

Pathway Health Services

Falls Reduction Related to Wheelchair Use

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Pathway Health Services
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Preventing Injuries

Goal

Reduce Wheelchair Related Injuries in the Community:
Home Health, Assisted Living, and Long Term Care Venues

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Falls Related to Seating

- Unlocked Brakes
- Over reaching
- Sliding
- Tipping chair
- Unassisted transfers

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Most common causes of falls from chairs

- Poor Fit
 - Due to knees lower than hips putting resident on a sliding board to the floor
 - Lower seat
 - Seat not deep enough causing chair to tip when resident leans forward
- Rises unsafely from chair
 - Tip seat using dual axle adjustment
 - Meet need to move with frequent position changes
 - Keep engaged in activity and visually supervised
- Propelling over uneven ground



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For Safety and Comfort

- All chairs should be fit to the resident
 - Size
 - Type of Use
 - Who will propel them



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Training needed for safe use

- Provide training to prevent injuries to caregiver:
 - Foot Pedals, folding chair, removing armrests
 - Transfers
 - Car, bed, toilet, chair
 - Up ramps – go forward
 - Down ramps – go backward
- Have therapist do WC mobility safety check
- Prevent injuries to user:
 - Same training as Care giver if they are to be an independent user
 - Safety in use if cognitively able to self propel
 - Propelling over rough ground



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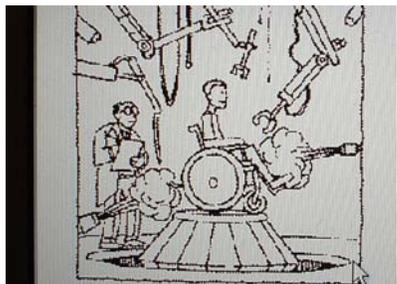
Bus Lifts

- Lock Brakes
- Provide assistance to access
- Position so down side of ramp is to rear of individual's wheelchair
- Follow Manufacturer's directions for Tie down
- Chair type must be tested and meet ANSI standards for use in transport vehicles



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Fit The Chair to Resident and keep it well maintained



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Wheelchair Cushions

- Purpose:
 - Increase Comfort
 - Reduce risk of Pressure Ulcers
 - Stabilize the pelvis for increased function
 - Stabilize the body in the chair to prevent sliding
- Types:
 - Open cell foam
 - Memory Foam
 - Multiple density foams combined
 - Wedge
 - Antithrust
 - Gel/foam combo
 - Gel
 - Air



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Failure to lock brakes:

Anti-rollback Brakes

- Advantages:
 - prevents roll back during attempts to independently transfer
- Disadvantages:
 - Must be carefully adjusted to prevent excess pressure on ischial tuberosity
- Brake Extensions



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Why DO folks attempt to get out of their chairs?

- Uncomfortable
 - Pain
 - Fatigue
- Boredom
 - Lack of engagement with others
 - Left for long periods in front of TV or in their rooms
- Confusion
 - Agitation/anxiety
- Need to move !!



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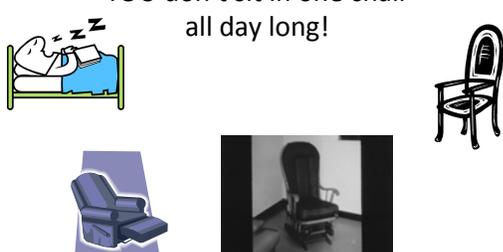
When repositioning

We all move away from pain and toward comfort



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Provide Alternative Options –
YOU don't sit in one chair
all day long!



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Everyone must be able
to identify poor W/C fit

- Correct Fit
 - Thighs level
 - Feet flat on floor
 - Back of chair comes up to mid shoulder bone
 - Elbows rest on armrests without leaning and without tucking them inside armrests



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Two Finger Rule



- Width:
 - Two fingers of space between hip and side arm
- Seat depth:
 - Two fingers of space behind back of calf and edge of seat

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Sliding from chair

- Pulls self from chair propelling down the hall with feet
- Sacral sitting - oozes from chair
- Effect is worse if
 - seat is too high and knees are lower than hips
 - Recliner chairs



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Over Reaching

- Center of gravity must remain within the base of support
- Leaning forward will tip this guy
- Increase seat depth and length of wheel base



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Gravity Assisted Seating – Eliminate Restraint Need



- Let gravity help keep the individual in the chair - not slide them out of the chair
- Tip chair using dual axle placement
 - Lower back of seat and raise front
 - May need to start with lower chair frame to get feet flat on floor for propelling chair
- Anti-tippers

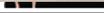


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What's wrong with this picture?

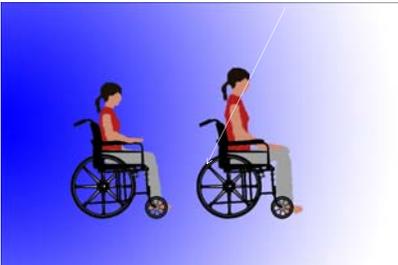


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Tall lean folks: deeper seat, higher off ground, taller back

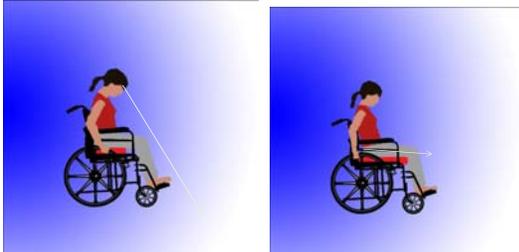


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Seat or Cushion Depth

Cushion or seat too short – folding forward

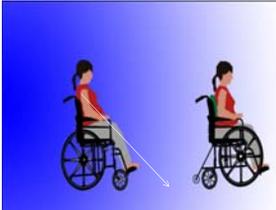
Cushion or seat Too long – slides into sacral sitting



