UCSF UC San Francisco Previously Published Works

Title

Unintended Consequences of Opioid Regulations in Older Adults with Multiple Chronic Conditions.

Permalink https://escholarship.org/uc/item/8zt0v63n

Journal The Gerontologist, 60(7)

ISSN 0016-9013

Authors

Ritchie, Christine S Garrett, Sarah B Thompson, Nicole <u>et al.</u>

Publication Date 2020-09-15

DOI

10.1093/geront/gnaa016

Peer reviewed





Research Article

Unintended Consequences of Opioid Regulations in Older Adults with Multiple Chronic Conditions

Christine S. Ritchie, MD, MSPH,^{1,*,} Sarah B. Garrett, PhD,^{2,3,} Nicole Thompson, BA,⁴ and Christine Miaskowski, RN, PhD, FAAN⁵

¹The Mongan Institute and the Division of Palliative Care and Geriatric Medicine, Massachusetts General Hospital, Boston. ²Division of Geriatrics, University of California, San Francisco. ³Philip R. Lee Institute for Health Policy Studies, University of California, San Francisco. ⁴Osher Center for Integrative Medicine, University of California, San Francisco. ⁵Department of Physiological Nursing, University of California, San Francisco.

*Address correspondence to: Christine S. Ritchie, MD, MSPH, Division of Palliative Care and Geriatric Medicine, Department of Medicine, Massachusetts General Hospital, Boston, MA. E-mail: csritchie@mgh.harvard.edu

Received: November 9, 2019; Editorial Decision Date: January 24, 2020

Decision Editor: Barbara J. Bowers, PhD

Abstract

Background and Objectives: The opioid epidemic has led to substantive regulatory and policy changes. Little is known about how these changes have impacted older adults, especially those with chronic pain and multiple chronic conditions (MCC). We sought to understand the experiences of older adults with chronic pain and MCC in the context of the opioid epidemic and policy responses to it.

Research Design and Methods: Purposive sampling of older adults in a West Coast metropolitan area. Semistructured indepth interviews lasting 45–120 min were digitally recorded and transcribed. Responses were analyzed using the constant comparative method. Participants were 25 adults aged 65 years and greater with three or more self-reported medical conditions and pain lasting for more than 6 months.

Results: Respondents' accounts revealed numerous unintended consequences of the opioid epidemic and its policy responses. We identified four main themes: changes to the patient–clinician relationship; lack of patient agency and access in pain management; patient ambivalence and anxiety about existing opioid treatment/use; and patient concerns about future use.

Discussion and Implications: Older adults have high rates of chronic pain and MCC that may reduce their pain management options. The opioid epidemic and policies addressing it have the potential to negatively affect patient–clinician relationships and patients' pain self-management. Clinicians may be able to mitigate these unintended consequences by actively conveying respect to the patient, empowering patients in their pain self-management activities, and proactively addressing worries and fears patients may own related to their current and future pain management regimens.

Keywords: Chronic pain, Opioid regulations, Multimorbidity, Qualitative methods

Chronic pain occurs in over 18 million older adults in the United States (Patel, Guralnik, Dansie, & Turk, 2013). In a nationally representative sample of older adults, the overall prevalence of bothersome pain in the previous month was 52.9% (Patel et al., 2013). In a cross-sectional, Internet-

based survey conducted in a nationally representative sample of U.S. residents, *chronic* pain lasting 6 months or longer was present in over 33% of adults \geq 65 years of age (Johannes, Le, Zhou, Johnston, & Dworkin, 2010). Older adults are particularly vulnerable to severe and persistent pain, especially those with chronic musculoskeletal disorders, degenerative spine disorders, and/or osteoarthritis (Bicket & Mao, 2015).

Among Medicare beneficiaries, over two-thirds have ≥ 2 chronic conditions and 24% have ≥ 4 chronic conditions. The likelihood of having a higher number of conditions increases with age. Older adults with multiple chronic conditions (MCC) experience challenges with complex or conflicting treatment regimens, where treatment of one condition exacerbates the management of another condition. They are often prescribed a larger number of medications that cumulatively increase their experience of adverse events and decrease treatment adherence (Blozik, van den Bussche, Gurtner, Schäfer, & Scherer, 2013).

Chronic pain is more common among older adults with MCC (Agborsangaya, Lau, Lahtinen, Cooke, & Johnson, 2012). Chronic pain can serve as a barrier to self-management behaviors and can be more difficult to treat, because common conditions such as high blood pressure, coronary artery disease, upper gastrointestinal bleeding, acute kidney injury, and heart failure can be precipitated or exacerbated by many over-the-counter analgesics such as ibuprofen or naproxen (Butchart, Kerr, Heisler, Piette, & Krein, 2009; Griffin, Yared, & Ray, 2000; Kim et al., 2016). Older adults are often prescribed opioids because comorbid conditions limit analgesic choices. While some evidence exists to suggest that older adults can benefit from opioid use (Papaleontiou et al., 2010), some studies report high rates of adverse effects, such as falls and fractures (Krebs et al., 2016; Solomon et al., 2010).

The management of chronic pain in older adults over the past three decades has reflected the overall zeitgeist of pain management in many ways. In the 1990s, pain was designated as the fifth vital sign. Health systems and practices established guidelines to insure that pain was assessed and treated—often with opioid analgesics. Findings from small studies suggested that opioid addiction was a rare event and that most patients prescribed opioids would not experience adverse effects. Over the next 20 years, sales of prescription opioids quadrupled. Opioid use rates also increased, but to a lesser degree, in older adults (Steinman, Komaiko, Fung, & Ritchie, 2015).

