24 Hour Pressure Management: a Functional Perspective

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Specialized Seating and Mobility Clinical Specialist

Advanced Wound Care Conference April 26, 2013
Learning Objectives

1. Understand the concept of 24 hour pressure management from a functional perspective
2. Identify a minimum of 3 common red flags that contribute to pressure ulcer development from a functional perspective
3. Describe a minimum of 3 practical assessment techniques that can be utilized to evaluate these red flag issues
4. Describe a minimum of 3 functional recommendations guided by best practice to address these red flag issues
24 Hour Pressure Management

Application of pressure ulcer best practice guidelines into the functional context of an individual’s life over the course of an entire day
A Functional Perspective

- Person
- Environment
- Occupation

Occupational Performance
A Functional Perspective

Person Factors
- Behaviour & lifestyle choices
- Cognition, perception, & affect

Environment Factors
- Support surfaces & adaptive aides
- Social & personal care supports

Occupation Factors
- Daily functional tasks
- Positioning, repositioning & mobility

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A Functional Perspective

OT

- Activity analysis
- Practical solutions
- Client centered
- Holistic approach
- P-E-O
- Equipment specialists
- Adaptation
# Best Practice vs. Clinical Practice

**Best Practice**
- Guideline only
- “Specifically vague”
- Broad accountability only
- Can be controversial
- Not always standardized
- Offers “what to do” not “how to do”

**OT Clinical Practice**
- Rule out medical concerns
- Understand team roles
- Client & Team buy-in
- Systematic approach with practical problem solving

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## Rule Out Medical Concerns

<table>
<thead>
<tr>
<th>MEDICAL SCREEN CHECKLIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has infection been ruled out?</td>
</tr>
<tr>
<td>Is the wound healable?</td>
</tr>
<tr>
<td>Does the wound require surgical intervention to heal?</td>
</tr>
<tr>
<td>Are other medical conditions that can have a negative impact on wound healing being managed appropriately?</td>
</tr>
<tr>
<td>Are there bedrest and/or sitting orders?</td>
</tr>
</tbody>
</table>
Understand Team Roles

- Accountability
- Collaboration
- Overlap & Role Sharing
- Clarification
- Delegation

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## Everyone’s Roles

<table>
<thead>
<tr>
<th>Role</th>
<th>Guiding Principle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation</td>
<td>Assess, don’t guess</td>
</tr>
<tr>
<td>Education</td>
<td>Say it, write it, show it, prove it</td>
</tr>
<tr>
<td>Monitoring &amp; Re-eval</td>
<td>As good as baseline or better?</td>
</tr>
<tr>
<td>Communication</td>
<td>Consistent messaging</td>
</tr>
<tr>
<td>Collaboration</td>
<td>“Coming together is a beginning. Staying together is progress. Working together is success” Henry Ford</td>
</tr>
<tr>
<td>Accountability</td>
<td>Who, what, when, where, &amp; why?</td>
</tr>
</tbody>
</table>

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“In general, if you had to describe in 10 words or less, what do you think a(n) _____’s role is (or should be) with pressure ulcer management?”

**Physician**

- “Assess causation, manage medical complications & surgical interventions, and initiate treatment orders and referrals for in-depth evaluation of causative factors”

**Nurse**

- “Assessment and treatment for skin care & wound management in consultation with physician if complications arise. Risk assessment, screening & cross referrals to address additional contributing pressure factors”
Team Roles

- **OT**
  - “Assess and problem solve practical intervention strategies that will address the external factors that contribute to pressure ulcer development during daily functional tasks”

- **PT**
  - “Maximize mobility to allow independence & safety with movement-related tasks that expose skin to external sources of pressure”

- **Dietitian**
  - “Assess nutritional requirements & provide adequate calories, protein, fluid, micronutrients, and/or the need for supplements to promote wound healing”
Team Roles

- “My job is to not get one”
- “Monitor skin and follow through with recommendations explained to prevent skin breakdown”
- Bottom line: informed choice, accountability, & problem solving if things go wrong
Client & Team Buy-in

- Projected time frames
- Readiness for change
- Informed choice
- Clearer expectations
- Accountability & consequences
Systematic approach

Pressure Management Assessment Tool (PMAT)

- A clinical evaluation tool, based on best practice, that offers a systematic way of addressing pressure factors from a practical perspective.
- A structural framework that investigates the factors that contribute to the functional aspects of pressure ulcer development from a 24 hour perspective.
PMAT Structure

**PART 1: INTERVIEW**
- Self report of function related to causative factors
- Screen insight & awareness
- Generate red flags

**PART 2: ASSESSMENT**
- Hands-on evaluation of causative factors
- Cross reference to self-report in Part 1
- Additional red flags & alternative solutions

