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The OR of the Future at Rochester General Hospital

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Safe, Smart & Secure
The OR of the Future at Rochester General Hospital
Despite incredible advances in medical and surgical technology, design of the operating room itself has remained virtually unchanged for the past 60 years. With a $1 million NYS grant, RGH has transformed OR #16 - one of the busiest on campus- into a state-of-the-art operating room integrating the latest technologies available - elevating the elements of safety for the patient and provider and creating a model of OR design for the future.

11 10 Years of Robotic Surgery: Q&A with Dr. John Valvo
Ten years ago, the RGHS installed their first surgical robot. What began as the pursuit of offering the latest and most advanced surgical options to patients has positioned RGHS as a leader in Robotics nationally. Now with 7,000 surgical cases under the their belt, RGHS Chief of Robotic Surgery, Dr. John Valvo shares his insight into the success of the program and thoughts on the future of this surgical specialty.

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New Study Shows Male Hormones Play an Important Role; May Enhance IVF Therapy

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Welcome to Volume 2 - 2014 of *Western New York Physician* where you will find informative stories and articles about and for physicians in western NY.

Amid the myriad changes to the healthcare system, one theme is constant — Safety. Keeping patients and providers safe is the theme of our cover story this issue. With a $1 million dollar grant from New York State, RGH has transformed OR #16 with the highest level of technology into the safest operating environment. Not only does this redesign improve the safety for patients and healthcare workers, it sets the highest standard for OR design moving forward and outward into rural health care markets.

I have been pleased to hear from many readers wishing to contribute articles to future issues. Your shared expertise is a valuable way to communicate with your medical colleagues. If you would like to be a part of an upcoming story or wish to submit an article, please email or call me to discuss timing and submission criteria. In the meantime, please enjoy the numerous other articles within the issue.

As always, we thank each of our supporting advertisers -- your continued partnership ensures that all physicians in the region benefit from this collaborative sharing of information and provides the WNYP editorial staff with a deep pool of expert resources for future interviews and articles.

In good health –

Andrea Sperry
Female Fertility
What’s Testosterone Got To Do With It?
New Study Shows Male Hormones Play an Important Role; May Enhance IVF Therapy

Several fertility clinics across the country are beginning to administer testosterone, either through a patch or a gel on the skin, to increase the number of eggs produced by certain women undergoing in vitro fertilization (IVF). Women are also purchasing the over-the-counter supplement DHEA, which is converted by the body into testosterone, to boost their chances of pregnancy with IVF.

A few clinical trials support the use of testosterone given through the skin, while others have shown no benefit of DHEA – also used in attempts to slow aging and enhance muscle mass – in increasing pregnancy and birth rates in women who don’t respond well to IVF therapy. Lacking a large and convincing body of data on the topic, the jury is still out as to whether male hormones such as testosterone improve female fertility.

A new study suggests that male hormones, also called androgens, help drive the development of follicles – structures that contain and ultimately release an egg that can be fertilized by a man’s sperm. Published in the Proceedings of the National Academy of Sciences, the research also details how male hormones boost the production of follicles in mice. Authors believe the study provides potential biological targets to enhance fertility in women with diminished ovarian reserve, who produce few or no follicles in response to IVF drugs designed to boost follicle development.

“There is a raging debate in the reproductive endocrinology field about what male hormones are doing in female fertility,” said Stephen R. Hammes, MD, PhD, senior study author and professor of Endocrinology at the University of Rochester School of Medicine and Dentistry. “Our study doesn’t solve the controversy, but, along with some earlier seminal studies from other groups, it does tell us that we can’t dismiss male hormones. They might actually be doing something useful.”

Using multiple animal models and cell experiments, Hammes and lead study author Aritro Sen, PhD, research assistant professor of Endocrinology at the medical school found that male hormones promote follicle development in two ways. First, they prevent follicles from dying at an early stage. They do this by ramping up a molecule that stops cells from self-destructing, a process called apoptosis. Hammes and Sen speculate that if a woman doesn’t have enough androgens (male hormones), more of her follicles may be dying and fewer progressing to a mature stage when they produce and release an egg.

Second, androgens make ovarian cells more sensitive to follicle-stimulating hormone or FSH, which promotes follicle growth. They do this by creating more FSH receptors – molecules on the surface of ovarian cells that jumpstart the follicle making process in response to the hormone.

“Androgens are increasing follicle growth and ensuring follicles don’t die – exactly what you want when providing fertility treatment,” noted Hammes, who is also the chief of the Division of Endocrinology and Metabolism at UR Medicine’s Strong Memorial Hospital.

When the team administered small doses of androgens to mice that were taking the equivalent of medications given to women undergoing IVF therapy, they developed more mature, egg-containing follicles than mice that didn’t receive androgens. The androgen-treated female mice also released larger numbers of eggs with ovulation. IVF drugs are designed to do just that, enhance ovulation – the production and discharge of...
an egg or eggs from the ovary. Unfortunately, these drugs aren’t always effective in women with diminished ovarian reserve.

Kathleen M. Hoeger, MD, MPH, director of UR Medicine’s Strong Fertility Center, estimates that around 20 percent of the patients her team treats have diminished ovarian reserve, meaning they produce fewer follicles than estimated based on their age. Women who are 40 years or older are most likely to have diminished ovarian reserve, but it can appear in younger women as well.

“This information is important because it provides theoretical support for administering androgens to some women undergoing IVF, a practice that our fertility clinic and many others across the country have started in recent years,” said Hoeger, who is also a professor of Obstetrics and Gynecology at the School of Medicine and Dentistry. “If these data are confirmed in clinical trials, we could propose that raising low levels of androgens in a woman with diminished ovarian reserve might increase her ability to produce more and better eggs for fertilization.”

Hammes says the study calls for further clinical trials to determine whether androgens can have a positive effect on fertility when given at the right doses. And, by better understanding the biological pathways that are important for follicle development, scientists may be able to target these pathways with drugs or other interventions to improve IVF success rates.
Picture an Operating Theatre in London circa 1820. Dozens of observers wearing street clothes stand in close proximity to a surgeon removing a tumor from an unsedated patient. Anesthesia wouldn’t be utilized for almost another 30 years. Imagine the Civil War circa 1863, where surgeons operated on patients under an open-air tent. Surrounded by oppressive temperatures and gunfire, they performed amputations without even washing their hands. It wasn’t actually until the late 1880’s that Joseph Lister discovered airborne germs were a source of infection in operating rooms.
Fast forward to 2014. The operating room of today would seem like science fiction to those early surgeons. In just the past three decades alone, traditional surgeries have been replaced by minimally invasive procedures that cut across disciplines ranging from urology to obstetrics. In today’s OR, one might even find a robot being directed by a surgeon.

But as much as scientific discoveries and technology have improved surgical techniques a thousand-fold in the span of two centuries, the design of the OR has not kept pace. Physicians still face serious issues related to patient safety and workplace flow and their impact on successful surgical outcomes.

An exciting new development has opened the door to an improved OR, led by a group of progressive surgeons at Rochester General Health System. For them, the ability to adapt to the needs of constantly changing requirements and evolving technology—while minimizing downtime—is essential in planning ORs for today’s needs as well as tomorrow’s.

Rochester General Hospital recently received a $1 million state grant to support development of a state-of-the-art Operating Room model that has not only transformed its existing space, but become the first of its kind in the region. Under the grant proposal, RGH’s intent is twofold. Foremost, the redesigned OR offers the highest level of technology incorporated into the safest operating environment, which will translate into the best possible patient results. Secondly, the grant will allow RGH to piggyback this concept into more rural areas, with the OR serving as a hub for middle spoke hospitals using a telemedicine approach.

