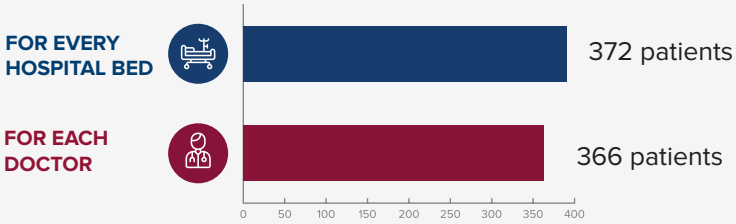
Islamabad, Pakistan

264,870

est. injured after one nuclear detonation (100kt) over the Prime Minister's Office



Pakistan possesses about 165 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 Islamabad today, the immediate health impact would be catastrophic. An estimated 126,240 people could die immediately and another 264,870 could be injured. Based on Islamabad's population of 1.1 million in 2020, about one in three would be injured or killed.

At the reported COVID peak through 2021 on June 13 2020, 6,884 new COVID cases were reported in one day in all of Pakistan. After a nuclear attack, about 38 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 is dropped over the Prime Minister's Office, that means that the Supreme Court, the National Library and Pakistan's Science Foundation 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 Islamabad, for this bomb dropped on the Prime Minister's Office, this would include the Pakistan Council of National Arts, the National Assembly, the President's House and a number of embassies.

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 Islamabad, this circle includes at least four hospitals as well as hotels, restaurants and a sports stadium.

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

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 two additional hospitals as well as schools and universities and parks.

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

How could Islamabad respond to a health crisis of this proportion? Pakistan has about 98 doctors per 100,000 people and 66 nurses and midwives per 100,000 people, which translates to roughly 1,106 doctors and 755 nurses and midwives in Islamabad. If roughly one third of that population is injured or dies from the nuclear explosion, that leaves about 723 doctors and 493 nurses and midwives to treat about 264,870 injured people. That means every doctor in Islamabad would be responsible for treating about 366 people, many with severe injuries, simultaneously.

What about hospital beds? Pakistan has 63 hospital beds per 100,000 people meaning there should be roughly 711 hospital beds in Islamabad. Many beds would of course already be occupied and some destroyed by the blast. The remaining available beds would be woefully inadequate to care for over 250,000 injured people.

The Pakistan Institute of Medical Sciences in Islamabad has a burn care center that would be located outside the estimated range of physical destruction from the nuclear weapon. The burn care centre has 20 beds - twelve in intensive care units. The centre's website notes that patients are often turned away due to lack of availability of beds, raising questions about if any of these beds would be available to care for the thousands of burn victims following a nuclear explosion. The Islamabad Medical Centre, also located outside the reach of the bomb's destruction, also has a burn centre.

Patients are often turned away from the Pakistan Institute of Medical Science's burn care centre due to lack of availabity of beds. Would any of these beds even be available to care for the thousands of burn victims after a nuclear attack?