

### OVERDOSE YOUTH SAFETY IN THE INLAND EMPIRE (ODYSIE) Program Overview

# GOALS:

- To prevent morbidity and mortality of substance overdose in Inland Empire schools by augmenting preparedness of school educators and staff in recognizing and responding to overdose events
- To increase awareness of adolescent overdoses in the Inland Empire and implement evidence-based methods of prevention
- To promote familiarity, positive attitudes, skill, and self-efficacy with the administration of Naloxone as a life-saving intervention in the context of a suspected overdose event
- To engage school educators and administrators in broader dialogue regarding overdose prevention, harm reduction, and substance use treatment for youth populations in the Inland Empire

# TARGET POPULATION:

Current part-time or full-time educators, paraeducators, or school administrators involved in the instruction or administration of students in grades 9-12 in San Bernardino and Riverside County schools

# **BACKGROUND:**

Drug overdose is a leading cause of accidental, preventable, and *reversible* death and disease states in the adolescent and young adult age groups. Adolescent students at high schools in the Inland Empire (San Bernardino and Riverside Counties) and across the United States are at risk for opioid overdose at home, on school grounds, during school events, and other local venues. That said, the nature of traditional secondary schooling in the U.S. aggregates significant risk of adolescent overdose to one location for the majority of the school year. By virtue of their roles and face-time with the population at risk, school teachers and staff may be the most likely to witness adolescent overdose, second only to peer groups. To meet the relative need, Inland Empire public schools and individual school administrators have the opportunity to supply their teachers and staff with specific equipment to effectively prepare for drug overdose such as intranasal naloxone kits.

Naloxone is a rapidly-acting opioid antagonist medication that has been widely proven to safely and effectively reverse opioid overdose when administered by a healthcare professional or a properly educated bystander.<sup>1-5</sup> In 2017, along with many other public health-facing government agencies, the United States Department of Health and Human Services (HHS) released a multifaceted approach to combat the growing opioid epidemic, which is responsible for taking 78,450 lives (75% of all drug overdose deaths) in the 12-month period ending in March 2022.<sup>6,7</sup> A key strategy of an overwhelming number of local, regional, and national responses to the opioid issue, including that of the HHS, is the wide expansion of access to naloxone for those at risk for opioid overdose. In response to this, California has implemented legislation such as the standing order for naloxone to increase pharmacy and community access for the medication, but also policy to protect the layperson administration of naloxone under "Good Samaritan" principles.

Intranasal naloxone kits are a key individual control for the mitigation of overdose death risk in high schools. Often school police and security are charged with the responsibility for overdose response in schools and may carry naloxone kits. However, teachers and paraeducators are additionally impactful naloxone carriers for several reasons: 1) proximity and familiarity with students, 2) relative ownership and knowledge of the specific space in which they practice, and 3) greatest total number of personnel amongst school staff designations. Widespread availability of overdose preparedness and naloxone administration training for teachers is likely to be a critical administrative control for the success of this intervention.

## **PROGRAM DESCRIPTION:**

## SCHOOL OUTREACH

To reach the target population, ODYSIE will arrange in-person training sessions hosted by the school campus. This will be conducted at **no direct cost** to the school or participants, although schools may elect to dedicate funds to promoting the training (flyers, etc) or arranging catering services on their own prerogative. Inland Empire school administrators will be asked to fill out a short online School Outreach Request Form that first describes the program and answers frequently asked questions (FAQs) before prompting the interested party to enter basic details regarding the school, their contact information, and suitable dates/times for an outreach event. The link to the form will be disseminated widely to Inland Empire schools via county public health communications, district-wide newsletters and mailing lists, and on an individual basis to schools who have an apparent need or substantial interest by parents, students, educators, etc. Upon receipt of the form, ODYSIE team members will review the basic information and contact the school administrator to arrange an outreach event appropriate for the school's needs and staff availability. If a school is unable to host the session, a contingency site will be selected depending on the expected group size.

