

ALGORITHMS FOR SAFE & EFFECTIVE MOVING & HANDLING

The US department of Veterans Affairs reviewed their "Safe Patient Handing and Mobility" Algorithms in 2014. They form part of an extensive Guidebook aimed at creating consistency in the implementation of a system wide program.

The document provides resources for safe patient handling and mobility programs, implementations, patient care ergonomic assessments, and patient handling and mobility technology. These resources include related to developing and maintaining safe patient handling programs. They also include algorithms that can be used to maximise safety while handling and mobilising all patients, with extra guidance specific to varied Client types.



Indicative algorithms can be used to assist decision making around appropriate choices for moving and handling people. They account for elements of assessment, staff numbers, equipment used and techniques applied. They intend to maximise safety for the Client and Caregiver during the implementation of a safe patient handling program. Algorithms help guide the critical thinking required to ensure individualised quality of care is demonstrated upon each moving and handling task.

Algorithms are specifically useful when moving and handling bariatric clients, where the safety risk is high, and assessment and practical skills may be less frequently used. A full assessment should always be performed by appropriate Clinical team, however due to fluctuations in ability, physical, cognitive, behavioural and medical, staff must be well educated to assess and adapt upon each moving and handling task.

Reference: Safe Patient Handling and Mobility Guidebook, Published by VHA Center for Engineering & Occupational Safety and Health (CEOSH), January 2016







Algorithm 1 Notes

SPECIFIC

- If patient has partial weight bearing capacity, transfer toward stronger side.
- Ensure all chairs, beds, stretchers, etc. are locked.
- To use seated transfer aid, chair arms must recess or be removable.
- High/low beds, adjustable exam tables and stretchers are ideal for making transfers easier.
- Always transfer towards stronger side.
- NEVER use a gait belt to lift, transfer, or catch a patient.

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a failing patient! A caregiver probably cannot stop a patient from failing. Quickly remove obstacles out of the way that may injure the patient's head.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of patient.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- Avoid shearing forces, especially for patients with delicate skin or pressure ulcers.
- Increase ease in inserting slings by using friction reducing device or lateral transfer device.
- Verify equipment is locked prior to transfer/movement.
- If using seated sling, air assisted lateral transfer device or friction reducing device, obtain facility direction for leaving under patient.
- Working height should be appropriate for staff safety, at about elbow height.
- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages). If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.
- Conditions likely to affect transfer/repositioning techniques.



BARIATRIC

- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI over 40 is considered to increase the risk for caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, and waist circumference should be collected on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- Abdominal binder/pannus sling may be necessary to prevent abdominal area from interfering with patient handling task/transfer.
- A friction reducing device will facilitate insertion and removal of a sling under a bariatric patient.
- Inserting sling and/or friction reducing device from head to toe or toe to head rather than log rolling may make sling placement easier.
- Suggest applying a sticker to all bariatric equipment with 'EC' (expanded capacity) and the weight capacity of the equipment.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.







Algorithm 2 Notes

SPECIFIC

- Confirm destination surfaces (bed, stretcher, exam table, etc.) and patient handling equipment MEET WEIGHT, WIDTH, and HEIGHT REQUIREMENTS of patient
- If patient needs to be pulled up in bed prior to transfer, see Repositioning in Bed (Algorithm 3).
- High/low beds, adjustable exam tables and stretchers are ideal for making transfers easier.
- Lock all wheeled equipment before transfer.
- When using air assisted lateral transfer device, ALWAYS move feet first, followed by upper torso and head, to determine if is safe to continue the move and to prevent patient from falling through the space between sending and receiving surfaces.
- Destination surface should be ½ lower than sending surface for all lateral patient moves.
- Ensure that at least one caregiver is on the destination side.
- For patients with delicate skin or pressure ulcers, care must be taken to avoid shearing force by dragging patient against surfaces.
- Friction reducing devices vary greatly in design and efficiency. Sometimes a combination of a slide board and another type can reduce forces more than either one alone.
- The force required to logroll a patient is about 32% of the patients body weight
- Caregivers should avoid push or pull forces greater than 20% of their own weight.

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient! A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patients head.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of
 patient.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- Increase ease in inserting seated slings by using friction reducing device or lateral transfer device.
- If using seated sling, air assisted lateral transfer device or friction reducing device, obtain facility direction for leaving under patient.
- Working height should be appropriate for staff safety, at about elbow height.
- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages). If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.
- Conditions likely to affect transfer/repositioning techniques.

