

By Francie Scott

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PHILADELPHIA—News of Angela Lakeberg has been pretty much off the front pages of newspapers since she was surgically separated from her co-joined twin, Amy, on Aug. 20, 1993.

Nonetheless, a quiet drama was recently played out here at Children's Hospital of Philadelphia (CHOP) where Angela is a patient and where clinicians prefer negative pressure ventilation for the baby.

"The philosophy of the cardiothoracic surgeon is to preserve the airway by using negative pressure as much as possible so as not to add a trach to the situation," said Joe Bolton, RRT, respiratory clinical specialist in the thoracic ICU.

bulks, piece of equipment, the Emersons felt they should deliver it themselves rather than ship it.

"It was an excuse to visit them," George Emerson said, noting the two men had not visited at CHOP for a couple of years. They also wanted to make a stop at the Kessler Institute for Rehabilitation in Westfield, NJ, to see John Bach, MD.

George Emerson removed the back seats from his Dodge Caravan to transport Angela's new iron lung. Father and son set off on the journey to Philadelphia on Monday, Jan. 10, just as a brutal winter storm was sweeping over the northeastern states.

THE STORM paralyzed the region for almost a week. A state of emergency was declared in Pennsylvania, where demands for electricity overpowered the capabilities of power companies to provide it.

Emerson had previously supplied a larger bottle to accommodate Angela's growth.

The infant iron lung is usually a short-term therapy, mostly for babies recovering from cardiac surgery. Angela was unique in needing the device long term. She shared a chest wall with her twin sister and a thin pink scar dissects the front of her body. Although both girls had their own tiny set of lungs, they shared a six-valve heart, and Angela's chest wall and abdomen are distended.

"The whole structure of the chest does not lend well to the natural mechanics of breathing," Hoydu told *ADVANCE* in an earlier interview.

On several fronts, caregivers are breaking new ground with Angela and have been hesitant to predict her clinical progress.

"**I THINK** Mr. Emerson has really gone to heroic proportions," Bolton said. "I just love the man. He shows a level of enthusiasm for his work, and his service

Emersons Battle Miles of Icy Roads To Deliver Vent for Angela Lakeberg

BUT ANGELA, now a seven-month-old charmer with fair wispy hair, grew out of the mini-iron lung devised by the legendary Jack Emerson of Cambridge, MA. In that prototype ventilator, Emerson used a large water bottle for the outside shell. Recently, however, the collar plate of the iron lung was getting tight around Angela's neck.

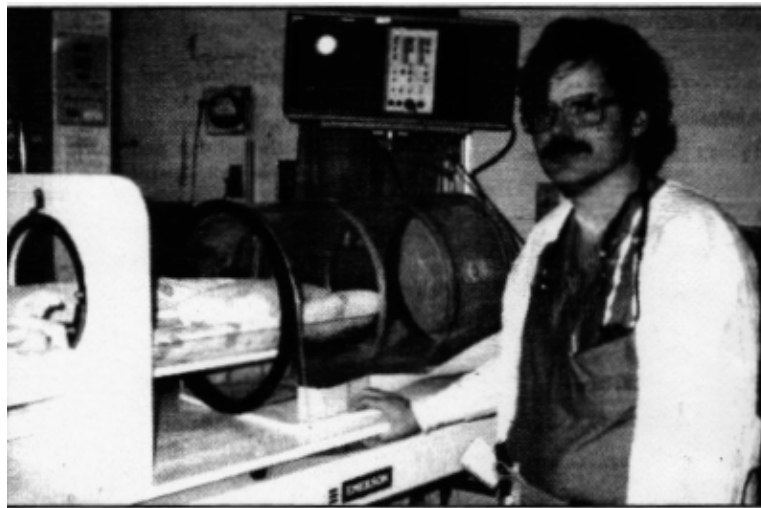
There were other problems as well. The little girl was not doing well with weaning, and doctors suspected she had an obstruction in the left pulmonary artery. There was poor circulation to her left lung, a problem not thought to be linked to the unique features of her body.

The problem became apparent when RCPs lowered the rates in attempts to wean the baby. Angela was intubated and assessed in the cath lab on Dec. 23, 1993, where the obstruction was identified. She was taken to the cath lab again on Jan. 25 and physicians cleared the obstruction with balloon angioplasty. A stent was placed to hold the left pulmonary artery open.

Meanwhile, Jeffrey Hoydu, BS, RRT, director of respiratory care, at CHOP, discussed the ventilator problem with Emerson, who started work on a larger model. He replaced the bottle with a sheet of Lexan (plastic) held in a cylindrical shape by aluminum hoops. Like the other prototype infant iron lungs, the larger model was designed to make it easy for caregivers to work with the child.

"**YOU JUST SLIDE** the bottle off and get access to the baby very quickly," explained Emerson's son and business partner, George Emerson. "That's a key advantage."

The new ventilator was ready by mid-January. But because it was a



Joe Bolton, RRT, inspects the new iron lung fashioned for Angela Lakeberg by Jock Emerson. (ADVANCE photo by Francie Scott)

As a result of the power shortages, schools and businesses were urged to close to conserve electricity and motorists were asked to keep off the roads which were miles-long sheets of ice. Temperatures plummeted into the sub-zero digits.

"It wasn't too bad," George Emerson said. "We ran into snow at Hartford and then ran into rain and ice."

Hoydu and his staff - some of whom were still recovering from their nightmarish treks to work from the suburbs - were amazed when the Emersons arrived at the hospital.

"**MR. EMERSON** has worked very hard to help Angela," Bolton said, explaining it was not the first time the bottle ventilator had been enlarged for the little girl.

has always been great."

Angela is doing well and has been able to breathe alone for periods up to 10 hours since the occlusion was removed from her left pulmonary artery. She does receive continuous oxygen therapy at three liters per minute.

Angela has been at Children's Hospital since August, and there is no talk of discharge at this time, according to Lloyd Zane Remick, the Philadelphia attorney who is representing the little girl.

There is just one postscript to the Emerson's trip to Philadelphia. They were not able to meet with Dr. Bach. He was stranded at home when Interstate 80 was closed in New Jersey due to the inclement weather conditions.