

Non-Opioid Alternatives for the Treatment of Acute Pain

Findings from a Survey of Parents with Addiction in the Family



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Partnership
to End Addiction

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Non-Opioid Alternatives for the Treatment of Acute Pain: Findings from a Survey of Parents with Addiction in the Family

Prescription drug misuse is a significant health threat for youth in the United States.¹ A recent national survey found that about one-third (35%) of adolescents and young adults, aged 12-25, had taken a prescribed psychoactive drug in the past year and about one-third said they misused the drug that was prescribed to them (i.e., used the medication in a way not directed or prescribed by their health care provider). These medications included opioids, stimulants, tranquilizers, and sedatives. With regard to opioids specifically, about one in five (19%) adolescents aged 12-17 said they used a prescribed opioid in the past year; among them, 17.6% reported misusing the drug. Even more young adults (aged 18-25) (30.2%) used a prescribed opioid in the past year and 23.3% misused the drug.²

Young people who misuse opioid medications often do so by taking another person's prescribed drug. A national survey found that, among 12th graders who reported misusing an opioid medication in the past year, about half said they got it free from a friend or relative (48%), one-quarter (26%) bought the drug and 14% stole it from a friend or relative. Another 17% said they bought it from a stranger or a drug dealer. However, misuse commonly occurs with one's own prescribed medication. In this survey, like the one described above, one-third (32%) of 12th graders who reported misusing a prescription opioid in the past year cited their own prescription as the source of the drug.³

Prescribed drugs tend to be perceived as safer than illicit drugs, especially among youth, because they are given by a trusted health professional to treat an actual medical condition. However, regardless of its source or legal status, opioids are highly addictive, as evidenced by the recent and ongoing opioid epidemic that has caused tens of thousands of cases of addiction and overdose deaths over the past few years⁴ and by the fact that the incidence of recent heroin use is about 19 times higher among those who had misused a prescription opioid compared to those who had not.⁵ It clearly is possible to become addicted to a prescribed opioid, especially if one is already vulnerable to or at risk for a substance use disorder.

There is an obvious and urgent need to reduce the rate of opioid misuse, especially among young people. Public health professionals generally agree that a key way to do so is to reduce the amount of prescription opioids that are available in homes by encouraging and incentivizing health care providers to prescribe these drugs less frequently.⁶ When they are needed, providers are encouraged to prescribe fewer pills at a time, in smaller doses, for shorter durations, and to monitor the patient for signs of misuse.⁷ At the same time, providers should try to utilize alternatives to opioid medications whenever possible, and especially when treating young people who are at the highest risk of developing an addiction to opioid medications.⁸ Several recent studies conducted in a variety of health care settings and with different patient populations support the effectiveness of non-opioid interventions for the management of pain.^{9,10}

Non-opioid alternatives for managing pain can include over-the-counter medications, such as acetaminophen (*Tylenol*); nonsteroidal anti-inflammatory drugs (NSAIDs) such as aspirin (*Bayer*), ibuprofen (*Advil, Motrin*), and naproxen (*Aleve, Naprosyn*); as well as prescription non-opioid medications injected by a health care provider or anesthetics – numbing agents – delivered directly to the area of the body where a surgery was performed. Non-opioid alternatives can also include therapeutic services such as physical or massage therapy, psychotherapy or acupuncture, and certain medical devices that reduce or interfere with the sensation of pain.

Given the financial, health and social costs of prescription opioids, these non-opioid options clearly should be explored and discussed by providers and patients. A national survey of adults in the general population, conducted by Gallup in 2017, found that 78% reported that they would prefer to try other

ways to manage physical pain before resorting to a prescribed pain medication.¹¹ A different national survey, commissioned by the American Society of Anesthesiologists in 2018, explored attitudes toward non-opioid alternatives specifically among parents of children ages 13-24, one-third of whom had been prescribed opioids. This survey found that more than half of the parents expressed concern that their child might be at risk for opioid addiction, but nearly two-thirds said they believe opioids are more effective than non-opioid alternatives at managing a child's pain after surgery or a broken bone. Only about one third of those whose children were prescribed an opioid asked their doctor about pain management alternatives.¹² These findings show that perceptions and understanding of non-opioid alternatives are mixed among adults, and leave many questions unanswered. Specifically, little is known about the extent to which alternatives are offered to patients and their families – especially those at risk for opioid addiction, whether the public is aware of these alternatives or feels comfortable asking providers about them, and what might stand in the way of them becoming more routine options for treating pain.

