FACILITATING IMPROVED POSTURE AND POSITIONING IN PERSONS WITH INTELLECTUAL AND OTHER DISABILITIES: THE NURSE’S ROLE

Presented by:
Dr. Catherine von Stitt DScPT MPT
Clinical Physical Therapist Consultant
Department on Disability Services
250 E St SW 5th Floor
Washington DC 20024
(202) 262-2219
catherine.vonstitt@dc.gov
Objectives

At the end of the workshop each participant will be able to:

- Describe the role of the nurse in promoting improved posture and positioning
- Demonstrate and teach direct service staff how to perform range of motion to improve/maintain joint mobility and prevent contractures
- State three principles to follow in providing optimal positioning when an individual is in bed and sitting up
- Identify the need and establish priorities for implementing rehabilitation services
Posture and Positioning

- Posture and Positioning/Repositioning are vital aspects of care for individuals who:
  - Need assistance to reposition themselves
  - Are dependent for repositioning
Posture and Positioning

- Without proper body alignment and positioning, these individuals are at risk for:
  - Developing contractures
  - Decreased skin integrity
Posture and Positioning
Federal Regulations (Omnibus Reconciliation Act, 1989) governing LTC facilities specifies that:

“A facility must ensure that a resident who enters a facility without contractures not experience an unpredictable reduction in ROM without justification of cause, and that a resident with contractures receives treatment and service consistent with professional nursing standards, designed to increase ROM and maintain existing ROM”
Federal Regulations

- Impose an obligation on healthcare facilities and staff to prevent contractures and immobility through:
  - ROM
  - Stretching
  - Activity
  - Exercises
  - Splinting
  - Positioning
What is a Contracture?

- Static shortening of muscle and connective tissue that limits range of motion at a joint
- Loss of joint motion due to structural changes in non-bony tissue (skin, ligaments, tendons, and muscle)
- Elastic connective tissue is replaced by inelastic fibrous tissue
- Painful, disfiguring deformities of the joints
Contractures

- Much easier to prevent than cure
  - Early intervention is essential to effective prevention

- The effects from not intervening timely can be devastating to:
  - An individual's physical functioning
  - Overall medical condition
  - Quality of life
Causes of Contractures

- Immobilization
- Poor Positioning
- Pain secondary to trauma/disease
- Prolonged bed rest
- Muscle imbalance
- Muscle weakness
Causes of Contractures Continued

- Studies show that residents in LTC facilitate may not move each joint through its normal range each day which results in:
  - Muscle atrophy
  - Shrinkage/tightening
  - Reduced ROM
Time Table for Contractures

- 4 days of immobility = Contractures are noticeable
- 10 days of immobility = Significant contractures
- 14 days of immobility = Gross contractures or near crippling deformities

For every day after the 4th day, it will take 10 days of treatment to restore the extremity to a functional state (not full ROM)
Consequences of Contractures

- Mobility limitations/Decreased Quality of Life
- Generalized weakness and poor circulation
- Increased risk of falls
- Occurrence of pain
- Decline in ADL/Functional task performance
- Increased occurrence of pressure sores/ulcers, incontinence, constipation, and weight loss
- Decline in social involvement and depression
What Happens During Functional Declines?

The saying is TRUE:

“If you don’t use it, You lose it!”

- Muscle begins to waste from disuse
  - Which can cause:
    - Decreased mobility
    - Increased/decreased tone to occur in muscles
    - Decreased range of motion at joints
    - Increased pain
    - Decreased posture
    - Decreased motivation
    - Decreased endurance for tasks
    - Decreased interaction with environment
    - Decreased circulation
    - Potential for skin breakdown
    - Decreased oral intake
    - Need for increased assistance from caregivers
  - All contributing to
    - Potential for Further Functional Decline
Keys to Facilitating Mobility

- Encourage individuals to do as much for themselves as possible

- Encourage individuals to participate in a variety of activities
  - Give plenty of choices/options
  - Make activities fun and interesting
    - Make games out of everyday tasks
      - Add music
      - Praise the individual for doing a good job
      - Incorporate a rewards system
Remember

Allowing an individual to do for themselves:

