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The Harnessing Online Peer Education (HOPE) Intervention for Reducing Prescription Drug Abuse: A Qualitative Study

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Abstract

Social media technologies are newly emerging tools that can be used to address the growing prescription drug epidemic. In this study, we sought to determine the feasibility and acceptability of using social media to reduce complications of opioid use among patients experiencing chronic pain. Specifically, we evaluated the utility of the Harnessing Online Peer Education (HOPE) social media intervention to reduce the risk of addiction and overdose among non-cancer pain patients receiving chronic opioid therapy. University of California, Los Angeles (UCLA) patients receiving chronic opioid therapy and UCLA staff were invited to participate in interviews regarding the HOPE intervention. Questions focused on resources used to manage pain, the limitations and benefits of these approaches, and the likelihood of using an online community to reduce complications of opioid therapy. Using an open-coding process, three topics were identified for the patients: 1) online social support is important for improving outcomes, 2) offline social support is helpful for some patients but has limitations, and 3) a tailored, online peer support intervention is needed. Interviews with staff confirmed these results. The HOPE social media intervention and other online communities appear to be an acceptable technology for patients on chronic opioid therapy.

Keywords

Addiction; opioids; social media; online communities

INTRODUCTION

Over the past decade, prescription opioid abuse has rapidly increased and is now one of the leading causes of accidental death in the United States (Centers for Disease Control and Prevention, 2015). For those living with chronic pain, chronic opioid therapy is one of the most commonly prescribed treatments (Centers for Disease Control and Prevention, 2011).

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AUTHOR CONTRIBUTIONS

Sean Young and Keith Heinzerling together conceived of the study, recruited the participants, carried out the study, and analyzed the data.

Declaration of Interest

The authors report no conflicts of interest.

Because of the large population currently receiving chronic opioid therapy, reducing risk factors for opioid abuse is of increasing importance to minimize consequences such as respiratory suppression, infectious disease transmission, addiction, and fatal overdoses (Brooner et al., 1997; Ling et al., 2011; Van den Brink & Haasen, 2006).

Patients who abuse prescription opioids are at especially high risk for addiction to other substances, major psychological disorders, re-hospitalization, incarceration, and suicidal behaviors (Appleby et al., 2001; Hawthorne et al., 2012; SAMHSA, 2012). Among those who abuse prescription opioids, poly-substance abuse (i.e., use of multiple drugs of addiction concurrently) is highly prevalent (Van den Brink & Haasen, 2006). Certain populations seem more at risk than others for abuse and negative effects from prescription opioid addiction, including more urban and less economically privileged populations (Fernandes et al., 2015). Due to the dramatic increase in addiction treatment admissions for poly-substance abuse involving opioid therapy from 2000 to 2010, there is a growing need to address the co-abuse of narcotic pain relievers and other substances (SAMHSA, 2012). Direct interventions to reduce risk for addiction and overdose among patients using prescription opioids could therefore have a substantial impact on public health. However, only two randomized controlled trials have been conducted to review direct interventions for prescription opioid abuse (Windmill et al., 2013). Novel approaches, including low-cost technology-based inventions, are therefore needed to decrease opioid abuse risk factors and to minimize addiction and overdose.

Effective treatments for opioid use disorder are available. Treatments typically combine counseling with medications, including opioid agonists (e.g., methadone), partial agonists (e.g. buprenorphine), or the opioid antagonist naltrexone (Veilleux et al., 2010). Higher levels of social support in tandem with pharmacotherapy have also been associated with improved outcomes (Cavaiola et al., 2015). To facilitate social support, clinicians often recommend attendance of 12-step self-help group meetings (Manning et al., 2012). However, because face-to-face support groups can be time-intensive and stigmatizing, new technologies, such as online social support groups, may be a more convenient and acceptable forum for supporting patients with prescription opioid problems.

