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Standing Frames, Tables, and Transfer Boards

Clinical Policy Bulletins | Medical Clinical Policy Bulletins

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Policy History

Last Review
07/21/2025
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Review History

Definitions

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Policy

Scope of Policy

This Clinical Policy Bulletin addresses standing frames, tables, and transfer boards.

I. Medical Necessity

Aetna considers rental, or if less costly, purchase, of the following standing frames, tables, and transfer boards medically necessary durable medical equipment (DME) when criteria are met:

A. For manual and power standing wheelchairs, see CPB 0271 - Wheelchairs and Power Operated Vehicles (Scooters) (../200_299/0271.html);
B. For postural drainage boards, see CPB 0067 - Chest Physiotherapy and Airway Clearance Devices; (../1_99/0067.html)
C. For seat lifts, patient lifts, and multi-positional transfer systems, see CPB 0459 - Seat Lifts and Patient Lifts (../400_499/0459.html);
D. Non-powered standing frame system / stander when *all* of the following criteria are met:

1. Member has a documented neuromuscular condition (e.g., cerebral palsy, multiple sclerosis, spinal cord injury, stroke); *and*
2. Member has impaired ability to stand, but can maintain standing position due to sufficient residual strength in hips, legs, and lower body with the aid of a standing frame device; *and*
3. Member has completed standing device training showing compliance, tolerance, and has demonstrated an ability to safely use the device in the home setting; *and*
4. Use of the standing device can be reasonably expected to provide therapeutic benefits and/or enhance ability to perform activities of daily living (ADL's) (e.g., functional use of arms or hands, functional head and trunk control); *and*
5. Member is unable to accomplish their functional goals with other assistive devices or the use of physical therapy.

Note: If a member has a gait trainer, they are not a candidate for a standing frame. This would be duplication of service.

Replacement of non-powered standing frame / standers will be considered medically necessary when *all* of the following criteria are met:

1. Member meets criteria for a non-powered standing frame system / stander (above); *and*

2. The device is nonfunctional or not repairable and cannot be refurbished or adequately repaired; *and*
3. Device is out of warranty.

Standing frame systems / standers are considered not medically necessary for members with complete paralysis of the hips and legs, whereby there is no improvement in the lower body strength following maintenance of standing position. For these members, these devices are not considered to offer clinically significant benefits because of insufficient evidence in the peer-reviewed literature. Further, standers have no proven value for the prevention or treatment of contractures.

Standing frame /stander accessories and positioning components must contribute to the therapeutic function of the standing frame. Accessories primary for caregiver convenience are considered not medically necessary.

Powered, electronic, or motorized standing frame systems / standers are considered not medically necessary. For information on power standing feature for wheelchairs, see CPB 0271 - Wheelchairs and Power Operated Vehicles (Scooters) (../200_299/0271.html).

E. Transfer board - for members with medical conditions that limit their ability to transfer from wheelchair to bed, chair, toilet, etc.

II. Policy Limitations and Exclusions

Consistent with the Centers for Medicare & Medicaid Services (CMS) policy, an item/service is correctly coded when it meets all the coding guidelines and is listed in the Pricing, Data Analysis, and Coding (PDAC) Product Classification List. Claims that do not meet coding guidelines shall be denied as not medically necessary or incorrectly coded.

Aetna does not cover the following tables and boards because they do not meet Aetna's contractual definition of covered DME in that they are not primarily medical in nature, are normally of use to persons who do not have a disease or injury, and/or are not mainly used in the treatment of disease or injury:

A. Bed boards (board inserted between bed spring and mattress to give extra support);
B. Cutout tables (table cutout for use with wheelchair or prone board);
C. Foot boards (board at the end of the bed);
D. Lapboards (board used on the lap as a table or desk);
E. Over-the-bed tables (overbed tables) (e.g., Able Table);
F. Standing tables (table for use in a standing position).

Aetna considers the following tables and boards institutional equipment and not appropriate for home use:

A. Performa Power Mat Platform;
B. Transfer discs (rotating foot disc used to assist staff in pivoting members who are difficult to transfer).

