

Clinical Perspectives

Prescribing Nasal Naloxone in Pediatrics: A Clinical Perspective on Reducing Overdose Deaths

Sivabalaji Kaliamurthy, M.D.^{1,2,3} , Jesse Ross, B.A.⁴ , Laura Willing, M.D.^{1,2} 

¹ Psychiatry, Children's National, ² Psychiatry, George Washington University, ³ Psychiatry, Howard University, ⁴ School of Medicine and Health Sciences, George Washington University

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Adolescents continue to be at increased risk for fatal opioid overdoses, driven by the widespread presence of illicitly manufactured fentanyl. Naloxone, a lifesaving opioid antagonist and an effective overdose reversal agent, remains underutilized in pediatric and adolescent populations. This clinical perspective addresses gaps in naloxone accessibility, common barriers that prevent clinicians from prescribing it, and solutions to overcome these barriers by presenting and discussing a case study of a 16-year-old girl suspended for carrying nasal naloxone to school.

Our objectives are to (1) outline clinical recommendations for identifying at-risk adolescents who should be prescribed naloxone, emphasizing its utility for adolescents using opioids or other substances and those with social connections to individuals engaging in substance use; (2) review common school policies that place naloxone in nurses' stations and the impracticality of retrieving it in emergencies; and (3) provide evidence debunking the myth that naloxone access encourages substance use and propose advocacy strategies for clinicians to navigate restrictive school policies and community stigma.

This clinical perspective also touches on the ethical considerations surrounding adolescent confidentiality laws, which may limit naloxone prescribing in cases where parental consent is unattainable. Several actionable solutions are discussed, including prescribing naloxone universally with comprehensive education on its benefits and safety profile. By equipping clinicians with evidence-based strategies and advocacy tools, this article aims to enhance the accessibility of naloxone for adolescents, reducing the tragic toll of opioid overdoses.

CASE

A 16-year-old girl being treated for opioid use disorder was suspended from school for carrying nasal naloxone, an opioid overdose reversal drug. This medication, a mainstay in the toolkit of anyone trying to prevent opioid-related deaths, can save a life, reversing the overdose by blocking opioid receptors in the body. It has minimal to no side effects when administered and no effect on those not experiencing an opioid overdose. The school administration, however, thought that "carrying naloxone meant she was okay with her friends using drugs." With naloxone in the nurse's station, they believed that carrying the drug encouraged a culture of drug use, rather than a culture of safety and harm prevention. Our clinical team responded by writing a provider's note for the patient to carry nasal

naloxone at school. This article describes the framework for this decision as well as provides an evaluation of who should be considered "at risk" and given similar accommodations.

INTRODUCTION

Opioid-related deaths have been increasing in adolescents in the US since 2019,¹ mostly attributed to the increase in illicitly manufactured fentanyl in the drug supply. As of 2020, drug-related overdose deaths and poisonings were the third leading cause of death in children and adolescents.² Between 2019 and 2021, 2037 adolescents died from opioid overdose, with rates of overdose increasing 65% over this time period.³ One study estimated that on average, 22 high-school-age adolescents died of an overdose every



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week in 2022.⁴ Adolescents are more at risk, but overdose deaths have been reported in those as young as 10 years old.³ This is despite an overall decrease in drug use by adolescents, highlighting the potency of the drugs being used and the urgency of effective harm reduction strategies.

Naloxone is an opioid antagonist that is available as a nasal spray. It blocks the binding of opioids to mu opioid receptors and can immediately reverse an overdose and prevent death.⁵ It is produced in disposable single-use units and is administered as a single spray into either of the user's nostrils. The dosing is universal for all body weights and does not produce any effect if the user has not used any opioids. The only documented adverse effects are rare allergic reactions.⁵

While 60% of adolescent overdose deaths between 2019 and 2021 had a bystander present, naloxone was not administered in 70% of those deaths.³ Of note, this disparity continued despite an ongoing increase in number of available naloxone prescriptions since 2017.⁶ Furthermore, of all overdoses recorded during the 2019-2021 period, only 33% had a diagnosis of opioid use disorder.³ These facts taken together suggest that (1) naloxone is being underutilized and (2) not all at-risk individuals carry a diagnosis of opioid use disorder.

CLINICAL RECOMMENDATIONS FOR TARGETED NALOXONE PRESCRIPTION

While there are no established guidelines for identifying who should be considered at risk for overdose, there are 3 relationships to drug use that should not be missed when considering who should be given a naloxone prescription.

First, there are adolescents who use opioids and other illicit substances, and this obviously puts them at risk. Ensuring these individuals receive naloxone is a benefit to both themselves, as using any substance is a risk factor for opioid overdose, and any friends they have who might use illicit substances, to whom naloxone can be administered if they overdose—a practice protected by Good Samaritan laws. This would empower all those in any communal setting of drug use to save their friend's life if they overdose. Second, for similar reasons, anyone with friends or family members who use any substance should be prescribed naloxone as well. Third, any adolescent or family member who has received a prescription for opioid medications should be given a prescription for naloxone.⁶

It should be the standard of care to assess all high-school-aged adolescents for the aforementioned risk factors and accordingly prescribe naloxone and give a provider's note to carry the medication in school districts where school policy does not explicitly allow them to carry this medication. As this information demonstrates, however, there are many challenges to implementing this recommendation. These challenges can be addressed by clinicians using the following creative strategies.

