

**SPHM Solutions  
Everywhere for Everyone:  
In the best interest of  
the patient and  
their caregivers**

**SPHM**



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**VA** | U.S. Department  
of Veterans Affairs






# Safe Patient Handling and Mobility (SPHM) For Everyone Around the World




Safe Patient Handling and Mobility (SPHM) practices have come a long way over the past 25 years. VHA started addressing reduction of nursing staff injuries in long term care settings and found that over time all direct care providers are at risk for Musculoskeletal Injuries (MSI) due to manual patient handling techniques. The evidence is clear that manually handling patients that exceed 35 pounds causes excessive forces on the musculoskeletal system and that these repetitive activities causes significant harm to direct care providers compared to other industries, as reported by Waters (2007).

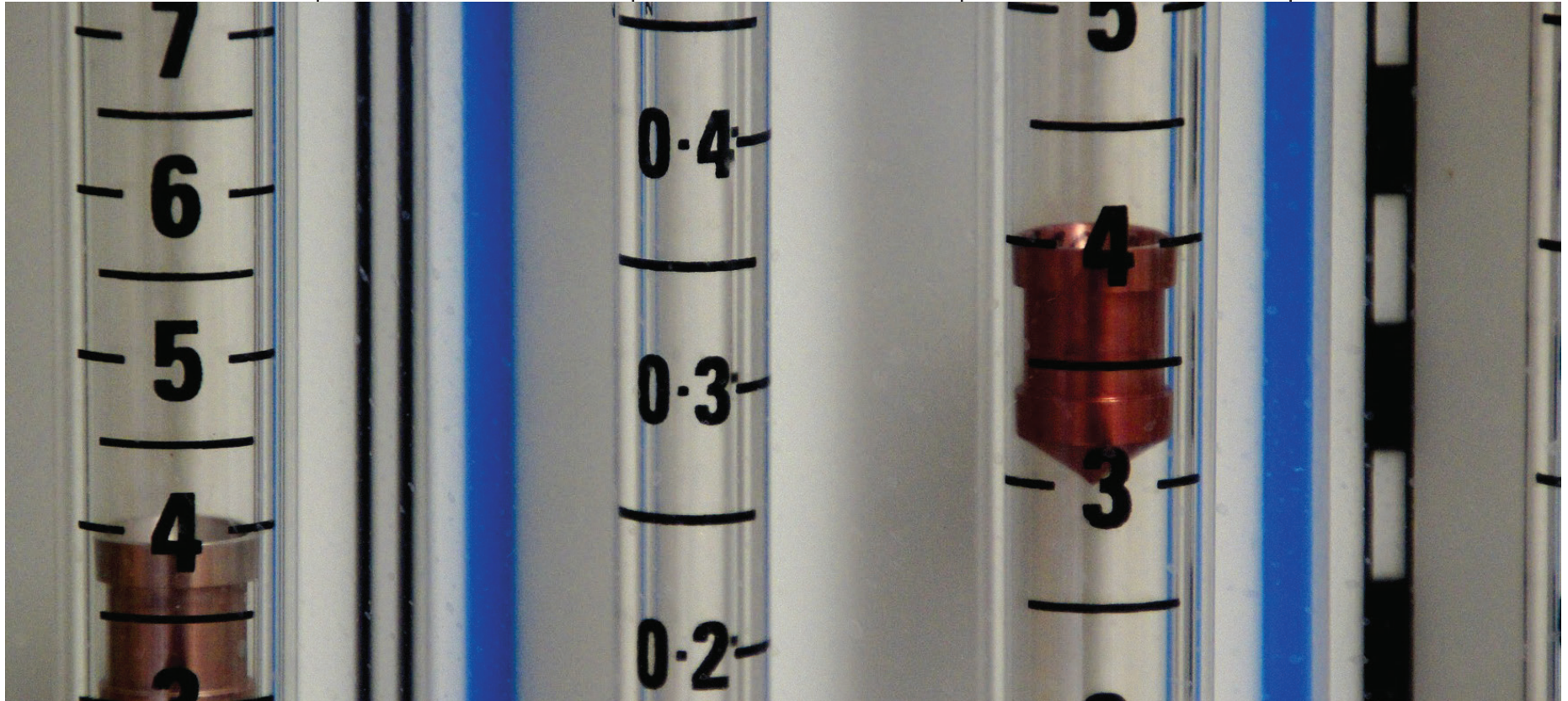
In 2008 the Veterans Health Administration (VHA) implemented a comprehensive enterprise wide national directive program requiring all health care systems to provide alternative technological solutions to manual patient handling techniques (such as overhead lift devices) which has resulted in a 50% reduction in staff injuries related to patient handling over 10 years. VHA is currently measuring not only staff injuries related to patient handling techniques, but also patient outcomes related to SPHM directives. VHA has exhibited a dramatic cultural change through SPHM programs and the addition of early mobility/activity/exercise programs that has positively impacted patient outcomes, including a reduction of falls; prevention of hospital acquired pressure injuries, catheter associated urinary tract infections (CAUTI), and central line associated bloodstream infection (CLABSI); and reduced hospital length of stay (LOS), ventilator days, and functional decline in the acute care and long term care settings. Injuries related to patient handling have decreased by 50% over the last 10 years. We are now expanding from inpatient settings to offer SPHM technologies to Veterans and their caregivers in their homes and communities.