Most Aetna benefit plans exclude coverage of exercise equipment. Please check benefit plan descriptions. Aetna considers the following tables and boards non-covered exercise equipment:

A. Foot inversion boards (used to strengthen muscles below the knee);
B. Stimulation boards (padded platform that rocks and is equipped with a safety belt; used for exercise).

III. Experimental, Investigational, or Unproven

Aetna considers the following experimental, investigational, or unproven because their safety and effectiveness have not been established:

Tilt tables for home use for reconditioning members with orthostatic hypotension

- Tek RMD M1 motorized standing device (Matia Motility).

IV. Related Policies

- CPB 0067 - Chest Physiotherapy and Airway Clearance Devices (../1_99/0067.html)
- CPB 0271 - Wheelchairs and Power Operated Vehicles (Scooters) (../200_299/0271.html)
- CPB 0325 - Physical Therapy (../300_399/0325.html)
- CPB 0459 - Seat Lifts and Patient Lifts (../400_499/0459.html)

CPT Codes / HCPCS Codes / ICD-10 Codes

Other CPT codes related to the CPB:

Code	Code Description
97001 - 97763	Physical Medicine and Rehabilitation
HCPCS codes covered if selection criteria are met:	
E0637	Combination sit to stand system, any size including pediatric, with seat lift feature, with or without wheels
E0638	Standing frame system, one position (e.g., upright, supine or prone stander), any size including pediatric, with or without wheels
E0641	Standing frame system, multi-position (e.g., three-way stander), any size including pediatric, with or without wheels
E0642	Standing frame system, mobile (dynamic stander), any size including pediatric
E0705	Transfer device, any type, each

Code	Code Description
HCPCS codes not covered for indications listed in the CPB:	
Powered, electronic, or motorized standing frame systems / standers, standing frame / stander accessories and tilt table, TEC RMD M1 (Matia Mobility) -no specific codes	
A9300	Exercise equipment
E0274	Over-bed table
E0315	Bed accessory: board, table, or support device, any type
Other HCPCS codes related to the CPB:	
E8000	Gait trainer, pediatric size, posterior support, includes all accessories and components
E8001	Gait trainer, pediatric size, upright support, includes all accessories and components
E8002	Gait trainer, pediatric size, anterior support, includes all accessories and components
ICD-10 codes covered if selection criteria are met:	
G70.00 - G70.9	Myasthenia gravis and other myoneural disorders
G73.3	Myasthenic syndromes in diseases classified elsewhere
G80.0 - G80.9	Cerebral palsy
G82.20 - G82.54	Paraplegia (paraparesis) and quadriplegia (quadriparesis)
I69.098, I69.198 I69.298, I69.398 I69.898, I69.998	Other sequelae of cerebrovascular disease
I95.1	Orthostatic hypotension
J40 - J47.9 J67.0 - J67.9	Chronic lower respiratory diseases and other lung diseases due to external agents

Code	Code Description
S14.0xxS - S14.159S S24.101S - S24.159S S34.01xS - S34.139S	Injury of nerves and spinal cord, sequela
ICD-10 codes not covered for indications listed in the CPB (for standers):	
M24.50 - M24.9	Contracture of joint
M62.40 - M62.49 M62.830 - M62.838	Contracture of muscle [spasm]

Background

Standing frames (also known as a stander) are assistive devices that offer an alternative position for individuals limited to supine, prone, or seated positions. They enable an individual to transition to a standing position and provide support while standing. Some standers can be integrated with wheelchairs for seated individuals, while others are specifically designed to assist those in a prone or supine position to stand.

Standing frames are generally accepted as a standard of medical practice when used for individuals with neuromuscular conditions (e.g., cerebral palsy, multiple sclerosis, spinal cord injury, stroke) who have an impaired ability to stand independently. Powered, electronic, or motorized standing frame systems / standers are used primarily for the convenience of the individual or caregiver and have not been shown to provide additional clinical benefit. For information on power standing feature for wheelchairs, see CPB 0271 - Wheelchairs and Power Operated Vehicles (Scooters) (../200_299/0271.html).

