Safer Mining Practices Reduce Hazardous Exposures in Small-scale Mining in Nigeria

OK International’s pilot program to reduce lead poisoning in Nigerian gold mining communities has brought extraordinary improvements to an area where hundreds of children had died from lead poisoning. The safer mining project took place in the Shakira community in Niger State where high levels of lead are naturally present in the gold ore. Our two-year effort to introduce safer mining practices was effective at preventing deaths and reducing lead poisoning in highly exposed villages.

We published the results of our efforts in the Annals of Work Exposures and Health in January 2019. The article “Reducing Lead and Silica Dust Exposures in Small-Scale Mining in Northern Nigeria” noted that average lead exposures among ore processors before the implementation of safer practices were 19 times greater than the U.S. Occupational Safety and Health. Our pilot project demonstrated that low-cost wet spray misting was effective at reducing average airborne lead exposures by 95 percent.

OK International partnered with Doctors Without Borders/ Médecins Sans Frontières (MSF) in this effort. The primary objective was to reduce lead exposures among artisanal small-scale miners and minimize take home exposures. However, we also demonstrated that these same methods reduced respirable silica dust by 80% among miners.

The study is available open source at: https://academic.oup.com/annweh/article/63/1/1/5236613
The True Scale of Artisanal Mining

Small-scale mining is a growing enterprise in at least 80 countries around the world. OK International was quoted in the April issue of the Lancet Respiratory Medicine in an article comparing small-scale mining today with the conditions described by George Orwell in northern England in the 1930s. The article, The True Scale of Artisanal Mining, points out that small-scale mining employs at least 7 times more miners than those involved in industrial mining. It also describes the occupational hazards that miners experience today including silica dust and the resulting higher rates of Tuberculosis (TB).

The Lancet article is available open source at: https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(19)30115-8/fulltext

Hope for U.S. Asbestos ban is fading

In April, the U.S. Environmental Protection Agency (EPA) issued a new regulation titled “Restrictions on Discontinued Uses of Asbestos; Significant New Use Rule” governing the process for the agency to monitor and review “new” uses of asbestos. The good news is that the EPA is has not yet decided if they will issue a ban on the use of asbestos as they were required to under the Toxic Substances Control Act (TSCA). The agency listed asbestos as one of ten priority chemicals to review for this purpose. The bad news is that in issuing this new rule the EPA seems to have no interest in putting in place a blanket ban for all uses of asbestos.

Although the asbestos ban still technically under consideration, the new regulation requires manufacturers or importers of asbestos-containing materials that can still be legally used in the U.S. to provide the agency with notice before these products could go into use. The regulation provides EPA with an “opportunity to evaluate each intended use (i.e., significant new use) for potential risks to health and the environment and take any necessary regulatory action, which may include a prohibition.” The agency would have no ability to stop new asbestos-containing products from coming on the market without this new regulation.

In putting together this regulation the EPA found that asbestos was being used in the U.S. in very limited applications including in chlorine and sodium hydroxide production and several imported asbestos-containing materials. At the same time, the EPA found no evidence that asbestos cement was being used in the U.S.

The New York Times has reported that EPA scientists had advised the agency to ban asbestos instead of regulating potential new uses in this way. The agency scientists also indicated in their internal memo that the regulatory process had disregarded asbestos fiber types that are known to be harmful but are not yet regulated in the U.S.

No Action on CDC Blood Lead Action Level

In a letter to the Editor of the Journal Environmental Health, Perry Gottesfeld, Executive Director of OK International, and Debbie Cory Slechta from the University of Rochester Medical School, call on the U.S. Center for Disease Control and Prevention (CDC) to lower the blood lead reference value for children. The CDC has considered lowering the blood lead action level to 3.5 ug/dl for the past three years. The intent in setting the reference value is that it would be adjusted periodically as blood lead levels drop to identify children with the highest exposures.

The proposed change is based on results from the 2011–2014 National Health and Nutrition Survey (NHANES)
which had shown geometric mean blood lead levels among children in the U.S. dropped to less than 1 ug/dl. The agency has so far failed to act despite two scientific advisory committees that called on the agency to lower the blood lead reference value for children in the U.S.

The letter comes in a response to a Commentary published in Environmental Health in February 2019 arguing that the blood lead reference value should not be used “to act as a clinical intervention level” in evaluating individual children. Instead of calling for action to lower the reference value, the Commentary incorrectly suggested that environmental interventions have not been shown to lower blood lead levels.

