

Description/Disclaimer for Board Meeting Presentation

Emergency Medical Response to the Mass Casualty Incident

Following the Derailment of Amtrak 188

Philadelphia, Pennsylvania

May 12, 2015

DCA15MR010

Board Meeting

The accident took place on May 12, 2015, about 9:21 p.m. Eastern Daylight Time. Eastbound Amtrak passenger train 188 derailed at milepost 81.62 in Philadelphia, Pennsylvania. This animation depicts a time sequence showing the distribution of injured train occupants as they were registered at 10 local area hospitals, in 15-minute intervals following the accident. The animation includes audio with a voice-over narration.

The animation begins with a map of the Mid-Atlantic States showing the train route from Washington, DC to New York City, New York, and a traveling arrow presenting the path of train 188 traveling from Washington, DC up to the accident location. Three aerial views of the accident site are shown from different angles, and the direction and the derailed traveling train are indicated with arrows in the first photo. Next shows a map of Philadelphia near the accident site marked by a red star, and the 10 hospitals receiving patients from the derailment within a 10 mile radius of the accident. The local hospitals are labeled. The hospitals identified with an orange square are designated adult trauma centers, and those identified with a yellow triangle are non-trauma hospitals. The symbol describing each type of hospital is shown in the upper left corner of the screen. Red lines on the map indicate potential routes to each hospital from the scene.

Patients registered at each hospital are indicated with bar charts adjacent to the hospital name and symbol. Growing bars represent the number of people being initially registered at the hospitals in 15-minute increments from the time of the accident. The bars are color coded to indicate injury severity: red indicates serious injury, green indicates minor injury, and blue indicates no injury diagnosed. The color scheme for the bars representing injury severity is identified in the lower right corner of the screen, along with the time since the accident.

The bar charts showing the distribution of patients are replaced by bar charts showing a hypothetical more even distribution of patients among the hospitals. The bars on the charts have a slightly lighter color to indicate the hypothetical nature of the patient distribution.

Animation narration

1. Amtrak passenger train 188 was en- route from Washington DC to New York City when it derailed in Philadelphia, Pennsylvania at 9:21 pm eastern daylight time on May 12, 2015.
2. There were 253 people on board. Of these, 7 occupants died on scene and 186 were transported to 10 area hospitals.
3. Philadelphia emergency medical services are part of the fire department which has a separate dispatch system from the police department.
4. The fire department coordinated the transport of 24 of the injured by ambulance.
5. All of the other injured occupants were transported by police vehicle or Septa bus.

6. This graphic shows a map of Philadelphia near the accident site, which is shown by the red star.
7. The 10 hospitals receiving patients from the derailment are within a 10 mile radius of the accident. The red lines here indicate potential routes to each hospital from the scene.
8. In this graphic, each of the 10 area hospitals is identified with an orange square for the designated adult trauma centers, and a yellow triangle for non-trauma hospitals.
9. Of note, all of the hospitals' emergency departments were open and already caring for patients at the time the derailment occurred.
10. The following animation shows only the additional patients from the derailment.
11. This animation shows how the injured were initially registered at hospitals in 15 minute increments from the time of the accident.
12. The NTSB obtained hospital records for 165 of the patients treated on the night of the accident, including the first time stamp in their hospital records and descriptions of their injuries.
13. Among these, one person died, and the time of hospital registration could not be determined for an additional 8 people.
14. The rapid, non-traditional transportation resulted in 89 percent of the injured being registered for hospital care by midnight, 2 ½ hours after the derailment.

15. Each of the growing bars represents the number of people from the mass casualty incident being cared for at each hospital at that time.
16. The bars are color coded to indicate injury severity: red indicates serious injury, green indicates minor injury, and blue indicates no injury diagnosed.
17. There was clearly an unequal distribution of the injured across the hospitals. For example, Penn Presbyterian Medical Center received only two patients while Temple University Hospital received dozens.
18. During a mass casualty incident, the distribution of patients among hospitals is normally coordinated to balance the needs of the injured with the availability of hospital resources and the needs of other hospitalized patients. This image shows what a more even distribution of patients from this mass casualty incident might look like.
19. An injured person transported in a vehicle other than an ambulance could potentially suffer additional injury or medical complications as a result. Incomplete transport coordination could overwhelm some hospitals with too many injured.
20. However, the NTSB did not identify any significant negative medical outcomes from the vehicle used or incomplete transport coordination in this accident.

Note: Animation is available upon request to the Office of the Chief Information Officer, Records Management Division (CIO-40)