Standing Frame and Cerebral Palsy

Rapson et al (2022) assessed the feasibility of a randomized controlled trial (RCT) to evaluate the effect of different doses of standing time on hip migration rate in children with cerebral palsy (CP). Twenty-five children aged 1-12 years with CP GMFCS levels III-V were recruited and randomized to either doubling or continuing with their usual time in their standing frame. Caregivers kept a standing time diary. The primary outcome measure was Reimers hip migration percentage, measured at baseline, 12 and 24 months. A blinded assessor measured secondary clinical outcomes at baseline, 6 and 12 months. Feasibility results were reported following CONSORT guidelines. Of the 25 children recruited, 19 were randomized and 10 completed the 12-month intervention. The mean daily standing time in the intervention group was 49minutes (SD 39.1) (Monday-Sunday) and 58.1 (SD 44.1) minutes during weekdays. In children remaining in the trial, primary and secondary clinical outcome measures were available in 54% and 90% of children respectively. There were three serious adverse events, unrelated to standing. The authors concluded that it may be feasible to conduct an RCT to assess the effect of duration of standing on hip migration in children with CP with an altered protocol. The suggested target dose is 60-minutes five times per week compared to a control group standing for 30-minutes three times per week, over twelve months. Use of botulinum toxin need not be a criterion for exclusion and radiography should be included as a research cost.

Standing Frame and Contracture

Gibson and colleagues (2009) conducted a quasi-experimental study to evaluate whether static weight-bearing in a standing frame affected hamstring length and ease of activities of daily living (ADLs) in non-ambulant children with cerebral palsy (CP). A convenient sample of 5 children (age range 6-9 years, mean age 7 years 2 months, SD 1 year 4 months) were recruited for the study. Participants stood in a standing frame for 1 hour, 5 days per week, for 6 weeks, followed by 6 weeks of not using a standing frame; each phase was repeated. Popliteal angle measurements were made at baseline and weekly throughout the study period. Caregivers provided written feedback regarding ease of ADLs at the end of each standing and non-standing phase. The authors report that high compliance with the standing regime was achieved (85% of

intended sessions completed). Repeated-measures analysis of variance and t-tests showed hamstrings significantly lengthened during standing phases (mean improvement 18.1 degrees , SD 5.5, P<0.01 for first standing phase; mean improvement 12.1 degrees , SD 7.7, P=0.03 for second standing phase). A trend for hamstrings to shorten during non-standing phases was observed (mean change -14.0 degrees , SD 4.2, P=0.02 for first non-standing phase; mean change -7.3 degrees , SD 6.5, P=0.20 for second non-standing phase). Feedback from caregivers suggested that transfers and ADLs became slightly easier after phases of standing frame use. The authors concluded that preliminary evidence shows that 6 weeks of standing frame use leads to significant improvements in hamstring length in non-ambulant children with CP, and may increase ease of performance of ADLs was found.

Standing Frame and Multiple Sclerosis

In a pragmatic, multicenter, randomized controlled trial, Freeman et al (2019) aimed to assess the clinical and cost effectiveness of a home-based, self-managed, standing frame program in people with progressive multiple sclerosis and severe mobility impairment. The study was undertaken in 8 centers from 2 regions in the United Kingdom. The study had assessor-blinded outcome assessments with use of clinician-rated and patient-rated measures at baseline, 20 weeks, and 36 weeks. After baseline assessment, participants were randomized (1:1) by computer-generated assignment to either a standing frame program plus usual care or usual care alone. The intervention consisted of two home-based physiotherapy sessions (60 min each) to set up the standing frame program, supported by 6 follow-up telephone calls (15 min per call). Participants were asked to stand for 30 min, three times per week over 20 weeks, and encouraged to continue in the longer term, although no further physiotherapy support was provided. The primary clinical outcome was motor function measured by the Amended Motor Club Assessment (AMCA) score at week 36, analyzed in the modified intention-to-treat population (excluding only patients who were deemed ineligible after randomization, those who withdrew from the trial and were unwilling for their previously collected data to be used, or those who did not provide baseline and week 36 measurements). A 9-point AMCA score change was considered clinically meaningful a priori. Adverse events were collected through a daily preformatted patient diary throughout the 36

