

Cardiovascular Perspectives



Munson Medical Center's Best in Nation Heart Program Serves Northern Michigan



Dino Recchia, MD, FACC
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I'd like to welcome you to the 2017 edition of Cardiovascular Perspectives and share some of the exciting things that are happening in our expanding heart program.

We are very pleased that cardiovascular services offered at the Webber Heart Center at Munson Medical Center have been recognized by U.S. News & World Report as among the best in the nation.

Munson Medical Center's cardiology and cardiothoracic surgery programs were among the top 50 in the nation following analysis of data from nearly 5,000 centers. Scores are based on a variety of patient outcome and care-related factors.

This prestigious U.S. News & World Report ranking helps you and your patients have confidence that they can receive top quality heart care without leaving northern Michigan. Whether a patient requires care from our teams in cardiac imaging, interventional cardiology, electrophysiology, heart failure, or cardiothoracic surgery, he or she will find highly qualified expert care with outcomes that compare well with nationally known hospitals, such as Mayo Clinic, Cleveland Clinic and the University of Michigan.

continued on page 2

Inside:

Page 3
Webber Heart Center continues to lead nation in patient satisfaction

Page 4
New Cryptogenic Stroke Clinic helps hospital stroke team find cause, monitor patients

Page 6
Do you ask your patients how well they are sleeping?

Page 7
Adult congenital and pediatric heart clinics are held in Traverse City

Page 8
Cardiac Rehab reduces readmissions, mortality and repeat heart events

Page 9
Robotic Mitral Valve Repair coming to Munson Medical Center

Page 10 - 11
Getting to know Michael Howe, MD, and Bobby Kong, MD

continued from page 1

Patient Satisfaction

While we appreciate being ranked among the best in the nation, the rating that really matters to us is what our individual patients have to say, such as this recent comment: "Competent, confident, capable, and congenial. How could you not be euphoric with a cardio team like that?" You can read more from our patients on page 3.

Regional Clinics



We recently expanded heart services in Grayling with a new clinic at the Maxon Medical Building across from Munson Healthcare Grayling Hospital. Five cardiologists from Traverse Heart & Vascular and additional staff now offer extended hours and expanded testing. The

Grayling clinic has capacity for up to 2,000 patient visits and 600 heart tests per year. We estimate the clinic will save patients the time and expense of traveling 140,000 miles per year to Traverse City and back to access services – about the same as driving around the Earth five times. Giving patients care close to home is one of our key goals. In addition to Grayling, we're achieving that goal by having cardiologists staff clinics in Cadillac, Charlevoix, Frankfort, Gaylord, Indian River, Kalkaska, Manistee, and Prudenville.

New Cryptogenic Stroke Clinic

One of the more puzzling subset of patients we see is those under the age of 55 who have had a cryptogenic stroke. In January, we established a Cryptogenic Stroke Clinic to try to identify the source of stroke in younger patients in an effort to develop a treatment plan that prevents recurrent stroke. You can read about the work being done by that clinic on page 4.

Robotic Mitral Valve Repair Begins

Munson Medical Center will soon begin offering robotic mitral valve repair as an option following extensive training of the surgical team. Cardiovascular Surgeon Bobby Kong, MD, joined Munson Medical Center last year, bringing a lifetime of experience with him. See page 9 for more about daVinci surgery and page 11 to learn more about Dr. Kong's interesting life story.

Cardiac Rehab Reduces Readmissions

We are fortunate in northern Michigan to have physician-supervised cardiac rehab programs in many of our communities. It is well documented that patients who complete cardiac rehabilitation do better. One of the key factors determining whether a patient participates in rehab is a recommendation from their physician. Read how cardiac rehab reduces readmissions on page 8.

The Sleep Connection

Researchers estimate that severe, untreated sleep apnea more than doubles the risk of dying from heart disease. See page 6 to read more about the growing body of evidence that connects sleep apnea and heart disease.

I hope you enjoy this edition of Cardiovascular Perspectives. Feel free to contact me with any questions or comments.

Sincerely,

Dino Recchia, MD, FACC
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drecchia@mhc.net

Save the Date

Cardiovascular Update Conference

Saturday, November 4, 2017

The fifth annual Cardiovascular Update Conference will give primary care, emergency medicine, hospital medicine physicians, PAs/NPs, and nurses practical tools and resources, including the most current developments in the diagnosis, treatment, and management of cardiovascular disease.

Please save the date and watch for more information and registration details.

Location:

Hagerty Center, Northwestern Michigan College, 715 E. Front St., Traverse City, MI 49686

Patient Satisfaction at Webber Heart Center Leads the Nation

Between January and March 2017, more than 200 patients gave their stay on the three inpatient cardiac floors of the Webber Heart Center the highest possible ratings.