To begin to explore these questions, we conducted a survey that examined the experiences of parents with regard to treatment for acute pain, focusing on those for whom substance use disorder has played a critical role in their families. We reasoned that these parents would be more attuned than parents who had not struggled with family substance use or addiction to the risks of opioids and the availability of promising alternatives for the management of pain. Their experiences would be illustrative of what families concerned about a loved one's substance use go through when the treatment of pain – and the possibility of opioid use – arises in a health care encounter, and might shed light on the need for a broad shift in health care toward offering patients and their families non-opioid options to manage acute pain.

Methods

A convenience sample of parents who had experienced addiction in their family (primarily among their children) was asked to complete a brief survey about their experiences with prescribed opioids and alternatives to opioids offered by health care providers. We asked participants about their knowledge of non-opioid alternatives for managing pain, whether these alternatives had been discussed in encounters with health care providers, and barriers to exploring these options. Through this survey, we sought to understand potential limitations or barriers to providers offering – and patients seeking – these options so that they can be effectively addressed in the interest of protecting young people from future opioid misuse and addiction.

The sample was comprised of parents who serve as trained volunteer parent coaches for Partnership to End Addiction's peer support program. These parents have personal experience with a loved one, usually a child, who has struggled or is struggling with substance use, usually involving opioids. Some parent coaches have a child in recovery, some have a child who is still struggling, and others have lost a child to addiction. The coaches provide support, insight, and encouragement to other parents and caregivers who are trying to address their own loved one's substance use or addiction, but often feel alone and disconnected.

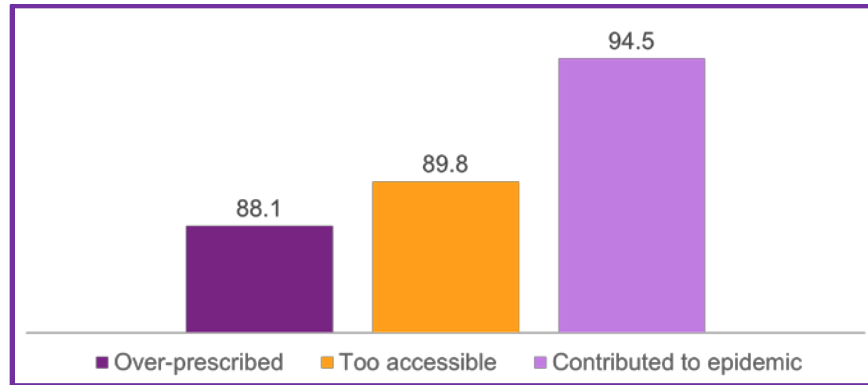
The survey was sent via email to 321 parent coaches who have been trained through the program; 59 responded to the survey. Participants were primarily female (86.4%), white/not Hispanic or Latinx (89.8%), and over age 45 (40.7% age 60-75, 50.9% age 46-59, 5.1% age 30-45, 3.4% age 18-29). Participants resided in 22 states across the country.

The survey consisted of 25 questions and took about 10 minutes to complete. Participation was voluntary, responses were confidential, and no incentive to participate was offered. Prior to completing the survey, respondents were given some basic definitions of terms used throughout the survey, including 'acute pain,' 'prescription opioids,' and 'non-opioid alternatives.' (See the Appendix for a copy of the full survey and its introductory comments.)

