

Pain Assessment

in the Cognitively or
Communicatively Impaired
(PACCI)

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The Issue

- 49% to 83% of LTC residents have pain
- Pain results from injury, illness, invasive procedures, and dying process
- Both acute and chronic pain are associated with depression, decreased socialization, sleep disturbance, impaired ambulation, and increased health care costs

Definitions

- Pain: an unpleasant sensory or emotional experience associated with actual or potential tissue damage
- “Pain is whatever the experiencing person says it is, existing whenever the person says it does” (McCaffery)

The Issue

- In LTC, pain management remains a significant care gap
- Pain is often under-diagnosed and miscommunicated
- Under treated pain with both analgesia and non-pharmacological measures

The Issue - Assessment

- Key step for pain management is assessment
- Gold standard is self-report
- Most challenging to assess are those with severe cognitive impairment and those unable to report their pain verbally
- Those unable who cannot communicate are treated for pain the least

The Issue - Assessment

- Self-report scales such as VAS or numeric rating scales (0 to 10) are appropriate for use in those who can communicate or with mild to moderate cognitive impairments
- They are not, however, of much help to those with severely limited communication skills
 - e.g. Patients with severe dementia or loss of consciousness; ? aphasia

Assessment

- If unable to verbally report pain, then the individual must be observed for nonverbal signs
 - Facial expressions
 - Body movements such as guarding
 - Vocalizations
 - Changes in interactions and usual activities

Work to Date

- Research about pain in CCI is desperately needed, but studies are difficult to design due to the lack of a “gold standard” for pain
- Tools developed to date each have their own strengths and limitations, but must be
 - Studied in larger populations
 - Refined for easy use
 - Further tested for validity and reliability

Work to date

- Various tools developed, many around same time as PACCI (see handout)
- Some have few items (less than 10), others have several (30 or more)
- Tools with few items may be more clinically feasible but may not detect pain in patients with less obvious behaviors (false negatives)

Work to date

- Longer tools will be more sensitive at the cost of possible false positives
 - This is based on the notion that severe dementia has diverse causes and may affect pain response in numerous ways
- Longer tools are more cumbersome to use
- PACSLAC recently reduced to 24 items

Work to date

- Tools to date have varied in
 - sample size,
 - format of administration (yes/ no or rating scale),
 - method of validation e.g. video recording,
 - amount of chart access or collaboration with other professionals required,
 - personnel who can complete the tool,
 - indicators of pain, e.g. fever, and populations tested
- Internal consistency
 - Often lacking (uncertain if all items measure the same construct)

Work to date

- Also helpful to link tool findings to clinical interventions
- Changes in behavior associated with interventions are likely to reflect improved pain control
- Even if pain not causing the behavior, at least an issue has been addressed:
 - Boredom,
 - Delirium,
 - Medications

What is the PACCI?

- Pain Assessment in the Cognitively/Communicatively Impaired
- 30 behaviors divided into four categories of
 - Behavioral, facial, physical, and vocal expressions
- Must indicate, in yes or no format, if each behavior is present
- No cut-off or baseline scores (issue for many tools)

Development of PACCI

- RHC **interdisciplinary** team began work to develop a pain assessment tool for the CCI in 2002
- Surveys at RHC indicated pain fairly well managed in cognitively intact but gaps existed for the CCI
- Team reviewed existing pain tools including those from Deer Lodge, Amy's Tool, and Doloplus 2

Development of PACCI

- In 2004 the Doloplus2 was trialed
- Significant deficits were found and alterations made which resulted in the development of the PACCI
 - Some items N/A
 - Rating scale 0-3 hard to use
 - Low inter-rater reliability
 - Wanted to include provoking and relieving factors related to behaviors/ pain

Development of PACCI

- Trial of the PACCI began in 2005 on chronic care and dementia units
- Several items were modified based on staff feedback e.g., “Withdrawing from environment” was changed to: “Withdraws (closes eyes, turns away)”.
- Inquiries made re: psychometric testing but many team members reassigned; left on hold

Development of PACCI

- In May 2007, a comparison study tried to determine whether the PACCI was as useful and as simple to use as the CNPI at RHC.
- Convergent validity with the CNPI was established.
- Evaluative feedback indicated that the PACCI was preferred over the CNPI, and took no longer to complete than the CNPI

Development of PACCI

- Inter-rater reliability was not consistent for either tool.
- Concluded that the PACCI is at least equivalent to one of the tools recommended by the WRHA.
- Further analysis of the psychometric properties of the PACCI could provide evidence to support its more widespread use.