Personally, working as an APN in 700 bed Level I Trauma Center at a University Health Care system for 23 years, I never would have anticipated that SPHM programs could and should have been offered to all Health Care Systems (HCS) and settings. Professionally, in my role as the SPHM National Program Manager for the VHA, I call on all HCS systems in the private sector and other government health care systems to develop an action plan to implement an evidence-informed SPHM program as part of a culture of safety based on principles of High Reliability Organizations (HRO). One of the main pillars of HRO is Safety Culture. One of the principles of Safety culture is "no blame". Focus not on the person involved with punitive intent, but encourage all staff to look for potential problems before they occur, reward reporting of near misses, and focus on the organizational factors (policies, processes, etc.) which result in any harm by performing purposeful root cause analyses. This document represents a pathway to facilitate implementation of SPHM programs for all health care providers in every clinical setting. It is no way all-inclusive but begins to illustrate where SPHM can live and suggests associated technologies that can best support safety initiatives for staff, patients, and their caregivers. Thus, benefiting our Veterans and impacting their quality of life by reducing undue harm. The VHA acknowledges many health care providers are providing care to our Veterans outside of the VHA and desires to support any efforts for SPHM implementation success. The goal is to work together in health care and expand the principles of SPHM to everyone everywhere.



Department/Service	Caregiver high risk tasks	Equipment and technology solutions	Potential patient outcome measures	Technology Improvements needed
<p><b>Labor &amp; Delivery</b></p> 	<ul style="list-style-type: none"> <li>• Limb Holding</li> <li>• Turning</li> <li>• Repositioning</li> <li>• Lateral transfers</li> <li>• Side lying</li> <li>• Epidural positions</li> <li>• Delivery positions</li> <li>• C-Section positions</li> <li>• Awkward positions</li> <li>• Foley cath insertion</li> <li>• Ambulation</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts *</li> <li>• Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand devices</li> <li>• Air transfer devices*</li> <li>• Friction reducing devices</li> <li>• Power drive GYN stretchers/ beds*</li> <li>• Air powered lifting device</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Pain management</li> <li>• Improved patient comfort</li> <li>• minimize birthing process trauma</li> <li>• Improved access for procedures</li> <li>• Improved patient satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Bariatric suite with adequate equipment, space and design</li> <li>• Bariatric SPHM equipment for technology dependent patients</li> <li>• Bedside Furniture to accommodate families of all sizes</li> <li>• Power drive beds and stretchers</li> </ul>
<p><b>Pediatrics/NICU</b></p> 	<ul style="list-style-type: none"> <li>• Applying of Prosthetic devices, e.g. body jackets</li> <li>• Quadriplegia</li> <li>• Ventilator Dependent</li> <li>• Uncooperative</li> <li>• Limited comprehension</li> <li>• Aggressive behaviors</li> <li>• Sensory disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand</li> <li>• Air transfer devices</li> <li>• Friction reducing devices</li> <li>• Air powered lifting device</li> </ul>	<ul style="list-style-type: none"> <li>• Patient friendly technology to encourage safer mobility</li> <li>• Utilizing play for therapy</li> <li>• Sensory devices</li> </ul> 	<ul style="list-style-type: none"> <li>• Bariatric Kid-friendly attractive play technology, non-intimidating to kids</li> <li>• Built in play devices / sensory stimulation</li> <li>• Accident prevention and elimination of hanging points</li> <li>• Child-proof features</li> </ul>
<p><b>Physical Medicine &amp; Rehabilitation (OT, PT, Kinesiology, Chiropractic)</b></p> 	<ul style="list-style-type: none"> <li>• Ambulation, balance &amp; exercise training</li> <li>• Transfers</li> <li>• Limb holding</li> <li>• Awkward positions</li> <li>• All mobility tasks</li> <li>• Joint mobilization</li> <li>• Joint manipulation</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts *</li> <li>• Floor based full body sling lifts*</li> <li>• Floor based powered and non-powered sit to stand aids</li> <li>• Air transfer devices*</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitation of improved patient function</li> <li>• Potential to reduce Length of stay</li> </ul> 	<ul style="list-style-type: none"> <li>• Bariatric Therapy equipment available for outdoors</li> <li>• Access to more SPHM Bariatric equipment for therapy in multiple settings.</li> </ul>