As opioid use grew, increasing numbers of studies reported opioid-related overdose deaths and a rise in opioid use disorder, although these rates were lower in older adults than in those 50 and younger (National Academies of Sciences, Engineering and Medicine, 2017). In 2017, over 70,000 Americans died from drug overdoses—a twofold increase in 10 years (National Institute on Drug Abuse, 2019).

In response to the growing number of opioid-related deaths and suggestions of an increase in the number of individuals with an opioid use disorder, in 2016, the Centers for Disease Control (CDC) published guidelines that recommended restraint in opioid use (Dowell, Haegerich, & Chou, 2016). In 2017, the Acting Health and Human Services Secretary declared a public health emergency due

to the increased rates of opioid-related drug overdoses (U.S. Department of Health and Human Services, 2017). In 2018, President Trump signed the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act (United States House of Representatives, 2018). Subsequently, the Centers for Medicare and Medicaid Services endorsed widespread restrictions on opioid dosing for chronic pain management, establishing a ceiling of 90-mg morphine-equivalent units for opioid prescriptions under the Part D Medicare program starting in 2019.

The CDC designed its recommendations as nonmandatory guidance. However, many health care systems, individual clinicians, practices, legislators, pharmacy chains, and insurers took aspects of these guidelines and translated them into more across-the-board restrictions on opioid dosing. Today, in over 50% of U.S. states, patients in acute pain from surgery or an injury may not, by law, fill an opioid prescription for more than 3–7 days, regardless of the severity of their surgery or injury. Most of these restrictions do not take into account age, comorbidity, or other age-related considerations that might influence what other pain management options older patients may have.

While the ensuing hardships associated with opioid restrictions are being felt by a wide array of persons with chronic pain, older adults with chronic pain and MCC have the potential to suffer disproportionately from these restrictions for the following reasons: (a) nonopioid analgesics have a higher risk for adverse events in older adults with ageor disease-related declines in kidney or liver function; (b) the use of nonpharmacologic therapies may be too costly for this largely fixed-income population; and (c) limited mobility may be a significant barrier to access both pharmacologic and nonpharmacologic treatments. Inquiry into to the "iat-rogenic" consequences of public health interventions may be particularly valuable in this setting (Lorenc & Oliver, 2014; Magasin & Gehlen, 1999; Merton, 1936).

As policy swings toward greater restrictions on prescription opioids, certain unintended consequences have already been documented, including increased use of illicit substances and increased suicide rates among opioid users (Health Professionals for Patients in Pain, 2019; Lagisetty et al., 2019). However, none of these studies focused on older adults or those with MCC. It is unclear what unintended consequences are seen in older adults with MCC. Therefore, our study sought to better understand the unintended consequences of the opioid epidemic and subsequent opioid regulations on the experiences of older adults with chronic pain *and* multiple chronic conditions, as these conditions may exacerbate older adults' pain and limit their pain management options.

Design and Methods

We used inductive thematic analysis (Bradley, Curry, & Devers, 2007; Nowell, Norris, White, & Moules, 2017)

to identify and characterize themes in qualitative semistructured interview data from older adults who met the following criteria: age 65 or above, no cognitive impairment, three or more self-reported chronic medical conditions, and pain for ≥ 6 months.

We recruited participants with chronic pain from the Optimizing Aging Registry, a research registry comprised of older adults from the greater metropolitan Bay Area. Study coordinators contacted potential participants via phone, described the study, and screened for the criteria described above. Participants reporting increased confusion or memory loss in the past year were evaluated over the phone (Brief Screen for Cognitive Impairment; Hill et al., 2005) and in person (Mini-Cog; Borson, Scanlan, Brush, Vitaliano, & Dokmak, 2000) to rule out cognitive impairment. The study team employed purposive sampling to recruit individuals from across the socioeconomic spectrum.

Interviews took place at a location of the respondents' choice, typically the research office or the participant's home, and lasted approximately 45–120 min. The participants reported basic demographic information and described their chronic conditions. Participants selected chronic conditions from a list of 13 common medical conditions taken from the Self-Administered Comorbidity Questionnaire (Sangha, Stucki, Liang, Fossel, & Katz, 2003) and reported additional conditions not on this list. The interviews assessed the respondents' experiences with chronic pain; their pharmacological and nonpharmacological pain management efforts; the effects of pain on their lives; their awareness of the opioid epidemic; and their perceptions of the epidemic's effects on them (see Supplementary Material for the full interview guide).

Interviewees' experiences with opioids and their perspectives on the opioid epidemic were captured by questioning about past treatment experiences and by questions like, "In the past several years, there have been a lot of news around opioids or narcotics, including how they have been misused, and how some people have experienced overdoses or serious side effects from them. Do you think this issue has affected the way your pain is being managed?" and "Have your opinions of pain medications changed over time related to your own experience, those of others, or news reports?" All participants provided written informed consent, approved the digital recording of the interview, and received a \$30 gift card. All activities were approved by the UC San Francisco Institutional Review Board.

The interview recordings were professionally transcribed and entered into ATLAS.ti, a computerassisted qualitative data analysis platform (Scientific Software Development GmbH, Berlin, Germany). One author with qualitative coding expertise who had conducted the interviews (N.T.) and an author with doctoral training in qualitative research methods (S.B.G.) independently reviewed then discussed the data to identify broad topic areas that recurred in respondent discussions of opioid analgesics (e.g., medication access, concerns about opioid use, side effects, effectiveness for pain management). They cocoded 25% of the transcripts in ATLAS.ti with these topics, achieving intercoder agreement of greater than 90%. One author (N.T.) then coded the rest of the data, thereby indexing the data for more in-depth analysis.

