

## Avoiding Readmission with a CHAT

Mary Gregg, M.D., MHA

Director of Quality and Patient Safety, Swedish Medical Center

Hospitals across the country are looking for every opportunity to reduce 30-day preventable readmissions. A common approach is to fine tune the discharge process to ensure all patients are clinically ready for discharge and have the knowledge and training to continue their recovery outside a hospital setting.

At Swedish, the Collaborative Health Action Team (CHAT) is taking this effort one step further to address after-discharge challenges. In July 2011, CHAT launched a 30-day-readmission pilot for congestive heart failure (CHF) patients. According to the Centers for Medicare and Medicaid, these patients, along with heart attack and pneumonia patients, are most likely to be readmitted within 30 days of discharge.

### Designing a solution

The multidisciplinary CHF steering committee first identified three key factors that contribute to readmission:

- Patient failure to schedule an early follow-up appointment
- Missing or marginal communication among multiple providers
- Patient noncompliance with self-care

To address these factors, the committee established a new process for inpatient nurses to schedule early follow-up appointments before patients leave the hospital, and to provide self-care calendars to their patients prior to discharge. The committee also addresses real and potential provider-to-provider communication issues and other barriers to care on a regular basis.



### When is a CHAT more than a reminder call?

The CHAT phone call is a key component of the new program. CHAT nurses call patients within 24 to 48 hours of discharge and once a week for 30 days. The nurse uses the phone call to reinforce the CHF self-care education the patient received at discharge, to assess the patient's medication compliance

*(continued on A6)*

## IN THIS ISSUE

- A1** Avoiding Readmission
- A2** MIS Pectus Excavatum Repair
- A3** Walla Walla Hospital Joins TeleStroke Network
- A4** Hip and Knee Robotic Surgery  
Case Study: Total Hip Replacement
- A5** Case Study: Knee Resurfacing
- A6** Swedish Stroke Care Designation
- A7** New Olympic Peninsula Affiliations  
Continuing Medical Education



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# Minimally Invasive Surgery to Repair Pectus Excavatum

## Correcting the physical defect and reducing social isolation

Alexander Farivar, M.D.  
Thoracic Surgery, Swedish Medical Center

Pectus excavatum, often referred to in lay terminology as “sunken or funnel chest,” is the most common chest-wall abnormality, with an incidence of one in every 300-400 births. In pectus excavatum, an abnormal growth of the cartilage between the ribs and sternum causes the sternal bone to pull inward, resulting in the chest’s concave appearance. As the child develops, pectus excavatum can contribute to chest discomfort, loss of endurance, and social embarrassment and isolation. If left untreated, the pressure the sternum places on the heart and lungs eventually can result in cardiac dysfunction and restrictive lung function.

Swedish Thoracic Surgery now offers a minimally invasive, video-assisted procedure to correct this sternal defect in children ages nine and older, as well as adults. Swedish is the only facility in Washington that makes this procedure available to both children and adults of all ages. The surgeon will order a chest CT scan to calculate a Haller Index, an echocardiogram and pulmonary function studies to determine if an individual is a candidate for surgery.

### The VATS Nuss procedure

With the patient under general anesthesia, the surgeon makes a small incision in the right chest wall and inserts a thoracoscope, allowing direct visualization. Through a second incision, the surgeon inserts a curved Nuss bar introducer under the sternum and exiting the left chest. The introducer facilitates the eventual passage of a curved Nuss bar. Adults may have two bars placed to help mold the less malleable sternum seen in the adult population.

Patients experience an immediate cosmetic improvement at the conclusion of the operation.

The bar lifts and reforms the sternum, gradually molding it into a more normal, flatter contour. It remains in place for three years in order to reduce the chance of recurrence. After three years, the bar is removed during an outpatient surgical procedure.

The VATS Nuss procedure, named after Dr. Donald Nuss who pioneered the procedure, is far less invasive than the open-chest repair that was previously championed as the primary treatment. The open procedure requires cutting the sternum and ribs, and removing a portion of the chest wall.

