Health experts concerned over India’s asbestos industry

India’s reliance on asbestos in buildings and its poor protection for workers exposed to the material could lead to an explosion in related malignant disease, warn experts. Talha Burki reports.

Late last year, the Times of India ran an advertorial on behalf of the asbestos industry. Entitled “Blast those Myths about Asbestos”, it began by asserting “asbestos is a naturally occurring material”. Readers were assured that “only safe white fibre is used in manufacturing of asbestos cement products in India”; and that the “problems” other countries have encountered “are not relevant in the Indian context”.

India’s surging consumption of asbestos, the industry’s hefty political and economic clout—of which the Times advertorial was one manifestation—and the country’s poor record of worker protection, has alarmed experts. A sizeable burden of asbestos-related disease is inevitable. But if current trends continue unabated, the public health consequences will be felt into the next century.

Worldwide, at least 90 000 people die every year from illnesses resulting from occupational exposure to asbestos. However, this number only takes into account workers and ex-workers who have been identified with asbestos-related lung cancer, mesothelioma, and asbestosis. But asbestos has also been linked to laryngeal and ovarian cancer. Factor in asbestos-related illness among individuals whose work history has not been recorded, the family members of those who work with asbestos, and people living near asbestos factories and mines, and the death toll is much higher.

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The lengthy latency period of asbestos-related malignant diseases—in some cases more than 40 years—means that even in countries that no longer use the material, the disease burden continues to rise. The UK, for example, banned all forms of asbestos in 1999 but at least 3500 people die from asbestos-related illnesses every year, and this figure is expected to increase to about 5000 in the coming years.

Chrysotile (or white asbestos) is the only form of asbestos still being mined—it constitutes more than 90% of all asbestos used throughout history. Canada—from where India sources much of its asbestos—is home to the Chrysotile Institute; an influential organisation funded by the Canadian Government, which lobbies internationally on behalf of the material, often hosting events in Canadian embassies. Indeed, Canada has been instrumental in stymieing efforts to have chrysotile listed in the Rotterdam Convention, a UN registry of hazardous materials, which requires “prior informed consent” before they can be exported.

The Chrysotile Institute distinguishes between chrysotile and amphibole forms of asbestos, contending that the former is not so dangerous and can be safely used. Crucially, the Chrysotile Institute maintains that “there is no evidence of increased cancer risk” if worker exposure to chrysotile is less than 1 fibre/cm³; an assertion denied by health experts. “WHO’s position is very, very clear”, says Maria Neira, director of public health and environment at WHO, “all types of asbestos are carcinogenic”. The organisation’s guidelines state: “increased cancer risks have been observed in populations exposed to very low levels.”

All of which has prompted more than 40 countries—including all member states of the European Union—to ban chrysotile. The World Bank has determined not to use it in any new development projects; and WHO has noted that “the most efficient way to eliminate asbestos-related disease is to stop using all types of asbestos”.

Nevertheless, about 125 million people across the globe are exposed to chrysotile in their working environment. Worldwide production remains at roughly the same level as in 1960: nearly 2.2 million metric tonnes per year. Vast development projects in Asia are largely responsible for maintaining the market. In particular, India’s asbestos industry is burgeoning.

From 2000–07, India’s use of asbestos rose from roughly 125 000 metric tonnes to about 300 000. Nearly all of India’s asbestos is mixed with cement to form roofing sheets. Bolstered by asbestos import tariffs that have been reduced from 78% in the mid-1990s to 15% by 2004, the country’s asbestos-cement industry is increasing by roughly 10% every year, employing in excess of 100 000 people. Since 2003, companies no longer require a special licence to import chrysotile.
Since 1960, India has incorporated about 7 million tonnes of asbestos into its buildings. The health consequences are already apparent, but the scale of the problem is not clear. "The Government of India has a very poor, almost non-existent, system to record death and disease", explains Arthur Frank from Drexel University, Philadelphia, PA, USA. Besides, cancer is not a notifiable disease. Frank cites a hospital in Mumbai which sees a dozen cases of mesothelioma every year. Studies have shown high rates of asbestosis among workers in the industry, including in those whose exposure to the material has spanned less than 5 years. "But I suspect that there has been no real assessment of [asbestos-related disease] to the point that you can get accurate figures", Frank concedes.

