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 Berlin today, the immediate health impact would be catastrophic. An estimated 166,520 people could die immediately and another 613,320 could be injured. That's more than 20% of Berlin's population of 3.5 million in 2020. Roughly one out of five people in Berlin would die instantly or be injured.

At the reported COVID peak through 2021 on 26 November 2021, 76,414 new COVID cases were reported in one day in all of Germany. After a nuclear attack, about eight times more people would need medical attention immediately in just one city.

### Immediate Health Impacts

A fireball would extend out about 380 meters in every direction from the detonation point. If the bomb were dropped over the Brandenburg Gate, that means that the German parliament building (the Bundestag), French and Russian embassies and important memorials, like the Memorial to the Murdered Jews of Europe, would be engulfed in a nuclear fireball and instantly vaporised.

To a distance of a little over 1km from the detonation point the explosion would likely generate a fatal dose of ionising radiation. In Berlin, for this bomb dropped on the Brandenburg gate, this would include the German Chancellery, the Berlin philharmonic, and several other well frequented theaters and museums.

Germany, while not a nuclear-armed state, hosts approximately 20 U.S. nuclear weapons at Buchel Air Base. Although current nuclear targets are not public, during the Cold War, there were several targets for nuclear weapons around Germany, including near its capital, Berlin.
How could Berlin respond to a health crisis of this proportion? There are around 30 hospitals in Berlin, but about one-third of those hospitals, the ones closest to the center of the city would be destroyed by the blast. Everyone in this zone would be injured, and many would die. In Berlin, this circle includes the Tiergarten, Bellevue Palace, popular tourist attractions, like Checkpoint Charlie, and several hospitals including Charité – Universitätsmedizin Berlin and Bundeswehrkrankenhaus Berlin.

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 Berlin, this circle includes the Tiergarten, Bellevue Palace, popular tourist attractions, like Checkpoint Charlie, and several hospitals including Charité – Universitätsmedizin Berlin and Bundeswehrkrankenhaus Berlin.

Within 4.38 km, people would suffer third-degree burns. Technology may be disrupted by an electromagnetic pulse. At least four additional hospitals lie in this zone: Virchow Klinikum, Jüdisches Krankenhaus Berlin, Vivantes Klinikum Am Urban, and St. Joseph Hospital.

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 Berlin respond to a health crisis of this proportion? There are around 30 hospitals in Berlin, but about one-third of those hospitals, the ones closest to the center of the city would be destroyed by the blast. Germany has about 425 doctors per 100,000 people and 1,324 nurses per 100,000 people, which translates to roughly 15,134 doctors and 47,144 nurses in Berlin. If 22% of that population is injured or dies from the nuclear explosion, that leaves about 36,823 nurses and 11,821 doctors to treat about 613,320 injured people. That means every doctor in Berlin would be responsible for treating about 52 people, many with severe injuries, simultaneously.

The explosion of a single nuclear weapon would destroy one-third of Berlin’s hospitals, leaving more than 20% of nurses and doctors injured or dead.

The 14,720 hospital beds left would be woefully inadequate to accommodate 600,000 injured people.

What about hospital beds? Germany has 800 hospital beds per 100,000 people and there are roughly 22,000 hospital beds in Berlin. If one-third of those were destroyed when the blast decimated the hospitals in the city center, that would leave 14,720 hospital beds, which would be woefully inadequate to accommodate over 600,000 injured people. There are about 688,000 hospital beds in all of Germany, although of course many of them would already be in use to treat patients suffering from other ailments.

Germany may host 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.