Here are recent results, as reported by Press Ganey:

Question	Rank
Overall rating of the care given:	98th percentile
Likelihood of recommending hospital	99th percentile
Staff worked together to care for you	98th percentile

(Percentiles are based on scores compared to other hospitals in Press Ganey's large database.)

What Webber Heart Center Patients Have to Say

"We are very fortunate to have Munson Medical Center in our community and the staff is **excellent!**"

"I cannot say enough about everyone that I had contact with. Thank you so much. I **FEEL WONDERFUL.**"

"Very pleased with all care and caregivers. Felt I was very well taken care of by physicians and staff my entire stay. Thank you for your **good care and concern.**"

"I was **impressed** by everyone. Staff went over and above to address my needs. Best hospital I've been to."

"Honestly, I've been in different hospitals a few times and yours is the best in all categories. I was **very satisfied** with my care all the way around."

"The doctors I had were the **best of the best.**"

"The nurses on the surgical floor for heart surgery were just great. They made you feel comfortable and lift you with **peace of mind** about your problems."

"From the time they wheeled me in to the time they wheeled me out, they **treated me like a queen.**"

"I think the physicians are at the **top of their game** – the best there is."

"I cannot say enough how **grateful** I am for the care, the acts of kindness from everyone at Munson, from the ER to the staff at the Webber Heart Center to the young lady from Buckley who emptied the trash and cleaned the room."

"All staff did a fantastic job! They worked well as a team – and **saved my life.** Thank you!"

"Love this hospital, excellent staff. **Kind and courteous** to me and my family. You are the best."

"Munson is a great facility for our community. I'm a nurse and was very impressed with my stay. As a nurse, I understand how important it is to have **empathy** and conduct your job well. All the staff made my stay a better experience."

"The staff in ER and Cardiac Tower were **wonderful** – very **kind** and helped me cope with a difficult situation."

"I have been a nurse for 45 years and the staff was wonderful – well trained, great at their jobs, **optimistic attitudes.** Very kind."



New Cryptogenic Stroke Clinic Assists Hospital Stroke Evaluation Team in Finding Cause, Monitoring Patients



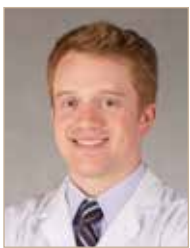
The device is implanted with local anesthetic and takes about 15 minutes.



Small insertable cardiac monitors provide long-term monitoring up to three years and are about one-third the size of a AAA battery.

The American Stroke Association estimates that 30 percent of all strokes are cryptogenic – meaning they have no identified cause. In 2016, Munson Medical Center treated 380 patients with ischemic stroke. Munson Medical Center cardiologists have begun assisting their colleagues in neurology and internal medicine in determining the cause of cryptogenic strokes in an effort to provide appropriate care and prevent future strokes.

Atrial fibrillation (AFib) is a well-recognized cause of ischemic stroke. An article in the *New England Journal of Medicine* in June 2014 concluded that long-term monitoring with an insertable cardiac monitor is superior to conventional follow-up for the detection of atrial fibrillation in patients with cryptogenic stroke.



“Putting these monitors in identifies AFib as the cause of cryptogenic stroke about 20 percent of the time,” said Cardiologist **Robert O. Kennedy, MD, FACC**, who specializes in electrophysiology and arrhythmias. “This device can really affect patient outcomes from stroke because it can detect AFib for up to three years versus a traditional monitor which detects for about 30 days. The median time for detecting AFib is well beyond 30 days, so having a long-term device allows you to capture patients you wouldn’t otherwise capture. You can then treat them to make sure they don’t have a second stroke, which could be similarly or even more devastating to them.”

A new protocol for implanting long-term monitors in hospitalized patients following a cryptogenic stroke has been developed through a collaborative effort involving Dr. Kennedy, Neurohospitalist **Kersti M. Bruining, MD**, and her team, Hospitalist **John P. Macnowski III, MD**, of INDIGO Health Partners, and the Primary Care Committee.

Under a standardized approach, if no cause of a patient’s stroke has been determined after 48 hours of inpatient workup and evaluation, cardiologists are called to do a same-day implant of the device. The minor procedure is performed with local anesthetic and takes about 15 minutes. One week later, the patient visits the Cryptogenic Stroke Clinic at Traverse Heart and Vascular to meet with advanced practice nurses. During the visit, the device is checked for proper functioning and an anticoagulation treatment plan is discussed in the event AFib is detected.



