

! COVID-19: CDC Museum Closed to the Public

Due to ongoing concerns about the novel coronavirus (COVID-19), the David J. Sencer CDC Museum is closed to the public and will remain closed as we continue to assess and monitor developments. All CDC Museum tours are canceled until further notice.

This decision is being made out of an abundance of caution and based upon the guidance of the CDC regarding social distancing and the elimination of large gatherings.

Please continue to check our website and social media accounts for additional updates.



Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

Disaster Response – International

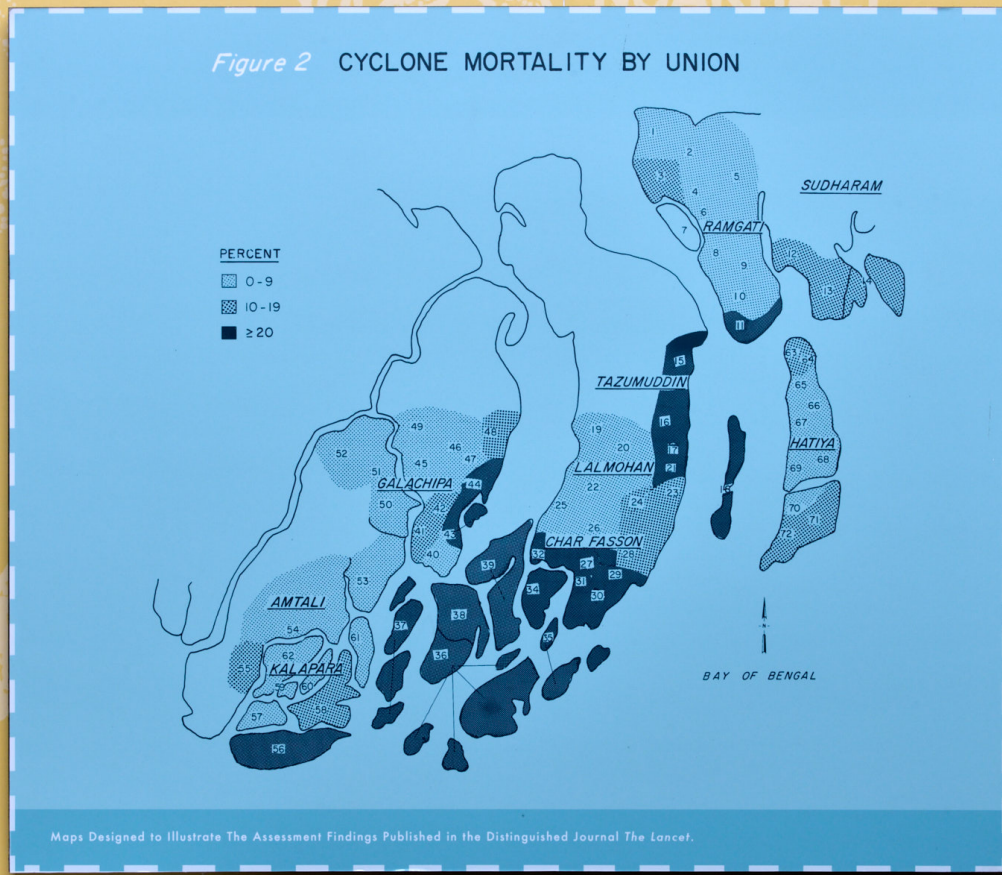
CDC Responds to Natural Disasters

Another international effort was the response to the Bhola Cyclone. In November 1970, CDC [EIS](#) officers and other epidemiologists were working on a nutritional survey of children living in rural Bangladesh. While they were there, a catastrophic **cyclone**, also known as a hurricane or typhoon, hit the country in its eastern state of Bhola. The cyclone was deadly, killing an estimated 300,000 people and destroying towns. CDC personnel performed two medical relief assessments, resulting in [two landmark studies](#) [↗](#)—the first a rapid assessment documenting post-cyclone injuries and diseases. The second study, which was conducted two months later, surveyed health, housing and environmental conditions.



Cyclone Syndrome

The [mentioned study](#), the rapid assessment on injuries, documents “Cyclone Syndrome” on survivors. The photograph seen here shows a male cyclone survivor with typical cyclone syndrome injuries — cuts and deep scratches on the arm, thigh, and chest from clinging to the trees while the wall of water from the storm passed. A photograph of a larger shipping freighter ship demonstrates the storm’s strength. In addition to driving the massive freighter ashore during the storm, the powerful storm grounded the vessel and sunk it into the ground. In addition, more than 85% of homes were severely damaged or entirely washed away by the storm. As they tried to rebuild, survivors found they had limited resources. In a picture taken two months after the cyclone, one survivor found herself fortunate enough to live in a hut made with walls of mud and grass with a sheet of tin scrap metal for a roof.