Validation of PACCI

- Research funding has been obtained to evaluate the psychometric properties of the PACCI (spring 2008)
- Tool needs to be reliable, valid, and feasible for use

Current Research

- Difficult to establish a control variable for pain in CCI
- Physiologic measures more suited to acute pain; cannot discriminate between other sources of distress
- Past medical history, diagnosis, and use of pain meds not very specific

Current Research

- Could use a control group of cognitively intact with similar co-morbidities e.g. hip fracture, but possible different presentation of pain for each group
- Proxy reports from formal and informal caregivers/ family – depends on how well they know individual and frequency of interaction

Current Research

- Postulation that pain related behaviors should occur during seemingly painful activities, such as transferring, dressing, bathing
- Comparison of results with existing observation scales or tools that have been validated

Current Research

Major themes in evaluating pain in cognitively impaired (Mentes, Teer, & Cadogan, 2004):

- Knowing the resident
- Family input important re: previous pain behaviors
- Reliance on face and eye cues
- Prevalence of pain with care giving activities

Current Research

Evaluation methods for this study used a multi-faceted approach:

- Direct observation
- Family/caregiver input
- Comparison with a VAS scale

Current Research Plan

Goal was to recruit 40 subjects from RHC and DLC who meet at least one of the following criteria:

- Diagnosis of severe dementia
- MMSE score of less than 10
- Inability to speak (e.g. lack of consciousness, aphasia)

Current Research Plan

- RA trained in use of PACCI and provides education to staff
- RA interviews subject's family member or health caregiver to learn about possibly painful activities/ behaviors
- RA observes subject and takes field notes

Current Research Plan

- Observation and completion of PACCI and VAS by the RA, and both HCA and RN assigned to subject during a possibly painful episode and during a time of calm or rest (no pain)
- Various correlations to determine inter-rater reliability, internal consistency, and validity to be performed
- Staff evaluation of the PACCI and VAS

Preliminary Findings

- 41 subjects: 32 RHC and 9 DLC
- Age: Mean 79 years, SD = 13
- Gender: 41.5 % male; 58.5% female
- Diagnoses: 29.3% Alzheimers & 48.8 % other or unspecified dementia
- MMSE: mean score = 0
- Ethnicity: 92.7% Caucasian

Preliminary Findings

- Proxy caregiver ratings indicated that 70.7% of “painful” activities included aspects of morning care including washing, dressing, grooming, and transferring
- Otherwise “pain” occurred at rest or cause was not able to be specified
- Most reliable/consistent proxy rater was often the HCA
- SDM often spoke of pain in historical sense

Preliminary Findings

- Item frequencies (see table)
- Items with significant changes between supposed pain-free and painful situations: fidgets, grabs at caregiver, pushes caregiver away, winces with movement, withdraws, frowns, grimaces, squeezes eyes shut, difficulty getting up, resists movement, seeks support for movement, cries with touch, grunts/ moans, and verbalizes pain
- Will require factor analysis

Preliminary Findings

Staff evaluations:

- Majority said both tools assisted with pain assessment
- More indicated PACCI was more useful for pain assessment
- But more (similar numbers) indicated that VNRS was easier to use

Preliminary Findings

Staff evaluations: (see table)

- Although not the majority, there were “confusing” items for both tools
- Equal numbers indicated VRNS could be completed in < 1 min or 1-5 min, while majority indicated 1-5 min and then > 6 min for PACCI

Preliminary Findings

Staff evaluations:

Reasons for choosing PACCI:

- More specific and detailed
- Can detect many aspects of pain
- Can apply to more complete part of a day e.g. over a shift vs a point in time
- Room for comments

Preliminary Findings

Staff evaluations:

Concerns with PACCI:

- Difficult to understand some items
- More time consuming
- Some items should be N/A
- Presence of items may not necessarily indicate pain

Preliminary Findings:

- Examination of data seems to indicate that raters agreed on scoring in general, at least for obvious situations of pain/ no pain
- HCAs often scored higher, esp. on PACCI
- IRR and correlations: Preliminary Cronbach's alpha for the PACCI scale during pain free and painful situations is greater than 0.70 which indicates an adequate degree of internal consistency; but much more in-depth analysis is required

Preliminary Results

- Preliminary results indicate that PACCI provides useful results but is quite lengthy to complete
- Also many items are difficult to assess at a specific time or may be redundant e.g. has difficulty getting up, reluctant to eat; winces, frowns, and grimaces
- VAS/ proxy report may be just as accurate and easier to use?
- PACCI is a cue to assess for pain

Preliminary Findings

- Always remember that self-report (gold standard) is often still possible even in those with severe dementia
- Investigate possible pathologies that could cause pain
- Involve surrogate reporting
- Trial use of analgesics to see if behaviors change

Limitations:

- Small sample size
- Homogeneous population
- One point in time for no pain and pain situations; not over time
- More extensive staff training would be helpful

Future work:

- Analyze the distribution of variables
- Work with statistician to determine most appropriate statistical tests to determine validity and reliability
- See if item reduction improves internal consistency
- Publish findings