The Evolution of Pain Assessment Tools

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Conflict of Interest Statement

- Co-author:

- No other conflict of interest in regards to the content of this presentation.
Educational Objectives

• At the conclusion of this activity participants should be able to:
  • List one advantage and disadvantage of simple pain intensity scales
  • List two common features of tools that include measures beyond simple pain intensity
  • Describe how complete pain assessments can guide clinical decision-making
The Importance of Assessment in the Management of Pain

Accurate pain assessment is necessary for effective clinical care. (Gordon, 2015)
American Nurses Association (ANA) 2018

Position paper entitled:

“The Ethical Responsibility to Manage Pain and the Suffering it Causes”

• “Nurses have an ethical responsibility to relieve pain and the suffering causes.”
• “Nurses should provide individualized nursing interventions.”
• “The nursing process should guide the nurse’s action to improve pain management.”
If one of the legs is broken-the chair cannot stand

- Assessment is part of the nursing process.
- **Assessment**, diagnosis, planning, implementation or
- **Assessment**, planning, implementation, evaluation
Regulatory Standards

• New Joint Commission Standards (2018)
  Provision of Care, Treatment, and Services (PC)
Provision of Care, Treatment, and Services (PC)

The hospital assesses and manages the patient’s pain and minimizes the risks associated with treatment.

- The hospital monitors patients identified as being high risk for adverse outcomes related to opioid treatment.
- The hospital reassesses and responds to the patient’s pain through the following:
  - Evaluation and documentation of response(s) to pain intervention(s)
  - Progress toward pain management goals including functional ability (for example, ability to take a deep breath, turn in bed, walk with improved pain control)
  - Side effects of treatment
  - Risk factors for adverse events caused by the treatment
The hospital assesses and manages the patient’s pain and minimizes the risks associated with treatment.

- The hospital involves patients in the pain management treatment planning process through the following:
  - Developing realistic expectations and measurable goals that are understood by the patient for the degree, duration, and reduction of pain
  - Discussing the objectives used to evaluate treatment progress (for example, relief of pain and improved physical and psychosocial function)
  - Providing education on pain management, treatment options, and safe use of opioid and nonopioid medications when prescribed
Provision of Care, Treatment, and Services (PC)
The hospital assesses and manages the patient’s pain and minimizes the risks associated with treatment.

- The hospital has defined criteria to screen, assess, and reassess pain that are consistent with the patient’s age, condition, and ability to understand.
- The hospital screens patients for pain during emergency department visits and at the time of admission.
- The hospital treats the patient’s pain or refers the patient for treatment.
- The hospital develops a pain treatment plan based on evidence-based practices and the patient’s clinical condition, past medical history, and pain management goals.
History of Pain Assessment Tools

• 1968 : “Pain is whatever the experiencing person says it is, existing whenever he says it does.” (McCaffery)

• 1970s : Development of **self-reported pain intensity tools**
  - Numerical Scale 0-5 tied to “Nil, Mild, Moderate, Severe & Very Severe” (Lee et al, 1973)
  - Visual Analog Scale (Huskisson, 1974)
  - McGill Pain Questionnaire (Melzack, 1975)
Behavioral/Observation Tools

• 1990’s-early 2000’s saw development of observational tools for patients who could not self-report their pain experience. E.g.
  • 1993- CHEOPS (Children's Hospital of Eastern Ontario Pain Scale)
  • 1997- FLACC (Faces, legs, activity, cry, consolability)
  • 2003- PAINAD (Pain assessment in Advanced Dementia)
Self-Reported Pain Intensity Tools

• **Strengths:**
  • Valid and reliable for **acute pain** (Page et al, 2012)
  • Simple and easy to use
  • Allow for quick assessment, reassessment and can help guide clinical decision-making

• **Weaknesses**
  • Simple tools measure only pain intensity
  • Doesn’t do justice to complexity of patient pain experience
Multidimensional Self-Report Tools

- McGill Pain Questionnaire (1975)
  - **Advantages:** Valid and reliable, contains a body diagram, may be helpful with multi-morbidity and pain arising from multiple causes.
  - **Disadvantages:** Long form takes 30 minutes to complete and requires literacy

- Chronic Pain Grade Scale
  - **Advantages:** Measures impact overtime of persistent pain on daily, social, and work activities
  - **Disadvantages:** Complex and less useful for assessment of pain at point of care
Tide of Thought Shifting

- Reliance on one dimensional scales to guide treatment has been linked to serious adverse events: Incidences of opioid over-sedation increased in hospital stays. (Pasero et al, 2016)

- Documentation of pain is treated as a regulatory nuisance and clinical decision making is not linked to assessment data.

