A Tricky One: Barriers to Non-opioid Pain Management in University Healthcare

Alexandra C.H. Nowakowski, PhD, MPH; Kaitlyn E. Barningham, MPH; Charlyn D. Buford, MPH; Martin Laguerre, MPH; J.E. Sumerau, PhD

ABSTRACT

We explored palliation practices and experiences among providers at university campus health centers to assess the availability and viability of non-opioid options for student patients. We interviewed 10 healthcare providers at the campus health center for a large research university in the southeastern United States. Data were collected via semi-structured interviews. Analyses of interview transcripts were performed via content analysis with open coding. We identified multiple barriers to non-opioid pain management. Non-opioid modalities were more likely to receive no insurance subsidy, and thus, to go unused even if clinically indicated. Providers also reported high levels of concern with potential opioid dependency, as well as interest in safer options for long-term palliation. Contextualizing results from our case study with prior literature from other care settings suggests that lack of access to non-opioid options presents challenges for university students who live with chronic pain.

Florida Public Health Review, 2017; 14, 60-66.

BACKGROUND

Research on pain management has long shown a persistent disconnect between the diversity of palliation options theoretically available to patients and those for which health insurers will provide substantial subsidies. Although low insurance subsidies for clinical activities can present a challenge across different areas of chronic pain management, this pattern disproportionately impacts non-opioid palliation modalities (Niagara & Manchikanti, 2010). Specific therapies affected include analgesic delivery pumps, nerve blocks, transdermal electrical neurostimulation units, nerve cauterization, internal neurostimulation devices, and deep massage (Nowakowski, 2010).

These diverse modalities can be used for perioperative (White, 2005) and chronic (Kalso et al., 2003) pain alike. Non-opioid therapies are clinically indicated as preferable to opioids for most conditions except cancer (McQuay, 1999). A growing evidence basis indicates the advantages of these methods over traditional opioid modalities, both in general (Kalso et al., 2004) and specifically for conditions involving mostly neuropathic (Arner & Myerson, 1988) pain. Evidence about the risks to patients and practitioners of long-term opioid prescribing also continues to grow (Ballantyne & Mao, 2003). Alternate modalities have exhibited effectiveness for multiple pain types and care activities (Crews, 2002). Likewise, non-opioid or hybrid approaches to management of chronic (Trescot et al., 2008) and neuropathic (Dworkin et al., 2007) pain have shown multiple clinical advantages. Yet, insurance subsidies for such treatments often remain low.

Payments for non-opioid pain management are consistently low across public and private insurance carriers (Luo et al., 2004). Prior research has identified this pattern for care tendered in acute care hospitals, long-term care facilities, private healthcare practices, community health clinics, and specialized pain management centers (Manchikanti & Hirsch, 2007). Across a variety of healthcare settings, providers show enthusiasm for implementing alternatives to opioid treatment, but remain limited by insurance payout structures in their ability to do so without substantially increasing out-of-pocket costs to patients (Schatman, 2011).

To date, no studies have explored these dynamics within university healthcare settings. Our project on provider experiences of pain management in student healthcare settings thus represents a unique approach to the broader topic of how providers experience the care process in psychosocial context. Little research currently exists on the distinct experiences of providers who care primarily for students. This research is especially parsimonious with respect to pain management, an area of medical care with which providers frequently experience frustrations and

concerns. Specific questions and debates concerning the use of and reimbursement for non-opioid pain management modalities thus remain unexplored in university healthcare environments.

We sought to bridge this gap in extant literature by assessing pain management practices and experiences among university healthcare providers via semi-structured interviews. Our participants practiced at a large research university in Florida whose health center accepts both school-based and private health insurance. We identified a similar mismatch between the quantity and diversity of options available for patients and those actually subsidized by insurance. We also noted many policy issues unique to universities in general and Florida specifically.

METHODS

Research Questions

We developed a qualitative study to assess the pain management experiences and perceptions of student healthcare providers at a large research university in Florida. We took an inductive, exploratory approach with our study. Consequently, we did not seek to test any specific hypotheses. Rather, we explored how providers experience the process of pain management in student health settings.

