

Baylor NICU Offers HFV During Transport From Referring Hospitals

Overview

- New equipment offers immediate treatment capability and increased patient stabilization
- HFV lowers risk of barotrauma

THE NEONATAL intensive care unit (NICU) transport team at Baylor University Medical Center at Dallas (Baylor Dallas) is among the first in the region to use high frequency ventilation (HFV) in the transport environment. This capability enables the team to provide immediate treatment during transport, rather than using conventional mechanical ventilation (CMV). HFV is gentler on damaged lungs because it provides many small breaths as opposed to fewer big breaths.

“We are using a special machine called the Bronchotron® that delivers both high frequency and conventional ventilation,” says Asif Khattak, M.D., neonatologist on the medical staff at Baylor Dallas, who oversees the team and the program. “Even though it is a high frequency machine, it does not work on the same principles as a high frequency oscillator or a high frequency

jet ventilator. It is a flow interrupter that has passive expiration like a high frequency jet.”

A mechanical and physiological interface, Phasitron®, allows breaths to be delivered precisely to selected pressures, and creates an oscillatory waveform by the rapid movement of a spring mechanism that balances inspiratory and expiratory pressures. The Bronchotron provides a convective component as compared to jet ventilators that must be “piggy-backed” onto a conventional ventilator for CO₂ removal. (Source: Percussionaire® Corporation)

“This equipment mimics the high frequency or jet ventilation that is being used in large level 3 NICUs, including the one at Baylor Dallas,” Dr. Khattak adds. “We will soon be able to use inhaled nitric oxide (aeronox system) with the Bronchotron, which could be

an additional tool to help extremely sick neonates with hypoxic respiratory failure.”

Gina Reynolds, RNC, BSN, neonatal transport coordinator, says the use of this equipment offers an even greater chance of survival for neonates in severe respiratory distress.

“With this equipment, we are able to transport a patient who is more stable than before,” Reynolds says. “This will mostly be used for extremely sick premature infants with severe lung disease or term infants with respiratory failure. HFV, both in transport and within our NICU, can be used when CMV pressures become so high to ventilate the patient that barotrauma is going to occur. HFV lowers the risk of barotraumas to the patient.”

(Continued on page 7)

In This Issue

- Baylor’s VAD Program Improves Outcomes, Quality of Life 2
- Improvements and Outcomes in Wound Care Management 3
- Interventional Neuroradiology Expands Treatment Options for Aneurysm and Stroke 4
- Baylor Gastroenterology Researchers Offer New Insights on Colon Cancer 5
- Continuing Medical Education Opportunities 6
- Sending a Patient to Baylor University Medical Center at Dallas 8

Baylor's VAD Program Improves Outcomes, Quality of Life

Overview

- FDA-approval of smaller device expands potential for implantation
- Baylor program receives Joint Commission's Gold Seal of Approval™

ADVANCES IN ventricular assist device (VAD) utilization and the recent FDA approval of a continuous axial flow pump are enabling physicians on the medical staff at Baylor University Medical Center at Dallas (Baylor Dallas) to provide greater use of technology to help patients with end-stage heart failure. Currently, VAD technology is used as a bridge to transplant for patients awaiting a donor heart and for other patients with heart failure.

Physicians in the VAD program at Baylor Dallas recently used a left ventricular assist device (LVAD) to help a patient's heart recover after failure due to viral myocarditis. "The key here is that this is not an expensive, futuristic device that is fraught with complications," says Johannes Kuiper, M.D., a cardiologist on the medical staff at Baylor Dallas. "In good hands, this can be a real improvement in quality of life for those who are too old for transplant, or for other patients who meet specific medical criteria.

"In addition to treating patients with end-stage heart failure, LVAD can prevent death and repeat hospitalizations, and improve quality of life for patients who require frequent hospitalizations or who are inotrope dependent without other co-morbidities," Dr. Kuiper adds.