At home, the patient places a wireless monitoring system at their bedside. Dr. Kennedy and **Brian D. Jaffe, MD, FACC** review monthly wireless downloads to monitor for any signs of arrhythmia. “If we see an event, we enact the anticoagulation plan we’ve already discussed with the patient so no time is lost. We can take care of them rapidly rather than waiting two months for an office visit to talk over anti-coagulation – it’s an anticipatory and rapid initiation of treatment, which is what they need.”

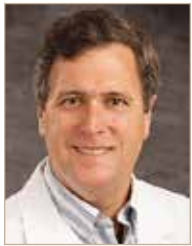
Patients return for an annual device check. If no AFib has been detected at the three-year mark, the monitor is removed.

Dr. Kennedy said the multidisciplinary approach allows for better tracking and follow-up for cryptogenic stroke patients. “Munson Medical Center is embarking upon a great effort to improve our stroke management and cardiology is able to provide this potentially life-saving and life-altering service to assist in the care and management of stroke,” he said. “This is a step toward really maximizing what we can do with a unified way of diagnosing these strokes.”

If no episode of AFib has been recorded after six months and the patient has a structural defect, another treatment option may be considered.

PFO Closure: A Possible Solution

When a cryptogenic stroke occurs in a patient who also has a patent foramen ovale (PFO), it is possible the stroke was caused by a blood clot that passed through the PFO. Up to 25 percent of all adults have PFO, a hole in their heart that never closed after birth. A PFO is not a problem for most people, even though blood leaks from the right atrium to the left. Problems can occur when that blood contains a clot, which can travel out of the heart to the brain and cause a stroke.

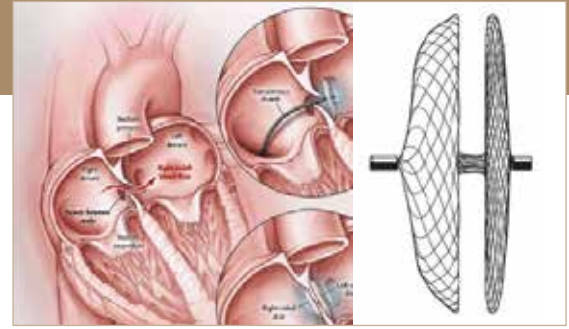


“Our Cryptogenic Stroke Clinic is specifically designed to follow a relatively rigorous process to tease out what the mechanism of a stroke might be,” said Cardiologist **James M. Fox, MD, FACC**.

Dr. Fox has been closing PFOs for select patients with cryptogenic stroke for about 15 years. “If we want to know if closing the PFO will reduce the risk of future stroke, we can put the patient through a 10-point Risk of Paradoxical Embolism (ROPE) scoring system that will tell us how likely it was their stroke was from their PFO.”

In October 2016, the US Food and Drug Administration (FDA) approved use of a PFO occluder in patients between 18 and 60 years old with a cryptogenic stroke. Medicare now reimburses for the procedure.

Prior to FDA approval, PFO closure for cryptogenic stroke was considered an experimental procedure. Final results of a decade-long clinical study are



expected to be published in an upcoming issue of the *New England Journal of Medicine*. Results of the RESPECT trial showed that the rate of a new stroke was 50 percent lower in patients treated with the device plus anticoagulants compared to blood-thinning medication alone.

“Being able to take somebody who is young and has had a stroke – just a terrible catastrophic event – to be able to say to them, ‘Look I can’t guarantee that your stroke risk is gone, but if I do this, it’s less and it’s more reliably controlled,’ it really gives them a big feeling of reassurance,” Dr. Fox said.

The catheter-based PFO procedure takes about 45 minutes and usually requires an overnight hospital stay. The procedure carries the risk of two complications: the potential for arrhythmias and the need for blood thinners, usually aspirin or a second anti-coagulant such as Plavix.

Follow-up imaging is critical to ensure the device is functioning properly, Dr. Fox said. “These people need to have routine imaging to make sure the device is positioned correctly and that it is gradually closing the hole over. Depending on the size of the hole, that can take anywhere up to a year so they need periodic images – usually echo studies.”



Primary Stroke Center

Munson Medical Center’s Stroke Program has been certified since 2012 by the Joint Commission as a Primary Stroke Center and meets all critical elements of performance to achieve long-term success in improving outcomes for stroke patients.

Gold Plus Achievement and Elite Honor Roll

Munson Medical Center’s Stroke Program is repeatedly recognized by the American Heart Association and American Stroke Association for high quality care.

