Author’s response to reviews

Title: Acute health effects after accidental exposure to styrene from drinking water in Spain

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Response to the editor

We have made the modifications requested in the references and modified the text of the paper according to the comments of the reviewers. We attach a point-by-point response. The major changes are the provision of additional information on the site of the accident and the provision of photos and a scheme, a more complete discussion of the public health aspects of this accident and the changes in the description of the epidemiological design followed to investigate this accident.

Response Reviewer J. Beach

1. We agree with the reviewer and have modified the discussion to make clear that we do not have an appropriate comparison population. However the prevalence of symptoms are much higher than what would have been expected in a healthy general population sample. The only objective measure of symptoms was the contact with the health services and the confirmation of irritation type symptoms. This is now mentioned.

2. No additional environmental variables were collected. The questionnaire is now appended in Annex 1.

3. We had collected information on the composition of the chemicals applied during reparation. We re-contacted the company applying and the industry producing the chemicals, but did not identify any other chemicals than those already mentioned in the paper. We have added in the text some minor additional information on exposures. The reviewer is right in saying that we cannot rule out the possibility that another chemical or chemical contaminant could have caused the symptoms and we have modified the discussion to indicate this. We sustain, however, that the chemical that most likely provoked the symptoms was indeed styrene: there is a very close temporal relation between reparation work and symptoms and in addition, several of the reported symptoms have been associated with styrene exposure in the occupational environment.

4. We agree with the reviewer that the main message of the paper should be focused on the public health implications of this incident. A more complete discussion of the chain of events that led to the contamination is now included together with a discussion of the main control measures should have been applied to prevent similar accidents. A scheme and photographs of the building and the water tanks now included.

Response Reviewer FJ Bove
There are several ways of classifying epidemiological studies. We followed a scheme proposed by N Pearce and have included a new reference to N Pearce's methodological paper. Under that scheme the study could be described as a prevalence case-control study. We agree, however, with the comment of the reviewer that this nomenclature can lead to misinterpretations and have modified the title, abstract and text following the reviewer's suggestion.

We moved the sentences indicated by the reviewer to the introduction and the methods section.

We have deleted some sentences to avoid repetition.