LVAD therapy is now a long-term option for many end-stage heart failure patients

**ALSO:**
- Post-Surgical ED Visits
- Sleep Apnea
- Retinoblastoma
- Post-Cancer Pain
New lung cancer screening guidelines

In a major policy change, the U.S. Preventive Services Task Force has issued new guidelines that recommend annual CT scans for certain smokers and former smokers. The recommendations apply to adults who have no signs or symptoms but are at high risk for developing the disease, namely people age 55–80 with a history of smoking 30 packs per year or more, whether they are still smoking or have quit within the last 15 years.

This recommendation comes from data reported by the National Lung Screening Trial, a randomized trial involving 53,454 current or former heavy smokers ages 55 to 74. The trial compared two ways of detecting lung cancer: low-dose helical CT and standard chest X-ray. Participants who received low-dose helical CT scans had a 20 percent lower risk of dying from lung cancer than participants who received standard chest X-rays.

All high-risk smokers should be encouraged to seek counseling and potential screening through comprehensive screening programs, such as the one offered at the U-M Lung Cancer Screening Clinic. Our interdisciplinary team has significant experience monitoring patients with lung nodules while minimizing unnecessary invasive procedures.

CALL Find out more by calling the U-M Lung Cancer Screening Clinic at 800-962-3555 or emailing lung-cancer-screening@umich.edu.

UMHS and Jackson’s Allegiance Health propose affiliation

In December 2013, the U-M Health System and Allegiance Health, a 480-bed health system serving the greater Jackson community, announced a proposed affiliation that would make Allegiance Health part of U-M. This proposal aims to create better health and well-being at every stage of life for the patients served by Allegiance Health, and to strengthen Allegiance Health’s ability to continue its tradition of high-quality health care.

The proposed affiliation seeks to combine Allegiance’s and U-M’s expertise to continue offering high-quality, accessible health care to the Jackson community. Over the coming months, the full details and terms of the proposed affiliation will be announced, in consultation with key stakeholders and in compliance with regulatory requirements. The new relationship would position both institutions to better and more efficiently serve patients and the community in a rapidly changing health care environment.

INFORMATION For full information on this proposed affiliation, visit uofmhealth.org/allegiance.
THE AFFORDABLE CARE ACT

What coverage expansion means for U-M patients

This is the year when the rubber meets the road for the Affordable Care Act, as formerly uninsured patients get coverage from private plans and expanded Medicaid programs, and other provisions kick in for hospitals, physicians and insurers. Here’s a brief summary of how the ACA intersects with the care the U-M Health System provides:

- As of Feb. 1, we are participating in, and considered in-network for, 131 of the 169 new private insurance plans offered to individuals, families and small businesses in Michigan. Patients who have coverage under other plans may be able to access U-M advanced specialty care if their plan grants authorization in advance.
- Our M-Support charity care program will continue to support previously enrolled patients until they can enroll in a Medicaid plan or a private plan. Going forward, patients seeking M-Support coverage must now apply to see if they are eligible for expanded Medicaid or for an affordable individual or family plan on the Marketplace. M-Support will now be limited to those who do not qualify for either.
- Our Patient Financial Counselors are available to assist any patient or his or her loved ones with questions about ACA-related matters, and to assist in identifying and enrolling in plans. This service is free and open to anyone — not just U-M patients.
- Patients who currently have coverage through a county-sponsored plan will likely continue to have that coverage until Michigan’s expanded Medicaid coverage begins. Please encourage them to call our counselors for assistance.
- As more patients gain access to care through expanded coverage, we are building our capacity to serve more patients. We especially look forward to providing advanced care to those who need it, on the advice of their own primary care providers.

ONLINE A full list showing the plans we are participating in, and those we are not, is available at uofmhealth.org/ACAplans. Get more information about the ACA and UMHS at uofmhealth.org/newoptions.

CALL Patient Financial Counselors can be reached at 877-326-9155 between 9 a.m. and 8 p.m. Monday–Friday, or email them at pfc-counselors@med.umich.edu.

A historical perspective

As the nation waits to see what happens when health insurance coverage expands to millions more people, three recent U-M studies report on the effects of past coverage expansions:

- After lower-income U.S. teens became eligible for CHIP coverage, ER visits by all teens leveled off and outpatient visits increased, according to findings published in Academic Emergency Medicine. By comparison, ER visits continued to rise among young adults, while outpatient visits remained flat.
- ICU use didn’t go up in Massachusetts after insurance coverage expanded there, according to a new study in Critical Care Medicine. But the percentage of ICU patients who had no health insurance went down substantially.
- Massachusetts residents reported better health status and used more preventive health services in the years following insurance expansion in that state, compared with people in other New England states, according to a new paper in the Milbank Quarterly.

RESEARCH For more information on these studies, visit med.umich.edu/cic.
Over the past decade, ventricular assist devices (VADs) have become viable alternatives to heart transplants as the technology has continued to improve. Pumps are smaller and more durable and the batteries last longer. Patients who are referred to the University of Michigan Frankel Cardiovascular Center’s Center for Circulatory Support benefit every day from these lifesaving devices.

Jerome Wilson, 62, was diagnosed with cardiomyopathy 20 years ago by his primary care physician. “I’ve been an athlete all my life,” explains Wilson. “When I was 42, I started having difficulty walking up stairs because I would get tired. An echocardiogram revealed cardiomyopathy.’’

Over time, his heart failure progressed, and traditional interventions including lifestyle modifications, drug therapies and a defibrillator no longer adequately improved his heart function. “That’s when I was referred to the University of Michigan, and I met with Dr. Koelling, a cardiologist,” says Wilson. “After several years of monitoring by both my local cardiologist and Dr. Koelling, last year they determined it was time to consider an LVAD.’’

**A LEADING PROGRAM**

For most left ventricular assist device (LVAD) patients, the procedure provides an opportunity to return to normalcy. They can usually exercise, work, travel and enjoy a better overall quality of life.

Since the late 1990s, the LVAD program at the Frankel CVC has implanted more than 580 long-term devices, making the program one of the largest and most experienced in the world. Frankel CVC’s Center for Circulatory Support was one of the first centers to be awarded Disease-Specific Care Advanced Certification for Ventricular Assist Device Destination Therapy by The Joint Commission. The VAD program at the Frankel CVC is also one of the few programs worldwide with access to several investigational and FDA-approved LVADs.

**WHEN TO REFER**

It’s important for a patient with advanced heart failure to be referred to a specialist at the earliest possible indication of worsening or severe heart failure. Physicians should evaluate functional limitations and exercise capacity, New York Heart Association (NYHA) class and symptoms, American Society of Echocardiography (ASE) guidelines for LVAD candidacy, presence of advanced heart failure devices, and other factors.

LVAD therapy is now a long-term option for many end-stage heart failure patients.

U-M is one of only a few institutions worldwide with access to many investigational and FDA-approved mechanical circulatory support systems.
My procedure was done by Dr. Pagani, and I feel like the luckiest man in the world. Wilson’s device was implanted in May 2013, and he returned home just 13 days after his procedure.

“We have a unique model program where patients who receive LVADs are strongly encouraged to follow up with their primary care physician by the University of Michigan in transitioning patients back to their home communities,” says Masri.

“I was very impressed, not only with the communications and updates from the physicians at the University of Michigan after the LVAD procedures, but also with the personal follow-up when the patients returned home,” explains Masri, who is fellowship-trained in heart failure and transplantation. “The VAD coordinator actually accompanies LVAD patients to their first post-procedure appointment with me. I wasn’t expecting that the first time it happened. I thought maybe I would get a letter, at the most.”

During these first post-procedure appointments, the VAD coordinator offers referring physicians a complete update on the patient, including information about the process of evaluating a patient for transplant, if applicable. Another goal during this appointment is to make sure the patient is involved with his or her own care and understands what is happening.

“Of course, I’m very familiar with the LVAD procedures, but it was a great help to have the VAD coordinator give me patient-specific information,” explains Masri. “And it wasn’t just a written update; it was very personal. This program is a wonderful way to facilitate the release of LVAD patients back to their communities.”

The LVAD team has been wonderful, like another family.

Jerome Wilson, patient
Hospitals across the country have successfully raced to reduce door-to-balloon time to 90 minutes or less in the belief that it would save heart muscle and lives. But heart attack mortality has remained the same, according to a study in the New England Journal of Medicine. The University of Michigan Frankel Cardiovascular Center led an analysis of 100,000 heart attack admissions between 2005 and 2009, a time period that coincided with a national effort to reduce door-to-balloon time. The study of 515 hospitals participating in the CathPCI registry found door-to-balloon time fell from 83 minutes in 2005–2006 to 67 minutes in 2008–2009, and the percentage of heart attack patients receiving care in 90 minutes or less improved from 59.5 percent to 83.1 percent. Heart attack mortality rate remained virtually unchanged at 4.8 percent in 2005 and 4.7 percent in 2009.

“The data suggests that efforts to reduce door-to-balloon time further may not result in lower death rates,” says lead study author, interventional cardiologist Daniel Menees, M.D., assistant professor of Internal Medicine at the University of Michigan. “Potential strategies to improve care may include increasing patient awareness of heart attack symptoms, reducing delays for treatment once symptoms begin and shortening transfer time between health care facilities after a heart attack is recognized.”

Referring physicians are invited to visit the LVAD clinic to get a better understanding of the therapy, meet patients and learn about available options. For more information, contact 734-615-3068 or surgery-circulatory support@med.umich.edu. The VAD team may also be reached via M-LINE at 800-962-3555.

Get comprehensive referral guidelines at umhealth.me/AHF-refer.
With prescription drug abuse at epidemic levels nationwide, and overdose mortality outranking that from auto accidents in many states, U-M researchers have published striking new data about the misuse of prescription painkillers and sedatives by teens and young adults.

In all, 10.4 percent of patients aged 14 to 20 years treated in the U-M emergency room for any reason admitted to misusing a prescription painkiller or sedative at least once in the last year. That included taking the drugs to get high, taking more of the drug than was prescribed to them or taking drugs prescribed to someone else.

What's more, most of this use was apparently illicit: The vast majority of those who admitted this use had no prescriptions for these drugs in their medical records.

The study, published in *Pediatrics*, also raises the possibility that emergency room visits of any kind could become important occasions for detecting and addressing prescription drug problems among young people.

**Study highlights need for better care coordination**

Nearly one in five geriatric patients who undergo frequently performed surgical procedures will visit the emergency department within a month of their hospital stay, a new U-M study finds — a surprisingly high number found in the first national look at the issue. The rate varied widely between hospitals.

The findings, published in *Health Affairs*, show the need for better coordination of post-surgical care, says lead author and U-M emergency physician Keith Kocher, M.D. He and others suggest that post-surgical emergency department use could be added to quality measures used to evaluate hospital performance. The findings come from an analysis of Medicare data from nearly 2.4 million adults who had percutaneous coronary intervention, coronary artery bypass, hip fracture repair, back surgery, elective abdominal aortic aneurysm repair or colectomy in a three-year period.

Just over 17 percent had one emergency department visit, and more than 4 percent had two or more visits within 30 days of leaving the hospital. More than half of the patients who sought emergency care ended up being readmitted to the hospital directly from the ED. The most common issues were cardiovascular and respiratory conditions, infections, complications with the site of their surgery or procedure incision, and abdominal or gastrointestinal problems.

“This research is a high-altitude look at this problem and suggests that we should really be doing more investigation into what is driving the frequency with which patients need to come into the emergency department,” says Kocher. “We should be looking for things we can do as a health system to head off the need for an ED visit in the first place, or to deliver care in the ED that can prevent a hospital readmission if we can.”

The findings highlight the need for surgical and inpatient teams to do a better job at educating patients and linking with the patient’s primary care site in the first days after discharge. If nothing else, emergency visits by post-surgical patients should be treated as an opportunity to re-establish coordination of care.

At U-M, adult emergency department patients have access to a care manager to coordinate patients’ care across UMHS sites, and a free phone-based service that assists them in getting outpatient appointments to follow up on their health needs.
A team led by Ronald Chervin, M.D., M.S., has found evidence that CPAP therapy helps patients not just feel better, but look better, too.

We perceived that our CPAP patients often looked better ... But no one had ever studied this.

Ronald Chervin, M.D., M.S.

CPAP adherence improves appearance

Patients who adhere to continuous positive airway pressure (CPAP) treatment for sleep apnea may not just sleep better — they may look better, too, according to a recent U-M study. The findings may give some patients more incentive to adhere to the risk-reducing but cumbersome treatment.

It’s the first time researchers have shown specific improvement in facial appearance after treatment for apnea, which affects millions of adults and elevates risk for cardiovascular issues and accidents. CPAP therapy is already known to improve daytime alertness and reduce blood pressure.

Writing in the Journal of Clinical Sleep Medicine, a team from the U-M Sleep Disorders Center reported results from a sensitive “face mapping” technique usually used by surgeons, and results from a panel of independent appearance raters. The researchers detected changes in 20 middle-aged apnea patients just a few months after they began using CPAP.

Sleep neurologist and center director Ronald Chervin, M.D., M.S., says the study grew out of the anecdotal evidence from patients coming for follow-up visits after using CPAP. The team sought a more scientific way to assess appearance before and after sleep apnea treatment.

“The common lore, that people ‘look sleepy’ because they are sleepy, drives people to spend untold dollars on home remedies,” notes Chervin. “We perceived that our CPAP patients often looked better, or reported that they’d been told they looked better, after treatment. But no one had ever actually studied this.”

The team used a precise face-measuring system called photogrammetry to take an array of images of the patients under identical conditions before CPAP and a few months after. Capable of measuring tiny differences in facial contours, the system is usually used in surgical planning and evaluation.

The research team also developed a way to precisely map the colors of patients’ facial skin before and after CPAP treatment.

And they used a subjective test of appearance: 22 independent raters were asked to look at the photos, without knowing which were the “before” pictures and which the “after” pictures of each patient. The raters were asked to rank attractiveness, alertness and youthfulness — and to pick which picture they thought showed the patient after sleep apnea treatment.

About two-thirds of the time, the raters stated that the patients in the post-treatment photos looked more alert, more youthful and more attractive. The raters also correctly identified the post-treatment photo two-thirds of the time.

Meanwhile, objective measures showed that patients’ foreheads were less puffy, and their faces were less red, after CPAP treatment. However, they did not document any improvement after treatment, in tendency to have dark blue circles or puffiness under the eyes.

Chervin notes that further research, on patients with a longer CPAP experience, is needed.

ONLINE See before and after images of the patients and read more about the study at med.umich.edu/cic.
Challenge Met

Intra-arterial chemotherapy for retinoblastoma now offered at U-M

For children with retinoblastoma, the threat to a patient’s life, eye and vision pose a challenge in treatment. Management options have included enucleation (removal of the eye); systemic chemotherapy alone or in combination with local laser treatment; or cryotherapy or external beam radiotherapy, depending on the extent of disease, involvement of the other eye and age of the patient.

Now, U-M has become the first institution in Michigan, and one of a few in the country, to offer a new option for retinoblastoma. Called intra-arterial (IA) chemotherapy, or “chemosurgery,” the approach allows delivery of chemotherapy agents directly to the site of the tumor, using neurointerventional techniques that navigate the ophthalmic artery and other neighboring vessels.

TARGETED TREATMENT

The treatment relies on precise navigation of a catheter from a femoral artery access through the internal carotid artery, into the ophthalmic artery and the tumor region. Typically the ophthalmic artery supplying the retina is cannulated for chemotherapy drug delivery directly into the retinal vessels and hence into the tumor. Alternative access into retinal vessels is also possible when the ophthalmic artery is non-navigable.

Until recently, patients had to travel to hospitals in New York or Philadelphia for this treatment, which allows the patient to avoid the effects of systemic chemotherapy. IA chemotherapy should allow more patients to avoid enucleation and to retain some vision in the affected eye.

Early identification of retinoblastoma is key to patient outcomes. Pediatricians and ophthalmologists should have a high level of suspicion for retinoblastoma, especially in infants and young children with white pupils, crossed eyes or decreased vision. Most patients experience no pain or irritation.

U-M’s neurointerventional team can also provide minimally invasive care for a broad range of other pediatric conditions involving the brain and spinal cord, and head, neck and facial vascular malformations.

Before (left) and after (right) images show the impact of intra-arterial chemotherapy for retinoblastoma in a pediatric patient.

At U-M, intra-arterial chemotherapy is made possible by the combined expertise of (left to right) neurointerventional radiologist Neeraj Chaudhary, M.D., MRCS, FRCR; pediatric oncologist Raymond Hutchinson, M.D.; ocul Oncologist Hakan Demirci, M.D.; pediatric ophthalmologist Steven Archer, M.D.; and neurointerventional radiologist Joseph Gemmete, M.D.; along with (not shown) pediatric neurovascular surgeons Aditya Pandey, M.D., Cormac Maher, M.D., and Hugh Garton, M.D.

