Proven Treatments for Clinical Depression

A Fresh Look at Electroconvulsive Therapy

New Study Supports Mammography Screening at 40

Sleep Apnea: What’s My Liability?
Proven Treatments for Clinical Depression
A Fresh Look at Electroconvulsive Therapy

Clinical Depression is a complex disorder to diagnose, treat and manage affecting more than 20 million Americans annually. When left untreated, it is the leading cause of suicide.

The multi-disciplinary team of experts who are part of RGH’s Behavioral Health Network shed light on the scope of clinical depression in our region and discuss the misunderstood yet highly effective modality of Electroconvulsive Treatment.

Clinical Depression is three to five times more common in the elderly than in young people. Dr. Adrian Leibovici has worked with the area’s elderly population for more than 30 years.
Welcome to the Nov/Dec Issue

For many the holidays are filled with family, friends and joyous moments but for those who suffer with a mental health disorder – this time of year may be particularly depressing.

A shocking 20 million Americans suffer from clinical depression – a non-discriminating disorder contributing to half of all suicides. As Primary Care Physicians are uniquely poised to recognize the early signs of depression with their patients, we thought it was a valuable opportunity to take a current look at the regional trends among patient groups and the various traditional and non-traditional modalities and resources available to treat area patients.

In this month’s What’s Your Liability column, Dr. James Szalados informs readers of the increasing and potential liability issues surrounding the patient with Obstructive Sleep Apnea (OSA.) Because this disorder often co-exists with other medical disorders, failure to diagnose and treat opens the door to a described “medical-legal minefield” for providers and institutions alike.

Whether through an in-depth cover story, a profile or as a contributing author, I thank you for sharing your time and expertise with all of your colleagues through the pages of Western New York Physician. We are now excepting editorial submissions and suggestions for 2012. To discuss your submission or learn about guidelines, please email Andrea Sperry @ awsperry@rochester.rr.com.

Many thanks to each of the advertisers who have continued to support Western New York Physician – it is your support that ensures that all physicians in the region benefit from this collaborative sharing of information.

In a few short weeks, Western New York Physician magazine will also be found on our companion website. We hope you will visit soon and share your feedback. www.WNYPhysician.com.

All the best,

Andrea
The breast cancer screening guidelines issued by the U.S. Preventive Services Task Force in November 2009 sparked a controversy among physicians, patient advocacy groups and the media. Much of the debate centered on the recommendation against routine annual mammography screening for women in their 40s.

“We believe this study demonstrates the importance of mammography screening for women in this age group, which is in opposition to the recommendations issued by the task force,” said Stamatia V. Destounis, MD, radiologist and managing partner of Elizabeth Wende Breast Care, LLC.

For the study, Dr. Destounis and colleagues performed a retrospective review to identify the number and type of cancers diagnosed among women between the ages of 40 and 49—with and without a family history of breast cancer—who underwent screening mammography at Elizabeth Wende Breast Care from 2000 to 2010. The researchers then compared the number of cancers, incidence of invasive disease and lymph node metastases between the two groups.

Of the 1,071 patients in the 40 – 49 age group with breast cancer, 373 were diagnosed as a result of screening. Of that 373, 39 percent had a family history of breast cancer, and 61 percent had no family history of breast cancer. In the family history group, 63.2 percent of the patients had invasive disease, and 36.8 percent had noninvasive disease. In the no family history group, 64 percent of the patients had invasive disease, and 36 percent had noninvasive disease. The respective lymph node metastatic rates were 31 percent and 29 percent.

“In the 40 – 49 age group, we found a significant rate of breast cancer and similar rates of invasive disease in women with and without family history,” Dr. Destounis said. “Additionally, we found the lymph node metastatic rate was similar.” According to Dr. Destounis, these results underscore the importance of early detection and annual screening mammography for women between the ages of 40 and 49 whether or not they have a family history of breast cancer.

Coauthors are Jenny Song, M.D., Posy Seifert, D.O., Philip Murphy, M.D., Patricia Somerville, M.D., Wende Logan-Young, M.D., Andrea Arienio, B.S., and Renee Morgan, R.T.
THE HAND IS THE MOST ACTIVE AND IMPORTANT part of the upper extremity. As a result they undergo physiological and anatomical changes associated with aging. There are several metabolic and skeletal diseases in elderly adults that contribute to impaired hand function. As we age there is a loss of muscle mass throughout the hand, which leads to the general weakness that many elderly people experience. This is most pronounced in the thumb, due to its large workload in so many everyday tasks. In addition, impairment in the microcirculation around tendons can cause difficulty with the normal gliding of the tendon, which can contribute to stiffness. A loss of water content is also a factor in the tendons ability to glide within the tendon sheath. The impairment in microcirculation around nerves as we age may account for the progressive loss of tactile sensation of the hand. This is exacerbated by local nerve compression in the hand.

Osteoarthritis throughout the joints in the hand is very common particularly at the base of the thumb. This causes pain with pinching motions and difficulty with day-to-day activities such as opening jars, doorknobs and ringing out a washcloth. There are various treatments to help combat basilar joint arthritis of the thumb including, splinting, corticosteroid injection, and as a last resort surgical reconstruction. The surgical reconstruction of basilar joint arthritis is very successful with excellent pain relief and return to normal activities in most patients in 3 months post surgery. Individual digital arthritis most often affects the small joints of the fingers. They can become deformed and are often painful however, those symptoms usually improve with time. The symptoms typically resolve because the joints begin to lose motion while still staying functional. They are not treated surgically unless the pain doesn’t improve. Cysts that arise from arthritic joints can be painful and unsightly. These can be observed or removed if they are causing significant thinning of the skin. They can potentially be aspirated providing the observance of careful sterile technique due to their relationship with the underlying joint.

Without a doubt, the most common condition seen in a hand surgeon’s office is tendonitis. Although most often associated with catching and locking of the fingers it can also be seen in the wrist. These conditions respond well to a cortisone injection or can be readily resolved with a minor surgical procedure. Trigger digits are frequently seen in diabetics whose systems are less responsive to cortisone injection and can be readily resolved with a minor surgical procedure.