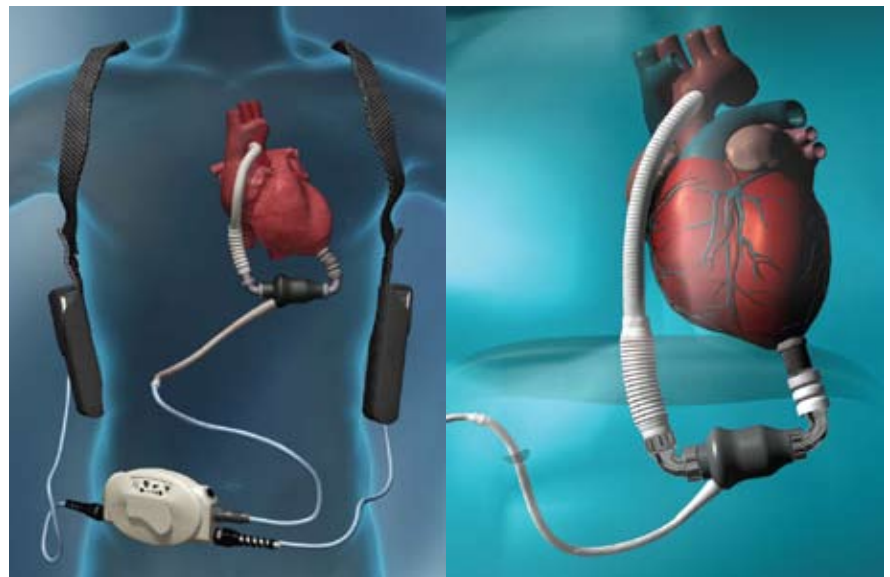
In April 2008, a continuous axial flow pump known as Heartmate® II received FDA approval for use as a bridge to transplant. Its predecessor, Heartmate® I, is a pulsatile pump. The Heartmate II offers significant advantages to patients.

"The primary advantage is that the newer pump is smaller in size and has greater durability. Heartmate I lasts about 18 months to two years, whereas Heartmate II has 3 to 5 years longevity," says Dan Meyer, M.D., a cardiothoracic surgeon on the medical staff at Baylor Dallas and medical director of Baylor University Medical Center Heart and Lung Transplant Program, which is a collaboration with UT Southwestern Medical Center. Dr. Meyer, a professor of cardiovascular and thoracic surgery at UT Southwestern Medical Center, adds, "We hope to see more patients referred for LVAD and possibly referred earlier in the management of heart failure. With the smaller pump, surgical intervention is now less taxing on the patient's body."

Dr. Kuiper adds, "Although success with LVAD is still clearly dependent on the family support system, it can be a life-saving device with a reasonable quality of life."

Baylor Dallas was the first hospital in the U.S. to receive the Gold Seal of Approval and disease-specific care certification from The Joint Commission for its VAD program. The certification means Baylor Dallas' VAD program follows national standards and guidelines that can specifically improve outcomes for patients. Additionally, since quality indicators and patient outcomes improve when patients are treated on a disease-specific nursing unit, Baylor Dallas has a designated inpatient unit for CHF patients. The staff is trained specifically in VAD patient care and management, as well as advances in treating heart failure.

For more information on Baylor Dallas' VAD program, please call **1-800-9BAYLOR**.



Artist's renderings of the Heartmate® II left ventricular assist device showing the entire system plus a close-up of the implanted device.

Renderings courtesy of Thoratec Corporation

Baylor's Wound Care Center Studies Improvements and Outcomes in Wound Management

Overview

- Baylor Wound Care Center study indicates 78 percent of patients experience healing within 8 weeks
- Collaborative approach combines advanced technology and treatments to provide total care

A RETROSPECTIVE CHART review of patients at the Comprehensive Wound Care Center (CWCC) at Baylor University Medical Center at Dallas (Baylor Dallas) underscores a strong potential for positive outcomes among patients referred for specialized treatment of chronic wounds. Out of a total 522 cases evaluated, 78 percent of wounds were healed within eight weeks and six percent within 18 weeks. Twelve percent were referred to surgical service for secondary closure due to the nature of the wound, while four percent were managed as palliative care.

These findings underscore the efficacy of the CWCC's collaborative approach to healing and its ability to follow each patient based on individual needs.

"With a specialty wound care facility, patients benefit by having their specific needs addressed, plus, we work collaboratively with the Ruth Collins Diabetes Center and other services within the medical center to focus on contributing factors to chronic wound management," says Matt Schweyer, CHT, program

manager, CWCC. "At least 65 percent of wound patients have diabetes, so to address nutritional needs, management of diabetes and other compounding issues enables us to achieve a high success rate for patients where other treatments may have failed."

The CWCC also instituted a pilot program to house the Freedom Negative Pressure Wound VAC® (vacuum assisted closure) in the center and transition the patient from the Info-VAC® to Freedom VAC® prior to discharge.