In 2016, the hospital received both Gold Plus Achievement and Elite Honor Roll recognition in the national association’s “Get with the Guidelines®” quality improvement program. This recognition is based on achieving:

- Two or more consecutive years of 85 percent or higher adherence with all applicable quality measures, and 75 percent or higher adherence in five or more select quality measures for stroke.
- At least 75 percent or higher achievement of door-to-needle times in providing Alteplase (tPA) within 60 minutes for stroke patients. This medication helps prevent or limit lasting impairment following a stroke.

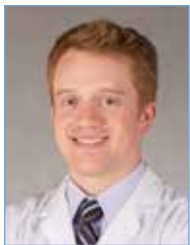
Sleep Apnea Significantly Increases Risk of Cardiovascular Disease



If you have a patient with resistant hypertension, atrial fibrillation, or other signs of heart disease, it's a good idea to ask them (or their spouse) how well they're sleeping.

Obstructive sleep apnea (OSA) afflicts nearly 30 million men and women in the U.S., and most remain untreated, according to the American Academy of Sleep Medicine. Sleep apnea puts an enormous strain on the heart by repeatedly causing hypoxemia (low concentration of oxygen in the blood), hypercapnia (too much carbon dioxide in the blood) and surging blood pressure.

It's now estimated that 26 percent of adults between the ages of 30 and 70 have sleep apnea. Untreated, severe sleep apnea more than doubles the risk of dying from heart disease.



"There is robust data supporting the link between sleep apnea and the development of arrhythmias, such as AFib, as well as other arrhythmias like ectopy, palpitations, or premature ventricular contractions," said Cardiologist **Robert Kennedy, MD, FACC**, who specializes in electrophysiology. "If you go to any of the cardiac electrophysiology meetings, there's always a big section on management of sleep apnea and its effect on arrhythmias."

Dr. Kennedy approaches arrhythmias by looking at all risk factors and underlying causes. "For the rare patient, just treating something like sleep apnea can put them below the threshold where the arrhythmia becomes a nonissue."

"I'm at the point where I almost consider AFib and sleep apnea as a sentinel event for the other one. If I have a patient with AFib, it triggers

me to ask them if they have sleep apnea – the correlation is so high. At the same time, if they have sleep apnea and they say, 'oh, I also have palpitations every once in a while,' it also makes me a little more aggressive about looking with the monitor and seeing if they have an arrhythmia because the consequences are pretty real. We talk about AFib with strokes. We talk about blood pressures that we're just not getting under control. Those are life and death type disease processes that can be modified very significantly just by treating the way people sleep."

New evidence continues to emerge about how sleep affects the body. "Twenty years ago sleep apnea wasn't something you trained aggressively in, but now it's really more of a routine thing – it's much more in the forefront of knowledge," Dr. Kennedy said. "It's now more in your top five things you ask people about."

Dr. Kennedy frequently refers patients from his clinic to sleep specialists. "We tend to work very closely together. I work on the arrhythmia issues with medications or ablations and they work on the sleep apnea. We reconvene a year later and the patient's doing much better and it's a contribution from both of those approaches."

He suggests that primary care physicians screen patients for sleep apnea, and if indicated, refer them for a sleep evaluation before making a referral to cardiology for arrhythmia. "It's always great if even before they get to me, a sleep evaluation is underway. If a sleep issue gets noticed earlier in the process and we work in parallel to manage it, patients get more timely care."

Consider these statistics:



Middle aged men with severe sleep apnea are **58 percent** more likely to develop heart failure.



Up to **85 percent** of people with treatment-resistant hypertension have sleep apnea. (ChronoPhysiology & Therapy 2011)



Between **30 - 40 percent** of people with high blood pressure have sleep apnea. (ChronoPhysiology & Therapy 2011)



People with severe, untreated sleep apnea are **twice** as likely to have a stroke. (International Journal of Cardiology 2013)



The risk for Afib is **two to four times** higher in people who have sleep apnea. (Journal of Atrial Fibrillation 2016)

Pediatric and Adult Congenital Clinics Held in Northern Michigan

In collaboration with Munson Healthcare, four pediatric cardiologists travel to northern Michigan to hold regular specialty clinics so children and adults with congenital heart disease in the region do not have to travel far for specialty care.

Adult Congenital Heart Program Clinic

University of Michigan Congenital Cardiology has held pediatric clinics in Traverse City since 1978. The Adult Congenital Heart Program formally joined this outreach in 2014. With advances in surgery and medicine more than 20 years ago, the number of adults living with a congenital heart condition now exceeds the number of children with such a condition.



U-M pediatric cardiologist **Mark D. Norris, MD, MS**, sees teen and adult patients four times a year at Munson Medical Center, including working with Munson sonographers who perform ultrasound echocardiograms for these individuals. He follows about 80 northern Michigan patients through the Traverse City clinic. Patients also are seen as needed in Ann Arbor, usually within two weeks.