Compressive neuropathies of the upper extremity are very common as we age. Carpal tunnel syndrome is the most prevalent of these nerve compression syndromes. It can be disabling with night symptoms and forearm pain as well as numbness in the thumb, index and middle fingers. Decompression of the carpal tunnel can provide excellent relief of the symptoms particularly those of forearm pain. Occasionally, the numbness is persistent due to permanent changes that have occurred in the
nerve due to long-term compression. Most patients however, recover most if not all of their sensation and are very pleased with the surgery as it is very effective at relieving night symptoms. A more successful outcome can be expected with earlier intervention. Carpal tunnel release surgery is a minor operation with excellent results and a short recovery time of 3 to 4 weeks.

Patients frequently ask if decreasing their activity level will alleviate the discomfort in their hands. More often than not I tell patients to stay as active as possible. Many of their activities can be modified to allow them to continue with less pain. As an example, patients who enjoy working out at the gym may benefit from using a padded glove while lifting weights. The extra padding takes some of the stress off of arthritic joints. Non-steroidal anti-inflammatory medications are excellent at relieving discomfort and decreasing inflammation in sore joints; allowing patients to function better and maintain their strength.

Hand therapy proves to be an excellent resource for the aging hand. We send patients for a personalized exercise program, which allows them to maintain a reasonable level of function. They can follow a home exercise program and track their progress which provides them with the feedback they need for successful hand strengthening.

Aging has a widespread effect on hand function. While all the changes are not reversible or preventable, those that can be corrected will greatly improve the quality of life for the elderly patient.

Dr. Ronchetti earned his medical degree at the University of Vermont and completed his internship and residency at the University of Rochester. He has subspecialty training in hand and upper extremity surgery from the Indiana Hand to Shoulder Center. Dr. Ronchetti is board certified in Orthopaedic Surgery and holds a Certificate of Added Qualification in surgery of the hand. He is a member of the American Academy of Orthopaedic Surgeons, American Society for Surgery of the Hand and the Monroe County Medical Society. Dr. Ronchetti is currently in private practice with Hand Surgery Associates of Rochester.
Proven Treatments for Clinical Depression

A Fresh Look at Electroconvulsive Therapy

Julie Van Benthuyzen

Clinical Depression affects nearly 12% of Americans — more than 20 million annually — and is estimated to contribute to half of all suicides. This serious mood disorder is non-discriminatory, affecting both genders, all races, incomes, ages, and ethnic and religious backgrounds. Twice as many women as men will experience at least one major depressive episode during their adult life.
Regionally, a multidisciplinary team of behavioral health professionals has broadened its treatment options in recent years for patients with Clinical Depression. As the stigma around the condition continues to diminish, more area patients are seeking therapy and even turning to more non-traditional methods for long-term treatment.

“We’ve developed a large, integrated system for treating all levels of Clinical Depression,” says Dr. Joseph Vasile, Chief of the Behavioral Health Network at Rochester General Health System. “The BHN manages almost 200,000 patient visits every year, from talk therapy to medical and surgical needs.” This includes the most acute, round-the-clock ER and in-patient care and clinical services at both RGH and Newark Wayne Hospital, drug and alcohol treatment, case management services and other longer-term programs for severe and persistent mental health issues. Patients range from children to the elderly.

**Understanding Clinical Depression**

“Clinical Depression can take on a life of its own,” says Dr. Vasile. “It affects your way of thinking. It affects who you are.” Extensive research indicates its causes are complex. Biochemical causes can occur as a result of abnormalities in the levels of certain chemicals in the brain, called neurotransmitters. In some people, depression can be traced to a single cause. In others, any number of causes can be at play or the causes never known. Genetic and environmental factors and certain personality traits can contribute to depression. Adverse life events, loss, change; lack of social support or persistent stress can cause neurotrans-
mmitter levels to become unbalanced. Pregnancy and childbirth can change hormone levels that can cause postpartum depression. “With Clinical Depression, you can’t will yourself to get better,” he says.

Children and teens are also susceptible to Clinical Depression, particularly those experiencing continual mental or emotional stress, a medical condition, recent loss, ADHD, learning or conduct disorders, substance abuse and obesity. Suicide, often stemming from depression, represents the third leading cause of death in children. “It seems to be affecting more young people these days,” says Psychiatrist Dr. Roopa Challapalli, Medical Director, Inpatient Psychiatric Unit at RGH. “They can’t perform normally in their daily lives.”

Clinical Depression is three to five times more common in the elderly than in young people. Older people are likely to have other medical illnesses like heart disease and stroke that can become an impetus for depression. Depression can become a potential side effect of medications taken to help treat those conditions. “Co-occurring illnesses can be harder to diagnose and treat in the geriatric population,” adds Psychiatrist Dr. Adrian Leibovici, who has worked with the area’s elderly population for more than 30 years.

While a striking number of cases still go undiagnosed, the majority are initially identified and addressed at the Primary Care level. That’s why collaboration between PCs and Mental Health professionals remains a critical factor in a patient’s successful treatment, say the doctors.

Combining therapy with medications is typically the best prescribed option. Since medications can affect the serotonin level and dopamine receptors differently, it can take several weeks before medications take effect. Many patients often try more than one before achieving positive results, or might require an increased dose at that point or a different medication altogether. “It’s important to get a good ‘clinical trial’ on a patient to see what works best,” says Dr. Vasile.

From his perspective, treating depression is no different than treating diabetes or heart disease. Compliance with medications and incorporating changes in lifestyle can help patients respond successfully to any of these conditions. “With depression, most medications work well and are well-tolerated, although some do have side effects both good and bad,” he says. “Some side effects actually benefit patients. Insomniac’s might be prescribed a depression medication that makes them sleep better, while still treating the underlying condition.”

While he doesn’t give guarantees, Dr. Vasile says the ability to treat depression is on par with treating many other illnesses. “Help is available for patients to get better in a safe and effective way, whether it’s through talk therapy, cognitive behavioral therapies, medications or more non-traditional methods.”

Primary Care physicians need to know what to look for to determine the potential severity of the case, he adds. “There are subsets of depression that include suicidal ideation, psychosis, delusional thinking, and manic-depressive behavior, where patients really need to be referred to a psychiatrist immediately for more involved intervention.”

