Examining Cancer-Related Pain and Study Enrollment Challenges in the Home Care Setting

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Published In/Presented At

Poster presented at: The Academy Health Annual Meeting, Orlando, FL (June 2012)

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Examining Cancer-Related Pain and Study Enrollment Challenges in the Home Care Setting

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Introduction

- Despite the availability of effective pain management techniques in the United States, relief of cancer-related pain is frequently inadequate (NCCN, 2012; ACS, 2012; APS, 2008).
- The main purpose of this pilot study was to examine cancer-related pain and quality of life (QOL) as reported by oncology patients receiving home care (HC) services. A secondary purpose was to describe study enrollment challenges encountered in the home setting and possible strategies for dealing with them.
- The study's theoretical framework was an adaptation of Michael Harrison's (1987) model in which the healthcare organization is conceptualized as an open system (Alley, 2001).

Study Objectives

- To describe the severity and nature of cancer-related pain experienced by oncology patients receiving HC services.
- To examine relationships between selected pain and quality of life variables.
- To evaluate the feasibility and strengths/weaknesses of study protocols and improve methods/tools for future studies.

Methods

- **Design**: Prospective, observational cohort study using a convenience sample of oncology patients receiving HC.
- **Data**: Quantitative data on self-reported pain, pain management, and perceived QOL.
- **Sample and Setting**: 50 cancer patients receiving HC services. Inclusion criteria: current cancer diagnosis, no surgeries within past 4 weeks, and able to communicate in English.
- **Self-Report Measures**: 1) Cleeland's Brief Pain Inventory (BPI); 2) Ferrans and Powers Quality of Life Index (FP-QLI); 3) EORTC QLQ-C30.
- **Procedure**: 354 HC patients were screened to obtain the sample of 50 subjects. The 3 most common reasons for non-enrollment were: being discharged from HC (48%); not meeting inclusion criteria (17%); and declining participation (11%). The study interviewer conducted a one-hour structured in-home interview and assigned each subject a Karnofsky Performance Status (KPS) score. Subjects who agreed completed the 5-Day Pain Diary.

Results

- **BPI findings, particularly noteworthy relative to the study's purposes and objectives:**
  - Of the 40 subjects receiving pain in the last week, 30 rated their worst pain as > 5.0 (10 scale) reflecting "substantial" pain intensity ratings (Cleeland, 1994).
  - For the 40 subjects reporting pain:
    - Mean pain intensity at its worst in the last week was 6.6 (SD=2.2); 79% had an active opioid prescription.
    - Of 10 subjects who reported no pain in the last week had at least 1 active opioid prescription.

- **Selected Pain Diary Results:**
  - 10 subjects who agreed to complete the 5-Day Pain Diary.
  - Pain intensity mean score in the last week was 3.3 (SD=2.2).
  - Pain interference mean score in the last week was 6.6 (SD=2.2).
  - Of the 40 subjects reporting pain:
    - Mean pain interference score in daily activities was 6.6 (SD=2.2).

- **Associations between Pain and Quality of Life (QOL) Variables**
  - KPS and QOL scores were inversely related to the BPI Pain Interference score; the two QOL scores were strongly associated (r=0.87) and related to pain intensity ratings. BPI lowest and worst diary pain intensity ratings. BPI lowest and worst diary pain intensity ratings.
  - Pain and pain diary ratings were highly correlated with self-report measures throughout the interview process. Pain diary pain intensity ratings. Pain and pain diary ratings.
  - Pain intensity during withdrawal from study were highly correlated with pain diary ratings.
  - Patients’ education, marital status and living situation did not correlate with pain ratings.

- **Correlations: Pain Interference, KPS and QOL**

- **Table 4.**

- **Table 5.**

- **Conclusion:** Consistent with other cancer pain studies, the majority of subjects experienced significant pain. This warrants increased intervention by healthcare providers to achieve adequate analgesia relief. Better education is needed for both medication use and other home-based comfort measures. Pain Diaries appeared easy and not burdensome for subjects to complete. Diaries provided additional information which could help healthcare providers improve cancer pain management.

Main Study Limitations

- Patients experiencing the most severe pain may not have been well represented in the study sample because of declines due to their symptom severity.
- Relationships among opioid and non-opioid analgesic use and pain intensity ratings were not examined, given that total amounts taken by subjects were not recorded in the diaries.

- **Conclusions and Limitations**

- **Table 4.**

- **Table 5.**

- **Conclusion:** Consistent with other cancer pain studies, the majority of subjects experienced significant pain. This warrants increased intervention by healthcare providers to achieve adequate analgesia relief. Better education is needed for both medication use and other home-based comfort measures. Pain Diaries appeared easy and not burdensome for subjects to complete. Diaries provided additional information which could help healthcare providers improve cancer pain management.

- **Overall, subjects were highly functional based on the KPS and BPI and were not demographically diverse. Future projects should include subjects with a broader range of pain ratings, functional abilities, and demographics, to yield more generalizable results.

- **Conducting successful research projects with patient populations outside the hospital setting presents special challenges that require novel approaches.**

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