weeks and analyzed in the modified intention-to-treat population. An economic assessment established the resources required to provide the standing frame program, estimated intervention costs, and estimate cost effectiveness. One-hundred forty participants were randomly assigned to either the standing frame group (n=71) or the usual care group (n=69). Of these, 122 completed the primary outcome assessment (61 participants in both groups) for the modified intention-to-treat analysis. The use of the standing frame resulted in a significant increase in AMCA score compared with that for usual care alone, with a fully adjusted between-group difference in AMCA score at 36 weeks of 4·7 points (95% CI 1·9-7·5; p=0·0014). For adverse events collected through patient diaries, we observed a disparity between the two groups in the frequency of short-term musculoskeletal pain (486 [41%] of 1188 adverse events in the standing frame group vs 160 [22%] of 736 adverse events in the usual care group), which was potentially related to the intervention. The musculoskeletal pain lasted longer than 7 days in five participants (two in the standing frame group and three in the usual care group). No serious adverse events related to the study occurred. The standing frame group had a mean 0·018 (95% CI -0·014 to 0·051) additional quality-adjusted life-years (QALYs) compared with those of the usual care group, and the estimated incremental cost-per-QALY was approximately £14 700. The authors concluded that the standing frame program significantly increased motor function in people with severe progressive multiple sclerosis, although not to the degree that was considered a priori as clinically meaningful. However, the standing frame is one of the first physiotherapy interventions to be effective in this population. The authors suggest that the program is feasible as a home-based, self-managed intervention that could be routinely implemented in clinical practice in the UK.

Standing Frame and Paralysis

Kunkel and colleagues (1993) evaluate the impact of "standing" in a frame has on spasticity, contracture, and osteoporosis in paralyzed males. The authors performed clinical assessment and H-reflex to evaluate spasticity, lower extremity joint range of motion for contracture, and dual photon absorptiometry for osteoporosis. The study included 6 paralyzed males (mean age 49 years) who had been confined to wheelchairs for an average of 19 years. Standing time averaged 144

hours over a mean of 135 days. Clinical Assessment measured reflexes, tone, and clonus in the legs. Results revealed no important differences between initial and final scores for clinical assessment and joint range of motion. In 3 subjects for whom H-reflexes were found, latency and amplitude were not altered by "standing." Bone density was normal in the lumbar spine but significantly reduced in the femoral neck. The authors found that "standing" did not modify the bone density in any site. A follow-up interview revealed that 67% of subjects continued to "stand" and felt healthier because of it. The authors concluded that "standing" had no ill effects, did not alter measured variables, and had a positive psychological impact.

In a cross-sectional study, Kyriakides et al (2019) aimed to assess the frequency domain heart rate variability (HRV) parameters at rest and in response to postural autonomic provocations in individuals with spinal cord injury (SCI) and investigate the autonomic influences on the heart of different physical activities. Ten subjects with complete cervical SCI and 14 subjects with complete low thoracic SCI were prospectively recruited from the community and further divided in sedentary and physically active groups, the latter defined as regular weekly 4 hour physical activity for the preceding 3 months. Sixteen healthy individuals matched for sex and age were recruited to participate in the control group. The Low Frequency (LF), High Frequency (HF) powers and the LF/HF ratio of HRV were measured from continuous electrocardiogram (ECG) recordings at rest and after sitting using a fast Fourier transformation. The authors found a significant decrease in all HRV parameters in patients with SCI was found compared to controls. The change in HF, LF and LF/HF following sitting maneuver was significantly greater in controls as compared with the SCI group and greater in subjects with paraplegia as compared to subjects with tetraplegia. Better HRV values and enhanced vagal activity appears to be related to the type of physical activity in active subjects with paraplegia. The authors concluded that in this cohort, spectral parameters of HRV were associated with the level of the injury. Passive standing was associated with higher HRV values in subjects with paraplegia. The authors acknowledged limitations to their study (i.e., cross-sectional study with small sample size; study used the AIS to define sensory-motor complete injuries; information on physical activity in the SCI group was collected as binary parameter, and authors did not record the vigor and time spent exercising; authors did not assess arterial

stiffness which has been shown to increase in persons with SCI; and they did not assess blood pressure variability that could provide more information about baroreflex sensitivity). Future studies should examine the outcome of different physical activities on the ANS aspects, to enable designing effective exercise programs to reduce cardiovascular morbidity and mortality.