- Pain is complex and assessment tools need to reflect that complexity, yet be pragmatic in clinical use. (Gordon, DB, 2015)

- Pain assessment is a complex communication process between the patient and clinician.
Are Pain Ratings Irrelevant?

• Speaker noted that fellow pain and palliative care colleagues didn’t always ask about pain intensity using the numeric scale.

• In 2015, Short Survey of APS members, N=41, found pain clinicians do not routinely use pain intensity ratings as part of the pain assessment during clinical practice. (Backonja M & Farrar JT., 2015)

• Dowding et al (2016) reported that nurses tended not to use a pain assessment tool to aid their decision making and appeared to distrust the scores. They preferred to rely on common sense and their own experiences to assess a patient’s pain.
What is a simple pain intensity rating (e.g. NRS) really measuring?

• When used by patients with chronic/persistent pain: is the patient really describing something other than pain intensity?
  • “Suffering” or “distress”?

• What happens when clinicians use different anchors for severe pain?
  • 10= “Worst pain you’ve ever experienced” vs
  • 10= “Worst pain imaginable”
Some patients modulate pain reports and behaviors based on their perception of what’s in their best interest.

Multidimensional Aspects of Pain Assessment

Assessment is part of a continuous process encompassing multidimensional factors. (Finka, 2015)

- **Physiological/sensory factors**
  - Location
  - Intensity
  - Duration
  - Quality
  - Aggravating and relieving factors
  - Associative factors

- **Affect**
- **Cognition**
- **Sociocultural factors**
- **Environmental factors**
- **Patient goal**
- **Pertinent medical history**
Pain Assessment as a Social Transaction

- Problem with self-report using a one-dimensional scale:
  - Pain is a multi-dimensional complex experience
  - Numeric scale difficult for some to use
  - NRS requires linguistic and social skills: problematic with some of most vulnerable populations
  - Patients modulate pain behaviors and self-report based on their perception of what’s in their best interest
Pain Assessment as a Social Transaction

Contributing Factors
- Biological
- Sociocultural
- Developmental/Psychological
- Experience/Empathy
- Contextual/Situational

Assessment Process
- Patient
  - Experience (Patient Meaning)
  - Expression
- Clinician
  - Assessment
  - Judgment (Clinician Meaning)

Intervention
## Examples of Contributing Factors in Pain Assessment

<table>
<thead>
<tr>
<th></th>
<th>Biologic</th>
<th>Sociocultural</th>
<th>Developmental-Psychological</th>
<th>Experience/Empathy</th>
<th>Contextual/Situational</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient</strong></td>
<td>Disease, clinical condition, drug influences</td>
<td>Ethnicity, sex, access to healthcare, cultural origin</td>
<td>Age, stress, drug addiction, interpersonal skills, fear</td>
<td>Previous experience of pain</td>
<td>Language, fear/stress, Similarity to clinician, socioeconomic status</td>
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</tr>
<tr>
<td><strong>Clinician</strong></td>
<td>Biologic disposition, stress reactivity</td>
<td>Pt. preferences or biases, age, sex, education, ethnic background</td>
<td>Views on pain, trust/suspicion, Interpersonal skills, critical evaluation of pain report</td>
<td>Knowledge, clinical competence, empathy, institutional insensitivity</td>
<td>Workload, interdisciplinary communication, facility resources</td>
</tr>
</tbody>
</table>

Schiavenato, M & Craig KD. (2010) Clin J Pain. 26(8);667-676
Tools Evolving and Expanding

• “Evaluation of functional outcomes provides a better indication of the effectiveness of pain management strategies than pain intensity ratings.” (Miaaskowski, 2010, p. 27.)
## Functional Pain Scale (FPS)

Gloth et al (2001)

<table>
<thead>
<tr>
<th>0</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Pain</td>
<td>Tolerable activities not prevented</td>
<td>Tolerable prevents some active activities</td>
<td>Intolerable prevents many active, (not passive) activities</td>
<td>Intolerable prevents all active and many passive activities</td>
<td>Intolerable incapacitated, unable to do anything or speak due to pain</td>
</tr>
</tbody>
</table>

**Active activities:** Usual activities or those requiring effort (turning, walking, etc)

**Passive activities:** talking on phone, watching TV, reading

FPS best used for older adults who are unable to self-report pain level.
DVPRS
(Defense and Veterans Pain Rating Scale)

2008, Army Surgeon General charged 22 member pain management task force to examine pain assessment practices across military and Veterans Hospital settings

2010 report

- NRS (Numerical rating scale) was inconsistently used, lacked standardized word anchors, provided minimal guidance in clinical care

DVPRS tool developed: combines NRS, colors, FACES, words plus additional questions on general activity, sleep, mood and level of stress.

