





The phenomenon of over-donation as a response to mass casualty events gained increased attention following the September 11 attacks on the World Trade Center and Pentagon in 2001. In New York City, where 139 patients were admitted to the five hospitals closest to the attack site, the New York Blood Center — which supplies most of the blood to the city's hospitals — received more than 12,000 telephone calls and collected more than 5,000 units of blood in the first 12 hours. Nationwide, the response was so great that approximately 475,000 blood units were collected for the victims in New York and Washington DC, but only 258 units were used.1

Some of the excess units of blood were frozen. Others could have been distributed to other parts of the country, but because of communication issues, a substantial portion of the collected blood was not used. 1 That waste negatively influenced future donations. "We are still suffering from the over-enthusiastic collection that resulted in wastage. There are still people who say, 'I'm not donating because they just waste it.' That was a single episode 17 years ago," said Jed Gorlin, MD, medical director

> of Innovative Blood Resources in St. Paul, Minn.

Following 9/11, AABB formed the Interorganizational Task Force on

Domestic Disasters and Acts of Terrorism (DTF) to coordinate the blood supply for the immediate victims, the region and the nation, as well as to deliver consistent messages about blood supply needs to the public after a mass casualty event. Task force members represent all the major organizations involved in managing the blood supply in the United States, including government agencies.

Overwhelming responses continue

The number and magnitude of incidents that result in multiple injuries and fatalities continue to increase in the U.S. One source asserts that the number of mass shootings during the ten-year period from 2008 to 2017 was 2.4 times greater than the decade before it.2 Mass casualty events have also occurred in several European cities in recent years: London and Manchester in 2017, Brussels in 2016, Paris in 2015, and Oslo in 2011.

In response to such events, large numbers of people often show up to donate blood immediately, much as they did after 9/11. Less than 24 hours after a mass shooting in Las Vegas in October 2017, hundreds lined up to donate blood, and the lines had not diminished four days later.³ After the Pulse nightclub shooting in Florida in June 2016, the local blood center collected 10,000 more pints of blood than they did in an average week.5 When two bombs injured runners and onlookers during the 2013 Boston Marathon, some competitors who had crossed the finish line kept running to a nearby hospital to donate blood.4

In each case, the need for blood supplies was met by the existing inventory through disaster preparedness systems in place.

"Virtually all blood used in a disaster response was donated well before the disaster," said Gorlin. "There's basically no local disaster that overwhelms the blood supply of the local provider. Even September 11, even Las Vegas didn't overwhelm the available blood supply." Blood units may be needed after mass

casualty events to replenish inventory. But according to Ruth Sylvester, director of regulatory services at America's Blood Centers in Washington, D.C., replenishing the local blood

supply usually takes less than 500 donations. For example, in the case of the Pulse incident, a total of 481 units of blood were needed in the first 24 hours and the two weeks following to treat victims.⁵

Behind the surges

One reason surges occur is that donating blood provides a tangible way for people to respond to tragedy. "The people in the disaster preparedness segment of our industry are acutely aware that donors want to do something," explained Sylvester. "They're usually upset about the event, particularly the mass shootings. They feel helpless. Just donating money doesn't fill that need to do something in response to something they really can't control. Donating blood is something physical they can do — they feel like they're contributing." She also noted that commiserating with other people in line or bringing food to them adds another level of comfort.

Also, interest in donating blood in the 24 hours after a mass casualty event can be triggered by local spokespeople. "It's usually a well-meaning local official, maybe a sheriff or a hospital representative that talks about the need for blood, that often drives the spikes that we will experience," said Sheedy. She cited instances such as the Pulse nightclub shooting, where a call went out for blood; and Las Vegas, where a local official mentioned blood donation in the immediate aftermath of the event and raised public interest in blood donation.

Media coverage of the event may be a factor in motivating donors right after a mass casualty event. "The news media doesn't really help us because they like showing the long lines of people lining up to donate blood," said Sylvester. Social media also plays a part by quickly spreading news of events.

Communicating to donors

The challenges of managing donor response to a mass casualty event are well

known in the blood banking community. When masses of donors appear, blood centers do not want to be too discouraging. "Do you close the doors on them?," asked Sylvester. "That will infuriate a lot of the donors." Said Gorlin, "If there's one

message to hammer home, it is that we need blood donations all the time because you never know when you will need it and when you do need it, you need it right away." Disasters

can overwhelm the blood supply at a hospital at the time, he added, but that is where transportation and logistics play a role.

A message commonly promoted in the community is "It is the blood on the shelf that saves lives." To support this overarching message, Gorlin offered several points:

- Disasters do not require large amounts of blood. Although it is common to think that blood use is massive, historically it has not been.
- There is sufficient inventory of tested red blood cells on blood center and hospital shelves to address emergencies. Centers and hospitals typically stock 3-5 days of inventory, which can cover immediate needs even in the worst mass casualty situations.
- The blood supply is not local or regional, it is national. If there is a shortage at the local or regional level, existing national networks can coordinate additional supplies.
- It takes 24 to 48 hours to prepare blood for use, so any donation made in the hours right after the event will not be used for emergency care for the victims.