Standing Frame and Stroke

Ferrarello and colleagues (2015) state that supported standing is a common adjunctive therapeutic practice in subjects with several central nervous diseases who are unable to stand actively. In a randomized control trial, the authors aimed to verify if the addition of supported standing practice (SSP), delivered by means of a standing frame in two durations, to conventional physical therapy (CPT), may improve motor function, autonomy, and mobility in individuals with disability due to recent stroke. After baseline assessment, 75 participants with severe disability due to stroke, all receiving CPT, were randomly assigned to adjunctive 20 or 40 min of SSP, or CPT only (control). Motor function, autonomy, and mobility were assessed before and after training, and three months later. All participants assessed received the planned dose of intervention. No adverse events of SSP were detected. Most outcome measures improved from baseline through the end of treatment and in the follow-up in all groups; the extent of change was comparable across the three randomization groups. The authors concluded that SSP was unable to provide any sizeable adjunctive benefit, above and beyond CPT, in persons with recent stroke.

Logan et al (2022) state that there is a paucity of evidence about how to implement early mobilization for people who have had a severe stroke. Prolonged standing and task-specific training (sit-to-stand repetitions) have separately been evaluated in the literature; however, these functionally linked tasks have not been evaluated in combination for people with severe sub-acute stroke. Therefore, the authors assessed the feasibility of a randomized controlled trial to evaluate a functional standing frame program compared with usual physiotherapy for people with severe sub-acute stroke. An assessor-blinded feasibility RCT with nested qualitative component (interviews and focus group) and process evaluation was adopted. Participants were 18 years or older with new

diagnosis of severe sub-acute stroke (modified Rankin Scale (mRS) 4/5) from four Stroke Rehabilitation Units across South West England. Participants were randomized to receive either functional standing frame program (30 min. standing plus sit-to-stand repetitions) plus 15 min of usual physiotherapy daily (intervention) or usual physiotherapy (45 min) daily (control). Both programs were protocolized to be undertaken a minimum of five sessions per week for 3 weeks. Feasibility indicators included process, resource, management, and safety. Adherence, fidelity, and acceptability of the trial and intervention were evaluated using data recorded by therapists, observation of intervention and control sessions, interviews and one focus group. Patient measures of motor impairment, activities/participation, and quality of life were carried out by blinded assessors at baseline, 3, 15, 29, and 55 weeks post-randomization. Forty-five participants (51-96 years; 42% male, mRS 4 = 80% 5 = 20%) were randomized (n = 22 to intervention). Twenty-seven (60%) participants were followed-up at all time points. Twelve participants (27%) died during the trial; no deaths were related to the trial. Adherence to the minimum number of sessions was low: none of the participants completed all 21 sessions, and only 8 participants (18%) across both groups completed ≥ 15 sessions, over the 3 weeks; 39% intervention; 51% control sessions were completed; mean session duration 39 min (SD 19) control, 37 min intervention (SD 11). Intervention group: mean standing time 13 min (SD 9); mean sit-to-stand repetitions/session 5 (SD 4). Interviews were conducted with 10 participants, four relatives and six physiotherapists. Five physiotherapists attended a focus group. The authors concluded that the majority of progression criteria for this feasibility trial were met. However, adherence to the interventions was unacceptably low. This aspect of the trial design needs to be addressed prior to moving to a definitive RCT of this standing frame intervention in people with severe sub-acute stroke. The authors identified solutions to address these concerns.

Tilt Tables

In medical settings, tilt tables are commonly used as a diagnostic procedure (tilt table test) to evaluate patients with syncope of unknown origin. However, tilt tables for home use have been purported in reconditioning management in persons with orthostatic hypotension, such as due to spinal cord injury, prolonged immobilization, or advanced age.

Patients are reconditioned to standing by gradually increasing the duration of tilting and the angle of inclination from day to day. There is significant risk of loss of consciousness if the angle of inclination or the duration of use is too great. Thus, tilt tables are generally used in a facility setting and by physical therapists; however, some tables are made for home use.

