

Why Puerto Rico's death toll from Hurricane Maria is so much higher than officials thought

June 1 2018, by Alexis R. Santos-Lozada



A broken power grid in Humacao, Puerto Rico. Credit: Dan Vineberg, CC BY

"If you don't get away from those areas, you are going to die." That



statement concluded Puerto Rico Secretary of Public Safety Héctor Pesquera's <u>press conference</u> before Hurricane Maria.

As of Dec. 29, the Department of Public Safety had certified <u>64 deaths</u> due to Hurricane Maria. Pesquera was one of the fiercest protectors of that official death count.

However, estimates reported by <u>CNN</u>, <u>The New York Times</u> and others around the same time told a very different story. Now, <u>a May 29 study</u> estimates the total number of deaths at 4,645.

Death counts for Hurricane Maria How many people died in Puerto Rico due to Hurricane Maria? The official count is at 64, but studies by other researchers and media outlets estimate many more. Official count 499 CNN (11/20/17) 1.085 Santos and Howard study (11/21/17) Center for Investigative Journalism 985 (12/7/17)1,052 New York Times (12/9/17) 822 Significance (2/6/18) 4,645 New England Journal of Medicine (5/29/18) CNN estimates only include deaths until mid-October.

I was part of the team of demographers that last year developed the first



estimates of excess deaths, with the objective of informing the public and policymakers. Our numbers, published in November, contrasted significantly with the original official figure. The most shocking results from <u>our study</u> suggested that deaths in September and October were 25 percent above historical patterns.

Determining the number of excess deaths after a natural disaster is not only a mathematical exercise. Undercounting deaths reduces the attention to the crisis Puerto Ricans live day by day. It can also delay international recovery efforts and the approval of policies to help those who need it the most.

Causes of death

Our study compared preliminary data from the Department of Public Safety with historical patterns for the same months in the past decade. In other words, we compared the number of deaths in September and October last year with data from the same period of time in 2010 to 2016. This is how we concluded that deaths exceeded historical ranges by at least 1,000.

So why were so many deaths missing from the official count? My colleagues and I suspect it may come down to how deaths are recorded by government officials.

In Puerto Rico, deaths are recorded using <u>international classifications</u>. This system doesn't capture all of the circumstances surrounding a death that happens following a natural disaster. The death may have been accelerated by some conditions – like difficulty communicating during the emergency.

Deaths associated with a particular natural disaster can be classified as direct or indirect deaths. According to the Centers for Disease Control



and Prevention, <u>direct deaths</u> are those "directly attributable to the forces of the disaster or by the direct consequences of these forces, such as structural collapse, flying debris or radiation exposure."

"Indirect deaths" may be associated with any unsafe or unhealthy conditions before, during and after a natural disaster.

For example, Hurricane Maria destroyed Puerto Rico's power grid. So, someone whose life depended on a dialysis machine would no longer be able to use one. In official certificates, their death would be classified as kidney-related and not attributed to the hurricane – even though the death was accelerated by lack of resources required by the patient to stay alive.

The same would happen to someone whose life depended on respiratory aid. Their death would be classified as pulmonary-related.

Or, say a person feels chest pain and suspects a heart attack. Their immediate reaction might be to call 911. A working communications structure may be used to get help in time and save a life. But in the days following Hurricane Maria, only <u>25 percent</u> of the cellphone towers were working. Communication was virtually impossible.

Under the international system, a death resulting from these circumstances would be classified as a result of a cardiovascular conditions and would not be attributed to the hurricane either.

Revising the death count

Given that most estimates, including the most recently published figure, point toward a serious undercount, it's imperative to address this issue once and for all.



I have <u>a few ideas</u> of how to move forward. Most importantly, researchers must be able to access data without interventions from the political establishment. So far, no government body at the local or federal level have shared updated counts with the public, and they are actively seeking to <u>dismantle</u> the Puerto Rico Institute of Statistics, which is the agency with the power to make them do it.

In light of the evidence, Governor of Puerto Rico Ricardo Rosselló last year ordered a <u>review</u> of the causes of death for those who died after Hurricane Maria. They chose <u>George Washington University</u> to run this project. A preliminary report was supposed to be published by the end of May, but it will more likely be published during the summer.

Will the official count change? As of today it has not, but it most likely will. The government is no longer updating the official count, which stands at 64, and they are likely to accept the count produced by the George Washington University team.

Following the impact of hurricanes Harvey, Irma and Maria, the CDC <u>published guidelines</u> that state and territorial governments should follow to determine if a death is related or not to a specific event. Following these guidelines could provide the government of Puerto Rico with a more realistic death count. It remains to be seen if the new count will follow this protocol.

What deaths should be counted?

An accurate death count could be used to inform policies, supplement requests for aid, and inform local governments as they prepare for future <u>natural disasters</u>. That's particularly important for Puerto Rico, where extreme weather events may become more likely as climate change worsens.



Hurricane Maria was the first storm to destroy the power grid in Puerto Rico. Puerto Rico is now entering hurricane season again, and experts predict it will be an <u>active one</u>.

Minimized figures could weaken efforts to provide relief to communities affected by the hurricane. Given that Puerto Rico does not hold political power in Congress, and that the only representative does not vote, it's crucial to convey the reality to all elected officials, so that their votes align with the necessities of those who are still in Puerto Rico.

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