

Managing Blood Supply, Demand, and Donations in a Disaster

An Interview with Chandel Ashby, Manager of Hospital Services; Liz Lambert, Marketing & Communications Specialist; Julie Scott, National Marketing Director; and Crystal Stanley, Manager of Manufacturing, Vitalant



Abstract: Traditional mass casualty incidents (MCIs) rarely place significant stress on the blood bank or require community blood drives. However, victims of blast and penetrating trauma may require massive transfusions, and when multiple victims present at once, this may create challenges for local blood banks. In some areas of the country, blood banks may be free-standing facilities. Some hospitals have their own on-site storage and processing facilities. Regardless of the nature of the incident and location of the supply, hospitals will use the blood that is currently “on the shelf” to treat patients. ASPR TRACIE interviewed Chandel Ashby*, Liz Lambert, Julie Scott*, and Crystal Stanley* (currently with

Vitalant; * signifies staff who were with Vitalant operations in Colorado, formerly known as Bonfils Blood Center, at the time of the incident) to learn about how blood was requested and transported in the aftermath of the Aurora, CO theater shooting. They also shared how lessons learned from 9/11 and more recent MCIs have been incorporated into their emergency planning efforts.

John Hick (JH): Please give us some background on the night of the incident and how (what was then) Bonfils supported the involved hospitals.

Chandel Ashby (CA): Luckily, we had taken the time to think about and plan for this type

of incident. On that particular evening, we had all the red cells, plasma, and platelets we needed to cover the hospital needs in state and around town. We also have the ability to go outside of our state to resupply our stock after an incident if necessary.

During our morning calls with our regional centers, we can request additional product as needed. We also have our own incident command system in place for local emergency response. If something were to happen elsewhere, we are a network of blood centers with collections operations in 28 states (serving nearly 1,000 hospitals nationwide) and can ship products via flight anywhere in the country.

Julie Scott (JS): One of our first actions in this type of incident is to pull an inventory report. Based on past experience with responding to these types of tragedies, we prepared “disaster packages” comprised of 25 units of O-positive red blood cells (RBCs), 10 units of O-negative RBCs, and 4 units of platelets. The rest of the units we sent were based on patient type and need.

JH: How are you typically notified about events? Does someone from the hospital reach out, are you notified as part of an area system, or is there a ‘push’ agreement in place with specific hospitals?

CA: We fill orders as they come in. We don’t have push agreements with particular hospitals, but sometimes we hear directly from emergency responders that a majority of patients are being routed to a specific hospital. The hospitals do a good job letting us know where they are and we can triage orders as they come in.

Access ASPR TRACIE’s [Blood and Blood Products Topic Collection](#) and [Blood and Disasters: Frequently Asked Questions](#) tip sheet for more information.

Approximate Numbers of RBC’s, Platelets, and Fresh Frozen Plasma (FFP) Sent from Bonfils in Response to the Shooting

7/20/12		600 RBCs, 50 Platelets, and 100 FFP
7/21/12		100 RBCs, 31 Platelets, and 100 FFP
7/22/12		400 RBCs, 34 Platelets, and 130 FFP

JH: How did management learn of the Aurora shooting?

Crystal Stanley (CS): That night, Vitalant (formerly Bonfils) hospital services staff started getting orders and called the on-call senior manager who activated our internal incident command system. This was followed by several conference calls. We also received clear and consistent communication about the number of patients our hospitals were expecting to receive.

JS: This was not the first time a community in Colorado experienced a tragedy like this. We learned a lot of lessons from the Columbine High School shooting regarding distributing product and managing donor surge. With these lessons and those learned from 9/11, we were able to create our own internal incident command system and the blood product disaster packages.

Liz Lambert (LL): Vitalant utilizes a communication tree when there is an event. Hospital Services puts out internal alerts any time it receives orders that are beyond routine. Our Marketing and Communications team is constantly monitoring media and alerts staff when a local or national news story has the potential to cause a donor surge.

JH: If you hadn’t had enough product, how long would it take you to get it from a regional distributor?

CA: As part of the Vitalant system, we have other facilities in our region. We can pull from Cheyenne, WY and have product here in a couple of hours. We could also pull from another facility in Rapid City, SD which would take between six and eight hours to reach us. We can pull from hospitals within the state, too, as needed.

JH: Are there ever challenges associated with security issues and getting product into facilities?

