Correspondence

Distance of residence in 1984 may be used as exposure surrogate for the Bhopal disaster

Sir,

We read with interest De's conclusions¹ that the lung function impairments in the Bhopal population were associated with gas exposure, lower socio-economic status, and smoking. Prior studies have also shown that poorer people living in kuccha houses sustained greater exposure to the gas because of proximity of residence to the Union Carbide plant². However, the high prevalence of tobacco smokers/ex-smokers in the exposed group is a major confounder which may also account for the study findings. An exposure-response analysis may have helped determine whether gas exposure is truly associated with pulmonary impairment but the author did not attempt such an analysis because of possible recall bias. We suggest that using distance of individual in the residence at the time of gas release in 1984 will serve as a surrogate measure of exposure. Such an approach was successfully used in the ten-year follow up community survey conducted by the International Medical Commission on Bhopal (IMCB)^{3,4} and may help determine if the association of gas exposure with respiratory impairment is truly present in this hospitalbased study.

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