Management of Pressure Injuries and Falls

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• F314 Pressure Ulcers changes to F686
• F688 Mobility Tag added

QAPI
• Focus on Skin Integrity

QAPI
• Quality Assurance
• Performance Improvement

QAPI
• Sign of Insanity:
  • Doing the same thing over and over again and expecting different results
    • Albert Einstein

SYSTEMATIC
ON-GOING
QAPI Assessing Systems

• QAPI Tools and Resources:  
  • http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/nhqapi.html

Governance & Leadership

• Administrator, DON and Management must fully support the program and be actively involved

QAPI – Feedback, Data Systems & Monitoring

• Use and make data meaningful  
  • Identify what you need to monitor  
  • Collect, track, and monitor measures/indicators  
  • Set goals, benchmarks, thresholds  
  • Identify gaps and opportunities  
  • Prioritize what you will work to improve  
  • Use data to drive decisions

QAPI – Systemic Analysis & Systemic Action

• Understand and focus on organizational processes and systems  
  • Model and promote systems thinking  
  • Practice Root Cause Analysis (RCA) – Get to the root of the problems  
    • Flowcharting  
    • Five Whys  
    • Fishbone Diagram  
  • Take action at the systems level

Targeting Your Skin Integrity PIP

• Break your Skin Integrity Systems Down:  
  • Wound Care Team and Effective Meetings  
  • Communication Systems  
  • Sufficient Resources  
  • Pre-Admission Process  
  • Admission Process  
  • Prevention Program  
  • Treatment Program  
  • Monitoring Programs  
  • Education
Skin Integrity Team PIP

* Wound Care Nurse
  - Utilized when a wound happens
  - Typically is responsible for the weekly documentation of a wound
  - Ensures appropriate treatment strategies

Oversight of the program

- Prevention
- Education
- F314 Compliance
- MDS Accuracy
- OASIS-C Accuracy
- Monitoring

Skin Integrity Team PIP

* Investment in Knowledge
  - Consider WOCN (www.wocn.org) or WCC (www.wcei.net) certification
  - Prevention
  - Etiology of wounds
  - Assessment & Documentation
  - Treatment modalities
  - F314 Training
  - MDS 3.0 Section M Training
  - OASIS-C Integumentary Items

Skin Integrity Team PIP

* Wound Care Expertise takes education AND experience
  - No one wound nurse can manage a prevention and treatment program alone
Skin Integrity Team PIP

• Development of a Skin Care Team
  • Key Nursing Assistants from ALL shifts
  • Key Floor Nurses from ALL shifts
  • Nurse Managers
  • Therapy
  • Restorative Nursing
  • Dietary
  • Physician/NP/Medical Director
  • Housekeeping/Maintenance
  • MDS Coordinator

Skin Integrity Team PIP

• Skin Team Meetings
  • Develop a SET schedule for the Skin Care Team meetings – Management MUST support
    • Initially may need to be weekly to bi-weekly
    • Monthly

Skin Integrity Team PIP

• Skin Team Meeting Agenda
  • Review current residents with wounds
    • Progress
    • Topical Treatment
    • Support surfaces/equipment
    • Heel lift
    • Turning Schedule
    • Incontinence management
    • Nutritional Support
    • Therapy & Restorative Involvement
    • Compliance/Barriers to plan of care

Skin Integrity Team PIP

• Skin Team Meeting Agenda
  • Review ALL Residents (bring in treatment book)
    • Review Treatment sheets
    • Decrease/change in mobility
    • Change in appetite, eating habits or weight loss
    • Change in continence
    • Change in cognition
    • Overall changes/decline
    • Restorative progress

Skin Integrity Team PIP

• Skin Team Meeting Agenda
  • Review Supplies/Equipment
    • Support Surfaces (bed & wheelchair)
    • Heel lift devices
    • Positioning devices
    • Perineal cleansers and barrier ointments/creams
    • Lifting & repositioning devices
    • Restorative devices
    • Topical dressings

PIP Project

Communication Systems
Communication PIP

• Communication Systems
  • On-going communication and involvement with the direct caregivers (plan of care, interventions, etc.)?
  • How do the caregivers communicate skin concerns (verbally or written)?

Communication PIP

• Communication Systems
  • Between shifts and between caregivers (last time turned & toileted at a minimum)?
  • Between Units?
  • Between health care settings?

Communication PIP

• Communication Systems
  • Physician/NP, Family, Interdisciplinary Team, Skin Care Team & Direct Caregivers
  • Upon Discovery of a wound
  • No Progress in 2 weeks
  • Decline
  • Healed

Communication PIP

• Communication Systems
  • Whom in the facility does the pre-admission screening?
    • Social Services
    • Admissions
    • Nursing

Pre-Admission Process PIP

• Where do your admissions come from?
  • Have you had any surprises and if yes, from where?
    • Didn’t know they had a wound
    • The wound is at a deeper stage than expected
    • Unaware of adjunctive treatment until arrival

Pre-Admission Process PIP

• Does the Pre-Admission Intake Ask/Address:
  • Do they currently have any skin breakdown?
  • Even if the answer is no proceed to the following questions
  • Are they currently receiving any skin care treatments?
Pre-Admission Process PIP

- **Does the Transfer Form Communicate:**
  - Complete assessment of current skin concerns
  - Current topical treatment and order
  - The type of mattress they were on and ordered
  - Type of wheelchair cushion they were on and ordered
  - Type of turning program/devices utilized and ordered
  - Incontinence/catheter and management
  - Dietary supplementation
  - Any follow up visits with wound care clinicians

Admission Process PIP

- **Developing a task force to evaluate the Admission Process:**
  - Assess when and where your admissions are happening
  - Who is doing the admission assessments – This will be the team members

Admission Process PIP

- **Admission Process Tips**
  - At a MINIMUM Temporary Care Plan within 48 Hours to Include:
    - Support surfaces (bed and W/C)
    - Turning & repositioning schedules & devices
    - Incontinence care & keeping skin clean and dry
    - Heels elevated off bed
    - Dietary, therapy, restorative nursing referrals
    - Topical Tx as ordered
    - Monitor wound for signs/symptoms of infection
    - Notify Physician and family of decline or concerns

PIP Project

- **Admission Process**

- **Prevention Program**
Prevention Program PIP

What is your on-going prevention program?

Prevention Program PIP

• Does your current prevention program include:
  • On-going skin inspections?
    • Long Term Care:
      ▪ Daily with cares by the caregivers
      ▪ Weekly by licensed staff
      ▪ Upon a planned discharge
    • Acute Care
      ▪ Daily
    • Home care
      ▪ With each nurse visit

Prevention Program PIP

• Prevention Team PIP Team Members:
  • May want to utilize the Skin Integrity team plus:
    ▪ Who does the licensed weekly skin checks?
    ▪ Who does the on-going risk assessments?
    ▪ Who updates the plan of care?
    ▪ Who does your restorative/mobility program?

Prevention Program PIP

• Does your current prevention program include:
  • On-going Risk Assessments per care setting guidelines?
    ▪ Does it utilize a validated tool (i.e. Braden scale, Norton)
    ▪ Is it comprehensive, picking up risk factors the validated tool doesn’t pick up

Prevention Program PIP

• A COMPREHENSIVE RISK assessment in Long Term Care should be completed:
  • Upon admission
  • Weekly for the first four weeks after admission*
  • Monthly
  • With a change of condition (including pressure ulcer formation, change in mobility and/or continence status, decrease in weight, etc.)

Prevention Program PIP

• A COMPREHENSIVE RISK assessment in Acute Care should be completed:
  • Upon Admission
  • Daily
Prevention Program PIP

• A COMPREHENSIVE RISK assessment in Home Care:
  – Upon admission
  – With every Nurse visit

Prevention Program PIP

• Ensure correlating interventions for risk factors identified
  • Ensure the risk assessment is broken down into its subsets
  • Have a “cheat sheet” for interventions and supplies that correlated with identified risk factors for care planning

Prevention Program PIP

• Restorative and Mobility Programs
  • Do you have a Restorative Program and who is involved/responsible?
  • Are all Nursing Assistance able to provide restorative care?
  • Are the Licensed Nurses overseeing the restorative program?
  • Who is writing the progress notes and does a licensed nurse review and sign them?
  • Who updates the restorative care plan and how is it communicated to nursing assistance?
  • Are all Departments involved?