“Any heart condition that was present in childhood, even if discovered as an adult, is appropriate for our clinic,” Dr. Norris said. “Individuals with congenital heart conditions, including those requiring heart surgery during childhood, should be seen at least intermittently by a congenital heart specialist, even if that person feels fine. Specific conditions include tetralogy of Fallot, coarctation of the aorta, and transposition of the great arteries. This is supported by the American Heart Association guidelines for Adult Congenital Heart Disease (ACHD). In addition to routine follow-up, pre-pregnancy counseling and cardiac care during pregnancy are included in this clinic.”

Dr. Norris is now ACHD board certified, a newly recognized certification by the American Board of Internal Medicine. He cross-trained in both pediatric and adult internal medicine, followed by congenital cardiology training.

“The ability of the medical team, including the congenital surgeons, to improve the outcomes and quality of life for individuals born with heart conditions has never been better and is continually improving,” he added. “I find great fulfillment in contributing to the continuum of care across the age spectrum.”

Pediatric Clinics

Catherine L. Webb, MD, a pediatric cardiologist from University of Michigan, holds monthly pediatric cardiology clinics at the Munson Specialty Clinics office in Traverse City, usually on the fourth Thursday of the month. Webb also collaborates in the care of adults with congenital heart disease. Webb completed her residency in pediatrics and her pediatric cardiology fellowship at the University of Michigan Health System.

MacDonald Dick, II, MD, a U-M pediatric cardiologist who started outreach pediatric cardiology clinics in Traverse City 37 years ago, continues to see patients at the Munson Specialty Clinic about three times a year.

Contact Information

- For U-M pediatric cardiology appointments at the Specialty Clinic in Traverse City, call **231-935-8125**.
- For UMHS emergency pediatric cardiology consultation at any time, call UMHS paging at **734-936-4000** and ask for the pediatric cardiology consult fellow on call.

Kim Lee, MD, FACC, a pediatric cardiologist from Helen DeVos Children’s Hospital in Grand Rapids with more than 24 years of experience, specializes in diagnosing and treating cardiovascular issues affecting children of all ages. He holds a monthly specialty clinic in the Cardiac Diagnostic Suite at Munson Medical Center, usually on the third Thursday of the month. For consultation or to make a referral, contact Helen DeVos Children’s Hospital at **616-267-9150**.

For more information, contact Dr. Norris at the Adult Congenital Heart Program at **877-720-3983**, or go to umcvc.org/medical-services/congenital-heart-disease.

For a UMHS emergency congenital cardiology consultation at any time, call UMHS paging at **734-936-4000** and ask for the pediatric cardiology consult fellow on call, who can connect with both pediatric and ACHD cardiologists.

Cardiac Rehab is ‘Physical Therapy on Steroids’

It reduces readmissions, mortality and risk of future cardiac events



*Cardiac rehab can be lifesaving for many people. It can help to prevent future heart problems, cardiac events and related deaths. According to studies, people who go to cardiac rehab have up to **30 percent** fewer fatal heart events, and are **25 percent** less likely to die compared to people getting standard therapy alone. They also can lower their chance of a second heart attack or heart surgery.*

Left: Cardiac Rehab at Munson Healthcare Paul Oliver Memorial Hospital in Frankfort, MI

Across the nation, only 10 to 30 percent of eligible heart patients participate in cardiac rehabilitation. It's a different story at Munson Medical Center, where 64 percent of patients discharged from the Webber Heart Center are enrolled in cardiac rehabilitation. Of those, 74 percent completed the program in 2016.



Anthony Ochoa, MD, FACC, Medical Director of Cardiac Rehabilitation at Munson Medical Center, attributes high enrollment and completion rates to a robust, multidisciplinary program that begins on day one of hospitalization with an automatic referral.

“We do the cardiac rehab consult on the day of admission instead of waiting until the day of discharge. Literally we try to do it as the heart cath is done,” he said. “It’s more than just rehab. It’s a cardiac specific form of physical therapy. I call it physical therapy on steroids.”

“We’re fortunate in northern Michigan to have excellent physician-supervised cardiac rehab programs here in town and also in our surrounding communities – in Grayling, Gaylord, Charlevoix, Cadillac, Manistee, Frankfort, and Kalkaska,” Dr. Ochoa said. “The people there are very knowledgeable, very energetic, and they’re good teachers in terms of telling patients what to look out for and how to change their lifestyle so they have less likelihood of returning to the hospital.”