Hip/Knee/Shoulder Replacements	Respiratory/Cardiac Compromise	Fractures
History of Falls	Wounds Affecting Transfer/Positioning	Splints/Traction
Paralysis/Paresis	Amputation	Severe Osteoporosis
Unstable Spine	Urinary/Fecal Stoma	Severe Pain/Discomfort
Severe Edema	Contractures/Spasms	Postural Hypotension
Very Fragile Skin	Tubes (IV, Chest, etc.)	

BARIATRIC

- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI over 40 is considered to increase the risk for caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, and waist circumference should be collected on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- A friction reducing device will facilitate insertion and removal of a sling under a bariatric patient.
- Inserting sling and/or friction reducing device from head to toe or toe to head rather than log rolling may make sling placement easier.
- Suggest applying a sticker to all bariatric equipment with 'EC' (expanded capacity) and the weight capacity of the equipment.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.







Algorithm 3 Notes

SPECIFIC

- DO NOT PULL FROM HEAD OF BED. Manual patient repositioning is dangerous.
- Discourage and remove draw sheets from beds and replace them with full body slings for repositioning. Using draw sheets on beds gives conflicting messages and makes the transition to technology use more difficult.
- The repositioning sling should be placed before a dependent patient is transferred to the surface.
- Inflate mattress of low air loss beds to maximum setting to assist in repositioning.
- Although some specialty beds turn and/or rotate the patient, most specialists confirm that bed rotations are not sufficient to off load pressure off patient and recommend that use of a repositioning sling is the best option for full turns. Confirm with Wound Care that off-loading pressure is accomplished appropriately.
- When using bed repositioning option, caregiver must assess skin integrity, support the turn, adjust limbs and provide pillow supports.
- For patients with delicate skin or pressure ulcers, care must be taken to avoid shearing force.
- Working height should be appropriate for staff safety, at about elbow height.
- For patients that can assist in moving up in bed, to encourage them to help, ask the patient to hold on the side rails above head, to help pull themselves up in bed, then to flex knees and push on the count of three.
- Verify equipment is locked prior to transfer/movement.
- If using seated sling, air assisted lateral transfer device or friction reducing device, obtain facility direction for leaving under patient.
- The force required to logroll a patient is about 32% of the patient's body weight
- The force required to pull a dependent patient on a draw sheet is about 72.6% of the patients body weight
- Caregivers should avoid push or pull forces greater than 20% of their own weight.

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient! A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patient's head.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of patient.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- Avoid shearing forces, especially for patients with delicate skin or pressure ulcers.
- Increase ease in inserting slings by using friction reducing device or lateral transfer device.
- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages). If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.
- Conditions likely to affect transfer/repositioning techniques.

Hip/Knee/Shoulder Replacements	
History of Falls	
Paralysis/Paresis	
Unstable Spine	
Severe Edema	
Very Fragile Skin	



Fractures Splints/Traction Severe Osteoporosis Severe Pain/Discomfort Postural Hypotension

BARIATRIC

- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI over 40 is considered to increase the risk for caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, and waist circumference should be collected on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchars, lifts, and other devices.
- Most bariatric patients have to have the head of the bed elevated at all times to facilitate ease in breathing during repositioning tasks.
- Encourage patient to move as much as possible independently to minimize caregiver handling tasks and foster patient independence and worsening of functional abilities.
- Use foam mattresses for patients who have some functional ability if the patients condition permits. Self mobilization is easier on a foam mattress than a Low Air Loss Mattress.
- Use a sealed, high-density foam wedge or similar device to assist in maintaining positioning
- Some patients have poor tolerance for turns greater than 30 degrees.
- Keep repositioning sling under patient at all times to minimize high risk handling tasks, if possible.
- When Low air loss mattress is required the patient is likely to slide down in bed frequently due to slippery mattress cover, use of a repositioning sling under patient facilitates routine movement and will offer patient comfort.
- Consider use of 2 padded twin turners or bariatric limb slings, one over upper torscback and one over buttocks area, to turn and reposition patient when there is a need to access the back for wound care. Utilize friction reducing devices to insert twin turner or limb holders.
- Expanded capacity turning, limb holding, and repositioning slings may help with repositioning patients during bathing.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- Abdominal binden/pannus sling may be necessary to prevent abdominal area from interfering with patient handling task/transfer.
- A friction reducing device will facilitate insertion and removal of a sling under a bariatric patient.
- Inserting sling and/or friction reducing device from head to toe or toe to head rather than log rolling may make sling placement easier.
- Suggest applying a sticker to all bariatric equipment with 'EC' (expanded capacity) and the weight capacity of the equipment.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.