Patients who have the VATS Nuss procedure can spend up to five days in the hospital in order to receive catheter-based pain management and teaching about appropriate activities that will help prevent bar migration during the early postoperative period.



Figure 1: In the OR before Nuss procedure



Figure 2: After Nuss procedure, while still in the OR

Presented here are pre- and post-operative photos of a 23-year-old patient who suffered from a severe pectus deformity (Figure 1), with decreased exercise tolerance, chest discomfort and persistent tachycardia. He had a successful and uneventful operation in which a Nuss bar was inserted by VATS and the sternum remolded. An improvement in appearance and reduction in tachycardia was noted at the conclusion of the operation (Figure 2). 

*These photographs are presented for educational purposes.*

### When to Refer to Swedish

Swedish thoracic surgeons are available to evaluate children (age nine or older) and adults with pectus excavatum. Symptoms may include:

- Tachycardia
- Chest pain
- Shortness of breath upon exertion
- Loss of endurance
- Social embarrassment and isolation

### Thoracic Surgery

1101 Madison Street, Suite 850  
Seattle, WA 98104  
Telephone: 206-215-6800  
Fax: 206-215-6801

To consult on or refer a patient,  
please call 206-215-6800.

Go to [www.swedish.org/thoracicsurgery](http://www.swedish.org/thoracicsurgery)  
for more information about Swedish Thoracic  
Surgery and pectus excavatum repair.

## Walla Walla General Hospital Joins Swedish TeleStroke Network

Walla Walla area residents facing a potential or actual acute stroke are already benefiting from a recently formed partnership between the Swedish Neuroscience Institute (SNI) Acute TeleStroke Program and Walla Walla General Hospital (WWGH). As a member of the Swedish Acute

a Swedish Stroke Team neurologist was called on to evaluate a WWGH patient using the new telemedicine connection and, in collaboration with the ED team at WWGH, was able to treat the patient with the clot-buster drug, rtPA.

“She went from a level of disability due to the stroke that would have left

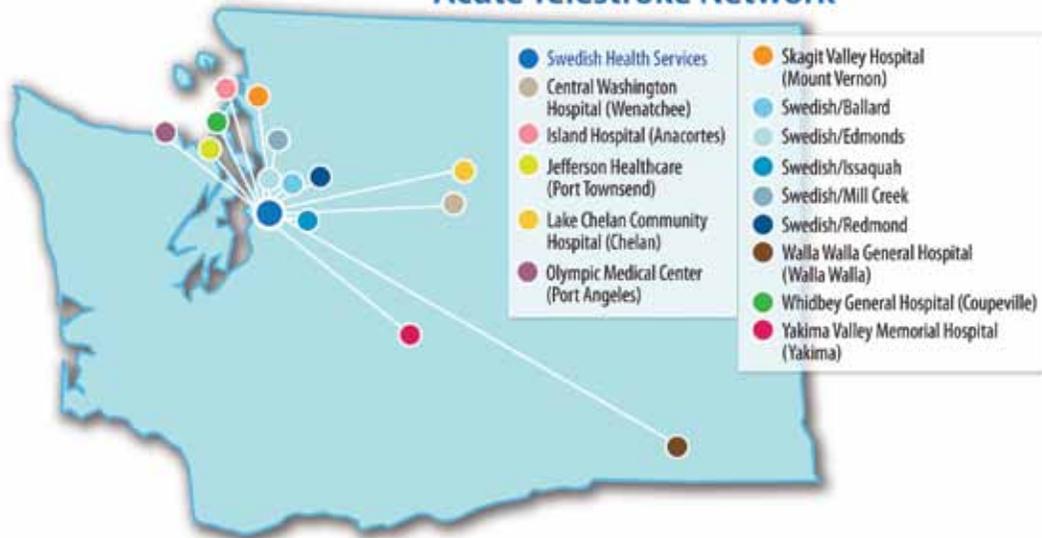
this can make for our patients and their families is huge.”

