

Preventing Opioid-Related Harms in the Construction Industry

Cora Roelofs¹ , Christopher Rodman², Richard Rinehart², and Chris Trahan Cain²

NEW SOLUTIONS: A Journal of
Environmental and Occupational
Health Policy
2021, Vol. 31(3) 367–372
© The Author(s) 2021
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/10482911211008174
journals.sagepub.com/home/new



Abstract

The construction sector has been hit hard by the opioid crisis. We describe CPWR—The Center for Construction Research and Training’s recent efforts to address the challenges of opioid use in the construction industry. With support and guidance from the North America’s Building Trades Unions Opioid Task Force, CPWR undertook three projects to promote prevention and best practices for struggling construction workers. The first project focused on recommendations for communications that reframe stigmatizing narratives into effective messages about prevention solutions. The second project refined and distributed a one-hour construction worker opioid hazard awareness training module. The third project assessed opportunities and barriers for the expansion and improvement of existing union peer support programs to support workers through treatment and recovery. Additional resources, such as opioid hazard tool box talks, to help reverse the impact on the sector are also described.

Keywords

construction, opioid crisis, training, communications, primary prevention

Introduction

Opioid overdose deaths have risen dramatically throughout the United States over the last several years.¹ Journalists and researchers have documented that these tragedies are a particular concern for the construction industry.^{2–5} Construction workers have the highest rate of opioid overdose deaths of all occupations.² While research to understand the pathways underlying these statistics has been limited, several contributing factors have been suggested, including high injury rates, work-related musculoskeletal pain, provider prescribing behavior, drug testing, work schedules, cycles of unemployment, lack of access to treatment, work-related stress, and background drug use.^{6–9} Construction workers have higher than average recreational drug and alcohol use; however, while “cultural factors” and these background behaviors may play a role, they do not explain the elevated rates.¹⁰ A more likely pathway is the practice of prescribing opioid medications for workplace injuries—a practice that has outstripped any rise in reported injury rates.^{11–13}

Construction has one of the highest injury rates of all industries.¹⁴ To treat pain associated with acute and chronic injuries, in the early 2000s, healthcare providers

began prescribing opioid painkillers to construction workers, enabling them to work, but potentially drawing them into opioid dependence and delay in healing of underlying injuries.^{15,16} Construction workers rarely have paid time off or sick leave, and gaps or delays in workers compensation settlements can produce financial pressures that lead workers to return to work before they are healed.¹⁷ Indeed, one of Purdue Pharma’s early advertising campaigns featured a construction worker describing how Oxycontin had enabled him to “get his life back.”¹⁸ Workers who develop physical and psychological opioid dependence may find themselves “cut off” from legitimate prescriptions, leading them to illicit sources of opioids, including deadly fentanyl-laced heroin.¹⁹ Thus, reducing opioid-related harms experienced by construction workers requires multifaceted solutions including injury prevention programs, policy

¹CR Research/Consulting, Roxbury, MA, USA

²CPWR, Silver Spring, MD, USA

Corresponding Author:

Cora Roelofs, CR Research/Consulting, 45 Atherton St., Roxbury, MA 02119, USA.

Email: cora_roelofs@uml.edu

initiatives, supportive programs, and empowerment-based worker education.²⁰

CPWR—The Center for Construction Research and Training is a nonprofit organization founded by the North America’s Building Trades Unions (NABTU) to reduce occupational injuries, illnesses, and fatalities and to improve worker well-being in the construction industry. NABTU formed an Opioids Task Force in 2017 to address the crisis in the sector and CPWR’s Executive Director serves as the Chair of the Task Force. In 2020, the NABTU quinquennial convention passed a resolution to destigmatize substance use and mental health disorders, educate members about the limitations of opioids for long-term treatment of injuries, design benefit funds to promote behavioral health and substance use disorder treatment, develop peer support programs, promote recovery-friendly workplace initiatives, and educate members about suicide prevention and awareness.

In 2019 and 2020, CPWR received support from the National Institute for Occupational Safety and Health and NABTU to develop strategies to address the opioid crisis in the construction sector, with a focus on upstream prevention of opioid use disorder and supporting workers who were struggling with addiction. This effort was in line with CPWR’s focus on the primary prevention of musculoskeletal disorders and other painful injuries resulting from construction site hazards through programs such as “Best Built Plans.”^{21,22} This paper describes CPWR’s recently completed projects to advance these goals: a communications framework to promote primary prevention, an opioid hazard awareness training program for construction workers, and an assessment of the barriers and opportunities for enhanced peer support for treatment and recovery in

the unionized trades. Figure 1 illustrates our theory-of-change model.

Project I: Reframe the Conversation

CPWR was concerned that the dominant narrative surrounding the construction industry and opioid use did not adequately focus on upstream prevention including prevention of injuries. To help address this, CPWR contracted with communications strategists from the FrameWorks Institute to investigate the following question: What communications strategies are most effective for the public to recognize the benefits of primary prevention as part of a holistic strategy to achieve and sustain positive results? The goal of this project was to generate recommended strategies for stakeholders to communicate about prevention in ways that resonate with the public, construction industry actors, and among healthcare and social workers who are tackling the opioid crisis.

FrameWorks’ approach was to reexamine data from fifteen years of communications research relating to prevention and addiction, adolescent substance use, human services, and public health and related issues. The analysis included a systematic review of CPWR’s communications materials, which allowed FrameWorks researchers to understand target concepts and make recommendations in relation to existing strategies. Their final report, *Reframing Primary Prevention and Opioid Use Reduction in the Construction Industry*, identified widespread patterns in public thinking that are likely to impede audience reception to messages about primary prevention.

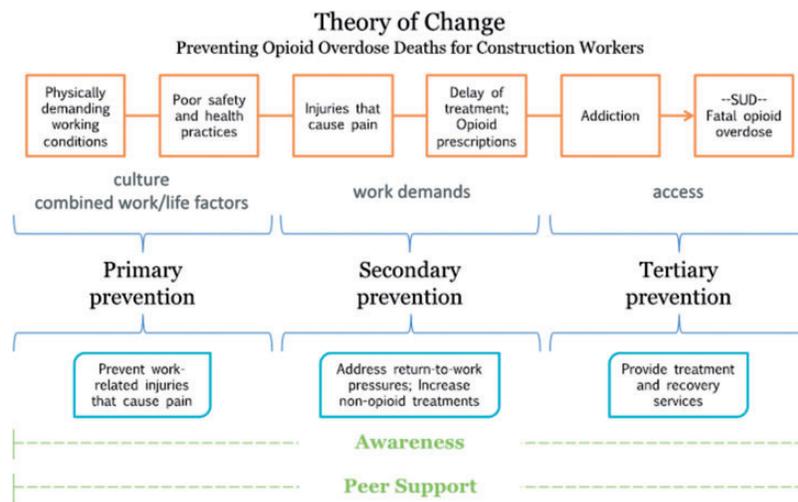


Figure 1. Theory of change.
SUD = substance use disorder.

It also provided a set of evidence-based guidelines and recommendations for framing the issue more effectively. FrameWorks' key recommendations included

- Carefully *link causes and consequences* to increase support for structural solutions.
- Use the *Upstream/Downstream metaphor* to explain prevention.
- Appeal to the *Value of Investment* in messages to construction industry professionals.
- Choose *concrete examples* to illustrate what effective interventions look like.
- Provide the necessary *context audiences need to interpret unfamiliar concepts and data*.
- *Explicitly name who or what is responsible* for the problem or for taking action to address it.
- Emphasize *systemic solutions* to expand thinking beyond individual-level interventions.

FrameWorks' report was complimented by a two-part virtual FrameLab to support those involved in efforts to communicate about prevention of opioid hazards in the sector. The first session used a webinar format and explored how to foster more meaningful conversations with the public and increase support for policies and programs that address pressing social problems. The second session was an interactive, hands-on virtual session designed for communicators interested in building their capacity to use strategic framing effectively.

Project 2: Opioid Hazard Awareness Training for Construction Workers

In 2019, CPWR developed a two-hour training module on opioid hazard awareness for construction workers guided by the NABTU Opioid Task Force and other construction stakeholders. The module included primary, secondary, and tertiary prevention strategies and was designed to empower trainees to recognize and prevent the harms of opioids (see Figure 1). Primary prevention includes preventing the hazards and conditions that might lead a worker to opioids. Secondary interventions might occur after a precipitating event to prevent harmful prescriptions through patient education. Tertiary interventions reduce the harms that can be experienced by workers who are using opioids. Examples of tertiary prevention, or "harm reduction," include improved access to substance use disorder treatment and overdose reversal with naloxone.

In 2020, the training was made available to construction industry trainers. CPWR held several "train-the-trainer" sessions to guide groups of union trainers from diverse trades through the accompanying

facilitator's guide to prepare them to use the materials in their training programs. The original training module, participant handout, and facilitator guide were uniquely downloaded from the CPWR website 175, 153, and 171 times, respectively, between February and September 2020. Additionally, we prepared pre- and posttraining surveys to assess changes in knowledge, attitudes, intention to help others, and awareness of resources among trainees.

Before COVID-19 shutdown in-person training, training staff from CPWR's Environmental Career Worker Training Program piloted the training with nine students in New Orleans. The Environmental Career Worker Training Program is a comprehensive preapprenticeship training program in four cities across the United States targeting underserved and vulnerable low-income people with the aim of securing jobs in the construction industry. All trainees completed pre- and posttraining surveys, and we interviewed training staff regarding the training experience. In addition to the Environmental Career Worker Training Program trainees, the module has been used in classes for carpenters and iron workers.

Feedback obtained during the pilot training and through additional interviews following the presentation of the training materials to the NABTU Opioid Task Force suggested that while the content was appropriate and effective, two hours was too long for the training. Based on these evaluations, the CPWR team revised the training module to one hour and updated the training materials. Subsequent responses to the training have been positive. A train-the-trainer session on using the revised module was presented to CPWR's annual construction industry trainers conference held in October 2020 which was attended by nearly eighty active trainers. CPWR will continue to evaluate and update the opioid training module based on feedback from trainers and trainees. Training materials are available at www.cpwr.com/opioid-awareness.

Project 3: Assessing Peer Advocacy for Treatment and Recovery

Many construction unions have been providing robust peer advocacy programs for their members for many years.^{23–25} These programs are staffed by construction workers—often volunteers—who have been trained to provide support for brothers and sisters in the trades who are struggling with substance use and mental health issues. In addition to connecting members with treatment and services, peer advocacy programs can help members to retain or regain their employment while in recovery. There is evidence that peer advocacy and support programs can have positive effects for people struggling with substance use disorder; however, we wanted

to better understand the dynamics and challenges of these peer-led programs in the construction sector.²⁶

CPWR staff conducted a qualitative assessment of the construction trades unions' response to the opioid epidemic and their peer advocacy programs by interviewing the NABTU Opioid Task Force members. We asked them open-ended questions to understand how their international and local unions are using peer advocacy programs to support their members. Seven of thirteen interviewees represented unions that had developed peer advocacy programs. We separately coded the responses and agreed on the specific themes that emerged from the interviews, including:

- Explanation of Peer Advocacy,
- Who Should Be a Peer Advocate,
- Barriers to Programs,
- Connecting Members,
- Employee Assistance Programs,
- Planning Peer Support Programs,
- Program Design, and
- Supporting Recovery.

While interviewees had varying experience with peer advocacy, the interviews gave CPWR insight into the design and organization of programs, different ways peer advocates are helping members, how peer advocates were being trained to be successful, aspects of a program that are thought to be necessary for success, and suggestions for sustaining programs. Most interviewees agreed that a successful employee assistance program was integral to peer support, in that peers are only as successful as the resources to which they can direct members.

The report, *Peer Advocacy for Construction Workers Struggling with Substance Use Disorder and Mental Health*, provides details about strategies, pitfalls, and challenges for existing programs for the construction trades. It also provides background information and key questions to consider in the design of a future large-scale effectiveness evaluation of peer advocacy and support programs and a list of other recommendations that emerged from the interviews. Further research is needed to assess feasible and effective approaches for establishing peer recovery programs and best practices for operating them.

Don't be a statistic. Protect yourself from an opioid overdose.



Construction work can result in painful injuries that are often treated with prescription opioids.

Opioids are addictive and should be the last option to treat your pain. Talk to your doctor about non-addictive medications.



REMEMBER: Addiction is an illness that can be treated.

Call this confidential national hotline:
1-800-662-HELP (4357)

Visit: Facing Addiction — <https://resources.facingaddiction.org/>



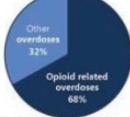
1 out of 4 people prescribed opioids for long-term pain become addicted.*



*Centers for Disease Control and Prevention. Promoting Safer and More Effective Pain Management. <https://tinyurl.com/overdosefacts>



In 2017 alone, more than 72,000 people died in the U.S. from an overdose — over 49,000 of which involved an opioid.*



*Centers for Disease Control and Prevention-WONDER. Provisional 2017 data. <https://www.drugabuse.gov/related-topics/trends-statistics/overdose-deaths-rates>



Overdose deaths that occur on the job are on the rise.*



*Bureau of Labor Statistics. Census of Fatal Occupational Injuries. News Release, 2016. <https://www.bls.gov/news.release/cfour0.htm>

©2018, CPWR The Center for Construction Research and Training. All rights reserved. CPWR is the research and training arm of NABTU. Production of this document was supported by cooperative agreement OH 009762 from the National Institute for Occupational Safety and Health (NIOSH). The contents are solely the responsibility of the authors and do not necessarily represent the official views of NIOSH.


THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING

Figure 2. CPWR resources (sample).

Resources for Addressing the Opioid Crisis Impact on Construction

In addition to the reports and materials described above, CPWR has an extensive internal and external resource list on its website and will continue to research and develop resources to aid the construction sector in positively intervening to address opioids, mental health, and overall well-being for construction workers. Other CPWR resources include an opioid deaths in construction hazard alert and toolbox talk, a pain management for construction workers physicians' alert, an infographic explaining how to protect oneself from opioid overdose (see Figure 2), a data report on overdose fatalities at work sites and opioid use in the construction industry, as well as hazard alerts, toolbox talks, and infographics for suicide prevention. CPWR's website also links to resources from federal agencies, trades unions, and nonprofit organizations, such as the National Safety Council.

Conclusion

CPWR's efforts related to the opioid crisis reflect our mission to address the most serious health and safety issues impacting construction. We will continue to conduct research regarding how opioids and mental health issues are affecting the construction industry and develop training and other resources that focus on primary prevention and empowerment of workers to take care of themselves and their brothers and sisters in the trades. The extent of the crisis, and its particular impact on construction workers, underscores the need for action by employers and all levels of government to support policies and programs that constrain the work and non-work-related factors that promote opioid dependence and make it difficult for those who are struggling to overcome it.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the North America's Building Trades Unions and the National Institute for Occupational Safety and Health under contract number 75D30119P05430.

ORCID iD

Cora Roelofs  <https://orcid.org/0000-0002-1404-3365>

References

1. Kolodny A, Courtwright DT, Hwang CS, et al. The prescription opioid and heroin crisis: a public health approach to an epidemic of addiction. *Annu Rev Public Health* 2015; 36: 559–574.
2. Harduar ML. Occupational patterns in unintentional and undetermined drug-involved and opioid-involved overdose deaths — United States, 2007–2012. *MMWR Morb Mortal Wkly Rep* 2018; 67: 925–930.
3. Dissel R. Ohio construction workers seven times more likely to die of an opioid overdose in 2016. *The [Cleveland] Plain Dealer*, https://www.cleveland.com/metro/index.ssf/2017/11/ohio_construction_workers_seven_times_more_likely_to_die_of_an_opioid_overdose_in_2016.html (2017, accessed 7 March 2018).
4. Sperance C and Sudo C. The silent killer on the job site: inside construction's battle with opioids. *Forbes*, <https://www.forbes.com/sites/bisnow/2017/10/26/the-silent-killer-on-the-job-site-inside-constructions-battle-with-opioids/> (accessed 27 October 2017).
5. Dong XS, Brooks RD and Cain CT. Prescription opioid use and associated factors among US construction workers. *Am J Ind Med*. Epub ahead of print 16 July 2020. DOI: 10.1002/ajim.23158.
6. Kowalski-McGraw M, Green-McKenzie J, Pandalai SP, et al. Characterizing the interrelationships of prescription opioid and benzodiazepine drugs with worker health and workplace hazards. *J Occup Environ Med* 2017; 59: 1114–1126.
7. Venkataramani AS, Bair EF, O'Brien RL, et al. Association between automotive assembly plant closures and opioid overdose mortality in the United States: a difference-in-differences analysis. *JAMA Intern Med*. Epub ahead of print 30 December 2019. DOI: 10.1001/jamainternmed.2019.5686.
8. Sperance C. 'The ignorance is still out there': is construction fighting hard enough against opioid addiction? *Bisnow*, <https://www.bisnow.com/national/news/construction-development/opioids-construction-safety-epidemic-104542> (accessed 8 June 2020).
9. Dale AM, Buckner-Petty S, Evanoff BA, et al. Predictors of long-term opioid use and opioid use disorder among construction workers: analysis of claims data. *Am J Ind Med*. Epub ahead of print November 2020. DOI: 10.1002/ajim.23202.
10. Bush D and Lipari R. *Substance use and substance use disorder by industry*. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2013, https://www.samhsa.gov/data/sites/default/files/report_1959/ShortReport-1959.html (accessed 25 March 2021).
11. Thumula V and Liu T-C. *Correlates of opioid dispensing. WC-18-48*. Cambridge, MA: Workers Compensation Research Institute, 2018, <https://www.wcrinet.org/reports/correlates-of-opioid-dispensing> (accessed 11 January 2019).
12. Choi B. Opioid use disorder, job strain, and high physical job demands in US workers. *Int Arch Occup Environ Health* 2020; 9: 577–588.