\*Items are preferred devices






Department/Service	Caregiver high risk tasks	Equipment and technology solutions	Potential patient outcome measures	Technology Improvements needed
<p>Respiratory Care Practitioners Primary Care, Specialty Care Medical providers (MD/NP/PA)</p> 	<ul style="list-style-type: none"> <li>• Intubation</li> <li>• Chest PT</li> <li>• Ambulation &amp; exercise</li> <li>• Assisting in care</li> <li>• Repositioning</li> <li>• Transfers</li> <li>• CPR</li> <li>• Awkward positions to perform procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Intubation pillow*</li> <li>• Overhead lifts*</li> <li>• Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand*</li> <li>• Floor based lifts</li> <li>• Air transfer devices*</li> <li>• Friction reducing devices*</li> <li>• Air powered lifting device</li> </ul>	<ul style="list-style-type: none"> <li>• Rapid ET tube placement</li> <li>• Reduction in Hospital Acquired Pneumonia due to increased mobility.</li> <li>• Improved patient comfort</li> <li>• Falls reduction</li> </ul>	<ul style="list-style-type: none"> <li>• Expanded capacity tracheostomy ties, face masks, CPAP/BIPAP devices</li> <li>• Improved patient securing technology for rapid access and precise procedures.</li> </ul>







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<p data-bbox="142 203 478 321"><b>Operating Room/ Perioperative, PACU, Short Stay Unit (SSU)</b></p> 	<ul data-bbox="499 203 837 573" style="list-style-type: none"> <li>• Lateral transfers</li> <li>• Turning</li> <li>• Repositioning</li> <li>• Limb holding</li> <li>• Proning</li> <li>• Lifting of OR bed attachments</li> <li>• Lateral decubitus positions</li> <li>• Low OR tables during procedures</li> <li>• Transferring patients in beds</li> </ul>	<ul data-bbox="867 203 1226 495" style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand</li> <li>• Air transfer devices*</li> <li>• Friction reducing devices</li> <li>• OR tables with features to facilitate safe positioning*</li> </ul>	<ul data-bbox="1255 203 1614 495" style="list-style-type: none"> <li>• Improved positioning for effective procedures</li> <li>• Improved patient comfort</li> <li>• Reduced skin shearing and pressure sores</li> <li>• Fall prevention</li> <li>• Minimizing nerve damage due poor positioning.</li> </ul>	<ul data-bbox="1644 203 2003 1417" style="list-style-type: none"> <li>• Bariatric Integrated overhead lifts in booms to facilitate pannus holding or securing, limb holding, lateral and proning and positioning.</li> <li>• OR table and C Arm technology expanded capacity.</li> <li>• OR Tables that monitor pressure points and by voice command; remind the nurse to check pressure point.</li> <li>• OR tables such as swiss army knife or inspector gadget attachments that pop up or by remote are part of the bed and made of a material that doesn't add weight to the table.</li> <li>• A drive through OR bed for outpatient surgery procedures. The patient remains on the outpatient/surgical bed from ambulatory check-in to OR and back to preop for discharge. Bed material should not add to weight of table or table should have a driving device such as is done for moving supplies and luggage to and from the airplanes.</li> <li>• An automated device that straps around patient legs and hoists them up for the nurse to position lithotomy.</li> </ul>
				