We asked questions about providers' history of pain management activities, challenges in the process of pain management, and any additional information providers might wish to share. We probed for in-depth information about frustrations and successes that providers have experienced in attempting to provide effective, sustainable pain management options for students with both lasting injuries and chronic diseases. We explored barriers that providers have encountered in providing specific treatments, as well as successes that they have achieved in overcoming these barriers.

Study Design

We conducted semi-structured interviews using a set of five questions with nested prompts. Our interview instrument asked providers to describe pain management activities with which they have been involved while working at campus health services, describe their role in these activities, and discuss positive and negative feelings they have experienced while participating.

Specifically, we asked campus health services providers about frustrations and triumphs they have experienced in providing pain management services. We asked participants to reflect on any unique challenges they may experience in providing pain management to student populations. The five questions and sub-prompts we used with participating providers are outlined in our interview script, included as an online supplement to this publication. Interviews lasted between 15 and 45 minutes with each provider. Graduate student interviewers collected audio recordings of each interview session, which were then transcribed by undergraduate research assistants for review and analysis.

Recruitment and Participation

The campus health center we studied offers a variety of different primary and specialty care services for undergraduate and graduate students who use the school's health insurance. Because of this and substantially larger enrollment of undergraduate versus graduate students at the university, most people who use the campus health center are undergraduates.

We focused on providers licensed to practice independently, including office consults and prescription orders. This limited potential skewing of data from inconsistencies in scope of possible activities related to pain management. We identified 25 providers (as of February 2015) who met our inclusion criteria by reviewing the campus health services website. We then reached out via email to the medical directors of the campus health center to begin recruitment. Because our three graduate research assistants held either paid or volunteer staff positions with the campus health center, we could follow up in person with senior administration.

Health center leadership expressed support for our study and encouraged eligible providers (those with degrees in allopathic medicine, osteopathic medicine, or advanced practice nursing) to participate. Graduate students enrolled interested providers and scheduled interviews, all of which were conducted in March 2015. A total of 10 providers participated in our study, representing all three eligible professional fields.

Providers gave informed consent to participate twice: first upon accepting the invitation to schedule an interview, and again immediately before beginning their interviews. The Florida State University Human Subjects Committee approved this study. Initial approval was granted on June 23, 2014. Updates to the protocol were later made to add graduate interviewers and undergraduate transcribers; these were approved on March 9, 2015. Approval for the project was renewed effective March 24, 2015.

Data Analysis

We used a grounded theory approach (Charmaz, 2003) to analyze our data. Specifically, we performed content analysis of interview transcripts using open coding and a constant comparison method (Charmaz & Belgrave, 2002). This validated technique for analyzing qualitative interview data (Corbin & Strauss, 2014) enabled us to identify key themes and patterns in providers' responses to the five questions.

Each person on the research team (faculty, graduate interviewers, and undergraduate

transcribers) reviewed one transcript apiece and took detailed notes on themes they observed. Faculty completed the same process for all 10 transcripts and maintained their own notes for comparison. Students shared their notes with the full team, then did another round of note-taking in which they read all 10 transcripts and commented on any important themes that did not appear in their peers' notes. Faculty reviewed all student notes as well as their own notes with one another prior to beginning manuscript preparation.

RESULTS

We identified six key themes related to opioid pain management in our interview transcripts. First, providers reported mostly using opioids in cases where they attempted to treat pain. Second, decisions to prescribe medication hinged on clinicians' perceptions of the legitimacy of pain management for each patient. Third, concerns about opioid dependency and addiction, as well as drug interaction and overdose, were widespread in our sample. Fourth, providers felt frustrated with lack of financially viable non-opioid palliation modalities. Fifth, most providers expressed interest in integrative approaches to pain management via complementary therapies. Sixth, providers highlighted the importance of trying to understand and respond to the needs of patients who reported pain, despite the inherent frustrations of these activities in an environment where options remain limited.

