scientific and medical research can provide information useful for risk–benefit analysis. Perhaps there was good reason to argue for immediate, drastic action such as a complete ban when the asbestos problem first became widely known more than 30 years ago, but this was not done.

The EPA proposed a ban in 1979 on the manufacture of asbestos-containing products in the United States. Many of the questions raised by Jack Siemiatycki[1] were asked and answered when a court of appeals remanded the matter back to the EPA in 1991 because they "failed to muster substantial evidence" to support their position that modern asbestos products present an unacceptable risk to the public.[2] The EPA did not provide this evidence. We argue that it does not exist.

In calling for a complete ban now, the Collegium Ramazzini states, without evidence, that the risk of chrysotile asbestos is too great and that exposure cannot be controlled.[3] On the contrary: exposures in the last 20 years seem to have been very well controlled. The increased rate of mesothelioma in the United States, which the Collegium uses to bolster its claim, occurs only among people old enough to have been exposed before 1970.

The Collegium argues, without proof, that all types of asbestos fibres present cancer risks so similar as to be indistinguishable. It ignores the characteristics, such as biopersistence and surface chemistry, that make some materials more carcinogenic than others. Yet it is these very characteristics that are needed to explain why substitutes such as synthetic vitreous fibres are safer.

The Collegium's approach to the health hazards of low-level asbestos exposure is behind the times. Because of its obsession with chrysotile asbestos, the Collegium has missed the really nasty hazards of the last half century, next to which the hazards of low-level asbestos exposure seem insignificant. The arsenic catastrophe in Bengal and Bangladesh is one example.

It is not too late to change. Let us urgently study the list of issues raised by Michel Camus[4] and agree upon a proper comparative risk assessment.

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Not much has changed concerning the morality of continuing to produce and sell asbestos since my editorial on the subject was published in *CMAJ* 14 years ago.[1] Jack Siemiatycki's balanced and thoughtful summary[2] is useful, but one may doubt that his recipe for resolution of the question will actually contribute much toward a solution. The problem is that the range of risk estimates is so wide and the exposure data are so poor that the choice between alternatives becomes essentially arbitrary. I reviewed the problem of asbestos in 1994 but was unable to suggest any way of improving the risk estimate procedure or of resolving the question.[3]

Since then, the Canadian government has challenged the French government's decision to join other European countries in banning the use of asbestos, and it was threatening to raise the matter with the World Trade Organization. As far as I am aware, this issue has not been debated in the House of Commons, nor is there a white paper outlining the Canadian government's defence of the use and export of asbestos. In my editorial, I argued that the Canadian medical profession had a responsibility in relation to this question, but I am still not sure how this should be exercised.[2]

My own position is that the difficulty in evaluating the risk management, the undoubted danger of the material when inhaled and the existence of satisfactory substitutes should lead to a decision that the use of asbestos should be discontinued.

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[Philip Landrigan responds:]

The principal reason for the Collegium Ramazzini's call for an international ban on all uses of asbestos is to protect the health of workers in developing nations.[1] In many of those countries, production and use of asbestos are increasing,[2] occupational safeguards are weak to non-existent and the prospect looms for an epidemic of asbestos-related disease that will dwarf the epidemics that occurred in North America and Western Europe.

Richard Wilson and colleagues and David Janigan miss this central point when they argue that a ban on asbestos is unnecessary because rates of mesothelioma are declining in the United States and other developed countries. It is well to recall that these declines are the result of strong regulations that were imposed on asbestos despite the continuing objections of the asbestos industry and their apologists, and despite continuing calls by those groups for yet more study, more risk assessment and more cost–benefit analysis.

The asbestos industry, like other industries that manufacture hazardous products, is deliberately transferring its operations and its markets to developing nations to escape the strict legal controls that now exist in virtually all industrially developed nations, Canada among them. It is quite hypocritical of those industries to relocate to the least-developed nations and then to claim that workers there can work safely with toxic materials such as asbestos. Anyone who has travelled in the poor nations of South America, sub-Saharan Africa and Southeast Asia will have seen workers using asbestos in the most uncontrolled of conditions, for example, cutting asbestos–concrete pipe with circular saws or trowelling asbestos insulation on to walls in the complete absence of any form of respiratory protection. The argument that workers can be protected against asbestos in nations that have no legal infrastructure in occupational health is a cruel joke.

The claim that chrysotile asbestos from Canada is "safe" is simply not true. Epidemiologic as well as toxicologic studies have shown abundantly that all forms of asbestos including Canadian chrysotile can cause the full range of asbestos-related diseases including mesothelioma, lung cancer, asbestosis and other malignancies.[2] An analysis from Quebec published 3 years ago showed a 7-fold excess mortality rate for pleural cancer (presumably mesothelioma) among women in the chrysotile-mining townships; no such excess was seen elsewhere in the province.[3] The International Agency for Research on Cancer,[4] the US Environmental Protection Agency[5] and the World Health Organization[6] have all accepted that chrysotile is a potent carcinogen.

The claim by Dildar Ahmad and William Morgan that the Collegium Ramazzini accepted funding from a consortium of trial lawyers to sponsor a conference a decade ago is old news. The Collegium receives no such funding at present.

Laurie Kazan-Allen is absolutely correct in noting that this issue has been studied to death. A call for further review might on its face seem reasonable, but in fact it is simply a summons for yet another journey down a well-trodden and diversionary pathway.

I thank David Muir, David Bates and Tee Guidotti for their thoughtful comments in support of this ban.

Those who support the continuing export of asbestos to the developing nations of the world are in the same unhappy position as those who would advocate the export of cigarettes to those nations — they are defending the indefensible.

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[Jack Siemiatycki responds:]

Notwithstanding the strong disagreements among these letter writers, most of them make valid points concerning the call for a worldwide ban on asbestos.[1–3] I would like to comment on 2 of the letters.

Laurie Kazan-Allen implies that one cannot legitimately question the ban-asbestos lobby without being a lackey of the chrysotile industry. She claims that the final word on chrysotile risks was produced by "a panel of 17 experts from 10 countries, which drew on the resources of 140 collaborating centres, institutions and individuals …" Having been one of the individuals involved in that process, I can affirm that the image she conjures of an army of scientists coming together in a harmonious and coordinated fashion to answer the questions is misleading. The document was written and approved by a small group of people, not by an army of scientists. Further, given the report's equivocal recommendations, its calls for additional research and its many acknowledgements of data limitations, it is clear that this panel did not consider that it was handing down the final truth on chrysotile.