“Essentially, we had a million dollar shopping list to jump-start our OR redesign, so we needed to decide what would give our patients the safest, the smartest and most secure operating room,” says Dr. Ralph Madeb, Chief of Surgery at NWCH, who co-authored the grant proposal with Dr. John Valvo, Executive Director of Robotic and Minimally Invasive Surgery at RGHS.

**ORs As They Exist Today**

While incredible technology has been incorporated into today’s OR, managing that technology has become quite complex. Its overall design is still considered old-fashioned and literally has not changed in 60 years. OR rooms are typically overcrowded, due to the new space requirements for high-tech equipment and the increased staff needed to operate it. Surgical equipment uses power and networking cables that traditionally sit on the floor, posing significant safety and access issues. Numerous pieces of equipment are plugged into the same overloaded outlets, which can lead to tripping over cords and machinery clunking against each other.

“The OR has never been designed around the operating bed,” says Dr. Madeb. “You can’t move the bed where you need to.” In its current state, the operating table lacks multifunction. Since it’s not fixed in place, it can become unstable or move accidentally during surgery. Some surgeries require repositioning of the patient, which can be awkward and unsafe with limited space for the extra staff required.

Overcrowding also opens up the OR to more potential contamination. With inefficient restocking of materials, the circulating nurse is often required to leave the room for supplies. As additional staff moves constantly in and out, infection can run rampant, particularly in this age of “superbugs” resistant to typical antibiotics. Recent statistics indicate that hospital-acquired infections (HAIs), particularly drug-resistant infections, represent a growing threat. In fact, more patients die from hospital-borne infections than from AIDS, breast cancer and auto

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**Historical Milestones of the Operating Room**

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accidents combined. Each year in the U.S. alone, about two million HAIs are estimated to lead to 100,000 deaths, costing hospitals upwards of $45 billion.

Constant updates to technology, with their tremendous potential to help more patients, also mean disruptive downtime to the OR, and cleanliness issues related to construction. Typically, OR walls are built of drywall, which creates a great deal of dust during construction and subsequent renovations. Moving large surgical equipment from room to room often results in collisions and damage to drywall and doorways as well, drumming up dirt and dust. Drywall also lacks adaptability of future wall-mounted integration upgrades and additions.

Need For Evolutionary Design

Drs. Madeb and Valvo received strong hospital administrative support from CEO Mark Clement and Dr. Ralph Pennino, the hospital’s Chief of Surgery. “The surgical matrix represented in this ‘OR of the Future’ is a complement of leading edge equipment, technology, patient data access and new procedures,” says Clement. “It will further enhance our ongoing efforts to provide the highest quality care to our growing patient community.

The doctors worked collaboratively with the Dormitory Authority of New York State and Senator Jim Alesi, an avid supporter of New York State healthcare initiatives, to make this new OR a reality. “The State didn’t hesitate,” says Dr. Valvo. “Senator Alesi recognized the benefits of integrating surgical systems for better autonomy.” “It is gratifying to know that the funding I secured will not only improve the quality of life for patients, but will also showcase the valuable expertise of medical professionals at RGH. Also, our regional economy benefits immensely when government funds leverage unique projects like this. Moreover, we cannot ignore the educational benefits of training a new generation of highly skilled surgeons in robotic medicine.” says Senator Alesi.

Under its new design, RGH’s OR #16 will focus on bringing everything toward the patient. Building its capabilities around the patient means a safer, cleaner and more efficient environment in every respect. With a state-of-the-art patient transfer system, the only time a patient is moved is post recovery when the patient is fully awake and conscious to a hospital bed. “In essence, the gurney becomes the operating table,” says Dr. Valvo.

With this patient-centered focus in mind, the doctors considered Moore’s Law – the idea that a computer’s ability to compute doubles every 18 months. Based on this law, the prediction capability of a computer’s “brain” will soon exceed that of the human brain. The OR design plan, say the doctors, must consider how to create allowances for technology that may not yet exist. They visited progressive ORs in larger cities to learn what makes sense for RGH. “We have to consider the modular aspects of design so that incorporating new technology – from iPads to medical patient information systems — can flow seamlessly into the room and is not as an afterthought,” he adds. The OR utilizes an EPIC database system that houses
KARL STORZ has been an industry leader in minimally invasive surgery for over 65 years.

KARL STORZ has been dedicated to the education and evolution of surgical procedural approaches, and has leveraged this competency to develop technology solutions for the OR that support the surgical workflow. The clinical goals of efficiency, patient centric, ergonomic, safety are a foundation to the engineering of any solution KARL STORZ manufactures.

KARL STORZ partnered with RGH to install key systems as a means to “integrate” their new robotic room. Essential NEO and StreamConnect are the KARL STORZ state-of-the-art integration systems that manage the video and audio in the OR—from creation to archiving.

all computer physician order entry, medical records, scheduling software, and practice management applications—enabling the doctors to access and consider the patient’s active medical problems, current medications, and drug allergies when making any care decision.

This new OR is in reality a beta test site for future OR design. For example, recent advances with HD cameras and 3D digital imaging technologies will continue to require increased use of in-wall or hanging monitoring systems and intercommunications, so the OR will be designed for easy integration of new data and communications interfaces.

“In this new OR, the surgeon becomes the information engineer,” says Dr. Valvo. In the next decade, medical patient information systems will revolutionize the information available to surgeons. “Efficiencies will follow and become second nature to everyone involved.” Other physicians will be able to chime in via their iPads, helping to advise while eliminating the need for more people on-site in the OR. With large, multi-purpose screens, surgeons can benefit from tele-consulting or tele-proctoring with doctors in another part of the hospital or even another city—a process which is sometimes mandatory.

Introducing The Future OR #16

“We began looking at this model three years ago and it already needs to evolve based on how quickly technology has changed since then, says Dr. Pennino. “We must constantly think for the future as we re-create our OR of today.”

Specifically, the state grant will support a STORZ System of minimally invasive endoscopic and robotic technologies for complete OR integration. Streaming video will provide real-time “dashboard” technology including surgical video, a picture archiving and communication system (PACS) and lab reports all displayed side by side on large, wall-mounted HD screens.

Widespread Use of Minimally Invasive Surgery
First Remote Robotic Surgery
Maquet Designs Vari-op Modular Surgical Room
First Redesign of OR in over 60 years

1990 2001 2009
visible to the entire OR team. A ceiling “boom” holds new LED lighting and eliminates tripping hazards. A specialized tele-monitor will be incorporated into the design to provide even more advanced remote surgical opportunities. “This more patient-aware OR will allow us to perform more safely and access critical case information instantaneously,” says Dr. Valvo.

The new OR will also address HAIs through a fast, thorough system that wipes out the threat before it can spread to patients. To that end, the OR will incorporate R-D™ Rapid Disinfector™, which beams lethal UltraViolet C (UVC) light into complex environments, destroying viruses, spores and drug-resistant bacteria—even in a room’s shadowed areas. Its remote sensors make R-D the only system that can measure how much UVC energy reaches every corner of a treatment space, so staff always knows when OR #16 is ready. This “green” technology is designed by Rochester-based Steriliz, LLC, using no harsh chemicals or consumables in the process. “We’ll be able to destroy microbes at the genetic level,” adds Dr. Madeb.

Improved safety and optimized workflow will also be achieved with a Maquet Patient Transfer System. Patients moving from the operating table to Magnetic Resonance Tomography (MRT) will be facilitated via MAGNUS, a transfer board system which eliminates the manual transfer. MAGNUS can be pushed onto the operating table or a transport unit or directly into the MRT. MAGNUS can bear weight up to 480 pounds, has slope and tilt angles and broader height adjustments for a more ergonomic workbench, ensuring stability, optimum radioscopy conditions and free access to the surgical field. The table supports interventions from endovascular and cardiovascular surgery to orthopaedics and spinal surgery. “It’s an intelligent operating table system that caters to the entire operative spectrum.”

