



A HAITIAN BOY PLAYS IN THE WATER IN CARREFOUR, HAITI, FEB. 4, 2010, WHILE THE U.S. NAVY HOSPITAL SHIP *COMFORT* LIES OFFSHORE.

Supplying *Comfort*

When disaster strikes, the U.S. Navy hospital ship *Comfort* aims to be on the spot ready to treat patients within five days. An innovative supply chain strategy makes it all work.

WHEN DISASTER HITS, THE WORLD MOBILIZES. AND SO IT WAS AFTER a devastating earthquake shook Haiti in January 2010. Among the responders that rushed to the scene was the U.S. Navy hospital ship *Comfort*. A full-service hospital ship, the *Comfort* provides acute medical and surgical care for the sick and injured, whether deployed military forces or victims of disaster.

With 12 operating rooms, an intensive care ward, medical labs, capacity for 1,000 patient beds, and a flight deck able to handle the largest military helicopters, the vessel is uniquely equipped to treat patients like the earthquake victims. What it did not have at the time of the earthquake, however, was the vast quantity of medical and surgical supplies—more than 5,000 lines—its medical personnel would need when the ship reached the island.

That was no cause for concern. As soon as the call went out, a complex net-



work of suppliers swung into action. Within 36 hours, an array of medical supplies had been delivered to the *Comfort* at its berth in Baltimore. Within 72 hours of its activation, the ship set sail from Baltimore. En route south, the vessel made a call in Norfolk, Va., to pick up additional crew and supplies. Within seven days, the ship was anchored off the coast of Haiti, fully supplied and staffed and providing medical care.

As remarkable as that might seem, it's hardly a unique occurrence. In fact, this kind of rapid response is close to standard operating procedure for the *Comfort* and its sister ship, the San Diego-based *Mercy*. Thanks to a supply chain strategy developed over the past decade by the Defense Logistics Agency (DLA), the ships are able to move quickly from a state of "reduced operations" (skeleton crew, no medicines, limited medical supplies) to "ready to sail." The goal is when the call comes—whether it's to respond to a natural disaster or sail to the

Persian Gulf to serve as a floating trauma unit—to be operational within five days. She often does it faster.

MISSION NEARLY IMPOSSIBLE

To understand the challenges of supplying the *Comfort*, it helps to know a little about the scale of the operation. The vessel, which was converted from a Panamax-class oil tanker to a Navy hospital ship in 1987, measures nearly 900 feet long and over 100 feet wide—the equivalent of a little more than two and a half football fields in length and a couple of basketball courts in width. If either the *Comfort* or the *Mercy* were relocated to land, it would make the list of the 25 largest hospitals in the United States. Send them together to support a mission, and they jointly are larger than all but a handful of hospitals in the world.

Supplying any hospital of that size—and doing it on short notice—might seem supply chain challenge enough. But in this case, the picture is complicated by the wide vari-

ation in mission profiles. The supplies required by a hospital that's caring for a military force during wartime are far different from the supplies needed for a humanitarian mission. Furthermore, not all humanitarian missions are alike—the medications and supplies needed to treat patients in the aftermath of an earthquake are not the same as those needed following a disaster like Hurricane Katrina.

For an example of the difficulty of forecasting supply needs, you need look no further than the Haitian earthquake. Injuries caused by collapsing buildings and falling debris led to unusually high demand for orthopedic devices used for treating traumatic bone fractures, which normally make up only a fraction of the supplies stocked by the *Comfort*. In that case, the DLA processed orders for more than 1,000 lines of orthopedic items and managed to have most of them delivered to the *Comfort* within five days, either in Baltimore or Norfolk. The remaining items were flown to the ship in Haiti, using the supplier's corporate aircraft.

TAKING A DIFFERENT APPROACH

So how do you configure a supply chain network to respond to the needs of one of the world's largest hospitals with no more than five days' notice of what supplies will be needed? That's been the ongoing challenge for the DLA's Troop Support organization in Philadelphia and, in particular, its Medical Supply Chain team.

Initially, the group followed standard stocking practice—that is, buying enough of everything it thought it might need and putting it on a shelf. Trouble was, that tended to cost a lot of money. On top of that, shelf inventories, particularly medicines, have expiration issues, and there's always the cost of maintaining storage facilities. About 10 years ago, it realized it needed to find a better way.

The task of devising a new process fell to the Medical Supply Chain team's Readiness Division. After a thorough review of the process, the team came up with a whole new approach to supporting the *Comfort*. Their strategy? Deliver readiness, not product.