**Managing Through Partnership**

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**Non-Traditional Electroconvulsive Therapy**

For those more extreme cases, intervention can mean a visit to the OR. A growing number of patients are being successfully treated at RGH through a non-traditional approach that’s been around for 60 years. Doctors there are finding better results using Electroconvulsive Therapy (ECT) for patients who haven’t responded favorably to traditional therapy and medication. ECT is a procedure in which a brief application of electric...
stimulus to the brain is used to produce a generalized seizure.

“It’s the single most effective treatment for severe depression,” says Dr. Vasile. While it’s not considered a curative treatment, it typically can terminate the worst depression at least, adds Dr. Leivobici. “In the most dramatic cases, ECT is life saving.”

As far back as the 1940’s, ECT treatments were administered to people with severe mental illnesses. It was actually discovered by serendipity, says Dr. Leibovici, when doctors noted that epileptic patients in psychiatric hospitals became very serene after a seizure. They hypothesized that by applying a similar electric stimulation to the brains of their severely depressed patients, it might improve their state of mind. Unfortunately, ECT’s reputation has suffered since those early beginnings. The misuse of equipment, ill-trained staff, incorrect and unsafe methods of administration, persistent memory loss, and transient post-treatment confusion have all contributed to its stigma.

“It’s a misunderstood modality, and its effectiveness has been distorted,” says Dr. Vasile. Today, ECT is performed in a far safer environment with the use of anesthesia. Treatments are performed in RGH’s ECT Suite under controlled conditions between the psychiatrist, nurse and anesthesiologist. The state-of-the-art Thymatron System provides an ultra-brief pulse to a more targeted area of the patient’s brain with the least cognitive disturbance. So while the patient still experiences a seizure, its duration and the amount of electricity administered is far less.

At RGH alone, up to 3,000 procedures are performed annually, and the numbers continue to rise. In these severe cases, doctors there work closely with the patient and patient’s family to discuss ECT when all other treatment options have failed. “The good part is, families are generally agreeable to discussing ECT, its risks and its benefits. We give them lots of examples of successful ECT treatment, and we offer them the opportunity to talk with someone who has had ECT,” says Dr. Challapalli. Patients are given a complete medical exam including a history, physical, neurological exam, EKG and laboratory test to determine their eligibility. Medications are noted and monitored closely, particularly with cardiac conditions and hypertension. Karen Joyce, RN, helps prepare patients for ECT by educating them on what to expect from the convulsive episode they will briefly undergo.

Prior to the actual treatment, the patient provides written consent, and is given general anesthesia. Electrodes are then attached to the scalp and an electric current is applied which causes a brief convulsion. Minutes later, the patient awakens confused and without memory of events surrounding the treatment. The ECT is usually repeated three times a week for approximately one month. If improvement occurs, treatments are tapered off. It’s often recommended that patients maintain a regimen of medication after the ECT treatments to reduce the chance of relapse.

Doctors Challapalli and Leibovici, both fellowship trained in geriatric psychiatry, learned ECT decades ago and have remained primarily involved with in-patient care with those ranging from the acutely suicidal to patients experiencing certain schizophrenic syndromes. “Patients far from baseline are brought to the ER immediately,” says Dr. Challapalli. Early in her training, she worked with University of Chicago ECT pioneers, where she had an opportunity to observe the procedure within a tertiary hospital setting with catatonic and psychotic patients who hadn’t responded to other treatments

“It’s like a reboot,” adds Dr. Vasile. “Many of our patients swear by it, and will gladly undergo further treatments if necessary. At the conclusion of treatment, they often ask what all the fuss was about.”

After six to twelve treatments over a two to six week time period, the effects are more lasting. “We can see striking differences in our patients. There’s less confusion immediately after the procedure now, although the short-term memory loss can persist,” says Dr. Challapalli.
She is enthusiastic about the notable growth in outpatient ECT therapy because of the specific safety measures now in place and more convenience to patients. “Having ECT is not necessarily a reason to hospitalize someone, unless it’s more risky for a geriatric patient or requires a special kind of care,” she says. “The recovery time for ECT has greatly improved. Patients can’t go back to work the same day, be left alone or drive a car, but they function better more quickly than in the past.” Some have been treated once a week for 15 years or more. Others might come for a year and that’s enough for the improvement to remain steady, she says.

ECT is administered to an estimated 100,000 people a year, primarily in general hospital psychiatric units and in psychiatric hospitals. As the country’s demographics have changed, the “typical” ECT patient profile has changed from primarily low-income males under 40, to include a growing number of middle-income women over 65.

**The Promise of New Treatments**

Continuous research is leading to other forms of therapy and new medications on the horizon. Some doctors are trying less invasive means than ECT to treat their patients, using magnets that target specific areas of the brain. By creating a strong enough magnetic field to create a small electrical current, they can target the patient’s brain in a more precise manner, without the need for anesthesia. “While this doesn’t come close to ECT in terms of efficacy, it has been show to work with some patients,” says Dr. Leibovici.

With greater public awareness, the doctors at RGH are encouraged that more Americans will receive diagnosis and get the help they need. Insurance companies are providing greater support for therapies like ECT. “Our patients have had many positive experiences,” says Dr. Challapalli. “Our community needs to hear about its benefits from professionals available right here in Rochester.” While RGH receives mostly psychiatric referrals for its ECT procedures, the doctors hope to see more referrals coming from PCS, who often serve as the gatekeeper to a patient’s overall medical care. “As only three of a handful of local psychiatrists who are trained to perform ECTs,” she says, “we can be an important community resource.”

“This affects a small minority of our local population,” adds Dr. Leivobici, “but for those who get the treatment, it makes all the difference in the world.”

“Continuous research is leading to other forms of therapy and new medications on the horizon.”