An Epidemiological Approach

As part of their studies, CDC epidemiologists generated a map of the area showing the percentage of fatalities (the darker the area, the greater percentage of people that died) and tables demonstrating that relief operations need to use an “epidemiological approach to disaster assessment and assistance” to tailor to the on-the-ground needs of populations. Today, CDC continues to provide [assistance with emergency responses](#) such as hurricanes and other natural disasters.



CDC Responds to Man-Made Disasters

This exhibition's final example of international relief provided by CDC is a man-made disaster. Shown here is a large picture of a malnourished African child sitting on a bench. His head is disproportionately larger than the rest of his body. His belly bulges out in the front because his body has digested his abdominal muscles and his ribs are visible. His feet and hands are swollen, and his arms and legs are very thin. The famine this child and his community faced was due to civil war in Nigeria when opposing parties cut off all relief aid to the boy's community.





A New Approach to Disaster Assistance

A fifty-person team, including CDC members operating in Nigeria, was mobilized for famine relief work. In collaboration with partner organizations, CDC's International Emergency and Refugee Health Branch conducted nutritional surveys in humanitarian emergencies. By applying epidemiological methods to a humanitarian emergency, CDC shaped a new approach to disaster assistance.

Two measurement devices on display here explain how the health care workers, without sophisticated medical equipment, assessed the children's health. One is the Mid-Upper-Arm-Circumference band, which assessed malnutrition in children ages one to five. CDC epidemiologists devised this simple test that used an adjustable strip of paper to measure the circumference of a child's upper arm in centimeters. Measuring the child's arm circumference allowed health workers to place children into three categories: healthy, needs to be monitored, and needs immediate assistance.

Another method was using a "Salter" type scale, a small, spring scale. It hangs by a large metal hook at the top and has a metal bar at the bottom to weigh infants under six months. A round dial between the hook and bar adjusts to measure infants' weights. Because they're portable, Salter scales are still frequently brought on [international humanitarian emergencies](#) to conduct nutritional surveys.

CDC's assessment of the state of malnutrition in the Biafra region showed the need for emergency humanitarian aid, to which the international community quickly reacted and assisted with relief supplies and food.

Enrichment Modules

SEE

Take a closer look:

- Learn more about CDC's [Global Rapid Response Team](#) and [Public Health Emergency Operations Center](#) (PHEOC).
- Read more about CDC's work responding to [natural disasters and severe weather](#).
- Learn what, why, how, and where [CDC's Global Health Protection and Security Division](#) operates.
- View images depicting a [Bangladeshi hospital](#) affected by the 1970 cyclone, [food distribution](#) and [weight measurement](#) at a 1967 Nigerian-Biafran war zone relief camp, and a [refugee being treated for kwashiorkor](#) at a 1968 Nigerian-Biafran civil war refugee camp.
- Got questions? Read CDC's [FAQ about disaster epidemiology](#).
- Explore visual representations of the [impact of natural disasters](#) worldwide and [genocide](#).

HEAR

From the source:

- Meet [Dinorah Lissette Calles](#), public health emergency epidemiologist on the CDC Global Rapid Response Team.
- Hear from [Anu Rajasingham](#), Public Health Engineer in CDC's Emergency Response and Recovery Branch.
- Meet [Luis Hernandez](#), Regional Emergency Preparedness and Response Coordinator in CDC's Guatemalan Office.
- Meet [Margo Riggs](#), former CDC EIS officer working in Public Health Preparedness.
- Read [stories of CDC's global health security work](#) led by active and retired programs.
- Follow @CDCemergency on [Twitter](#) or [Facebook](#) for preparedness tips, updates, and health alerts from CDC's Office of Public Health Preparedness and Response.
- Learn about the [science of tsunamis](#) from Ted-Ed.

REFLECT

Then and now:

- Read archives and [updates from the field](#) from CDC's Division of Global Health Protection.
- View [Katsushika Hokusai's artwork](#) depicting the uncertainty of life in the wake of natural disaster.
- Read about the challenges that soldiers and civilians faced as World War I coincided with [infectious disease outbreaks](#).
- Learn [what constitutes a famine](#) from Doctors Without Borders.

DO

Give it a try:

- Interested in learning more about disaster epidemiology? Check out this short [eLearning course](#), dive deeper with these online [disaster mortality training modules](#), or check out these [factsheets and toolkits](#).
- Find [shareable social media graphics](#) from CDC’s Division of Global Health Protection.
- Explore CDC’s international public health disaster relief with this coloring sheet: [International Public Health Disasters – Biafra](#) [↗](#)

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