## OUTREACH TEAM & VOLUNTEERSHIP

The ODYSIE Outreach Team is composed of adult volunteers from several healthcare domains (i.e. EMTs, paramedics, firefighters/fire medics, nursing students, nurses, medical students, physicians, community health workers, etc) with real-world experience and advanced training in emergency response including overdose management. All outreach team members will complete a brief program-specific training prior to engaging in site visits to overlay expectations for structure and content of the school training sessions. The volunteers will travel to school campuses and other community settings/events (i.e. health fairs, public health events, etc) across the Inland Empire to promote widespread overdose preparedness. The Outreach Volunteers are responsible for delivering the ODYSIE curriculum and answering content-related questions to the extent of their knowledge and experience. They may also administer surveys for program evaluation and perform other logistical activities.

# TRAINING CONTENT & CURRICULUM

The ODYSIE Training Curriculum is developed and updated by the ODYSIE Steering Committee pursuant to the expanding evidence basis for overdose preparedness, naloxone distribution, and harm reduction in youth populations. Curriculum content sections include:

- Brief history of the U.S. Overdose Crisis
- Epidemiology of youth overdose in the IE
- Evaluation news/media coverage of drug use and overdose risk
- Risk factors for substance use, addiction, and overdose in youth populations
- Role of schools/educators in mitigating risk and responding to overdose
- Harm reduction approach in youth
- Recognizing overdose
- Overdose response with naloxone
- Local substance use treatment resources

### HARM REDUCTION APPROACH

While the widely-known DARE program historically promoted a "just say no" and zerotolerance mentality directly to elementary school students and adolescents, ODYSIE instead promotes a <u>harm reduction approach</u> to youth overdose risk awareness and overdose response amongst <u>school educators and administrators</u>, specifically. The original DARE-style approach has unfortunately not been shown to be effective<sup>13</sup> and is not recommended by the U.S. Office of the Surgeon General or the U.S. Department of Education. On the other hand, ODYSIE reflects the national shift toward harm reduction and naloxone promotion that has been shown to be effective in many contexts.

The National Harm Reduction Coalition defines *harm reduction* as "a set of practical strategies and ideas aimed at reducing negative consequences associated with drug use." ODYSIE aligns with the Substance Abuse & Mental Health Services Administration and the Department of Health and Human Services in promoting this evidence-based approach to overdose prevention and conversations about substance use, especially amongst adolescents and those who care for and serve them. In practicality, harm reduction interventions include overdose prevention education and widespread naloxone distribution.

### TRAINING FORMAT

Training content will be delivered primarily in slide presentation format with opportunity for Q&A following the presentation. Other modalities for training (i.e. simulation) will be offered on a modular basis upon development.

Length of the training will depend on the school, level of interest/participation by educators, training modules requested, and arrangements available for the training event. Individual training sessions can be as short as 30 minutes duration or up to 60-90 minutes depending on the aforementioned factors. Group/seating arrangements will vary as well. Small rotating sessions, assembly-style formats, and others can be supported.

## PROGRAM EVALUATION

Qualtrics will be used to collect pre-intervention and post-intervention surveys to evaluate the training session's effect on overdose-related knowledge and attitudes amongst our target population. Completion of surveys is completely optional and all participants in the program (regardless of survey completion) will be eligible for any program incentives (gift cards, etc) offered. Surveys will be collected anonymously unless participants would like to share their email addresses for further correspondence, however this is optional.

An informed consent section will appear at the start of both the pre-intervention and post-intervention surveys. Survey takers will be notified their rights as a participant in the study and their implicit consent by completing the ensuing survey.

## **EXPECTED IMPACT:**

There are several direct and indirect benefits expected for participants in this intervention as well as their colleagues, their students, their families, and their community. High school administrators/educators may be more likely and capable to respond in a suspected opioid overdose on campus, at home, or in the community after this intervention. This would increase the pool of trained naloxone administrators/overdose responders in Inland Empire and thereby, decrease the time to effective naloxone administration in high schools and our community. As the morbidity and mortality of opioid overdose increases with every unit of time that naloxone is not administered, this intervention may ultimately lead to decrease in adverse events related to overdose (e.g. anoxic brain injury, death) in our community.

