

# STATE OF THE FIELD

Issue Brief: Use of SPHM Technologies in Rehabilitation to Improve Patient Mobility and Function

## SUMMARY STATEMENT

Use of Safe Patient Handling and Mobility (SPHM) technologies can support rehabilitation goals of improved mobility and increased independence. Use of technologies is particularly beneficial for early mobility patients (i.e. neurological disorders, post-op CVA or stroke, fall risks, gait/balance instability), patients with upper or lower extremity weakness or signs of deconditioning, and amputees. Therapists must ensure that proper positioning and assistance are maintained, weight-bearing precautions are taken, and patients exhibit adequate strength and cognitive ability.

## WHAT WE DID

Evaluators from the VISN 8 Patient Safety Center of Inquiry (PSCI) and a panel of Safe Patient Handling and Mobility (SPHM) physical and occupational national experts administered a survey to VHA occupational, physical and kinesio therapists to identify current uses of SPHM technologies in therapeutic rehabilitation. The purpose of using SPHM technologies in rehabilitation is to maximize patient function and mobility while maintaining a safe working environment for the health care professionals.

Occupational (n=10), physical (n=6), and a kinesio therapists (n=1) shared 41 photo-narratives with the PSCI describing uses of SPHM technologies in rehabilitation. A photo-narrative is a method used to collect information about an activity of interest through photos and a detailed description. Not all photo-narrative activities were endorsed by the panel of experts. Therapists reported using a variety of SPHM technologies in rehabilitation, including: powered hospital beds, ceiling mounted patient lifts, floor based patient lifts, ambulation aids, sit to stand lifts, and standing frames.

## RESULTS

Photo-narratives were categorized by the World Health Organization International Classification of Functioning Disability for chapter 4 on mobility (World Health Organization, 2018). Most photos were categorized as: d410-d429 changing and maintaining basic body positions (n=22) and d450-d469 walking and moving around (n=9). The photo narratives herein were endorsed by the expert panel as exemplars safe SPHM technology use in therapeutic environments. References to equipment brands have been replaced with generic equipment titles, such as friction reducing sliding sheet.



*Common use of SPHM technology*

### Description #3 d420



Scotting up and down when sitting on edge of bed (EOB) and/or scotting forwards and backwards when sitting EOB. Use of friction reducing sliding sheet to facilitate scotting up or down at EOB. The sheet reduces friction, allowing a person to slide easier on the mattress and sheets. It promotes a smoother weight shifting for lateral sliding, like a 'conveyor belt' mechanism. With an easier gliding motion, the sheet can reduce skin shear during lateral transfers. Alternately, use the sheet to facilitate scotting forwards and backwards to sit at EOB. Use the sliding sheet with patient populations of post-Cerebral Vascular Accident (hemiparesis/hemiplegia). —*Bariatric, Amputee and Debility-Rehabilitation OT*

### Description #2 d414



This easy stand lift is a lift for exercise purposes. It helps patients who cannot stand on their own to exercise and increases the amount of time they are standing. They can read a magazine or eat something and stand at the same time. Some patients find it boring to stand for so long with nothing to do, but this equipment allows patients to do something they enjoy while they are standing. It is important that the lift has a table because it increases the amount of standing time that patients can endure. I have a bilateral amputee patient who is dependent on a lift for his ADLs and all transfers. He stays there between forty minutes to an hour. It would be extremely unusual for him to stand for that long without this machine. We have about three hundred patients in home-based primary care and only two of our patients have these machines because you have to medically justify why the patient needs it. The VA is on the right track for providing these to patients. —*Home-Based Primary Care OT*

## Description #4 d50 & 455



Obstacle course gait in parallel bars using solo step on track. Proficiency from inside parallel bars to outside of the bars. Does not have a motor, patient is dragging the cord with them. To be used with high fall risk, amputee, post CVA and Parkinson's Patients. —*Outpatient PT*



This common use of a full coverage ceiling lift with a high back sling allows a patient who is unsafe transferring with either stand pivot, slide board or other means to move from chair to bed (in this circumstance) without physical assistance from a caregiver, thus reducing the overall burden of care for staff, family, or other caregivers.

Therapists should consider skin integrity and positioning when using this technology. Ensuring that placement of the sling is not interfering with any open area or pressure sores as well as surgical incisions. In addition, any patient who has limitations in their ROM, especially posterior total hip arthroplasty should not use this style sling due to posterior hip precautions. —*PT, Rehabilitation Setting*

## PRECAUTIONS

Therapists using SPHM technologies during rehabilitation activities to transfer, position, or support patients should be conscientious of maintaining proper safety precautions.

## CONCLUSIONS

This is a first attempt to document how therapists use SPHM technology in the VHA. Narratives suggest that therapists use SPHM equipment in therapeutic settings to prevent patient and staff injuries. SPHM technology increases patient endurance, frees the hands of the therapist and decreases patients' fear of falling, allowing patients and therapists to focus on completing exercises and movements safely.

### Safety Precautions by SPHM Technology

Precautions for using SPHM Technologies in Rehabilitation	hospital beds	ceiling lifts	floor lifts	ambulation aids	sit to stand lifts	standing frame
Ensure proper positioning	•	•	•	•	•	•
Patient requires adequate strength		•	•	•	•	
Patient requires adequate cognitive ability	•	•	•	•	•	•
Take weight-bearing precautions		•	•	•	•	•
Therapist assistance required	•	•	•	•	•	•
Guard patient with Gait Belt				•		
Contraindicated if patient lacks skin integrity	•	•	•	•	•	•
Contraindicated if patient has orthopedic issues (i.e. unstable fractures, knee surgeries, severe osteoporosis)		•	•	•	•	•
Take abdominal precautions	•	•	•		•	•
Contraindicated if patient has breathing difficulties	•	•				
Contraindicated if patient has swallowing difficulties	•	•				
Contraindicated if patient has blood pressure issues	•	•	•	•	•	•
Contraindicated if patient requires Halo neck supports		•				
Take sternal precautions	•	•	•	•	•	•

*Note: Specific recommended precautions are indicated by a dot under corresponding SPHM technology type.*

*"SPMH technology could make therapy safer and more effective." - OT, Acute Care Setting*

## CONTACT US

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