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Dr. Roopa Challapalli, Medical Director, Inpatient Psychiatric Unit at RGH is enthusiastic about the notable growth in outpatient ECT therapy because of the specific safety measures now in place. Approximately 3,000 procedures are performed annually at RGH and the numbers continue to rise.
How To Make Sense out of The PSA Screening Controversy

By now most health care providers in the US are aware of the controversy regarding routine screening for prostate cancer (PrCa). It is impossible to pick up a newspaper, watch TV, browse the web, or even read our own medical journals without hearing about it. The differing recommendations put forth by the US Preventive Services Task Force (USPSTF), and other medical organizations and advocacy groups, most notably the American Urological Association (AUA) leave our patients wondering what to believe and what to do with regard to their own health care. Last month the USPSTF published its recommendation against PSA screening for any men in the US (their previous recommendation applied to men over 75). This new recommendation was based on 7-year interim follow up data from a study funded by the National Cancer Institute, the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial which compared two groups each with about 38,350 men, one screened frequently for prostate cancer with an annual PSA test for 6 years and a yearly rectal exam for 4 years. The control group had “the usual care” meaning that about half of the control group was also getting periodically screened for prostate cancer with either a DRE, PSA, or both (N Engl J Med 2009; 360:1310-1319).

The study concluded that more intense PSA screening increases the detection of prostate cancers but that there was not a statistically significant difference between the two groups in terms of prostate cancer specific mortality. Critics of this study (as well as the authors of the study) cite the obvious issue that 7 years is simply not long enough follow up for a prostate cancer study which uses cancer specific mortality as its main endpoint because PrCa is generally (but not always) a slower growing type of cancer. Most prostate cancer experts would prefer follow up of 10 to 15 years for a study like this. Out of the 76,693 men in the study, only 1 tenth of 1% (94 patients total) actually died of prostate cancer in the first 7 years making it difficult to make any conclusion at all about differences in mortality between the two study groups. Additionally, about half of the subjects in the “control” group actually did undergo prostate cancer screening during the study period. This is a very significant form of contamination that would obviously diminish the relative detected benefit of screening when comparing the two groups.

Despite these very serious flaws with the PLCO trial, the USPSTF is citing it as the rationale for its determination that there is moderate or high certainty that routine PSA screening provides men with no benefit. This seems like a tall claim to make given the PLCO trial’s shortfalls; however the study did highlight a very important issue: that widespread use of prostate cancer screening and subsequent treatment of clinically insignificant forms of prostate cancer may be doing more harm than good for a large number of patients. Recently, the interim results of an important study; the Prostate Cancer Intervention Versus Observation Trial (PIVOT) clearly showed that it is safe to ac-
tively monitor highly selected patients with low grade prostate cancer (Plenary Session of the American Urological Association 2011 Annual Meeting; May 17, 2011). At the same time, this study also suggests that treatment in the form of radical prostatectomy does reduce mortality in men with intermediate and high-grade prostate cancer. These findings have also been demonstrated in a separate study from Sweden (JNCI J Natl Cancer Inst (2010) 102 (13): 950-958). Hence, the real issue at hand is not whether or not to screen men with greater than 10 years of life expectancy for prostate cancer. Prostate cancer can be a lethal disease and there is no doubt that our best chances of curing patients is to detect the disease early. Since the advent of PSA screening there has been a 40% reduction in the PrCa specific mortality rate in the US. With that said, there is no doubt that overuse of the PSA test has lead to overdetection and that since 90% of men diagnosed with prostate cancer are subsequently treated, the risk overtreatment and subsequent exposure to complications of treatment are significant.

The decision whether or not to screen a patient should be based on:

- A life expectancy of at least 10 years.
- Any known risk factors including a family history of PrCa,
- Ethnicity/Race.
- Other factors such as rectal exam findings, prior PSA history,
- and prior prostate biopsy results.

The American Urological Association (AUA) recommends that the risks of overdetection and overtreatment should be included in discussions with patients about screening. Knowing whether or not they have prostate cancer gives men the power to make important decisions regarding their healthcare and plan for the future. It is simply not possible given the current limitations of our screening methods, to make broad sweeping blanket recommendations regarding PSA screening. As responsible physicians it is our duty to educate our patients about their unique attributes that determine individual risk and help them determine whether or not they should be screened (and more importantly whether they should be treated) for prostate cancer.

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Imagine a life that revolves around where the nearest bathroom is located or having a disease that limits or prevents the ability to work, have a family or even go camping. More than one million people in the U.S. have to think about issues that those of us without Crohn’s Disease (CD) take for granted.

**What is CD?**
CD is a chronic inflammatory condition of the intestines that can affect numerous parts of the gastrointestinal tract (GI) from the mouth to the anus and cause a wide array of symptoms - a condition for which there is currently no cure. It’s characterized by periods of improvement followed by episodes when symptoms flare up.

Since CD can affect any site along the entire GI tract, the disease may go by other names, which indicate where the diseased portion of the intestines is located. For example, it’s commonly located in the ileum where it is referred to as ileitis, crohn’s ileitis, regional enteritis or terminal ileitis; if it involves the ileum and the colon, it is referred to as ileocolitis. When it is in the stomach or the first few loops of the intestine, it’s known as gastroduodenal crohn’s disease and when residing in the colon, its know as crohn’s colitis. Another term for the disease is granulomatous ileitis or enteritis.

**What causes CD?**
Although there are many theories, the exact cause of CD is unknown. Many scientists believe CD is caused by three factors: Immune system problems, genetics and environmental factors.

**Symptoms of CD**
Patients experience a variety of symptoms as a result of CD correlating with the locale of the inflammation.

**GI** - Abdominal pain, usually accompanied by diarrhea. Some patients report defecating 20-25 times a day. Perianal discomfort is also a GI symptom that may include itchiness or pain around the anus, anal fissure, or fistulation or abscess around the anus.

**SYSTEMIC** - Symptoms may include high fevers, weight loss, or anorexia

**EXTRAI NTESTINAL** - Arthritis and arthralgia are common among CD patients. Blood, skin and the endocrine system can also be affected. Erythema Nodosum, Pyoderma Gangrenosum and Aphthous Ulcers are all clinical manifestations that can show up on the skin causing pain and embarrassment.

**The Challenge in Diagnosis**
Many symptoms over-lap with other disorders of the bowel such as ulcerative colitis (UC). This may explain why many patients experience vague symptoms like fatigue, abdominal pain and fever for years prior to the diagnosis of CD. Typical onset is between 15 and 30 years of age, but can occur at any age. Although many symptoms of Inflammatory Bowel Diseases (IBD), crohn’s and ulcerative colitis may be similar, the pattern each forms in the digestive tract is very distinct.

