

The nuclear threat has changed since the end of the Cold War: while global nuclear warfare is certainly still possible, the more imminent concern is a nuclear device in the hands of terrorists. There are several possible paths by which terrorists could acquire a nuclear device. Further, changing geopolitical conditions could rapidly alter the terrorist nuclear threat, as evidenced by developments in North Korea, and the AQ Kahn proliferation network. No pathway for terrorist acquisition of a nuclear device is easy, and uncertainties abound, but the threat cannot be ignored. During the Cold War the United States carried out wide-ranging analyses of nuclear weapons effects focusing on strategic impacts, such as total casualties, infrastructure loss, and industry incapacitation. Cold War civil defense research and programs correspondingly centered on survivability of the nation as a whole, with emphasis on civilian fallout shelters and preparedness drills. The post-9/11 nuclear threat, regarded as a single, relatively small terrorist weapon detonated at ground-level in a city, poses new challenges in assessing impacts with the goal of effective response to the incident in the affected city. A foundation for response planning must be built on our best understanding of the threat, and potential impacts of a nuclear attack on a city. In order to begin nuclear attack response planning, more detailed assessments and descriptions of the post-nuclear urban impacts are needed to provide the basis upon which planning can proceed. In this presentation, a summary of the terrorist nuclear threat will be provided, and an assessment of the current state of knowledge of impacts from a terrorist nuclear attack on the urban environment is given from the perspective of early response activities at the incident scene.

Learning Objectives:

1. Understand the nature of the terrorist nuclear threat
2. Understand factors that affect early response to a nuclear attack
3. Understand the use of zones for planning response operations