Why should we regularly screen for pain when assessing people with cognitive impairment or dementia? Pain is known as the 5th vital sign. The prevalence of pain related to degenerative joint disease (e.g. osteoarthritis) exponentially increases with advancing age.\(^1\) Eighty percent of people living in nursing home-like environments suffer persistent pain; a large majority of them are old and have dementia.\(^2\)

People with dementia can feel pain, but they frequently are unable to articulate the source or intensity of pain as those who are cognitively intact can do.\(^3\) Pain experience may be expressed through pain behaviors and pain responses to specific stimuli.

Pain increases dementia symptoms (e.g. agitation, confusion), depression, as well as functional dependency and caregiver burden.\(^2\)-\(^4\) Yet, across all settings, pain in people with dementia is still under-assessed, under-diagnosed, and therefore under-treated.\(^2\)-\(^4\)

Every time a person with dementia is clinically assessed by a healthcare professional, the presence of pain should be assessed. Physical therapists are movement and neuromusculoskeletal experts who are well-suited for assessing and locating the source of pain in people with dementia.

What are pain behaviors? Pain behaviors can vary from person to person. Common pain behaviors are sad or angry facial expressions (e.g. frowning, grimacing), abnormal body language (e.g. aggressive postures such as clenched fists), repetitive movements (e.g. rocking, teeth grinding), negative verbalization (e.g. moaning sounds, negative speech), disengagement from activities, and diminished eating.

How does one choose the right pain screening tool for a person with cognitive impairment or dementia? A number of state-of-the-art pain screening tools are available to all healthcare professionals.\(^5\) The PAINAD is a valid and reliable tool that incorporates five common pain behavior categories. It is not culturally biased, can be used in all settings, and assess people for pain who may or may not demonstrate dementia characteristics or language barriers.\(^5\) The PAINAD takes upwards of 5 minutes to complete and can be used by clinicians and caregivers alike to monitor and track pain behaviors and treatment effectiveness over time.\(^5\)
**How does one administer the PAINAD?** Observe for signs of pain behaviors in all five categories for upwards of 5 minutes and under different conditions (e.g. resting, after an activity, after caregiving, after pain medication given). See PAINAD table below.

<table>
<thead>
<tr>
<th>BEHAVIOR</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathing independent of vocalization</td>
<td>Normal</td>
<td>Occasional labored breathing; Short period of hyperventilation.</td>
<td>Noisy breathing; long periods of hyperventilation; gasping breaths with periods of no breathing.</td>
<td></td>
</tr>
<tr>
<td>Negative vocalization</td>
<td>Normal</td>
<td>Occasional moan or groan; low-level speech, negative, disapproving speech quality.</td>
<td>Repeated troubled calling out; loud moaning or groaning; crying.</td>
<td></td>
</tr>
<tr>
<td>Facial Expression</td>
<td>Smiling or inexpressive</td>
<td>Sad; frightened; frowning</td>
<td>Facial grimacing.</td>
<td></td>
</tr>
<tr>
<td>Body Language</td>
<td>Relaxed</td>
<td>Tense; distressed pacing; fidgeting.</td>
<td>Rigid; clenched fists; pulled up knees; pulling or pushing away; striking out.</td>
<td></td>
</tr>
<tr>
<td>Consolability</td>
<td>No need to console</td>
<td>Distracted or reassured by voice or touch.</td>
<td>Unable to console, distract or reassure</td>
<td></td>
</tr>
</tbody>
</table>

**How does one score and interpret the PAINAD?** Scores for each behavior category range from 0-2 and a total score of 2 or more indicates pain is likely present and should be treated.

OF NOTE: The severity of pain cannot be correlated to any PAINAD score. In other words, a total score of 2 only reflects the number and/or types of pain behaviors present. For instance, a score of 2 may mean two pain behaviors (each with a score of 1) are present, or it may mean one pain behavior (with a score of 2) is present.
Case Example: Incorporating the PAINAD into the Cognitive and Mental Health Assessment. Dr. Ann Odyne, DPT, is the contracting physical therapist for Sunshine Valley Convalescent Hospital, a 45-bed skilled nursing home that does not bill any insurance and contracts with various specialists as needed. Dr. Odyne has a private practice and bills Medicare Part B for her services. She decided to incorporate the PAINAD into all her patient assessments after learning about the PAINAD from her State Advocate and using it with her patient, Belle.

Belle is 95 years old. She has lived in an assisted-living community for five years. Three days following a fall at the mall, she was transferred from the local hospital to Sunshine Valley for skilled nursing and physical therapy care management services. An occupational therapist is not available in this area so Dr. Odyne incorporates ADL-retraining into her care plan.