Another advancement to OR #16 will be AMS GreenLight™ lasers for outpatient prostate surgeries. GreenLight Laser Therapy is a procedure performed with a small fiber inserted into the urethra through a cystoscope, which delivers high powered laser energy that quickly heats up the prostate tissue, causing it to vaporize. “This technique combines the effectiveness of the ‘gold standard’ transurethral resection of the prostate (TURP) with fewer side effects,” says Dr. Madeb.

**Round Two**

Within three years, further OR expansion will result in newly constructed surgical rooms throughout RGH. Everything from hygiene to better ventilation will be addressed. This includes doors and glass that better support sterile techniques and eliminate swinging hazards. Stainless steel wall modules will eliminate damage resulting from equipment colliding with doorways and walls typically constructed with drywall. Modular walls will be encased so fewer people will be inclined to enter or leave the OR for supplies. “It’s not just about the best technology—obtaining better knives or using robotics,” says Dr. Madeb. “It’s about cleanliness and safety first.”

Other services like gas, electric plates and cabling will also be incorporated into the new design. Minimizing downtime in the OR is critical, so any anticipated retrofitting that technology dictates will help protect the hospital’s financial investment. Rooms can also be designed with the respective color schemes of different surgical disciplines. Providing an appealing interior design will immediately bring a higher comfort level to patients and personnel alike. “It’s like a kid with a blanket,” Madeb says. “Patients feel less anxious in an inviting environment. They have a better recovery and long-term positive outcomes.”

**The OR’s Expanding Reach**

In a sense, say the doctors, the OR of the near future will become the “Information Superhighway,” no longer operating in a silo from other hospital units. “Surgeons will find it far more comfortable knowing they have backup if they need it and increased communication between providers, which in turn leads to a safer culture,” says Dr. Madeb.

Tele-medicine plays an important role in this grant. Dr. Madeb has already been instrumental in using the interplay of high-end technology within his practice at Newark Wayne...
Hospital. “Tele-medicine is instantaneous,” he says. “Our affiliates want Newark Wayne and similar rural hospitals to succeed, so more revenues generated through a more efficient OR also translate to more revenues to rural hospitals.”

“I feel very lucky,” he adds. “We have very progressive people supporting this, putting Rochester once again in the healthcare forefront, on par with major cities like NY and Chicago.

The growing use of robotics means more general surgeons are being trained in a broad array of specialty surgeries. As a health system in the top 2% nationwide for robotic surgery and continuing to grow, RGH already holds first place position for its volume of robotics in colorectal, urology and ob/gyn surgeries. Prostatectomies are becoming the standard of care. “Robotics is truly exploding,” says Dr. Valvo. “The use of LED and green light lasers, particularly in urology, represents yet more tools in our medicine bag.”

As these progressive doctors move forward with the most advanced OR available in our region, they insist it will only succeed with a heightened patient-centric focus. “While we certainly want to use technology to make the OR simpler, with everyone on the same track,” says Dr. Valvo, “we have to build in quality and safety measures so we don’t ever lose the patient in the process.”

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10 Years of Robotic Surgery at RGHS

Q & A with Dr. John R. Valvo

Dr. John Valvo, Executive Director of Robotic and Minimally Invasive Surgery at RGHS, played a founding role in launching the robotics program at RGHS in early 2004. Under his leadership, the program has become nationally acclaimed ranking in the top 2 percent in the U.S. An impassioned proctor and mentor, Dr. Valvo is dedicated to the promulgation of robotic technology helping to develop many surgeons and healthcare centers throughout the northeast to advance their surgical skill and strengthen their robotic capability.

Dr. Valvo, who maintains practices in Rochester, Greece and Brockport, earned his medical degree from the State University of New York at Buffalo. He completed an internship in General Surgery and Residency in Urology at the University of Rochester School of Medicine and Dentistry. He is a member of the Society of Laparoendoscopic Surgeons, a Fellow of the American College of Surgeons, and a diplomat of the American Board of Urology.

Q As RGH commemorates 10 years and 7,000 cases - what has driven the success and growth of the program?

A Essentially what began as a commitment by a philanthropic family and a dedicated physician has grown to a prodigious level with the inclusion of several specialties that were not intended to benefit from robot surgery. We started out with a urological footprint and that gravitated to gynecological surgery both benign and malignant disease, then colorectal surgery found a nice foothold with robotic surgery and now it has expanded into the broad category of general surgery, why this has grown at Rochester General is because we are the areas leading high volume general surgical center and with excellent surgeons who have identified the need for advanced technology in their special fields I believe this is a great reason why this has become such a prominent form of surgical therapy at Rochester General.

Q How has RGH been able to attract the best and the brightest?

A I believe our unselfish attitude towards training and extending ourselves to our fellow surgeons in proctoring has allowed the use of this technology to certainly flourish. I am very proud of the fact that our staff surgeons extend themselves to each and every one of their colleagues in an effort to broaden the base of robotic technology.

Q Is a robotic surgical approach becoming the gold standard and why?

A Certainly there are some procedures which lend itself extremely well to robotic surgery. When we first started in 2004 the robotic approach for radical prostatectomy accounted for approximately 10% of the cases nationwide, 10 years later it now accounts for approximately 90% of the cases nationwide, we are seeing similar trends in gynecologic surgery and colorectal surgery. So it started out as what was thought to be good idea has now become the initial treatment of choice for many surgical disorders.

Q How has RGH been able to become the robotics leader in the region?

A I believe our high volume status as an institution for surgical procedures allows us to have a great deal of material to be exposed to but more importantly again a very unselfish attitude from hospital administrators to surgical staff and to surgeons has allowed us to expand the use of robotic technol-
ogy in our surgical theater. Not the least of which I believe in many procedures and many disease states robotic surgery has become a more preferred method because of its significant advantages to patient care and better surgical outcomes.

Q: What opportunity resources are there for doctors without robotic training to acquire and develop robotic skills at RGH?

A: When we first started robotic surgery in 2004 we immediately set out a guideline of credentialing we felt that it would be very important for surgeons to acquire this skill to have proper guidelines whereby they could require credentialing given by the hospital. Since at that time and for that matter many specialties do not have national guidelines we were first to institute that in our region and many other hospitals throughout the country have adopted guidelines based on our original tenets to use as a model to allow their surgeons to become adequately credentialed and more importantly maintain that credentialing. All our robotic surgeons are continually being monitored with regards to their surgical outcomes and I am very happy to say we have had an excellent response from all of them in participating in this endeavor.

Q: Ready for the future where do you see the greatest opportunity for robotics in medicine?

A: I think we are at the very beginning of where robotics will find itself not only in medicine but health care as well; we are living in a digital interface where information is being streamlined into the operating room. The only way that is done simultaneously is through digital interfaces with computerization and high level technical information data symptoms. A robot is simply a data system and the surgeon who operates that is really an informational engineer who learns to control the data that is being fed into in, in a step-wise manner and in an accurate and simultaneous manner to provide a more highly sophisticated approach in a minimally invasive environment. I foresee the intervention of digital formats in many areas of medicine including diagnostic, therapeutics, home care, elder care and helping physicians determine which patients are more likely to respond to medication then others so in a predictive informative way.
In Golf, the Pursuit of Perfection Can Lead to Hazards for Your Body

By James Briggs MSPT, CMP

I’ve never met anyone who admits to being good at golf, but based on its incredible popularity you obviously don’t have to be at the “pro” level to simply enjoy playing the game. Sometimes I think the only thing that will stop a diehard duffer from hitting the links is an injury ... and maybe not even then.