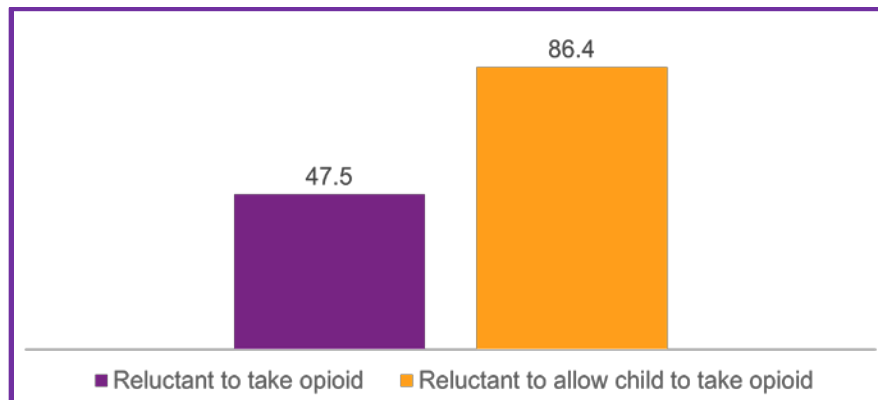
Key Findings

Attitudes and Beliefs about Prescription Opioids and Non-opioid Alternatives

Most respondents think prescription opioids are over-prescribed, too accessible, and have contributed to the opioid epidemic. About nine in ten respondents thought, “we prescribe too many opioids in the United States” (88.1%), that “there are too many excess opioid pills in medicine cabinets in the United States” (89.8%), and that “prescription opioids are a contributing factor to the U.S. opioid epidemic” (94.5%).

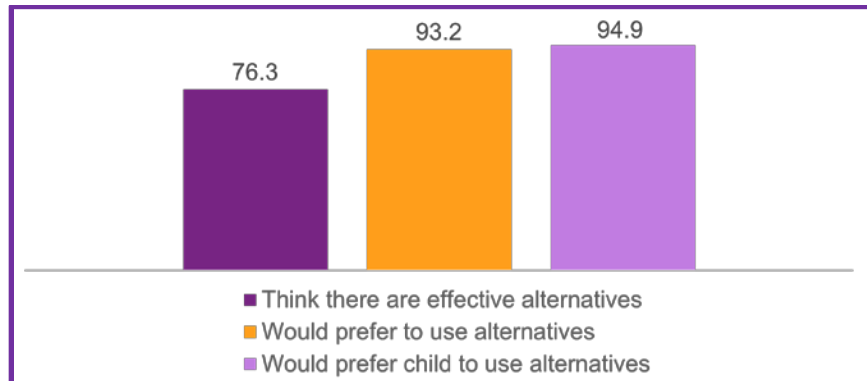


Many would feel reluctant to take a prescribed opioid for acute pain and most would have a problem allowing their child take it. Nearly half (47.5%) disagreed with the statement “If I were prescribed an opioid to treat acute pain, I would have no problem taking it” (33.9% said it was true and 18.6% were unsure). When asked the same about their child, 86.4% disagreed with the statement “If my child were prescribed an opioid to treat acute pain, I would have no problem having my child take it” (10.2% were unsure).

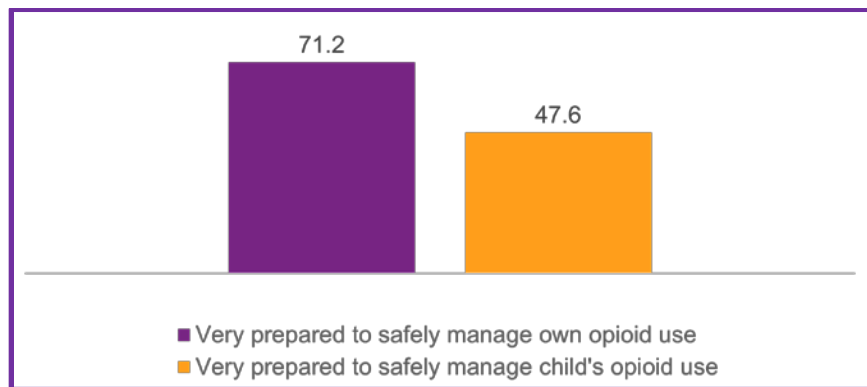


Many believe that there are effective alternatives for treating pain and most would prefer them to opioids, but there is less certainty about the availability of these alternatives. About three in four (76.3%) thought it is true that “there are effective alternatives to prescription opioids for treating acute pain” (20.3% were unsure), but 40.7% thought, “non-opioid alternatives for treating acute pain are less easily available than opioid medications” (23.7% thought this statement was false and 35.6% were unsure about it). Still, the majority (93.2%) said it was true that “If effective alternatives to opioid medications were available to treat acute pain, I would prefer to use them rather than taking prescribed opioids.” A similar majority (94.9%) felt the same about preferring that their child use alternatives to opioid