**PART 3: FINDINGS**
- Summary & recommendations based on red flags
- Prioritize interventions strategies & cross referrals
- Written record for accountability & buy-in

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PMAT Content

Pressure Ulcer Causative Factors

- Self-management Behaviours
- Pressure Ulcer History
- Physical Status
- Microclimate
- Positioning
- Mobility, shear & Friction
- Repositioning Strategies
- Support Surfaces
## Assumptions For PMAT Use

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working knowledge of clinical practice guidelines for pressure ulcer prevention and treatment</td>
<td></td>
</tr>
<tr>
<td>Working knowledge of pressure ulcer stages and additional signs &amp; symptoms of pressure-related damage to skin</td>
<td></td>
</tr>
<tr>
<td>Ability to reliably landmark &amp; palpate key bony areas that are most susceptible to pressure-related damage</td>
<td></td>
</tr>
<tr>
<td>Working knowledge of proper support surface terminology and principles</td>
<td></td>
</tr>
<tr>
<td>Awareness of pressure-posture relationship</td>
<td></td>
</tr>
<tr>
<td>Understand team roles in addition to your own role</td>
<td></td>
</tr>
</tbody>
</table>
### Referral Information

<table>
<thead>
<tr>
<th>Referral Information</th>
<th>Client “X”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td>Alzheimer’s &amp; CVA</td>
</tr>
</tbody>
</table>
| Other medical conditions | Incontinence  
                          | Spasticity |
| Pressure issue       | Skin breakdown “on buttocks” |
| Other relevant information identified | Postural deformities  
                          | Sliding in wheelchair |
| Request of OT        | “Needs a cushion” |
Part 1 - Interview

Pressure Ulcer History
- Where is your current ulcer located?
- What do you think caused it?
- What methods have you used to heal ulcers in the past?

Physical Status
- Do your spasms make it difficult for you to stay properly positioned in any of the following situations:
  - Lying in bed
  - Sitting in your wheelchair
  - Sitting on your toilet or commode
  - In your bathtub or on a bath seat
  - Travelling in a vehicle...
Part 1 - Interview

Positioning
- Which of the following positions do you alternate between when in bed:
  - On your back (flat)
  - On your back (with the head of the bed raised)
  - On your right side...
  - How long do you typically spend in each position?

Support Surfaces
- What type of bed and mattress do you use?
- Do you use any other equipment to assist with positioning & repositioning in bed?
Part 1 - Interview

Repositioning Strategies

• Do you reposition yourself, or have others reposition you, for the purpose of pressure redistribution (i.e. shifting or relieving pressure away from specific parts of your body) while sitting in your wheelchair?
• How frequently do you move for the purpose of pressure redistribution when sitting?

Mobility, Friction & Shear

• How many transfers do you typically perform in a day? Method? Equipment?
• Do you ever slide out of position on any of the support surfaces you use over a 24 hour period?
• How do you manage moving between different positions in bed?
Part 1 - Interview

Microclimate
- Do you ever experience bladder incontinence?
- Do you ever feel excessively hot for extended periods of time over 24 hours?
- Does your body tend to sweat over the course of 24 hours?

Self-management Behaviours
- Do you perform skin checks? How frequently?
- What signs would indicate to you if there is/are area(s) of concern during a skin check?
- Please indicate the type of lower body clothing and layers you typically wear over a 24 hour period
- Do you smoke?
# Part 1 – Red Flags

<table>
<thead>
<tr>
<th>Most Common Functional Red Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Same pressure ulcer location breaking down repeatedly</td>
</tr>
<tr>
<td>- Incontinence &amp; spasticity common secondary conditions</td>
</tr>
<tr>
<td>- Pressure ulcer weight bearing majority of the time despite different positions throughout the day</td>
</tr>
<tr>
<td>- Support surfaces are either in poor repair or need upgrading</td>
</tr>
<tr>
<td>- No clear repositioning schedules</td>
</tr>
<tr>
<td>- No regular skin checks &amp; poor problem solving with skin issues</td>
</tr>
<tr>
<td>- Transfers frequently down-played as an issue</td>
</tr>
<tr>
<td>- Loss of positioning (e.g. sliding) common in a variety of different positions throughout the day</td>
</tr>
</tbody>
</table>
Part 2 - Assessment

EARS
What do you hear?

EYES
What do you see?

HANDS
What do you feel?