The full text of the letter is available open source at: https://ehjournal.biomedcentral.com/articles/10.1186/s12940-019-0472-8

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**Preventing Tuberculosis with Silica Dust Controls**

OK International has spearheaded efforts to raise awareness that silica dust controls are effective at preventing TB in high-risk occupations including mining, construction, ceramic manufacturing and stone crushing. Along with the International Commission on Occupational Health (ICOH) we brought this issue to the UN General Assembly at their first ever meeting on TB in September, 2018. Our participation at the UN resulted in the TB declaration calling on countries to commit to “implementing primary prevention in high-risk occupations by reducing silica dust exposures in mining, construction and other dusty workplaces, and worker tuberculosis surveillance and infection prevention and control in healthcare settings.”

In coordination with the UN meeting, Perry Gottesfeld, along with Michael Reid and Eric Goosby from the University of California at San Francisco, published a Commentary in the Lancet Global Health to highlight the opportunity for TB programs to invest in workplace interventions. The article, “Preventing tuberculosis among high-risk workers” notes that 230 million individuals are exposed to silica dust and that most highly exposed are generally the most vulnerable to TB infection.

The full text of the Commentary is available open source at: https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(18)30313-9/fulltext

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**Eliminating lead paint would save lives**

OK International has long advocated for a ban on lead paint both in the U.S. and around the world. Despite restrictions on the use of lead paint in residential structures, lead paint can still legally be applied on roadways, bridges, and other steel structures in the U.S. Recently Delaware became the first state to prohibit the use of lead paint on outdoor structures and roadways.

To further raise awareness of the need to address this obvious health hazard in the U.S. and abroad, Perry Gottesfeld and Johnson Ongking, vice president of Pacific Paint (Boysen) in the Philippines co-authored an editorial in the Mercury News. OK International and our partners at the Ecowaste Coalition in the Philippines had worked with Boysen Paints to remove lead from their products and to become the first brand certified under the Lead Safe Paint™ program. The article points out that in addition to damaging children’s brains leading to reduced school
OK International Celebrates 20th Anniversary with Small Grants

In celebration of our 20th Anniversary the Board of Directors of Occupational Knowledge International has decided to request proposals from NGOs seeking small grants to conduct projects involving occupational or environmental health threats in their communities. Eligible proposals may have an investigative, advocacy, technical assistance, or educational focus and is open to organizations based in developing countries.

The submitters of selected proposals will be awarded a small initial monetary grant of $2,000 USD, technical advice and, an offer of partnership to seek additional funds to expand the proposed projects. Applicants must articulate a need for technical assistance or collaboration beyond funding.

For additional information, the call for proposals is available at:

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Bill to Revise the Cal-OSHA Lead Standard Advanced by State Legislature

OK International has participated on the Cal-OSHA advisory committee that has worked on revising the lead standard for more than 8 years. The California State Assembly has now recognized the need to finish the job by voting for AB 457 which gives the agency a firm deadline to complete the process by next year. Now the Senate Labor, Public Employment and Retirement Committee is expected to take up the bill in June.
Currently the provisions protecting workers exposed to lead on the job are based on our understanding of lead hazards from 40 years ago. Since then we have learned much more about the health effects of low-level exposures and lead has been linked to high blood pressure, cardiovascular disease and premature deaths in adults.

California has set aside millions of dollars to clean up lead contaminated soil from the Exide Technologies battery recycling facility in Vernon, CA and this work is likely to continue for several years. In addition, hundreds of millions of dollars are expected to be released to pay for a court-mandated lead paint abatement program in ten counties throughout California. This will greatly increase the number of workers exposed to lead.

A similar effort is underway in Washington State where the Department of Labor & Industries, Division of Occupational Safety & Health (DOSH) is expected to complete a revised lead standard later this year.

OK International at Asbestos Workshop

in New Delhi

Perry Gottesfeld spoke at a workshop held in conjunction with the 4th International Conference on Occupational and Environmental Health (ICOEH 2019) in New Delhi, India in February. Gottesfeld’s talk “Exposing False Claims on Installation and Removal of Asbestos Roofing”, explained how he was successful in calling on the Journal of Occupational and Environmental Hygiene to retract a review article published in the journal on asbestos exposures from roofing materials by Lotter et al. published in 2016. The Lotter article contained several misleading statements and false claims in minimizing the exposures associated with asbestos-containing roofing materials.

Asbestos cement roofing remains a growth industry in India and in other countries. These materials pose a significant risk to workers in the manufacturing process and to construction workers involved in installing, cutting, and removing these products.

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