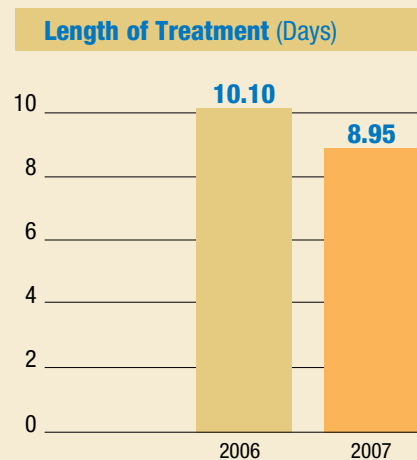
From March 2006 to February 2007, 642 patients using the VAC® ATS® System had a combined total of 6,488 therapy days and average length of treatment (ALOT) of 10.10 days. During the same timeframe from 2007 to 2008, utilization increased to 719 patients with 6,435 treatment days and ALOT at 8.95 days. Cost of care decreased 5 percent, from \$437,987 to \$420,309.

Charles Shuey, M.D., medical director of the Louise Gartner Center for Hyperbaric Medicine and medical director of respiratory care services, says these findings offer patients and their physicians a unique resource for the chronic wound management.

"As a dedicated center, we have the advanced products and technology to address each particular case and provide the necessary follow-up," Dr. Shuey says.

"We work in conjunction with referring physicians to enable their patients to receive appropriate treatment while keeping the physicians informed.

"We also have hyperbaric medicine available within the center, which is helpful as an adjunct when conventional therapies have failed," he adds. "If the patient's nutrition is adequate, diabetes is controlled, and they're still not responding to good wound care, there's evidence that hyperbaric medicine may offer a benefit."



Source:

In addition to its medical care, the CWCC is leading the way in patient satisfaction. Scores from patient surveys

(Continued on page 7)

"As a dedicated center, we have the advanced products and technology to address each particular case and provide the necessary follow-up."

Charles Shuey, M.D.

Interventional Neuroradiology Expands Treatment Options for Aneurysm and Stroke

Overview

- Baylor Dallas offers advanced treatments, latest technology
- Coil embolization and microcatheters provide effective, less invasive options

INTERVENTIONAL neuroradiologists on the medical staff at Baylor University Medical Center at Dallas (Baylor Dallas) are using advanced technology, including coil embolization and microcatheters, to provide less invasive treatment options for patients with aneurysms or strokes. Joe Hise, M.D., chief of radiology and interventional neuroradiologist on the medical staff at Baylor Dallas, says access to this technology and to the broad range of services available at Baylor Dallas enables patients to receive innovative medical care for these life-threatening conditions.

“Baylor offers a comprehensive center with the capability to address strokes or aneurysms,” Dr. Hise says. “Each case is individualized so the physicians are able to draw upon vast resources within Baylor to determine the best course of treatment for every patient. In other words, Baylor offers a one-stop resource for patients and their physicians.”

Coil embolization can be used for either ruptured or non-ruptured cerebral aneurysms, which usually offers patients a shorter hospitalization and quicker recovery. Baylor Dallas annually treats an average 100 patients with aneurysms.

“With a ruptured aneurysm, the first choice usually is coil embolization, but if the patient cannot be safely coiled, then the next choice is a consult with the neurosurgeon on open surgery,” Dr. Hise

says. “In patients with an unruptured aneurysm, physicians look at age, life expectancy, size and location of the aneurysm, and weigh the benefits and risks of treatment.

“The advantage of coiling for unruptured aneurysms is that 95 percent of patients are able to go home the next day. A craniotomy requires four or five days in the hospital,” he adds.

One primary disadvantage is that coiling may take an additional procedure for a durable outcome.

“Large cohort studies have found that the retreatment rate with coiling is about 10 percent, whereas clipping has a retreatment rate of less than one percent,” Dr. Hise says. “It’s much harder to get a permanent seal around the neck of the aneurysm with coiling, but it is still much less invasive than craniotomy.”

“At Baylor Dallas, all medical treatments, therapies and specialties are available in one place, which is essential for acute intervention in both strokes and aneurysms,” Dr. Hise says.