“Patients can go to any of these rehab programs and do terrific,” Dr. Ochoa said. “We get a lot of feedback from our cardiac rehab specialists. If they see a problem, they call us – they let us know who’s doing well, who’s not doing so well and in what way they are struggling. It’s really eye opening to see how comprehensive a service they provide for these patients. It’s not just the physical rehab, but also a lot of behavioral modifications, dietary education, just a lot of education in heart conditions in general.”

Impact on Readmissions/Mortality

All 825 patients who completed the Cardiac Rehabilitation program at Munson Community Health Center between January 2012 and February 2017 have been entered into the American Association of Cardiovascular and Pulmonary Rehabilitation Outpatient Cardiac Rehabilitation Registry. Of those, only 5 percent were readmitted to the hospital for their heart condition. Patients in cardiac rehab tend to have fewer readmissions because they are observed by cardiac rehab specialists two to three times a week. If something abnormal is noted, physicians are alerted before a serious problem develops. Patients in the registry who completed the recommended 36 visits of cardiac rehabilitation had a 47 percent risk reduction for mortality and were 31 percent less likely to have a heart attack.

“Cardiac rehab is optional, but we strongly recommend it.” Dr. Ochoa said. “We refer the patients we know will qualify for the service because of their heart conditions.”

Barriers to Cardiac Rehab



Physicians play a key role in whether a patient participates in cardiac rehab, said **Jodi Radtke, BSN, RN-C**, coordinator of Cardiac Rehab at Munson Community Health Center. “If a physician says, ‘you don’t need to do this,’ they won’t enroll for sure. If the physician discusses it, supports it, and writes a referral, they are much more likely to come.”

In Michigan, only physicians can make a referral to cardiac rehab – mid-levels cannot refer.

Other barriers to enrollment include driving distance to the nearest cardiac rehab program and high co-payments. Medicare and private insurers cover the 36-week Phase II Cardiac Rehabilitation Program, but some people have co-pays they find prohibitive. “Even if they come only one day a week, it’s better than nothing,” Radtke said.

Robotic Mitral Valve Repair Offered at Munson Medical Center

Heart Attack Patients Least Likely to Finish Rehab

Patients who have had heart attacks are the least likely to finish cardiac rehabilitation. "They have that brush with mortality, but it really doesn't impair their function," Dr. Ochoa said. "So you get a letter from rehab a few weeks later that says 'so and so decided to stop doing rehab,' which means they may have decided to stop taking their medication and taking care of themselves. If they go back to their old lifestyle, we're going to see them again in another year or two."

Beyond Phase II

"By in large, patients love going to rehab," Dr. Ochoa said. "A lot of patients stick with it after they've completed the program and continue with Phase III. There's a camaraderie – they like to see each other. They've got their own moral support group. It's a fantastic set up." About 200 people are enrolled in Cardiac Rehab through Munson Medical Center at any one time; about half are participating in the post-hospitalization Phase II, and half in Phase III.

Cardiac Rehab for CHF

"Our comprehensive Congestive Heart Failure Clinic team is really working to keep a lot of people out of the hospital by minimizing readmission rates during the first 30 days, but also the first year," Dr. Ochoa said. "If you can keep somebody out of the hospital for six months, you're more likely going to be able to keep them out for a year. It's the patients that we see every month or every other month that are utilizing a lot of resources."

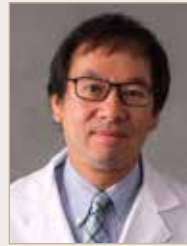
Congestive heart failure is the most common reason for hospital admissions and readmissions among Medicare patients, and it is among the most costly diseases to treat. In February 2014, CMS issued a formal decision to begin covering 36 visits of cardiac rehabilitation for eligible CHF patients whose disease cannot adequately be controlled with medication alone.

Cardiac Rehab Phase II is now covered by Medicare for CHF patients if the following criteria are met:

EF < 35 percent

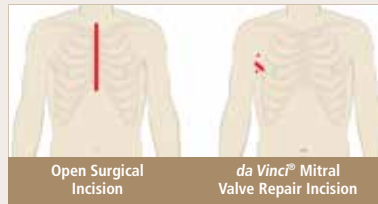
NYHA class II-IV symptoms, despite being on optimal heart failure therapy for at least six weeks

Stable = has not had a recent (< 6 weeks) or planned (< 6 months) major cardiovascular hospitalization or procedure



When Cardiovascular Surgeon **Bobby Kong, MD**, joined Munson Medical Center last year, he brought a lifetime of experience with him, including the skills to perform mitral valve surgery using the da Vinci surgical system.

Robotic mitral valve repair will become an option for patients at Munson Medical Center in the near future, following extensive training of the surgical team that assists Dr. Kong. The team traveled to Ann Arbor twice to view two robotic cases, went to the University of Chicago to learn "tricks of the trade" and new techniques very different from conventional heart surgery and also are training locally to become proficient.