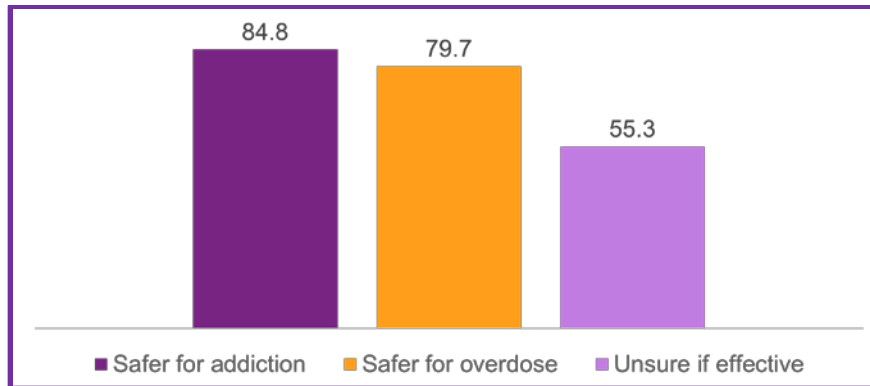
medications and that they “would feel comfortable asking my provider or my child’s provider for alternatives to opioid medications if they were about to prescribe an opioid to treat acute pain.”



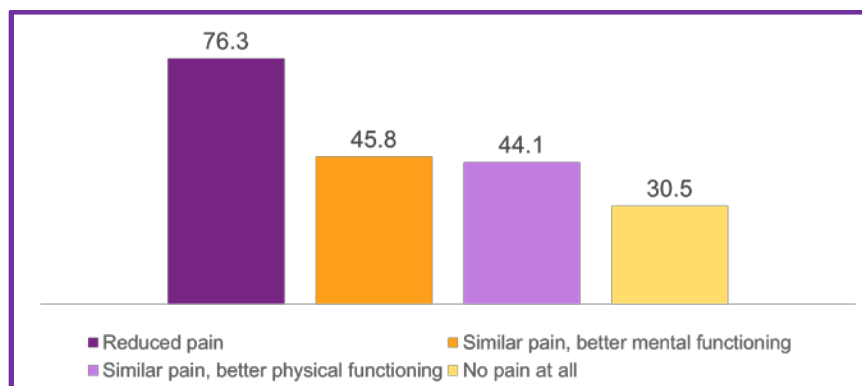
Respondents felt more prepared to safely manage their own future use of a prescribed opioid medication than their child’s future use of a prescribed opioid medication. When asked how prepared they would feel to manage their opioid use safely if they were prescribed one in the future, 71.2% said they would feel very prepared (20.3%, somewhat prepared and 8.5%, unprepared). When asked the same question in relation to their child, only 47.6% said they would feel very prepared (20.3%, somewhat prepared and 32.2%, unprepared).



Most respondents see non-opioid alternatives to treat acute pain as safer than opioid medications, but are not as sure about whether they are as effective as opioids. Most (84.8%) said that non-opioids are safer than opioids when it comes to the risk of addiction and 79.7% said they are safer when it comes to the risk of overdose. Most (83.1%) also indicated that prescription opioids are equally dangerous to heroin and other illegal opioids if they are not used exactly as prescribed (15.3% believed them to be more dangerous and 1.7% said that they were less dangerous). However, more than half (55.3%) were unsure about whether non-opioid alternatives are effective for treating acute pain compared to opioids (23.73% thought they are equally effective, 15.3% thought that they are less effective, and 5.1% thought they are more effective).



Standards for determining whether a pain treatment was effective varied, but centered on reducing pain or resulting in no pain at all. About three-quarters of respondents (76.3%) said that they would decide that a specific pain treatment worked, was effective, or made a real difference in easing acute pain if they experienced reduced pain; 30.5% said they would need to experience no pain at all to decide that a treatment worked. Forty-six percent said they would decide that a pain treatment worked if it resulted in experiencing a similar level of pain, but with the feeling that one is better able to function mentally or emotionally and 44.1% said the same about it improving physical functioning.