We also noted cross-cutting response patterns spanning multiple thematic categories. Within each domain, providers discussed the potentially unique dynamics of these issues in university student populations. Likewise, clinicians reported numerous other concerns and frustrations mirrored by published literature on clinical pain management. Some participants noted that they had experienced similar challenges in other practice settings, but this was not universal. Indeed, we observed variation in responses that aligned with differences in provider background, training, and specialization as well as demographic characteristics.

Theme 1: Dominance of Opioid Modalities

All providers expressed the perception that opioids were one of their most accessible and financially viable options for providing pharmaceutical pain management to university students. However, clinicians varied substantially in their comfort levels with prescribing opioid medications. Most agreed that pharmaceutical pain management for university students should begin with over-the-counter medications, and progress to opioids only in cases where that approach did not yield favorable results. Some clinicians felt comfortable prescribing opioids themselves in such cases, whereas others preferred to refer out for specialized pain management services in cases where opioids were indicated. Clinicians showed diverse knowledge of alternatives to opioids. These included oral pharmaceuticals such as steroids and muscle relaxants, as well as interventional modalities such as nerve blocks that involve non-opioid drugs. Participants noted that use of interventional techniques was very limited at the campus health center, but also consistently reported that students were given referrals in cases where they could not get appropriate services on site.

Theme 2: Clinical Legitimacy of Treatment Strategies

Participating clinicians expressed varying degrees of concern over the legitimacy of prescribing opioids. These concerns were especially strong in cases of contested and/or "invisible" medical conditions, especially those chronic pain. Several participants expressed the idea that only some people "need" narcotics. At the same time, many clinicians expressed concerns about writing patients off and failing to help. "I don't want to jump to the wrong conclusion" said one participant. Several providers felt a responsibility to impact patient outcomes positively while avoiding potential harms. Some explicitly referenced their professional training and resultant perceptions of obligation to "first do no harm." For one provider, a "holistic approach" to assessing each patient's needs seemed to work best. They described using evidence-based guidelines, but also trusting their own perceptions and instincts. This provider also noted that sometimes a student's reasons for returning to the health center will not be immediately clear because they may lack the clinical vocabulary to describe their experiences with their current treatment plan, and their specific perceptions of what is and is not working.

Theme 3: Concerns About Addiction

Several providers expressed feelings of discomfort with prescribing opioids to university students because of concerns about dependency and addiction. Concerns about other sources of iatrogenic harm, such as drug overdoses and interactions, also played a role in clinicians' reluctance to prescribe opioids. Providers differed substantially in their perceptions of drug-seeking behavior in university students; concerns about potential drug interactions and toxicities were more consistent across respondents. For some providers, prescribing narcotics brought more perceived drawbacks than benefits, leading them to abandon it completely. "I don't get into prescribing the painkillers," they said. Other clinicians continued to prescribe these medications on a case-by-case basis, but noted more generalized concerns about addiction and dependency.

One of these providers also noted feeling complicit in bringing about current trends in narcotic use and abuse, saying that "we created a monster." This perception was widespread, though many clinicians used softer language to describe it. Some providers were skeptical about students' underlying reasons for inquiring about narcotic therapy, explaining that "pain-wise, you can certainly get people who will try to find the path of least resistance to what they want." For other providers, concerns about students' knowledge of the potential dangers of taking narcotic medication—even for clinically indicated purposes—trumped notions of drug-seeking behavior. Several mentioned potential interactions with medications for attentional processing conditions, such as Ritalin and Adderall, as key concerns in treating students. Others mentioned being aware that students may be using street drugs such as marijuana, legal controlled substances such as alcohol, and prescription drugs purchased outside of pharmacies as means of self-medication for chronic pain.

Theme 4: No Financially Viable Alternatives to Opioids

All participants expressed frustrations about the paucity of insurance coverage options for non-opioid medications. Many also cited negative experiences in getting reimbursement for commonly used opioid drugs. These issues included time costs, abstruse billing and coding practices, and challenges with preauthorization. One provider summarized these experiences as "a tough time" even when providers do ultimately succeed in securing a payout from insurance carriers. Another provider assessed the current landscape of insurance reimbursement for palliative therapies as "a complete morass."