Alharbi et al (2024) state that non-pharmacological interventions, such as tilt training, physical counter pressure maneuvers, and yoga, have been proposed as potential treatments for vasovagal syncope (VVS); however, their efficacy in preventing recurrent episodes remains uncertain. Thus, the authors conducted a systematic review and meta-analysis of the literature using PubMed, Web of Science, and Embase databases up to March 2023. Randomized controlled trials comparing non-pharmacological interventions with control in preventing VVS recurrence were included. The primary outcome was the recurrence rate of VVS episodes. A total of 1130 participants from 18 studies were included in the meta-analysis. The overall mean effect size for non-pharmacological interventions versus control was 0.245 (95 % CI: 0.128-0.471, p-value <0.001). Subgroup analysis showed that yoga had the largest effect size (odds ratio 0.068, 95 % CI: 0.018-0.250), while tilt training had the lowest effect size (odds ratio 0.402, 95 % CI: 0.171-0.946) compared to control. Physical counter pressure maneuvers demonstrated an odds ratio of 0.294 (95 % CI: 0.165-0.524) compared to control. The authors concluded that non-pharmacological interventions show promise in preventing recurrent VVS episodes. Yoga, physical counter pressure maneuvers, and tilt training can be considered as viable treatment options; however, further research, including randomized studies comparing pharmacological and non-pharmacological approaches, is needed to evaluate the safety and efficacy of these interventions for VVS treatment.

Hoenemann et al (2023) hypothesized that daily artificial gravity training through short-arm centrifugation could help to maintain orthostatic tolerance following head-down tilt bedrest, which is an established terrestrial model for weightlessness. The authors studied 24 healthy persons (eight women; age 33.3 ± 9.0 years; BMI 24.3 ± 2.1 kg/m2) who participated in the 60-days head-down tilt bedrest (AGBRESA) study. They were assigned to 30 min/day continuous or 6 × 5 min intermittent

short-arm centrifugation with 1Gz at the center of mass or a control group. The authors performed head-up tilt testing with incremental lower-body negative pressure until presyncope before and after bedrest. They recorded an electrocardiogram, beat-to-beat finger blood pressure, and brachial blood pressure and obtained blood samples from an antecubital venous catheter. Orthostatic tolerance was defined as time to presyncope. The authors related changes in orthostatic tolerance to changes in plasma volume determined by carbon dioxide rebreathing. Compared with baseline measurements, supine and upright heart rate increased in all three groups following head-down tilt bedrest. Compared with baseline measurements, time to presyncope decreased by 323 ± 235 s with continuous centrifugation, by 296 ± 508 s with intermittent centrifugation, and by 801 ± 354 s in the control group ($p = 0.0249$ between interventions). The change in orthostatic tolerance was not correlated with changes in plasma volume. The authors acknowledged important limitations in their study. The authors noted a difference in orthostatic tolerance at baseline. Furthermore, they did not collect blood samples at specific timepoints, but rather at baseline and after presyncope occurrence. They could not exclude that upright norepinephrine and copeptin measurements were confounded by differences in sampling time-point given the variability in time to presyncope. Moreover, given the complexity and costs of head-down tilt bedrest studies, the number of study participants was relatively small. The authors concluded that their study suggests that the artificial gravity protocol applied in their study helped maintain orthostatic tolerance following head-down tilt bedrest. However, the interventions did not suffice to fully prevent cardiovascular deconditioning. Possibly, longer artificial gravity duration or intensity are required.

There is insufficient evidence in the published peer-reviewed literature to support tilt tables for home use in the reconditioning therapy in persons with orthostatic hypotension.

Glossary of Terms

Term	Definition
Manual standing wheelchair	A wheelchair that has a mechanism that allows user to manually raise seat to transition from seating to standing position. This mechanism typically involves using a hand lever or lever system that engages and locks the wheelchair in the desired standing position. The user can then use their upper body strength to maintain stability and balance while standing.
Prone	Lying face downward
Standing frame	A piece of equipment used to enable individuals with limited/impaired mobility to maintain an upright position
Supine	Lying on the back, face upward

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