But golf-related injuries do happen, especially during the actual golf swing – which invites the question: Is there a single perfect swing? A swing so technically sound that it generates the greatest amount of power with minimal energy expenditure, appropriate joint torques, and unmatched accuracy? A swing that will put the ball exactly where you want it to go, and not hurt you in the process?

Unfortunately, studies have confirmed that there’s no such thing as a swing that’s perfect for everyone; in fact, the pursuit such a swing can lead to injury. Paul Glazier of the University of Wales Institute and Keith Davids of Queensland University of Technology believe that the “perfect swing” is a variety of constraints:

Performance constraints – height and weight, strength, flexibility, performance anxiety, confidence, and deficiencies in perceptual systems (sight, sound, and proprioception/body awareness)

Environmental constraints – light, temperature, weather and geography

Task constraints – swinging the club to optimal speed at impact, hitting the “sweet spot” to maximize energy transfer, and orienting the club head to direct the ball correctly

As if trying toolfer’s body to move in ways that run counter to their unique anatomy, which can lead to injury. The most common location for golf injuries is the lower back, which makes sense considering the tremendous torque generated through the body by the swing. Think about the muscle recruitment, core strength and joint mobility and stability needed to accelerate and decelerate the club. Don’t forget the repetitive bending and stooping to pick up the ball, replace divots, and putt; these movements all place flexion loads on discs, and tension through ligaments.

Two conditions of the elbow are also common. Golfer’s Elbow may occur when the swing of the club is stopped or nearly
Golfer’s Elbow may occur when the swing of the club is stopped or nearly stopped suddenly by hitting the ground. The tensile forces exceed the stiffness of the inner elbow flexor tendons, and microtearing may result. Some people may then get caught in a cycle of relative overuse and re-injury, which prolongs healing. Tennis Elbow usually occurs from a constant grip during repetitive activity — in this case, a golf swing — that may involve excessive wrist motion. Basically, any increased frequency, duration, or intensity of an activity can cause tendon overload and kick-start the inflammatory process.

The recommendation in these cases is for “relative” rest: Limited activity, stopping short of a level that could irritate the tendon or cause pain. Returning to full activity before the healing is finished limits the ability of tendon structure and scar tissue to mature to pre-injury strength levels. When that happens, it becomes easier to be injured again — perhaps more seriously.

No “one size fits all” exercise regime can help everyone prevent these injuries. No two cases of back pain, rotator cuff injury or elbow tendinitis are the same, and preventative exercises or treatments must be tailored to your unique needs. A certified physical therapist can work with you to develop an effective plan of treatment.

And if you’re not injured, consider using golf’s off-season to prepare yourself for staying that way once you return to your favorite course. The combination of a personal trainer and a well-equipped athletic club is second to none to helping a golfer achieve the condition they need to stay as healthy as possible. Consider also the benefits of a proper aerobic regimen, as well as yoga or pilates training to keep your core activation, strength and flexibility in tip-top shape.

Ultimately, putting as much thought into your health as your golf game will likely improve both — and make it easier for you to come ever closer to your peak performance.

James Briggs MSPT, CMP, is a physical therapist at Rochester General Health System’s Physical Therapy Center at Midtown Athletic Club.
Electronic Health Records Certification Standards: New Developments for 2015

Q: Do I need to recertify my EHR to the new 2015 edition of the Electronic Health Record Technology Certification Criteria recently announced by the HHS?

A: On February 21, 2014, the HHS Office of the National Coordinator for Health Information Technology (ONC) issued proposals for the next edition (the “2015 Edition”) of electronic health record (EHR) technology certification criteria. This proposed rule marks the first time ONC has proposed an edition of certification criteria separate from the CMS “meaningful use” regulations.

Compliance with the 2015 Edition would be voluntary - EHR developers that have certified EHR technology to the 2014 Edition would not need to recertify to the 2015 Edition for customers to participate in the Medicare and Medicaid EHR Incentive Programs. Similarly, health care providers eligible to participate in the Medicare and Medicaid EHR Incentive Programs would not need to “upgrade” to EHR technology certified to 2015 Edition to have EHR technology that meets the Certified EHR Technology definition.

The proposed 2015 certification standards represent ONC’s new regulatory approach that includes more incremental and frequent rulemaking. This approach allows ONC to update certification criteria more often to reference improved standards, continually improve regulatory clarity, and solicit comments on potential proposals as a way to signal ONC’s interest in a particular topic area.

The proposed rule will be published in the Federal Register on February 26. ONC is currently accepting comments on the proposed rule through April 28, 2014, with the final rule expected to be issued sometime in the summer of 2014. For a link to the HHS press release you can go to: http://ow.ly/uexIE.

If you have any questions, please contact our Managing Partner, Michael J. Schoppmann, Esq at 1-800-445-0954 or via email at MSchoppmann@DrLaw.com.
Better survival rates, short OR times, fewer complications: These and other criteria have helped Rochester General Health System’s Sands-Constellation Heart Institute earn recognition as the top cardiac program in New York State, and among the finest nationwide. But our patients use a different yardstick. They measure our success by faster recovery periods, increased quality time with loved ones, and longer, healthier lives. By either standard, we’re proud to lead the way.
Biomarker Points to Alzheimer’s Risk

A study involving Rochester-area seniors has yielded the first accurate blood test that can predict who is at risk for developing Alzheimer’s disease. This discovery – which appeared in the journal Nature Medicine – could be the key to unlocking a new generation of treatments that seek to head off the disease before neurological damage becomes irreversible.

The biomarker – which consists of 10 specific lipids found in blood plasma – predicted with greater than 90 percent accuracy which individuals would go on to develop Alzheimer’s disease or a precursor condition known as amnestic mild cognitive impairment (aMCI). The cost of the simple blood test required to detect these lipids is a fraction of other techniques and, unlike alternatives, it identifies risk early in the disease process before cognitive symptoms appears.

“The ability to identify individuals who are at risk of developing Alzheimer’s before the clinical manifestation of cognitive impairment has long been a Holy Grail of the neuromedicine community,” said Mark Mapstone, PhD, a neuropsychologist with the University of Rochester School of Medicine and Dentistry and lead author of the study. “Current efforts to develop a treatment for this disease are coming up short because they are probably being used too late. Biomarkers that can allow us to intervene early in the course of the disease could be a game-changer.”

Alzheimer’s research is at an impasse with many once promising experimental therapies failing in late stage clinical trials. These setbacks have led all but a few major pharmaceutical companies to pull back from their research and development in the disease.

The absence of an effective treatment for Alzheimer’s, and the dwindling options in the drug development pipeline, mean that the nation – and the world – are woefully unprepared for the coming “Silver Tsunami” of aging baby boomers who will develop the disease in the coming years. By 2050, an estimated 14 million Americans will have Alzheimer’s, consuming an estimated $1.2 trillion in health care costs per year.

There is an emerging scientific consensus that once the cognitive symptoms of the Alzheimer’s have emerged, it may be too late to slow or reverse the neurological damage caused by the disease. Researchers speculate that if treatments could be initiated early in the disease cycle, they may stand more of a chance of being effective. In fact, many of the same experimental treatments that have failed in recent clinical studies may ultimately prove to be successful if they are given to patients sooner. The challenge is there currently exists no way to identify which people are at risk of developing Alzheimer’s.