It is not simply a case of data collection. Of India’s 300 or so medical schools, only one has a training programme in occupational health. 55 million Indians are covered under the Employee State Insurance Corporation. They have 6500 physicians", points out Frank, "yet virtually none of them have had training in occupational health". Consequently, asbestosis is frequently misdiagnosed as tuberculosis or bronchitis. Besides, "doctors do not have access to the standard ILO [International Labour Office] radiological plate which is needed to diagnose asbestosis", V Murlidhar from the Occupational Health and Safety Centre, Mumbai, India, told The Lancet.

Asbestos-cement is durable, fire-proof, and easily secured, unlike thatched roofs. It does not clatter in the monsoon or rust, unlike metal roofs; and it will not gust in the wind, unlike a sheet of tarpaulin. Its proponents claim it is vital for sustainable development. Alternatives such as polyvinyl chloride and ductile iron might have to be imported, whereas most countries have access to cement. But, says Frank, "there are many substitutes for asbestos which don’t carry the same health risk".

The Chrysotile Institute claims that chrysotile can be used safely as long as employers follow basic precautions. This is just not feasible, answers Pat Martin, Canadian member of parliament and former asbestos miner. "If we in the developed world haven’t found a way to handle chrysotile safely, how can we expect them to do so in developing nations?" he asks.

Vessels laden with asbestos are deposited in Indian ports, to be dismantled by some of the country’s 60,000 or so ship breakers. For these individuals, and for most workers in the asbestos-cement industry, the outlook seems bleak. "Most workers are not protected at all", notes Madhumita Dutta from Ban Asbestos Network of India based in Chennai. "Health and safety standards in the asbestos industry in India are negligible", agrees Martin, he talks of factories covered in carcinogenic dust and workers using bits of cloth as rudimentary masks. "There is very low awareness of the adverse effects of asbestos amongst workers", adds Dutta. Many Indians smoke, a factor which massively increases the risk of lung cancer when taken in combination with exposure to asbestos.

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The difficulties do not end there. Intact, asbestos-cement locks in harmful fibres. But it does not always remain intact. Indian consumers are unlikely to know that as asbestos-cement erodes and crumbles, dangerous fibres are released; that you must never use power saws on asbestos-cement, nor cut the product dry.

"Every time you put a piece of asbestos-cement in place, you’re putting in place the seeds of a potential future problem", Frank stated. Even if building materials are kept in pristine condition and future generations are made aware of the building’s contents, there is no legislation for man-made disasters. The 2001 Gujarat earthquake destroyed almost 400,000 homes. In the USA, after the World Trade Centre collapsed, some dust samples showed asbestos concentrations of 4%.

Hopes for India’s immediate future are muted. “We can expect a lot more death and disease, that’s no secret”, Frank told The Lancet. “There is no champion for the working person, or for the elimination or reduction in the use of asbestos, that I can see in the central Indian Government”, he added. Dutta points out that several parliamentarians have major holdings in asbestos companies, and there are asbestos manufacturing plants in state ownership. “The asbestos industry in India is a very powerful force”, agrees Barry Castleman, an environmental consultant who has advised the World Bank and WHO on asbestos. Both he and Frank asserted that the industry has even affected government agency studies into asbestos, providing funding and helping to design questionnaires.

At a minimum, those workers who are already ill must be compensated, says Murlidhar. As things stand only a handful have received compensation—India’s intricate labour laws make it difficult to hold negligent employers to account. The final aim, however distant, is an outright ban. “The health hazards of asbestos don’t warrant its use”, Martin says simply.

Talha Burki