

Pediatric Anesthesiologists provide clinical flexibility and expertise aboard the USNS Comfort in Haiti

By Robert S. Greenberg, MD and Paul Firth, MD



Robert Greenberg



Paul Firth

On January 12, 2010 at 16:53hrs a magnitude 7.3 earthquake devastated the city of Port-au-Prince, Haiti. Tens of thousands were killed instantly; many more were seriously injured or would die in the following days.

Final estimates put the death toll at over 200 000. The world responded. The U.S. Navy Southern Command was asked to support a global relief effort to deliver food, water, medical, and shelter assistance to the Haitian people. As part of this effort, the USNS Comfort, a hospital ship capable of caring for the most critically ill, was launched from dry dock in Baltimore, Maryland with a skeleton medical crew.

Among the Navy personnel immediately deployed was Lt Cmdr. James Solomon, a pediatric anesthesiologist. The initial plan was for the Comfort to take on further medical staff in Miami, but when the scale of the devastation and lack of local medical facilities became evident, the ship was diverted straight to Port-au-Prince.

Even before the Comfort dropped anchor on the 19th it began receiving patients by helicopter. Surgical operations started on the 20th. On the 21st the remainder of the Navy medical deployment arrived, flown in to Port-au-Prince via Guantanamo Bay, and then helicoptered onto the ship. Among the newly arrived anesthesia providers was Cmdr. John Bastien, another pediatric anesthesiologist, bringing the anesthesia department to seven anesthesiologists and eight CRNAs.

The floating hospital took almost 500 admissions in the first week. While a surge of casualties is typical of any mass disaster, the unusual feature of this wave of patients was that all were referrals from other emergency units – the seriously injured that could not be treated in field hospitals. All had critical injuries. Orthopedic and degloving injuries predominated; cranial and spinal trauma were common, and varied surgical and medical problems completed



John Bastien



James Solomon

SPA NEWS Extra, continued



the admission profile. The ten operating rooms were worked to capacity; the intensive care units similarly filled rapidly. Almost a quarter of the patients admitted were children.

Recognizing the need for more pediatric expertise, the Navy called for civilian assistance. Thirty volunteers were sourced and deployed with days' notice by Project Hope, a civilian non-government organization. The team included pediatric and adult intensive care nurses, pediatricians, and a pediatric anesthesiologist, Paul Firth, from the Massachusetts General Hospital. The reinforcements arrived on the 27-28th, allowing some relief to the exhausted Navy personnel. A second group of civilian CRNA's and anesthesiologists arriving a week later included a fourth pediatric anesthesiologist, Robert Greenberg, from Johns Hopkins.

Well over 700 surgical procedures were performed in the first three weeks the Comfort was stationed off Port-au-Prince. More advanced facilities allowed not only for neurosurgical intervention, but attempts to salvage limbs rather than simply to amputate. The high patient load in the intensive care units emphasized the need for early extubation, even following major pediatric neurosurgical cases. Regional anesthesia similarly was essential in orthopedic operations to relieve the burden on stretched ward nursing staff, allowing for prolonged post-operative pain relief despite limited personnel.

In a setting of major surgical procedures, a large pediatric population, and strained post-operative resources, specialized pediatric anesthetic expertise was in great demand. One month out from the earthquake, the Comfort was still receiving children with complex surgical problems. Fractures had healed, and osteotomies were now required to correct disabling deformities. Looking to the future, this will be the long-term pattern of disability and dysfunction in children that will require surgical and anesthetic intervention.

Pediatric anesthetic expertise will continue to be as important to effective health care in settings of limited resources in the long-term as it was during the acute setting.