**Diagnosis** begins with a thorough medical history and physical exam along with a series of tests. Including:

- Blood and stool samples
- X-Rays/CT and MRI scans
- Colonoscopy with biopsies
- Flexible sigmoidoscopy
- Barium enema (lower GI)
- Barium swallow (upper GI)
- Capsule endoscopy
Due to the scope of the pathology and the latent diagnosis of this disease, the pattern of inflammation found on colonoscopy is by far the most pathognomonic for CD. During testing, the colon revealing CD activity will most likely show thickened and intermittent patterning of diseased and healthy tissue, which may have a “cobblestone” appearance. Just as a contrast, in UC the inflammation pattern tends to be continuous throughout the inflamed areas and will not show patches of healthy tissue. Another good indicator that CD is the correct diagnosis is when granulomas are found in the biopsy tissue.

**CD Treatment and Management**

There are many different thoughts on how to treat CD and the debilitating symptoms that afflict its patients. Lifestyle changes such as smoking cessation, eating small portions of food, regular exercises and getting adequate sleep are a few of the recommendations doctors may suggest. Medications like 5 aminosalicylates, immunosuppressants, biologic response modifiers, antibiotics, and prednisone are very common for treating CD. Surgery, although not used as a curative, can be used when partial or full blockage of the intestine occurs. Surgery may also be required for complications such as obstructions, fistulas and or abscesses or if the disease does not respond to drugs.

Acupuncture, Hyperbaric Oxygen Therapy, Far-Infrared Light treatments, Homeopathy, Probiotics, Nutrition Response Testing and Ayurvedic medicine are some of the few Alternative or Complementary treatments that are on the rise and available for patients to either add to their traditional care or use as their only source of healing.

**A New Face for CD?**

As mentioned earlier, abnormalities in the immune system have often been invoked as being causes of CD. This means that the inflammation associated with CD is thought to arise from an over activation of T-helper cells and associated elevations in inflammatory cytokines including tumor necrosis factor-alpha, interferon-gamma, and interleukin 2. CD is thought to be an autoimmune disease.

The Center for Clinical Research at RGH and Dr. Kevin Casey have recently initiated a Phase 2A, Randomized, Double-Blind, Placebo-Controlled trial with Celgene Cellular Therapeutics. This trial is based on the above scientific view. The primary objective of the study is to estimate the treatment effect of PDA001 (the study treatment) versus placebo in subjects with moderate-to-severe CD who are refractory to one or more protocol specific CD treatments (oral corticosteroids, immunosuppressants or biologic agents). RGH is one of only 17 sites in the US and Canada chosen to do participate in this trial. This is RGH’s second trial using stem cells to treat CD.

According to Dr. Robert Hariri, MD, CEO of Celgene, PDA001 is characterized as a cellular immune modulatory agent with therapeutic potential. PDA001 is a mesenchymal-like cell population derived from normal, full-term human placental tissue. PDA001 suppresses T-cell proliferation when the T-cells are activated. In vitro and phase I results indicate that PDA001 can modulate some of the cellular immune and cytokine abnormalities involved in the pathogenesis. Dr. Hariri states “in our earlier phase study we have seen remission among four patients in the low dose group.”

The study has three dosing arms: placebo, low dose (200 million cells) and high dose (800 million cells). All patients undergo an induction phase of 12 weeks followed by an extension or follow-up phase of approximately 2 years. Within this time period, the patient has the potential of receiving 4 or more infusions and is guaranteed to get a dose of PDA001.

The traditional treatment for CD has focused on non-specific anti-inflammatory or immunosuppressive agents. Unfortunately, a considerable number of patients develop intolerable side effects or become unresponsive to therapy. The first trial conducted over two years ago by The Center for Clinical Research resulted in no serious adverse events related to the stem cells. Although the trial is still being conducted and proof of efficacy has not yet been established, we are encouraged to see the continued benefit of the potential these cells have in suppressing inflammatory properties and regenerating injured tissue.

**A Take Away Thought**

While there is no known cure for CD, the researchers at The Center for Clinical Research at RGH stand at the very edge of discovery. They remain dedicated to developing advanced therapies for this debilitating disease that will eliminate the severe side effects of traditional medications. When patients are empowered with the knowledge of other promising options available to them, they hold the hope of a dramatically improved quality of life.

If you have a patient, friend or family member with CD and feel they might be a candidate for the Celgene trial, please call The Center for Clinical Research at Rochester General Hospital 585-922-3639.
The health benefits of red wine started being taken seriously after several scientific studies in the 1990’s reported that in spite of having similar intakes of animal fats, French people have half the coronary heart disease death rate when compared to Americans. This “French Paradox,” a term coined by Dr. Serge Renaud, a scientist from Bordeaux University in France, has been attributed to the very high intake of red wine by the French. Sharing similar lifestyle and cultural habits, the Italian’s are seen to enjoy many of the same health benefits as their French neighbors.

In September, a team of wine experts from Lisa’s Liquor Barn traveled to Sicily to visit wineries, to sample the region’s food and to enjoy the rich history of the island. This brief article summarizes their general observations regarding the French (and Italian) Paradox and shares some of their notes and recommendations on Sicilian wineries and specific wines.

**The French (Italian) Paradox**

**A View from Sicily**

par-ə-do克斯/ par däks/ noun: The paradox that France enjoys a relatively low incidence of coronary heart disease and a relatively long lifespan, despite a diet high in saturated fats. The explanations proposed include the consumption of wine, specifically red wine, alcohol, and resveratrol, an antioxidant in wine.

**Observations**

- **A** Obesity in Southern Italy is not a problem. The inhabitants seem to walk more, buy their groceries more frequently and adults drink wine to accompany meals. We did not observe fast food restaurants on our route (Massena, Syracuse and Palermo).

- **B** Bread, cheese and pasta are consumed on a daily basis but use olive oil in lieu of butter.

- **C** Sundays are spent with family involving a leisurely and communal meal.

- **D** They consume smaller portions. In the U.S, for example, many people gravitate to the restaurant that piles it high on the plate. We did encounter many Gelato ice cream outlets but the serving sizes were much smaller than American establishments (no triple scoops).