The Harnessing Online Peer Education (HOPE) intervention is a peer-led behavioral intervention delivered via social media that has been successful at changing behavior in the areas of HIV prevention and testing (Young & Jaganath, 2014). By using social media as a method of two-directional communication, users remain engaged and retention levels remain high (Bowen et al., 2008; Young, 2014). Additionally, a common limiting factor in behavioral interventions, whether implemented by trained clinicians or by peers who gather in real-world settings at specific times, is that of scalability; online, peer-support interventions potentially obviate this problem (Hobfoll et al., 2016). Although the use of social media via the HOPE intervention proved effective at increasing testing among populations at risk for HIV, many of whom were substance users, no study has tested whether such an intervention could be adapted to reduce prescription drug abuse. Moreover, it is unclear whether patients on chronic opioid therapy would be interested in participating in a social media-based intervention to reduce their risk for opioid-related complications.

In this article, we sought to determine the acceptability and feasibility of using social media to reduce opioid-related complications among patients with chronic pain. In particular, we evaluated the utility of the Harnessing Online Peer Education (HOPE) social media intervention to reduce the risk of addiction and overdose among non-cancer pain patients receiving chronic opioid therapy.

METHODS

We conducted qualitative interviews with University of California, Los Angeles (UCLA) Health System patients (n = 10 [6 male, 4 female]; 18 years) being treated for prescription opioid dependence and co-occurring chronic pain. All patients met DSM-IV criteria for opioid dependence and were receiving treatment with buprenorphine from one of the authors (KH). Staff (n = 5) at UCLA clinics who worked with patients receiving chronic opioid therapy were also interviewed. Interviews were conducted between February 3, 2015, and April 22, 2015, with patients and June 2, 2015, to July 26, 2015, with staff.

Interviews used a semi-structured protocol. Before conducting the interviews, we created an open-ended interview structure informed by interviews with two clinical staff members who worked with chronic opioid patients, in order to gain insight on building a social media community to reduce prescription opioid abuse. Broad areas of questioning included: patterns of internet/social media use by the individual and their peers, differences in patterns of use between traditional and mobile social media platforms, and the potential acceptability of opioid- and pain management-related messages through social media. Goals of the study included: understanding the influence of social support in opioid addiction, understanding how these individuals use social networking technologies, and determining whether peer-led communities would be acceptable among patients on chronic opioid therapy who were at high risk for addiction. After gaining insights from the clinical staff, we created a set of semi-structured interview questions for patients and a modified version for clinical staff that had not participated in development of the interview.

Patient Interviews

Inclusion criteria for patients were (1) UCLA Health System patient not receiving care for cancer, (2) 18 years of age, and (3) being treated for prescription DSM-IV opioid dependence and co-occurring chronic non-cancer pain by a UCLA addiction medicine specialist (one of the authors, K.H.). Cancer patients were not included in the study given they are commonly prescribed opioids for palliative care.

Questions covered in the semi-structured interviews focused on the nature and relationships of chronic pain sufferers to social media, including whether they make or maintain friendships online, how influential they perceived those relationships to be, and whether they felt community settings such as Alcoholics Anonymous (AA) could be helpful for reducing their dependence on opioids. Participants were also asked about the educational information they have access to, other information they would like to have access to in regard to pain management and drug therapy, and how this information could be relayed via social media. During the interviews, the HOPE intervention was described to patients and they were asked for their thoughts about how it or similar online peer-led communities might benefit them.

Finally, participants were asked about the role social support has played in helping improve their pain management and reducing opioid abuse. Participants received a \$20 online gift card after completing the interview.

Clinical Staff Interviews

Inclusion criteria for staff were (1) 18 years of age, (2) treated patients with chronic pain and opioid dependence, and (3) had worked at a UCLA clinic for at least 1 year. Physicians and clinic staff were also interviewed to explore their views on the acceptability of an online community intervention for chronic non-cancer pain patients to reduce risk factors for opioid abuse and overdose. Staff were asked similar items to patients but questions asked them to focus on the patient perspective. Because the HOPE intervention is a peer-led intervention requiring effective role models (e.g., patients who were effectively managing their chronic opioid therapy), clinical staff were also asked about the qualities and attributes they thought would be needed in peer leaders and acceptable among patients interacting with these peer leaders. Clinical staff were not paid for their participation in the study.