There are several screening methods that can detect Alzheimer’s disease. These include spinal taps which measure the presence of the proteins beta amyloid and tau and advanced imaging systems such as MRIs, PET scans, and functional MRIs that spot changes in the brain. But these techniques have significant limitations. First, they have only been shown to be effective in confirming the diagnosing of the diseases after the cognitive symptoms have surfaced. And second, the high cost associated with these technologies is a significant barrier to widespread use in clinical practice.

The Rochester Aging Study, which was launched in 2007, is a community-wide collaboration that involves physicians and researchers from the URMC, Unity Health, and RGHS.

In total, 425 seniors from the Rochester area participated in the study. The volunteers underwent a comprehensive cognitive assessment and a blood draw once a year over a five-year period. An additional 100 individuals from Irvine, CA were enrolled in the study.

Researchers at the University of Rochester and Georgetown University used a technique called mass spectrometry to screen for lipid levels in blood plasma. Lipids are a class of naturally occurring molecules found in the body that play a role in energy storage, signaling, and form the structural components of cell membranes. The scientists identified 10 specific lipids that, if present in lower than normal levels, could predict with more than 90 percent accuracy whether an individual would go on to develop either Alzheimer’s or aMCI.

The scientists are not entirely sure why this particular set of lipids is indicative of Alzheimer’s. All ten represent a class of lipids called phospholipids, molecules that are important cellular building blocks. The researchers speculate that the lower lipid levels could be an early indication that the brain cells lost in the disease are beginning to lose their integrity and break down.

Once commercialized, a blood test required to detect these lipids would likely cost less than $200 – compared to thousands of dollars for a spinal tap or MRI – and could be ordered as a part of a routine exam by an individual’s primary care physician.

“Having a tool that is able to identify, with a high degree of accuracy and at a low cost, which individuals will convert to Alzheimer’s could transform how we care for this devastating disease,” said Mapstone.
How accurate is MRI in locating prostate cancer?
Not all MRI scanners are equal when it comes to detecting prostate cancer. It’s important to have the proper hardware, imaging software and training to image and identify prostate cancer. Even the MRI scanner itself is a key factor for prostate imaging. The contrast and resolution of 3 Tesla MRI scanners are far superior than 1.5 Tesla MRI scanners. A multiparametric approach is necessary for proper detection. 3 tesla MRI, Diffusion weighted imaging, spectroscopy, power injector for dynamic contrast enhancement as well as a computer for post processing the dynamic contrast enhanced images are just a few of the necessary tools not all imaging centers have.

What are the benefits to the patient and the Specialist of MRI over other imaging tests?
MRI unlike X-ray, PET, Bone Scan or CT does not use radiation to image the human body. A fundamental shortcoming of CT in detecting prostate cancer is its inability to detect architectural changes within the prostate. CT or Bone scans should be limited to patients with elevated high risk of prostate cancer metastasis based on other disease parameters. Transrectal Ultrasound (TRUS) was initially developed as a means of identifying prostate cancer and guiding biopsies. Many studies have shown that prostate U/S has low accuracy in detecting prostate cancer. In addition, biopsy and the effects of biopsy have always been a concern. MRI is a less invasive approach to prostate cancer detection and staging and if biopsies are needed an MRI can help to localize the best target.

Describe the patient that is the best candidate for Prostate MRI?
Patients with an abnormal digital rectal exam, elevated PSA and/or negative biopsies. PSA may be high in men who have an infection or inflammation of the prostate or have an enlarged, but noncancerous, prostate. One benefit of Prostate MRI is ruling out prostate cancer before subjecting a patient to a biopsy which may in the end prove inconclusive.

Are there limitations to the sensitivity of MRI in accessing size of prostate growth?
On the contrary, innovations in prostate imaging, specifically prostate MRI, exploit the biology of prostate cancer and thereby offer the potential for superior detection of the location, extent, and aggressiveness of prostate cancer.

How is MRI useful to the Urologist in treatment planning?
The three main questions you’re trying to answer for the treating urologist, 1- is there prostate cancer 2- where is it and how many lesions are in the gland and 3- can they stage it. In advanced centers (Like UMI) where you have reader experience and the necessary tools in terms of MR hardware and software, prostate MRI can be useful for detecting prostate cancer as well.

Does MRI affect the need for biopsy and can biopsy be done at the same time as MRI?
Can you biopsy in MRI, Yes, is it the preferred method of biopsy, No. Ultrasound is still the gold standard. However, MRI will affect the need for biopsy in patients with normal results, essentially eliminating them for the need to have a biopsy. Current biopsy methods can be inaccurate and randomized biopsy samples are taken in hopes of selecting tissue samples worth testing. The true benefit of MRI comes with the introduction of fusion imaging. Fusion imaging biopsy systems allow fusing the contrast enhanced
MRI prostate images with real time ultrasound images so that exact areas of concern are biopsied rather than random sampling. This significantly increases the diagnostic effectiveness of the biopsy in an effort to increase prostate cancer detection accuracy.

**Is Prostate MRI covered by a patient’s insurance?**
Prostate MRI is essentially a focused study of the male pelvis and is generally covered by most insurances. Many have spectroscopy classified as experimental and may or may not cover the use of these necessary services. Please check with your insurance carrier to determine your exact policies coverage.

University Medical Imaging, PC is now accepting referrals for contrast enhanced Prostate MRI. Due to the advances in 3T MRI, UMI can perform non-invasive high resolution imaging of the prostate without the need for placement of an endorectal coil. This makes the imaging procedure much more comfortable for the patient while providing the necessary signal to noise ratio required for fine detail prostate imaging. Using a combination of a dynamic contrast injection, Spectroscopy and specialized post processing software, UMI can perform real time image analysis of the prostate.

**Dr. Eric Weinberg** is the Medical Director at UMI and specializes in Cross-Sectional Imaging in MRI, CT, and Ultrasound. He completed a Fellowship in Cross-Sectional Imaging at the URMC and a Residency in Radiology at Albany Medical Center, earned his MD at Albany Medical College, is certified by the American Board of Radiology and is a member of the American Roentgen Ray Society, the American College of Radiology and the Radiological Society of North America. He is also a professor and researcher at the URMC.

**Michael Lechner** is a NYS-licensed Radiologic Technologist certified in MRI. Michael came to UMI in 1996 and has served as UMI’s Lead MR Technologist, Chief Technologist and since 2005 has served as the Practice Administrator. He holds advanced certifications in Leadership Development, Six Sigma business training and Physician Practice Management. He is a member of the American Academy of Professional Coders, the American Registry of Radiologic Technologists, the American Academy of Medical Management and the Association for Medical Imaging Management.

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**New Doctor in Town?**
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Cash Balance Plans

Breaking the $52k DC Limit

Many owners of small to mid-sized professional firms, including physicians’ practices, have found themselves behind with regards to saving appreciably for retirement. After working long hours over the course of many years, pouring every available dollar back into the business, many owners suddenly realize that retirement is close and that their qualified retirement plans do not allow them to save as much as needed to accumulate sufficient retirement assets.

What is a Cash Balance Plan?

A Cash Balance Plan is a defined benefit (DB) plan that looks very much like a defined contribution (DC) plan to participants (where the plan states a required contribution percentage). Cash Balance Plans may offer employers advantages over traditional DB Plans, including:

- Large deductible contributions that can exceed 100% of pay for older participants
- Design flexibility to offer different benefits to different employee groups
- Increased design flexibility when paired with a 401(k) Plan
- Lump sum or lifetime annuity benefits for all participants
- Ease of understanding for employees and owners

Cash Balance Plans are often called hybrid plans because they share characteristics of both DB and DC plans. Although they are specifically DB plans, they contain similar traits to DC plans because allocations for participants are referred to as a percentage of pay. A Cash Balance Plan works differently than a traditional DB plan, by defining an allocation formula in the plan document, instead of a normal retirement benefit formula. A hypothetical account (the “cash balance” account) is created for each participant, and is maintained on paper for bookkeeping purposes. Also defined in the plan document is an interest crediting rate. Each year, the hypothetical account receives the allocations as defined in the plan document, as well as the guaranteed interest credits.