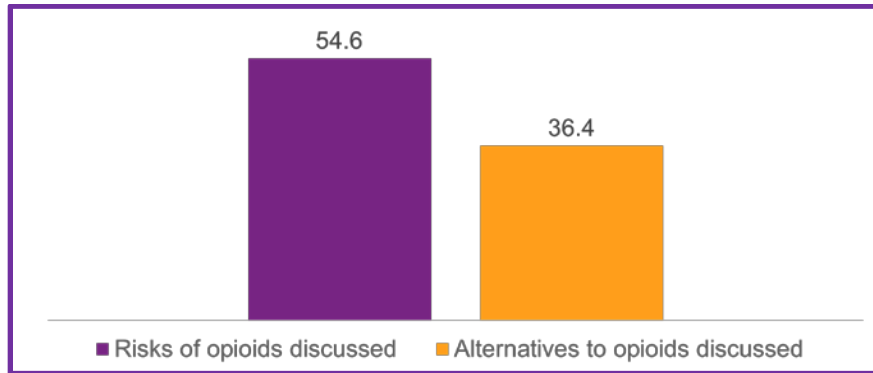


The specific non-opioid alternatives that most respondents would be willing to use or have their child use to manage acute pain are acetaminophen, ibuprofen, and physical therapy. Offered a list of non-opioid alternatives for acute pain, the majority said they would be willing to use acetaminophen (*Tylenol, Tylenol, Ofirmev injection by a health care provider*; 89.8%), ibuprofen (*Advil, Motrin, Calodor injection by a health care provider*; 94.9%), or physical therapy (94.9%) if it were recommended or prescribed by their provider. When asked what they would be willing to have their child use, 91.5% said acetaminophen, 91.5% said ibuprofen, and 93.2% said physical therapy. Other common responses were aspirin (*Bayer*), surgical site pain relievers or numbing agents (*EXPAREL injection by a health care provider*), antibiotics, massage therapy, and psychological therapy.

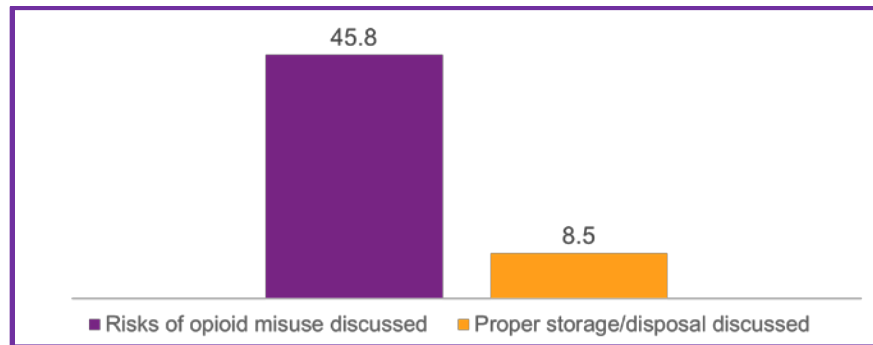
Personal Experiences with Prescription Opioids and Non-opioid Alternatives

Most respondents had not had an experience in which they or their child was prescribed an opioid in the past year, but among those who had, most were prescribed an opioid to treat acute (temporary) pain. Twelve percent of respondents said they had been prescribed an opioid medication in the past 12 months and 16.9% said that their child had been prescribed an opioid during that time. Among those for whom an opioid was prescribed, 68.8% said it was to treat acute pain (18.8% said it was for chronic pain and 12.5% were unsure).

Among those who reported having an opioid prescribed for acute pain, nearly half said that the potential risks were not discussed by the provider and two-thirds said that non-opioid alternatives were not presented as options. Only 54.6% of respondents who were prescribed an opioid for themselves or their child to treat acute pain said there was a discussion about potential risks associated with taking opioid medications and only one-third (36.4%) said that the prescribing provider or a member of the provider’s staff discussed alternatives to opioids to treat the pain.



More than half of respondents said they never talked to their own or their child’s provider about the risks associated with misusing prescription opioids and the majority never discussed proper storage or disposal of unused prescription opioids. Despite experiencing substance use problems or addiction in their family, only 45.8% of respondents said they had talked with a health care provider about the risks associated with misusing prescription opioids and only 8.5% said they had a discussion with a provider (their own or their child’s) about how to store or dispose of unused prescription medications, including opioids. About 15% reported currently having in their home leftover or unused prescription opioids from an earlier, but resolved, acute pain event (5.1% were unsure).