For this paper, these authors and two senior clinicianscientists with expertise in thematic qualitative data analysis (Nowell et al., 2017) and clinical pain management (C.R., C.M.) independently reviewed all paragraphs coded with one or more of the following topics: access to opioid medications; concerns about opioid treatment; personal experiences with opioid medication; and perspectives on the opioid epidemic and its effects. Using inductive thematic analysis, the research team iteratively discussed, identified, and characterized themes (Bradley et al., 2007; Nowell et al., 2017). Specifically, over the course of several readings of the data, the authors first independently, then collaboratively, worked to identify (a) experiences, (b) perspectives, and (c) relationships among these that were recurrent and salient in respondents' narratives. To explore potential differences between individuals who had and had not used opioids for chronic pain, they reviewed the data within and across these respondent groups. Finally, they refined identified themes through discussion, reviewing the raw data, and considering counterfactual examples (e.g., attention to stability or improvement of the patient-clinician relationship as counterpoints to the examples of worsened relationships). The research team documented analytic discussions, decisions, and theme development and achieved consensus on the themes presented.

Results

Description of the Sample

Coordinators communicated with 49 potential participants. Fourteen screened out for reasons such as lack of chronic pain or fewer than three chronic medical conditions; 10 explicitly or tacitly declined to participate; one person was too distant to interview in person. Twenty-five individuals enrolled (Table 1). Over half were women and the majority were between 66 and 75 years of age (mean = 72 years). Four out of five were White and over half had a bachelor's or advanced degree. No respondents self-identified as Hispanic. Four out of five had "enough finances to meet daily needs." On average, participants had six chronic conditions (SD = 2.04; range 3–12; Figure 1).

Findings

Most of the older adults' experiences with or perspectives on opioids could be characterized as negative or as unintended

| | n | % |
|--|------|------|
| Gender | | |
| Female | 16 | 64 |
| Age (years) | | |
| 66–75 | 20 | 80 |
| 76–85 | 3 | 12 |
| 86+ | 1 | 4 |
| Race | | |
| White | 20 | 80 |
| Black or African American | 3 | 22 |
| Asian | 1 | 4 |
| Unknown | 1 | 1 |
| Marital status | | |
| Married | 3 | 12 |
| Widowed | 5 | 20 |
| Divorced | 7 | 28 |
| Never married | 9 | 36 |
| Other | 1 | 4 |
| Educational level | | |
| HS degree/GED | 3 | 12 |
| Some college | 5 | 20 |
| Bachelor's degree | 7 | 28 |
| Graduate degree | 10 | 40 |
| Has sufficient finances to meet daily needs | 20 | 80 |
| Currently has an opioid prescription for | 11 | 44 |
| chronic pain | | |
| Little interest or pleasure in doing things? | | |
| Not at all | 11 | 44 |
| Several days | 9 | 36 |
| More than half the days | 1 | 4 |
| Nearly everyday | 4 | 16 |
| Feeling down, depressed or hopeless? | | |
| Not at all | 8 | 32 |
| Several days | 11 | 44 |
| More than half the days | 4 | 16 |
| Nearly everyday | 2 | 8 |
| | Mean | SD |
| Number of chronic conditions | 6.08 | 2.04 |

Table 1. Sample Characteristics: Older Adults with Chronic Pain and Multiple Chronic Conditions (n = 25)

Note. GED = Graduate equivalent diploma; HS = high school.

consequences of the epidemic or the policy response to it. We identified four major themes: changes to the patient–clinician relationship; lack of patient agency (being able to make decisions or take responsibility for one's life) and difficulties with access to pain management; ambivalence and anxiety about existing opioid treatment/use; and concerns about future use (Table 2). The majority of interviewees (23/25) expressed at least one of these major themes in their interview. For each quotation presented, we indicate the study identification number, self-reported gender ("F," female and "M," male), and age of the respondent. We use an asterisk to identify respondents who reported using opioids for chronic pain at the time of interview.



Figure 1. Number of participants with each chronic condition (n = 25). *Note*: No respondents reported kidney or liver disease.

Table 2. Summary of Major Themes and Subthemes

| Major theme | Subthemes |
|---|--|
| Changes to the patient–clinician relationship | Negative feelings Erosion of the relationship Abandonment Greater trust, strong alliance |
| Lack of patient agency and access in pain management | Diminished patient power or voice in treatment decisions Lack of satisfactory treatment options More barriers to prescription access, inconvenience |
| Ambivalence and anxiety about existing opioid treatment/use | Anxiety, concern Addiction, overmedication |
| Concerns about future use | Uncertainty about future access to opioids Discomfort with potential need for higher doses of opioids Discomfort with potential need to initiate opioid treatment |

Changes to the patient-clinician relationship

Several respondents described challenging interactions with clinicians when they spoke about their opioid treatment or the opioid epidemic more broadly. For some individuals currently using opioids, these conversations created significant relational tension and strain. Respondent P11* (M, 68) reported being "really upset" with his clinician: "that for [my] legitimate reason ... they would not help me with the pain ... My interest is not in getting high; I just don't want to hurt." For these individuals, opioid regulations and system-level restrictions manifested in difficult interactions with clinicians and erosion of the patient–clinician relationship. P19* (F, 66) described an ongoing, emotionally fraught dynamic with her clinicians:

I get really, really resentful when doctors bring up the opioid epidemic like I'm a dope fiend. I find it very disrespectful. And I had to tell my doctor, I said, "I am asking you with all the dignity that I have, that my pain is not being addressed." And I almost had to beg him. I had to talk to him for at least ten minutes on him not wanting to prescribe but to do other things. And I've done everything that—I feel like I'm doing my part ... all the seniors, they've all been cut back, and everybody's very resentful, resentful about being labeled the opioid addict.

