Beijing, China

1.23M
est. injured after one nuclear detonation (100kt) over Tiananmen Square

FOR EVERY HOSPITAL BED
14 patients

FOR EACH DOCTOR
33 patients

China possesses about 350 nuclear warheads

A nuclear war would realistically involve many nuclear weapons targeting many cities in a country, making for an enormous humanitarian catastrophe basically impossible for any health care system to deal with. But even if just one average-sized nuclear weapon (100 kiloton) were to be detonated over Beijing today, the immediate health impact would be catastrophic. An estimated 357,810 people could die immediately and another 1,232,310 could be injured. Based on Beijing’s 2020 population, about one out of every thirteenth person in Beijing would be injured or killed.

At the reported COVID peak through 2021 in China in February 2020, more than 15,000 new COVID cases were reported in one day in all of the country. After a nuclear attack, about 82 times more people would need medical attention immediately in just one city.

Immediate Health Impacts

380 m
A fireball would extend out about 380 meters in every direction from the detonation point. If the bomb were dropped over Tiananmen Square, that means that parts of the Great Hall of the People and Chairman Mao’s Memorial Hall would be engulfed in a nuclear fireball and instantly vaporised.

1.1 km
To a distance of a little over 1km from the detonation point the explosion would likely generate a fatal dose of ionising radiation. In Beijing, for this bomb dropped on Tiananmen Square, this would include the entrance to the Forbidden City, the National Centre for the Performing Arts, several museums and a middle school.
How could Beijing respond to a health crisis of this proportion? China has about 198 doctors per 100,000 people and 266 nurses and midwives per 100,000 people which translates to roughly 40,512 doctors and 54,474 nurses and midwives in Beijing. After the explosion, about 37,364 doctors and 50,240 nurses would survive to treat about 1,232,310 injured people. That means every doctor in Beijing would be responsible for treating about 33 people, many with severe injuries, simultaneously.

What about hospital beds? China has 431 hospital beds per 100,000 people meaning there should be roughly 88,194 hospital beds in Beijing.

At least six hospitals with approximately 8,900 beds collectively (Beijing Friendship Hospital has about 1500, Beijing Hospital 1200, Beijing Union Hospital 2000, Capital Medical University, Beijing Hospital of Traditional Chinese Medicine 2500, Beijing Tiantan Hospital 1650 and Beijing Tiantan Puhua Hospital 70) would be destroyed when the blast decimated the hospitals in the city center, leaving less than 80,000 hospital beds in Beijing, some of which would already be occupied, which would be woefully inadequate to accommodate roughly 1.2 million injured people.

Within 3.26 kilometers in every direction from the center, there would be blast damage, with most residential buildings collapsing, and local fires starting from the destruction. Everyone in this zone would be injured, and many would die. In Beijing, this circle includes at least six hospitals: Beijing Friendship Hospital, Beijing Hospital, Beijing Union Hospital, Beijing Hospital of Traditional Chinese Medicine, Beijing Tiantan Hospital and Beijing Tiantan Puhua Hospital, as well as the Forbidden City, the Temple of Eternal Peace and many museums and hotels.

Within 4.38 km, people would suffer third-degree burns on all exposed skin. Technology may be disrupted by an electromagnetic pulse. This zone would include at least three additional hospitals: Peking University First Hospital 1574, Dongzhimen Hospital 574, Xuanwu Hospital 1159, and a number of parks, such as Ritan and Taoranting Park.

A full 9km from the center of the blast, glass windows would shatter, causing additional injuries to anyone in the vicinity and some technology may be disrupted by an electromagnetic pulse.

Healthcare Response Capacity

A basic investigation to evaluate the burn care system in the country was done in 2014 and the results confirm that the system is not adequate and lacks a great number of trained burn professionals.

China may prepare to use nuclear weapons but its health care infrastructure is not and cannot be prepared for the humanitarian catastrophe that will result from the use of just one nuclear weapon.

A single nuclear weapon would destroy at least 6 hospitals leaving less than 80,000 beds in the city to accommodate over 1.2M injured.