

Public health crisis looms in Gulf

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A growing number of scientists, doctors, and health care experts have warned of the potential for a public health crisis as a result of the massive BP oil spill in the Gulf of Mexico. They have also criticized BP's control over health monitoring and the lack of public health infrastructure in the US to deal with the catastrophe.

The most acute health problems are likely to be experienced by cleanup workers, who were given little training and inadequate equipment before being sent by BP into oil cleanup operations.

Oil is composed of a combination of benzenes and hydrocarbons known to cause cancer and damage to the brain and central nervous system, according to public health specialists Ellen-Marie Whelan and Lesley Russell of the Center for American Progress. Other scientists have pointed to a link between exposure to oil and skin conditions as well as kidney and liver failure.

"We know that Exxon Valdez cleanup workers faced average oil mist exposure that was twelve times higher than government-approved limits, and those who washed the beach with hot water experienced a maximum exposure 400 times higher than these limits," Whelan and Russell write. "Many of those workers suffered subsequent health problems and in 1989, 1,811 workers filed compensation claims, primarily for respiratory system damage, according to the National Institute of Occupational Safety and Health."

There have been few studies on the impact of oil spills on human health, either of workers or nearby communities. For example, after the Exxon Valdez disaster, which took place in Alaska's remote Prince William Sound in 1989, there were 350 environmental studies but not a single study on the impact on humans, in spite of the fact that scores of cleanup workers came down with respiratory problems they called the "Valdez crud."

Indeed, in the over 400 tanker spills that have taken place since 1960, only seven have resulted in studies on the disasters' health impact on humans, according to Nalini Sathiakumar of the University of Alabama Institute of Medicine.

One disaster that was studied was a tanker spill off the coast of Spain in 2002. A team of Spanish scientists found persistent respiratory difficulties among workers years after the disaster, as well as psychological trauma, hormonal changes, and changes to the structure of DNA consistent with heightened risk for cancer.

Scientists also point to the dangers posed to both cleanup workers and Gulf communities by burning the oil off into the atmosphere. BP has eliminated about 20 million gallons through these "controlled burns."

"When we aerosolize those oil droplets, they can be breathed in, which can be very damaging to the lungs and can be irritating to the eyes and the throat and can cause nausea and vomiting," Whelan and Russell note.

Already in early May the EPA released data from air tests conducted 75 miles south of New Orleans, in the coastal community of Venice,

Louisiana, suggesting levels of toxins in the air far exceeding those deemed safe for human exposure.

Volatile organic chemical (VOC) benzene has been found far above Louisiana's ambient air standards. The standard for benzene is 3.76 parts per billion, and VOC methylene chloride is 61.25 parts per billion (ppb). The VOCs, however, were found to reach over 3,000 ppb as early as April 30th and May 2nd. Long-term exposure to volatile organic chemicals has been linked to cancer. There are concerns that methylene chloride is also a carcinogen.

Chemicals like hydrogen sulfide were detected at levels 100 times greater than the threshold known to cause ill effects among humans. In the short-term, hydrogen sulfide is associated with eye and respiratory irritation, along with dizziness, headaches, nausea and confusion.

A large number of cleanup workers and Gulf residents have reported these very symptoms—about 500 as of one month ago, according to one estimate. Information on the extent of the harm is only anecdotal as BP and federal authorities have refused to release data and forbid cleanup workers from speaking to the media.

Health experts criticize the lack of information from BP. "Independent scientists ... are also concerned about the reliability of the data, especially that for BP's workers, whose claims of illness are screened by a private medical service paid for by BP," according to *Time* magazine. "Given the fact that any evidence of serious health effects could be used against the company in the countless lawsuits we'll see filed in the coming months and years, the potential conflict of interest is obvious.

"Workers also may fail to come forward out of fear of losing their job—they've already shown reluctance to talk to the press for the same reason. The researchers at the Institute of Medicine conference said they have already seen large gaps in the surveillance data to date."

Like all other aspects of the blowout response and cleanup, BP has maintained control over the monitoring of the disaster's human health impacts.

"It's kind of scary" that the medical response is controlled by the company at fault said Linda McCauley, Dean of Emory University's nursing school.

"Why would we trust an oil company to monitor the health effects?" Whelan asks. "BP in particular has shown more safety violations than any other oil company over the past number of years. We believe that the federal government should be empowered to monitor the health effects both now in the emergency phase and as we do some more long term effects."

BP's control of the response is mirrored by the lack of preparedness by the federal government for a large-scale public health disaster. "[W]e are now facing what some are calling the worst-ever ecological disaster without an appropriate public health response in place," Whelan and Russell warn.

