Cancer Patient Compliance in the Self-Administration of a Pain Assessment Tool

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Background
- Pain intensity is the main clinical variable in guiding management of cancer pain.
- Pain measurement scales should be psychometrically valid and practically feasible.
- One of the most common methods of pain measurement involves patient self-administration of forms, questionnaires, or pain diaries.
- The frequency of pain assessment that is needed to obtain valid data is unknown; however, daily measurements to multiple weekly measurements have been suggested.
- Patient compliance with these measurements is therefore important and is assessed in this study.

Methods
- Patients referred to the Pain and Palliative Care inpatient consult service at the National Cancer Institute in Milan, Italy between 1/27/01 and 1/25/01 were eligible.
- Patients had to be older than 18 years of age, have pain due to cancer, be able to understand the Italian language, and have normal cognitive function.
- Patients followed by the inpatient service for <24 hrs, patients in the first 3 post-operative days, and patients in acute pain due to therapeutic or diagnostic procedures were excluded.
- Pain assessment forms utilizing a numerical rating scale (NRS) (rated 0 to 10, 0 being "no pain" and 10 being the "worst pain imaginable") were distributed by a pain consult nurse during the 5-month study period, and patients were asked to complete pain self-assessments for one full week (7 days).
- Patients were asked to complete 6 different pain scores on the pain form.
- Compliance was rated as: completely filled in (6/6 per day), partially filled in (1-5/6 per day), or not filled in (no pain score).
- Compliance was defined as percentage of the follow-up period during which each patient gave complete or partially complete daily pain scores.
- If the form was partially or totally incomplete, the reason for non-compliance was investigated through a structured interview and classified into one of 10 categories by consensus of the nurse interview and the other members of the pain consult service.

Results
- Of the 174 patients seen during the study period, 106 (61%) were eligible for the study. The most common reason for exclusion was change in mental status (seen in 24 patients).
- 55% of patients had 5 to 8 years of school education, 3% had up to 13 years of education, and 12% had university degrees.
- 58% of daily forms were completely filled in, 37% were not filled in, and 5% were partially completed.
- 23.5% of patients completely filled in their forms for 100% of the follow-up period.
- 13.2% returned blank forms every day.
There was no association between compliance and sex, age, surgical vs. medical unit, mean pain intensity, or education level.

Patients with a longer period of follow-up were less likely to return completed forms (Pearson's $r = 0.26$, $p<0.01$).

Patients who most frequently failed to complete the form cited physical reasons (including having too much pain, not feeling physically well, or feeling fatigued) and/or psychological reasons (including forgetting to complete, lack of will, lack of motivation, and depression) as the causes for non-compliance.

Only 1% of patients cited failure to understand the measurement method as the reason for non-compliance.

Absence of pain was cited at least once as the reason for non-compliance with the form by 22% of non-compliant patients, and as the most frequent reason for non-compliance by 16% of non-compliant patients.

**Authors’ Conclusions**

- It is not known what the best administration modality is for pain assessment; however, any scale that is chosen should follow specific guidelines and be appropriate for the long-term monitoring of cancer pain therapies.

- The authors employ a three-times-daily schedule to evaluate average pain over a short period of 6-8 hours. They also require separate evaluation of pain at rest and on movement.

- Two previous studies on compliance with pain assessment have reported compliance of 80% or greater for most endpoints, which is higher than seen in this study. However, these previous studies were controlled trials, whereas the current study was aimed at applying pain assessment to clinical practice within a tertiary care center, and the method of assessment in this study was particularly demanding, with 6 scores needed daily.

- The clinical impact of compliance with pain assessment has not been established.

- More studies are needed to assess the validity of different schedules and modalities of pain assessment; however, assessment that is weekly or less than weekly leaves doubt as to the actual clinical validity of the measures obtained.

- Given that the majority of patients report physical or psychological reasons for being non-compliant, and because a significant percentage of patients were non-compliant due to no pain (which should have been scored a zero on the pain scale), more careful education and motivation of patients could improve compliance.

- As a patient's cancer advances and mental function declines, simpler methods of pain assessment are needed.

**Discussion**

Pain has a high impact on the quality of life of many cancer patients. In light of the extremely subjective nature of pain, patient self-assessment is vital to guiding pain management. It has been well established that more frequent assessment of pain provides increased validity in pain assessment; however, the optimal schedule and method of pain assessment has not been established. The current study describes patient compliance using a high-frequency, highly detailed pain assessment tool.

Less than one-quarter of patients were fully compliant with the pain assessment in this study, with over one-third of assessment forms going completely unfilled. Without this valuable information regarding patient pain, clinicians' ability to adequately manage pain is considerably limited. Importantly, this article identifies several barriers to compliance that may be addressed. Psychological barriers, including forgetting to complete the assessment form and depression, can be addressed with active intervention. In addition, patients can be educated to complete forms even when they feel no pain, as information regarding lack of pain is as valuable to the health care provider as the presence of pain. Additional research is needed regarding interventions to improve compliance in pain self-assessment.