Earthquake

Last update: 2022-03-22

Key facts

- Impact depends on the intensity of ground shaking and the building structure quality. There is a larger impact in areas of high population and building density.
- Generally occurs without any warning. Aftershocks can remain a significant hazard, causing further damage and increasing the psychological stress of both affected communities and humanitarian workers.
- Potential for large influx of search and rescue and medical teams.

Main health impacts

Health concern	Risk factors
Trauma or injury	Building collapse causes the majority (75 per cent) of trauma, other injuries can occur from landslides or tsunamis triggered by the earthquake. Mortality and injury peak is usually within the first 72 hours.
Diarrhoeal diseases	Through interruption of water supplies, damaged or destroyed sanitation facilities and poor hygiene practices.
Respiratory illnesses, skin disease and vaccine-preventable diseases	Significant population displacement and overcrowded, communal emergency shelters, coupled with poor hygiene can lead to respiratory illnesses or skin diseases. A major earthquake can cause severe damage to health facilities and lead to the disruption of routine health services such as vaccination programmes, therefore increasing the risk of transmission of vaccine-preventable diseases.
Vector-borne diseases	An earthquake might cause a break-down in solid waste management or sanitation services. This can result in an increase in breeding sites for mosquitoes in stagnant water, and after some time an increase in transmission of dengue, chikungunya and/or malaria. Other vectors such as rats can be affected and their number increased because of poor hygiene conditions, bringing them in closer contact with humans, and leading to an increase in incidence of Leptospirosis.

Health concern	Risk factors
Overall adverse health outcomes	Destruction and damage to health facilities and stock disrupt provision of and access not only to primary health care such as maternal and child health services, but also to essential care for chronic noncommunicable diseases (NCD).

Priority actions for teams with community and public health response capacity

Immediate steps	• Provide first aid and ensure ambulance transport for injured survivors. • Identify key disease risk factors and implement corresponding prevention and preparedness activities. • Identify and support authorities to manage possible sources of toxic contamination.
Surveillance	• Assess existing surveillance mechanisms (if any), and determine, if there is a need, the extent to which the National Red Cross Red Crescent Society could feasibly support community-based surveillance efforts. If necessary, set up a community-based surveillance system.
Community-based action and social mobilization	• Implement Risk Communication and Community Engagement (RCCE) interventions with a focus on prevention of diseases related to a lack of water, sanitation and hygiene. • Support the social mobilization component of emergency vaccination campaigns as needed. • Ensure procedures in place to safely manage human and animal corpses. • Ensure access to mental health and psychosocial support (MHPSS) services for community members and staff/volunteers which may include (but are not limited to): regularly assessing MHPSS needs; providing information on the situation regularly in cooperation with authorities; training volunteers on the provision of psychosocial support (PSS); using mobile teams providing a range of support; embedding PSS into evacuation centre/shelter facilities; providing special support to vulnerable groups; working closely with authorities in family tracing; coordinating points for further care. • Assure convenient clothing and accommodation facilities for affected people. • Support for survivors of sexual or gender-based violence. • Support in restoring family links. • Identification in the community of cases of high-risk diseases (see list of disease tools below) and referral to pre-identified health structures. This requires a prior elaboration of a referral pathway, that is, mapping of existing primary health facilities, and assessment of minimum quality care standards and accessibility (including geographic and cost-related barriers).

For teams with additional clinical capacity

Please always refer to the appropriate local or international guidelines for clinical management.

Important primary health care interventions after earthquakes

- Close coordination between rescue and medical teams for triage and immediate management of life-threatening injuries.
- Provision of initial triage and care for trauma, asphyxia, exposure, burns care.
- Referral and transport of patients to secondary facilities, as needed.
- Minor wound care and tetanus vaccination.
- Continuity of main services delivery including maternal and child services.
- If disrupted, advocate and/or support authorities to ensure access to services and medication for patients with noncommunicable diseases (NCD) and who require palliative care.
- Specific primary care interventions for diarrhoeal diseases, respiratory tract infections, Hepatitis A, typhoid, skin infections, snake and insect bites.
- Treatment for malaria, dengue and other vector-borne diseases.

Disease tools that may be relevant

> Hepatitis A
> Measles
> Malaria
> Cholera
> Acute respiratory infections (ARI): Influenza (avian and seasonal)
> Chikungunya
> Dengue fever
> Diphtheria
> Diarrhoeal diseases
> Hepatitis E
> Meningococcal meningitis
> Pertussis (whooping cough)
> Poliomyelitis (polio)
> Rubella
> Typhoid fever
> Yellow fever
> Zika virus infection (Zika)