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<p><b>Dialysis inpatient and outpatient</b></p> 	<ul style="list-style-type: none"> <li>• Lateral transfers</li> <li>• Wheelchair transfers</li> <li>• Weights</li> <li>• Hypotensive episodes positioning</li> <li>• Repositioning</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand*</li> <li>• Air transfer devices*</li> <li>• Non friction reducing devices*</li> <li>• Air powered lifting device</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable treatment and transfer</li> <li>• Patient satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Bariatric power drive height adjustable extra wide chairs with Trendelenburg features, and foot extensions, attached tabletops, w/ scales</li> </ul>
<p><b>Oncology inpatient and outpatient</b></p> 	<ul style="list-style-type: none"> <li>• Chemotherapy equipment</li> <li>• Transfers</li> <li>• Repositioning</li> <li>• Ambulation</li> <li>• Low seating and awkward positions</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand*</li> <li>• Air transfer devices</li> <li>• Friction reducing devices</li> <li>• Motorized elevated toilet lift seat.</li> <li>• Air powered lifting device</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> </ul> 	<ul style="list-style-type: none"> <li>• Bariatric Height adjustable extra wide chairs with foot extensions with attached tabletops</li> </ul>
<p><b>Cath/EP Lab</b></p> 	<ul style="list-style-type: none"> <li>• Lateral transfers</li> <li>• Wheelchair transfers</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts</li> <li>• Lateral Air Transfer Device* or roll boards</li> <li>• Portable or overhead lift outside of cath lab</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to safe procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Bariatric weight and width capacity table</li> <li>• Consider Integrated overhead lift/boom systems</li> </ul>
<p><b>Diagnostic Radiology</b></p> 	<ul style="list-style-type: none"> <li>• Wheelchair transfers</li> <li>• Lateral transfers</li> <li>• Ambulation</li> <li>• Standing</li> <li>• Positioning</li> <li>• Vertical lift assistance from standing position up to procedure table</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor-based full body sling lifts*</li> <li>• Floor based powered and non-powered sit to stand</li> <li>• Air transfer devices*</li> <li>• Friction reducing devices</li> <li>• Low/High Mobile lift mate.</li> <li>• Air powered lifting device</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Bariatric weight and width capacity table.</li> </ul>

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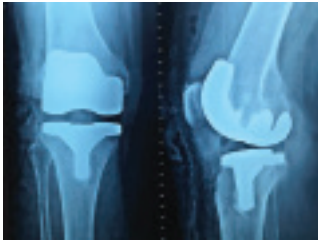


