HUP Patient Receives Temporary Total Artificial Heart

A BRIDGE TO TRANSPLANT

Gary Onufer, a 46-year-old former fitness instructor suffering from biventricular end-stage heart failure and in irreversible cardiogenic shock, became the first person to receive a new temporary Total Artificial Heart in the Northeast U.S. Indeed, with this procedure, HUP joins a short, prestigious list of institutions worldwide — becoming the first hospital in the region, 8th in the country, and 15th in the world — to complete TAH-t certification by performing its first proctored implant.

This lifesaving technology serves as a 'bridge to transplant' for patients who

are waiting for a donor human heart, who have both sides of their heart failing, do not respond to other treatments, and are at imminent risk of death. Research has shown that patients receiving the device, called the temporary Total Artificial Heart (TAH-t), have almost twice the survival rate of patients who received standard ventricular assist devices.

Rohinton Morris, MD, surgical director of Heart Transplantation and Mechanical Assist Programs, and his team performed Penn's first implant of a TAH-t last month. The TAH-t com-

pletely replaced the patient's damaged heart, as opposed to just assisting it, while he waits for a donor heart to become available for transplant. Prior to the surgery, Onufer's heart could no longer pump enough blood to sustain his body, damaging his vital organs.

"This unique new cardiac technology keeps the sickest of the sick — those with damage to their entire heart muscle — alive while they wait for a heart transplant," Morris said. "This is just the latest addition to our already wide arsenal in battling the nation's number one killer, heart disease."

The device will remain in Onufer's chest until he receives a healthy heart for transplant — probably within a few months — but the device has kept patients alive for up to five years.

A few weeks after the six-hour surgery, Onufer is said to be doing well. Elan Howell RN, BSN, coordinator for the Total Artificial Heart Program, said that she and Mary Frances Quinn, BSN, trained the nursing staffs in the OR, the CT SICU, and on Founders 10 in using the technology associated with the TAH-t. "They had to learn how to interpret all the information on the console. It's different from what they're used to and is a

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Making sure patient Gary Onufer receives the best care are (l. to r.): John Wanner, Nurse Manager Jim Ballinghoff, Laura Capra, Elan Howell, Deb Dougherty, and Mary Lou O'Hara.



Paul Quirk (l.) and Mike Toland know how to stay warm while working on CAM.

"Work generally goes on no matter what the temps. The workers wear lots of layers, good gloves, insulated boots..., explained Jack Garrett, of L.F. Driscoll, who is general superintendent for the CAM project. "Men who work in construction are pretty hearty. It takes a certain type of person to be able to work in extreme heat and cold."

Carpenter Foremen Mike Toland and Paul Quirk, who have been working in construction for 25 and 35 years respectively, agreed. "I enjoy being outside in the cold," Toland said. "In fact, I'd much rather it be 20 degrees than 90. When I go home after work, I have to work outside for a while. It's too hot sitting inside!"

Dressing in layers is key. ("Three layers usually keep you warm," Quirk said). And it's essential to keep the extremities — the hands, feet, and ears — protected.

Toland recalled only one time in his career when work stopped because of the cold. "I was working on a Center City project, and the steel handle on my ratchet broke off as I used it. That was it... I told the crew to call it a

Wind is a much bigger deterrent than cold, the men all agreed. "Wind is definitely the worst," Quirk said. "It causes sawdust to blow up in your face, and materials start flying around.

Moisture is no friend of construction either, Garrett added. "Ice, snow, or rain makes steel slippery and very dangerous for workers."

MAJOR CONCERNS ABOUT MATERIALS

While humans are able to dress appropriately and weather the cold temps, building materials need help. "Anything that has water as an ingredient is a big issue in the cold," Garrett said.

For example, concrete needs above-freezing temperatures when it's mixed (in plunging temps, they make it with hot water and additives), poured, and setting. And, the receiving surface requires these 'higher' temps as well. That's where the white tarps you've seen on CAM come in. "We put the tarps around the floor below where the concrete will be poured. Then we heat the enclosed

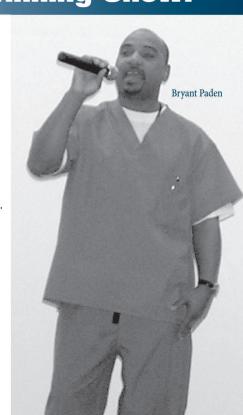
ospelrama Another Winning Show! Tamika Patton Rochelle Rose

Last month, Medical Alumni Hall was rocking with the sound of the 2007 Gospelrama the 12th year to showcase the many talents of our employees. "People are energized by this program," said Al Black, HUP's chief operating officer. "We leave feeling refreshed."

Once again, the Honorable Rev. Louise Williams Bishop was the mistress of ceremonies. "I'm delighted to be with you, to celebrate the talents of those who have done such great things."

The Reverend Ralph Ciampa, director of Pastoral Care, applauded the Gospelrama committee for their efforts in putting the show together — especially **Madeline** and **Johnny** Dawson.

Thanks to everyone for such a great evening!



area with propane heaters so the surface above — which has metal decking — warms up."

To maintain the warmth both during and after the concrete has been poured, the heaters must be kept on around the clock, sometimes as much as two days, depending on the temperatures.

The workers also tent areas that will be sprayed with fireproofing because this solution is water-based as well. "Masonry is affected as well. Mortar needs above-freezing temperatures."

Planning for these cold-weather days starts, ironically enough, in the summer. "We need to get a source of fuel heaters, fire resistant tarps, propane.... There's a lot of construction going on in the city so everything has to be special-ordered ahead of time," Garrett said.

He and his supervisors check several weather sites each day to ensure the workers' safety. In fact, "the weather channel is the first thing up on my computer!" he said, smiling.

It's usually a 'go,' though. "Even when Mother Nature doesn't want us to work, we figure out how to do it."

SUPPORT BRAIN TUMOR RESEARCH ... FOR PETE'S SAKE

Thomas and Carol Hallinan lost their son, Peter, to a serious brain tumor called anaplastic oligodendroglioma. To help raise awareness and funds for brain tumor research, they have partnered with our Department of Neurosurgery in hosting 'For Pete's Sake,' an event that will include a silent auction,

dinner, and entertainment. All proceeds will go to advance brain tumor research at Penn. The event will be held on Friday, March 23, at the historic Knowlton Mansion. For more information, please contact PENN Medicine Development at 898-0578.

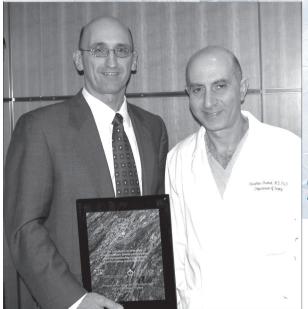
IT'S A SLAM DUNK!

Patient Flow March Madness has begun. Our patients tell us that Improved Patient Flow = Improved Patient Satisfac-

tion and we hear them. Throughout the month, HUP teams will compete for prizes as they improve the coordination of our patients' care. Stay tuned for updates on our progress and winners.



The Right Numbers Add Up to an Exceptional Program



Garry Scheib and Abraham Shaked, MD

Nearly 40 families generously donated the organs of their loved ones at HUP between July 2005 and June 2006. These life-saving numbers represent a record for HUP and is also the highest number for a single center within the Gift of Life region.

And these numbers add up to even more impressive results: 107 people — and their families — benefited from these organs. And that doesn't include the 37 others who donated tissue, which translated into allografts for hundreds of people.

For all of this — and for the transplant teams' excellence in supporting families — HUP received the first annual DVHC (Delaware Valley Healthcare Council) Gift of Life Award. At a special presentation event, Dennis Wagner of the Department of Health and Human Services noted that HUP "is a leader in not only bringing in organs but in maintaining as expected — or better than expected — rates of survival." He added that these numbers place HUP's program among the best in the country and "offer hope to those awaiting transplantation."

The PENN Transplant Institute, one of 259 transplant centers in the country, was also recently identified for achieving excellence in patient outcomes and growth in transplantation across four organ programs: lung, heart, liver, and kidney.

