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May 5, 2024

Pediatric Pain Management: The Unforeseen Consequences of the Opioid Epidemic

Research Question: What are the implications of the opioid epidemic on pediatric pain management?

Opioids are viable in treating pediatric pain as they provide effective relief for moderate to severe pain in children, particularly following major surgical procedures (e.g., scoliosis surgery), trauma (e.g., car accidents, falls), and burns. These situations frequently cause significant pain that requires effective analgesics like opioids to manage.

What are opioids, and why do they pose a risk to the health of young people?

Opioids are a category of medications commonly prescribed for managing moderate to severe pain in individuals. They encompass a range of pain relieving drugs that interact with the receptors in your brain to inhibit pain signals and increase the production of endorphins, or hormones that are produced when your body feels pain or stress. Doctors commonly prescribe opioids to manage pain after surgery for cancer related pain, chronic pain and pain resulting from injuries or accidents. While considered effective for pain management, it is crucial to note that opioids should only be used under medical supervision and with a valid prescription, as they carry significant risks for addiction, overdose, and potential death. Moreover, the opioid crisis has sparked concerns surrounding opioid abuse, underscoring the importance for healthcare professionals to carefully manage pain relief while mitigating the dangers linked to opioid consumption.

What are the risk factors that make adolescents more susceptible to opioid misuse?

The widespread issue of opioid misuse has had profound implications for individuals of all ages, especially adolescents. This demographic has been particularly affected by the increasing rates of opioid-related hospitalizations and fatalities. Various factors, such as mental health challenges, exposure to trauma, and peer pressure, place adolescents at heightened risk of opioid misuse. Additionally, the easy accessibility of prescription opioids from home medicine cabinets or through social networks further alludes to this vulnerability. Adolescents face a multitude of risk factors that make them susceptible to opioid misuse. According to Kathryn DelPizzo, the Director of Pediatric Anesthesiology, Hospital for Special Surgery, some of these risks include:

- Children and teens have brains which are still developing..
- Many are subjected to peer pressure or engaging in drug or alcohol experimentation.
- Many adolescents struggle with mental health disorders including depression and anxiety.
- Surgery can be traumatic, and young people in the US are more vulnerable than ever to experience mental health problems.

An epidemic of opioid-related overdose deaths continues to rise in the United States through the last two decades, but its impact on children is hardly recognized nationally or in legislative initiatives. A study from the *Pediatric Health Information System Database* revealed that, “3,647 patients in 31 children's hospitals across the country [...] were admitted with opioid-related diagnoses” (“Opioid Overdose Among Children Nearly Doubles, Study Says.”). In addition, 43% of the patients who were admitted were sent to the ICU. As the issue of adolescent opioid use, addiction, and overdose remains a major concern, it is important to

understand the triggers that contribute to this troubling trend. Erin Winstanely, a member of the CPDD (College on the Problems of Drug Dependence) asserts :

The drug overdose death rate among adolescents aged 15 to 19 years more than doubled from 1999 (1.6 per 100,000) to 2007 (4.2 per 100,000), declined by 26% between 2007 and 2014 (3.1 per 100,000), and then increased in 2015 (3.7 per 100,000).⁴⁹ Although estimates vary by year and geographic area, in 2016, approximately 60% of drug overdose deaths involved opioids,⁵⁰ and 86% were classified as unintentional. [...]

Timely treatment of adolescents with OUDs, before they transition into adulthood, is critical; additional research and clinical tools are needed to prevent adolescent overdose.

The effects of opioids on adolescents are far-reaching and multifaceted. From physical health problems to addiction and substance dependence, opioids can have detrimental effects on the overall health of young individuals. Furthermore, adolescents who abuse opioids may also suffer in school, have social problems, and find it difficult building healthy relationships with their peers. Ultimately, the opioid epidemic poses a significant threat to the well-being of adolescents, and urgent action is needed to address this crisis. Through targeted interventions, education, and support, we can work towards reducing the impact of opioids on adolescents and ensuring a brighter future for the next generation.

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