How Can a Cash Balance Plan Benefit Your Practice?

Through use of a method known as New Comparability, a Cash Balance Plan can help the business owner craft different benefit levels for different employee classes. By permissively aggregating a Cash Balance Plan with a 401(k) Profit Sharing Plan, employers can provide meaningful benefits for employees, while maximizing benefits for the owners and other principals, and generating the largest potential allocations allowed under a qualified plan. Consider the hypothetical example below, based on a practice in the medical industry:
As the chart illustrates, under this employer’s current Profit Sharing Plan, an allocation of $44,550 is required for non-owners in order for each owner to achieve the $52,000 maximum. Given the expense for non-owners under this type of plan, the owners may simply choose to give a much smaller overall percentage of payroll, thus settling for much less than $52,000 for each of themselves. Under a Cash Balance and 401(k) Profit Sharing Plan combination, the employer can still provide a meaningful 10% of pay allocation to non-owners, while achieving an allocation of over 68% of pay for each owner, and reducing the dollar amount cost of non-owner employee benefits to $27,000.

In addition to potential dramatic increases in annual savings for the owners, the employer can also greatly increase its tax-deductible contributions, whilst simultaneously protecting these assets from the claims of the firm’s creditors—an advantage of any qualified plan under the Employee Retirement Income Security Act (ERISA).

While Cash Balance Plans broadly appeal to businesses of all sizes and types, they are not ideal for every employer. Before making a decision to adopt one, business owners should consider the following questions:

- Do you want to greatly increase your tax-deductible retirement savings?
- Do you want to control the cost of benefits for employees?
- Are you and your key executives much older on average than your rank and file employees?
- Is your business’ income and profitability consistently stable and high?
- Can you make a commitment to increased plan contributions for the foreseeable future?

If the answers to these questions are all “YES”, then a Cash Balance Plan may be a way for you to improve your retirement plan offering and break the $52k DC limit.

For more information on how you can help to improve your practice’s long-term retirement planning needs, contact James Esposito, QPA, LUTCF, Qualified Plans Consultant, Manning & Napier at info@manning-napier.com and 585-325-6880, ext. 8336.

James Esposito is a Qualified Plans Consultant for Manning & Napier.

In this capacity, he assists employers with the technical design of existing or new qualified retirement plans to better address their goals and objectives. James also provides employers with plan document and governance reviews, to ensure overall compliance with an increasingly complex body of rules and regulations. Prior to joining Manning & Napier in 2011, James spent 12 years as the Marketing Director for Security Administrators, Inc., an actuarial firm in Binghamton, NY. Prior to that, he was an Associate Life Marketing Consultant for CU Life Insurance Company of New York.

James earned his BA in Mathematics and New York State Teacher Provisional Certification from the State University of New York at Buffalo. He is also a Life Underwriter Training Council Fellow (LUTCF) and Qualified Pension Administrator (QPA) through the American Society of Pension Professionals and Actuaries (ASPPA).
New Hypertension Guidelines Bring Relaxed Blood Pressure Goals and Controversy

The Joint National Committee on Treatment of Blood Pressure recently released the eighth version of their guidelines on management of blood pressure (JNC-8), updating the previous guidelines published in 2003. This document, along with recent updates on guidelines for treatment of hypercholesterolemia, lifestyle modification, obesity, and cardiovascular risk assessment developed by the American Heart Association (AHA) and American College of Cardiology (ACC), represent the cornerstone of our approach to primary and secondary prevention of cardiovascular disease.

Members of the panel were appointed in 2008 by the National Heart, Lung, and Blood Institute (NHLBI). However, due to the increasing controversy surrounding the process of drafting guidelines since that time, NHLBI has essentially stepped out of the business of creating guidelines, choosing instead to shift that responsibility to professional organizations such as AHA and ACC. As such, the final draft of the hypertension guidelines is not sanctioned by NHLBI. It is unclear who will undertake the drafting of the next update to these guidelines or when that will occur.

In response to criticism that past hypertension guidelines (as well as other guidelines) were overly reliant on expert opinion rather than clinical trial data, this new document was developed using a systematic method of applying clinical trial data to address key questions. Specifically, the literature was analyzed for data to address the following: (1) whether initiating antihypertensive medications at specific blood pressure (BP) thresholds improves health outcomes, (2) determining the ideal BP goal once antihypertensives are initiated, and (3) which drugs or drug classes should be chosen for initial therapy. Unfortunately, studies addressing some of these essential questions are surprisingly sparse, leaving the panel to rely on outcomes from a few small studies or to rely on expert opinion alone.

The primary change in the updated guidelines is a relaxed BP goal for many patients. JNC-7 set a goal of <140/90 for most patients and an even more aggressive goal of <130/80 for patients with diabetes or chronic kidney disease (CKD). In JNC-8, the threshold to start antihypertensive medications (and the goal blood pressure to achieve once medications have been started) remains <140/90 for many patients but the goal is now relaxed to <150/90 for patients 60 years of age or older. The goal for patients with diabetes or CKD is also relaxed to <140/90.

The recommendation to relax the BP goal among patients over 60 comes primarily from two studies, the JATOS and VALISH trials, that compared strict treatment to a systolic BP goal of <140 versus a more lenient goal (<150 in one study and systolic BP <160 in the other). Both studies demonstrated no significant difference in adverse outcomes. However, their applicability to the hypertension guidelines is criticized due to the fact that both studies were performed in Japanese patients, were of relatively small size, and had short follow-up duration. Given these limitations, critics argue that there is insufficient evidence to warrant changing the previously recommended BP goals.

The appropriate first-line antihypertensive medications for treating hypertension have been a matter of debate for some time. In JNC-8, a thiazide diuretic, angiotensin receptor blocker (ARB), ACE inhibitor, or calcium channel blocker are recommended as the first choice antihypertensive for non-black patients. A thiazide diuretic or calcium channel blocker are recommended as the first choice for black patients. For patients with CKD, it is recommended that initial treatment include an ACE inhibitor or ARB.

Perhaps the effect of these guidelines will be increased individualization of both treatment and discussion with patients, particularly for those whose blood pressure falls in the borderline range. For example, a patient over 60 years old with a systolic BP that generally falls in the 140’s on sub-maximal doses of well-tolerated antihypertensives will feel that the potential benefit of increasing the dose of a current medication outweighs the associated risk. On the other hand, a patient over 60 years old who is already on three antihypertensive medications at maximal doses with a systolic BP in the 140’s will prefer not to start a fourth medication that will increase cost and potential for adverse reactions.

One of the revealing facts to emerge from these guidelines is the paucity of clinical data that dictates the blood pressure goals that have been our mantra for many years. Clearly, more research is warranted to better inform the next guidelines.
Focus on the “Why” when Measuring ROI

What is a return on investment? Most want to refer to it as a measurable quantitative value that you can report to the Board to show that the money you spent on the electronic health record is in fact, saving you money in other places (decreased staff, increased daily patient volume, higher percentage of approved claims, etc.) or possibly justify that the incentive money has covered all the costs. If your definition is similar to the previous statement then I regret to inform you, you will not meet your expectations, especially given all the mandated updates you must comply with in 2014. But if you were to break down the question into two parts, you may be able to measure your return differently. How invested were and/or are you in the success of your electronic health records? What positive qualitative return would you expect from your non-monetary investment?