**REFER** Refer patients with suspected retinoblastoma to the Kellogg Eye Center by calling M-LINE at 800-962-3555.
We are trying to understand who is most likely to get pain and how we can best treat it to improve the quality of life for these patients.

N. Lynn Henry, M.D., Ph.D.
There are currently eight surgical options for breast reconstruction surgery after mastectomy, but it remains unclear what the best option is for individual patients. With so many choices to be made by the care team and the patient, a 10-site study has been created to help aggregate long term, patient-centered outcomes data to assist in decision-making. The study, MROC (Mastectomy Reconstruction Outcomes Consortium), is led by Ed Wilkins, M.D., a plastic surgeon and professor at the U-M Health System.

"Reconstruction options get very confusing, very fast, to the point where patients will throw up their hands and want to be told what to do," Wilkins explains. "We’d rather not end up there because if we have enough accurate information on the pros and cons of these various options, we should be able to trust the patient to decide what's best for them."

MROC follows patients from before surgery to two years afterward using a digital survey format. Questions include both clinical items, like pain or fatigue, but also satisfaction items, like aesthetic quality and social functioning.

"A lot of people talk about patient-centered outcomes and the mind-body continuum. It’s almost cliché,” Wilkins says. “But we really need to be acting on that and the early findings of this study have added evidence to this claim. It's important that we disseminate the results to colleagues so we can reconfigure our systems to care for the whole patient.”

Other studies have looked at whether women who undergo multiple types of breast cancer treatment are more likely to have pain. For example, one study found that women who have had chemotherapy were more likely to experience pain from aromatase inhibitors, an anti-hormone treatment.

“We know peripheral nerve damage is common with chemotherapy, and can cause numbness, tingling and pain. But maybe chemotherapy affects the nerves in the brain and spinal column, not just the peripheral nerves in the hands and feet,” Henry says.

A previous study, led by Ellen Lavoie Smith, Ph.D., from the U-M School of Nursing, showed that duloxetine can help with pain in the hands and feet from peripheral neuropathy caused by chemotherapy.

**MULTIPLE CAUSES NEED MULTIPLE SOLUTIONS**

Several aspects of breast cancer treatment can cause pain:

- Pain can occur in the area where a woman had surgery, including the axilla if lymph nodes were removed.
- Women who had lymph nodes removed are also at risk of lymphedema, which can cause chronic pain.
- Some patients experience joint pain and achiness or a painful tingling from peripheral neuropathy during chemotherapy. This may linger even after the treatment is over.
- Aromatase inhibitors also frequently cause joint pain and muscle aches.

It’s about more than just pain, too. Because few treatments are effective, many women are just living with pain. And that makes some think twice about continuing with therapies that may reduce their risk of cancer returning. A study that Henry published in 2012 found that almost one in four women stopped taking aromatase inhibitors because of joint and muscle pain.

“Some women do well with their treatments but others have a really hard time with pain and they are miserable,” Henry says. “We have to find better ways to predict who might be at risk of pain and then prevent or successfully treat it.”

**REFER** For information on any of N. Lynn Henry’s pain studies or to refer your patients, call the U-M Cancer AnswerLine at 800-865-1125.
Five minutes with Paul King

New executive director of C.S. Mott Children’s Hospital and Von Voigtlander Women’s Hospital

You joined U-M just a few months ago. What do you see as the biggest opportunity facing children’s and women’s services at U-M?

Our biggest opportunity is making sure that we have the capacity to say “yes” to all those who honor us by choosing our health system for their care needs. Since opening our new facility two years ago, we have been blessed to have more demand than we can handle. Although a good problem for a “business,” it is not good for our medical center or our partners. We have to be able to accept referrals for care that we are uniquely qualified to provide. We are taking action to make sure we have the staff and other necessary resources to serve our families and referring physicians.

What are you particularly interested in focusing on in the coming year?

During the next year and beyond, we will be focused on managing the growth of our practice. We will be providing care closer to home — both tangibly through our ambulatory care centers and face-to-face medical consulting coverage agreements at local and regional hospitals; and virtually through the creative use of technology. We will also be challenged to manage our resources in a fiscally responsible manner, while providing the highest quality and safest care possible. In June, all of us will be focused on ensuring the smooth rollout of our electronic health record (MiChart) in the inpatient setting.

MEET Paul King wants to hear from you! To request a meeting, contact physician liaison Jen Klaus at klausj@med.umich.edu. Learn more about Paul King at mottchildren.org/leadershipteam.