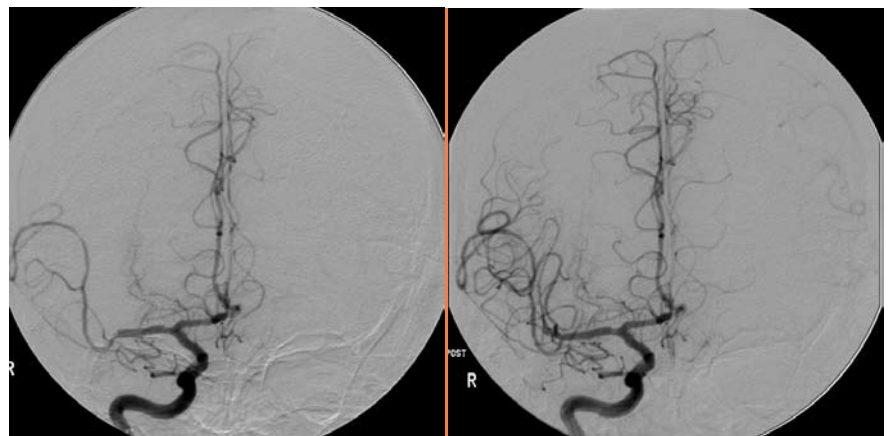
Baylor Dallas has a dedicated stroke unit which gives patients access to a multidisciplinary team of neurologists, neuro-interventionists, emergency room physicians and nurses, neuro-radiologists,

physiatrists, neurosurgeons, vascular surgeons, internists, and cardiologists on the medical staff of Baylor Dallas, as well as stroke nurses and therapists.

While the administration of tissue plasminogen activator (tPA) within a three-hour window has been FDA-approved for several years, most patients arrive within a 3 to 8 hour window, putting them at risk of further damage within the brain and a prolonged recovery. Now, interventional neuroradiologists can use microcatheters to deliver tPA directly into the clot after the three-hour window or as an adjunct to patients receiving IV tPA. This approach also can be used for patients with large clots that IV tPA is unlikely to dissolve.

“After that three-hour window, there are several possible options, including the use of a clot retrieval device called the MERCI retriever for mechanical extraction of thrombus,” Dr. Hise says. “There also is the Penumbra System, which uses a microcatheter and separator wire to break up and suction out the clot little by little for revascularization.”

For more information on Baylor Dallas’ interventional neuroradiology services or the Baylor Neuroscience Center, please call **1-800-9BAYLOR**.



Left: Cerebral angiography demonstrates near complete occlusion of the right middle cerebral artery with only minimal flow. Right: After emergently suctioning out the clot with the Penumbra Device, there is significantly improved blood flow to the brain.

Baylor Gastroenterology Researchers Offer New Insights on Colon Cancer

Overview

- Hereditary cancer risk program and JC Virus research provide clues to causes
- Nutriprevention research targets unique compounds in apples, olive oil and curry

PHYSICIANS at Baylor University Medical Center at Dallas (Baylor Dallas) are leading several initiatives that target colon cancer, including hereditary colon cancer, the presence of the JC virus and nutriprevention. C. Richard Boland, M.D., chief, division of gastroenterology and a physician on the medical staff of Baylor Dallas, says that while colon cancer is often preventable through screening, early detection and the removal of precancerous polyps, this research addresses underlying genetic and biological predisposition to the disease and new theories on prevention and possible treatment.

“Through our hereditary cancer risk program, we analyze family history and create a pedigree, which enables us to create a mathematical estimation of colon cancer risk,” Dr. Boland says. “Based upon that risk, we can provide recommendations on what screenings to undertake and provide very specific regimens for prevention and treatment.

“Additionally, if a patient has a parent or sibling who had what sounds like a familial form of colon cancer, we can obtain tissue samples from the relative’s treatment facility to determine the likelihood of hereditary gene involvement,” he adds. “With that information, we can target a specific gene or genes to evaluate

and make a better diagnosis and treatment plan for each patient.”

Another area of research involves the JC virus, a virus as common as the cold virus and found in 90 percent of all colon cancers. Physicians from Baylor Dallas’ GI Cancer Research Laboratory and Baylor Research Institute are studying the virus to determine if it is involved in the initiation of chromosomal instability that leads to colon cancer.

“This virus is in the normal colonic tissues of most people, and most of us can live with it,” Dr. Boland says. “With a grant from the National Cancer Institute, we are studying this virus in vitro to determine if it is reactivated in

some way that leads to chromosomal instability. With this information, we can look for completely novel ways to prevent colon cancer that involves dealing with the virus.”