Belle’s first week at Sunshine Valley was particularly difficult due to complications related to delirium (from a UTI), pain (from her fall) overlying arthritis (multiple sites), severe osteoporosis, and a dementia process related to a long history of alcohol abuse. Dr. Odyne worked with the medical director and the nursing staff to determine that Belle’s pain behaviors came from moving her back and right hip. These pain behaviors were consistently reduced when she took 1000 mg Tylenol three times a day. Specifically, her pain behaviors reduced from four categories to two categories, and her total PAINAD score reduced from 8/10 to 3/10 when she was regularly medicated with Tylenol. Other types of pain medications were tried during her first month at Sun Valley but resulted in negatively impacting her cognition.

<table>
<thead>
<tr>
<th>BEHAVIOR</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>SCORE With No Tylenol</th>
<th>SCORE With 3x/day Tylenol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathing independent of vocalization</td>
<td>Normal</td>
<td>Occasional labored breathing; short period of hyperventilation.</td>
<td>Noisy breathing; long periods of hyperventilation; gasping breaths with periods of no breathing.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Negative vocalization</td>
<td>Normal</td>
<td>Occasional moan or groan; low-level speech, negative, disapproving speech quality.</td>
<td>Repeated troubled calling out; loud moaning or groaning; crying.</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Facial Expression</td>
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<td>Sad; frightened; frowning.</td>
<td>Facial grimacing.</td>
<td>2</td>
<td>2</td>
</tr>
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<td>2</td>
<td>0</td>
</tr>
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<td>Consolability</td>
<td>No need to console</td>
<td>Distracted or reassured by voice or touch.</td>
<td>Unable to console, distract or reassure</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL SCORE</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>8</strong></td>
<td><strong>3</strong></td>
</tr>
</tbody>
</table>
Sixteen weeks after her admission to Sunshine Valley, Belle presents as follows:

- her PAINAD score has been consistently 3/10 or less for the past month;
- her Barthel Index score* has improved from 10/100 (total dependence with ADLs) to 50/100 (severe dependence with ADLs);
- her Function In Sitting Test score** has improved from 8 to 28 indicating she still requires physical assistance equivalent to Care Levels 3 and 4 with many aspects of functional sitting;
- she is able to transfer in/out of bed/wheelchair/commode/shower chair using bilateral upper extremity push-pull strategies plus assistance from one certified-nurse’s aide equivalent to CARE Level 3 (partial/moderate assistance that is less than half of the overall effort);
- she can independently propel herself in her wheelchair (within the confines of the nursing home) using all her limbs;
- she can shuffle-walk upwards of 100 feet in 2 minutes with support from a 4-wheeled platform walker and assistance from the nursing staff equivalent to CARE Level 4; and
- under Medicare Part B, her current and projected functional problem status codes are G8987 and G8988, respectively, and her current and projected impairment range is CK (40% to less than 60%).

Belle remains at high risk for cognitive, physical and functional decline within the context of having chronic and progressive underlying medical conditions (i.e. high fall injury risk, pain, arthritis, osteoporosis and dementia). Her family has agreed to keep her at Sunshine Valley because she continues to benefit from having long-term skilled care management services.

Dr. Odyne transitions Belle from a rehabilitative physical therapy care management plan to a habilitative care management plan. (Under Medicare Part B, habilitative physical therapy care management services are considered a covered benefit for those beneficiaries with chronic, progressive medical conditions.) The physical therapy goals are modified to reflect long-term maintenance-focused impairment and functional goals. A daily prescribed RNA-assisted exercise program has been established (e.g. stand-ups at wall rail: 5 reps x 3 sets; walking with platform walker to all meals: 5 minutes/walk). The RNA has been instructed to record Belle’s PAINAD score during every RNA session and to call Dr. Odyne if Belle’s PAINAD score is greater than 3/10.

Dr. Odyne includes in the care plan a monthly face-to-face visit over the next two months so she is able to optimally manage Belle’s fall risk and pain within the context of Belle’s other chronic, progressive medical conditions. During Belle’s transition into a long-term habilitative physical therapy care management plan, Dr. Odyne will continue to use the PAINAD and several performance measures. She will use the collected data to track Belle’s status over time and help her identify changes to best address Belle’s needs.
Creator of the A Club campaign and Developer of the A Club’s Cognitive Health Assessment, August 2015
Topic: Using the PAINAD to assess for pain.
Dr. Lise McCarthy, PT, DPT, GCS, CMH SIG Founding Chair

Special thanks for their contributions of content, format and/or edits:
Michele Stanley, CMH SIG Nominating Committee Chair
Kevin McCarthy, MIPT, Inc. Practice Manager

References:

Additional resources:
*Barthel Index:
**Function In Sitting Test: