

Grant: AFC820-14

Title: Opioid Hazard Awareness Training for Sand, Stone and Gravel Workers

Organization: University of Massachusetts, Lowell

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Topic: Safety and Health Management

Priority Area: Training

SYNOPSIS

Problem Statement: The opioid epidemic has impacted the mining workplace, yet there have been limited responses to address the crisis through health and safety training and management. The use of opioids by miners may compromise mining safety and may reduce the numbers of available skilled employees. Virginia, West Virginia, and Kentucky have instituted regulations to remove individuals from the mining workforce who may have substance use issues. However, workplace factors, such as ergonomic risk factors, can precipitate opioid use and may lead to the unintended diversion of opioids in miners' homes. Miners and their families can benefit from training programs that provide timely and evidence-based knowledge and skills to recognize opioid hazards, prevent addiction, and reduce stigma around help-seeking. Mine operators can also benefit from policy guidance on identifying risk factors for opioid use, drug-free and recovery-friendly workplace policies, benefits plans that encourage quality and cost-effective care, and naloxone (overdose reversing) in the first aid kit. Employers' policies and workplace culture can play a profound role in either negative outcomes that result in overdose death or in positive ones that support recovery. Further, best practice policies could protect them from liability while sustaining a work environment supportive of the prevention, response and treatment programs that can save lives and help to reverse the crisis.

Research Approach: The project is proposed as an intervention development, evaluation, and dissemination study based in the sand, stone and gravel sector in Massachusetts. It will include a formative needs assessment to determine strategic and effective messaging to miners related to opioid hazards, as well as barriers and opportunities to transformative action to address the crisis. The needs assessment will inform the development of a peer-delivered training module and training materials. The training will be piloted as part of the annual required MSHA training provided by the MA Department of Labor Standards to over 700 miners in Massachusetts in January 2020 and 2021 and during training sessions at participating operators' facilities. It is expected that at least 800 miners will receive this training each year for two years. This training will be evaluated by pre- and post-test evaluation, including three-month follow-up surveys of trainees. Assessment will cover beliefs, behaviors/skills, and knowledge measures. The training module and related materials will then be revised and made available for adoption by other MSHA training providers across the country in this sector and, potentially, mining sectors beyond sand, stone and gravel. Additionally, an employer tool kit aimed at sand, stone and gravel operators will be developed and disseminated and a survey of operators will be conducted to assess its uptake and perceived impact.

Impact of the Research: The research seeks to reduce the potential for opioid-related hazards and injuries in the mining sector through a training intervention as part of mandated MSHA refresher training for sand, stone, and gravel miners in Massachusetts and by providing opioid-related health and safety guidance to their employers. Following evaluation of feasibility and effectiveness in the sand, stone and gravel sector, the materials will be modified and disseminated to other mining sectors. While it is difficult to definitively link an education and communications intervention to changes in health outcomes, this project will assess intermediate measures that indicate progress toward safer worksites and a healthier workforce. This intervention will leverage public health interventions to target a high-risk worker population with prevention messaging and access to needed prevention, intervention, treatment and recovery resources.