Some patients' concerns about seeming "drug-seeking" made them reluctant to communicate honestly or straightforwardly with their clinician. P06* (F, 68), for example, said "I'm gonna tell [doc] how I'm feeling, and see maybe he'll have mercy on me. Maybe he'll order me some—I don't know—I'm not gonna ask. 'Cause I don't like [to seem] drug-seeking. There's such a stigma, and especially now."

In some cases, interviewees reported abandonment by or separation from a clinician because of these challenges. $P21^*$ (M, 69), described that his pain medication doctor,

Just dropped me out of the blue because he didn't want to be responsible for prescribing [Fentanyl] anymore. I looked high and low all over the city trying to find a pain management doctor and none of them would take me on ... When they started me on in it eight or nine years ago, I was definitely told I would need to be on it for life so I fully expected that. Now, suddenly, that's not necessarily going to be honored anymore.

P19* (F, 66) described leaving her safety-net doctor "for several reasons," including because "she wanted me off of all opioids, and I said, 'That's not gonna be possible.'"

Not all of the older adults interviewed described difficult interactions. Some older adults indicated that how their clinician handled opioid prescribing in fact revealed caring and competence on the part of their clinician. Despite his frustrations, P11* (M, 68) reflected,

There was a day you could get a doctor to write you for anything. They just don't want to do that anymore ... I have legitimate pain issues, and I can't even get them to do it. So, that tells you how serious I think doctors are taking this. Maybe not all doctors, but mine are. And that's okay. They're just looking out for me.

P05* (F, 85), who had a prescription for hydrocodone, felt the opioid epidemic had not affected the way her pain was being managed, instead saying, "I think the doctor's given me what I need right now, and, you know, she's very emphatic about how much to take and not to—you know, I trust her, [she's] a wonderful doctor."

Loss of patient agency and difficulties with access to pain management

Multiple patients depicted in their stories their lack of power or participation in decisions about their pain treatment. They also described a lack of access to effective, alternative treatment options. About accessing her opioid medication, P06* (F, 68) reported that "[the doctor] basically said 'Don't talk to me till December,' so I know I don't have any more ... I'm running out, and then I get anxious. And I gotta go back to feeling pain all the time." In the meantime, she was using a medication that she found less effective for her pain. She drew a contrast between her current situation and one where she would have more control over her own pain management:

I believe right now that if the curtain was lifted, and they said, "You can have a prescription, and when you run out, you get another one." I would be in seventh heaven, because I would know I could manage my own pain. I would be in charge of my pain.

P19* (F, 66), revealed a similar tension, describing her ideal pain management scenario as

[being] able to have a higher dose for the days that it's really bad, and let me be the decision maker ... Let me be the one to have some choices about my life. [Institution name], they really like encouraged people to be responsible, but then when it comes to opioids, I feel like they're treating me like a little kid."

Several respondents who had an opioid prescription indicated that they were not satisfied with their current treatment options. For some, such as P06 and P07 above, it was because they had not been able to access or retain the specific opioid or dose level they felt they needed to optimally manage their pain. One respondent who used opioids only for acute pain complained of inadequate access:

When I had the prostate surgery, they didn't give me morphine ... I was in extreme pain, and it took probably 18 to 24 hours before I had relief ... I think it was around the time when the opioid crisis was coming out in the news. And so I figured, 'Well, maybe that has something to do with it. But I'm in pain here.' (P08, M, 69)

Others deeply wished for effective alternatives to opioids but had none. P02* (F, 84), who did not want to take Tramadol, complained "there's nothing they can give me to replace it." P21* (M, 69) explained,

I don't want to be on [Fentanyl], I don't want to be constipated because of the drug, but even if I were to go off the drug, I would be in unbearable pain ... I talk to my doctor about it every month, 'Is there anything else I could be on that I could get off narcotics?' And she says, 'Not really.'

Some respondents described specific ways that policy changes have made accessing their prescription opioids far more difficult. P12* (M, 75) described being upset that the "new government regulations" required that he pick up his medication "every four weeks on the day": "There's no oversupply. You don't build up anything ... It makes me angry that—I absolutely understand it, but ... dealing with the opioid crisis is not dealing with people with chronic pain." P13 (F, 72), who used opioids for acute pain, reported,

It's much harder to get those pills from the drugstore, and insurance companies are way more particular about when they refill them, so it's a pain in the neck ... It's frustrating and it takes energy ... For instance, if I'm in a lot of pain, I can't send somebody to the drugstore to refill my oxycodone; I have to go there. It doesn't matter if it's hard to walk.

In characterizing their loss or relative lack of power in these decisions, most older adults cast their doctors as the decision-making party. However, some described observing a loss of agency on the part of their clinicians as well. P11* (M, 68), for example, shared, "I am a little concerned ... about this whole opioid crisis is making doctors afraid to do anything for their patients..."

Ambivalence and anxiety about existing opioid treatment/use

Even among patients who, with their clinicians, identified opioids as the best treatment for chronic pain, some felt ambivalent or concerned about their care plan. These concerns centered around addiction to the opioid and, to a lesser extent, overmedication. For example, P02* (F, 84) explained that she "would love to get off the Tramadol because it's an opioid," but had no effective alternative to it. She feared she was "probably addicted, but they can't give me anything in its place." P01 (M, 90) would wait to use opioids until his pain "gets up to a ten" and he is "incapacitated." He described this approach as having helped him to "avoid becoming totally dependent on an opiate or having bad effects from an opiate ... [It] is the choice I made, but it's not a choice which pleases me, to say the least." For a few respondents, concerns about opioid use were rooted in their own past experiences with addiction. P11* (M, 68) limited how much of the prescribed codeine he took for this reason: "When I do take them, I only take one ... I'm just so afraid. I don't want to do anything that's going to get me hooked in some way. ... I would rather be in pain every day than to live like that [addicted] again." Some respondents in the sample described formal (i.e., clinician-approved) and informal efforts to reduce their dose because of these concerns.