In summary, we are wine merchants, not physicians or dieticians. But our observations led us to the following conclusion: moderate consumption of food and wine is a healthy balance. Also the interaction with family (particularly on Sundays) is important. It all gets back to common sense.

Now, on to our Sicilian wine notes/recommendations/food pairings of the two wineries visited, **Benanti and Rapitala**.
The Benanti Winery

Vineyards are on the slopes of Mt. Etna, where smoke still emits from the cone. The wines benefit from the proximity of the sea and the super rich volcanic soil. On some days the inhabitants cover their vehicles and employ umbrellas to deflect the volcanic ash. Two wines were highly recommended:

This was LeeAnn and Pat’s favorite red - they rated it as 91-92 pts.
Climate: High rainfall and humidity with great temperature changes throughout the day.
Terrain: Sandy, volcanic, rich in minerals.
Grape Varieties: Negrello Maccalese & Nerello Cappuccio
Age of vineyards: Over 100 Years
Characteristics: Deep ruby color with intense notes of vanilla and ripe fruit.
Superbly structured with an elegant robust taste of ripe black cherries and black currants.
Alcohol content: 13%
Food Pairing: Red meats (particularly ribeye steak) and mature cheese.

This wine was LeeAnn’s favorite- she rated it a solid 90.
Climate: High rainfall and humidity with great temperature changes throughout the day.
Grape: 100% Carricante
Characteristics: Pale yellowish with bright greenish tints. The nose is intense, rich, yet delicately fruity with hints of ripe apple. The taste is dry with pleasant acidic and delightful aromatic persistence.
Food Pairing: Grilled chicken, lobster or sea bass. It is also perfect alone or with light cheese.

The Rapitala Winery

Rapitala translates “Beautiful garden of Allah,” a reminder that Sicily was once occupied by the Arabs. It is located in the northwest corner of the Island. The vineyards and winery are owned by a French count and his Sicilian wife (from a prominent winemaking family). The wines are bold and reflect a marriage of cultures, marked by French elegance, finesse, Sicilian passion and soul. The winery produces 13 wine varietals. We believe that Rapitala will become a very popular wine in the U.S. over the next decade. Here are two wines that reflect that quality and potential.

1. Rapitala Grillo Bianco 2010 ($11.99)
This was Pat’s favorite- he rated it at 92pts.
Climate: Vineyard parcels are 900 and 1300 feet above sea level and caressed by cool Mediterranean winds with moderate rainfall.
Terrain: Soils are clay, small pebbles and sand.
Grape Varietal: 100% Grillo
Characteristics: Golden yellow/green with light aroma of herb, floral and citrus notes.
Light and crisp on the palate with a clean refreshing finish.
Alcohol Content: 13%
Food Pairing: Excellent choice with light pastas, grilled vegetables, shellfish and grilled white meats.

2. Rapitala Alto Nero D’Avola 2008 ($27.99)
Nero D’Avola is the primary red grape of Sicily. Ernesto rated this stunning wine at 95pts.
Climate: Dry. Vineyard is sourced from a single high elevation location (1300 to 1700 ft. elevation).
Terrain: Dry and steep forcing the vines to dig deep to acquire water and nutrients in the barren soil.
Grape Variety: 100% Nero D’Avola.
Age of Vineyard: 10 years.
Characteristics: Deep ruby color with generous bouquet of ripe red fruit and vanilla. The wine is deeply structured. It’s full, round delicious flavor develops into a spicy, intense crimson finish that is stunning.
Alcohol content: 14%
Food Pairing: Lasagna, roasts/red meats accompanied by delicate sauces, creamy cheese and soufflés.
Future “Practices”

Change is the law of life. And those who look only to the past or present are certain to miss the future. ~John F. Kennedy

70 Million Baby Boomers are aging. There will be unprecedented demand for health care, you are facing declining reimbursement, increasing regulatory oversight and there is a limited supply of physicians. The combination of these events coupled with the Patient Protection and Affordable Care Act (ACA) of 2010 is creating the perfect storm. One of the main components of the ACA is the provision to expand Medicaid eligibility and the mandate for employers with more than 50 employees to offer health insurance for full time workers. These provisions will ultimately allow 30 million uninsured Americans to get health insurance. Given these circumstances, have you planned on positioning your practice for future success? While I don’t have a crystal ball, I will offer you a few points to ponder nonetheless.

Since it is predicted that patient demand will outpace supply, it may be easier for a practice to select a contract as a participating provider with commercial insurers. Ultimately, this may result in fewer disallowed claims and higher reimbursement levels. Therefore, you may have a unique opportunity to negotiate increased payments and/or rebalance the payer mix when it’s time to negotiate. Time will tell.

Since there is a national shortage of primary care physicians and this trend is expected to continue, consideration, by some practitioners, is being given to forgo traditional insurance payments and become a concierge practice. This may allow physicians to set their price, select their patients and not have to deal with any reimbursement issues since the practice base will be all private payers. The economic law of supply and demand has a unique way of creating different opportunities as well as challenges, depending on if you are delivering patient care or in need of care, respectively.

With these impeding changes, physicians, medical practice executives and staff must not only prepare for but foster dynamic change in methods and processes in order to remain profitable. Successful practices will need to achieve improvements in productivity, process enhancements, effectively apply technology and make the best use of staffing. The current extraordinary environment calls for dynamic change. This type of change is being defined as revolutionary rather than evolutionary. The areas to consider are revenue enhancement tactics and expense reduction strategies.

Revenue is a function of volume. In terms of revenue enhancement there is only so much or so many patients a physician can see in a day while delivering quality care. So what are some of the alternatives in increasing your top line to consider? First, consider a coding and documentation review. So many practices leave large amounts of dollars on the table which is rightfully theirs because of errors in this process. A coding and documentation review will allow you to see where there is opportunity. Consideration should be given to implementing and promoting new services. Many dermatology practices today offer laser hair removal as an ancillary service and revenue generator. Scheduling and productivity is yet another area to consider. Has consideration been given to exam/procedure room turn around? What have you done to eliminate the impact of “no shows”? The result
practices have implemented an EMR system, I would argue your practice is not using it to its full potential. EMR systems need constant monitoring as well as staff training to assure that it is being used efficiently and effectively. Most practices have the system implemented and were provided initial training, but do not consider having additional training or an independent assessment as to how it is operating. If you don’t believe you are fully utilizing your EMR system, then take the measures necessary to ensure you are.