- Requires less caregiver assistance
- Decreases the potential for caregiver injury
- Increases the individuals quality of life
The Role of Nurses in Promoting Mobility and Functional Independence

- Know each individual's functional baseline

- Encourage Direct Staff Support (DSP) to allow the individual to do as much for themselves as possible (Even if it takes more time)

- Encourage DSP’s to engage individuals in physically and mentally stimulating tasks
The Role of Nurses in Promoting Mobility and Functional Independence

- Encourage activities such as:
  - A walking or standing program before/after dinner
  - Wheelchair mobility activities
  - Encouraging DSPs to have individuals assist with household duties
  - Group exercise activities at home
  - Utilizing Wii games
  - Utilizing exercise videos/DVDs
The Role of Nurses in Promoting Mobility and Functional Independence

- Don’t be scared to move rigid joints
- Encourage DSP’s to perform gentle range of motion during ADL’s
Lets Talk About Joint Mobility

- Every joint has an available range of motion
- Every joint has an end feel:
  - **Hard end feel:** when bone hits bone
    - i.e. elbow extension when olecranon process enters the olecranon fossa to stop joint movement
    - Abnormal i.e.: arthritis or bone chips causing joint to stop moving
  - **Firm end feel:** a stretching or “springy” feeling
    - i.e. hip flexion when the hamstrings stretch to stop joint movement
    - Abnormal i.e.: elbow extension when bicep spasticity causes joint movement to stop
  - **Soft end feel:** when soft tissue hits soft tissue
    - Elbow or knee flexion when one muscle belly hits another to stop joint movement
Let's Talk About Joint Mobility

Every muscle has tone
  - However, tone can also increase or decrease
    - Increased tone is called spasticity

  - **Modified Ashworth Scale**
    - Grade 0: no increase in muscle tone
    - Grade 1: Slight increase in muscle tone, manifested by a catch and release, or by minimal resistance at the end of range of motion
    - Grade 2: Slight increase in muscle tone, manifested by a catch, followed by minimal resistance throughout the remainder (less than half) of the range of movement
    - Grade 3: More marked increase in muscle tone through most of the ROM, but affected parts still move
    - Grade 4: Considerable increase in muscle tone, passive movement difficult
    - Grade 5: Affected part(s) rigid in flexion and extension
Let’s Talk About Range of Motion

Gentle Range of Motion can make a DIFFERENCE!

- It can facilitate muscle relaxation
- It can alter tone (increase/decrease)
- It can increase range of motion
- It can assist in increasing muscle strength
- It can prevent further contractures
- It can assist with improved carryover into functional tasks
Let’s Practice!

- Passive range of motion
  - Caregiver moves the joint
- Active Assistive range of motion
  - Individual assists caregiver with the movement
- Active range of motion
  - Individual performs the full movement
Pressure Ulcers

- Pressure ulcers are sometimes called "bed sores"

- Occur in about 40,000 people every year

- Usually occur when individuals are:
  - Not able to change their position in a bed or a chair
    - Bed bound
    - In the bed or wheelchair or other surface for prolonged periods of time
    - May not even realize that they need to change their position

http://www.moveforwardpt.com/symptomsconditionsdetail.aspx?cid=0e1ed7fb-165d-4cb3-a187-64da4b415504#.Uyfz3Ld8NPM
Pressure Ulcers Continued

- Pressure ulcers can also result from:
  - Friction injuries to the skin when a person is being pulled across a surface
    - Such as being pulled across a sheet when the bed is being made or being pulled out of a wheelchair
  - Prolonged skin exposure to:
    - Tape, urine, and feces, or it might be injured by tape removal
      - This kind of skin injury is more likely to become a pressure ulcer if the skin is exposed to too much or too little moisture, scrubbing, or temperatures that are too cool or too warm.

http://www.moveforwardpt.com/symptomsconditionsdetail.aspx?cid=0e1ed7fb-165d-4cb3-a187-64da4b415504#.Uyfz3Ld8NPM
Areas most at risk of skin injuries from immobility and prolonged pressure:

- Ischium or sitting bones
- Greater trochanters or hip bones
- Sacrum and coccyx or tail bones
- Spinal bones
- Scapula or shoulder blade
- Bones in the lower leg and feet can also press on parts of the wheelchair

**The Pelvis is the Key**

It is the proximal anchor

Where the pelvis is the rest of the body will follow!
Principles for Seating and Positioning

- The body should be aligned laterally to midline
- The spine is aligned to the normal cervical, thoracic, and lumbar curves or “S” shape, without lateral flexion
- The pelvis is without rotation with a slight anterior tilt
- The hips are at 90 degrees
- The knees are at 90 degrees
- Weight bearing should be evenly distributed over the ischial tuberositites
- The ankles are at 90 degrees
- The feet are supported by the footrest/foot box without inversion/eversion
- The head is in midline to the shoulders, slightly forward and extended
- The shoulders are without obliquity and slightly abducted
- The elbows are resting comfortably on the armrests
- The wrist/hands are in a neutral functional position
Take the Pressure Off

- Changing positions helps to relieve pressure, redistribute weight, and promote circulation
  - Performing pressure relief in the wheelchair can help prevent skin injuries
  - Repositioning or moving a person back and forth between a bed and a chair is needed to help pressure ulcers heal
  - Providing specialized beds, mattresses, or cushions made of materials that decrease the amount of pressure on vulnerable parts of the body.
Repositioning in the Wheelchair

**Frequency:**
- Individuals using a wheelchair should change position as much as possible on their own every 15 minutes and should have assistance with changes in position every hour
- If an individual requires assistance they should be repositioned at least every 2 hours

**Self-care:**
- If an individual has enough strength in their upper body, they can do wheelchair push-ups — raising their bodies off the seat by pushing on the arms of the chair
Repositioning in the Wheelchair
Continued

- **Specialized wheelchairs:**
  - Pressure-release wheelchairs, which tilt to redistribute pressure, provide some assistance in repositioning and pressure relief

- **Cushions:**
  - Various cushions — including foam, gel, and water- or air-filled cushions — can relieve pressure and help ensure that the body is appropriately positioned in the chair
Techniques for Pressure Relief in the wheelchair

- Leaning to one side then the other with or without assistance. Lying across a bed or table may help.
- Leaning forward so chest goes onto knees either independently or with assistance.
- Utilizing the tilt-in-space mechanism if you have this on a power wheelchair by tilting all the way back as far as the wheelchair allows. A minimum of 50 degrees is preferable.
- Lifting straight up.

Repositioning in the Bed

- **Frequency:**
  - Repositioning should occur every two hours

- **Repositioning devices:**
  - Individuals with enough upper body strength may be able to reposition themselves with the assistance of a device such as a trapeze bar. Using bed linens to help lift and reposition a person can reduce friction and shearing.

- **Special mattresses and support surfaces:**
  - Special cushions, foam mattress pads, air-filled mattresses and water-filled mattresses can help a person lie in an appropriate position, relieve pressure and protect vulnerable areas from damage. Your doctor or other care team member can recommend an appropriate mattress or surface.

Repositioning in the Bed Continued

- **Bed elevation:**
  - Hospital beds that can be elevated at the head should be raised no more than 30 degrees to prevent shearing.

- **Protecting bony areas:**
  - Bony areas can be protected with proper positioning and cushioning. Rather than lying directly on a hip, it's best to lie at an angle with cushions supporting the back or front. Cushions should also be used to relieve pressure against and between the knees and ankles. Heels can be cushioned or "floated" with cushions below the calves.

How often should I pressure relieve and for how long?

- This will vary and depends upon your cushion, your skin type, whether you have previously had a skin injury, the amount of soft tissue covering your bony areas and how frequently you move in and out of your wheelchair.

- Generally, you should hold your pressure relieving position for 2 minutes (2 minutes each side if you go side to side) to allow the circulation in your buttocks to return to normal.

- Don't forget about pressure relief whilst in the car or sitting on the couch. For long journeys in the car a cushion in the car can help.

How often should I pressure relieve and for how long?