Finally, multiple respondents expressed concerns about others' use of opioids. Some worried about opioid users in general who, due to their own choices or overprescribing, can get in "serious trouble" (P12, M, 75). P10 (F, 70), who did not use opioids, herself, was concerned about her spouse:

My husband is actually on an opioid. He is pretty careful about it ... We are both pretty careful to make sure we don't get addicted to anything like that. Because obviously everybody thinks that [opioids] are a problem and that they've been overprescribed. So yeah, we don't want to get caught up in anything like that.

Concerns about future use

Many respondents, spanning those with and without opioid prescriptions, described concerns about access to opioids in the future when they really need them. For some currently using prescription opioids to manage chronic pain, these concerns focused on whether they would have continued access to their medications. P15* (M, 67), for example, said he is not yet affected by decreased access, but recognizes that "there may come a point where that's not available to me. I feel bad for everybody who needs opioids truly and they may not be available." P21* (M, 69) worried

If my insurance company is going to continue to cover the price of the Fentanyl in the new year on the formulary. There's a warning that they might not ... I'm really worried but what's going to happen if I can't get that prescription anymore."

Both prescription opioid users and nonusers expressed substantial concern about using higher doses of opioids, or using opioids at all, in the future. Many of them referenced the opioid epidemic and public health messaging around opioids. P23* (F, 69) said, "I don't wanna take too many pain pills ... but over a period of time, [the pain is] getting worse ... I don't wanna get hooked on them Oxycontin." P14 (F, 75), who used ice, heat, and physical therapy for her chronic pain, explained she had fear about "opioids for sure ... It's such an epidemic in the country. I mean, I wouldn't even consider it." P20 (F, 72) echoed this:

I don't want to be addicted to anything ... I've told my health provider repeatedly that I don't want anything that's opioid. If it's a pain medication that will lead to some kind of addiction, I don't need it. I don't want it. I'll suffer the pain.

Discussion and Implications

This qualitative study of older adults with both MCC and chronic pain revealed how national attention to the opioid epidemic and regulatory restrictions associated with opioid use have shaped the patient–clinician relationship and patients' concerns regarding their pain management.

Several interviewees described an erosion of the patient– clinician relationship and an undercutting of trust. In some instances, patients felt distrusted, stigmatized, or held in suspicion by their clinicians. These findings align with those seen in younger patients with chronic pain who, in focus groups, described feeling disrespected, stigmatized and distrusted (Antoniou et al., 2019; Upshur, Bacigalupe, & Luckmann, 2010). This underlying challenge of not having one's pain believed has threatened shared decision making and patient engagement for decades (Frantsve & Kerns, 2007; Werner & Malterud, 2003). Evidence suggests that these dynamics can in fact exacerbate patients' symptoms (Greville-Harris & Dieppe, 2015).

The lack of patient agency among older adults with chronic pain was illustrated in multiple instances where patients felt like they were given little say about how to optimally manage their pain. Some patients described a sense of abandonment when their clinicians would no longer care for them or no longer take into consideration their personal expertise with their pain experience and its management. These clinician-patient interactions diverge from the goal by U.S. health care toward greater patient-centeredness, namely: "providing care that is respectful of, and responsive to, individual patient preferences, needs and values" (Institute of Medicine, 2001). Numerous initiatives have sought to educate clinicians to invite and support patients' involvement in decisions about their treatment (Elwyn et al., 2012; Weston, 2001). However, several cases in our study reveal a failure of patient-centeredness in both the processes of care delivery (e.g., in communication, decision making, and the provision of acceptable options acceptable to the patient) and its outcomes (e.g., patient dissatisfaction and disempowerment, poor or no access to desired treatments). Efforts are needed to intentionally integrate shared decision making into pain management in older adults, with an emphasis on empathy and nonjudgment (Marchand et al., 2019).

Many patients described escalating anxiety and ambivalence about the use of opioids. This anxiety translated into worries about taking pain medications, being stigmatized or being discounted because of their use of opioids, and how to optimally manage their pain in the future. What is unclear from this study and others is the overall health impact of this type of chronic anxiety. Given the known association between anxiety and pain in the general population, this chronic anxiety may exacerbate an older adult's chronic pain symptoms (Asmundson & Katz, 2009; McWilliams, Cox, & Enns, 2003). However, how medication anxiety and stigma influence pain in older adults remains poorly understood.

The anxiety seen in older adults in this study appeared to be further complicated by, participants' conflation of addiction (a compulsive use of a substance despite associated harmful consequences) with physical dependence (chronic use of a tolerance-forming drug, in which abrupt or gradual drug withdrawal causes unpleasant physical symptoms; American Psychiatric Association, 2019; National Cancer Institute, 2019). Participants described fear of becoming addicted to opioids when they equated the experience of opioid withdrawal (due to physical dependence) with addiction. Such anxiety could lead patients to try to avoid analgesics altogether, even if such avoidance contributes to increased pain, reduced mobility, and more social isolation. Given the possible relationship between anxiety and pain, clinicians may be able to mitigate chronic anxiety about the future by anticipating and addressing worries related to future pain and its management.

Not all respondents indicated they experienced negative effects from the opioid epidemic or its policy responses. For a small number, the impact of these policies manifested as greater trust in and respect for their clinicians—even when the clinician prescribed lower doses of opioids than the patient had requested. This discovery is valuable, as these cases may serve as models for clinicians seeking to satisfy both public health needs and individual patients' needs. Research is needed on what clinician behaviors and care settings factors support these outcomes.