Although this partnership between WWGH and SNI’s TeleStroke Program is a recent development, the concept of a certified and comprehensive stroke center providing extra support to partner EDs is not new.

“We are really excited about the opportunity to begin helping WWGH’s ED team provide an enhanced level of stroke care services, as we are doing at 15 locations throughout Washington,” said SNI Stroke Program Medical Director **William Likosky, M.D.** “The innovative component of this program is to bring experienced vascular consultants to a patient’s bedside via secure video conferencing. The consulting physician is then able to examine the patient and

discuss with the patient, family and ED physician emergent treatment options, which may break down blood clots and reverse stroke symptoms.”

### The Swedish Neuroscience Institute Acute Telestroke Network



TeleStroke Network, WWGH’s emergency department (ED) now has a 24/7 link with the comprehensive team of stroke specialists based at the Swedish/Cherry Hill campus in Seattle. Using real-time, telemedicine-based technology, members of SNI’s Stroke Program are able to quickly perform ‘virtual’ bedside neurological evaluations that allow them to examine patients, review brain images and collaborate with WWGH ED physicians to quickly select the best acute stroke treatments.

The impact was almost immediate. In the first week the program went live,

her needing full-time care, to walking out of the hospital with little to no disability after the quick evaluation and appropriate treatment,” said Linda Givens, director of the Emergency Department at WWGH.

WWGH sees more than 125 patients a year who are experiencing signs and symptoms of TIA or stroke.

“We have the equipment and team, now we have the expertise of the physicians and staff at Swedish to help better serve our patients,” said Jackie Fullerton, vice president for patient-care services at WWGH. “The difference

### For More Information

To learn more about Swedish TeleHealth and the SNI Acute TeleStroke Program, go to [www.swedish.org/telehealth](http://www.swedish.org/telehealth).

To learn more about becoming part of the Swedish TeleHealth Network, email [telehealth@swedish.org](mailto:telehealth@swedish.org).

# Hips and Knees Get Extra Robotic Attention in Seattle and Issaquah

The Swedish Orthopedic Institute (SOI) has the most active traditional and minimally invasive joint replacement/resurfacing program in Washington. Through its programs at its First Hill, Ballard and Issaquah locations, the SOI performs more than 2,700 joint replacement and resurfacing procedures annually – more than any hospital in Washington. With dedicated teams of world-class experts, the most sophisticated orthopedic operating suites and a specially designed care plan called the Joint Journey, the SOI is able to offer comprehensive, personalized care from diagnosis through recovery.

## MAKOplasty® now available in Issaquah

The SOI at Swedish/First Hill was the first hospital in the Puget Sound area to offer MAKOplasty – a minimally invasive, robotic joint replacement procedure. The SOI recently expanded access to MAKOplasty by making it available at the new hospital at Swedish/Issaquah. Expanding access means this procedure is now offered closer to home for residents of communities located east of Seattle.

### Swedish Orthopedic Institute (Swedish/First Hill)

601 Broadway  
Seattle, WA 98122  
Phone: 206-215-9145

### Swedish Orthopedic Institute at Issaquah

751 N.E. Blakely Dr.  
Issaquah, WA 98029  
Phone: 425-313-7000

Initial consultations and second opinions about minimally invasive, robotic hip or knee replacement/resurfacing are available at Swedish/First Hill and Swedish/Issaquah for patients with:

- Osteoarthritis
- Rheumatoid arthritis
- Metabolic bone conditions
- Fractures or severe injuries

[www.swedish.org/orthopedics](http://www.swedish.org/orthopedics)

## Robotic hip replacement at Swedish/First Hill

Another addition to the already comprehensive joint replacement/resurfacing program is robotic, minimally invasive hip replacement.

This relatively new procedure using the MAKOplasty technology reduces both the length of time the patient is hospitalized and overall recovery time when compared to traditional hip replacement surgery. 