Practical Pressure Management

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Assessment 1: Functional Wound Evaluation

- Visual inspection over primary weight bearing surfaces
- Remove dressings whenever possible – involve nursing
- Side lying in “mocked” sitting position
- Rule of thumb:
  - What do you see?
  - What do you feel?
  - What do you smell?
- Understand signs of pressure, shear, friction, & microclimate
- Digital photos

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Assessment 2: Positioning Evaluation

- Palpation to correlate ulcer with position
- Evaluate whether pressure ulcer is weight bearing, partial weight bearing, or fully offloaded for:
  - All positions, on
  - All support surfaces
  - 24 hour perspective
- Mock up modified positions or additional options with client as alternative solutions

Referencing ulcer with positioning
Correlating ulcer with clothing
Palpation

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Assessment 3: Postural Screen in Sitting

- PRESSURE-POSTURE relationship
- Influence of gravity
- What happens in the wheelchair is a good indication of what will happen on other sitting surfaces
- Bodies will go in 3 general directions:
  - Anterior
  - Posterior
  - Lateral
Assessment 4: Repositioning Evaluation

• Evaluation of repositioning movements in:
  • Bed
  • Wheelchair
  • Other sitting surfaces
• Goal is to determine whether:
  • Client is capable of the movement
  • Movement is effective
• Palpate ulcer area during movement to decide:
  • Effective offloading?
  • Shear, friction or trauma during movement?
Assessment 5: Support Surface Evaluation

- Offloading
- Pressure Redistribution
- Shear
- Envelopment
- Friction
- Immersion
- Microclimate

Support Surface Terminology

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Assessment 5: Support Surface Evaluation

- Visually inspect every support surface used over a 24 hour period
- Ensure equipment is:
  - Set up properly
  - In good condition
- Understand impact of support surface on:
  - Stability & function
  - Microclimate
  - Shear & friction
- Issue with layers
- Correlate ulcer with support surface in specific positions & during functional tasks
Assessment 6: Mobility, Friction & Shear Evaluation

- Watch transfer and repositioning movements and screen for signs of:
  - Trauma
  - Shear & friction
- Palpate ulcer area during movements
- Mock up alternative methods of moving
- Confirm trauma, shear & friction are eliminated or minimized with alternative methods

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Assessment 7: Cognitive Screen

- Indirect evaluation gathered from Part 1 & 2 results
- Appropriate pressure management requires:
  - Insight & awareness
  - Problem solving
  - Motivation
  - Ability to retain information and apply new learning
- Sometimes people make BAD lifestyle choices and decisions

Client’s solution to discomfort and better accessibility

Outcome with client’s solution

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# Part 2 – Assessment

## Red Flags

<table>
<thead>
<tr>
<th>Most Common Assessment Red Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>People rarely do skin checks on a regular basis</td>
</tr>
<tr>
<td>Other than “redness” people rarely know what else to look or feel for during a skin check</td>
</tr>
<tr>
<td>People in general have very little awareness of what to do if they see an issue during a skin check</td>
</tr>
<tr>
<td>Bed positioning requires lots of problem solving</td>
</tr>
<tr>
<td>Very few positions offer true “offloading” to IT ulcers</td>
</tr>
<tr>
<td>Ulcers over sacrum, heels &amp; GT’s are more frequently influenced by bed positioning (vs. sitting)</td>
</tr>
</tbody>
</table>
### Most Common Assessment Red Flags

<table>
<thead>
<tr>
<th>Flag</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="red_flag.png" alt="Red Flag" /></td>
<td>Majority of individuals with sitting-related pressure ulcers also tend to have mild to severe postural asymmetries.</td>
</tr>
<tr>
<td><img src="red_flag.png" alt="Red Flag" /></td>
<td>Inability to maintain postural stability throughout the day – sliding forward or trunk leaning to the side most common issues.</td>
</tr>
<tr>
<td><img src="red_flag.png" alt="Red Flag" /></td>
<td>Forward leaning tends to be a more sustainable method of pressure relieving in a wheelchair compared to a full “push-up.”</td>
</tr>
<tr>
<td><img src="red_flag.png" alt="Red Flag" /></td>
<td>People who use manual tilt-in-space wheelchairs are rarely tilted frequently enough or far enough back.</td>
</tr>
</tbody>
</table>
## Part 2 – Assessment Red Flags

<table>
<thead>
<tr>
<th>Most Common Assessment Red Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathroom equipment is rarely padded</td>
</tr>
<tr>
<td>Layers used over bed and wheelchair support surfaces</td>
</tr>
<tr>
<td>Bottoming out on the sleep surface when lying with the head of the bed raised</td>
</tr>
<tr>
<td>Ongoing skin issues despite use of a ROHO cushion</td>
</tr>
<tr>
<td>Dragging, “hard landings”, &amp; not clearing obstacles during transfers</td>
</tr>
<tr>
<td>Incontinence products frequently get used to reposition individuals in bed (&amp; left underneath them after movement)</td>
</tr>
</tbody>
</table>
## Part 2 – Assessment Red Flags