"There is not less risk to the patient with this technique," Dr. Kong said. "You still have to stop the heart and open the heart chamber. But the approach is easier on the body because

the incision is on the side between the ribs. For the right patient, the robot is less invasive."

Certain kinds of mitral valve pathology are not suitable for robotic surgery. Patients with significant arterial sclerosis disease or other critical cardiovascular disease, as well as elderly patients with frail blood vessels and very obese patients are not good candidates for robotic surgery. The potential benefits of robotic mitral valve repair for patients who do qualify include:

- Typically less pain
- Eliminates risk of deep sternal wound infection
- Quicker recovery and return to work
- Smaller incisions and superior cosmetic effects

Robotic surgery is still evolving, Dr. Kong said. He expects the technology to improve over time. One current disadvantage for the surgeon is the robot does not provide tactile feedback. "With my hand, I know how much force I'm using. My hand is better than the robot, but the robot's hand is much smaller."



Patients with mitral valve regurgitation should be evaluated by a cardiovascular surgeon who can fully explain the pros and cons of the robotic and traditional repair options.

To refer a patient or learn more, call Cardiothoracic Surgeons of Grand Traverse at **231-935-5730**.

Cardiologist Profile: Michael J. Howe, MD, FACC

Interventional Cardiologist Michael Howe, MD, FACC, and Allergist Laura Nichols Howe, MD, met during their very first week of medical school at Michigan State University. Their paths converged and they completed their residencies and fellowships together. When it came time to begin their careers, they found everything they wanted in Laura's hometown of Traverse City.

"I honestly can't imagine a better situation for us personally and professionally," Dr. Howe said.

The Howes are raising their children, Jackson, 4, and Kate, 2, in the same town with Laura's parents, grandparents, and her sister, who also works at Munson Medical Center. The younger Howes have reconnected with many of Laura's high school friends who also returned to the community after college and graduate school.

"We feel really fortunate – our kids get the opportunity to be outside constantly, in the water throughout the summer, and my 4-year-old has been skiing every weekend this winter at Hickory Hills about a mile from our house, so it's really great for us personally."

"Munson Medical Center is better than anything I could have hoped for in terms of quality of physicians and nurses and facilities – it's really the whole package," Dr. Howe said.

Heart Clinics in Manistee and Gaylord

An unexpected bonus of working at Munson Medical Center is the opportunity to do cardiac outreach clinics in Manistee and Gaylord. "It's become a highlight of my practice," he said. "It's been a great way for me to get to know the primary care physicians in the community, and get to know patients in the communities where they live. We can provide the vast majority of their care in their community. Through our electronic medical record systems, we can have the case reviewed by other physicians in Traverse City without bringing the patient here."

Understanding How Things Work

Dr. Howe grew up in Kalamazoo, where his dad worked for The Upjohn Company. As an undergrad in biology, he volunteered for a cardiac cath lab in Kalamazoo. "I just became fascinated by it. The thought of people coming in sick and doctors being able to do things to rapidly help them become dramatically better – that's really what hooked me on medicine. Watching the doctors I worked with know the patient by name, know their family members, and become almost a part of their family life really hit me on a lot of levels – on an intellectual level and an emotional level."



Dr. Howe plays ice hockey on Sunday nights with a team sponsored by Shine. "About half of our team is affiliated with Munson – a couple of doctors, a couple of nurses, a couple of ultrasound techs. It's a great way to get outside of the practice of medicine."

Dr. Howe initially trained in internal medicine because he wanted to think about the whole person.

Cardiology became a natural choice after he realized he was drawn to doing procedures, satisfying his innate desire to understand how things work and fix them.

Dr. Howe specializes in cardiology and interventional cardiology, including the treatment of congenital heart defects, coronary artery disease, heart rhythm disorders and heart failure. He is board certified in internal medicine and cardiology.



Dr. Howe completed a three-year residency in Internal Medicine at the University of Michigan, followed by a three-year fellowship in cardiovascular medicine and a one-year fellowship in interventional cardiology, all in Ann Arbor.

Despite the fact that he and Laura are alums of both Michigan State and University of Michigan – they lean green. "We do support the Wolverines on every weekend except for one."

Best Part of the Job

"We see people come in who are having the worst day of their life, and within 30 or 40 minutes we can get them through a procedure and resting comfortably. To see someone who is so scared and to be able to help them, and then reassure them that their issue is fixed and there's

Cardiothoracic Surgeon Profile: Bobby K. Kong, MD

Growing up in cosmopolitan Hong Kong, young Bobby Kong wanted to see the world. His first foray took him to a place that was polar opposite to the densely populated home he left in Southeast Asia. At age 17, he immigrated to Alberta, Canada, to the remote community of Bonneville on the 53rd parallel north. He lived with his aunt and her husband, both primary care physicians serving the small town of about 2,000 people.