In response to the opioid epidemic, state and federal agencies have been racing to put into place policy and regulatory initiatives to curb opioid misuse, opioid overdoses, and opioid-related deaths. While substantial energy has gone into instituting and monitoring these outcomes, little attention has focused on the unintended consequences and harms these initiatives are having on older adults with MCC. This lack of attention to unintended or unanticipated consequences of these regulations on vulnerable populations has the potential to unleash continuous harm that contributes to substantial suffering, as predicted by Merton (1936) and others.

Older adults with MCC warrant their own focused consideration because many studies describe lower rates of opioid misuse among older adults than among young and middle-aged adults (Han, Sherman, & Palamar, 2019; Reid et al., 2010), and therefore a different potential burdenbenefit ratio of opioid use. Lorenc and Oliver (2014) describe different types of harms that can occur as a result of a public health intervention: direct harms, psychological harms, equity harms, group and social harms, and opportunity harms. While our study participants did not describe direct harms such as functional decline from unaddressed pain, many described inadequately controlled pain, psychological harms related to increased anxiety or group and social harms related to labeling and stigmatizing. As the country seeks to address opioid misuse, it must systematically characterize and monitor these harms.

In light of the findings from this study, a number of actionable recommendations emerge:

1. Navigating optimal pain management in the context of new state and federal regulations that restrict opioid use is challenging for patients and clinicians and can erode the patient–clinician relationship. Clinicians should engage in a detailed assessment of older adults' pain and seek to better understand the biological, psychological, and social components of their patients' pain. They should learn empathic communication skills and ways to optimize listening and understanding. In Upshur and colleagues' (2010) study, patients talked about the value of feeling listened to and trusted, and of having clinicians available to them in between visits to address any pain concerns. Clinicians may be helped by drawing on tools designed to support challenging conversations in other settings (Sager & Childers, 2019) and seek to preserve and strengthen the therapeutic alliance while engaging in straightforward dialogue regarding the benefits and risks of opioid use. Future research should investigate under what conditions these conversations regarding opioid treatment in older adults go particularly well versus poorly.

- 2. Clinicians should seek to provide patients with more education about and promote better access to nonpharmacologic pain management interventions. While our participants sought out an array of nonpharmacologic treatments, they often felt thwarted by significant financial and other access barriers. Ensuring that a member of the clinician's interprofessional team is well-equipped to guide patients in their search for nonpharmacologic treatments will indicate support and nonabandonment to patients.
- 3. Almost no research has systematically evaluated the prevalence, characteristics, and impact of chronic pain in older adults with MCC. Given the substantial increase in the aged population with MCC, longitudinal studies of chronic pain in these individuals are desperately needed. Additionally, more research is needed that focuses on how the opioid epidemic is influencing the management of specific pain conditions such as diabetic neuropathy.
- 4. The National Institutes of Health Helping to End Addiction Long-term (HEAL) initiative—along with a number of other federal and state-based initiatives—will continue to research and address opioid use in the context of continued opioid misuse and overdoses. Rather than solely measure the impact of the HEAL initiative on traditional measures (e.g., Emergency Department visits and opioid-related outcomes), policy makers should evaluate the potentially harmful effects of these initiatives. A systematic approach to capture unintended harms associated with opioid regulations, such as increased anxiety and erosion of patient–clinician relationships, would inform real-time refinement of these interventions (Bonell, Jamal, Melendez-Torres, & Cummins, 2015).

This study is limited in its generalizability due to its size and location in the California Bay Area. Additionally, legislative changes related to opioid use continue to evolve. Therefore, the picture painted in this study may be more conservative than one from a study conducted even more recently, as the opioid epidemic continues to shape different aspects of older adults' care and health. Nevertheless, as far as we know, this study is the first qualitative investigation of community-dwelling older adults with both chronic pain and MCC. It represents a step forward in understanding the myriad effects of the opioid epidemic, as well as the various policy responses to it.

Conclusion

Older adults with chronic pain and MCC face unique challenges with pain management. Recent health care

regulations may be inadvertently eroding patient-clinician relationships and escalating patients' overall levels of distress. Findings from this qualitative study of older adults with chronic pain and MCC suggest the importance of clinician-patient shared decision making and alliance in conversations regarding chronic pain management. It highlights the need for routine monitoring of outcomes other than drug utilization and mortality when a society institutes new policies and regulations. It argues for more robust research in this population so that the true benefits and harms of various pain management strategies can be understood and communicated between patients and clinicians.

Supplementary Material

Supplementary data are available at The Gerontologist online.

Funding

This work was supported by the UCSF Claude D. Pepper Older Americans Independence Center Pilot Program funded by the National Institute on Aging (Grant number P30AG044281).

Acknowledgments

We are grateful to the study participants and to Krista Harrison, PhD, who helped with interview guide development and other foundational aspects of the study.

Conflict of Interest

The authors have no conflicts of interest to declare.