Many physicians are questioning, is health information technology really worth it? I say yes, but I may be bias working in this field and thinking about the actual “return” differently. But, I’m not ignorant. I see the day to day struggles that physicians must deal with and the additional costs that are incurred annually. Meaningful Use, PCMH, PQRS, eRx, ACO, and all the other incentive and payment programs that are or were helping you see the value in the electronic health record, are really more of a burden that drive your actions daily. Someday, when all the technology, payment reform, delivery of care reform, quality metrics and interoperability standards align (just to name a few of the changes); your electronic health record will provide more benefit to you as a physician than you could measure! Unfortunately for physicians, the technology came first and the process and reform are following in bits and pieces, making it hard to accomplish a steady state.

When speaking with a colleague who works for a large health system, his concern was that end-users of the technologies tend to focus on the “how”…how do we upgrade the system, how do we roll-out ICD-10, how do we train, how does this make my job easier; instead of being provided the guidance to understand the “why” first. If you can put the daily struggles aside and think why, you will see that payment reform, data and analytics, increased patient engagement, care coordination, data exchange, reduction of duplicative services, innovative encounter methods, decreased hospitalizations, and much more; are only possible if the patient information is contained within an electronic format. So, why are they all needed? To reduce costs and improve outcomes, it’s as simple as that. And although the “how” of all the future benefits is not operationally defined at this point for you; great strides are taking place in designing this future state and your increased understanding of how technology can accomplish this, will help you tremendously.

For those of you solely looking for a measurable return, there are a multiple calculations and methods available to you online. One example is to measure Hard ROI versus Soft ROI. Hard ROI is essentially the outcome when you quantitate the Soft ROI. Soft ROI categories can be:

- Process Improvement
- Increased Preventive Care visits
- Reduction in Medication Errors
- Quicker lab results
- Increased access to patient information (real-time query)
- Patient Safety & Satisfaction
- Increased Compliance

Now, quantify those returns in a way that relates to your practice to determine Hard ROI. Process Improvement may have resulted in increased patient volume on a daily basis which would increase your total claims and possibly allow you to code at a higher rate. Increased Preventive Care visits could possibly be measured in multiple ways. The visit alone is a billable opportunity that the system has now made more attainable to accomplish. Increased access to patient information is a time-saving return for all physicians including the exchange of the information with other physicians. I could continue to give examples of every little detail that was impacted by the implementation of an electronic health record in your practice, but you know what has worked well, what still does not seem to work for you and that there is plenty of guidance and services available to help your practice optimize utilization.

If you see the value in the technology and you invest mentally, not just monetarily, you will increase your return by taking full advantage of the benefits made available to you through health information technologies. The truth is, the implementation and optimization are so focused on the day to day “how,” that we lose sight of “why” these changes need to take place. If you want to be relevant in the future, focus on the qualitative benefits, then you will be in an advantageous position for future growth and collaboration.

Nicole is a Senior Health IT Advisor at Innovative Solutions based in Rochester, NY. She provides strategic and operational consulting to medical organizations related to their use of Health IT.

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The State of Interoperability in Image Sharing - a vignette

It’s winter in Rochester and the temperature is hovering around 15 degrees with a wind chill of -30. In Orlando it’s a balmy warm day and John Patient is screaming at the top of his lungs as he shoots around the final bend of Space Mountain. The excitement is starting to get to him though and he’s been feeling short of breath with a nagging tightness in his chest. His wife looks at him with a knowing glance and says, “Honey, are you ok?”

Hours later John is in the ambulance en-route to Memorial Hospital. A 12-lead electrocardiogram is transmitting information directly to the Memorial ER over a wireless modem where an ER physician is interpreting it.

The preliminary diagnosis is myocardial infarction with ST-segment elevation. The catheterization lab is notified of an incoming patient.

On arrival John’s cardiologist from Rochester, Dr. Hart, is contacted. Dr. Hart is concerned about John’s condition and asks to see copies of John’s ECG’s to compare with prior studies stored at his office. Memorial has no record of Dr. Hart, but they do have access to the eHealth Technologies Image Exchange system through their local Health Information Exchange.

During the ride to the Memorial Hospital ER, the ECG system used by the ambulance company transmitted the ECG data including waveforms to the hospital’s main hub, which forwarded it on to the eHealth Technologies interface on the Orlando hospital’s system. From there it was made available to John’s electronic medical record.

Dr. Hart’s request to view the images and results is processed by the file room. With a few mouse clicks, the clerk sends John records, including the ECG results, directly to Dr. Hart’s email as a hot-link that can be opened through the HIE Provider Portal. A PIN is included for security purposes.

Dr. Hart receives the electronic message and opens the link on his iPad Air. He’s asked to enter the PIN and the ECG from Memorial opens. He reviews the waveforms and confers with the hospital cardiologist.

During the consultation a recommendation is made for immediate percutaneous catheterization. John is taken to the Cath Lab and a stent is placed. A fluoroscopic study is performed to confirm the stent placement and this image is sent to the hospital PACS (medical imaging system) and the eHealth Technologies interface. The study is available to Dr. Hart in real time through the eHealth-Viewer zero-footprint viewer on any of his computers or mobile devices so he carefully reviews the stent placement and electrical studies. John is held for observation and released the next day.

On returning to Rochester’s wintry climes John Patient goes to see his primary physician who would like to review the history of the incident. Unfortunately John’s images, discharge summary, and overall medical records are in Orlando not Rochester. To get access to these records the front office staff must call multiple institutions, exchange a variety of forms, and wait for CDs and faxes to arrive. This is inefficient and error prone. When critical information doesn’t arrive medical decision-making and patient care may be impacted. Surely there is a better way?

Over the past five to ten years regional Health Information Exchanges (HIEs) have emerged. Many HIEs have embraced imaging and provide physicians within the community access to viewers of various forms. In Western New York, eHealth Technologies powers the majority of these systems. John’s fluoroscopic study, ECGs and associated reports can be made readily available to members of the HIE through a provider portal and “zero footprint” viewing technology that runs on a computer or tablet in the physician’s office. For users within the HIE this type of solution provides a seamless way to share and collaborate on images and waveforms.

Sharing images between HIEs in different states is less straightforward. Even when both HIEs use the same vendor it is not always possible to integrate image sharing due to differences in implementations. Fortunately, recent efforts in standardization by the “Integrating Healthcare in the Enterprise” (IHE) body have lead to some truly interoperable solutions called “Cross Community Access” (XCA) that are designed to address the issue of sharing clinical documents and images between institutions.

From a physician’s point of view, these solutions offer the potential to be able to find and receive clinical information from out of network or out of state entities without having to leave their local system. In Dr. Hart’s case, with this interoperable sharing in place, ECGs could be pulled up from Florida and New York and displayed side by side in the same session.

It is the author’s hope that these new standards will positively impact patient care. The best evidence of this occurring is the IHE Connectathon - an event in Chicago where over 500 systems engineers come together to test over 150 systems. eHealth Technologies’ Cross Community Access for imaging was tested at this event and proven to interoperate with several other major players. This is the first step to a truly interoperable system for imaging between Health Information Exchanges and a way for physicians to get access to the images they need regardless of where they were acquired.
**WHAT'S NEW**

**in Area Healthcare**

**RGHS**

**New Leadership Role Created for RGHS Finger Lakes Hospitals**

RGH administrator Rob Cercek named Regional President of Operations for Newark-Wayne Community Hospital, Clifton Springs Hospital & Clinic.