Watching them work was his first introduction into the medical field. "They lived in one half of the house and the other half was their office," Dr. Kong said. "They were two of the four doctors in town. They made house calls, did deliveries, and simple surgeries such as appendectomy. It was eye opening for me."

While a freshman at the University of British Columbia in Vancouver, his entire family immigrated to the United States and settled in St. Louis, Mo. He transferred to Washington University in St. Louis, where he earned a bachelor's degree in mechanical engineering. Dr. Kong was deciding between graduate school and medical school when he was accepted into St. Louis University School of Medicine. He decided to pursue medicine, and thought he would go into medical research.

Dr. Kong was first exposed to cardiothoracic surgery at St. Louis University, where the very first open heart surgery in the Midwest was performed in 1956. It also was the site of the first successful heart transplant in the Midwest in 1972 by Vallee Willman, MD, who eventually became one of Dr. Kong's instructors and mentors.

After completing an internship in internal medicine at St. Louis University, he moved to Philadelphia, Penns., for an internship and residency in general surgery at Penn Presbyterian Medical Center. While there, he was once again exposed to a strong heart surgery program, working with renowned heart surgeon W. Clark Hargrove, III, MD, who encouraged him to pursue cardiac surgery.

After residency, he returned to St. Louis University to complete a fellowship in cardiothoracic surgery, working with Dr. Willman. In 1991 he joined a cardiothoracic practice in Ann Arbor, Mich., and continued to work in Ann Arbor for 25 years and had the opportunity to work with thoracic and cardiac surgeon Otto Gago, MD, until he was recruited to Traverse City.



"After I looked into Traverse City and this opportunity, I decided to make the change. It was the right decision because I saw the dedication of the surgeons and staff here to deliver quality surgical care to northern Michigan – and the beauty of the area."

Dr. Kong joined Cardiothoracic Surgeons of Grand Traverse in 2016. "Traverse City is a wonderful place. I'm an outdoor person so I really enjoy it. Since I came here, I also found out the people in Traverse City are very nice, polite, gentle people. It's the same with the people in the hospital. The nurses are very devoted, same as the doctors I work with in different specialties, so I'm very happy here."

"I really like the technical aspects of surgery," he added. "The fact that I can help patients feel better and live longer is such a privilege. It's a real privilege to be able to do what I do."

When he isn't working, Dr. Kong enjoys the outdoor activities that are such a big part of life in northern Michigan including tennis, biking, swimming, snow shoeing, cross-country skiing and photography.

He also is very proud of his three wonderful adult children: his son, a computer technician in Ann Arbor, and two daughters – one in her first year of medical school at Michigan State University, and one who works for IBM in San Francisco after graduating from his alma mater, Washington University.

Meet the Webber Heart Center Team

The Webber Heart Center team provides preventive, interventional, and ongoing comprehensive care for patients with cardiac conditions.

Cardiothoracic Surgeons of Grand Traverse 231-935-5730

Daniel H. Drake, MD
Bobby K. Kong, MD
Shelly C. Lall, MD
R. Glade Smith, MD
Mack C. Stirling, MD

Traverse Heart & Vascular 800-637-4033

Todd R. Adams, DO, FACC	Michael J. Howe, MD, FACC
Thomas C. Andrews, MD, FACC	Brian D. Jaffe, MD, FACC
John N. Beattie, MD, FACC	Robert Kennedy, MD, FACC
Daniel L. Bonifacio, DO, FACC	Steven T. Mast, MD, FACC
Anna M. Booher, MD, FACC	M.R.S. Nair, MD, FACC
Kevin J. Clayton, DO, FACC	Anthony B. Ochoa, MD, FACC
Roberto A. Corpus, MD, FACC, FSCAI	Dino Recchia, MD, FACC
Mark A. Elliott, MD, FACC	Michael E. Schulte, MD, FACC
James Martin Fox, MD, FACC	Nicklaus K. Slocum, MD, FACC, FSCAI
Anne M. Hepner, MD, FACC	

How to Refer Patients

To refer patients for consultation, specialized care, or for a physician consult, please contact a physician at the numbers noted here. For 24/7 hospital transfers, please call **800-468-6766**.

Traverse Heart & Vascular clinic locations:

Cadillac, Charlevoix, Frankfort, Gaylord, Grayling, Indian River, Kalkaska, Manistee, Prudenville, and Traverse City