Nutriprevention focuses on naturally occurring substances that block the progression of disease. Dr. Boland, along with Ajay Goel, Ph.D., and Luigi Ricciardiello, M.D., are specifically studying the Annurca apple, polyphenols in olive oil from a specific region in Italy, and curcumin, a compound found in turmeric and curry. They are working in conjunction with M.D. Anderson Cancer Center and Texas A&M University.

(Continued on page 7)

Nutriprevention Research



Annurca Apples



Italian Olives



Turmeric



Curry

THE 35th ANNUAL
**WILLIAMSBURG
CONFERENCE
ON HEART DISEASE**

DECEMBER 7-9, 2008

The Williamsburg Conference Center
Williamsburg, Virginia
Program Director
William Clifford Roberts, MD

WHO SHOULD ATTEND

This educational activity is intended for cardiologists, internists, cardiovascular surgeons in active clinical practice involving the management of patients with cardiovascular disease.

EDUCATIONAL OBJECTIVES

At the conclusion of this conference, participants should be able to:

- Apply contemporary concepts in cardiovascular disease prevention, patient assessment, and management to clinical practice
- Review findings and clinical implications of recent cardiovascular clinical trials
- Examine the role of co-morbidities associated with cardiovascular disease, including hyperglycemia, insulin resistance and chronic kidney disease
- Assess the role of percutaneous interventions in the management of cardiac disease
- Outline practical approaches to the management of arterial narrowings, particularly atherosclerosis, through the use of lipid-lowering agents, stents and other strategies
- Highlight important concepts in management of heart failure.

REGISTRATION AND INFORMATION

Register online at www.cmebaylor.org, by fax at (214) 820-4169, or by mail to Baylor University Medical Center, A. Webb Roberts Center, 3500 Gaston Avenue, Dallas, Texas 75246. For questions and location information, call (214) 820-2317 or email to cmeregistration@baylorhealth.edu.

The Perinatal & Neonatal Journey
JUSTICE FOR ALL



September 26-27, 2008

Hilton Park Cities Hotel • Dallas, Texas

WHY ATTEND

It is paramount that the most clinically relevant data and practice techniques are disseminated to all practitioners. This conference will identify and communicate the most timely and essential practice changing information vital to the safe passage of newborns and the wellbeing of the mother. Offering a unique opportunity for health care professionals to acquire knowledge imperative to the care of mother and baby, this dynamic conference will focus on the immediate clinical integration of new data and techniques to the enhancement of practice skill resulting in improved patient health.

WHO SHOULD ATTEND

- Neonatologists
- Perinatologists
- Obstetricians
- Neonatal & Perinatal Nurses
- Neonatal Respiratory Therapists

REGISTRATION

Register online at www.cmebaylor.org, by fax at (214) 820-4169 or by mail to A. Webb Roberts Center, Baylor University Medical Center, 3500 Gaston Avenue, Dallas, Texas 75246.

QUESTIONS?

For questions and location information, call (214) 820-2317 or email to cmeregistration@baylorhealth.edu.

The A. Webb Roberts Center for Continuing Medical Education of Baylor Health Care System, Dallas designates this educational activity for a maximum of 10.5 *AMA PRA Category 1 Credits™*. Physicians should only claim credit commensurate with the extent of their participation in the activity. This activity includes one formal credit in Medical Ethics and/or Professional Responsibility as required annually by the Texas Medical Board.

The A. Webb Roberts Center for Continuing Medical Education of Baylor Health Care System, Dallas is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The Center for Nursing Education and Research of Baylor University Medical Center/Baylor Health Care System is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

Application for Continuing Education for Respiratory Therapists (CERT) - Category I has been made with the Texas Society for Respiratory Care.

(Continued from page 1)

Baylor NICU Offers HFV During Transport From Referring Hospitals

Baylor Dallas' transport team has undergone extensive training and continues to review each case to further their knowledge base and expertise.

"Our physicians felt it was important to offer this technology to patients in outlying areas, and they have invested a great amount of trust in our transport team members," Reynolds says. "We were already using both high frequency jet and oscillatory ventilation in the unit.

To be able to use HFV during transport extends our capabilities beyond the inpatient setting."