Essentially, the DLA now contracts with suppliers not for specific goods, but for a guarantee of the goods' availability.

In practice, that means that each year, the Readiness Division invests over \$30 million across 59 "contingency contracts." For this investment, the DLA receives no product. Instead, it receives a guarantee of five-day availability (and sometimes faster), on demand, from its network of commercial suppliers. This investment gives DLA the right

to quick-turn delivery for almost \$700 million worth of medical products.

In financial terms, what the division gets for its \$30 million is a call option. It has the right to exercise a delivery contract and pay for the items, using pre-negotiated unit pricing, at the time of delivery. Or as Mike Medora, chief of the Troop Support medical contingency contracting team, puts it, “We pay for access to the material.”

Another way to look at it is that for its annual \$30 million, DLA Troop Support is able to tap the most sophisticated medical supply chain in the world, on demand. The DLA never even touches the material. Suppliers are responsible for everything from product freshness to storage, and because they deliver directly to the *Comfort* and the *Mercy*, the agency doesn’t even have to maintain its own distribution network.

Take pharmaceuticals, for example. The DLA has a prime vendor contract with Cardinal Health, under which Cardinal agrees to make available within 72 hours a specified list of pharmaceutical products to support a 1,000-bed activation. When it needs to supply the *Comfort*, Cardinal simply draws on the resources of its 23-center distribution network, according to Theo Wilson, Cardinal Health’s vice president of government sales. “We can move product around to support any activation,” he says.

Meeting the DLA’s fast-turnaround requirement can be challenging, Wilson admits. But workers need little encouragement once they learn where the orders are headed, he says. “It’s not hard to motivate people to get it done.”

It also helps that Cardinal has a distribution center not far from the *Comfort*’s berth in Baltimore. “After Katrina, we didn’t wait the 72 hours that DLA gives us,” Wilson says. “We had product there in 24 hours.”

PLAN AND ADJUST

Along with rethinking the nature of the contracts it places with commercial suppliers, DLA Troop Support’s Readiness Division is redefining its own business processes to boost preparedness. For example, it has compiled a cross-referenced list of standard-use medical items from all the services. It has also upgraded its computer systems so that orders can flow without human intervention directly to the suppliers.

That list of “standard” items grows almost daily. The number of surgical items in the catalog is approaching 75,000 SKUs, including almost 2,000 pharmaceutical items. To put these numbers in perspective, a typical supermarket

THE *COMFORT* PASSES THE STATUE OF LIBERTY EN ROUTE TO MANHATTAN TO PROVIDE ASSISTANCE TO VICTIMS OF THE SEPT. 11 TERRORIST ATTACK ON THE WORLD TRADE CENTER.



Comfort at sea

The *Comfort* has been busy over the past decade. On the afternoon of Sept. 11, 2001, the *Comfort* was activated in response to the attack on the World Trade Center, arriving pier side in Manhattan on Sept. 14. Since then, it has embarked on a variety of missions:

- In June of 2003, the *Comfort* deployed to the Persian Gulf in support of Operation Iraqi Freedom.
- On Sept. 2, 2005, after only two days of preparation, the *Comfort* sailed to assist in Gulf Coast recovery efforts after the devastation of Hurricane Katrina.
- On Jan. 13, 2010, the *Comfort* was ordered to assist in the humanitarian relief efforts following the 2010 Haiti earthquake.
- In March 2011, the *Comfort* set sail on a five-month goodwill mission to the Caribbean, Central America, and South America.

assortment is about 40,000 items. The catalog has developed over time based on experience across the military. “We’ve been working with the military services for years,” says Linda Grugan, a contracting officer in the pharmaceutical prime vendor division at DLA.

In a perfect world, orders would automatically release, supply would flow, and DLA could just sit back and watch once the activation order went out. However, every contingency is different, as the Haiti deployment shows, and that’s when the Medical Supply Chain team steps in to tailor supplies to the specific need.

Wilson talks about the improvisation across the supplier base that makes this sort of response possible. “We don’t wait. If we see that there is a natural disaster or an emerging contingency, we move. We’re in constant contact with Linda Grugan at Troop Support. We’re leaning forward, constantly preparing, based on what we see happening in the world. We understand the urgency.”

Jackie Basquill, a supervisor in the Medical Supply Chain who works directly with the *Comfort*, echoes Wilson’s observation. “It’s a great set of relationships, and when there is a need, we just find a way to make it happen.” □