<table>
<thead>
<tr>
<th>Most Common Assessment Red Flags</th>
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<tr>
<td>People will only process and retain small bits of information &amp; require repeat consistent messaging in multiple formats</td>
</tr>
<tr>
<td>New behaviours require a lot of repetition, practice &amp; problem solving before they will become habitually incorporated into daily life</td>
</tr>
<tr>
<td>Being dependent on others for repositioning can have a negative impact on mood &amp; quality of life</td>
</tr>
</tbody>
</table>
Part 3 - Findings

Assessment Summary

• Overall impression of pressure ulcer factors (red flags)
• Main areas of concern (prioritized)
• Changes required to eliminate factors
• Consequences if changes are not implemented
• Necessary buy-in for successful follow through

Recommendations

• Itemized & prioritized list of action plans specifically targeted to address red flag concerns
• Detail-oriented and focus on practical solutions
• Accountability delegated
• Cross referrals identified

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## Part 3 - Findings

### Top 10 Tips for Providing Practical Recommendations

<table>
<thead>
<tr>
<th></th>
<th>Tip</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Initiate consult to physician for unresolved medical concerns</td>
</tr>
<tr>
<td>2</td>
<td>Initiate cross referrals to other team members as indicated &amp; if clients transition through continuum of care</td>
</tr>
<tr>
<td>3</td>
<td>Clarify &amp; collaborate regarding bedrest vs. sitting orders</td>
</tr>
<tr>
<td>4</td>
<td>Prioritize positioning schedules and support surface use based on bedrest vs. sitting orders</td>
</tr>
<tr>
<td>5</td>
<td>Prioritize what to do immediately for the interim vs. what needs to be addressed eventually</td>
</tr>
</tbody>
</table>
# Part 3 - Findings

## Top 10 tips for Providing Practical Recommendations

<table>
<thead>
<tr>
<th></th>
<th>Tip</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Prioritize interventions for core functional tasks that must occur on a daily basis: eating, sleeping, toileting, &amp; bathing</td>
</tr>
<tr>
<td>7</td>
<td>Think outside the box when problem solving practical ways for these tasks to occur</td>
</tr>
<tr>
<td>8</td>
<td>Frame recommendations so that there are clear expectations and accountability – describe who, what, when, where, why &amp; how</td>
</tr>
<tr>
<td>9</td>
<td>Provide clients with the opportunity to decide whether or not they will follow recommendations</td>
</tr>
<tr>
<td>10</td>
<td>Be clear on trade offs and consequences when clients decide against any recommendations</td>
</tr>
</tbody>
</table>
# Part 3 - Findings

## Common Themes Addressed with Recommendations

<table>
<thead>
<tr>
<th>THEMES</th>
<th>PRACTICAL TIPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offload the ulcer</td>
<td>Don’t always assume bedrest provides best offloading</td>
</tr>
<tr>
<td>Repositioning schedule for bed</td>
<td>Alarm clocks for consistency with overnight turns</td>
</tr>
<tr>
<td>Repositioning schedule for wheelchair</td>
<td>Resting onto a low table reduces effort required for leaning movements</td>
</tr>
<tr>
<td>Upgrading recumbent &amp; sitting support surfaces</td>
<td>Support Surface Selection Tool for sleep surfaces</td>
</tr>
<tr>
<td>Skin check education</td>
<td>Check skin before &amp; after introduction of new equipment and/or tasks</td>
</tr>
</tbody>
</table>

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Future Directions

OT Pressure Management Working Group

- Looking at core competencies and standardization of OT pressure management practices across WRHA
- Goal is OT representation from all WRHA sites

Clinical Practice Resources

- Clinical use guidelines for PMAT
- Guidelines for upgrading and downgrading support surfaces in bed and wheelchair
- Guidelines for upgrading and downgrading repositioning schedules
Learning Objectives

1. Understand the concept of 24 hour pressure management from a functional perspective
2. Identify a minimum of 3 common red flags that contribute to pressure ulcer development from a functional perspective
3. Describe a minimum of 3 practical assessment techniques that can be utilized to evaluate these red flag issues
4. Describe a minimum of 3 functional recommendations guided by best practice to address these red flag issues

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Resources

- Winnipeg Regional Health Authority (WRHA): www.wrha.mb.ca (‘for health professionals’ → ‘evidence informed practice tools’ → ‘wound care’ → ‘pressure ulcer’)
- Ontario Neurotrauma Foundation: www.onf.org (‘documents’ → ‘documents & resources’ → ‘Canadian Best Practice Guideline for Pressure Ulcers’)
- National Pressure Ulcer Advisory Panel (NPUAP): www.npuap.org
- Canadian Association of Wound Care (CAWC): www.cawc.net
- Wound Care Canada (Official publication of CAWC): www.woundcarecanada.ca
- Paralyzed Veterans of America (PVA): www.pva.org
THANK-YOU!

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