Analysis

Interviews were coded by two researchers to determine topics and themes. We used an open coding method to analyze the data, generating a set of codes that we confirmed by iterative comparison until the two coders reached consistent agreement. The three main themes in the data were: 1) communication with other patients, 2) perceptions of community-based social support, and 3) the need for tailored support. Communication with other patients was defined as expressing opinions about the need for communication with other patients to improve management of pain and address potential opioid dependence. Perception of community-based social support was defined as discussing the necessity or usefulness of in-person or offline support systems for social support, such as AA or Narcotics Anonymous (NA). The need for tailored support was defined as needing groups that were specifically created and tailored for patients on chronic opioid therapy as opposed to other types of addiction.

RESULTS

Patients

Three main themes were identified: 1) respondents saw online social support as important for reducing pain and improving outcomes; 2) offline social support interventions (e.g., AA, NA) were seen as valuable but had notable limitations; and 3) a tailored, online peer support intervention would be desirable and might improve clinical outcomes.

Online social support—One theme that emerged is that patients valued being able to communicate about their pain and opioid therapy with others online. The ability to share stories, support, and tips for pain management online were all of value to those interviewed. The necessity of regular, accessible and nonjudgmental peer support, as reported could be found online, was expressed by all interviewees and was communicated as integral for maintaining recovery and re-abuse prevention. The following types of statements highlighted the need for social support:

“What helped me through it, I joined online support group help boards. I replied and sent my own posts over 200 times, I leaned and they leaned on me for support. I think online groups, especially nowadays, are extremely helpful. You don’t feel alone. Being age 30 and going through what I did, I couldn’t relate to my peers, so the online group was really helpful. [You] give each other support or ideas or tips or just a shoulder to cry on basically.”

“You’re online for a reason. The people who are pain-free, [they] aren’t online. It can be a dark area because you get sucked into the suffering and not realizing there are a lot of people out there doing okay but they aren’t online. Take it with a grain of salt. When you’re online, you think the whole world is in pain. But I think it had no real cons, all pros. I reached out for help, it was free, accessible twenty-four hours, and relatable.”

Being able to speak to people online who were on similar medications and able to share tips and experiences was important to all of the interviewees. Patients were also interested in talking to others about their issues with accessibility and difficulty in waiting for meetings due to their pain.

Perceptions of community-based social support—Patients also voiced their need for a support system, regardless of online or in-person, as valuable to bond over shared experiences and get tips on daily pain management. Ambivalence regarding in-person traditional interventions, such as AA, was a common theme. The importance of support seemed more focused on feeling included and not being subject to judgment or misunderstanding:

“For sure [online support] will be [helpful] because then we could help each other with withdrawal, what helps, maybe walking, a hot shower, what sort of pharmacy [to go to], if you want to get certain things. It would be very helpful if we could exchange our opinions, talk about what we’re worrying about. Just somebody to talk to in general who understands you like AA or NA.”

Some patients were unable to identify with others at community-based settings such as AA.

“I found it superficial. At least that particular group [AA]. And a little dogmatic and I don’t like that. If you have any differing belief systems, it can be shunned by the group. It’s hard to sometimes deal with chronic pain in an AA-type environment because a lot of those people, they don’t believe in meds or narcotics or anything related to them, even antidepressants, they don’t think are good.”

“I was with heroin addicts and I couldn’t relate to anyone. All of our pasts were different.”

None of those interviewed said that they had maintained a regular attendance at any traditional offline support system, though most participants said they had been to at least one meeting. Because of the philosophy espoused by AA and NA of a completely drug-free life, some patients expressed they felt judged and unwelcome for admitting the necessity of pharmaceuticals in their lives to maintain quality of life.

The need for tailored support—Patients expressed desire for a more tailored form of support that specifically addressed their needs as prescription opioid users as opposed to “street” drug addicts. Patients expressed the need for an educated and supportive environment with empathy for their specific concerns and experiences.

“As long as everyone is in the same boat, if we’re all on the same meds. [You should] separate the people who are just trying to get high and pain patients. Yes, I’d want people in the same boat with chronic pain.”