Dr. Khattak concurs, "An extremely sick neonate with respiratory failure on a conventional ventilator in a small peripheral hospital could potentially be saved with this modality. There have not been any randomized controlled trials on the machine, but units that are using it throughout the country have shown good results."

Neonatal transfers are coordinated directly through the Neonatal Intensive Care Unit. To initiate transfer of a patient to Baylor Dallas call **1-888-820-2806**.

The Perinatal and Neonatal Outreach Program at Baylor Dallas provides education and resources to community hospitals. The program provides referring physicians with follow-up reports, and with parental consent, sends regular faxes to notify the physician of progress and significant changes in the patient's condition. The outreach program also provides educational and teaching programs for community hospital personnel.

For more information on HFV during transport or on the Perinatal/Neonatal Outreach Program, please call **1-800-9BAYLOR**.

(Continued from page 3)

Baylor's Wound Care Center Studies Improvements and Outcomes in Wound Management

indicate 94 percent of patients are "likely to recommend," which is a key indicator used by the Press Ganey survey tool. The center also received high marks for its concern for patients, friendliness of staff, sensitivity demonstrated to patients and explanation of treatment.

"These findings from both the clinical and service standpoints tell us we're doing the right things and using the proper tools to find relief and healing for patients with chronic wounds," Dr. Shuey says.

To refer a patient to the Comprehensive Wound Care Center at Baylor University Medical Center at Dallas, call **1-800-9BAYLOR**.

(Continued from page 5)

Baylor Gastroenterology Researchers Offer New Insights on Colon Cancer

"These are things people have been eating for centuries, but we are just beginning to understand how they effect the development of cancer," Dr. Boland says. "A specific compound found in the Annurca apple, for example, appears to reverse DNA methylation, which then leads to the re-expression of certain tumor suppressor genes, which is one strategy to prevent cancer. I'm very encouraged by the response we are getting in the lab. What is perhaps most fascinating is that these nutritional substances would appear to be quite safe, and yet, they have pharmacological properties that are potentially very powerful as preventive agents."

Colon cancer continues to be the third most common cancer diagnosed and the second leading cause of cancer death in the United States. Dr. Boland hopes that increased understanding of how colon cancer begins and an emphasis on prevention will help decrease the number of patient deaths.

"It is important for the medical community to take a careful family history and be aware of the potential genetic hereditary risk of colon cancer of their patients," Dr. Boland says. "Those patients can be taken care of differently with the goal of managing their screening and prevention program.

"For the long term, however, as we learn to manipulate the JC virus, we may uncover novel ways to prevent this cancer or develop a vaccine for prevention," he adds. "Baylor is competing on an international basis in this research and we are fortunate to be able to offer patients the latest knowledge and treatment for this potentially fatal disease."

For more information on colon cancer research initiatives or to refer a patient for treatment, please call **1-800-9BAYLOR**.

Sending a Patient to Baylor University Medical Center at Dallas

With one phone call, a physician can request an appointment for a patient, a consult, or an inpatient transfer.

Call 1-800-9BAYLOR and a ConsultLines representative will try to assist you and your requests.

Baylor University Medical Center at Dallas has a dedicated nurse to coordinate the transfer of inpatients for physicians in the region. This includes: Emergency Department, OB and neonatal transfers and those transfers without an accepting physician. Inpatient transfers should be current acute inpatients who may require a continuation of acute care, specialized care or a higher level of care not available at your local hospital. The nurse will attempt to find an accepting physician, reserve a bed and work with Baylor's Access Service to verify insurance coverage.

ConsultLines also can help you with other needs, such as reaching specific Baylor departments for information, or sending you the latest copy of the



Physicians and Services Directory. So remember if you make one call to 1-800-9BAYLOR, we will do our best to take care of you and your patients when you need us.

To be removed from the mailing list, call 1-800-9BAYLOR.

* Physicians are members of the medical staff at one of the Baylor Health Care System's subsidiary, community or affiliated medical centers and are neither employees nor agents of those medical centers, Baylor University Medical Center, or Baylor Health Care System.

© 2008 Baylor Health Care System DH-BH987-07/08

1-800-9BAYLOR • Baylor ConsultLines • BaylorHealth.com

 **BAYLOR**
University Medical Center
at Dallas

Marketing and Public Relations
3500 Gaston Avenue
Dallas, Texas 75246

NONPROFIT ORG
US POSTAGE
PAID
DALLAS, TX
PERMIT #2650