Prevention Program PIP

• Does your current prevention program include:
  • On-going updates to the plan of care?
    • Do all caregivers give input
    • Do all nurses give input
    • Is it interdisciplinary
    • Input from the resident and family

Treatment Program PIP

• Treatment Team PIP Team Members:
  • May want to utilize the Skin Integrity team plus:
    • Nurses who do the day to day treatment
Treatment Program PIP

- Checklist for When a Wound is Found:
  - Notification of the Physician and family/designee of the development of a wound, regardless of stage
  - Notify Dietary, Therapy and Restorative Nursing
  - Documentation of the wound(s)
  - New risk assessment
  - Evaluate Support Surfaces
  - Evaluate turning and repositioning
  - Evaluate all interventions
  - Up-date the care plan
  - Up-date the nursing assistants assignment sheets

Treatment Program PIP

- Weekly Wound Rounds
  - Involvement of:
    - Minimum of:
      - Nurse Manager
      - Floor Nurse
      - Nursing Assistant
    - If possible the wound team members
      - Therapy
      - Dietary
      - Physicians/NP

GREAT TIME FOR BED SIDE EDUCATION

Treatment Program PIP

Risk/Benefit Discussion

- Discuss resident’s condition
- Treatment options
- Expected outcomes
- Consequences of refusing treatment (pressure ulcer development, sepsis and even death)
- Offer relevant alternatives
- Recommend showing residents/families pictures of pressure ulcers

Treatment Program PIP

- Risk/Benefit Conversation
  - Document the date of discussion in care plan and put resident’s request in care plan
  - Review quarterly, with re-admission and with change of condition

PIP Project

Monitoring Programs

- All staff should be involved
- Continuous

Monitoring Your PIP Programs
**Monitoring Your PIP Programs**

- **Wound Nurse to Monitor on a Monthly Basis:**
  - Treatment books
  - Charts of high risk AND wound care residents
  - Weekly skin checks
  - Supplies
  - Dressing Change technique
- **Have floor nurses involved with monitoring turning, toileting, equipment on a daily basis**

**Monitoring Your PIP Programs**

- Monitoring turning and repositioning (sticky notes)
- Monitoring toileting schedules
- Assessment and confirmation that equipment is in place and functioning properly

**Monitoring Your PIP Programs**

- Monitor daily cares to ensure they are:
  - Inspecting the skin,
  - Doing proper peri-care,
  - Range of Motion/restorative
  - Utilizing equipment/supplies correctly
  - Feeding/supplements,
  - weights,
  - I & O, etc.

**Monitoring Your PIP Programs**

- Monitor the Physician and NP Documentation of:
  - Orders
  - Diagnosis
  - Progress notes

**Monitoring Your PIP Programs**

- Monitoring that the risk assessment and skin observations are done at appropriate intervals
- Monitoring that the plan of care reflects interventions being implemented and identified risk factors
- Do the risk assessments, physician orders, caregiver assignment sheets and MDS/CAAs match the care plan?

**Monitoring Your PIP Programs**

- Daily rounds by Administrator, DON and Managers
- Walking rounds for each shift
Monitoring Your PIP Programs

- Input on the program from residents and family members

On-Going Education PIP

- Recommend doing educational programs in this order
  - Prevention – ALL staff
  - Prevention & Risk Assessment
  - Assessment and Documentation
  - Treatment Modalities
  - Lower Extremity Ulcers
- Do bedside follow up after educational programs
- Do education on orientation and periodically throughout the year

Sufficient Resources PIP

- Involve the staff the utilize the supplies and equipment
  - Floor nurses who are doing dressing changes
  - Nursing Assistants
  - Restorative Nursing
  - Housekeeping
  - Maintenance
  - Therapy

Sufficient Resources

- Go look into supply rooms, treatment carts, etc. for topical dressings in the facility
Sufficient Resources PIP

**Sufficient Resources**
- Set up a wound care formulary of products

**Sufficient Resources PIP**

**Sufficient Resources**
- **Topical Supplies**
  - Moisture dressings (i.e., hydrogels, hydrocolloids and transparent films)
  - Absorptive dressings (i.e., foams and calcium algincates)
  - Debriding Agents (Santyl, Medical grade honey)
  - Antimicrobials (silver, cadexomer iodine, medical grade honey, etc.)
  - Collagen Dressings

**Sufficient Resources PIP**

**Sufficient Resources**
- If possible have an approval system for anything ordered off of your product formulary
- Educate your Physicians, NP’s, Wound Clinics, etc. on your product formulary

**Sufficient Resources PIP**

**Sufficient Resources**
- **Topical Supplies**
  - Access to adjunctive therapies
    - E-Stim
    - NPWT (Negative Pressure Wound Therapy)
    - Celleration MIST
    - Access to Hyperbaric Chambers

**Sufficient Resources PIP**

**Sufficient Resources**
- **Topical Supplies**
  - Access to adjunctive therapies
  - E-Stim
  - NPWT (Negative Pressure Wound Therapy)
  - Celleration MIST
  - Access to Hyperbaric Chambers

**Make a streamlined topical management guideline with limited products in each major category:**
- Guideline should guide the nurse by characteristics of the wound (i.e., superficial dry wound)
- Recommend product category for ordering (i.e., adhesive foam verses Allevyn adhesive)

**Sufficient Resources**
- Barrier ointments/creams to protect from incontinence (are they accessible to the caregivers)
- Absorptive products for incontinence
Sufficient Resources PIP

Sufficient Resources

- Do an overview of equipment:
  - Bed surfaces
  - Wheelchair cushions
  - Heel lift devices
  - Lifting and repositioning devices
  - Positioning devices
  - Incontinence products
  - Restorative equipment
  - Nutritional supplements
  - Bariatric equipment

Sufficient Resources PIP

Sufficient Resources

- Lifting and positioning devices
  - Repositioning slings
  - Limb lifter slings

Sufficient Resources PIP

Sufficient Resources

- Positioning devices
- Restorative equipment
- Heel Lift Devices

Sufficient Resources PIP

Sufficient Resources

- Pressure redistribution bed surfaces
  - Preventative Mattresses
  - Advanced Therapy (i.e., low-air-loss, alternating air, etc.)
  - Wheelchair cushions

Sufficient Resources PIP

Sufficient Resources

- Dietary supplements as appropriate
  - Protein & Calories
  - Multivitamins

Sufficient Resources PIP

Sufficient Resources

- Lotions
- Protective garments
Sufficient Resources PIP

Sufficient Resources

- Compression Therapy for Venous Insufficiency
  - Compression wraps
  - Compression stockings
  - Compression pumps
  - Protective/appropriate footwear

Sufficient Resources PIP

Sufficient Resources

- Bariatric Equipment
  - Lifting & repositioning equipment and slings
  - Bed frame
  - Specialty mattress
  - Wheelchair and cushion
  - Toileting equipment, etc.

Sufficient Resources PIP

Sufficient Resources

- Access to:
  - Podiatrists
  - Wound Clinics/Physicians
  - Certified Wound Care Nurses
  - Vascular Surgeons/Physicians

Remember the most expensive product is the one that doesn’t work!!!!

Taking the Time to Utilize a Quality Improvement Process Can Improve Resident Outcomes and Workflow

Happy Residents and Staff

Prevention of Pressure Injury: Risk Assessment and Care Planning
The Definition of Pressure Injuries

- Array of terms used to describe alterations in skin integrity due to pressure, some of these include:
  - Pressure ulcer
  - Pressure injury
  - Pressure sore
  - Decubitus ulcer and
  - Bed sore
- For this training program the term pressure injury will be utilized

The National Pressure Ulcer Advisory Panel (NPUAP) Definition April 2016:

- A pressure injury is localized damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device. The injury can present as intact skin or an open ulcer and may be painful. The injury occurs as a result of intense and/or prolonged pressure or pressure in combination with shear. The tolerance of soft tissue for pressure and shear may also be affected by microclimate, nutrition, perfusion, co-morbidities and condition of the soft tissue.