Department/Service	Caregiver high risk tasks	Equipment and technology solutions	Potential patient outcome measures	Technology Improvements needed
<p>Mental Health and Psychiatric units</p> 	<ul style="list-style-type: none"> <li>• Fall rescue</li> <li>• Aggressive Behaviors management</li> <li>• Seizures</li> <li>• Total care</li> <li>• Therapeutic containment</li> </ul>	<ul style="list-style-type: none"> <li>• Floor-based full body sling lifts*</li> <li>• Floor based powered and non-powered sit to stand and transfer devices*</li> <li>• Lateral air transfer device*</li> <li>• Air powered lifting device*</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Bariatric overhead ceiling lift full room coverage that is not accessible to patient but fully accessible to caregivers</li> </ul>
<p>Nuclear Medicine</p>	<ul style="list-style-type: none"> <li>• Lateral transfers</li> <li>• Repositioning</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead Lifts</li> <li>• Air transfer devices*</li> <li>• Friction reducing devices</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Efficiency in procedures</li> <li>• Patient comfort</li> </ul>	<ul style="list-style-type: none"> <li>• Bariatric, length, weight and width capacity tables</li> </ul>
<p>Interventional Radiology</p> 	<ul style="list-style-type: none"> <li>• Lateral transfers</li> <li>• Repositioning</li> <li>• Side lying positions</li> <li>• Proning positions</li> <li>• Table too narrow to mobilize patient.</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead Lifts</li> <li>• Air transfer devices*</li> <li>• Friction reducing devices</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Efficiency in procedures</li> <li>• Patient comfort and satisfaction</li> <li>• Music therapy</li> </ul>	<ul style="list-style-type: none"> <li>• Bariatric, length, weight and width capacity tables.</li> <li>• Overhead ceiling lift integrated in boom systems.</li> <li>• C Arm able to accommodate wider table</li> <li>• Bariatric Integrated boom overhead ceiling lifts can be explored.</li> </ul>
<p>GI Lab</p> 	<ul style="list-style-type: none"> <li>• Wheelchair Transfers</li> <li>• Lateral transfers</li> <li>• Proning</li> <li>• Pushing on Abdomen</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor based lifts</li> <li>• Air transfer devices*</li> <li>• Friction reducing devices</li> <li>• Abdominal pressure aids</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Bariatric, length, weight and width capacity power drive stretchers.</li> <li>• Proning sling</li> </ul>
<p>ED &amp; Urgent Care Centers</p> 	<ul style="list-style-type: none"> <li>• Car extraction</li> <li>• EMS Transfers</li> <li>• Lateral transfers</li> <li>• Gurney pushing</li> <li>• Repositioning</li> <li>• Turning</li> <li>• Limb holding</li> <li>• Proning</li> <li>• Seizures</li> <li>• Aggressive behaviors</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor based lifts Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand</li> <li>• Air transfer devices*</li> <li>• Friction reducing devices</li> <li>• Ambulance bay overhead lift*</li> <li>• Air powered lifting device</li> <li>• Powered Drive Stretchers*</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Bariatric, length, weight and width capacity power drive stretchers.</li> </ul>

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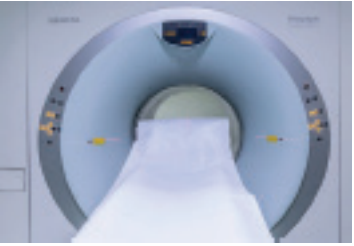
Department/Service	Caregiver high risk tasks	Equipment and technology solutions	Potential patient outcome measures	Technology Improvements needed
<p>Ophthalmology/Vision Dental, Audiology Speech and Language Blind Rehabilitation</p> 	<ul style="list-style-type: none"> <li>• Wheelchair Transfers</li> <li>• Positioning</li> </ul> 	<ul style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand</li> <li>• Wheelchair lift recliner*</li> <li>• Air powered lifting device</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> </ul> 	<ul style="list-style-type: none"> <li>• Bariatric, length, weight and width capacity chairs and exam tables.</li> <li>• Audiology booth to accommodate lifting/transferring device</li> </ul>
<p>Dementia and Alzheimer's Units</p> 	<ul style="list-style-type: none"> <li>• Aggressive Behavior</li> <li>• Assaults</li> <li>• Ambulation</li> <li>• Wheelchair transfers</li> <li>• Repositioning</li> <li>• Fall rescue</li> <li>• Hygiene Care/toileting/ Showering</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand</li> <li>• Floor based lifts</li> <li>• Air transfer devices*</li> <li>• Friction reducing devices</li> <li>• Air powered lifting device</li> <li>• Floor based Lifts for hygiene/ water resistant</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> <li>• Dignity/Autonomy</li> </ul> 	<ul style="list-style-type: none"> <li>• Existing technology</li> <li>• Bariatric patients tend to be minimal in this population</li> </ul>
<p>ICU-cardiac, medical, surgical, cardiovascular transplantation, Code teams, Rapid Response Teams</p> 	<ul style="list-style-type: none"> <li>• Wheelchair transfer</li> <li>• Lateral transfers</li> <li>• Turning and repositioning</li> <li>• Proning</li> <li>• Limb holding</li> <li>• Sitting</li> <li>• Ambulation</li> <li>• Intubation</li> <li>• Medical procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand</li> <li>• Floor based lifts</li> <li>• Air transfer devices</li> <li>• Friction reducing devices</li> <li>• Air powered lifting device</li> <li>• Powered drive beds*</li> </ul>		

