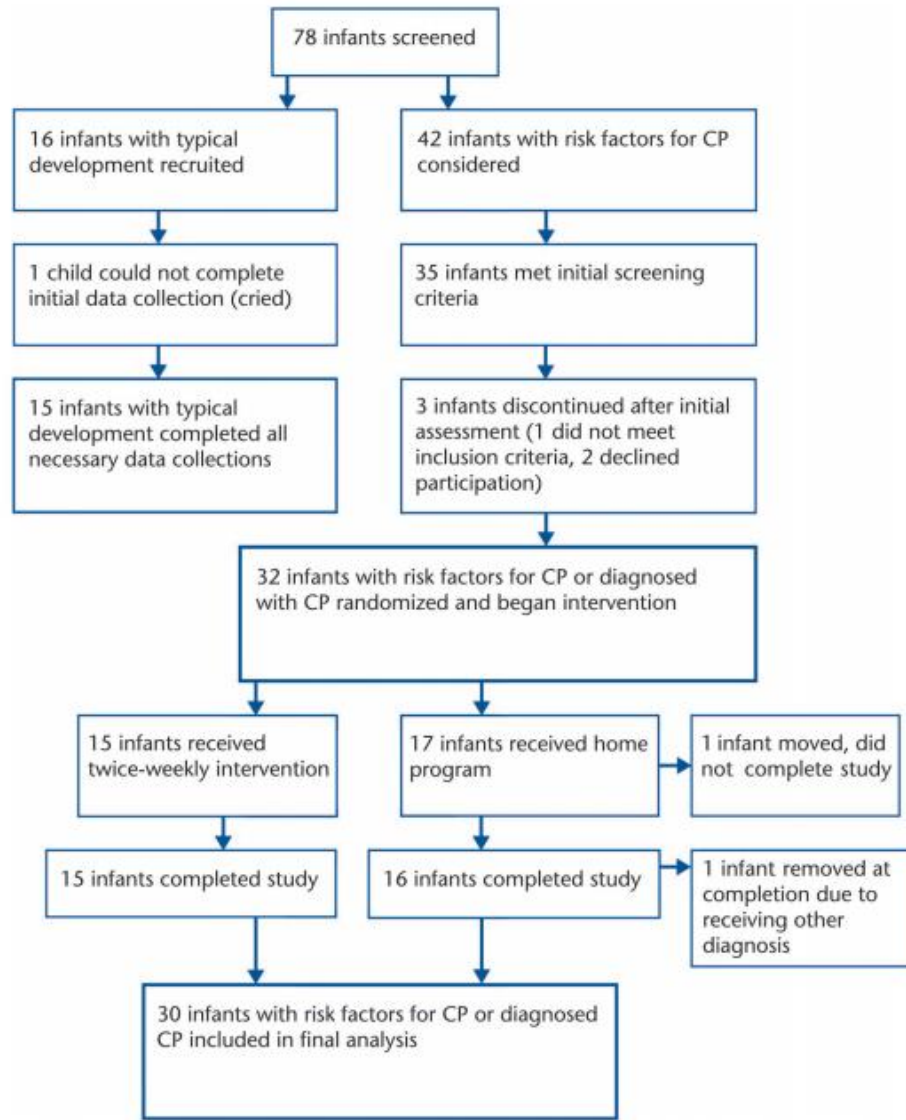


Figure 2. Flow chart of recruitment and group assignment of children in the study. CP=cerebral palsy.

Table 3.
Participant Information for Infants Included in the Intervention Groups^a

Participant No.	Diagnosis at 2 Years of Age	Severity	GMFCS Level	Intervention Group ^b
C01	Spastic quadriplegic CP	Severe	4	2
C02	Right hemiplegic CP	Mild	1	1
C03	Right hemiplegic CP	Mild	1	2
C04	Hypotonic, overall delays	Moderate	3	2
C05	Developmental delay	Mild	1	1
C06	Premature (28 weeks), BPD	Mild	1	2
C07	Premature (28 weeks), BPD	Mild	1	1
C08	Spastic lower extremities	Moderate	1	1
C09	Hypotonic, overall delays	Severe	3	1
C10	Athetoid CP	Moderate	2	2
C12	Mixed quadriplegic CP	Moderate	3	2
C13	Spastic quadriplegic CP	Severe	4	1
C14	Spastic quadriplegic CP	Severe	4	2
C15	Right hemiplegic CP	Mild	1	2
C17	Hypotonia, overall delays	Mild	1	1
C18	Athetoid CP	Moderate	3	1
C19	Spastic hemiplegic CP	Moderate	3	2
C20	Spastic quadriplegic CP	Severe	4	2
C21	Hypotonic, motor delay	Moderate	2	1
C23	Spastic quadriplegic CP	Severe	4	1
C24	Hypotonic, motor delay	Mild	1	1
C25	Spastic diplegia	Moderate	2	2
C26	Motor delay, hearing impaired	Mild	1	1
C27	Premature, motor delay	Mild	1	2
C29	Premature, left hemiplegia	Mild	1	2
C30	Premature, motor delay	Mild	1	1
C31	Hypotonia, motor delay	Mild	1	2
C32	Spastic quadriplegia	Severe	4	1
C34	Hypotonia, motor delay	Mild	1	2
C35	Hypotonia, overall delay	Severe	3	1

^a GMFCS=Gross Motor Function Classification Scale, CP=cerebral palsy, BPD=bronchial pulmonary dysplasia.