“Here I was in this pain-management forum and it was people with all kinds of pain. Or it was just regarding addiction and people are taking pills because of abuse or childhood trauma and that needs to be addressed and there wasn’t a lot out there for specially opiate abuse for pain patients and i think that’s key to be very specific when finding help. Meetings—like with back pain—it was hard to find help for opiate addiction for back pain. There has to be more specific treatment for specific ailments.”

The need for a tailored support environment, including people with shared demographic, socioeconomic, environmental, and medication histories, was expressed by patients who had tried online communities as well as those who had only tried offline support groups. Interviewees expressed that a group focused on addressing the needs of non-cancer chronic opioid therapy patients was a unique niche that was not currently addressed. The need to feel less isolated, less invisible, and more heard for their specific needs and struggles were recurrent patterns expressed by patients.

Clinical staff

All clinical care staff reported that an online support community would likely be beneficial to their patients. Interviewees #1, #2, and #4 reiterated patient interview responses, saying that they have often tried to refer patients to offline support communities such as AA, but patients were reluctant to go because it was not tailored to their patient demographic and because of the time commitment involved. Three staff members felt that a peer-driven community would be beneficial. They believed that older patients on chronic opioid therapy had more free time and would be more likely to commit to being peer leaders, while younger patients would find it interesting and would also be willing to help act as role models to other patients. In general, staff members thought that patients would be willing to listen and interact with peer leaders from all age groups. They thought that patients would be able to relate to other opioid users and gather insights from patients who had overcome complications and learned to manage their pain successfully.

DISCUSSION

Results demonstrate that an online community behavioral support intervention might be acceptable for reducing opioid-related complications among non-cancer patients on chronic opioid therapy. A strong theme in the interviews was that patients felt safest and most likely to share their experiences when they had a support system to share their concerns and condition. There was agreement that being a member of a supportive community of other patients on opioid therapy for pain could help improve their perceptions and management of

treatment, and reduce negative outcomes, such as medication abuse or fatal overdose. This is not surprising, as 12-step or self-help groups such as Alcoholic and Narcotics Anonymous have been shown to reduce drug and alcohol use primarily via social influence and enrichment of social network ties oriented toward drug/alcohol abstinence (Kelly et al., 2012; Toumbourou et al., 2002).

While 12-step groups are the most widely available potential source of social support for patients with prescription opioid abuse and chronic pain, an interesting finding from this study was that some patients did not identify with groups such as AA or NA (i.e., patients expressed a desire to have support systems tailored to them and their unique needs). When we discussed our plan to investigate whether a HOPE community for patients dealing with opioid dependence would be beneficial, one patient suggested that we create a group for extremely specific groups, such as for new mothers on chronic opioid therapy, so as to address every niche population and reduce feelings of isolation, shame, and judgment and improve community empathy. Another expressed concerns at being grouped with heroin abusers and others who are “just looking to get high.” Patients who were on chronic opioid therapy because they had been prescribed medication clearly identified themselves as different from other drug users. Interviewees wanted to be grouped with people who identified, as they did, as chronic pain managers and not as “street drug addicts.” A higher number of more specific groups tailored to the needs of their population was suggested to address these concerns and to increase retention for interventions.

A recurring theme in patient responses was their dis-identification as drug addicts and their feeling that they had different problems and concerns than most other persons attending existing self-help groups for addiction such as AA and NA. Some respondents indicated that their opioids were prescribed to them as medication; this indicated to them that they had an ongoing medical need for the medication, or that it was not their “fault” for having problems with overuse of the medication because they had not “chosen” to seek out the opioids, in contrast to persons addicted to street drugs. Another concern was stigma and associating with self-identified addicts. We have known since Goffman (n.d.) that persons with concealable stigma such as a hidden addiction go to great lengths to avoid spoiling their public persona through disclosure or association with persons who cannot conceal their stigma. Avoidance of disclosing stigmatizing information has been reported as a reason opioid patients do not access methadone treatment (Anstice et al., 2009), but we believe our report is the first to note this concern among at-risk users of prescription opioids as an inhibitor from seeking out risk-reduction and support services.