Algorithm 4 Notes

SPECIFIC

- Take full advantage of chair functions, such as a chair that reclines.
- May use arm rest to facilitate repositioning.
- Make sure chair wheels are locked.
- · Friction reducing devices for seated repositioning vary greatly. One way slides, slide sheets, or thin, small slide boards may be appropriate.
- Do NOT push on knees without friction reduction or manually lift a patient up in a chair.
- NEVER use a gait belt to lift, transfer, or catch a patient.
- Caregivers should avoid push or pull forces greater than 20% of their own weight.
- Avoid shearing forces.
- Always be aware of and use stronger side, if appropriate.

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient! A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patient's head.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of patient.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- Avoid shearing forces, especially for patients with delicate skin or pressure ulcers.
- Increase ease in inserting slings by using friction reducing device or lateral transfer device.
- If using seated sling, air assisted lateral transfer device or friction reducing device, obtain facility direction for leaving under patient.
- Utilize one way slide cushion as much as possible to minimize repositioning needs in chair.
- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages). If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.
- Conditions likely to affect transfer/repositioning techniques.



BARIATRIC

- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI over 40 is considered to increase the risk for caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, and waist circumference should be collected on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.
- Most bariatric patients are unable to sit upright in seated position due to large abdomen obstructing sitting, so facilitate seating in modified recline for patient comfort and ease in breathing.
- Verify the bariatric chair meets patients weight and width at widest part of body, and facilitate ability of patients feet to reach the floor for safety and comfort.
- Utilize the seated full body sling that fits the patients size to position patient during repositioning of patient in chair. Avoid having patient sit on the sling for prolonged periods in a way that would create pressure points.
- Most bariatric patients require padded slings during positioning in chair.
- Encourage patient to reposition self as much as possible independently.
- Often bariatric patients have swelling and poor circulation in the legs, so consider keeping legs elevated on pillows, using limb sling to reposition legs as needed.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- Abdominal binder/pannus sling may be necessary to prevent abdominal area from interfering with patient handling tasktransfer.
- A friction reducing device will facilitate insertion and removal of a sling under a bariatric patient.
- Suggest applying a sticker to all bariatric equipment with 'EC' (expanded capacity) and the weight capacity of the equipment.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.

Reference: Safe Patient Handling and Mobility Guidebook, Published by VHA Center for Engineering & Occupational Safety and Health (CEOSH), January 2016







Algorithm 5 Notes

SPECIFIC

- Appropriate mode and route of transport requires information gathering prior to transport.
 - What equipment can receiving environment accommodate? Some areas may require stretcher or chair as opposed to bed.
- What does receiving area require? (i.e., seated patient, patient on air device, specific bed features, etc.)
- Is width/length/weight capacity of devices adequate for patient?
- What is the easiest and safest route to transport patient (even surfaces, no inclines, etc.)?
- If the patient has respiratory distress, the stretcher must be able to maintain a high Fowler's position.
- If powered devices are not available, use newer transport devices that are meant for transport. Heavy beds (including sand beds) or small wheels will add to difficulty.
- Plan a path to avoid obstacles, narrow doors, slopes, carpet, tight turns, or sudden stops and to ensure bed/stretcher/wheel chair can be accommodated along the pathway.
- Verify equipment is locked prior to transferring patient onto or off of transport device.
- Confirm elevator will accommodate specialty beds and expanded capacity beds/stretchers.
- Caregivers should avoid push or pull forces greater than 20% of their own weight.

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient! A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patient's head.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of patient.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages). If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.

BARIATRIC

- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI over 40 is considered to increase the risk for
 caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, and waist circumference should be
 collected on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.
- Determine if the stretcher/bed is wide enough for patient to reposition self as needed.
- Transport devices should be powered if at all possible. Verify that device is fully charged and ready for use at all times.
- Transport with head in upright or elevated position.
- Pre-plan the route to transport the patient to facilitate patient respect and dignity as well as ease in maneuvering through wider spaces.
- Pre-plan transport to morgue upon end of life, using repositioning sling or lateral air transfer device under body bag to minimize transfer risks.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- Suggest applying a sticker to all bariatric equipment with 'EC' (expanded capacity) and the weight capacity of the equipment.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.