References

- Agborsangaya, C. B., Lau, D., Lahtinen, M., Cooke, T., & Johnson, J. A. (2012). Multimorbidity prevalence and patterns across socioeconomic determinants: A cross-sectional survey. *BMC Public Health*, **12**, 201. doi:10.1186/1471-2458-12-201
- American Psychiatric Association. (2019). What Is Addiction? Retrieved September 25, 2019, from https://www.psychiatry. org/patients-families/addiction/what-is-addiction
- Antoniou, T., Ala-Leppilampi, K., Shearer, D., Parsons, J. A., Tadrous, M., & Gomes, T. (2019). "Like being put on an ice floe and shoved away": A qualitative study of the impacts of opioid-related policy changes on people who take opioids. *The International Journal on Drug Policy*, 66, 15–22. doi:10.1016/j. drugpo.2019.01.015
- Asmundson, G. J., & Katz, J. (2009). Understanding the co-occurrence of anxiety disorders and chronic pain: State-of-the-art. *Depression and Anxiety*, 26, 888–901. doi:10.1002/da.20600
- Bicket, M. C., & Mao, J. (2015). Chronic pain in older adults. Anesthesiology Clinics, 33, 577–590. doi:10.1016/j. anclin.2015.05.011
- Blozik, E., van den Bussche, H., Gurtner, F., Schäfer, I., & Scherer, M. (2013). Epidemiological strategies for adapting clinical practice guidelines to the needs of multimorbid patients. *BMC Health Services Research*, 13, 352. doi:10.1186/1472-6963-13-352

- Bonell, C., Jamal, F., Melendez-Torres, G. J., & Cummins, S. (2015).
 'Dark logic': Theorising the harmful consequences of public health interventions. *Journal of Epidemiology and Community Health*, 69, 95–98. doi:10.1136/jech-2014-204671
- Borson, S., Scanlan, J., Brush, M., Vitaliano, P., & Dokmak, A. (2000). The Mini-Cog: A cognitive 'vital signs' measure for dementia screening in multi-lingual elderly. *International Journal* of Geriatric Psychiatry, 15, 1021–1027. doi:10.1002/1099-1166(200011)15:11<1021::aid-gps234>3.0.co;2-6
- Bradley, E. H., Curry, L. A., & Devers, K. J. (2007). Qualitative data analysis for health services research: Developing taxonomy, themes, and theory. *Health Services Research*, 42, 1758–1772. doi:10.1111/j.1475-6773.2006.00684.x
- Butchart, A., Kerr, E. A., Heisler, M., Piette, J. D., & Krein, S. L. (2009). Experience and management of chronic pain among patients with other complex chronic conditions. *The Clinical Journal of Pain*, 25, 293–298. doi:10.1097/AJP. 0b013e31818bf574
- Dowell, D., Haegerich, T. M., & Chou, R. (2016). CDC guideline for prescribing opioids for chronic pain—United States, 2016. *JAMA*, 315, 1624–1645. doi:10.1001/jama.2016.1464
- Elwyn, G., Frosch, D., Thomson, R., Joseph-Williams, N., Lloyd, A., Kinnersley, P.,...Barry, M. (2012). Shared decision making: A model for clinical practice. *Journal of General Internal Medicine*, 27, 1361–1367. doi:10.1007/s11606-012-2077-6
- Frantsve, L. M., & Kerns, R. D. (2007). Patient–provider interactions in the management of chronic pain: Current findings within the context of shared medical decision making. *Pain Medicine (Malden, Mass.)*, 8, 25–35. doi:10.1111/j.1526-4637.2007.00250.x
- Greville-Harris, M., & Dieppe, P. (2015). Bad is more powerful than good: The nocebo response in medical consultations. *The American Journal of Medicine*, **128**, 126–129. doi: 10.1016/J. AMJMED.2014.08.031
- Griffin, M. R., Yared, A., & Ray, W. A. (2000). Nonsteroidal antiinflammatory drugs and acute renal failure in elderly persons. *American Journal of Epidemiology*, 151, 488–496. doi:10.1093/oxfordjournals.aje.a010234
- Han, B. H., Sherman, S. E., & Palamar, J. J. (2019). Prescription opioid misuse among middle-aged and older adults in the United States, 2015–2016. *Preventive Medicine*, **121**, 94–98. doi:10.1016/j.ypmed.2019.02.018
- Health Professionals for Patients in Pain. (2019). *Health professionals* call on the CDC to address misapplication of its guideline on opioids for chronic pain through public clarification and impact evaluation. Retrieved October 18, 2019, from https://healthprof essionalsforpatientsinpain.org/the-letter-1
- Hill, J., McVay, J. M., Walter-Ginzburg, A., Mills, C. S., Lewis, J., Lewis, B. E., & Fillit, H. (2005). Validation of a brief screen for cognitive impairment (BSCI) administered by telephone for use in the Medicare population. *Disease Management: DM*, 8, 223–234. doi:10.1089/dis.2005.8.223
- Institute of Medicine. (2001). Crossing the quality chasm: A new health system for the 21st Century. Washington, DC: The National Academies Press. doi: 10.17226/10027
- Johannes, C. B., Le, T. K., Zhou, X., Johnston, J. A., & Dworkin, R. H. (2010). The prevalence of chronic pain in United States adults: Results of an Internet-based survey. *The Journal of Pain*, 11, 1230–1239. doi:10.1016/j.jpain.2010.07.002