CA: As part of our process, we use a “bill of lading” type of packaging, which includes insert information. The boxes are security-sealed and well-marked with our name on them. In these types of situations, we routinely use the same couriers; the hospitals and blood bankers know these couriers and the trust is already established. After the theater shooting, the couriers called ahead and the hospitals knew when to expect them. Hospital security recognizes the boxes as well.

JH: Can you comment on any trends in use of never-frozen products and whole blood?

CA: We strive to keep a significant amount of plasma available for use and can turn on collection if needed to keep our levels high. We don’t distribute whole blood at present. The platelet situation for these incidents becomes tricky if inventory is low somewhere in the area. Some challenges we are working through include platelets, and how the new blood bank draft guidance relates to bacterial detection testing—the effect that has on the turnaround time of our platelet products is significant. Being part of a larger system does

allow us to be a phone call away from quickly getting product from another facility.

We are entering a new age of new products. We’ve got liquid plasma that is being stocked for emergencies and trauma, which eliminates the thawing time. Trying to compute the plasma to red cell ratio can get tricky if you’re doing a lot of transfusions. While I would prefer not to see another mass casualty incident, I think we will eventually find out how much easier it is to use liquid plasma versus thawing plasma.

JH: Tell us about some of the challenges you faced with donor flow after the incident. For example, how did you manage messaging about donations?

JS: At the time of the Aurora shooting, we had hundreds of first-time donors after the news broke. As Vitalant’s National Marketing Director, I traveled to Las Vegas after the mass shooting to support our media effort there. In that instance, you had the sheriff’s office making public calls for donors. While the largest mass shooting in US history, and we knew there would be a need for product, it was difficult to anticipate the need. People came out in droves and within 24 hours, we shifted the

message to the hundreds of media outlets we communicated with from “Donate now” to “The needs have been met, and we need people to schedule appointments going into the holidays,” because that is a time when donations decline. The Aurora theater shooting happened in the summertime, another traditionally slow blood donation period. We did experience a surge in donations in Denver, which helped us get through the summer months.

LL: In similar, more recent situations (e.g., the Pulse nightclub shooting in Orlando), we’ve seen a surge in donations in the Denver Metro area following MCIs elsewhere in the country. When we have a figurative “megaphone,” after an MCI, we do try to raise awareness with the local media and the public that it’s the blood already on the shelf that is key in an emergency. We welcome donors who are compelled to donate in response, but when it’s evident the blood supply has more than been replenished, we also put out messaging encouraging prospective donors to consider staggering their donations, waiting a few days or weeks to help ensure we can continue to meet the blood needs that will come up in the near future.