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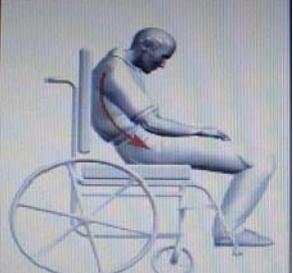
Bariatric Seating

- Large buttocks push pelvis forward in chair
 - Extra depth wheelchair seat
 - Support low back above buttocks
 - Tip chair by lowering back of seat and raising front (dual axel chairs)
- Extra width
- Heavy duty chair



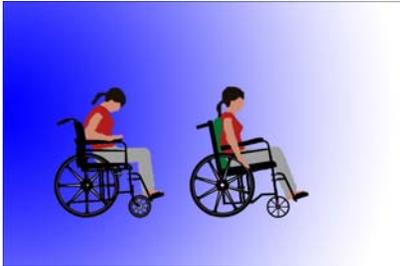
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Sacral sitting – high pressure points and pain



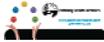
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Kyphotic Back – molded back,
extra depth seat and tipped seat



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Moldable back – Total Contact



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Recessed deep surround back



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Exhaustion: COPD or CHF Use Lightweight Chair

- Average Wheelchair weighs 35-50 pounds plus weight of oxygen tank
- Rugs create resistance
- Wheels don't turn equally pulling wc to side



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When To Use a Tilt In Space Chair?



- Individual who cannot reposition and needs pressure relief
- Traumatic Brain Injury
- Severely compromised Cerebral Palsy
- Cost has come down



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Habitual Rocking

- Elder with Dementia
 - Pacing in a sitting position
 - Self Stimulation through movement
- Solutions: Provide opportunity for movement
 - Stationery glider
 - Frequent opportunities to walk with staff
 - Stimulation class
 - Anti-tipping devices - front and rear

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Huntington's Disease

- Need longer wider wheelbase to prevent tipping chair
 - Ballistic movements
 - Severe thrusting side to side
- Need low center of gravity
- Need to be able to self propel
- Need tipped seat to prevent forward falls



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What about a Geri Chair

- Issues:
 - No Pressure Relief
 - Use a gel overlay
 - Unable to position functionally
 - Does not accommodate contractures
 - Windswept leg position
 - Feet dangle



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No one wants to be restrained



MDS: Coding Definition

A restraint is any device that "restrains" you from doing something you could do without the device or from accessing your body parts



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Examples for LTC Correct MDS 3.0 Coding

- A dependent resident with a seat belt or lap buddy is not restrained
- A lap tray is a restraint if it prevents a capable resident from scratching their thigh
- A seat belt is a restraint when used on a resident who rises unsupervised from the wheelchair - if he cannot open it independently



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Is Anti-Gravity Seating a Restraint?

- What Effect does the chair position have on the individual?
 - If the chair position prevents someone from rising who could rise from a standard seat, it is a restraint
- Discuss the effect with family and client
 - Explain the negative effects of restraints and of falls
 - Make an educated choice
 - Document discussion
 - Reevaluate and modify seating as the condition changes



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Managing Family Resistance to Restraint Reduction

- Are you treating the family's needs or the resident's needs?
- On admission – provide pamphlet and explain policy "We are a restraint free facility"
 - Don't wait for the issue to become urgent
- Explore their fear with them
- Create a safe plan
- Explain safe plan to family showing them how it can work
- When eliminating a restraint - Do not take restraint off until safe plan is in place and working
- Do a gradual progression with good family feedback
- When all else fails, do 30 day notification, so family can find a facility which agrees with their philosophy



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Gradual reduction of restraint and alarm use

First - put effective alternatives in place

- Gravity assisted seating
- Visual supervision
- Opportunities Alternative positioning
- Fix root cause
 - UTI
 - Medication issues etc

Second – progressive reduction with family participation, care plan, & documentation of results

- Off when visually supervised
 - Meals and activity
- Off during most coherent time of day
 - Not when "sun-downing"
- Increase off time till device is eliminated



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Sounds good but how do we pay for a proper chair??

- In Long Term Care - Federal Regulations require facilities to meet the needs of residents it admits . Facility must provide a safe functional chair.
 - Reshuffle current wheelchairs
 - Utilize dual axel component on chairs already owned by facility
 - Prioritize - meet needs of frequent fallers first
 - Prioritize - acquire chairs with deeper seats
 - Therapy assessments and reassessments are reimbursable
- In Assisted Living and Home Care, Medicare will purchase chair
 - Get it right the first time
 - Consult an OT or PT



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Resources - Google

- Joann Rader
 - Rethinking Personal Alarms
 - Individualized Wheelchair Seating for Older Adults
- CMS – MDS 3.0 Resident Assessment Instrument (RAI) manual for examples of Restraint coding
- Mountain Pacific QIO web site: Seating ideas
 - Wheelchair Seating tool kit: Betsy Willy PT, MA or email me for copy
- Family Pamphlet - Reducing Restraint Use in Nursing homes: A guide for Residents and Families – Colorado Foundation for Medical Care web site
- Email Betsy Willy: Betsy.willy@pathwayhealth.com