Those healthcare professionals who do not modify their practices to the transforming healthcare system should carefully consider the words of JFK.

Most practices operate at relatively predictable overhead levels. If you are like most practices your biggest expenses are wages and benefits, occupancy, medical supplies and insurance. So if you are running as lean as you can, where can you still find savings? First consider your staffing complement. Utilize your staff as best as possible to make you as efficient as possible. A good office staff will allow you to move from patient to patient easily throughout the day minimizing downtime. If you have lower rated staff you may want to consider upgrading those positions. The outcome should allow you, as well as other staff members, to be more productive. Make the most efficient use of technology and make sure the entire practice is using it to its utmost potential.

In today’s environment, physician practices must both expect and prepare for constant change. Process improvement, staffing and job design, and the effective use of technology may ensure practices to prosper. Those healthcare professionals who do not modify their practices to the transforming healthcare system should carefully consider the words of JFK.

Steven M. Terrigino CPA
Steven is a Certified Public Accountant and a Partner at The Bonadio Group based in Rochester, NY. He concentrates his practice on physicians and physician practice groups with respect to accounting, tax and consulting related matters. He may be contacted at sterri-gino@bonadio.com or at 585-381-1000.
What is My Liability?

SLEEP APNEA

Issue

Sleep apnea represents a clinical syndrome characterized by repetitive episodes of apnea during sleep and one of a class of sleep-related breathing disorders. Obstructive Sleep Apnea (OSA) is characterized by recurrent episodes of airway obstruction precipitated by intermittent collapse of the upper airway during sleep, causing periods of hypoxemia, hypercarbia, and cardiovascular stress. OSA is heavily associated with other medical conditions such as atherosclerotic heart disease, heart failure, chronic fatigue, and stroke. The manifestations of OSA include excessive daytime sleepiness and fatigue, impaired concentration, and spontaneous violence (automatism). This patient population is exquisitely sensitive to the central nervous depressant effects of alcohol, opiates, anesthetics, and benzodiazepines. Thus, it should be apparent that the medical care of the patient with OSA represents an example of a medical-legal minefield with associated potential for increased liability.

It is estimated that approximately 24% of all males and 9% of all females have some form of OSA and all age groups are affected. In the obese with BMI ≥ 30, the prevalence of OSA approximates 40% and in those with a BMI ≥ 40 the prevalence rises to 98%. Furthermore, an estimated 80% to 90% of patients with OSA remain undiagnosed, under-estimating the actual prevalence of OSA and also increasing the challenges unique to this patient population.

Primary care physicians (PCP) must maintain a high index of suspicion for OSA in those patients who present with the typical symptomatology or body habitus profile. It is a widely accepted legal doctrine that ‘failure to diagnose’ results in ‘failure to treat’ and the now widespread availability of sleep testing centers has greatly facilitated diagnosis of OSA. The chronic morbidity associated with OSA underscores the need for diagnosis and early therapeutic intervention. Moreover, there is increased data supporting not only an association but also a causal link between OSA and cardiovascular disease. Man and Sin opined in the November 2011 issue of Circulation, that, since sleep disordered breathing is recognized to promote cardiopulmonary stress and intermittent hypoxia, OSA may be causally linked to atherosclerosis and cardiac failure.

The PCP and sleep specialist share the potential liability for a ‘duty to warn’ under the “Tarasoff Doctrine”. In Tarasoff a patient confided in his psychotherapist that he intended to kill his girlfriend and the therapist did not warn the potential victim; when the patient subsequently carried out his intention, the therapist was held liable for breach of a duty to warn. The duty to warn has increasingly been applied to a duty to counsel patients and third parties about the side effects of medications. With OSA, harm to self and others can take the form of violent behaviors during sleep or from sleep arousal, or, errors in judgment and impaired motor skills due to excessive daytime sleepiness.
Motor vehicle accidents and industrial accidents represent the majority of deaths and injuries due to sleep disorders. Errors in judgment and mental capacity also lead to significant workplace dysfunctionality. Patients with OSA are 2 - 3.6 times as likely as others to be involved in a motor-vehicle accident (MVA), a statistic which applies to both private and commercial drivers. The potential for harm becomes more apparent when we consider that 24 – 60% of the 10 million commercial drivers in the U.S. may suffer from OSA. Since, in such cases, both patients and the public are at risk for harm, and employers have a vicarious financial liability, appropriate diagnosis, counseling, and documentation may mitigate legal risk. Lastly, medical practitioners may need to advocate on behalf of patients or employers for disability benefits related to OSA.

The perioperative care of patients with OSA represents perhaps the highest legal risk for providers and institutions. Those caring for patients with OSA must recognize that patients with sleep apnea are very sensitive to even minimal levels of sedation. The key concerns in surgical patients with OSA include early and high-grade upper-airway obstruction with procedural sedation or anesthesia induction, difficult tracheal intubation, and increased postoperative respiratory depression with a resultant very high risk for subsequent anoxic brain injury. The standards of care are relatively well-defined: cautiously titrated medication dosing, continuous monitoring of oxygenation and ventilation, and use of prescribed home CPAP (continuous positive airway pressure) therapy. Protocols should guide the management of patients with OSA. Failure to communicate among providers and failure to monitor and treat perioperative patients in conformity with published standards has resulted in large settlements and judgments against both individuals and institutions.

In conclusion, the treatment of patients with OSA is one area in which both the science and the standards of care have evolved rapidly. The prevalence of OSA is both significant and increasing, the associated morbidity and economic burden is substantial, and there is an ability to non-invasively and easily diagnose the condition, and multimodal treatment options are available. Therefore a failure to recognize OSA and take appropriate measures to keep patients and the public safe are associated with increasing legal liability.

Dr. Szalados is a licensed physician engaged in the practice of anesthesiology and critical care; a senior-level hospital administrator, and an attorney admitted to the practice of Law in New York and concentrates his practice in the areas of Health Law.
The team, headed by Burns C. Blaxall, PhD, Harris A. “Handy” Gelbard, MD, PhD, and Stephen Dewhurst, PhD, recently won the largest grant awarded to date by the University’s Clinical and Translational Science Institute (CTSI) – $250,000 over two years. The grant, part of the CTSI’s newly initiated Incubator Program, is larger than most awarded by the Medical Center.