Photos courtesy of MAKO Surgical Corporation



## Case Study: Robotically Assisted Total Hip Replacement

James W. Pritchett, M.D., Chief of Orthopedic Surgery, Swedish Orthopedic Institute

Betty is a healthy 70-year-old female with an active family. During her initial visit she reported that she had suffered from pain and limited flexibility in both hips for several years, and has tried medication and physical therapy without improvement. She said she had to give up skiing, horseback and motorcycle riding, and snowboarding, and now was having difficulty getting on her bicycle. She also indicated she could no

longer do things with family.

On physical examination, Betty was unable to stand up straight due to 30-degree flexion contractures of her hips. She had no rotational movements or abduction in either hip. She was able to flex her hips to 90 degrees. She walked with a limp and used a cane.

X-rays of her hips showed severe bilateral osteoarthritis (see figure 1 on page A6). Because of

the flexion contractures, it was not possible to accurately determine limb-length symmetry or the orientation of her hips.

Betty asked about hip replacement surgery. She was concerned about hip stability, symmetry and range of motion. Previously she had seen two orthopedic surgeons who told her she would not be able to return to an unrestricted lifestyle because of her severe contractures.

(continued on A6)

## Case Study: Minimally Invasive Robotic Knee Resurfacing

Gregory Komenda, M.D., Orthopedic Surgery, Swedish Orthopedic Institute at Issaquah

Jeff is a very active 68-year-old male whose days have always been filled with a variety of physical activities. Since his 30s he has suffered with chronic left knee pain that developed as a result of a college football injury.

In early 2008 Jeff presented with medial left knee pain with intermittent swelling. He said the pain was aggravated by walking, being on his feet and using stairs. Radiographs demonstrated advanced medial compartment osteoarthritis.

Initially Jeff was treated with nonsteroidal anti-inflammatory drugs (NSAIDs) and activity modification. After six months of persistent discomfort, a course of viscosupplementation with Synvisc® was performed. Synvisc is an injectable hyaluronic acid, a naturally occurring lubricant and cushioning agent found in joints.

Although Jeff experienced a moderate benefit from viscosupplementation, which was repeated in 2009 and 2010, the pain persisted. In 2010 Jeff was prescribed a knee unloader brace, which also provided moderate benefit.

By 2011 the daily knee pain and swelling had begun to affect his active lifestyle. New radiographs demonstrated grade IV osteoarthritis of the medial compartment of the knee. He had no instability of his knee and no significant pain laterally or in the patellofemoral joint. Jeff elected to proceed with a medial compartment arthroplasty using the



Figure 1. Pre-operative anterior posterior image.



Figure 2. Pre-operative lateral image.



Figure 3. Post-operative anterior posterior image.



Figure 4. Post-operative lateral image.

MAKOplasty® system at Swedish/Issaquah.

Using anatomical data obtained from a CT scan and the MAKO software, preoperative planning to determine the precise placement of the knee components was completed. During a minimally invasive, robotic surgical procedure

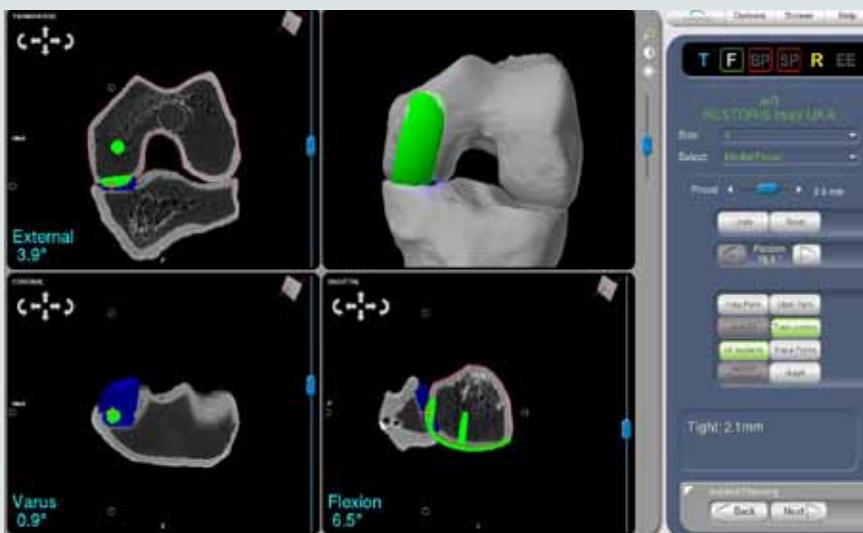
in January 2012, the medial compartment of Jeff's knee was resurfaced.

