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Valencia floods: How proper response can stop a natural disaster from becoming a public health crisis

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Traducciones

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The unthinkable happened to thousands of people in the province of Valencia on October 29 – in a matter of minutes, they went from going about their daily lives to being submerged or swept away by floodwaters, with many losing everything they own. A massive area of both countryside and densely populated town centres, home to around 300,000 people, has been ravaged by the floods.

Almost two weeks after the disaster, with cleanup and recovery efforts still underway, we have to understand what the health ramifications will be for the people living in these areas, both to respond adequately now, and learn lessons for the future.

Responding to a disaster

Disaster management cycles set out four stages in responding to a natural disaster: prevention, preparedness, response and recovery. Right now, a matter of days after the floodwaters subsided, both ordinary people and emergency services are still very much in the “response” stage.

This phase involves organising and carrying out tasks to alleviate the disaster’s direct impact. This includes rescuing victims, finding the missing and managing the remains of the deceased, and providing adequate healthcare to those who need it by attending to people who have suffered trauma and injuries caused by the flooding and providing a suitable place where they can recover.

It also means providing shelters for those who were evacuated, guaranteeing access to basic resources such as shelter, water, food, energy, and so on. In short, stabilising the situation, and reducing any further possibility of personal injury.

Much of the activity continues in the recovery phase, where efforts should focus on returning the population to the previous situation with the lowest possible impact on their health. This covers many different areas, including rebuilding health and non-health infrastructures, and providing economic and employment support, and offering longer term medical support to deal with trauma, both physical and emotional.

Polluted water, shortages of food and medicine

Public health responses have to adapt to the unique risks and circumstances of each specific disaster.

Recovering human remains as soon as possible is paramount, as is identifying and returning them to loved ones. Experts at the World Health Organization have clearly stated that “contrary to common belief, there is no evidence that corpses pose a risk of disease epidemics after natural disasters.”

However, in a situation like the recent Valencia floods, there is a risk that sewage systems will be disrupted or overwhelmed, increasing the risk of water contamination. This comes alongside the disruption of basic services such as drinking water and electricity.

The destruction of communication and transport infrastructures also hampers the distribution of food, cleaning products and medicines, and it is important to recover these supply routes as soon as possible. However, some infrastructures – including roads and bridges – have been badly damaged, meaning it may take some time to return to normality in this regard.

It is imperative that the affected populations have access to safe water, safe food and energy for cooking. The authorities and supply companies must make every effort to replenish the basic needs of the population, even if only by temporary means. This avoids potential health risks from floodwater and stagnant water, which can be a breeding ground for infectious diseases, especially gastrointestinal diseases – though this is, at least in principle, a low risk in Europe.

The local population, for its part, should adopt all possible hygiene measures to avoid contamination of food or cooking utensils with this water, and should wash and sanitise their hands properly.

Dangerous objects and chemicals in floodwaters

Objects washed away by the floods present an additional danger, as they can cause injuries – sharp objects, glass, wood, metal fragments, and so on.

Potentially toxic chemicals can also enter the water, as cars or machinery can spill or leak fuel and other substances as they are dragged along by the current. People passing through affected areas therefore have to wear good, waterproof footwear and appropriate protective clothing, and must ensure that any injuries receive prompt attention. Wherever possible, cleanup work should be assisted by the appropriate equipment and personnel.

Chronic medical conditions

People with pre-existing conditions may suffer as a result of not having their usual medication, especially if they no longer receive the care and treatment they need, such as access to dialysis or oxygen therapy. In addition, some of these people may have spent hours surrounded by water, possibly suffering from hypothermia, and may have difficulty in getting proper nutrition or hydration. People in situations of dependency, such as elderly people in care homes, may also have been evacuated, and now find themselves in a strange, disorienting environment.

We also cannot ignore the mental health risks involved in such a situation, which can affect both those directly impacted and those who come to help. Particular attention is required for those who have suffered personal losses, have had their lives or those of their family members put at risk, or have suffered significant material losses (their homes, personal belongings, businesses, workshops, agricultural land, etc).

After the initial, active phase of response, there is also a health risk related to the possible increase in mosquito and other insect populations, especially when climatic conditions for breeding in stagnant water are favourable. Fortunately, this risk is currently lower than at other times of the year in Valencia.

Proactive action can prevent further problems

Food security must be guaranteed, sanitation systems must function and supplies of water, food, energy and medicine must be restored as soon as possible, even if only temporarily. At the same time, it is essential to guarantee medical attention to those both with injuries sustained during the disaster, or those with pre-existing or chronic conditions that need urgent attention.

Public health monitoring systems, for their part, have to work harder to preemptively detect possible outbreaks or illnesses that will need a swift response.

Care needs to be taken to avoid additional risks – such as injuries, infections and chemical exposure – among both residents of the affected areas and volunteers who go to help there. Emotional and mental health risks also cannot be ignored, throughout the response and recovery stages.

Once the crisis has passed, measures will then need to be analysed and put in place to minimise the impacts of any future weather events. This is especially urgent in the face of a climate crisis that is making extreme weather more frequent, and more violent.

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