13. CPWR – The Center for Construction Research and Training. *Construction chart book: fatal and nonfatal injuries, back injuries in construction and other industries*. 6th ed. Silver Spring, MD: Author, 2018, <https://www.cpwr.com/research/data-center/the-construction-chart-book/> (accessed 25 March 2021).
14. CPWR – The Center for Construction Research and Training. *Construction chart book: fatal and nonfatal injuries, back injuries in construction and other industries*. Silver Spring, MD: Author, 2017, <https://www.cpwr.com/sites/default/files/publications/CB%20page%2048.pdf> (accessed 25 March 2021).
15. Midwest Economic Policy Institute. Addressing the opioid epidemic among midwest construction workers, <https://midwestepi.files.wordpress.com/2018/02/opioids-and-construction-final2.pdf> (2018, accessed 25 March 2021).
16. Franklin G, Sabel J, Jones CM, et al. A comprehensive approach to address the prescription opioid epidemic in Washington State: milestones and lessons learned. *Am J Public Health* 2015; 105: 463–469.
17. Hawkins D, Roelofs C, Laing J, et al. Opioid-related overdose deaths by industry and occupation—Massachusetts, 2011–2015. *Am J Ind Med*. Epub ahead of print 26 July 2019. DOI: 10.1002/ajim.23029.
18. MedPage Today. Anatomy of an epidemic: the opioid movie, <https://www.youtube.com/watch?v=10ZISSXiuP4> (2012, accessed 23 November 2020).
19. Pacula RL and Powell D. A supply-side perspective on the opioid crisis. *J Pol Anal Manage* 2018; 37: 438–446.
20. Shaw WS, Roelofs C, Punnett L. Work Environment Factors and Prevention of Opioid-Related Deaths. *Am J Public Health* 2020 Aug; 110(8): 1235–1241. doi: 10.2105/AJPH.2020.305716. Epub 2020 Jun 18. PMID: 32552015; PMCID: PMC7349438.
21. Dale AM, Jaegers L, Welch L, et al. Evaluation of a participatory ergonomics intervention in small commercial construction firms. *Am J Ind Med* 2016; 59: 465–475.
22. CPWR – The Center for Construction Research and Training. Best built plans: preventing injury & improving productivity by reducing manual materials handling, <https://www.cpwr.com/research/research-to-practice-r2p/r2p-library/other-resources-for-stakeholders/best-built-plans/> (accessed 9 February 2021).
23. Whelan A. In Philadelphia’s building trades, construction workers are helping their colleagues battle addiction, <https://www.inquirer.com>, <https://www.inquirer.com/philly/health/addiction/in-philadelphias-building-trades-construction-workers-are-helping-their-colleagues-battle-addiction-20181003.html> (accessed 25 October 2019).
24. Gold J. Workers overdose on the job, and employers struggle to respond. *The New York Times*, 23 September 2018, <https://www.nytimes.com/2018/09/21/business/economy/opioid-overdose-workplace.html> (accessed 25 September 2018).
25. Diaz J. Building trades unions at forefront of opioid crisis. *Bloomberg BNA/Daily Labor Report*, <https://www.bna.com/building-trades-unions-n57982091215/> (2018, accessed 9 May 2018).
26. Bassuk EL, Hanson J, Greene RN, et al. Peer-delivered recovery support services for addictions in the United States: a systematic review. *J Subst Abuse Treat* 2016; 63: 1–9.

Author Biographies

Cora Roelofs has over twenty years of experience as an occupational health and safety researcher with a focus on opioid hazards, construction, and vulnerable populations. She was a consultant to CPWR for these projects.

Christopher Rodman is the Opioid Projects Coordinator for CPWR—The Center for Construction Research and Training. He holds an MPH from Johns Hopkins Bloomberg School of Public Health with a specialization in substance use issues.

Richard Rinehart is CPWR’s Deputy Executive Director and policy specialist. He holds an ScD from Harvard School of Public Health.

Chris Trahan Cain is CPWR’s Executive Director and Chair of the North America’s Building Trades Unions’ Opioid Task Force. She is a certified industrial hygienist and is recognized as a leading voice for construction workers’ safety and health.