^b 1=home program group, 2=perceptual-motor group.

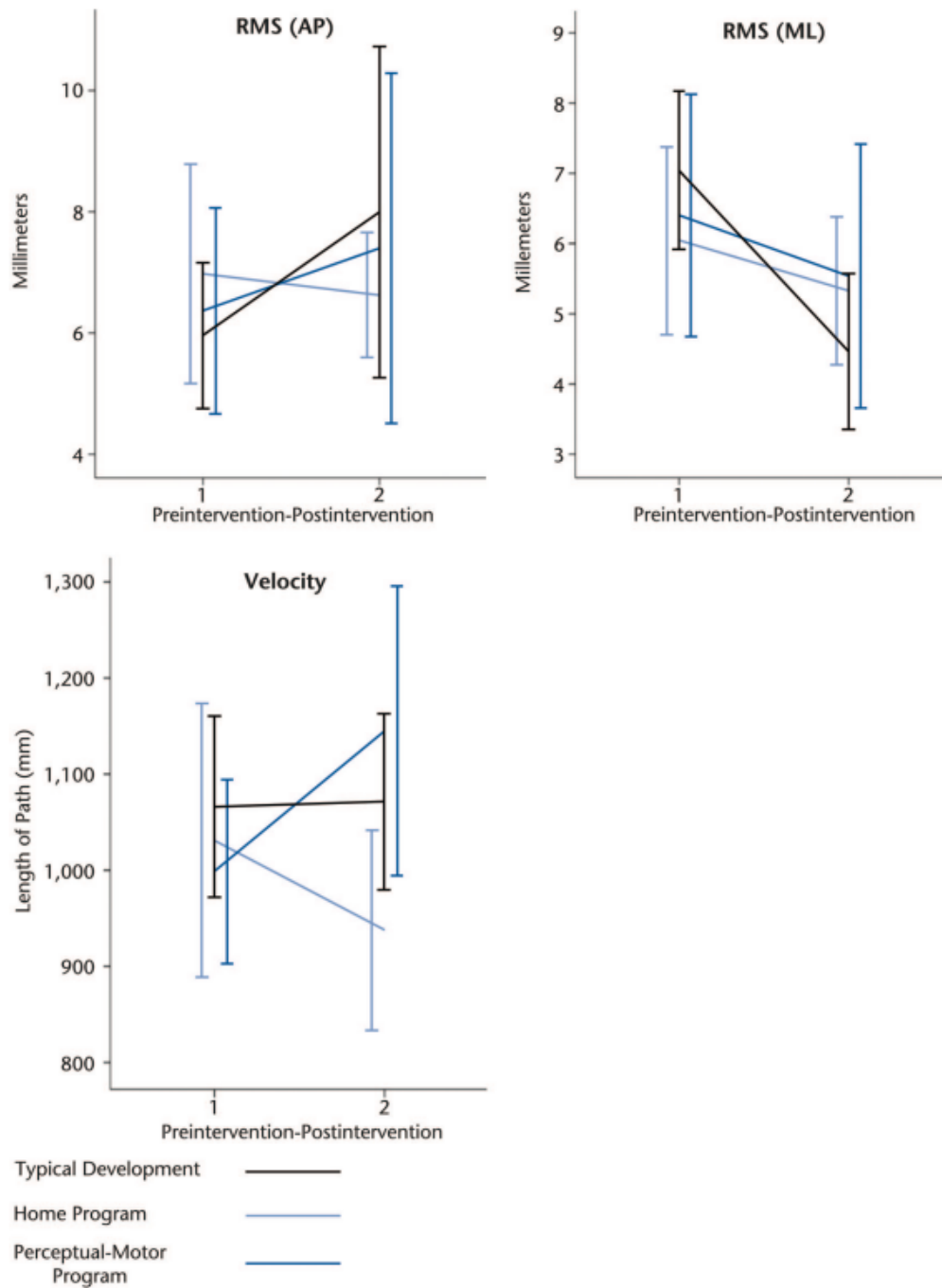


Figure 3.

Graphs of linear center-of-pressure (COP) measures comparing the mean values for infants with typical development (from beginning sitting to independent sitting), infants in the home program group, and infants in the perceptual-motor intervention group from preintervention to postintervention measurements. Bars indicate 95% confidence intervals. RMS (AP)=linear measure of overall postural variability, the standard deviation of the length samples in the anterior-posterior direction; RMS (ML)=linear measure of overall postural variability, the standard deviation of the length samples in the medial-lateral direction.