Willingness to negotiate these challenges varied between providers, as did resources. As one provider pointed out, "You're on hold for the insurance company for a very long time…and I think I have enough on my plate as it is." Another provider lamented the impact of time spent arguing with insurance companies on the quality and intensity of other care activities, saying that "I have to sometimes rush." One clinician noted that every insurance carrier and specific benefit can also pose unique challenges, citing their own experiences in negotiating with workers' compensation programs as an example. Even with basic plans involving no legal claims, the billing and coding process can be confusing for clinicians. One frustrated provider noted that they were still "trying to learn how to fill these things out."

Theme 5: Enthusiasm for Integrative Approaches

Providers noted that while they felt frustrated with the lack of affordable non-opioid pharmaceutical pain management options for their student patients, they did have a range of other options available for managing pain. In general, providers expressed support for engaging non-drug modalities for an integrative approach to pain management. However, several also noted that these alternate therapies could not substitute for pharmaceutical options, but rather complement them and thus potentially improve results. Specific modalities in which providers placed their confidence included physical therapy, chiropractic adjustment, deep massage, acupuncture treatments, and regular exercise. Clinicians noted that all of these modalities were not necessarily appropriate in every case, but that many of them could often be provided at relatively low cost to patients or in community settings for students wishing to try them.

Theme 6: Simultaneous Frustration and Determination

Providers consistently expressed feeling challenged and frustrated by the current landscape of pain management options for their student patients. Some specifically pointed to chronic pain management as a key challenge that may lie beyond the comfort zone of some clinicians. One provider described chronic pain management as "a tricky one" for them, citing their own reluctance to make it a key emphasis of the care they provided. Another noted that "we all have limitations to our comfort" in addressing chronic pain. Specific barriers to clinician involvement in managing chronic pain in university students, especially if opioids are the available treatment option, are diverse. Psychological factors on the part of providers can be a major barrier—the desire for "a quick fix" and subsequent disappointment, as one clinician described it.

However, these providers also noted that in cases where clinicians do choose to take on these challenges, they can make a big impact for students. Medical authority was a cornerstone of this impact potential. One provider noted that "if you're going to do the chronic management, you get to be in charge" of multidisciplinary teams. They also cited patients' trust in their judgment as a crucial factor in effective care. Whether they felt comfortable coordinating pharmaceutical pain management themselves or tended to refer students out to other practices for follow-up, participating providers universally felt that responding to student reports of pain was important. Some also had a more hopeful attitude about chronic pain management with student populations overall. One provider who previously cared for different patient populations operated strictly on a case-by-case basis, and began with the fundamental assumption that everyone could be helped. Another provider saw therapies as worth exploring even if a specific approach "helped only 40% of the patients."

DISCUSSION

We found that in our university sample as in other settings, non-opioid modalities were more likely to receive no subsidy from insurance, and thus to go unutilized even in cases where clinically indicated. Yet providers also reported high levels of concern with potential opioid dependency and related issues among patients seeking treatment for chronic pain. Respondents expressed frustration with trying to reconcile interest in safe and evidence-based options for long-term palliation with obligation to secure payment for services. Finally, we observed substantial determination and creativity in our participants about finding ways to offer non-opioid resources for pain management without exposing students to additional costs.

We note several limitations for our study. Although we engaged practitioners of a variety of sexes and races, we cannot comment meaningfully on gender or ethnic diversity and its potential impact on therapeutic approaches or attitudes because comments about these characteristics did not emerge in any of our interviews. We also had no medical claims or health records data to corroborate self-reports from providers about what they were doing to manage pain in their patients. We also captured only 40% of the total provider pool licensed to practice independently at our campus health center. However, we feel reasonably confident that we captured accurate information because of the high level of consistency in provider reports of using different pain management modalities. The high degree of saturation observed in our data suggests that interviewing additional providers would likely not have contributed substantially more insight, and that the information we did gather is largely accurate.