Algorithm 6 Notes

SPECIFIC

- · Prior to transport, determine if bathroom doorway can accommodate entry of lift and/or wheelchair, staff, and patient.
- Thresholds may present a problem. Consult with Engineering Service to lower if problematic.
- If using seated transfer aid, chair arms must recess or be removable.
- If patient has partial weight bearing capacity, transfer toward stronger side.
- Use of powered toilet lift seat facilitates a safer process.
- Toileting slings (bariatric and non-bariatric) are available for toileting.
- Verify equipment is locked prior to transfer onto or off of commode.

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patient's head.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of
 patient.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages) If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.
- Conditions likely to affect transfer/repositioning techniques.

Hip/Knee/Shoulder Replacements	Respiratory/Cardiac Compromise	Fractures
History of Falls	Wounds Affecting Transfer/Positioning	Splints/Traction
Paralysis/Paresis	Amputation	Severe Osteoporosis
Unstable Spine	Urinary/Fecal Stoma	Severe Pain/Discomfort
Severe Edema	Contractures/Spasms	Postural Hypotension
Very Fragile Skin	Tubes (IV, Chest, etc.)	

BARIATRIC

- For patient handling purposes, any patient that weighs more than 30C pounds, or 100 pounds over ideal weight, or who has a BMI over 40 is considered to increase the risk for
 caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, and waist circumference should be collected
 on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.
- Check toilet weight capacity. A bariatric patient may need an expanded capacity commode chair, steel toilet, or toilet with enhanced weight support. A standard porcelain toilet typically
 has a weight limit of 350 pounds. Even a floor bearing toilet may shear under weight.
- A standard bathroom toilet often does not provide adequate space for the body of a bariatric patient, use of an expanded capacity commode over a toilet provides safety and privacy for the patient.
- Place bariatric patient in a room where there is full access to ceiling lift throughout the room, into the shower and over the toilet using one move if available.
- Use correct size and padded hygiene slings for toileting and showering tasks.
- Use bariatric standing assist device, if appropriate, to facilitate independence in toileting and preserve as much function as possible.
- Consider bariatric powered lift toilets if appropriate.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- A friction reducing device will facilitate insertion and removal of a sling under a bariatric patient.
- Inserting sling and/or friction reducing device from head to toe or toe to head rather than log rolling may make sling placement easier.
- Suggest applying a sticker to all bariatric equipment with 'EC' (expanded capacity) and the weight capacity of the equipment.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.



Algorithm 7 Showering and Bathing OPTIONS: Coach and cue patient. Powered standing assist device or May use personal assistive devices. (A) non-powered standing aid to transfer patient Consider fall protection for high fall risk. to powered or non- powered shower chair. START HERE Ceiling lift or full body lifting device with (B) shower sling or hygiene sling to transfer patient into shower/ bathing trolley or tub. Full Bariatric patients require additional caregivers. Can patient bear Is patient weight and Yes Partial cooperative? Yes balance while standing? 'Partial weight bearing or unreliable standing balance Does patient No have upper extremity strength, sitting balance, and ability to grasp with at least OPTIONS: one hand? May require additional staff. Bed bath (see Algorithms 3, 11, 12, 13). (A) Evaluate/screen patient Ceiling lift or full body lifting device with shower B and reschedule if needed. sling or hygiene sling. If safe to perform task, Lateral transfer (see Algorithm 2) to shower/ No use one of these options. bathing trolley or powered shower chair. Bariatric patients require additional caregivers and may require special equipment to reposition patient. Last Revision 12/2/14

Reference: Safe Patient Handling and Mobility Guidebook, Published by VHA Center for Engineering & Occupational Safety and Health (CEOSH), January 2016



Algorithm 7 Notes

SPECIFIC

- Mesh slings (bariatric and non-bariatric) are available for bathing.
- Turning, limb holding, and repositioning slings may help with repositioning patients during bathing.
- Verify equipment is locked prior to transfer/movement.
- Always be aware of and use stronger side, if appropriate.

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient! A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patient's head.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of patient.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- Avoid shearing forces, especially for patients with delicate skin or pressure ulcers.
- Increase ease in inserting slings by using friction reducing device or lateral transfer device.
- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages). If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.
- Conditions likely to affect transfer/repositioning techniques.