A significant potential advantage of an online, peer-based intervention such as the HOPE model is that it could allow for much more specific tailoring of support to persons with particular characteristics and needs, such as young adults living with chronic non-cancer pain, working professionals managing chronic pain, or persons managing chronic pain along with anxiety or mood disorders. Online and social media-based interventions in general have a much greater potential than face-to-face therapy or support groups for scalability and potential tailoring to specific intersecting demographics, as well as for accessibility to geographically remote persons or persons in locations that cannot sustain enough participants for face-to-face support groups.

Although physician and pharmacist perspectives on prescription opioid abuse have been reviewed (Hagemeyer et al., 2013), we believe this is the first study to examine the perspective of patients with prescription opioid abuse and chronic pain. Results suggest that these attitudes may be a barrier to treatment or participation in addiction-focused support groups.

This study was limited by a small sample of patients, most of whom had private insurance and who did not have a prior diagnosis of other substance use disorders. It is unknown whether our findings would generalize to other populations of chronic opioid users. While abuse of prescription opioids is a major problem, many patients prescribed opioids for chronic pain do not develop abuse or addiction to opioids and it is not clear if our results would be generalizable to chronic pain patients without a diagnosis of opioid dependence. Further research will be required to evaluate the viability of generalizing patient perspectives across other abuse models or healthcare networks. Only single-encounter, self-reported data were collected for the study, limiting the ability to test whether patients on prescription opioids would use an online community to reduce risks for prescription opioid abuse. Finally, the study was constrained by the self-selection bias of those who were able and willing to discuss their opioid dependence.

CONCLUSION

This study suggests that a tailored online support community would be an acceptable platform for a behavioral intervention to enhance social support and reduce risk of prescription opioid abuse among patients with chronic pain. An online community that is specifically tailored to the needs of patients who abuse prescription opioids, as opposed to currently available addiction-focused 12-step communities, should therefore be developed and tested to determine whether it can mitigate the growing rates of prescription drug abuse and associated addiction.

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References

- Anstice S, Strike CJ, Brands B. Supervised methadone consumption: Client issues and stigma. *Substance Use and Misuse*. 2009; 44:794–808. DOI: 10.1080/10826080802483936 [PubMed: 19444722]
- Appleby L, Luchins DJ, Dyson V, Fanning T, Freels S. PredischARGE linkage and aftercare contact among dually-diagnosed public psychiatric patients. *Journal of Nervous and Mental Disorders*. 2001; 189(4):265–267.
- Bowen AM, Williams ML, Daniel CM, Clayton S. Internet-based HIV prevention research targeting rural MSM: Feasibility, acceptability, and preliminary efficacy. *Journal of Behavioral Medicine*. 2008; 31:463–477. DOI: 10.1007/s10865-008-9171-6 [PubMed: 18770021]