A number of agencies have begun to monitor the impacts of the

disaster on human health, including the EPA, Centers for Disease Control (CDC), the National Disaster Medical Service, the Food and Drug Administration (FDA), the Fish and Wildlife Service as well as the National Oceanic and Atmospheric Administration (NOAA). These and other state and non-governmental agencies are “not necessarily well-coordinated either with each other ...” Whelan and Russell say.

An adequate response “will require intensive, long-term testing and monitoring of people, food, water, and air; timely analysis of the data; and transparent communications with the people most exposed and most likely to be harmed,” the two scientists write.

There are numerous reports that BP refuses to allow cleanup workers to wear respirators and has even threatened to fire workers who show up with respirators on their own. It has been surmised that such basic disregard for elementary health precautions is a part of the oil giant’s bid to “control the message.” Just as it has sought to prevent journalists from taking pictures of oil-soaked birds, BP is fearful of images in the media of workers wearing respirators similar in appearance to those worn by soldiers in the trench warfare of WWI.

But for workers engaged in cleanup in the near vicinity of the toxic brew formed by oil and dispersants, the health effects of working without respirators may be severe and long-lasting. The emission of toxic chemicals into the air is accelerated, scientists warn, by the intense heat and sunlight of the Gulf.

Incredibly, it is not yet known whether or not the Independent Claims Facility established by the Obama administration and BP will pay claims related to long-term health problems.

“We’re working on that,” said “claims czar” Kenneth Feinberg in a recent statement to the the House Judiciary Committee. “I am of the view that we need to get some expertise on the likelihood of latent claims” resulting from long-term health problems.

This week Feinberg also informed fishermen that the pay they received from BP for this life-threatening work will be deducted from whatever claim they might receive. Their livelihoods destroyed, fisherman could easily become buried in a lifetime of medical bills related to their exposure to chemicals while working on the cleanup.

There is also the question of the health impacts from the heavy use of the chemical dispersant Corexit. The substance is known to be toxic, but its use is permitted by the EPA after self-analysis by the company that produces it, Nalco, declared it to be of low enough toxicity to pose no serious threat to humans.

Nalco, a company with close financial and personnel connections with BP and ExxonMobil, refuses to reveal the chemical composition of Corexit, claiming it a “trade secret.” This in spite of the risk it poses to hundreds of thousands of cleanup workers and Gulf residents, as well as to the organisms of the Gulf. Yet it is known that Corexit is both more toxic and less effective than other dispersants on the market. Its use is prohibited in the United Kingdom.

“The issue is that we do not actually know what chemicals are in many of these dispersants, or what their long-term effects will be since their exact makeup is kept secret under competitive trade laws,” Whelan and Russell write. “There are some things we learned after the dispersants were used following the Exxon Valdez spill. Studies performed on organisms exposed to these chemicals after the cleanup found that the dispersants accumulate in living organisms at very high concentrations and harmed the developing hearts of both Pacific herring and pink salmon embryos ... The herring population has never rebounded, even 20 years after the spill, due to a combination of issues including disease and poor nutrition from decreased plankton

production. How sure can we be that these chemicals will not also affect humans?”

Whelan and Russell also warn that dispersants such as Corexit are laboratory tested under florescent lights, dramatically different conditions than exist in the Gulf. “[R]esearch conducted under conditions more equivalent to natural sunlight indicate that toxicity increases significantly after sun exposure—by 12 to 50,000 times as much,” they write.

On May 19 the EPA ordered BP to cease using Corexit within 24 hours or provide a detailed explanation of why it does not use one of the 12 other dispersants on the market rated more effective and less toxic. BP simply refused the order. Upwards of one million gallons of dispersants, mostly Corexit, have been dumped in the Gulf.

Whelan and Russell also point to the long-term effects to humans posed by the poisoning of fish, shrimp, and other species that people eat. The toxins in the Gulf, both from the oil and the dispersants, have already entered the food web and will inevitably stay there for years.

Finally, there are the psychological problems associated with the catastrophe. On June 23 an Alabama charter boat captain who had been forced to take a job in oil cleanup fatally shot himself. Friends say he was in a crisis over the loss of his livelihood. (See: “Oil spill cleanup worker commits suicide”).

“These are people in a serious crisis,” says Dr. Irwin Redlener of the National Center for Disaster Preparedness at Columbia University. “They’re at ground zero of a catastrophe.”

Anthropologist Lawrence Palinkas of the University of Southern California warns that the traumatic effects of the Gulf oil disaster will last for years. In a study of the Exxon disaster, Palinkas found that in affected Alaskan communities the incidents of Post Traumatic Stress Disorder (PTSD) and other psychiatric problems were 360 percent higher than in the general population one year after the spill.

“The major issue that we may be addressing for years to come is not just the physical health effects of the oil spill, but the mental health impacts,” Palinkas said in a meeting held at the Tulane University Medical School in New Orleans last week.



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