- Pressure relief should occur every 2 hours
Options for Pressure Relief

Wheelchair Pressure Relief by Leaning from One Side to the Other

Wheelchair Pressure Relief by Bending at the Waist
Options for Pressure Relief
Options for Pressure Relief
Options for Pressure Relief
Options for Pressure Relief
Options for Pressure Relief

[Images of a child and a young person laying on their sides, presumably demonstrating pressure relief positions.]
If it’s not documented, it’s like it never happened!
Documentation Continued

Tips for Completing Documentation

- Be truthful when documenting
- Complete documentation in a timely manner
- Fully complete all sections
- Use the code key for the document
- Make sure you initial your documentation
# Positioning Schedule

**Month/Year:** January 2014

| TIME | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 8:00 AM | WC | WC | WC | WC | WC | WC | UC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC |
| 10:00 AM | WC | WC | WC | RWC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC |
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| 10:00 PM | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC | WC |

**Staff Initials:**

- Code: 5G = Right Side Lying
- Code: 5T = Tilted in Wheelchair
- Code: 5S = Supine
- Code: 5P = Day Program
The Role of Nurses in Promoting Posture and Improved Positioning

✔ Educated DSP’s on the importance of correct positioning and needs for repositioning

✔ Encourage DSP’s to perform gentle range of motion during ADL’s and as Prescribed by the PT
The Role of Nurses in Promoting Posture and Improved Positioning Continued

- Encourage DSP’s to perform gentle range of motion during ADL’s and as prescribed by the PT
- Ensure that staff knows how to accurately document
- Recommend contacting a Physical Therapist if indicated
When Should You Contact a Physical Therapist

- A physical therapist can advise on the appropriate placement of cushions and their role in regular repositioning.

- Physical therapists are experts in positioning people on different surfaces, including beds, wheelchairs, toilets, bedside commodes, or other types of chairs and furniture as well as in moving a person from one surface to another (called "making transfers"). The physical therapist can train family members and caregivers to do positioning and transfers safely.

http://www.moveforwardpt.com/symptomsconditionsdetail.aspx?cid=0e1ed7fb-165d-4cb3-a187-64da4b415504#.Uyfz3Ld8NPM
Ellen is an 80-year-old woman with Down Syndrome, Alzheimer Disease, and Congestive heart failure and she lives in an Intermediate Care Facility (ICF) with 5 other housemates. She requires Maximal Assistance to perform to change her own position in bed, perform bed mobility, and transfers. She is nonambulatory and her ability to communicate is limited. She has a dedicated service provider (DSP) and a Physical Therapist is scheduled to begin home health visits to improve her mobility.

One day while bathing Ellen her DSP, Megan, notices thick, mushy material on the sheet and a bad smell. Based on the location of the material on the sheet, Megan traces it back to Ellen's tailbone, where there is an opening in the skin the size of a dime. She also notices that Ellen has shallow ulcerations on the back of both heels.

What does she do next? Who does she report this issue to?
Pressure ulcers can be very serious and can become infected. They require immediate attention. When Ellen's Physical Therapist arrives that afternoon, the therapist examines the wound and recommends that Ellen be taken to her primary care physician to further assess and address the wounds. The Physical Therapist notes that Ellen presents with decreased range of motion and increased flexion tone throughout both hips and knees.

The Physical Therapist trained the QMRP, House Manager, and DSP staff at the home on how to perform a lower extremity home exercise program 3-5 times a week to improve range of motion, blood circulation, and positioning in order increase her potential for greater mobility and to decrease the potential for further contractures, poor posture, decline in mobility, and wounds. showing the family how to reposition and transfer her from one surface to another. The Physical Therapist will continue to work with the caregivers to ensure compliance with the home exercise program.

This story was based on a real-life case. Your case may be different. Your physical therapist will tailor a treatment program to your specific case.
**Nurses, You Make A Difference!**

Your skills, Your eyes,
Your compassion, Your caring
Make A Difference!!!

Thank You
For ALL that you DO!
References

- http://www.mayoclinic.org/diseases-conditions/bedsores/basics/prevention/con-20030848

- http://www.moveforwardpt.com/symptomsconditionsdetail.asp?cid=0e1ed7fb-165d-4cb3-a187-64da4b415504#.Uyfz3Ld8NPM