In keeping with Rochester General Health System’s (RGHS) commitment to provide the highest quality care to greater Rochester and beyond, a new leadership structure has been announced that will improve the comprehensive delivery of RGHS health services in the Finger Lakes region. Effective April 1, Rob Cercek, currently vice president of operations for Rochester General Hospital, will become regional president of operations for two hospitals in the Finger Lakes: Newark-Wayne Community Hospital (NWCH), an RGHS affiliate since 1997; and Clifton Springs Hospital & Clinic, when that facility becomes a full RGHS affiliate later this year.

Since joining the health system in 2008, Cercek has led the development of the strategic expansion of services to rural areas outside of greater Rochester. Those responsibilities have included a lead role in the current affiliation processes that will lead to Clifton Springs Hospital & Clinic and Batavia’s United Memorial Medical Center joining RGHS later this year. In his current role, Cercek leads over 2,000 staff members across all service lines.

“Rob’s track record of success in managing complex operational change and clinical integration across our system, as well as his team-oriented approach to leadership, make him uniquely qualified for this vital new executive role,” said Mark C. Clement, president and CEO of RGHS. “Under his leadership, we can effectively transform Newark-Wayne and Clifton Springs into growing and complementary campuses providing fully integrated health care in the Finger Lakes.”

Cercek has more than 20 years of experience in health care administration, including leadership roles with various organizations in Colorado and Ohio. Immediately prior to joining RGHS he was director of operations for Diversified Radiology of Colorado, PC. He is a Fellow in the American College of Healthcare Executives, and earned a Master’s degree in Health Care Administration from Central Michigan University.

As president of NWCH, Cercek will succeed Mark Klyczek, who has led the hospital since 2011 and guided NWCH to its current position as a regional leader in quality and patient satisfaction. Klyczek is taking on a new system-wide leadership role, with responsibility over the RGHS oncology, pharmacy and respiratory therapy service lines. At Clifton Springs, interim president and CEO Lew Zulick, MD, will transition into a senior clinical leadership role.

**Innovative MRI Technology Launched at NWCH**

**Unique in the Finger Lakes – Provides Advanced Imaging Capabilities and Unparalleled Patient Comfort**

In keeping with RGHS’s commitment to deliver the highest quality care to Finger Lakes patients, RGHS affiliate Newark-Wayne Community Hospital has added advanced outpatient imaging technology that provides unique clinical and patient-focused benefits.

Innovative features of the new GE Optima MR450w MRI scanner include an oversized chamber, feet-first testing and “Silent Scan” noise reduction. Additionally, the GE Optima Caring MR Suite allows patients to select a customized audio/visual environment with soothing music and pre-programmed themes including a forest, a field of sunflowers and an outer-space setting. Combined, these features reduce patient anxiety and ensure more effective examinations.

Newark-Wayne’s new MRI suite can generate high-quality images even for patients with metal joint replacements and other implanted devices – a limitation of previous-generation MRI testing. Flexible coils in the bed of the MR450w adapt to the patient’s body, to further enhance image quality.

Newark-Wayne is the first upstate New York hospital to offer this combined technology – ensuring that area patients with complex cases can receive high-quality MRI scans in a comfortable environment, without unnecessary out-of-town travel. “With its state-of-the-art imaging science and patient-focused comfort, this new MR suite is an ideal addition to Newark-Wayne,” said Rob Cercek, President of Newark-Wayne Community Hospital. “This innovative resource gives patients of the Finger Lakes, as well as the entire greater Rochester region, a close-to-home alternative for leading-edge diagnostic imaging.”

**URMC**

**Flaum Eye Institute Leads Region in New Laser Technique for Cataract Surgery**

Flaum Eye Institute is the first center in the Finger Lakes region to acquire the CATALYS® precision laser system to treat cataracts, the leading cause of reversible blindness in the United States.

The new system combines state-of-the-art femtosecond laser, advanced 3D imaging and sophisticated software allowing surgeons to improve treatment planning and removal of the cataract. “This is a tremendous advance because it almost eliminates incisions made with the knife and limits the amount of energy needed during surgery, which protects the cornea,” said Steven Feldon, MD, MBA, director of the Flaum Eye Institute and chair of Ophthalmology. “It’s safer, easier to perform and causes less inflammation for patients. It’s truly amazing to watch it because the surgery appears to come out of thin air.”

Cataracts are common -- by the age of 80, more than half of all Americans either have a cataract or have had surgery to remove one. Symptoms include blurry vision, poor night vision and difficulty driving at night, sensitivity to lights and glare and frequent changes in corrective lenses or contacts. Surgery is the only treatment for cataracts and is one of the most widely performed procedures
McRae said. Together, we can continue carrying forward and building upon the tremendous progress and innovations of St. Ann’s Community, as we continue our legacy of caring for Rochester Seniors.”

McRae holds a Master’s Degree in Human Services Administration from Buffalo State College and a Bachelor’s Degree in Gerontology from University at Buffalo, and is a licensed New York State Administrator. McRae is a Board Member of Visiting Nurse Association and the Sea Gate Alliance.

McRae Succeeds Current Leader of 17 Years, Betty Mullin-DiProsa

On April 7, Michael E. McRae, Executive Vice President and Chief Operating Officer at St. Ann’s Community, will assume his new role of President and CEO to lead Rochester’s largest senior housing and healthcare system.

Betty Mullin-DiProsa, outgoing President and CEO of St. Ann’s Community, announced her retirement plans in May of 2013. McRae joined St. Ann’s Community in 2010 as Senior Vice President and Administrator. He was elected to succeed Mullin-DiProsa after a unanimous vote by the organization’s Board of Directors in July 2013 and will be the third person to hold the title of CEO in 50 years.

“Having worked in Healthcare for 27 years, this is an incredible privilege, and I’m honored to step into this role and lead an organization with such an exceptional history and passion for care and service,” McRae said. “I’m looking forward to continuing the great reputation of St. Ann’s Community, which is founded on the quality of care that we provide, caring for ‘The Most Important People on Earth.’”

As the new President & CEO, McRae will look to expand on Mullin-DiProsa’s efforts to lead the $80 million senior living community, which employs 1,200 and serves nearly 3,000 people annually.

“I look forward to joining in the dedication and enthusiasm of our employees, board members and the community, worldwide.

“Femtosecond laser surgery is designed to give us more reproducible results and less inflammation for our patients. The level of precision afforded by the laser is far better than manual surgery,” said Yousuf Khalifa, MD, a cornea specialist and associate professor of Ophthalmology. Khalifa is one of a team of surgeons who perform cataract surgeries at Flaum Eye Institute.

ST. ANN’S COMMUNITY
Michael E. McRae Assumes Role as St. Ann’s Community President and CEO

Unity Health System will launch a program that provides a central access point for people suffering from foot and ankle conditions.

Unity recently opened its Foot and Ankle Center. The first of its kind in the area, the Center was developed through a collaborative partnership among Unity medical staff, Unity Physical Therapy and community partners.

Unity’s network of specialists includes podiatrists, orthopedists, physical therapists and orthotic experts. The patient’s condition determines the appropriate action to be taken and may range from a comprehensive consultation to podiatric or orthopaedic surgery.

“We’ve thoughtfully created a better way for patients to access the right treatment team for their condition,” said Luke Loveys, MD, Chief of Orthopaedics at Unity Hospital. “Our approach is simple. One call and the patient is seen by the appropriate specialist.”

The goal of the Foot and Ankle Center is to have a Nurse Navigator guide patients smoothly through the treatment process in a manner that’s effective, efficient and ‘user friendly’. “Aligning these partners really showcases Unity’s commitment to provide the absolute best possible health care experience,” Loveys added.

Unity Opens Foot and Ankle Center

The first of its kind in Rochester, Unity’s Foot and Ankle Center provides a central access point and streamlined approach.
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