Moreover, educators are often important facilitators of the spread of accurate information, including that related to public health, as they are generally viewed as impartial, knowledgeable, and caring.<sup>10</sup> High school educators participating in the planned intervention are likely to be empowered to distribute knowledge regarding appropriate naloxone administration to their colleagues, students, students' parents, and families, resulting in a cascade effect of public health knowledge dissemination. Also, further education regarding overdose may increase educators' comfort or familiarity on the subject and increase openness of discussion regarding the topic in high school classrooms which is likely to increase student perception of "safe space".<sup>11</sup>

Finally, educators involved in the intervention may be more likely to engage in advocacy at the school, district, and even state-level for the distribution of naloxone kits and the generation of district-wide overdose response procedures increasing the standardization and effectiveness of such a response.

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# REFERENCES

- 1. Giglio RE, Li G, DiMaggio CJ. Effectiveness of bystander naloxone administration and overdose education programs: a meta-analysis. *Inj Epidemiol*. 2015;2(1). doi:10.1186/s40621-015-0041-8
- Wermeling DP. Review of naloxone safety for opioid overdose: Practical considerations for new technology and expanded public access. *Ther Adv Drug Saf.* 2015. doi:10.1177/2042098614564776
- 3. Kerr D, Kelly AM, Dietze P, Jolley D, Barger B. Randomized controlled trial comparing the effectiveness and safety of intranasal and intramuscular naloxone for the treatment of suspected heroin overdose. *Addiction*. 2009. doi:10.1111/j.1360-0443.2009.02724.x
- 4. Kim HK, Nelson LS. Reducing the harm of opioid overdose with the safe use of naloxone : a pharmacologic review. *Expert Opin Drug Saf*. 2015;14(7):1137-1146. doi:10.1517/14740338.2015.1037274
- McDonald R, Strang J. Are take-home naloxone programmes effective? Systematic review utilizing application of the Bradford Hill criteria. *Addiction*. 2016. doi:10.1111/add.13326
- Wilson N, Kariisa M, Seth P, Smith H, Davis NL. Drug and Opioid-Involved Overdose Deaths — United States, 2017–2018. *MMWR Morb Mortal Wkly Rep.* 2020;69(11):290-297. doi:10.15585/mmwr.mm6911a4
- 7. HHS. Strategy to Combat Opioid Abuse, Misuse, and Overdose A Framework Based on the Five Point Strategy.
- Kelly A, Kerr D, Koutsogiannis Z, Dietze P, Patrick I, Walker T. Randomised trial of intranasal versus intramuscular naloxone in prehospital treatment for suspected opioid overdose. Med J Aust. 2005;182(1):24-27. doi:10.5694/j.1326-5377.2005.tb06550.x
- Davis CS, Carr D, Southwell JK, Beletsky L. Engaging law enforcement in overdose reversal initiatives: Authorization and liability for naloxone administration. Am J Public Health. 2015. doi:10.2105/AJPH.2015.302638
- 10. Garza, R., Ryser, G., & Lee, K. (2009). Illuminating adolescent voices: Identifying high school students' perceptions of teacher caring. *Academic Leadership*, 7(4).
- 11. Tupper, K. W. (2008). Teaching teachers to just say "know": Reflections on drug education. *Teaching and Teacher Education*, *24*(2), 356–367. https://doi.org/10.1016/j.tate.2007.08.007
- Williams, A. V., Strang, J., & Marsden, J. (2013). Development of Opioid Overdose Knowledge (OOKS) and Attitudes (OOAS) Scales for take-home naloxone training evaluation. *Drug and Alcohol Dependence*, *132*(1–2), 383–386. <u>https://doi.org/10.1016/J.DRUGALCDEP.2013.02.007</u>
- 13. West, S. L., & O'Neal, K. K. (2011). Project D.A.R.E. Outcome Effectiveness Revisited. *Https://Doi.Org/10.2105/AJPH.94.6.1027*, *94*(6), 1027–1029. https://doi.org/10.2105/AJPH.94.6.1027