"Unlike the simple numeric scale, the DVPRS scale and supplemental questions encourage meaningful clinician–patient discussions about pain and its several dimensions and comorbidities, providing information that is needed to guide further clinical evaluation and to establish personalized biopsychosocial treatment plans with the patient."

(Buckenmaier et al, 2013, p.118)
Permission is granted for clinicians and researchers to freely use the Defense and Veterans Pain Rating Scale (DVPRS) as is, without alteration.
**DoD/VA Pain Supplemental Questions**

For clinicians to evaluate the biopsychosocial impact of pain

1. **Circle the one number that describes how, during the past 24 hours, pain has interfered with your usual **ACTIVITY**:**

   0 1 2 3 4 5 6 7 8 9 10
   
   Does not interfere  Completely interferes

2. **Circle the one number that describes how, during the past 24 hours, pain has interfered with your **SLEEP**:**

   0 1 2 3 4 5 6 7 8 9 10
   
   Does not interfere  Completely interferes

3. **Circle the one number that describes how, during the past 24 hours, pain has affected your **MOOD**:**

   0 1 2 3 4 5 6 7 8 9 10
   
   Does not affect  Completely affects

4. **Circle the one number that describes how, during the past 24 hours, pain has contributed to your **STRESS**:**

   0 1 2 3 4 5 6 7 8 9 10
   
   Does not contribute  Contributes a great deal

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CAPA® (Clinically Aligned Pain Assessment) Tool

- University of Utah – 2012 Pilot Project
- CAPA® developed to replace conventional numeric rating scale (NRS; 0-10 scale)
- Press Ganey© scores increased from 18th to 95th percentile
- 55% patients preferred CAPA ©
- Nurses preferred CAPA © 3:1 over NRS

From, Donaldson & Chapman, 2013.
Clinically Aligned Pain Assessment (CAPA)

“Pain is More Than Just a Number” ©

- Evaluates
  - intensity of pain
  - effect of pain on functionality
  - effect of pain on sleep
  - efficacy of therapy
  - progress toward comfort
- Engages patient and clinician in a brief conversation about pain resulting in coded evaluation

From, Donaldson & Chapman, 2013.
**CAPA© Tool** (modified by U of MN with permission; original in blue)

*The conversation leads to documentation - not the other way around.*

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comfort</strong></td>
<td>• Intolerable</td>
</tr>
<tr>
<td></td>
<td>• Tolerable with discomfort</td>
</tr>
<tr>
<td></td>
<td>• Comfortably manageable</td>
</tr>
<tr>
<td></td>
<td>• Negligible pain</td>
</tr>
<tr>
<td><strong>Change in Pain</strong></td>
<td>• Getting worse</td>
</tr>
<tr>
<td></td>
<td>• About the same</td>
</tr>
<tr>
<td></td>
<td>• Getting better</td>
</tr>
<tr>
<td><strong>Pain Control</strong></td>
<td>• Inadequate pain control</td>
</tr>
<tr>
<td></td>
<td>• Partially effective</td>
</tr>
<tr>
<td></td>
<td>• Fully effective</td>
</tr>
<tr>
<td><strong>Functioning</strong></td>
<td>• Can’t do anything because of pain</td>
</tr>
<tr>
<td></td>
<td>• Pain keeps me from doing most of what I need to do</td>
</tr>
<tr>
<td></td>
<td>• Can do most things, but pain gets in the way of some</td>
</tr>
<tr>
<td></td>
<td>• Can do everything I need to</td>
</tr>
<tr>
<td><strong>Sleep</strong></td>
<td>• Awake with pain most of night</td>
</tr>
<tr>
<td></td>
<td>• Awake with occasional pain</td>
</tr>
<tr>
<td></td>
<td>• Normal Sleep</td>
</tr>
</tbody>
</table>

*From, Donaldson & Chapman, 2013.*
Anecdotes from U. of MN Experience

*Patient perspective:* “Makes me feel like the nurses care more about my pain.”