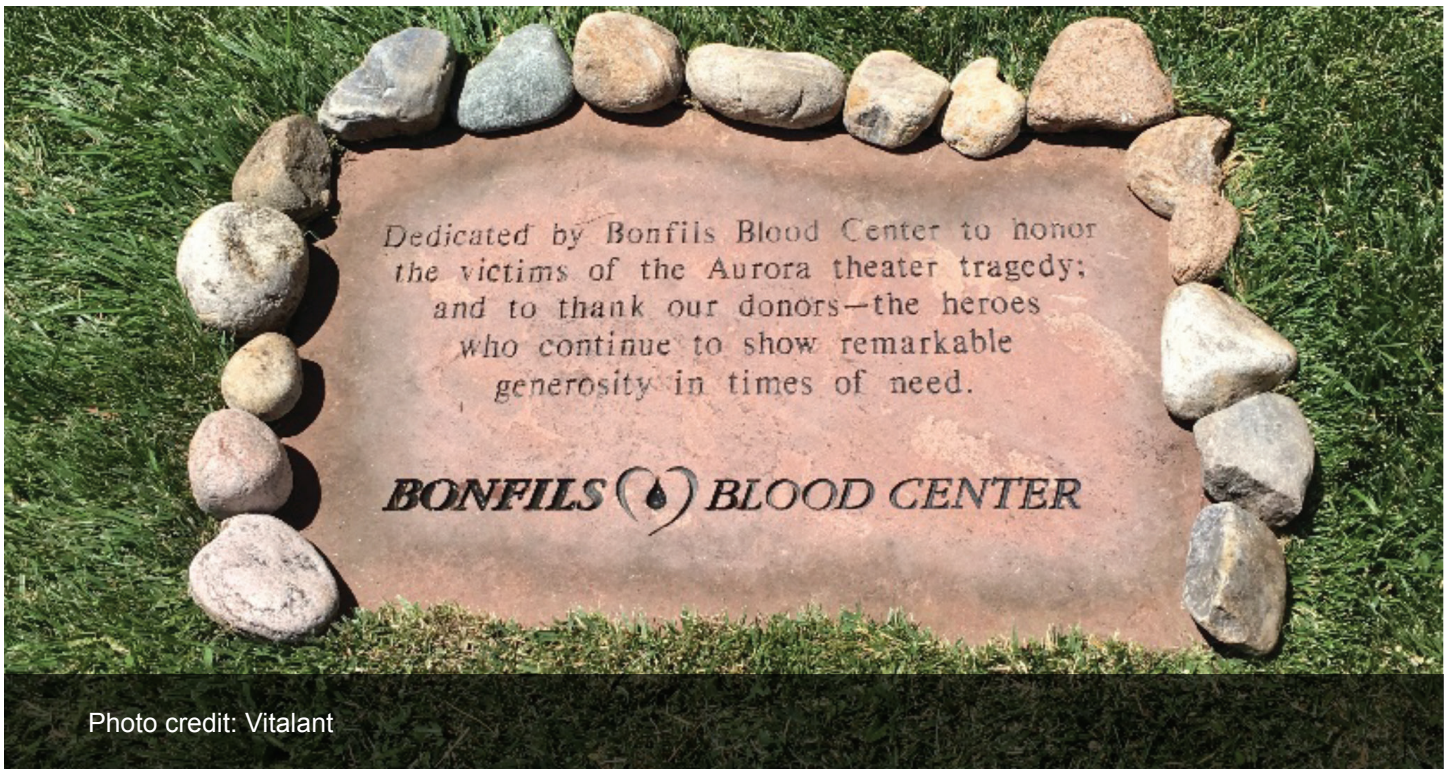


Photo credit: Vitalant

JH: *Is there any data about existing donors being prompted by disasters to donate again?*

JS: Because so many donors who respond to these tragedies are giving blood for the first time, we implement tactics in an effort to convert them to repeat donors. During the response to the Las Vegas MCI, we had a difficult time keeping track of those who could not be accommodated (but stood in line for hours to donate).

JH: *Did a lot of people go straight to hospitals wanting to donate blood? Did you conduct any blood drives there?*

JS: In Denver, we tried to funnel people to our community donor centers and existing mobile blood drives. In Las Vegas, University Medical Center reached out to us and requested a blood drive unit be available, so we placed two bloodmobiles in front of the hospital to accommodate donors for a week. While they were busy, it was the two community donation centers that saw the most traffic.

JH: *Do you have any backup communication mechanisms? If the hospital phone systems are overwhelmed, for example, how do you receive requests for product?*

CA: Hospitals can use an on-line ordering system to request product. There are spaces on the electronic form where users can add comments, and that is where they typically include information about the situation and directions for couriers. If they can't get to a phone, this is how hospitals request product. These electronic requests show up directly on our monitors and in our systems nearly immediately, making them easier to track.

After both the Aurora and Las Vegas MCIs, we sent follow-up emails to donors—particularly the first-time donors—encouraging them to come back. We also communicated to those who had given blood in the few days before the tragedies, thanking them for stepping forward and allowing us to ensure that we had an adequate supply of blood to support patients.

Julie Scott



JH: Are there any other recommendations you have for hospitals to improve planning or expedite delivery?

CA: Success involves working with and involving the couriers before an incident. We've done emergency drills with our couriers and the hospitals to gauge timing. We check on our verbiage to ensure we can clearly communicate the severity of the situation; we ensure that we use certain words or phrases that activate the best possible outcome.

JH: Do you coordinate with state patrol, local law enforcement, or helicopter services to get product moved to more distant hospitals?

We do use an emergency courier that has licensing for running lights and sirens on their vehicles. They

communicate with law enforcement as well. Having these emergency couriers around town has definitely been a blessing.

JS: We have partnered with state patrol in the past. A few years ago, we learned of a case involving a childbirth complication, but the mountain pass that led to the hospital treating the patient was closed. We had a courier get the product to a state patrol officer, the officer delivered the product to the hospital on time, and the surgery was a success.

JH: What future trends in your field will have an impact on disaster response?

JS: From a national perspective, across the board, the industry appears to be struggling with inventory; it is starting to reach a fever pitch. Vitalant just launched

a new brand in the fall, and we are developing new strategies to reach new donors. Because the majority of our donors are baby boomers, one of our recent advertising campaigns focused on millennials. Right now, we are faced with weather challenges across much of the U.S., and cold and flu season, and while this happens every year, we still need to work very diligently to plan for those things. We must continue to educate people about the fact that making blood donation a habit will ensure a safe and adequate supply for the community. ■