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Changing Risks for Asbestos Abatement Workers: A Commentary

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The asbestos abatement industry arose from risks associated with this material added to buildings and structures through-out the world. Much of the stated risks for workers removing Asbestos-Containing Materials (ACM) have been extrapolated from those mining, milling or manufacturing these agents. These risks are based on historical events before application of controls were required by various regulatory agencies. Regulations regarding exposure and mitigation of potential health effects for asbestos emerged in the 1970-1980's, which corresponds to the beginning of occupational regulation, at least in the United States. Disease(s) relating to the mineral, at least in the western world, have been categorized to activity before this time period [1]. Fundamentally, after this time period risk from asbestos (exposure) appears to be no greater than that for the general public; notably when below a threshold level of exposure (e.g. 20-25 f/cc-year) [2,3]. However, the real issue is these findings are adjusted for smoking, and when included, risk of disease in this population, is elevated; with the actual cause as result of smoking.

However, conditions for those in early abatement and handling/removal of ACM from buildings have dramatically undergone change; even when examining the 1970's with today, most notability in western countries. At least in the United States, there is a blanket criterion for any material that is ACM, which by definition is a material containing asbestos over one percent. This requirement exists regardless of the type/condition of the material. ACM has been classified as friable and non-friable; although, some by definition do not clearly separate the difference [4].

Exposure data have shown that some "forms" of ACM "exhibit" little risk and result in no practical exposure [2,4]. However, practices related to abatement of these materials may actually result in a risk. For example, application of water or amended water can create a slip and fall hazard, yet actual removal does not exhibit a hazard from airborne asbestos [4].

Today, studies have shown exposure to be much lower than from the past, with some suggesting this material exhibits a threshold level where the risk of disease is minimal [1]. Others have suggested no threshold for asbestos and support a one fiber theory, but at the same time acknowledge lower exposures carry little consequence to health [5]. As the exposure changed, becoming lower over time, actual contributors for risk have also changed. Risks or hazards for this occupational population have shifted away from the mineral to smoking, infectious disease, accidents, personal risks (e.g., obesity, drunk driving) and in some ways impacts from global warming.

Smoking is probably the greatest health risk for asbestos abatement workers (AAW), currently and historically [1]. This agent has been shown to dramatically increase the risk of lung cancer and asbestosis, and is for some people, due to genetics, also relates to mesothelioma [6]. Today this agent is the most important contributor to health effects in this occupational population. What is not commonly addressed is that smoking rates in this group do not appear to have changed over the last 20-30 years [1]. A survey of AAW during the summer of 2012 found out of 10 workers, 8 were current smokers, one an ex-smoker and one a non-smoker. Although this is a small survey and include only one "crew" of workers, these results are consistent with previous findings [1].

Tobacco consumption is not the only "potential" hazard experienced by AAW, others include personal risks, such as drug and alcohol use, along with accidents (person and industrial) which can also be identified as a concern; especially when considering impairment that is reported in this and other occupational industries [4].

Recently, infectious diseases have been identified as an emerging risk for construction workers, including those undertaking asbestos abatement [7]. This appears to be an un-recognized hazard for AAW that has yet to be addressed.

A new emerging hazard is from global warming and related events. As climate changes old hazards will be modified, such as heat disorders. With a changing climate many of these hazards will become more common along with unusual ones emerging (e.g. higher environmental dust-associated problems, fungal levels in ambient air); some specifically related to certain regions (e.g. southwestern US -Coccidioides immitis-Valley Fever). Many of these will be difficult to recognize, at least initially, and likely have some regional specificity.

These modern risks are vaguely addressed or not at all. Issues of concern in this industry are based on exposure and concerns that existed before what is occurring today. Basically, today's standards and criteria are based on old conditions and have not adapted to present risks/hazards. To achieve functional risk/hazard reduction, criteria need to address actual and current risks. Unfortunately, change is hard and so is learning/understanding current information. Most like the status quo and oftenpeople become resistant to change - basically we go back to what was originally taught or currently know.

To effectively prevent disease in this occupational population a new focus is needed to address current concerns, not those which are historical. However, important criteria as related to prevention can vary among locations (e.g. western vs. developing nations). At least for western countries, risks have changed from the past and should now focus on smoking (tobacco use) personal accident prevention, industrial accidents, infectious disease and global warming-related hazards. Functionally, occupational health needs to approach practices from an evidence-based prospective rather than strictly from a historical or regulatory view

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