Regulatory: F686

- Based on the comprehensive assessment of a resident, the facility must ensure that --
  - A resident receives care, consistent with professional standards of practice, to prevent pressure ulcers and does not develop pressure ulcers unless the individual’s clinical condition demonstrates that they were unavoidable; and
  - A resident with pressure ulcers receives necessary treatment and services, consistent with professional standards of practice, to promote healing, prevent infection and prevent new ulcers from developing.

Regulatory and Litigation

The care setting must PROVE that the wound was ...

Avoidable/Unavoidable

- Avoidable
  - Means that the resident developed a pressure ulcer/injury and that the facility did not do one of more of the following:
    - Evaluate the resident’s clinical condition and risk factors;
    - Define and implement interventions that are consistent with resident needs, resident goals, and professional standards of practice;
    - Monitor and evaluate the impact of the interventions; or
    - Revise the interventions as appropriate.
Avoidable/Unavoidable

- **Unavoidable**
  - Means that the resident developed a pressure ulcer/injury even though the facility had:
    - Evaluated the resident’s clinical condition and risk factors:
    - Defined and implemented interventions that are consistent with the resident needs, goals and professional standards of practice;
    - Monitored and evaluated the impact of the interventions; and
    - Revised the approaches as appropriate
  - NOT AS SIMPLE AS HAVING THE PHYSICIAN WRITE IT WAS UNAVOIDABLE!!

Prevention of Pressure Injuries F686

- A pressure injury can occur wherever pressure has impaired circulation to the tissue. A facility must:
  - Identify whether the resident is at risk for developing or has a pressure injury upon admission and thereafter;
  - Evaluate resident specific risk factors and changes in the resident's condition that may impact the development and/or healing of a pressure injury;
  - Implement, monitor and modify interventions to attempt to stabilize, reduce or remove underlying risk factors; and
  - If a pressure injury is present, provide treatment to heal it and prevent the development of additional pressure injuries

Assessment for Risk of Skin Breakdown

Skin Inspection

- **Skin Inspection in LTC**
  - Upon Admission – Imperative to capture wounds within the first 24 hours
  - Daily with cares by the nursing assistant
  - Weekly by the licensed staff
  - Upon a PLANNED Discharge

Skin Inspection in Acute Care

- Upon Admission
- Daily
- Upon discharge

Skin Inspection in Home Care

- Upon Admission
- With each licensed nurse visit
**Skin Assessment**

- Complete a head to toe skin inspection, inspecting all of the skin
- CMS’s Five Parameters for skin assessment:
  - Skin color
  - Skin temperature
  - Skin texture/turgor
  - Skin integrity (open areas, rashes, cuts, surgical incisions, bruising, etc)
  - Moisture status

**Skin Assessment**

- Look and FEEL: As compared to the surrounding skin
  - Skin temperature (colder or warmer)
  - Tissue consistency (boggy or firm)
  - Edema
- If erythema is observed, assess for blanching
  - Blanchable is an early indication to redistribute pressure
  - Non-blanching erythema suggests that tissue damage has already occurred

**Skin Assessment**

- focusing on high risk bony prominences, areas of erythema and under medical devices
- Vulnerable pressure points:
  - Supine position: occiput, sacrum, spine, scapulas and heels
  - Sitting position: ischial tuberosities, coccyx, spine and scapulas
  - Side lying: trochanters, lateral malleolus, ears
- The Sacrum and Heels are the most common location for pressure injuries

**Risk Assessment**

- Comprehensive Risk Assessment in LTC
  - Upon Admission
  - Weekly for the first 4 weeks after admission
  - Monthly
  - Whenever the condition changes or deteriorates
  - The frequency of assessment should be based upon each resident’s specific needs

**Deep Tissue Injury**

- Some situations, which may have contributed to this tissue damage prior to admission, include pressure resulting from:
  - Immobility due to hospitalization or surgical procedures
  - Prolonged ambulance transport
  - Waiting to be assisted after a debilitating event (fall, CVA, etc.)
Risk Assessment

- Comprehensive Risk Assessment in Acute Care
  - Upon Admission
  - Daily - Some ICUs recommend every shift
  - Whenever the condition changes or deteriorates
  - Upon discharge

Risk Assessment

- Comprehensive Risk Assessment in Home Care
  - Upon Admission
  - With each licensed nurse visit

Risk Assessment Tools: Validation

- If you use a validated risk assessment such as a Braden Scale or Norton
  - Use the tool consistently
  - Regardless of the overall risk score derived, assess each individual risk factor

Risk Assessment Tools: Validation

- No risk assessment tool is a comprehensive risk assessment
  - Braden:
    - Sensory Perception
    - Moisture
    - Activity
    - Mobility
    - Nutrition
    - Shear and Friction
  - Doesn’t capture:
    - Diagnosis
    - Medications
    - Resident Choice, etc.

Risk Assessment Tools: Validation

- If you use a validated risk assessment such as a Braden Scale or Norton
  - It is acceptable if the clinician’s assessment places the resident at a higher risk level than the overall score of the assessment tool based on assessment factors that are not captured by the tool
  - Documentation of the clinician’s decision should be placed in the medical record.

Risk Assessment Tools

- Overall goal is to identify the INDIVIDUAL risk factors and implement correlating interventions that modify, stabilize or eliminate the risk factors

<table>
<thead>
<tr>
<th>Problem</th>
<th>Goal</th>
<th>Interventions</th>
<th>Responsible person(s)</th>
</tr>
</thead>
</table>
| Potential for alteration in skin integrity due to immobility due to right sided hemiplegia | Skin will remain intact | - Provide a pressure redistribution mattress
- Elevate heels with bilateral heel lift boots
- Turn and repositioning q2 hours | Nursing |
Braden Scale Sub-Sets

SENSORY PERCEPTION
ACTIVITY
MOBILITY

Braden Scale: Activity

• Decreased activity level leading to staying in one position for a long period of time
  • Chairfast
  • Bedbound
  • Choosing not to get out of the bed or chair
  • Chooses not to change positions

Braden Scale: Mobility

• Due to being unable to move or having limited movement leads to staying in one position for long period of time:
  • Diagnosis: CVA, MS, Paraplegia, Quadriplegia, end stage Alzheimer’s/Dementia
  • Fractures and/or casts
  • Cognitive impairment
  • Pain
  • Restraints or medical equipment
  • Choosing not to be mobile
  • Contractures

Braden Scale Sub-Sets

• Interventions based on the Braden subscales consistent for:
  • Immobility
  • Impaired sensory perception, and
  • Decreased activity

  All lead to inactivity/movement
  • Goal: to decrease or remove pressure and promote circulation to skin and tissues

Restorative & Mobility Programs

• Referral to Therapy and Restorative Nursing
  • ROM and PROM
  • Walking
  • Transfers
  • Bed mobility
  • Amputation/Prosthesis Care
  • Communication
  • Eating
  • Self care training/ADLs
  • Toileting
  • Splint/brace
Restorative & Mobility Programs

• Assistive devices to promote mobility:
  • Grab bars for repositioning & egress
  • Bed at correct egress height
  • Utilize electric bed to assist to a standing position
  • Lifts (ceiling, sit to stand, transfer, walking)
  • Lateral transfer devices
  • Repositioning slings
  • Walking devices (cane, walker, etc)
  • Rocking chairs
  • Assistive devices

Pressure Redistribution

• Definition: Ability of a support surface to evenly distribute the load over the contact area of the human body
• Term Pressure Redistribution replaces prior terminology of Pressure Reduction and Pressure Relief support surfaces
• Goal of Support Surface:
  • Evenly distribute pressure over the surface
  • Envelop and immerse into the support surface
  • Control microclimate

Pressure Redistribution

• Types of Therapeutic Support Surfaces for Bedframe:
  • Prevention (foam, foam/air combination)
  • Low Air Loss/Alternating Pressure
  • Air fluidized therapy
  • Fluid Immersion Simulation
• Document on care plan type and date implemented
• Never a substitute for turning and repositioning schedules
• Heels especially vulnerable even on specialty support surface

Pressure Redistribution

• Heel Elevation: Elevate heels completely
  • Pillow prop
  • Wedges
  • Heel lift boots
• Always provide heel elevation bilaterally
• Feel to ensure the heel has no pressure

Pressure Redistribution

• All wheelchairs should have a cushion
  • Air and gel is more aggressive than foam products
  • A sitting position = head elevation of 30 degrees or higher
  • All sitting surfaces should be evaluated for pressure redistribution
• Recommend a Therapy screen for wheelchair cushion
  • When positioning in a chair consider:
    • Postural alignment
    • Weight distribution
    • Sitting balance
    • Stability
    • Pressure redistribution
Pressure Redistribution

• Tissue tolerance is the ability of the skin and its supporting structures to endure the effects of pressure without adverse effects.
• Tissue tolerance affects the length of time a resident can maintain a position without suffering a pressure injury.