BARIATRIC

- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI over 40 is considered to increase the risk for caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, and waist circumference should be collected on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- A friction reducing device will facilitate insertion and removal of a sling under a bariatric patient.
- Inserting sling and/or friction reducing device from head to toe or toe to head rather than log rolling may make sling placement easier.
- Suggest applying a sticker to all bariatric equipment with 'EC' (expanded capacity) and the weight capacity of the equipment.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.







Algorithm 8 Notes

SPECIFIC

- Do not manually lift a patient from the floor. Use SPHM technology.
- Medical precautions or stabilization do not require manual lifting. A Back Board can be lifted with a repositioning or supine sling or with straps built to connect back board to lift. Some
 lifts have stretcher attachments to keep a patient flat.
- Do not allow patient to lean on caregiver for support.
- Lift connection must go low enough to reach sling connections (loops or clips) without pulling patient up manually to attach.
- Friction reducing devices aid in transferring a patient onto lifting devices, back boards or slings.
- If patient falls in a difficult to access area, consider inserting air assisted lifting and/or lateral transfer device or lift sling under patient to facilitate pulling patient out of hard to access area.
 Sling or air assistive device can then be used to lift the patient.
- Preserve dignity by facilitating privacy for fall rescue when possible.

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patient's head.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of patient.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- Avoid shearing forces, especially for patients with delicate skin or pressure ulcers.
- Increase ease in inserting slings by using friction reducing device or lateral transfer device.
- Verify equipment is locked prior to transfer/movement.
- If using seated sling, air assisted lateral transfer device or friction reducing device, obtain facility direction for leaving under patient.
- Working height should be appropriate for staff safety, at about elbow height.
- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages).
 If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.
- Conditions likely to affect transfer/repositioning techniques.



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- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI over 40 is considered to increase the risk for
 caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, and waist circumference should be collected
 on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.
- Elevate head with pillow prior to moving patient to facilitate patient comfort and ease in breathing.
- If using air assisted lifting and lateral transfer devices, consider placing seated, supine, or repositioning sling on top of air assisted lateral transfer device prior to placement under patient.
- Fall rescue will require three or more caregivers to help pick patient up from the floor using lifting devices. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- A friction reducing device will facilitate insertion and removal of a sling under a bariatric patient.
- Inserting sling and/or friction reducing device from head to toe or toe to head rather than log rolling may make sling placement easier.
- Suggest applying a sticker to all bariatric equipment with 'EC' (expanded capacity) and the weight capacity of the equipment.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.







Algorithm 9 Notes

SPECIFIC

- Vehicle transfer will be hazardous whenever the patient is combative. Use more staff and minimize contact with the patient.
- NEVER use a gait belt to lift or transfer a patient.
- For seated transfer aid, chair must have arms that recess or are removable.
- Verify equipment is locked prior to transfer/movement.
- Always transfer towards stronger side, if possible

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient! A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patient's head.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of patient.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- Avoid shearing forces, especially for patients with delicate skin or pressure ulcers.
- Increase ease in inserting slings by using friction reducing device or lateral transfer device.
- Verify equipment is locked prior to transfer/movement.
- If using seated sling, air assisted lateral transfer device or friction reducing device, obtain facility direction for leaving under patient.
- Working height should be appropriate for staff safety, at about elbow height.
- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages). If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.
- Conditions likely to affect transfer/repositioning techniques.



BARIATRIC

- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI over 40 is considered to increase the risk for caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, and waist circumference should be collected on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.
- Bariatric size chairs and powered stretchers need to be wide enough to accommodate patient's width and height for patient safety and comfort.
- Keep patient's head elevated during transfer and transport.
- If coordinating transport, verify transport vehicle is large enough to accommodate patient, staff, and patient handling equipment.
- Keep repositioning sling or air transfer device under patient to facilitate lateral transfers if allowed and appropriate.
- Pre-plan route to minimize transport risks over rough terrain or up or down inclines.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- A friction reducing device will facilitate insertion and removal of a sling under a bariatric patient.
- Inserting sling and/or friction reducing device from head to toe or toe to head rather than log rolling may make sling placement easier.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.







Algorithm 10 Notes

SPECIFIC

- Do not bear patient's weight or allow patient to lean on caregiver for support.
- Assure that lift and sling capacity, size and design can accommodate patient without damage or groin pain.
- Ambulation slings have a wide range of designs intended to support chest, thighs, and/or pannus. Some designs or patient conditions may require the use of protective undergarments.