In accepting the DVHC Gift of Life Award for all of the Transplant teams, HUP Executive Director **Garry Scheib** said, "I'm humbled by this achievement and by the generosity of these families making such hard decisions. It takes a team like ours to create an environment that supports this increase."

Abraham Shaked, MD, PhD, chief of PENN Transplant Center, thanked all the families who have giving so much and his team members. "They are unbelievable people — committed to provide the best care."

The most touching part of the program came at the end, when the mother of a donor spoke about her gift of life. When she lost her teenage son, she made the difficult and selfless decision to donate his organs. "This one act takes you from tragedy to triumph," she said. "I would have been a broken woman without this. Now my son has a legacy. I am healed."

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Black also mentioned the Health System's purchase of Graduate Hospital from Tenet Healthcare Corporation, as part of its

The Health System continues to do well financially, noted **Al Black**, HUP's chief operating officer, at last month's Meal with an Administrator. "Our volume is the driving force," he said, adding that, despite the growing numbers, patient satisfaction rates also continue to improve.

However, possible cuts to Medicare and Medicaid, by the federal and state governments, respectively, may have an impact on our finances.

In speaking about JCAHO's upcoming visit, Black said "we're making significant progress" in many areas of patient safety. "Continue doing what you're doing, not only for JCAHO, but because this is what is going to be expected all the time. It must remain a part of how we do business."

HUP's application for Magnet status — the gold standard of nursing — was submitted last month. "The Magnet survey will occur sometime in the spring," he said, "but just getting the application in was a significant achievement."

Black also mentioned the Health System's purchase of Graduate Hospital from Tenet Healthcare Corporation, as part of its joint venture with Good Shepherd Rehabilitation Network to form a physical rehabilitation facility and a long-term acute care hospital. In addition, "Pennsylvania Hospital will use the Tuttleman Building [part of the Graduate purchase] for much of their ambulatory surgery."

Chief HR Officer Terri Woodruff noted that UPHS held a job fair for Graduate employees "to help them apply for open jobs in the Health System. It's part of being a good community partner."

EMPLOYEE QUESTIONS

"I work near the Gates lobby and notice when I leave or come in that patients often have to wait in the rain or snow because there's no cover," said one employee. "Could we get an outside canopy over that entrance?"

"We're making improvements to the Gates lobby itself and will look into getting one," Black said.

A couple employees had questions about directional signs. One person said that signs leading to the Rhoads building were needed in the main entrance. "People are always asking me where Rhoads is when they come in."

Another person brought up a concern about the Penn Tower elevators. "People are confused. They try to get upstairs using the elevators that only go between the Bridge and the garage. They don't even know about the elevators that go to 21. I think we need better signs."

Black said he would follow up on both issues.

"I read that Penn might be interested in buying Chestnut Hill Hospital," said one employee. "Is that true?"

"We have been a partner in that hospital for the past $1\frac{1}{2}$ years, but we did not make a financial investment. We provide clinical expertise for their programming."

Another person asked the reason behind the nurses' switch to wearing navy blue scrubs. "Victoria Rich [the Medical Center's chief nursing executive] feels strongly that patients should know who their nurse is, and patients are sometimes confused because so many clinical workers wear scrubs," Black said. "We're a long way from when nurses wore an identifiable uniform and caps that represented the school they attended."

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very specialized knowledge," she said. "I want to thank all of the nursing staff for their help. And the physical therapy staff have been crucial in Gary's recovery as well."

The TAH-t is a modern version of the Jarvik-7 Artificial Heart that was implanted in patient Barney Clark in 1982. After ten years of study, the TAH-t is now the only total artificial heart approved by the U.S. Food and Drug Administration, Health Canada, and Communite Europeenne for "bridge to transplant."

Michael Acker, MD, chief of Cardiovascular Surgery, added, "The TAH-t pumps up to 9.5 liters of blood per minute through both ventricles – making it the highest cardiac output of all mechanical circulatory support devices. This is truly lifesaving technology."

Proceeds of more than \$700,000 from the 2006 Philadelphia Antiques Show went to fund new technologies, including total artificial heart pumps, supporting consoles, and monitoring equipment in the Heart Transplantation and Mechanical Assist Program at Penn.

By Susanne Hartman