Additional limitations may be introduced by the fact that the particular campus health service we studied accepts both private and student health insurance. Indeed, although the specific health center we studied is in many ways like university health facilities at other large research schools, and our participant pool diverse in training and specialization, we cannot say with confidence that our results would be consistent were we to interview providers at other universities. Yet in the context of research on alternatives to opioid therapy for college-age populations, the limitations on generalizability from our campus health center's unique approach to insurance billing may yield strengths as well. Specifically, we can comment meaningfully on the low likelihood that the barriers to non-opioid pain management we identified at our campus health center owe purely to student health insurance plans not paying for therapies for which other carriers might provide reimbursement.

We also note several other key strengths in our research. Our graduate students' history of employment with the campus health center helped tremendously in building relationships with providers and encouraging participation. This includes the follow-up work are presently doing with clinicians to help us develop a practitioner application manuscript for publication in a healthcare management journal. We also captured the full range of independently practicing clinicians represented on campus, with excellent participation from people with different types of medical and advanced practice nursing degrees, as well as strong representation from those specializing in both physical and mental health. We engaged providers of different ages whose experiences suggested different life histories and economic backgrounds, which may in turn have influenced their perceptions about pain prevalence and control.

Conclusions

Although our study only captured providers from a single university, contextualizing our results with findings from prior research across multiple domains of healthcare suggests that lack of access to non-opioid options may present a major quality of life barrier for university students who live with chronic pain. Our study also suggests that this lack of access stems largely from factors related to insurance billing and reimbursement, thus mirroring the general literature on clinical pain management with diverse patient and provider populations. We also identified several creative steps that our campus health service providers are taking to offer non-opioid palliation resources at no cost to students. These findings again reflect a growing trend in clinical pain management across multiple settings, and indeed, in healthcare as a whole, as services continue to integrate.

Both our study findings and the high level of enthusiasm providers showed for participating suggest that ample potential exists for team-based efforts to expand non-opioid pain management options for university students while keeping campus-based healthcare affordable. Indeed, participating providers prioritized such efforts strongly even given limited time and resources. One respondent summarized this sense of urgency in saying, "We need to think of other outlets for pain than just pills." To follow up on this preliminary work, we met with providers and administrators from the campus health service to share findings and discuss next steps. During these sessions, we invited participants to share their insights and any planned changes to their own practice behaviors, as well as broader recommendations for improving pain management services on university campuses. We are presently using feedback from these sessions, as well as additional data from the original interviews, to develop a practitioner application piece with specific recommendations for changes in care strategy.

Acknowledgements

We are grateful to the administration, providers, and staff of the campus health center referenced in the study for their enthusiastic support of our research. We are also immensely grateful to our undergraduate interview transcribers for their outstanding assistance. Finally, we are grateful to Dr. Richard Nowakowski for inspiring us to focus on university-based healthcare.

REFERENCES

Arner, S., & Meyerson, B.A. (1988). Lack of analgesic effect of opioids on neuropathic and idiopathic forms of pain. *Pain*, *33*(1), 11-23.

Ballantyne, J.C., & Mao, J. (2003). Opioid therapy for chronic pain. *New England Journal of Medicine*, *349*(20), 1943-1953.

Charmaz, K. (2003). Grounded theory. In: *Qualitative psychology: A practical guide to research methods.* Thousand Oaks, CA: SAGE Publications.

Charmaz, K., & Belgrave, L. (2002). Qualitative interviewing and grounded theory analysis. In: *The SAGE handbook of interview research: The complexity of the craft* 2. Thousand Oaks, CA: SAGE Publications.

Corbin, J., & Strauss, A. (2014). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: SAGE Publications.

Crews, J.C. (2002). Multimodal pain management strategies for office-based and ambulatory procedures. *Journal of the American Medical Association*, *288*(5), 629-632.

Dworkin, R.H., O'Connor, A.B., Backonja, M., Farrar, J.T., Finnerup, N.B., Jensen, T.S., & Portenoy, R.K. (2007). Pharmacologic management of neuropathic pain: evidence-based recommendations. *Pain*, *132*(3), 237-251.