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient! A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patient's head.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of patient.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages). If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.

BARIATRIC

- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI over 40 is considered to increase the risk for caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, and waist circumference should be collected on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.

Reference: Safe Patient Handling and Mobility Guidebook, Published by VHA Center for Engineering & Occupational Safety and Health (CEOSH), January 2016







Algorithm 11 Notes

SPECIFIC

- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages). If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.
- Working height should be appropriate for staff safety, at about elbow height.
- Increase ease in inserting slings by using friction reducing device or lateral transfer device.
- Modify use of a bariatric seated sling to elevate limbs for bathing or wound care.
- To determine safety of lifting an appendage, use the following. A man's leg is approximately 16% of the total body weight. The head is approximately 8%, and an arm is approximately 5%.

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient! A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patient's head.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of patient.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- Avoid shearing forces, especially for patients with delicate skin or pressure ulcers,

BARIATRIC

- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI over 40 is considered to increase the risk for caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, and waist circumference should be collected on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.
- Consider use of two or more of padded limb holders to support limbs using a four point hanger bar.
- Consider seated sling straps to support limbs for procedures.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- Abdominal binder/pannus sling may be necessary to prevent abdominal area from interfering with patient handling task/transfer.
- A friction reducing device will facilitate insertion and removal of a sling under a bariatric patient.
- Inserting sling and/or friction reducing device from head to toe or toe to head rather than log rolling may make sling placement easier.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.







Algorithm 12 Notes

SPECIFIC

- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages). If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.
- To determine safety of lifting an appendage, use the following. A man's leg is approximately 16% of the total body weight. The head is approximately 8%, and an arm is approximately 5%.
- Working height should be appropriate for staff safety, at about elbow height.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of patient.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- A friction reducing device will facilitate insertion and removal of a sling under a bariatric patient.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.
- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI or over 40 is considered a patient that increases the risk for caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, waist circumference should be collected on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.

GENERAL

- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient! A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patient's head.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- Avoid shearing forces, especially for patients with delicate skin or pressure ulcers.







Algorithm 13 Notes

SPECIFIC

- During any patient task, under the best of circumstances (no lines, tubes, contractures, etc.), a caregiver may lift no more than 35 pounds of a patient's weight (body, head, appendages). If tubes, lines and other patient items or conditions influencing patient handling are present, or staff must bend, twist or reach, the permissible lifting weight is decreased. If weight limit is exceeded, assistive devices must be used if possible.
- To determine safety of lifting an appendage, use the following. A man's leg is approximately 16% of the total body weight. The head is approximately 8%, and an arm is approximately 5%.
- Working height should be appropriate for staff safety, at about elbow height.
- Prior to starting task, CONFIRM patient handling equipment, slings, and destination locations (bed, commode, wheelchair, etc.) meet WEIGHT, WIDTH, AND HEIGHT requirements of patient.
- Bariatric patients require more caregivers. Identify a leader when performing tasks with multiple caregivers in order to synchronize efforts and increase safety.
- Abdominal binder/pannus sling may be necessary to prevent abdominal area from interfering with patient handling task/transfer.
- A friction reducing device will facilitate insertion and removal of a sling under a bariatric patient.
- Working height should be appropriate for staff safety, at about elbow height.
- A multidisciplinary team should problem solve these tasks, communicate to all caregivers, refine as needed and perform consistently.
- For patient handling purposes, any patient that weighs more than 300 pounds, or 100 pounds over ideal weight, or who has a BMI or over 40 is considered a patient that increases the risk for caregivers while performing patient handling. Waist circumference is also used to identify bariatric patients. Weight, height, waist diameter, waist circumference should be collected on these patients in order to provide safe care and select appropriate equipment, beds, stretchers, wheelchairs, lifts, and other devices.

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- NEVER lift patients manually except under emergency situations such as during an active patient code.
- NEVER catch a falling patient! A caregiver probably cannot stop a patient from falling. Quickly remove obstacles out of the way that may injure the patient's head.
- Do not allow patient to lean or pull/grab on caregiver for support in movements.
- Allow and encourage patients to move on their own as much as it is safe to do so.
- Ask patient what steps can be taken to facilitate ease and comfort in their movement and mobility as they typically understand their strengths and weaknesses.
- Avoid shearing forces, especially for patients with delicate skin or pressure ulcers.