*Nurses perspective:*  
- “It makes sense.”  
- Many had been frustrated by numeric scale and liked the change. “I hated that 0-10 scale.”
Nurse Survey At U. of MN
1 med-surg unit (N=21, 67% return)

80% satisfied or very satisfied with implementation

80% felt communication with patients improved with CAPA ©

71% satisfied with rationale for change

66% preferred CAPA© over NRS

47% believe patients have somewhat better pain management

with CAPA ©

Thanks to Emily Drobinski, Carrie Hallstrom, Kelly Pavlicek, Mary Sylvestre, Heather White, Clare Zielinski: Unit 8A, UMMC
Quarterly Press Ganey® Scores
Pre and Post CAPA © Implementation at U. of MN

Overall Pain Management
Pain Well Controlled
Staff Did Everything
Regulatory Responses to CAPA Tool

- U of MN passed two visits from TJC and CMS since incorporating this tool
  - Not necessary to tie dosing of opioids to pain intensity scores (Pasero, et al, 2016)
  - Can be dangerous to dose opioids to pain intensity alone
Sense-Making

- Existing concepts of pain recognition, assessment and management do not fully explain how the decision process occurs in clinical practice.

- Dowding, et al, (2015) research indicates that pain recognition, assessment and management is not an individual cognitive activity; it is carried out by groups of individuals over time and within a specific organizational culture or climate, which influences both health care professional and patient behavior.

- Their proposed model based on “sense-making” recognizes the salience of individual cognition and acknowledging that decisions are constructed through social interaction and organizational context.
Assessment as A Clinical Art

“It remains a clinical art to combine patient’s reports, behavioral observation, and physiologic measurement with the history, physical exam, laboratory information and overall clinical context in guiding clinical judgments and therapeutic interventions.”

PRN PAIN MEDICATION SELECTION GUIDELINES: MILD-MODERATE-SEVERE

PAIN ASSESSMENT

Patient’s Self-report + Objective Assessment + Clinical Judgment = Mild-Moderate-Severe

<table>
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<th>Patient’s Self-reported Pain</th>
<th>Objective/Bio-psycho Social Impact</th>
<th>Clinical Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Pain</td>
<td>No signs/no interference</td>
<td>Pain history</td>
</tr>
<tr>
<td></td>
<td>Distractable pain during movement/Rx</td>
<td>Knowledge of condition</td>
</tr>
<tr>
<td></td>
<td>Interferes with Rx/relationships</td>
<td>Anticipatory Pain</td>
</tr>
<tr>
<td>1-3</td>
<td>Interferes with simple tasks</td>
<td>Poor Control</td>
</tr>
<tr>
<td>3-6</td>
<td>Pain at rest Inconsolable</td>
<td>Declining</td>
</tr>
<tr>
<td>6-10</td>
<td>Behavioral scales CNPI, PAINAD, CPOT, NCS</td>
<td>Anticipatory Pain</td>
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Important consideration
Decrease the need for PRN opioid analgesics by discussing with healthcare team the feasibility of scheduling routine non-opioid pain medications

RN selects from PRN pain medication ordered &/or nondrug comfort measures

Mild
Moderate
Severe
In Summary

• There is growing recognition that pain intensity alone is NOT a complete assessment of a patient’s pain experience.

• Reliance on pain intensity scores to guide prescribing has led to negative outcomes.

• Assessment is an ongoing process and a social interaction between patient and clinician.

• Inclusion of pain’s effect on functionality and sleep will help set reasonable goals and guide clinical decision making in pain management.

• Nurses, and all clinicians, must hone the art of assessment in order to guide clinical decisions which result in optimal pain management for all patients.
References


Donaldson, G., & Chapman, C.R. (2013) *Pain is more than just a number.* University of Utah Health Care/Department of Anesthesiology


References


**PCSS** is a collaborative effort led by the American Academy of Addiction Psychiatry (AAAP) in partnership with:

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<td>American Psychiatric Association</td>
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<tr>
<td>American Academy of Neurology</td>
<td>American Society of Addiction Medicine</td>
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<tr>
<td>Addiction Technology Transfer Center</td>
<td>American Society of Pain Management Nursing</td>
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<tr>
<td>American Academy of Pain Medicine</td>
<td>Association for Medical Education and Research in Substance Abuse</td>
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<tr>
<td>American Academy of Pediatrics</td>
<td>International Nurses Society on Addictions</td>
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<td>American Dental Association</td>
<td>National Association of Drug Court Professionals</td>
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<td>American Medical Association</td>
<td>Southeastern Consortium for Substance Abuse Training</td>
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<td>American Osteopathic Academy of Addiction Medicine</td>
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