- Brooner RK, King VL, Kidorf M, Schmidt CW Jr, Bigelow GE. Psychiatric and substance use comorbidity among treatment-seeking opioid abusers. *Archives of General Psychiatry*. 1997; 54(1): 71–80. [PubMed: 9006403]
- Cavaiaola AA, Fulmer BA, Stout D. The impact of social support and attachment style on quality of life and readiness to change in a sample of individuals receiving medication-assisted treatment for opioid dependence. *Substance Abuse*. 2015; 36:183–191. DOI: 10.1080/08897077.2015.1019662 [PubMed: 25839214]
- Centers for Disease Control and Prevention. Vital signs: Overdoses of prescription opioid pain relievers—United States, 1999–2008. *MMWR Early Release*. 2011; 60(43):1487–1492.
- Centers for Disease Control and Prevention. Prescription drug overdose data. 2015. Retrieved from <http://www.cdc.gov/drugoverdose/data/overdose.html>
- Fernandes JC, Campana D, Harwell TS, Helgersson SD. High mortality rate of unintentional poisoning due to prescription opioids in adults enrolled in Medicaid compared to those not enrolled in Medicaid in Montana. *Drug and Alcohol Dependence*. 2015; 153:346–349. DOI: 10.1016/j.drugalcdep.2015.05.032 [PubMed: 26077605]
- Goffman, E. Book Report–Stigma [PDF]. n.d. Retrieved from <http://www.ishkbooks.com/stigma.pdf>
- Hagemeyer NE, Gray JA, Pack RP. Prescription drug abuse: A comparison of prescriber and pharmacist perspectives. *Substance Use and Misuse*. 2013; 48:761–768. DOI: 10.3109/10826084.2013.787101 [PubMed: 23607672]
- Hawthorne WB, Folsom DP, Sommerfeld DH, Lanouette NM, Lewis M, Aarons GA, Conklin RM, Solorzano E, Lindamer LA, Jeste DV. Incarceration among adults who are in the public mental health system: Rates, risk factors, and short-term outcomes. *Psychiatric Services*. 2012; 63(1):26–32. DOI: 10.1176/appi.ps.201000505 [PubMed: 22227756]
- Hobfoll SE, Blais RK, Stevens NR, Walt L, Gengler R. Vets prevail online intervention reduces PTSD and depression in veterans with mild-to-moderate symptoms. *Journal of Consulting and Clinical Psychology*. 2016; 84:31–42. DOI: 10.1037/ccp0000041 [PubMed: 26322788]
- Jaganath D, Gill HK, Cohen AC, Young SD. Harnessing Online Peer Education (HOPE): Integrating C-POL and social media to train peer leaders in HIV prevention. *AIDS Care*. 2012; 24:593–600. DOI: 10.1080/09540121.2011.630355 [PubMed: 22149081]
- Kelly JF, Hoepfner B, Stout RL, Pagano M. Determining the relative importance of the mechanisms of behavior change within Alcoholics Anonymous: A multiple mediator analysis. *Addiction (Abingdon, England)*. 2012; 107:289–299. DOI: 10.1111/j.1360-0443.2011.03593.x
- Ling W, Mooney L, Hillhouse M. Prescription opioid abuse, pain and addiction: Clinical issues and implications. *Drug and Alcohol Reviews*. 2011; 30:300–305. DOI: 10.1111/j.1465-3362.2010.00271.x
- Manning V, Best D, Faulkner N, Titherington E, Morinan A, Keaney F, Gossop M, Strang J. Does active referral by a doctor or 12-Step peer improve 12-Step meeting attendance? Results from a pilot randomised control trial. *Drug and Alcohol Dependence*. 2012; 126(1–2):131–137. DOI: 10.1016/j.drugalcdep.2012.05.004 [PubMed: 22677458]
- SAMHSA.gov. The TEDS Report: Admissions reporting benzodiazepine and narcotic pain reliever abuse at treatment entry. 2012. Retrieved from <http://archive.samhsa.gov/data/2k12/TEDS-064/TEDS-Short-Report-064-Benzodiazepines-2012.htm>
- Toumbourou JW, Hamilton M, U'Ren A, Stevens-Jones P, Storey G. Narcotics Anonymous participation and changes in substance use and social support. *Journal of Substance Abuse and Treatment*. 2002; 23(1):61–66.
- Van den Brink W, Haasen C. Evidenced-based treatment of opioid-dependent patients. *Canadian Journal of Psychiatry*. 2006; 51(10):635–646. [PubMed: 17052031]
- Veilleux JC, Colvin PJ, Anderson J, York C, Heinz AJ. A review of opioid dependence treatment: Pharmacological and psychosocial interventions to treat opioid addiction. *Clinical Psychological Reviews*. 2010; 30(2):155–166. DOI: 10.1016/j.cpr.2009.10.006
- Windmill J, Fisher E, Eccleston C, Derry S, Stannard C, Knaggs R, Moore RA. Interventions for the reduction of prescribed opioid use in chronic non-cancer pain. *Cochrane Database Syst Rev*. 2013; 9:CD010323.doi: 10.1002/14651858.CD010323.pub2

- Young SD. Social media technologies for HIV prevention study retention among minority men who have sex with men (MSM). *AIDS & Behavior*. 2014; 18(9):1625–1629. DOI: 10.1007/s10461-013-0604-z [PubMed: 24062015]
- Young SD, Jaganath D. Feasibility of using social networking technologies for health research among men who have sex with men: A mixed methods study. *American Journal of Mens Health*. 2014; 8:6–14. DOI: 10.1177/1557988313476878