Jeff was discharged the next morning after beginning physical therapy. He was immediately able to ambulate with full weight bearing on his knee. Within four weeks he started riding his bicycle and in five weeks was cleared to play tennis. At his five-week post-operative exam, his knee range of motion was 0-130 degrees. He had minimal swelling and soreness in his knee, and he reported the preoperative medial compartment pain was now absent. ∞

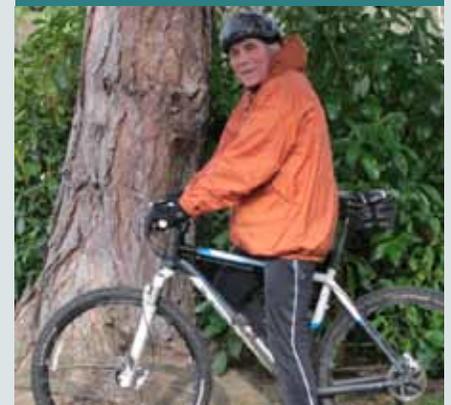
*This case study is presented for educational purposes with the patient's permission.*

### From the patient's perspective

*"The pain from my old football injury was beginning to have an impact on my quality of life that just wasn't acceptable. The folks at Issaquah were heroic – not only Dr. Komenda, but also the staff who made sure I had the operation despite the snowstorm, and the physical therapist who has helped me get back to the things I love doing. I can hike full stride, play tennis and go bicycling. I've even been snowshoeing." – Jeff Pochop*



The MAKO software uses images obtained from a CT scan to plan precise implant placement.



*Jeff was back on his bicycle four weeks after his surgery.*

## Avoiding Readmission

*(continued from A1)*

and to answer questions. The nurse also may remind the patient of a follow-up appointment and/or facilitate making an appointment if one hasn't been scheduled. Patients have said the calls are helpful, without being judgmental.

"I was surprised when the CHAT nurse called," said Fredric Kogin, a Hoquiam resident and cardiac patient of **Jeffrey Westcott, M.D.**, of the Swedish Heart & Vascular Institute. "It's so damn refreshing – and truly comforting – to know that someone cares enough to call and see how I'm doing. It's not your 'take-two-aspirin-and-call-me-in-the-morning' medicine anymore."

The process is designed to work for patients discharged home from a hospital or a skilled nursing facility.

The nurses are trained to gather information through simple conversa-

tion. As Kogin suggests, the nurse was evaluating his condition even though it never felt like it. It was particularly reassuring for him to know there was someone he could call if he had a question – someone who cares as much as his cardiologist.

"What impressed me the most about Fred's response to this new program is that he is one of my more stubborn patients and resistant to change," said Dr. Westcott. "The fact that he volunteered to me during a follow-up visit that he really enjoyed talking to the CHAT nurse was a real eye opener for me. If this program works for Fred, it will work for most patients."

### Outcomes prove the point

Before launching the pilot program, the team established a 30-day-readmission-rate baseline for CHF

patients. Using data collected from the 12 months immediately prior to launch, the baseline was 23 percent. In the two quarters after launching the program (July through December 2011), the rate dropped to an average of 12.2 percent.

These outcomes suggest that a similar approach could help reduce 30-day readmissions for other patients, such as those with acute myocardial infarction (AMI), pneumonia, COPD, stroke, CABG and lower extremity diagnoses. [↻](#)

### For More Information

Contact **Kerry Parsinen, R.N., BSN**, at 206-215-2428, for more information about the CHAT program at Swedish.

## Total Hip Replacement

*(continued from A4)*

Betty opted for robotically assisted total hip replacement. We felt that using the robot would give us the greatest confidence in the symmetry and accurate placement of her prostheses.