Turning and Repositioning

• F686 Guidance in LTC, Tissue Tolerance:
  • A skin inspection should be done, which should include an evaluation of the skin integrity and tissue tolerance, after pressure to that area, has been reduced or redistributed.
  • Ongoing monitoring of the resident’s skin integrity and tissue tolerance is critical to prevent development of deterioration of pressure injuries.
  • The measurement of tissue tolerance can be done in a variety of ways and the method chosen for use in the facility should be identified.
  • There is no evidence-based tissue tolerance test.

Other Interventions

• Monitor skin – this should be listed on all plans of care:
  • Inspect skin daily by caregivers.
  • Inspect bony prominences: look and feel.
  • After pressure has been reduced/redistributed.
  • Under medical devices (cast, tubes, orthoses, braces, etc).
  • Weekly head to toe skin inspection by a licensed nurse.
  • If the resident has a wound it should be assessed/documented by a licensed nurse at least every 7 days.

• Establish an Individualized repositioning schedule for sitting and lying based on:
  • Level of activity and mobility.
  • General medical condition.
  • Overall treatment objectives.
  • Skin condition.
  • Comfort.
  • Characteristics of the pressure redistribution support surface.
  • Utilize repositioning and positioning devices as appropriate.

Turning and Repositioning
Turning and Repositioning

- F314: “Momentary pressure relief followed by a return to the same position is usually NOT beneficial (micro-shifts of 5 to 10 degrees or a 10-15 second RPS).”
- “Off-loading” is considered 1 full minute of pressure RELIEF
  - Good compromise if unable to fully reposition

Restricting Movement: Restraints

- Release restraints at designated intervals
- More importantly try to eliminate restraints

Pain Management to Promote Movement

- Pre-medicate the individual 20-30 minutes prior to repositioning, treatment or cares as appropriate
- Scheduled pain medication
- If palliative care is the primary goal; comfort may supersede prevention causing the individual to have a single position of comfort.
- Utilize appropriate support surfaces in the bed and wheelchair to provide comfort as well as improve pressure redistribution

Pain Management to Promote Movement

- Provide soothing music
- Distraction
- Conversation
- Relaxation techniques
- Position changes
- Meditation
- Guided imagery
- Transcutaneous electrical stimulation (TENS)

Braden Scale Sub-Set

MOISTURE
Moisture

- Moisture can irritate and make the skin more susceptible to breakdown
- Incontinence of bladder
- Incontinence of bowel
- Excessive perspiration
- Moisture within skin folds

Interventions for Protection vs. Moisture

- Individualized Bowel and Bladder Program
- Peri-care after each episode of incontinence
- Appropriate, dignified absorptive incontinent products
- Apply a protective skin barrier to peri-area or wound edges (ensure skin is clean before application and it is appropriate to use with the absorptive product)
- Foley catheter and/or fecal tubes/pouches as appropriate (in LTC for stage III or IV only)

Interventions for Protection vs. Moisture

- 4x4’s, pillow cases or dry cloths in between skin folds
- Inter Dry Ag sheets if prone to fungal infections
- Antifungal powder or ointment for active fungal infections
- Bathe with MILD soap, rinse and gently dry
- Keep linen dry and wrinkle free

Interventions for Protection vs. Moisture

- If there is already an elimination problem on the care plan that addresses the interventions:
  - List “incontinence of bowel and/or bladder” as a risk factor under skin integrity, however,
  - State under interventions:
    - See elimination problems

Braden Scale Sub-Set

NUTRITION

- Nutritionally at Risk
  - Serum Albumin below 3.5g/dl
  - Pre-Albunin 17 or below (more definitive than an albumin level)
  - Significant unintended weight loss
  - Very low or very high body mass index
  - Inability to feed self
  - Poor appetite
  - Difficulty swallowing
  - Tube fed
  - Admitted with or history of dehydration
Nutritional Interventions

- Dietary consult to determine interventions
  - Provide protein intake of 1.25-1.5 gm/kg/body weight daily
  - 30-35 kcalories/kg of body weight/day

Nutritional Interventions

- Dietary consult to determine interventions
  - Provide a simple multivitamin
  - Unless a resident has a specific vitamin or mineral deficiency, supplementation with additional vitamins (i.e., Vit. C) or minerals (i.e., zinc) may not be indicated
  - Zinc no more than 40mg/day for no more than 2-3 weeks
  - Higher dosages or long term use of zinc can decrease copper status and lead to anemia
  - Appetite stimulants as appropriate

Nutritional Interventions

- Provide food per individual preferences
- Provide adequate hydration
- Accurate intake, output and weights

Interventions for Friction and Shear

- At risk for friction and shear:
  - Needs assistance with mobility
  - Tremors or spasticity
  - Slides down in the:
    - Bed
    - Wheelchair/sitting surface
  - Agitation

Braden Scale Sub-Set

SHEAR & FRICTION
Interventions for Friction and Shear

- Lift -- do not drag -- individuals
- Utilize lifting devices and slings
  - Ceiling lifts
  - Transfer lifts
  - Sit to stand lifts
  - Walking lifts
  - Lateral transfer devices
  - Specialty slings
    - Repositioning slings
    - Limb lifter slings

Interventions for Friction and Shear

- Elbow or heel pads
- Protective clothing
- Protective dressings or skin sealants
- Raise the foot of the bed before elevating
- Wedge wheelchair cushions (therapy referral)
- Pillows

Comprehensive Risk Assessment

MOVING PAST THE BRADEN: COMPREHENSIVE RISK ASSESSMENT

Comprehensive Skin Integrity Risk Assessment

- In addition to the Braden Scale, review:
  - History and Physical
  - Diagnoses
  - Physician/NP notes
  - Consultations (e.g., podiatry, wound clinic)
  - Medications
  - Labs (albumin and pre-albumin)
  - Blood sugars
  - MDS/CAAs (if complete)
  - Interview resident and family, etc.

Non-Braden Risk Factors

- Diagnoses that can lead to skin breakdown:
  - Anything that impairs blood supply or oxygenation to the skin (cardiovascular or respiratory disease)
  - Immunosuppression
  - History of pressure ulcers and skin breakdown -- indicate type of skin breakdown, location and stage (pressure ulcer) if known
  - End stage diseases (renal, liver, heart, cancer)

Non-Braden Risk Factors

- Anything that renders the individual immobile
- Anything that can affect his/her nutritional status (inability to feed themselves)
- Anything that affects his/her cognition
- Terminal disease
Non-Braden Risk Factors

**Diabetes**
- Keeping blood sugars below 140 and/or A1c below 7 and preventing hypoglycemia
- Monitoring and management of diabetes as ordered
- Dietary consultation
- Exercise program/therapy
- Diabetic foot care
  - Can state “see diabetic problem”

**Non-Braden Risk Factors**

- **Medications or Treatments, such as:**
  - Steroid therapy
    - Evaluate steroid use and dosage
  - Medications that decrease cognitive status
    - Adjust medications as appropriate to improve cognitive status
  - Antibiotic use
    - Antibiotic stewardship
    - Monitor for allergic reactions and fungal infections

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**Medical Devices**

- Remove medical devices as appropriate and inspect the skin for pressure injuries
  - Oxygen tubing
  - Catheter tubing
  - Casts, braces or splints
  - Footwear
  - Pad medical devices and ensure proper fit

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**Other Preventive Interventions**

