EUR. J. ONCOL.; Vol. 23, n. 3, pp. 132, 2018

The global challenge of ascertaining the impact on mortality from natural disasters: the experience of Puerto Rico's Hurricane Maria

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Background. The practice of accounting for deaths from disasters due to natural hazards was critically challenged after Hurricane Maria hit Puerto Rico when societal-observed mortality rates were higher than official estimates. To confront the controversy, the Governor commissioned George Washington University to conduct an independent estimate of excess mortality, evaluate the death registration practice and assess the communication process.

Methods/Approach. We present the difficulties in carrying out multiple empirical analyses in the face of the complex social and political realities in a USA territory. In any setting, the precise assessment of mortality is a methodologic challenge, complicated by limited official guidelines for certifying deaths and uneven application, and the worldwide lack of standardized methods to document deaths that are indirectly caused by natural disasters.

Results. We discuss our six-month findings, the excess mortality and age and socioeconomic inequities. We identified the lack of a culture of preparedness, and issues with communication and coordination across the local, Puerto Rico and federal governments. We discuss the actions that Puerto Rico is undertaking to prepare for future storms. We address the experience of releasing the report and the responses from the local government and civil society, as well as the amplified reaction by the federal authorities. We provide an update of current initiatives in the US to establish a standardized procedure for accounting the mortality impacts from natural disasters. We discuss its policy, epidemiologic and capacity-building implications.

Conclusions. There is need for agreed-upon principles and adherence to rigorous methodologic standards in order to produce credible impact assessments. Only by understanding the full magnitude of such impacts will we be able to demonstrate the importance of intervening in a proactive and protective manner; this requires capacity-building for monitoring and analysis of deaths after disasters.

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