On the first day following her right hip replacement and the same day as her left hip replacement, Betty was walking without weight bearing restrictions. She has recovered full range of motion in both hips and has no pain.

She is able to ride her bicycle and horse, and has no restrictions. Her X-rays show symmetry of her leg lengths and ideal placement of her hip prostheses (*see figure 2*). [↻](#)



Figure 1. Pre-operative



Figure 2. Post-operative

*This case study is presented for educational purposes. The patient's name has been changed to protect her privacy.*

## Swedish Forges New Relationships to Benefit Olympic Peninsula Patients

Swedish has announced new affiliations with three hospitals on the Olympic Peninsula, including Olympic Medical Center in Port Angeles, Jefferson Healthcare in Port Townsend and Forks Community Hospital, which serves patients in the peninsula's west end. Because these hospitals are members of the newly created Swedish Health Network, the communities that depend on them for their health care will see improved access to the tertiary and quaternary services commonly available only at centralized referral centers, such as Swedish, and to secondary services that may be under represented locally.

Swedish is working with these hospitals to develop service-line

strategies and standard treatment and transfer protocols. Additionally, affiliation will allow these hospitals to take advantage of group-buying services and CME offerings, and to tap into Swedish experience with quality and safety best practices and quality-improvement activities. Implementation of Epic, an electronic medical record that will facilitate clinical communication, is being provided as part of a separate agreement.

Most importantly, the affiliations will help preserve access to health care for families living on the Olympic Peninsula, and will help protect and better utilize existing health-care resources, which is vital to the future of health care in Washington. 

## CME Course Listing

### May – September 2012

Physicians from across the region and around the world come to Swedish Medical Center's Continuing Medical Education (CME) courses to learn about new research and innovative treatment techniques.

For times and locations, go to [www.swedish.org/cme](http://www.swedish.org/cme) or call 206-386-2755.

**Annual Oncology Symposium: Cancer and Obesity**  
Friday, May 4

**Sixth Annual Cerebrovascular Symposium: Practical Aspects of Stroke and Cerebrovascular Care**  
Thursday-Friday, May 17-18

**Let's Talk about Sex**  
Friday, May 18

**Acute Care Neurology and Neurosurgery: From the ER to the OR to the NCCU**  
Friday, June 1

**Emil Jobb Gastroenterology Symposium: Updates in the Diagnosis and Treatment of Gastroenterological Diseases**  
Friday, June 8

**Spine Management for the Primary-Care Physician: Back to the Future**  
Friday, June 15

**Liver Transplantation from A-Z**  
Friday, June 29

**Third Annual Highlights in CV Therapies: A Contemporary Course for Cardiac & Vascular Specialists**  
Friday, July 13

**Physician Well-Being**  
Friday, Sept. 7

**Second Annual Update in Neurology**  
Thursday-Friday, Sept. 13-14

**Pacific Northwest Urology Robotics Symposium**  
Thursday-Friday, Sept. 14-15

**16th Annual Pain Management Symposium**  
Friday, Sept. 28

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206-782-2700

**Cherry Hill**  
500 17th Ave.  
Seattle, WA 98122-5711  
206-320-2000

**Edmonds**  
21601 76th Ave. W.  
Edmonds, WA 98026  
425-640-4000

**First Hill**  
747 Broadway  
Seattle, WA 98122-4307  
206-386-6000

**Issaquah**  
751 N.E. Blakely Dr.  
Issaquah, WA 98029  
425-313-4000

**Lakeside**  
6506 226th Pl. S.E.  
Issaquah, WA 98027  
425-427-8450

**Mill Creek**  
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425-357-3900

**Redmond**  
18100 N.E. Union Hill Road  
Redmond, WA 98052  
425-498-2200

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Seattle, WA 98101-1169  
206-320-2700

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Swedish Medical Group  
206-320-5925 (office)  
[aaron.bryant@swedish.org](mailto:aaron.bryant@swedish.org)

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