- **Dry or Fragile Skin**
  - Apply non irritating lotion at least daily
  - Protective clothing

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**Other Preventive Interventions**

- **Dry or Fragile Skin**
  - Apply non irritating lotion at least daily
  - Protective clothing
Other Interventions

- Smoking
  - Discuss effects of smoking on risk
  - Smoking cessation plan if resident agrees

Non-Braden Risk Factors

- Lower extremity vascular disease
  - Arterial insufficiency
  - Venous insufficiency
  - Peripheral neuropathy
  - Diabetic neuropathy

Lower Extremity Vascular Disease

- Identification of etiology is critical!!!!!
  - Ankle Brachial Index (ABI)
  - Vascular/Physician consultation for diagnosis and plan
  - Goal is to identify the disease process to prevent or minimize skin breakdown

Other Preventive Interventions

- Dermatitis and other skin concerns
  - Dermatology Consultation
  - Appropriate treatment for etiology of skin concern

Other Interventions

- Consultation
  - Provide adequate Psychosocial support/Psychology referral
  - Obtain a Podiatrist, Dermatologist, Vascular Physician and/or Wound Care Consultation as appropriate
  - Involve primary physician and/or appropriate physician support
**CARE PLANNING**

- Ensure care plan has appropriate goals
- Only list the type of ulcer and location of it on the care plan (i.e., Pressure injury to right trochanter)
- Once the pressure ulcer heals, ensure it gets listed on the care plan (i.e., history of pressure injury to right trochanter)
- Physician diagnosis and prognosis are appropriate

**Admission Process Tips**
- At a MINIMUM Temporary Care Plan within 48 Hours to Include:
  - Support surfaces (bed and W/C)
  - Turning & repositioning schedules & devices
  - Incontinence care & keeping skin clean and dry
  - Heels elevated off bed
  - Dietary, therapy, restorative nursing referrals
  - Topical Tx as ordered
  - Notify Physician and family of decline or concerns

**CASE STUDY**

- Ima Sweetie
  - 75yo female
  - Suffered from a stroke affecting her right side
  - Progressed to the point where she can use a walker, independently for short distances
  - Suffers from depression and does not like to leave her room
  - Is intermittently incontinent and requires pad changes q. shift, but does not inform staff/family when she has been incontinent
  - Prefers to spend most of her day laying in her bed on right side, despite attempts to reposition q2 hrs

**Helpful Tips**

- Nursing Assistant assignment sheets should include:
  - Turning and Repositioning schedule
  - Type of Bed and Wheelchair surface
  - Bowel and Bladder program and products
  - Type of heel lift
  - Restorative cares
  - Supplements to be given
  - Skin protection devices/lotion
  - Lifting/Transferring instructions and equipment/devices
  - Dressing(s) and the location to notify the nurse if missing, loose or soiled
  - Inspect skin daily
  - Notify nurse of any skin concerns

**Communication**

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  - Dressing(s) and the location to notify the nurse if missing, loose or soiled
  - Inspect skin daily
  - Notify nurse of any skin concerns
Case Study

• Ima Sweetie
  • States she has diminished sensation on her entire right side
  • She occasionally slides down in her chair at the evening meal
  • Eats about half of each meal served, and occasionally will take dietary supplements.
  • She has fragile skin and states she has had many skin tears on her hands and arms
  • Her right hand is starting to contract

• What is her Braden Score?

• What risk factors from the Braden would you bring forward?

• What other risk Factors would you bring forward from this scenario?

• What interventions should be initiated to avoid skin breakdown?

Resources

• Available Resources and Web Sites
  → www.wocn.org (Wound, Ostomy and Continence Nurses Society)
  → www.ahrq.gov (Agency for Health Care Research and Quality)
  → www.abwmcertified.org (American Board of Wound Management)
  → www.npuap.org (National Pressure Ulcer Advisory Panel)
  → www.woundsource.com (Great source to find wound care products)
  → www.wcei.net (Wound Care Education Institute)
Bibliography


Stage 1 Pressure Injury

- Stage 1 Pressure Injury: Non-blanchable erythema of intact skin
  - Intact skin with a localized area of non-blanchable erythema, which may appear differently in darkly pigmented skin. Presence of blanchable erythema or changes in sensation, temperature, or firmness may precede visual changes. Color changes do not include purple or maroon discoloration; these may indicate deep tissue pressure injury.

Stage 1 Appearance

Deep Tissue Injury

- Deep Tissue Pressure Injury (DTPI): Persistent non-blanchable deep red, maroon or purple discoloration
  - Intact or non-intact skin with localized area of persistent non-blanchable deep red, maroon, purple discoloration or epidermal separation revealing a dark wound bed or blood filled blister. Pain and temperature change often precede skin color changes. Discoloration may appear differently in darkly pigmented skin. This injury results from intense and/or prolonged pressure and shear forces at the bone-muscle interface. The wound may evolve rapidly to reveal the actual extent of tissue injury, or may resolve without tissue loss. If necrotic tissue, subcutaneous tissue, granulation tissue, fascia, muscle or other underlying structures are visible, this indicates a full thickness pressure injury (Unstageable, Stage 3, or Stage 4). Do not use DTPI to describe vascular, traumatic, neuropathic, or dermatologic conditions.

Deep Tissue Injury

- Internal stresses and strains adjacent to bony prominences are substantially higher than those near the surface, and have the potential to cause damage in deep tissues before the superficial tissue is damaged (NPUAP, 2014, p.20)
Deep Tissue Injury

Evolution of a Deep Tissue Pressure Injury

Stage 2 Pressure Injury

- Stage 2 Pressure Injury: Partial-thickness skin loss with exposed dermis:
  Partial-thickness loss of skin with exposed dermis. The wound bed is viable, pink or red, moist, and may also present as an intact or ruptured serum-filled blister. Adipose (fat) is not visible and deeper tissues are not visible. Granulation tissue, slough and eschar are not present. These injuries commonly result from adverse microclimate and shear in the skin over the pelvis and shear in the heel. This stage should not be used to describe moisture associated skin damage (MASD) including incontinence associated dermatitis (IAD), intertriginous dermatitis (ITD), medical adhesive related skin injury (MARI), or traumatic wounds (skin tears, burns, abrasions).

Evolution of a Deep Tissue Pressure Injury

Stage 2 Appearance

Wound Bed Assessment

- Stage 2 pressure ulcers heal by epithelialization (resurfacing), not granulation, therefore the wound base would be described as pink or red versus granulation tissue (impacts MDS 3.0 coding).
Stage 3 Pressure Injury

- Stage 3 Pressure Injury: Full-thickness skin loss:

  Full-thickness loss of skin in which adipose (fat) is visible in the ulcer and granulation tissue and epibole (rolled wound edges) are often present. Slough and/or eschar may be visible. The depth of tissue damage varies by anatomical location; areas of significant adiposity can develop deep wounds. Undermining and tunneling may occur. Fascia, muscle, tendon, ligament, cartilage, and/or bone are not exposed. If slough or eschar obscures the extent of tissue loss this is an Unstageable Pressure Injury.

Stage 4 Pressure Injury

- Stage 4 Pressure Injury: Full-thickness skin and tissue loss

  Full-thickness skin and tissue loss with exposed or directly palpable fascia, muscle, tendon, ligament, cartilage or bone in the ulcer. Slough and/or eschar may be visible. Epibole (rolled edges), undermining and/or tunneling often occur. Depth varies by anatomical location. If slough or eschar obscures the extent of tissue loss this is an Unstageable Pressure Injury.

NPUAP Position Statement

- Although the presence of visible or palpable cartilage at the base of a pressure ulcer was not included in the stage 4 terminology; it is the opinion of the NPUAP that cartilage serves the same anatomical function as bone. Therefore, pressure ulcers that have exposed cartilage should be classified as a Stage 4.