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<p data-bbox="113 201 443 461">Medical surgical units, Orthopedics, Tele, SDU, Long term care, Burn unit, Hospice, Palliative care</p> 	<ul data-bbox="485 201 831 548" style="list-style-type: none"> <li>• Lateral transfers</li> <li>• Wheelchair transfers</li> <li>• Repositioning in bed/chair</li> <li>• Toileting</li> <li>• Showering</li> <li>• Limb holding</li> <li>• Turning</li> <li>• Compression hose Application</li> <li>• CPM machine</li> </ul> 	<ul data-bbox="856 201 1213 630" style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand</li> <li>• Floor based lifts*</li> <li>• Air transfer devices*</li> <li>• Friction reducing devices</li> <li>• Air powered lifting device</li> <li>• Powered drive beds</li> <li>• Floor based Lifts for hygiene/ water resistant</li> </ul>	<ul data-bbox="1245 201 1602 630" style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> <li>• Reduction in HAP wounds and lungs</li> <li>• Early ambulation</li> <li>• Reduction in LOS Falls reduction</li> <li>• Access to procedure</li> <li>• Reduction in incontinenc</li> <li>• Dignity/Autonomy</li> </ul>	<ul data-bbox="1633 201 1990 509" style="list-style-type: none"> <li>• Improved access to bariatric slings e.g. pannus holder, turners, limb holders, repositioning</li> <li>• Bariatric expandable width and length power drive beds</li> <li>• Bariatric bed linen and clothing</li> <li>• Integration of fitted bed sheet/ sling air transfer device</li> </ul> 
<p data-bbox="134 899 407 1068">Ambulatory Care Clinics Primary Care Specialty Care</p> 	<ul data-bbox="485 867 831 1214" style="list-style-type: none"> <li>• Lateral transfers</li> <li>• Wheelchair transfers</li> <li>• Repositioning in exam table/ chair</li> <li>• Toileting</li> <li>• Limb holding</li> <li>• Turning</li> <li>• Compression hose Application</li> <li>• Car Extraction</li> </ul>	<ul data-bbox="856 867 1213 1256" style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand*</li> <li>• Floor based lifts*</li> <li>• Air transfer devices*</li> <li>• Non friction reducing devices</li> <li>• Scales</li> <li>• Air powered lifting device</li> <li>• High/low exam tables</li> </ul>	<ul data-bbox="1245 867 1602 1133" style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> <li>• Ability to examine patient outside of wheelchair on exam table</li> </ul> 	<ul data-bbox="1633 867 1990 1062" style="list-style-type: none"> <li>• Bariatric, length, weight and width capacity chairs</li> <li>• Access to swivel tables and accessories to minimize awkward positions</li> </ul>








