

Long-term Effectiveness of Chronic Pain Education: A Pilot Study

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Purpose

This randomized, controlled pilot study was conducted to evaluate the effectiveness and durability of continuing education (CE) for clinicians treating patients with persistent baseline pain and breakthrough pain (BTP). Expert pain educators designed the study protocol and structured outcomes questionnaire (SQ), both reviewed by the Albany Medical Center IRB. For each activity, clinicians completed a pre- and post-SQ addressing their knowledge and approaches to chronic pain management. Clinicians randomized to an interventional group participated in follow-on Web-based education, the benefits of which were evaluated with SQ. Surveys completed by patients of study participants suggest a road map for further research.

Method

Stage I of this study included CE programs-including live workshops, teleconference programs, and print monograph-emphasizing best practices in chronic pain management. Clinician attitudes and knowledge were assessed with the IRB-reviewed SQ (10 Likert statements and 5 multiple choice questions) specifically designed for this study. Pre- and post-program SQ results were evaluated with standard statistical methods. Stage I clinicians who successfully completed an activity entered Stage II in which they were randomly assigned to control or intervention groups, the latter receiving Web-based education designed to reinforce teaching points. The control group received no further education, providing a measure of durability for the initial education and a baseline to measure the effectiveness of additional education. Control and intervention groups again completed the SQ for further evaluation. Finally, for Stage III, control and interventional group clinicians invited patients to complete a survey addressing essential elements of their chronic pain experience.

Results

A total of 187 clinicians successfully completed Stage I of this study. Changes in knowledge were measured pre- and post-activity with the SQ. During Stage I, participants demonstrated statistically significant improvements ($P<0.05$), supporting the utility of the educational programs. Among the statistically significant educational outcomes, those listed below warrant further discussion.

- When asked if patients should be stratified for risk of nonmedical opioid use when considering opioid-based therapy for chronic pain, participants demonstrated a 20% improvement from pre- to post-activity
- Regarding pharmacotherapy for select BTP subtypes, the number of participants who answered SQ questions correctly increased up to 14% from pre- to post-activity
- Correct responses improved by 25% from pre- to post-activity when participants were asked about the phenomenology of BTP

During Stage II, only 13 clinicians randomized to the interventional group successfully completed the Web-based education. While recruitment and retention barriers experienced precluded statistical comparisons of the effects of repeated education over time, faculty and study participants made reference to the initial education on such varied topics as BTP phenomenology, risk stratification, and structured opioid therapy, highlighting distinct benefits of the initial and follow-on educational activities.

During Stage III, 42 patients (Control n=21; Intervention n=21) completed the survey. Numerous patients shared anecdotes with participating clinicians, though many balked at completing a questionnaire despite the strict anonymity and good relationships with their healthcare providers. Salient data are included below.

- More than 6 of 10 respondents reported that they experienced intense and short-lasting spikes of pain that required discussion with their pain practitioner. Encouragingly, an estimated 3 of every 4 patients "strongly agreed" or "agreed" that their current regimen specifically addressed these pain episodes
- Nearly 7 of 10 patients understood the importance of discussing personal/family history of drug abuse and/or psychiatric illness with their clinicians

Conclusions

Education on responsible opioid prescribing; establishing and maintaining control of baseline pain over time; and differentiation of uncontrolled baseline pain from BTP are critical to patient care. During this pilot study, clinicians' perspectives on risk stratification for nonmedical opioid use among patients with chronic pain improved significantly. Further, the study demonstrated significant improvements in other practice behaviors, including operational understanding and differential diagnosis of BTP and its subtypes. Additional studies are required to understand and leverage CE's benefits for pain clinicians and their patients. Importantly, this study contributed to a new semi-structured questionnaire addressed in an accompanying abstract.