Unstageable Pressure Injury

- Unstageable Pressure Injury: Obscured full-thickness skin and tissue loss

  Full-thickness skin and tissue loss in which the extent of tissue damage within the ulcer cannot be confirmed because it is obscured by slough or eschar. If slough or eschar is removed, a Stage 3 or Stage 4 pressure injury will be revealed. Stable eschar (i.e. dry, adherent, intact without erythema or fluctuance) on an ischemic limb or the heel(s) should not be removed.
Unstageable Appearance

Assessment

Resources

- [www.wocn.org](http://www.wocn.org) (Wound, Ostomy & Continence Nurse Society)
  - Provide Certification for 4 yr RNs
  - Available Guidelines:
    - Prevention and Management of Pressure Ulcers
    - Management of Wounds in Patients with Lower-Extremity Arterial Disease
    - Management of Wounds in Patients with Lower-Extremity Neuropathic Disease
    - Management of Wounds in Patients with Lower-Extremity Venous Disease

- [www.wcei.net](http://www.wcei.net) (Certifies LPN, 2-4 year RN, Therapists, etc in wound management)
- [www.npuap.org](http://www.npuap.org) (National Pressure Ulcer Advisory Panel)
- [www.woundsource.com](http://www.woundsource.com) Great source to find wound care products and companies/vendors

Keeping Residents Mobile

- **F688 Mobility** – A facility provides the services, care and equipment to ensure:
  - That a resident who enters the facility without limited ROM does not experience reduction in ROM unless the resident’s clinical condition demonstrates that a reduction in ROM is unavoidable; and
  - A resident with limited ROM receives appropriate treatment and services to increase ROM and/or to prevent further decrease in ROM
Keeping Residents Mobile

- **F688 Mobility Continued:**
  - A resident with limited mobility receives appropriate services, equipment, and assistance to maintain or improve mobility with the maximum practicable independence unless a reduction in mobility is demonstrably unavoidable.

The Effects of Immobility

- **Loss of Independence & Psychosocial effects**

Impact of immobility

- **Falls in the Nursing Home**
  - About 1,800 people living in nursing homes die from falls each year.
  - About 10-20% of nursing home falls cause serious injuries.
  - Each year, a typical nursing home with 100 beds reports 100 to 200 falls, however many go unreported.
  - Between ½ to ¾ of nursing home residents fall each year. That is twice the rate of falls among older adults living in the community.
  - Residents often fall more than once. The average is 2.6 falls per person per year.
  - About 35% of fall injuries occur among residents who cannot walk – 65% are ambulatory.

Impact of immobility

- **Why do people Fall?**
  - Strength
  - Balance and
  - Endurance issues

Mobility – the ability to efficiently navigate and function in a variety of environments, requires balance, agility and flexibility.
• Impact of immobility
  • The most common causes of nursing home falls
    • Muscle weakness and walking or gait problems are the most common causes of falls among nursing home residents.
    • These problems account for about 24% of the falls in the nursing home
    • Environmental hazards in the nursing homes cause 16 – 27% of the falls
    • Medication can increase the risk of falls.
      • Drugs that affect the central nervous system, such as sedative and anti-anxiety drugs are of particular concern.
      • Fall risk is significantly elevated during the 3 days following any changes in these types of medications
    • Other causes
      • Difficulty moving from one place to another (bed to chair)
      • Poor foot care
      • Poorly fitting shoes
      • Improper or incorrect use of walking aids

What is a Fall?
MDS Definition
• Falls include any fall, no matter whether it occurred at home, while out in the community, in an acute hospital or a nursing home
• The fall may be witnessed, reported by the resident or an observer or identified when a resident is found on the floor or ground

What is a Fall?
MDS Definition
• Falls are NOT a result of an overwhelming external force (e.g., a resident pushes another resident)

• MDS new section GG “Functional Abilities and Goals”
  • Eating
  • Oral Hygiene
  • Toileting Hygiene
  • Lying to sitting on side of bed
  • Sit to stand
  • Chair/bed-to-chair transfer
  • Toilet transfer
  • Walk 50 feet with two turns
  • Walk 150 feet
  • Wheel 50 feet with two turns
  • Wheel 150 feet

• Restorative Nursing
  • Is once a day ROM and propelling/walking once a day 150 feet enough to prevent a decline in Function?
  NO
Clinical Foundation

**Why?**

- Why do residents attempt to stand up?
  - Need to go to the bathroom
  - Discomfort or pain
  - Hunger
  - Boredom

**Humans are Meant to be Upright & Mobile**

Optimal Body Function – Upright for 16 hours/day
Instinctive to attempt to get up and move

- Impact of Immobility
  - Fractures
    - 95% from falling, most often by falling sideways
    - 1 out of 5 hip fracture patients dies within a year of their injury

**Immobility, potential root cause of the following:**

- Falls
- Skin Breakdown
- Incontinence & UTIs
- Development of diseases – Diabetes, Cardiac, etc.
- Weight loss – muscle wasting
- Depression
- Delirium/confusion
- Respiratory Infections
- Constipation
- Staff injuries

**The Causes of Immobility in the Nursing Home**

- Disease State and Health Issues
- Staff
  - Residents moving too slow or taking too long
  - Restricting them from moving on their own
### Effects of Immobility: Research Evidence

#### The Effects of Immobility – Muscles
- First muscles to become weak are in the lower limbs
- Keeping a muscle in a contracted position will significantly increase atrophy
- In stroke paralysis or immobility due to splinting, muscles atrophy around 30-40%
- There is a 12% rate of loss of muscle strength and muscle atrophy (wasting away) in one week
- In as little as 3-5 weeks of immobility, almost half the normal strength of a muscle is lost
- It takes 4 weeks to recover from atrophy with exercise
- Totally degenerated muscles are permanently replaced by fat and connective tissue
- Disuse of the muscle will also effect the neuromuscular function – essentially the body forgets how to properly coordinate motor function
- Complete rest will decrease endurance levels
- Causing fatigue, affecting motivation
- Then leading to a cycle of greater inactivity

#### The Effects of Immobility – Endocrine System
- Decrease in metabolic rate
  - In as little as 10 hours
- Insulin resistance, impaired glucose tolerance and the subsequent development of type 2 diabetes

---


• The Effects of Immobility – Cardiac System
  • Postural hypotension (drop in blood pressure upon standing) can be noted in little as 20 hours of immobility
  • This can lead to dizziness, anxiety and falls
  • Postural hypotension, even in fit, healthy adults can take several weeks to fully recover once they start moving

• The Effects of Immobility – Hematological
  • Decrease in oxygen saturation
  • Increase in carbon dioxide concentrations
  • Leads to Hypoxia
    • Acute confusion
    • Can develop quickly over a number of hours
    • Symptoms can fluctuate during the day and worsen at night

• The Effects of Immobility – Connective Tissue
  • Contracture: A decrease from the normal range in parts of the body responsible for motion (joints, ligaments, tendons and related muscles)
  • In 4-6 days after immobility changes in the structure and function of connective tissue become apparent
  • In 2-3 weeks of immobilization a firm contracture can develop
  • These changes remain even after normal activity has been resumed!!

• The Effects of Immobility – Bone
  • Disuse osteoporosis
  • Bones most susceptible:
    • Vertebra
    • Long bones of the legs
    • Heels
    • Wrists

• The Effects of Immobility – Gastrointestinal
  • Reduced sense of taste, smell and loss of appetite
  • Difficulty swallowing
  • Constipation
  • Fecal impaction

• The Effects of Immobility – Skin
  • Normally we continually shift our weight, even during sleep
  • Immobility or decreased sensation prevents shifting in weight leading to prolonged pressure on skin capillaries, ultimately resulting in death of skin tissue
  • Formation of pressure ulcers
• **The Effects of Immobility – Cardiac System**
  - Immobility leads to atrophy and loss of muscle mass in the legs
  - This impairs the muscle pump action which reduces venous return
  - Lower extremity edema
  - Ulceration
  - Venous dermatitis
  - Cellulitis

• **The Effects of Immobility – Cardiac System**
  - The heart is a muscle and too needs activity to stay healthy
  - Immobility can lead to atrophy of the heart muscle

• **The Effects of Immobility – Respiratory System**
  - Development of fixed contractures of the costovertebral joints, leading to inability to expand the lungs
  - Risk of lung collapsing
  - Pooling of mucus in the lower airways
  - Increased risk of respiratory infections
  - *Stroke patients confined to bed for 13 days or more are 2-3 times more likely to develop a respiratory infection than mobile people*