CHALLENGES TO NALOXONE ACCESS AND UTILIZATION, AND PROPOSED STRATEGIES

Challenge 1: There is a lack of clarity around naloxone self-carry laws and policies in schools.

Proposal 1: In all 50 states, students have the right to self-carry lifesaving medication such as injectable epinephrine and inhalers for acute asthma attacks.⁷ Given the safety profile of naloxone compared to these interventions, providers should feel confident writing notes to allow self-carry in school. In addition, providers should support advocacy efforts to allow self-carry in their school districts, mirroring the recent legislation in Montgomery County, Maryland, that explicitly protects students from disciplinary action solely for carrying naloxone.⁸

Challenge 2: There is considerable stigma in school administrations and local government that naloxone prescription encourages drug use.

Proposal 2: Providers should advocate on behalf of the increased presence of naloxone on students' persons based on robust research that disproves this connection. Researchers from Columbia University tracked adolescent initiation of use and lifetime use of both heroin and injectable drugs from 2007 to 2019 as a function of laws passed that increased naloxone availability. While naloxone access increased dramatically over this time period, researchers found that there was no meaningful increase of initiation or continued use of heroin or injectable drugs.⁹ This is an opportunity for Regional Organizations of Child and Adolescent Psychiatry and other provider-led groups to engage in local advocacy.

Challenge 3: The availability of naloxone in school nursing stations might lead some schools to think self-carrying naloxone is unnecessary.

Proposal 3: There are many times during the day when students may not be physically at school—off-campus lunch hours, extracurriculars, if a student leaves school early, or socializing after school has ended. Students who witness a peer overdose in these settings may not have adequate time or the ability to retrieve naloxone from the nurse's office in a timely manner to intervene. Further, the witness who was concurrently using substances might hesitate to do so because of fear of disciplinary action. Providers should advocate for their patients to self-carry naloxone so that they have more ready access to this medication.

Challenge 4: Middle schools might be more hesitant to allow naloxone on their campuses. Most research on this topic focuses on adolescents above the age of 14 years, and there are considerable developmental differences between sixth graders and eighth graders. School administrators might worry about exposing their younger students to interventions aimed at their older students depending on the locality.

Proposal 4: Naloxone does not pose any more risks to younger children than it does to anyone else, provided they are instructed on its use and how to responsibly discuss carrying it with peers.¹⁰ With the increase in middle-school-

age children dying due to overdose,³ it is crucial to make this medication accessible to this demographic.

Challenge 5: The Health Insurance Portability and Accountability Act and 42 CFR part 2,^{11,12} the federal laws that govern confidentiality, allow adolescents to confidentially seek treatment for substance use disorder. However, their ability to consent to treatment is often dependent on local state laws that may have age and parental circumstances limitations. For example, Washington, DC, allows a minor of any age to consent to substance use disorder treatment if a provider deems they have the capacity to do so, while in Mississippi, only those over the age of 15 years have this right.¹³ Because prescribing naloxone may be seen as substance use disorder treatment, the patient must be able to consent to such treatment when they do not want parental involvement.

Proposal 5: In cases where patients cannot consent to treatment without their parents' consent as well as patients who can consent but do not want their parents to know they are being given naloxone, special considerations must be made. One possible solution is to educate patients on local naloxone distribution sites that do not require a prescription. Another possible solution is to administer naloxone to all of one's patients, educating them and their parents on the current epidemic, the safety of naloxone, the benefit of increasing the accessibility of this medication, and evidence that carrying naloxone does not increase risk of opioid use. In addition, physicians can advocate to amend their local state laws to align with federal law and allow adolescents to confidentially consent to substance use disorder treatment.

CONCLUSION

The rising number of adolescent opioid overdose deaths despite increasing numbers of naloxone prescriptions highlights the need to provide targeted groups with more timely and consistent access to naloxone. This article arms providers with the knowledge they need to both prescribe naloxone to anyone who might benefit from it and advocate for their patients' ability to self-carry the medication through providers' notes and conversations with school administrations. Given the safety profile of naloxone and the robust evidence that increased access to naloxone does not increase rates of drug use in adolescents, providers can confidently play a vital role in increasing access to this medication for their patients.

PLAIN LANGUAGE SUMMARY

More adolescents are dying from opioid overdoses, partly because powerful drugs like fentanyl are mixed into the drug supply. Naloxone can reverse an overdose and save lives, but it's not used enough in adolescents. We explored why adolescents often can't carry naloxone and how rules and stigma get in the way. Giving adolescents naloxone does not make them more likely to use drugs. Providers can help change school rules and laws so more adolescents have

naloxone. Making naloxone easier to carry could save lives and protect families from tragedy.

ABOUT THE AUTHORS

Sivabalaji Kaliyamurthy, MD, Division of Psychiatry and Behavioral Medicine, Children's National Hospital, Washington, DC, USA; School of Medicine and Health Sciences, The George Washington University, Washington, DC, USA; Department of Psychiatry, Howard University, Washington, DC, USA; Department of Psychiatry, Yale University, New Haven, Connecticut, USA.

Jesse Ross, BA, School of Medicine and Health Sciences, The George Washington University, Washington, DC, USA.

Laura Willing, MD, Division of Psychiatry and Behavioral Medicine, Children's National Hospital, Washington, DC, USA; School of Medicine and Health Sciences, The George Washington University, Washington, DC, USA.

CORRESPONDENCE TO:

Sivabalaji Kaliyamurthy, MD; email: skaliamurt@childrensnational.org.

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AUTHOR CONTRIBUTIONS

All members contributed equally to this work.

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