Author's response to reviews

Title: Application of Disability-Adjusted Life-Year to Predict the Burden of Injuries and Fatalities due to Public Exposure to Engineering Technologies

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Author's response to reviews: see over
Comment: The purpose of the fatality equivalent is not clear (p. 11 of your paper). Moreover, DALYs are not equivalent to the median life expectancy. The editors would like you to either remove this from the paper or elaborate.

Response

The notion of fatality-equivalent and the section on the idea of converting DALY to fatality-equivalents has been removed from the manuscript. However, content that describes how a DALY can be associated with fatality has been retained:

A DALY estimate from Equation (2) for fatality of an individual is determined by setting the short-term parameters (disability-weight and duration) to zero, the long-term parameters (disability-weight and fraction) to one and long-term duration as the remaining life expectancy of the deceased. The result is a DALY value which is equal to the victim’s expected life expectancy at the age of death. In a general setting, if the remaining life is set to median life expectancy in Ontario (44.4 years; subject to change), the resulting DALY associated with mortality could be used as a benchmark and guiding principle for statutory and provincial decision makers.

I hope the above explanation is acceptable and gives an insight into why a DALY for fatality was termed as ‘fatality-equivalent’ in the earlier version of the manuscript. If editors and reviewers find this explanation practical and have no objection in re-introducing the fatality-equivalent unit to compare against the well acknowledged benchmark of 1 fatality in a million people in a year, we would be glad to bring the corresponding description back in to the manuscript. But otherwise, the manuscript change is complete and is ready for your kind consideration and review for publication in your esteemed journal.