\*Items are preferred devices

Department/Service	Caregiver high risk tasks	Equipment and technology solutions	Potential patient outcome measures	Technology Improvements needed
<p data-bbox="155 224 432 391">Home and Community Care, schools, sports, recreation</p> 	<ul data-bbox="506 204 842 716" style="list-style-type: none"> <li>• Lateral transfers</li> <li>• Wheelchair transfers</li> <li>• Repositioning in bed/chair</li> <li>• Toileting</li> <li>• Showering</li> <li>• Limb holding</li> <li>• Turning</li> <li>• Compression hose Application</li> <li>• CPM machine</li> <li>• Vehicle transfer*</li> <li>• Extraction from floor or ground</li> <li>• Emergency Evacuation devices</li> <li>• Assisted ambulation</li> </ul>	<ul data-bbox="877 204 1224 716" style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor-based full body sling lifts</li> <li>• Floor based powered and non-powered sit to stand</li> <li>• Slings, sheets and repositioning straps.</li> <li>• Powered toilet lifting devices</li> <li>• Floor based lifts</li> <li>• Vehicle-mounted lifts</li> <li>• Air transfer devices</li> <li>• Friction reducing devices</li> <li>• Ambulation device</li> <li>• Air powered lifting device</li> <li>• Indee lifts</li> </ul>	<ul data-bbox="1255 204 1612 459" style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedures and community activities.</li> <li>• Safe Participation in community activities</li> </ul>	<ul data-bbox="1654 204 1990 789" style="list-style-type: none"> <li>• Improved healthcare access to:</li> <li>• Sports/leisure Swimming/ Kayaking</li> <li>• Hand cycling</li> <li>• Skiing</li> <li>• Golf</li> <li>• Beach</li> <li>• Movies</li> <li>• Shopping</li> <li>• Eating out</li> <li>• Travel by Air, Auto, Cruise, train</li> <li>• School</li> <li>• Health care</li> <li>• Alternative therapies</li> <li>• Participation in all community activities.</li> </ul>
<p data-bbox="184 857 369 894">Clinical Lab</p> 	<ul data-bbox="506 844 831 987" style="list-style-type: none"> <li>• Accommodation for bariatric wheelchairs and scooters</li> <li>• Lateral transfers</li> <li>• Repositioning</li> </ul>	<ul data-bbox="877 844 1224 987" style="list-style-type: none"> <li>• Bariatric Blood draw chairs and tables</li> <li>• Stations to accommodate wheelchairs scooters</li> </ul>	<ul data-bbox="1255 844 1507 987" style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> </ul>	
<p data-bbox="247 1166 321 1203">MRI</p> 	<ul data-bbox="506 1146 709 1252" style="list-style-type: none"> <li>• Lateral transfers</li> <li>• Repositioning</li> <li>• Lifting</li> </ul>	<ul data-bbox="877 1146 1224 1252" style="list-style-type: none"> <li>• Overhead lift in holding area.*</li> <li>• Lateral Air transfer in MRI*</li> <li>• Friction reducing devices</li> </ul>	<ul data-bbox="1255 1146 1528 1289" style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> </ul>	<ul data-bbox="1654 1146 1948 1252" style="list-style-type: none"> <li>• Bariatric MRI weight and width capacity table.</li> <li>• Wider barrel diameter</li> </ul>

\*Items are preferred devices

Department/Service	Caregiver high risk tasks	Equipment and technology solutions	Potential patient outcome measures	Technology Improvements needed
<p>CT, PET Scanner, SPECT, ultrasound, Mammography</p> 	<ul style="list-style-type: none"> <li>Lateral transfer</li> <li>Repositioning</li> <li>Patient unstable bearing weight standing</li> </ul>	<ul style="list-style-type: none"> <li>Overhead lifts*</li> <li>Floor based lifts</li> <li>Air transfer devices*</li> <li>Friction reducing devices</li> <li>Air powered lifting device</li> </ul>	<ul style="list-style-type: none"> <li>Falls reduction</li> <li>Skin shear reduction</li> <li>Comfortable transfer</li> <li>Access to procedure</li> </ul>	<ul style="list-style-type: none"> <li>Bariatric weight and width capacity table.</li> </ul> 
<p>EMS Interfacility Transfers Non-medical emergency transport Emergency, Air and Ship Transport</p> 	<ul style="list-style-type: none"> <li>Lifting of stretcher and patients into vehicle.</li> <li>Limited space in vehicle / air carrier to perform care / duties</li> <li>Awkward positions for CPR, intubation, procedures.</li> <li>Seizure activity protection</li> <li>Bystander and animal/pet interference</li> </ul>	<ul style="list-style-type: none"> <li>Power lift and load stretchers*</li> <li>Lateral transfer devices*</li> <li>Air powered lifting device</li> </ul> 	<ul style="list-style-type: none"> <li>Falls reduction</li> <li>Skin shear reduction</li> <li>Comfortable transfer</li> <li>Access to procedure</li> </ul>	<ul style="list-style-type: none"> <li>Bariatric EMS vehicles, power drive stretchers that are wider and longer with associated equipment and supplies.</li> <li>Powered air transfer devices. Portable lift devices.</li> <li>Enhancement of work safety program in community setting including stairway mobility and transfers with medical equipment, restraints, aggressive behaviors.</li> <li>Equipment that is mobility time efficient</li> </ul>
<p>Simulation Training Lab</p> 	<ul style="list-style-type: none"> <li>Wheelchair transfer</li> <li>Lateral transfers</li> <li>Turning and repositioning</li> <li>Limb holding</li> <li>Sitting</li> <li>Ambulation</li> <li>Intubation</li> <li>Vehicle transfer</li> <li>Medical procedures</li> </ul>	<ul style="list-style-type: none"> <li>Overhead lifts*</li> <li>Floor-based full body sling lifts</li> <li>Floor based powered and non-powered sit to stand</li> <li>Floor based lifts</li> <li>Air transfer devices</li> <li>Friction reducing devices</li> <li>Air powered lifting device</li> <li>Simulation EMS transport</li> </ul>	<ul style="list-style-type: none"> <li>Falls reduction</li> <li>Skin shear reduction</li> <li>Comfortable transfer</li> <li>Access to procedure</li> </ul>	<ul style="list-style-type: none"> <li>Access to most patient care equipment and supplies listed in departments and services for training purposes.</li> <li>Bariatric manikins</li> </ul>