Red Cross communications strategy

In the aftermath of a mass casualty event, the American Red Cross responds in several ways using direct communications, press releases, its website and social media.

First, the Red Cross works closely with its hospital partners to assess the need for additional blood products and determines if that supply can be met from its national inventory. Next, it shares its response. "We'll let people know if the Red Cross has or has not supplied additional blood products, how many blood products we've supplied and if hospital needs have been met," said Jodi Sheedy, senior director of integrated communications at the American Red Cross in Washington, D.C. "We may not be able to say right away if hospital needs have been met, but usually within 24 to 48 hours we can provide that information to the public."

The Red Cross also raises awareness of the ongoing need for blood donations, with the messages that convey that the need for blood is constant. These include "Every two seconds someone in the U.S. needs blood," and "It's the blood that's on the shelf that helps in an emergency," and "Blood donations have a shelf life and cannot be stockpiled."

Another tactic the Red Cross uses to help prevent blood centers from being overwhelmed in the first 24 to 48 hours is encouraging people to schedule an appointment.

"We know they want to take that immediate action — people want to help. So what they can do now is schedule an appointment for the days and weeks to come," explained Sheedy.

In addition, the organization tries to set the expectation that those who do come out right away to donate will likely experience longer wait times than normal

Providing transparency is key to the Red Cross's approach. "When I speak with members of the media who are covering the story in the aftermath, they

may want to say that the new blood donated is for the victims. There is a misperception there that we don't want to let go without clarifying," said Sheedy. "So often people believe that if they show up right after one of these events and they roll up a sleeve, their blood will go directly to a victim. But with the two to three days it takes to test and process and distribute the blood to hospitals, that is often unlikely."

In its efforts to be transparent, the Red Cross focuses messaging on replenishing the blood supply and telling individuals their donations will become part of the national blood inventory, helping to ensure they are prepared to respond wherever and whenever the need arises. "We value our donors and we want to make sure we're telling them where their donation is going. Even if it's not that victim of a mass casualty or someone who's been injured from one of those events, it is helping a patient in need."

Speedy, consistent messages

The current strategy for containing donor surges is to provide messages as quickly as possible about the state of the blood supply. Cullen Case, program manager of the Radiation Injury Treatment Network in

Minneapolis and a long-time member of the DTF, said, "During every major disaster over the last 12 or 13 years, there was no need for the surge in donors right then. It's really important to get a message out to the community as quickly

as possible about the future need for donors following the disaster."

Elected officials who get out in front of the news to motivate people to support response efforts after an incident sometimes make

comments about donating blood. Cullen suggests reaching out to the official's staff right away to request that they say, "If you're going to mention blood, mention donating in the coming weeks, not today."

Consistency is also important. The DTF serves the role of developing a single message for the public. It tries to release a message quickly after an event

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to convey the state of the local supply and the blood reserve in the U.S., and ask people to schedule to donate in the coming weeks.

In addition to coordinating with the task force, the Red Cross works to align its national

and local messages."The Red Cross has one national inventory, so we want to ensure we always have a unified message that goes out to the public. The messaging from

national headquarters is the same messaging you'll hear from a local communicator in South Carolina," Sheedy said. "The boots on the ground know their media, they know their community. Our national headquarters provides the crisis communication

expertise, and they have the expertise in the community."

Seeking better solutions

As over-donation after mass casualties continues, the blood banking community is seeking more effective strategies to address it. "Articles in professional journals are not doing it. Newspaper articles about this issue generally come out after the event has died down, and it does not get the same attention," said Sylvester. "Even putting your doctor in front of the camera saying, 'We've got all we need right now, schedule an appointment next week and the week after' doesn't do it. People just stay in line."

Because messages do not always resonate in times of crisis, one approach may be a large-scale promotion that goes well beyond the blood banking industry. Sylvester envisions a sizable, crossfunctional group that includes psychologists and members of the public to guide such a campaign. It could be modeled after the successful "Stop the Bleed" campaign; the challenge will be presenting the message "don't donate after a disaster" in a way that has wide appeal and long-term impact.

Early education could be another potential avenue to explore. "In a perfect world, there would be education to be consistent donors," said Cullen. "Maybe it's education at the elementary school level, like the 'stop, drop and roll' drills children are taught. Maybe it's doing high school programs, getting teens excited about potentially saving three lives by donating one unit of blood — if they become engaged

> and interested, once they're able to donate, they will."

In a sense, over donation is a good problem to have. "The American public

is incredibly generous. We

know if we go out after one of these tragedies and say we need blood, the public will respond," said Sheedy. "It's what's great about our country, but at the same time it's a great responsibility that we have in communications in the blood

industry about what those needs are."

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