- Kim, S. H., Yun, J. M., Chang, C. B., Piao, H., Yu, S. J., & Shin, D. W. (2016). Prevalence of upper gastrointestinal bleeding risk factors among the general population and osteoarthritis patients. World Journal of Gastroenterology, 22, 10643–10652. doi:10.3748/ wjg.v22.i48.10643
- Krebs, E. E., Paudel, M., Taylor, B. C., Bauer, D. C., Fink, H. A., Lane, N. E.,...Ensrud, K. E.; Osteoporotic Fractures in Men (MrOS) Study Research Group. (2016). Association of opioids with falls, fractures, and physical performance among older men with persistent musculoskeletal pain. *Journal of General Internal Medicine*, 31, 463–469. doi:10.1007/s11606-015-3579-9
- Lagisetty, P. A., Healy, N., Garpestad, C., Jannausch, M., Tipirneni, R., & Bohnert, A. S. B. (2019). Access to primary care clinics for patients with chronic pain receiving opioids. *JAMA Network Open*, 2, e196928. doi:10.1001/ jamanetworkopen.2019.6928
- Lorenc, T., & Oliver, K. (2014). Adverse effects of public health interventions: A conceptual framework. *Journal of Epidemiology* and Community Health, 68, 288–290. doi:10.1136/ jech-2013-203118
- Magasin, M., & Gehlen, F. L. (1999). Case study: Unwise decisions and unanticipated consequences. *Sloan Management Review*, 41, 47–60. ISSN: 0019-848X.
- Marchand, K., Beaumont, S., Westfall, J., MacDonald, S., Harrison, S., Marsh, D. C.,...Oviedo-Joekes, E. (2019). Conceptualizing patientcentered care for substance use disorder treatment: Findings from a systematic scoping review. Substance Abuse Treatment, Prevention, and Policy, 14, 37. doi:10.1186/s13011-019-0227-0
- McWilliams, L. A., Cox, B. J., & Enns, M. W. (2003). Mood and anxiety disorders associated with chronic pain: An examination in a nationally representative sample. *Pain*, 106, 127–133. doi: 10.1016/S0304-3959(03)00301-4
- Merton, R. K. (1936). The unanticipated consequences of purposive social action. *American Sociological Review*, 1, 894. doi: 10.2307/2084615
- National Academies of Sciences Engineering and Medicine Committee on Pain Management and Regulatory Strategies to Address Prescription Opioid Abuse. (2017). Pain Management and the opioid epidemic: Balancing societal and individual benefits and risks of prescription opioid use. Washington, DC: National Academies Press.
- National Cancer Institute. (2019). *Definition of physical dependence*. Retrieved November 8, 2019, from https://www.cancer.gov/ publications/dictionaries/cancer-terms/def/physical-dependence
- National Institute on Drug Abuse. (2019). Overdose death rates. Retrieved September 21, 2019, from https://www.drugabuse. gov/related-topics/trends-statistics/overdose-death-rates
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16. doi: 10.1177/1609406917733847
- Papaleontiou, M., Henderson, C. R. Jr, Turner, B. J., Moore, A. A., Olkhovskaya, Y., Amanfo, L., & Reid, M. C. (2010). Outcomes associated with opioid use in the treatment of chronic noncancer pain in older adults: A systematic review and meta-analysis. *Journal of the American Geriatrics Society*, 58, 1353–1369. doi:10.1111/j.1532-5415. 2010.02920.x

- Patel, K. V., Guralnik, J. M., Dansie, E. J., & Turk, D. C. (2013). Prevalence and impact of pain among older adults in the United States: Findings from the 2011 National Health and Aging Trends Study. *Pain*, 154, 2649–2657. doi:10.1016/j.pain.2013.07.029
- Reid, M. C., Henderson, C. R. Jr, Papaleontiou, M., Amanfo, L., Olkhovskaya, Y., Moore, A. A.,... Turner, B. J. (2010). Characteristics of older adults receiving opioids in primary care: Treatment duration and outcomes. *Pain Medicine (Malden, Mass.)*, 11, 1063–1071. doi:10.1111/j.1526-4637.2010.00883.x
- Sager, Z., & Childers, J. (2019). Navigating challenging conversations about nonmedical opioid use in the context of oncology. *The Oncologist*, 24, 1299–1304. doi:10.1634/ theoncologist.2019-0277
- Sangha, O., Stucki, G., Liang, M. H., Fossel, A. H., & Katz, J. N. (2003). The self-administered comorbidity questionnaire: A new method to assess comorbidity for clinical and health services research. *Arthritis and Rheumatism*, 49, 156–163. doi:10.1002/ art.10993
- Solomon, D. H., Rassen, J. A., Glynn, R. J., Garneau, K., Levin, R., Lee, J., & Schneeweiss, S. (2010). The comparative safety of opioids for nonmalignant pain in older adults. *Archives of Internal Medicine*, 170, 1979–1986. doi:10.1001/ archinternmed.2010.450
- Steinman, M. A., Komaiko, K. D., Fung, K. Z., & Ritchie, C. S. (2015). Use of opioids and other analgesics by older adults in

the United States, 1999–2010. Pain Medicine (Malden, Mass.), 16, 319–327. doi:10.1111/pme.12613

- United States House of Representatives.(2018). Amendment to the Senate Amendment to H.R. 6—Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment (SUPPORT) for Patients and Communities Act. Washington, DC: U.S. House of Representatives. Retrieved from https://docs. house.gov/billsthisweek/20180924/HR6.pdf
- Upshur, C. C., Bacigalupe, G., & Luckmann, R. (2010). "They don't want anything to do with you": Patient views of primary care management of chronic pain. *Pain Medicine (Malden, Mass.)*, 11, 1791–1798. doi:10.1111/j.1526-4637.2010.00960.x
- U.S. Department of Health and Human Services. (2017). HHS acting secretary declares public health emergency to address national opioid crisis. Washington, DC. Retrieved from https:// www.hhs.gov/about/news/2017/10/26/hhs-acting-secretarydeclares-public-health-emergency-address-national-opioidcrisis.html
- Werner, A., & Malterud, K. (2003). It is hard work behaving as a credible patient: Encounters between women with chronic pain and their doctors. Social Science & Medicine (1982), 57, 1409– 1419. doi:10.1016/s0277-9536(02)00520-8
- Weston, W. W. (2001). Informed and shared decision-making: The crux of patient-centered care. Canadian Medical Association Journal = Journal de l'Association Medicale Canadienne, 165, 438–439.