Facilitating Mobility and Functional Independence in Persons with Intellectual and Other Disabilities: The Nurse’s Role

PRESENTED BY:
DR. CATHERINE VON STITT DSCPT MPT
DDA/DDS CONSULTING CLINICAL PHYSICAL THERAPIST
Objectives

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

- Identify the need and establish priorities for implementing rehabilitation services
- Describe the role of the nurse in promoting mobility and functional independence
- 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 and promoting independence for persons who use wheelchairs
What is Rehabilitation?

- **Rehabilitation** refers to
  - Any process that seeks to restore an individual to a previous level of health

- The Rehabilitative process will focus on
  - The task of restoring at least some function to a damaged body part or utilizing the process of education to equip the individual to compensate for damage that cannot be repaired

- At its core, Rehabilitation
  - Has the goal of assisting individuals to achieve the highest quality of life and health as possible within their circumstances

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
Rehabilitation Services Available through DDA/DDS

- Physical Therapy
- Occupational Therapy
- Speech Therapy
What do Physical Therapists Do?

- Help restore mobility
- Help restore function
- Provide patient/caregiver training
- Assist with preventing further decline

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
Physical Therapists

- Complete Physical Therapy Evaluation
- Develop a plan of care
- Create treatment plans
- Educate patients/caregivers
- Promote healthier and more active lifestyles

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
Physical Therapists

- Improve Range of Motion and Strength
  - Exercises
  - Manual techniques
  - Modalities
  - Orthotics
- Assist with improving functional transfers
- Assist with improving quality of gait pattern during ambulation
- Improve balance
  - Sitting: static/dynamic
  - Standing: static/dynamic
    - Improving protective response and righting reaction
- Assist with wheelchair seating/positioning/mobility
- Assist with pain management related to identified neuromuscular/bone disorders
Example of Treatment Interventions

- Therapeutic Exercises
- Therapeutic Activities
- Neuromuscular Reeducation
- Gait Training
- Orthotic Fitting/Training
- Wheelchair Seating and Positioning
- Electrical Stimulation
- Ultrasound
- Shortwave Diathermy
- Manual Therapy

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
When an individual demonstrates a decline in functional mobility from their baseline:

- Decline in ambulation
- Decline in transfers
- Decline in bed mobility
- Decline in sitting/standing balance
- Decreased lower extremity range of motion
- Increased/decreased muscle tone
- Development of contractures
- Poor posture in wheelchair
- Increasing number of falls
- Increased pain with functional mobility
- S/p recent fractures of the lower extremities
- Need for orthotic/splinting device for lower extremities
- Decreased ability to maneuver wheelchair
What do Occupational Therapists Do?

Help people across the lifespan to participate in things they want and need to do in order to complete everyday activities.
Occupational Therapists

- Restoring Range of Motion and Strength
- Completing Activities of Daily Living:
  - Bathing
  - Dressing
  - Grooming
  - Toileting
- Cooking
- Driving
- Coordination during tasks
- Sequencing for completing tasks
- Assess needs for adaptive equipment
- Create/recommend appropriate upper extremity splints

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
Occupational Therapists

- Complete Occupational Therapy Evaluation
- Develop a plan of care
- Create treatment plans
- Educate patients/caregivers
- Promote healthier and more active lifestyles
Examples of Treatment Interventions

- Therapeutic Exercises
- Therapeutic Activities
- Neuromuscular Reeducation
- Gait Training
- Orthotic Fitting/Training
- Wheelchair Seating and Positioning
- Electrical Stimulation
- Ultrasound
- Shortwave Diathermy
- Manual Therapy

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
When an individual demonstrates a functional decline in ADL’s and self management from their baseline

- Decline in self feeding techniques
- Decline in bathing techniques
- Decline in dressing techniques
- Decline in toileting/hygiene techniques
- Decreased toilet transfers
- Decreased tub/shower transfers
- Decreased sitting/standing balance
- Decreased sequencing during functional tasks
- Decreased upper extremity strength and range of motion
- Increased tone in upper extremities
- Decreased ability to safely maneuver wheelchair
- Decreased posture in wheelchair
- Need for orthotic/splinting devices for upper extremities

When to Refer to Occupational Therapy Services

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
What do Speech Therapists Do?

Specialize in communication disorders as well as swallowing disorders

Speech Therapy...
Speech Therapists

- Work to improve:
  - Cognitive aspects of communication
    - attention, memory, problem solving, executive functions
  - Quality of Speech
    - phonation, articulation, fluency, resonance
  - Language
    - comprehension and expression in oral, written, graphic, and manual modalities; language processing

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
Speech Therapists

- Work to improve:
  - Swallowing
  - Voice
  - Sensory awareness related to:
    - Communication
    - Swallowing
    - Aerodigestive

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
Speech Therapists

- Complete Speech Therapy Evaluation
- Develop a plan of care
- Create treatment plans
- Educate patients/caregivers
- Promote independence and safety in communication, cognition, and swallowing

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
Examples of Speech Therapy Interventions

- Treatment of swallowing dysfunction
- Treatment of speech language, voice, and communication disorder
- Development of cognitive skills

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
When an individual demonstrates a decline in cognition, communication, or ability to swallow from their baseline:

- Decline in cognition
- Increased coughing or drooling during meals
- Decline in swallowing function
- Decline in oral motor function, strength, and range of motion
- Decline in language comprehension
- Decline in speech production
- Decline in speech intelligibility
- Decline in vocal quality and hygiene behaviors
- Decline in reading comprehension and expression
- Decline in alternative communication expression (non verbal)
Where do Therapists Work?

- Hospitals
- Private practice
- Outpatient Clinics
- Home Health Agencies
- Schools
- Work Settings
- Sports and fitness facilities
- Government Agencies

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
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

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
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

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
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

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
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 DSP’s to have individuals assist with household duties
  - Group exercise activities at home
  - Utilizing Wii games
  - Utilizing exercise videos/DVD’s

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
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

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
Let's 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
    - Abnormal i.e.: hand edema causes joint movement to stop
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

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
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

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
**The Pelvis is the Key**

It is the proximal anchor

Where the Pelvis is the rest of the body will follow!
Proper sitting position:

- 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
- Weight bearing should be evenly distributed over the ischial tuberositites
- The knees are at 90 degrees

- 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
Poor Wheelchair Posture May Increase the Risk for:

- Contractures/loss of range of motion/deformities
- Muscle atrophy
- Decreased mobility
- Altered sensation
- Decreased activity and interaction
- Incontinence
- Impaired circulation
- Skin breakdown

- Aspiration and pneumonia
- Behavioral/emotional changes
- Restrictions of the diaphragm, decreased respiratory capacity
- Decreased oral intake
- Decreased bowel action/constipation
- Altered heart rate
- Pain

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
Let’s Get and Keep Our Individuals Moving

- Encourage range of motion and exercises
- Get individuals up and moving
- Make sure individuals are properly positioned
- Let individuals do as much as they can for themselves

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
**Nurses, You Make A Difference!**

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

Thank You
For ALL that you DO!

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
References


- Jones, D.  Wheelchair Seating for the Elderly.  Presented at Good Samaritan Community Healthcare; February 23-24, 1999; Puyallup, WA.


- McCue, M.  Practical Seating and Positioning Solutions.  Sponsored by Professional Education Programs, Inc.; March 21, 2003; Seattle WA.

Dr. Catherine von Stitt DScPT MPT
DDA Health and Wellness
December 20, 2012
References