• **The Effects of Immobility – Hematological**
  - 13% of patients in bed for long periods may develop deep vein thrombosis (DVT)
  - Increases risk for emboli
    - In the lungs - pulmonary embolism
    - Cerebral circulation within the brain – Stroke
    - Coronary circulation of the heart – myocardial infarction

• **The Effects of Immobility – Renal System**
  - Functional Incontinence
  - Kidney stones
  - Urinary retention (overflow)
  - Urinary tract infection
  - Urosepsis

• **The Effects of Immobility – Nervous System**
  - Sensory deprivation
  - Depression
  - Disorientation
  - Confusion
  - Restlessness
  - Agitation/aggression
  - Anxiety
  - Reduced pain threshold
  - Difficulty problem solving
  - Loss of motivation
• The Effects of Immobility – Nervous System
  • Insomnia
  • For normal function we need:
    • 16 hours of activity
    • 7-8 hours of sleep
  • Consistently sleeping for more than 9 hours or fewer than eight hours has a negative impact on physiological, psychological and cognitive functions

  • Alzheimer’s Disease
  • Amyloid plaques in the brain
  • Interventions to decrease amyloid plaques
    • Adequate sleep
    • Exercise
  Guest Column in McKnight’s: http://www.mcknights.com/guest-columns/lifestyle-and-the-aging-brain/article/417260/?DCMP=EMC-MCK_Daily&spMailingID=11530562&spUserID=ODE2NDE0MDMwNDES1&spJobID=560074336&spReportId=NTYwMDc0MzM2S0236

• The Aging Process Impact on Mobility
  • Sarcopenia
    • The loss of muscle mass with age
    • Each decade the aging adult has 5lbs less muscle and about 15 pounds more fat
    • Resulting in a 20lbs change in physical status and appearance

  • Restorative Nursing
    • If you don’t use it, you lose it
    • If you rest, you rust

• The Aging Process Impact on Mobility
  • The primary cause of the loss of muscle mass

  DISUSE

• The Aging Process Impact on Mobility
  • Dieting alone without exercise does not have high success rates
    • 25% percent of weight lost during low calorie diets without exercise is actually lost muscle tissue
    • Less muscle leads to slower metabolism
      • Reduced muscle tissue is largely responsible for a 2 – 5% per-decade decrease in our resting metabolism
      • Slower resting metabolism leads to calories previously used by muscle are routed into fat storage
• Benefits of Cardiovascular Exercise
  • Cardiac output - reduce the risk of heart disease
  • Oxygenation of tissue
  • Respiratory function
  • Neuroplasticity
    • Leads to strengthening, repair, formation of neuronal circuitry
    • best time for the brain to relearn is during and immediately after exercise

• The Aging Process Impact on Mobility
  • All adults should perform regular endurance exercise such as walking and cycling to enhance cardiovascular function.
  • Aerobic activities do little to prevent gradual deterioration of the musculoskeletal system.
  • One study of elite middle-aged runners, the subjects lost about 5lbs of muscle over a 10 year period in spite of extensive aerobic training.

• The Effects of Immobility
  The Solution – Strength Training
  • Systemic strength training – use of resistance
    • Adding muscle
    • Losing fat
    • Raising resting metabolic rate
    • Increase daily expenditure
    • Increase bone density
    • Enhance glucose metabolism
    • Increase gastrointestinal transit
    • Lower resting blood pressure and pulse
    • Decrease in depression

• Strength Training Exercise program:
  • Studies have shown that muscle mass can be increased at essentially any age through systemic strength training even if they have never done strength training before.

• What is the best type of exercise??
  • Cardio AND Strength Training
  • How You Train is How You Gain
  • Repetition, Repetition, Repetition
  • Neuroplasticity in response to repetitive training

• Exercise should be done in the standing position as much as possible
  • Near a wall or have a chair handy if slight balance issues
  • Sitting position if unable to bear weight safely
**Frequency of Exercise**

- Strength exercises may be productively performed two to three days per week – Allow 48 hours of rest of the muscle group worked.
- Research has shown that 2 days a week of strength training is beneficial and just as effective as 3 days.
- Cardio should be done daily.

**Goals of Exercise**

<table>
<thead>
<tr>
<th>Avoidance of Disease/Health</th>
<th>Fitness</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Days a week</td>
<td>3-4 Days a week</td>
<td>7 Days a week</td>
</tr>
<tr>
<td>Moderate Intensity</td>
<td>Vigorous/Hard Intensity</td>
<td>Very Hard Intensity</td>
</tr>
<tr>
<td>30 minutes a Day</td>
<td>30-45 Minutes per Day</td>
<td>2 Hours per Day</td>
</tr>
<tr>
<td>Walk 6-12 miles/week</td>
<td>Jog 10 miles/week</td>
<td>Run 100 miles/Week</td>
</tr>
</tbody>
</table>

**Governance & Leadership**

- Administrator, DON and Management must fully support the program and be actively involved.

**Assess your current Programs to Identify a Starting point**

- What is the mind set of the staff?
- How many of your Residents depend on wheelchairs for mobility?
- What is the relationship between Nursing, Therapy and Activities?
- Do you currently have a Restorative Nursing Program and what does that provide?
- What types of activities do you have during the day and in the evenings?
- Do you have a sleep hygiene program?

**Get ALL staff on board**

- Initial Training on WHY???
Aim Toward Independence

“How to”
Rather than “Doing for”
You are the coach!!

Assemble Your Team:
• Therapy
• Restorative Nursing – Lead Nurses and Lead Nursing Assistants
• Nursing assistants – All shifts
• Floor nurses - all shifts
• Nurse Managers/Supervisors
• Physicians/Nurse Practitioners
• Activities
• Dietary
• Maintenance
• Housekeeping

What will be your facility’s benchmarking Data?
• Quality Measures
  • Long Stay:
    • Activities of Daily Living Has Increased
    • Ability to Move Independently Worsened
    • Physical Function Improves from Admission to Discharge
    • Percent of Residents Experiencing One or More Falls with Major Injury

Environment

• Environment
  • Floor surfaces: shiny, slippery, or do the surfaces change in areas (going from carpet to tile)
  • Grab bars and hand rails in good condition, clearly identified and throughout the entire building
  • Lighting bright no glare
  • Clear walkways
  • Contrasting colors

• Environment
  • Devices to promote self repositioning or mobility in resident rooms
  • Low beds ONLY for residents who cannot physical egress at all and roll out of bed
  • Proper width of the bed – wider widths (42 inches) shown to decrease falls
  • Careful use of floor mats – ensure not a trip hazard for the resident, roommate or staff
• **Environment**
  • Devices to promote self repositioning or mobility in resident rooms – for residents that can egress from bed
  • Proper egress height of the bed & mattress – feet flat on the floor with the knees slightly above a 90 degree angle
  • Mark the head board with tape for proper position of bed
  • Grab bars or transfer poles to stabilize

• **Environment**
  • Devices to promote self repositioning or mobility in resident rooms
  • Properly fitted and accessible
    • Wheelchairs
    • Walkers
    • Canes

• **Environment**
  • Properly fitted and accessible
  • Wheelchairs
  • Walkers
  • Canes

• **Investigation of the Fall**
  • What were you doing just before you fell?
  • Location of the fall and the position the resident is in
    • Next to where they attempted to get up – strength, balance and/or hypotension
    • 5-10 feet away – balance
    • 10 feet or further - endurance
    • Look for trip hazards
    • Were they wearing their eye glasses
  • Were they wearing proper footwear
  • Did they have their walking/mobility device
  • Any changes in medications
  • Last time toileted and/or incontinence with fall
  • Vital signs/neuros
  • Time of day/patterns
Addressing Mobility Issues

Picking Up Where Therapy Leaves Off
Effective Restorative Nursing &
Mobility Programs

• Coordination of the Program:
  • Physician must approve and order the exercise program
  • Therapy to do the initial assessment and setting up of the individual resident’s program for Nursing/Designee
  • Therapy to competency test Nursing/Designee implementing the individual resident’s program
  • Dietary to ensure proper calories and protein intake for level of exercises
  • Nursing to refer back to Therapy when a resident needs adjustment of the program (i.e. decline, plateau, need for more aggressive exercises, pain or change in ability to perform exercises)