Kalso, E., Allan, L., Dellemijn, P.L., Faura, C.C., Ilias, W.K., Jensen, T.S., ... & Zenz, M. (2003). Recommendations for using opioids in chronic non - cancer pain. *European Journal of Pain*, *7*(5), 381-386.

Kalso, E., Edwards, J.E., Moore, R.A., & McQuay, H. J. (2004). Opioids in chronic non-cancer pain: systematic review of efficacy and safety. *Pain*, *112*(3), 372-380.

Luo, X., Pietrobon, R., Sun, S.X., Liu, G.G., & Hey, L. (2004). Estimates and patterns of direct health care expenditures among individuals with back pain in the United States. *Spine*, *29*(1), 79-86.

Manchikanti, L., & Hirsch, J.A. (2007). Issues in health care: Interventional pain management at the crossroads. *Pain Physician*, *10*(2), 261.

McQuay, H. (1999). Opioids in pain management. *The Lancet*, *353*(9171), 2229-2232.

Niagara, W.I., & Manchikanti, L. (2010). Interventional pain management at crossroads: The perfect storm brewing for a new decade of challenges. *Pain Physician*, *13*, E111-E140.

Nowakowski, A.C.H. (2010). More options for treating pain. *Hospitals & Health Networks Weekly*. February 2, 2010.

Schatman, M.E. (2011). The role of the health insurance industry in perpetuating suboptimal pain management. *Pain Medicine*, *12*(3), 415-426.

Trescot, A.M., Helm, S., Hansen, H., Benyamin, R., Glaser, S.E., Adlaka, R., & Manchikanti, L. (2008). Opioids in the management of chronic non-cancer pain: an update of American Society of the Interventional Pain Physicians'(ASIPP) Guidelines. *Pain Physician*, *11*(2 Suppl), S5-S62.

White, P.F. (2005). The changing role of non-opioid analgesic techniques in the management of postoperative pain. *Anesthesia & Analgesia*, *101*(5S), S5-S22.

APPENDIX A
INTERVIEW SCRIPT

1. Let's start by reviewing the pain management services you have provided to students during your time with campus health services.

    a. **What specific pain management modalities have you used with students?**
    b. **Are there any modalities you would not feel comfortable using with students?**

2. Now let's talk about logistical challenges have you experienced in providing pain management services to students. Logistical challenges would be things like trouble getting insurance reimbursement for a specific therapy, or mechanical problems with a pain relief device.

    a. **What specific logistical challenges have you experienced?**
    b. **How have you dealt with these challenges?**

3. We're also interested in learning about emotional challenges have you experienced in providing pain management services to students. Emotional challenges would be things like feeling frustrated because your patient continued to have pain after trying several options, or feeling helpless to meet a specific patient's needs.

    a. **What specific emotional challenges have you experienced?**
    b. **How have you dealt with these challenges?**

4. Now let's talk about social challenges have you experienced in providing pain management services to students. Social challenges would be things like having a difference of opinion with your supervisor about how to manage someone's pain, or having trouble communicating with a patient about their care needs.

    a. **What specific emotional challenges have you experienced?**
    b. **How have you dealt with these challenges?**

5. Thank you for all of your responses so far! We're almost finished. Before we wrap up the interview, I want to give you the opportunity to share anything else you think might be relevant for our study.

    a. **Is there anything else you would like to share about your experiences providing pain management to students at campus health services?**

Alexandra C.H. Nowakowski (corresponding author) is Assistant Professor, Florida State University College of Medicine, Orlando Regional Campus, Orlando, FL. Email at xnowakowski@fsu.edu. Kaitlyn E. Barningham is a graduate of the MPH program at Florida State University, Tallahassee, FL. Email at keb10c@my.fsu.edu. Charlyn D. Buford is a graduate of the MPH program at Florida State University, Tallahassee, FL. Email at cdb10g@my.fsu.edu. Martin Laguerre is a graduate of the MPH program at Florida State University, Tallahassee, FL. Email at ml14y@my.fsu.edu. J.E. Sumerau is Assistant Professor of Sociology, University of Tampa, Tampa, FL. Email at jsumerau@ut.edu.