Digital Tools Seen as Helpful in Assessing Options for Pain Management

Respondents were asked which of the following tools they would find helpful in preparing to assess their options if they or their children were to have a procedure that required pain management in the future:

- Text a hotline to receive answers to questions
- Text a hotline to sign up for reminders and information before an appointment
- A digital or print guide or decision making tool

All three options were selected as helpful by 40.7% of respondents; 28.8% selected only the digital or print guide or decision-making tool; 13.6% selected both the text hotline to receive answers to questions and the digital or print guide or decision-making tool; and 6.8% selected both texting to hotline options.

Conclusion

The findings from this survey indicate that non-opioid alternatives for the treatment or management of acute pain are not typically offered by medical providers, despite a belief among parents that prescription opioids carry risks and a demonstrated interest of utilizing non-opioid alternatives, especially for their children.

A significant majority of the parents surveyed believed that there were issues surrounding opioid prescribing practices in the United States. Most thought that too many opioids are prescribed, there are too many excess opioid pills in medicine cabinets, prescription opioids are a contributing factor to the opioid epidemic, and there are effective alternatives for treating acute pain. The majority said that prescription opioids can be as dangerous as heroin and other illegal opioids and expressed concern about using them to treat their own or their child's acute pain. Nevertheless, parents seemed hesitant to raise their concerns or inquire about alternatives with their own or their child's provider.

Parents' interest in non-opioid alternatives for managing acute pain does not seem to be met by providers' interest or willingness to offer these alternatives or even to discuss safety precautions with regard to opioid medications. This is especially concerning given the characteristics of this sample, which was comprised primarily of parents who have struggled with a child's substance use or addiction.

These results highlight the need for both provider and provider-to-parent education on non-opioid alternatives to treat pain as well as on safe storage and disposal of opioid medications. Given that the sample consisted of parents with firsthand experience with substance use and addiction within their own families, one can assume that they are more wary relative to the average parent of the risks of opioids, more knowledgeable about alternatives, and more willing to press providers to offer non-opioid options to treat a loved one's pain. Yet, even they did not typically seek out these alternatives, making it all the more important for education and discussions around non-opioid options to become a routine part of health care practice, especially for patients at risk for addiction.

Policymakers should support health professional education about opioid misuse and dependence; incentivize providers to spend time educating patients, screening for risk, and offering brief interventions; and encourage research into and the use of effective non-opioid alternatives for acute pain management.¹³

Appendix

Survey Instrument

Thank you for agreeing to participate in this brief survey that will help us get some information about non-addictive alternatives to opioids for the treatment of pain. It should take about 10 minutes to complete.

There are no right or wrong answers. We are simply trying to get a feel for people’s experiences so that we can better advocate to make sure health care professionals are sensitive to the needs of people in recovery. All responses will be kept confidential. If you have any questions or concerns about completing the survey, please contact my colleague Linda Richter at lrichter@toendaddiction.org

We are conducting this research in partnership with Voices for Non-Opioid Choices (<https://nonopioidchoices.org/about/>). They will be receiving and using the data from the survey but will not receive any information that could tie responses to individual respondents’ identities.

Thank you in advance for your help!

Some quick definitions before we start:

Acute pain refers to temporary pain, such as that experienced after a surgery, other medical procedure, or an injury. It is important to note this is a different type of pain than chronic (long-lasting) pain.

Prescription opioids are pain relievers that are prescribed and administered under names such as hydrocodone (*Vicodin, Lortab, Lorcet*), oxycodone (*OxyContin, Percocet, Percodan*), morphine (*Kadian, Avinza*), codeine (often combined with acetaminophen or aspirin), hydromorphone (*Dilaudid*), meperidine (*Demerol*), and methadone.

Non-Opioid Alternatives are interventions to manage pain. These include over-the-counter medications, such as acetaminophen (*Tylenol*), nonsteroidal anti-inflammatory drugs (NSAIDs) such as aspirin (*Bayer*) and ibuprofen (*Advil, Motrin*), naproxen (*Aleve, Naprosyn*), as well as prescription non-opioid medications injected by a health care provider such as NSAIDs (*Toradol*), ibuprofen (*Caldolor*), acetaminophen (*Ofirmev*), or anesthetics – numbing agents delivered directly to the area of the body where the surgery was performed (*Marcaine, EXPAREL*). Non-opioid alternatives can also include therapeutic services – such as physical or massage therapy, psychological support, or acupuncture – and certain medical devices that reduce or interfere with the sensation of pain.