• Restorative & Mobility Programs
  • Restorative Nursing Program-MDS Requirements
    • Technique, training or skill practice was performed for a total of at least 15 minutes per 24 hours
    • The 15 minutes can be broken up (i.e. remove & clean splint and skin, inspect skin and perform ROM for a total of 5 minutes 3x/day)
    • Need 2 or more 15 minute restorative programs for 6-7 days/week
    • Restorative nursing does not include groups with more than four residents per supervising helper or caregiver

• Restorative & Mobility Programs
  • Restorative Nursing Program-MDS Requirements
    • H0200C, H0500 **Urinary toileting program and/or bowel toileting program
    • O0500A,B **Passive and/or active ROM
    • O0500C Splint or brace assistance
    • O0500D,F **Bed mobility and/or walking training
    • O0500E Transfer training
    • O0500G Dressing and/or grooming training
    • O0500H Eating and/or swallowing training
    • O0501 Amputation/prostheses care
    • O0501I Communication training

**Count as one service even if both provided
• Offer Strength Training:
  • 15 minutes 6 days a week, staggering muscle groups
  OR
  • 30 Minutes 2 or 3 times a week, with 15 minutes of ROM on the non-strength training days

• Restorative & Mobility Programs
  • Restorative Nursing Program-MDS Requirements – Example of 2 programs
    • Active ROM exercises AND Walking
    • Active ROM exercises AND Transfers
    • Active ROM exercises AND Bed mobility
    • Active ROM exercises AND Bladder program
    • Active ROM exercises AND Splint or Brace assistance
    • Active ROM exercises AND Dressing and Grooming Training, etc.

• Restorative & Mobility Programs
  • Restorative Nursing Program
    • Skilled Care-Medicare A
      • Rehabilitation nursing: 2 activities, 15 minutes each per day for 6-7 days per week.
      • Must be in conjunction with therapy, 45 minutes, 3 days per week

• Restorative & Mobility Programs
  • Restorative Nursing Program
    • Restorative Nursing Programs – maintenance
      • Restorative Nursing provides the activities

• Restorative & Mobility Programs
  • Restorative Nursing Program
    • Restorative Nursing Programs
      • Therapy set up functional maintenance and do periodic updates (Part B)
      • Restorative Nursing provides the activities

• Restorative & Mobility Programs
  • Restorative Nursing Program-MDS Requirements
    • The care plan & medical record must document measurable objectives and interventions
    • The medical record must reflect periodic evaluation by a licensed nurse.
    • Nursing assistants/aides must be trained in the techniques that promote resident involvement in the activity
    • A registered nurse or licensed practical (vocational) nurse must supervise the activities in a restorative nursing program.
Individual Resident Goal Setting
• Needed for Starting Point & to Measure Progress
  • Short Physical Performance Battery (SPPB)
  • Anthropometric Measurements
  • Muscle Quality Index
  • Hand Grip Strength
  • Steps per Day
  • Resting Heart Rate
  • Resting Blood Pressure
  • Waist to Hip Ratio
  • The Resident’s Goal

• Restorative & Mobility Programs
  • Restorative Nursing Program-MDS Requirements
    • If the resident does not meet MDS requirements for reimbursement, the program should still be implemented – Payment shouldn’t drive the program
    • Example: Resident can perform exercise program 3 days a week or can only perform one 15 minute program per day

• Exercise program:
  • Are specifically designed for older adults that can be done individually or in groups of 4 in 15 or 30 minute increments
  • Can be done in different positions depending on balance issues
    • Supine Position
    • Sitting Position
    • Standing in an assistive device
    • Standing

• Sufficient Resources
  • Accessible Exercise Equipment
  • Enough for groups of 4

• Environment
  • Stand Assist Devices to promote early mobility and exercise in a standing position dedicated to Therapy & Restorative Nursing

• Develop Exercises that call for exercise for each of the major muscle groups
  • Quadriceps
  • Hamstrings
  • Pectoralis Major
  • Latissimus Dorsi
  • Deltoids
  • Biceps
  • Triceps
  • Erector Spinae
  • Rectus Abdominus
  • Neck
  • Flexors/Extensors

American Senior Fitness Association, 2000
**MINIMIZING INJURY**
- Hip protectors
- Helmets
- Proper Footwear
- Proper Clothing
- Plenty of Water

**Strength Training**
- Proper warm-up and cool down are needed for strength training exercises
  - Simple walking or marching while sitting for standing balance issues
  - Large body movements (arm crosses) for wheelchair bound
  - When warming up no static stretching

**Train on Safe Strength Training Exercise Practices**
- Proper weight and repetitions
- Training speed
- Breathing
- Training range of motion
- Posture
- Positions to avoid

**Proper Cool Down - Stretching**
- Tips:
  - Hold stretches for 30 seconds or more
  - Go to the point you feel the muscles stretching
  - Do not go past that point where it starts to hurt
  - Always ease into a stretch gently

**Stop Exercise if any of the following warning signals**
- Light headedness, dizziness
- Breathlessness, shortness of breath
- Higher than normal levels of joint, muscle, or skeletal pain or discomfort
- General weakness, extreme fatigue
- Anginal pain which may occur in the chest, neck, jaw, back or limbs
- Excessive sweating, cold sweats, clamminess
- Heart palpitations, irregular pulse
- The resident stops for any reason

**Addressing Endurance Issues**
Walking Programs
• Physical Activity (Steps per day)
  • Public health recommendations of achieving 10,000 steps per day.
  • While the physical activity assessment is designed to be a gauge for the resident’s physical activity status in the form of ambulation, targets of the following have been associated with higher health related quality of life outcomes:
  • Men: 5,500 steps/day
  • Women: 4,500 steps/day

Endurance: Bicycling, Kayaking, Swimming, or Rowing

• Exercises for specific conditions/concerns
  • Parkinson Disease/Balance
  • Obstacle Courses
  • Kayaking
  • Lunges
  • Kicks
  • Quick Boxing Movement

Walking Programs
• Physical Activity (Steps per day)
  • A 10-minute walk is approximately comparable to 1,000 steps, depending on walking speed and stepping cadence. Adding 100 to 1,000 steps per day or week may enable residents to achieve recommendations.
  • Those residents who are capable may work up to the 10,000 steps per day recommendations.

• Exercises for specific conditions/concerns
  • Parkinson Disease
    • Mobility – the ability to efficiently navigate and function in a variety of environments, requires balance, agility and flexibility all of which are affected by Parkinson Disease.
    • Rigidity, bradykinesia, freezing, poor sensory integration, inflexible program selection and impaired cognitive processing limit mobility in people with Parkinson Disease.

• Exercises for specific conditions/concerns
  • Balance
    • Tai Chi
    • Yoga
    • Balance exercises
Exercises for Specific Conditions

Lower Extremity Arterial Insufficiency
- Walking 30-60 minutes 3x/week of sufficient intensity to bring on claudication and then followed by rest

Venous Insufficiency
- Elevate legs above the heart for 30 minutes, 3-4x/day
- Perform ankle flexion 5-10 times every few minutes and for 1-2 minutes every 30 minutes
- Perform brisk walking
- Perform planter flexion, tip-toe exercises, and walk on incline treadmill
- Sit and rock in a rocker chair, using feet to push down to plantar flex the ankles
Exercises for Specific Conditions

Peripheral Neuropathy
- Exercise must be conducted with caution due to the insensate lower extremity
- Institute non-weight bearing exercises such as swimming, water aerobics, bicycling, rowing and upper body exercises
- Wear well fitting shoes and socks
- Recommend daily range of motion to avoid loss of muscle strength and flexibility

• Involving the team:
  • Can be done during activities
    - Treasure hunts
    - Obstacle courses
    - Video exercise games
    - Throwing a ball
    - Tai Chi
    - Yoga
    - Dancing
    - Walking Courses
  • Do activities while standing (i.e. cooking or arts and crafts)
  • Offer programs during the day and evening

• Input on the program from residents and family members

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• Input on the program from residents and family members

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Thanks for your participation!!!

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