\*Items are preferred devices

Department/Service	Caregiver high risk tasks	Equipment and technology solutions	Potential patient outcome measures	Technology Improvements needed
<p><b>Emergency Disaster Management</b></p> 	<ul style="list-style-type: none"> <li>• Vertical Evacuation</li> <li>• Lateral Evacuation</li> <li>• Lateral transfers</li> <li>• Wheelchair transfers</li> <li>• Bed transfers</li> </ul>	<ul style="list-style-type: none"> <li>• Sleds with braking/safety</li> <li>• Evacuation chairs</li> <li>• Inflatable evacuation devices</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead lifts*</li> <li>• Floor based lifts</li> <li>• Air transfer devices*</li> <li>• Friction reducing devices</li> <li>• Air powered lifting device</li> </ul>
<p><b>Morgue and Funeral Home</b></p> 	<ul style="list-style-type: none"> <li>• Lateral transfers</li> <li>• Limb holding</li> <li>• Repositioning</li> <li>• Vertical lifting</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead ceiling lifts</li> <li>• Floor based mobile lifts</li> <li>• Lateral Air transfer Devices</li> </ul> 	<ul style="list-style-type: none"> <li>• Cadaver/patient Dignity</li> <li>• Preventing damage to the remains</li> </ul>	<ul style="list-style-type: none"> <li>• Bariatric morgue power drive stretchers that are wider, deeper, and longer.</li> <li>• Bariatric morgue refrigeration</li> <li>• Increase the footprint of morgue</li> <li>• Power lifting for transport vehicles</li> </ul>
<p><b>In house transport and wheelchair escort Services</b></p> 	<ul style="list-style-type: none"> <li>• Wheelchair transfers</li> <li>• Lateral transfers</li> <li>• Ambulation</li> <li>• Standing</li> <li>• Positioning</li> <li>• Vertical lift assistance from standing position up to procedure table</li> </ul>	<ul style="list-style-type: none"> <li>• Motorized wheelchairs</li> <li>• Overhead ceiling lifts</li> <li>• Floor based mobile lifts</li> <li>• Lateral Air transfer Devices</li> <li>• Power Drive Stretchers</li> <li>• Powered drive beds</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Wider and longer stretchers</li> </ul> 
<p><b>Security and Police Services</b></p> 	<ul style="list-style-type: none"> <li>• Limb holding and restraining</li> <li>• Vertical lifting</li> <li>• Lateral transfers</li> <li>• Aggressive behaviors</li> <li>• Assaults</li> <li>• Dealing with weapons and contrabands</li> </ul>	<ul style="list-style-type: none"> <li>• Powered air lift fall rescue devices.</li> </ul>	<ul style="list-style-type: none"> <li>• Falls reduction</li> <li>• Skin shear reduction</li> <li>• Comfortable transfer</li> <li>• Access to procedure</li> </ul> 	<ul style="list-style-type: none"> <li>• To be determined</li> </ul>

\*Items are preferred devices

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## Resources:

1. Injured Nurses by National Public Radio  
<http://www.npr.org/series/385540559/injured-nurses>
2. SPHM VHA APP  
<https://staff-sqa.mobilehealth.va.gov/sph/#/cpaa/single-task>
3. VHA SPHM Guidebook and Bariatric Guidebook  
<http://www.tampavaref.org/safe-patient-handling/implementation-tools.htm>
4. Safe Patient Handling & Mobility (SPHM) for Direct Patient Care Providers – TRAIN 1083299 - <https://www.train.org/vha/course/1083299/>  
Safe Patient Handling & Mobility (SPHM) for VA Employees - 1083300 - <https://www.train.org/vha/course/1083300/>

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