Please answer the following questions as accurately and honestly as you can:

1. Please indicate if you think the following statements are true, false, or if you are unsure:
 - We prescribe too many opioids in the United States.
 - There are too many excess opioid pills in medicine cabinets in the United States.
 - Prescription opioids are a contributing factor to the US opioid epidemic.
 - There are effective alternatives to prescription opioids for treating acute pain.
 - Non-opioid alternatives for treating acute pain are less easily available than opioid medications.
 - If I were prescribed an opioid to treat acute pain, I would have no problem taking it.
 - If my child were prescribed an opioid to treat acute pain, I would have no problem having my child take it.
 - If effective alternatives to opioid medications were available to treat acute pain, I would prefer to use them rather than taking prescribed opioids.
 - If effective alternatives to opioid medications were available to treat acute pain, I would prefer to have my child use them rather than taking prescribed opioids.
 - I would feel comfortable asking my provider or my child's provider for alternatives to opioid medications if he/she was about to prescribe an opioid to treat acute pain.
 - If answer is false, please indicate which of the following best describes why you would not feel comfortable to ask a provider for an alternative to an opioid medication:
 - I would be reluctant to question the doctor's judgment
 - I am not aware of non-opioid options to manage pain
 - I don't have enough information about non-opioids to start a meaningful discussion
 - I trust the doctor's recommendation
 - I believe opioids are an effective way to manage pain
 - Other *[please specify]*

2. Please respond to the following items by selecting the response option that best reflects your opinion or belief:
 - Compared to opioids for treating acute pain, non-opioid alternatives are:
 - more effective
 - equally effective
 - less effective
 - Unsure
 - Compared to opioids for treating acute pain, non-opioid alternatives are:
 - safer when it comes to the risk of addiction
 - as safe when it comes to the risk of addiction
 - less safe when it comes to the risk of addiction
 - Unsure
 - Compared to opioids for treating acute pain, non-opioid alternatives are:
 - safer when it comes to the risk of overdose
 - as safe when it comes to the risk of overdose
 - less safe when it comes to the risk of overdose
 - Unsure

3. Please indicate which of the following you would be willing to use to treat acute pain, if it were recommended or prescribed by your provider *[check all that apply]*:
- Acetaminophen (*Tylenol, Ofirmev injection by a health care provider*)
 - Ibuprofen (*Advil, Motrin, Caldolor injection by a health care provider*)
 - Aspirin (*Bayer*)
 - Opioid medication
 - Steroids
 - Antibiotics
 - Surgical site pain relievers or numbing agents (*EXPAREL injection by a health care provider*)
 - Acupuncture
 - Hypnosis
 - Massage therapy
 - Physical therapy
 - Psychological therapy
- 3a. Please indicate which of the following you would be willing to have your child use to treat acute pain, if it were recommended or prescribed by your child's provider *[check all that apply]*:
- Acetaminophen (*Tylenol, Ofirmev injection by a health care provider*)
 - Ibuprofen (*Advil, Motrin, Caldolor injection by a health care provider*)
 - Aspirin (*Bayer*)
 - Opioid medication
 - Steroids
 - Antibiotics
 - Surgical site pain relievers or numbing agents (*EXPAREL injection by a health care provider*)
 - Acupuncture
 - Hypnosis
 - Massage therapy
 - Physical therapy
 - Psychological therapy
4. Have you been prescribed an opioid medication within the past 12 months?
- Yes
 - No
 - Unsure
5. Has your child been prescribed an opioid medication within the past 12 months? *[If more than one child was prescribed an opioid medication, please think of the child with the most recent prescription when answering the questions.]*
- Yes
 - No
 - Unsure

[If respondent answers No or Unsure to both Q4 and Q5, skip to Q13]

6. Was the opioid prescribed to treat acute (temporary) pain or chronic (long-term) pain?
- Acute pain
 - Chronic pain [SKIP TO Q13]
 - Unsure [SKIP TO Q13]

7. If an opioid was prescribed to treat acute pain, was there any discussion about potential risks associated with taking opioid medications?
- Yes
 - No
 - Unsure
8. If an opioid was prescribed to you or to your child to treat acute pain, did the prescribing provider or a member of the provider's staff discuss any alternatives to opioids to treat the pain?
- Yes
 - No [SKIP TO Q12]
 - Unsure [SKIP TO Q13]
9. If the provider discussed alternatives, which alternatives were offered or recommended?
-
10. If the provider discussed alternatives, were there any economic considerations (e.g., insurance coverage, medication costs) that you were made aware of when choosing between opioids and non-opioid alternatives to treat acute pain?
- Yes
 - No
 - Unsure
11. If the provider discussed alternatives, were the alternatives presented as a more effective, equally effective, or less effective option compared to opioids to treat acute pain?
- More effective than opioids
 - Equally as effective as opioids
 - Less effective than opioids
12. If the provider did not discuss alternatives to opioids, did you ask the prescribing provider or a member of the provider's staff about alternatives to opioids to treat acute pain?
- Yes. Please indicate which of the following best describes the response you received from the provider:
 - The provider offered an alternative to opioids
 - The provider did not offer an alternative to opioids
 - Unsure
 - No. Please indicate which of the following best describes why you did not ask about alternatives:
 - I would be reluctant to question the doctor's judgment
 - I was not aware of non-opioid options to manage pain
 - I don't have enough information about non-opioids to start a meaningful discussion
 - I trust the doctor's recommendation
 - I believe opioids are an effective way to manage pain
 - Other [*please specify*]
-
13. If you were to be prescribed an opioid in the future, how prepared would you feel to manage your opioid use safely?
- Very prepared
 - Somewhat prepared
 - Not prepared

- 13a. If your child were to be prescribed an opioid in the future, how prepared would you feel to manage your child's opioid use safely?
- Very prepared
 - Somewhat prepared
 - Not prepared
14. Have you ever talked to your own or your child's provider about the risks associated with misusing prescription opioids; that is, using them in ways or amounts other than as prescribed?
- Yes
 - No
 - Unsure
15. In comparison to heroin and other illegal opioids, how dangerous are prescription opioids if not used exactly as prescribed?
- More dangerous
 - Equally as dangerous
 - Less dangerous
16. Has anyone at your own or at your child's provider's office ever discussed with you how to store or dispose of unused prescription medications, including opioids?
- Yes
 - No
 - Unsure
17. Do you currently have in your home any leftover or unused prescription opioids from an earlier acute pain event that has since resolved?
- Yes
 - No
 - Unsure
18. Which of the following would make you decide that a specific pain treatment worked, was effective, or made a real difference in easing acute pain? *[check all that apply]:*
- Experience no pain at all
 - Experience reduced pain
 - Experience similar level of pain, but feel more able to function physically
 - Experience similar level of pain, but feel more able to function mentally or emotionally
 - Other *[please specify]*
-
19. If you or your child were to have a procedure that required pain management in the future, what tools could help prepare you to assess your options?
- Text a hotline to receive answers to questions
 - Text a hotline to sign up for reminders and information before your appointment
 - A digital or print guide or decision making tool
20. Is there anything else you'd like to share about an experience you've had with prescription opioids for the treatment of acute pain?
-

21. Is there anything else you'd like to share about an experience you've had with non-opioid alternatives for the treatment of acute pain?

Just a few remaining questions:

22. With which gender do you identify?

- Female
- Male
- Other
- Prefer not to answer

23. What is your age?

- 18-29
- 30-45
- 46-59
- 60-75
- 76+
- Prefer not to answer

24. Please indicate your race/ethnicity:

- White, not Hispanic/Latinx
- Black, not Hispanic/Latinx
- Hispanic/Latinx
- Asian
- Native American, Native Hawaiian or Pacific Islander
- Two or more ethnicities
- Other
- Prefer not to answer

25. In which state do you currently live? _____

Thank you for your time and participation!

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- ¹³ Kelley-Quon, L. I., Kirkpatrick, M. G., Ricca, R. L., Baird, R., Harbaugh, C. M., Brady, A., et al. (2021). Guidelines for Opioid Prescribing in Children and Adolescents After Surgery: An Expert Panel Opinion. *JAMA Surgery*, 156(1), 76–90. <https://doi.org/10.1001/jamasurg.2020.5045>