“The brain and the heart are two completely different systems that are rarely considered to have biological, or emotional, overlap,” said Blaxall, lead researcher for the new study and an associate professor within the Aab Cardiovascular Research Institute at the Medical Center. “We may find that they are not so different after all.”

The unique investigation stems from years of research by Gelbard, a neurologist, and Dewhurst, a microbiologist and immunologist, to develop the world’s first treatment designed to prevent dementia commonly associated with HIV infection. They have already created a compound that shows great promise in the laboratory and works by blocking an enzyme known as MLK3, which plays a key role in the inflammatory process.

In patients with HIV-associated dementia, excess inflammation – a byproduct of the body’s natural attempt to protect itself from the virus – damages healthy brain cells and leads to cognitive difficulties. Excess inflammation is also a hallmark of heart failure: Tissue damage from a heart attack, for example, ignites an inflammatory response to guide repair, but if the response is too strong, “inflammation overload” leads to scarring that hinders the heart’s ability to pump blood throughout the body.

Given Gelbard and Dewhurst’s understanding of MLK3, and Blaxall’s expertise in the molecular mechanisms underlying heart failure, they joined forces to study if the enzyme plays a role in the disease. According to Gelbard, who heads the Center for Neural Development and Disease at the Medical Center, “This is a great example of how one area of research can really help inform another.”

Their preliminary studies of cardiac cells suggest that, in fact, MLK3 is involved in the inflammation and scarring characteristic of heart failure. Even more exciting is research showing that a compound very similar to the MLK3 inhibitor in development for HIV-associated dementia slowed the progression of heart failure.

The Rochester team is working in close collaboration with Val S. Goodfellow, PhD, CEO of biotechnology company Califia Bio Inc., in the ongoing identification and development of a range of MLK3 inhibitor compounds.

“The idea that MLK3 inhibitors could have an impact in treating dementia, but also in treating heart failure, bridges very prevalent, very bad diseases that we need better treatments for,” noted Randy N. Rosier, M.D., Ph.D., co-director of the Pilot and Collaborative Studies Key Function within the CTSI who, along with fellow co-director Richard T. Moxley, M.D., selected the Blaxall/Gelbard/Dewhurst team to receive the Incubator grant. “We are extremely enthusiastic about this collaboration and think it has great potential to bring in additional funding from outside the University and birth even bigger, longstanding research programs here.”

In addition to attracting new funding, the Incubator Program represents an important investment in the University’s future by involving students and young investigators in the translational research process. Blaxall’s team, which also includes Sanjay B. Maggirwar, PhD, will mentor four trainees as part of the grant.

As for the current research, Gelbard says that while HIV-associated dementia is a very important problem, and one that he’s focused his entire career on, it is still a small part of the health care universe. “If our work ultimately leads to a potential therapy for heart failure the implications of that are far larger. That would be a wonderful piece of serendipity.”
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Falls Prevention

One area of particular focus for HCR Cares is the prevention of falls among older individuals. According to the Centers for Disease Control and Prevention (CDC), an older adult is treated in a hospital emergency room for a fall every 18 seconds. Every 35 minutes an older adult dies as a result of a fall-related injury. Statistics on the costs of falls are also alarming:

- Fall-related injuries for those over 65 cost over $19 billion annually.
- In New York State, about 1.7% of people age 65 and older, or more than 42,000 people, were hospitalized through the ER because of a fall.
- If the current rate of falls among seniors is not reduced, fall-related treatment costs will reach $43.8 billion annually by 2020, according to estimates by the CDC.

HCR Cares has developed a free, easy-to-use risk assessment and prevention brochure, which is available at locations throughout the greater Rochester area, or can be downloaded by clicking here.

Sex Hormone Behind Age-Related Weight Gain

That women gain weight as they grow older is no secret. But now a new study has identified the unsuspected role of sex hormone estrogen in those burgeoning waistlines.

Researchers have traced hormonal effects on metabolism to different parts of the brain.

The findings may lead to the development of highly selective hormone replacement therapies that could be used to combat obesity or infertility in women without the risks for heart disease and breast cancer, the researchers say.

“When women approach menopause, they gain weight in fat and their energy expenditure goes down,” said Deborah Clegg of the University of Texas Southwestern Medical Center.

Estrogen levels decline and women grow increasingly susceptible to obesity and metabolic syndrome.

Estrogen acts on receptors found throughout the body, in fat, on ovaries and in muscle. But when it comes to the hormone’s influence on metabolism, Clegg suspected receptors in the brain.

Others had traced the effects of estrogen on energy balance specifically to estrogen receptor-a (ERa). When her team deleted those receptors from the entire brains of mice, “we got very, very fat mice,” Clegg said. The animals consumed more calories and burned less.

The study has been published in the journal Cell Metabolism.

URMC Receives Patent for Implantable Diagnostic Technology

URMC has received a U.S. patent for a medical device technology that could revolutionize the way that physician's monitor the health of their patients. The device – which consists of an implantable “living chip” – is designed to give doctors real time information on their patients’ health and, more importantly, alert them to a change in their condition.

The technology consists of a chip that holds the potential to identify – faster and more accurately – physiologic and chemical changes in the body. This personalized-medicine technology uses live cells, which are engineered to live in and function as part of the miniature electronic chip. A wireless biosensor is placed with in and around blood vessels and nerves to monitor surrounding tissues or organ systems and detect changes, which then triggers a message to a wireless device to alert the patient – or their physician – early on about a problem.

The potential application of the technology is extensive. The bio-chip could be used in patients with heart failure to detect changes in blood protein levels at an early stage, prompting the physician to alter medications to correct the problem. Currently, the patient or physician would not suspect a problem until the patient began having symptoms or underwent pre-scheduled testing at a routine visit. Catching the problem earlier...
means the patient remains healthier and diminishes the chance of hospitalization.

The device could also be used by researchers to monitor the effectiveness and safety of experimental drugs or to command other implanted devices – such as a wireless defibrillator/pacemaker or insulin pumps – by identifying abnormalities and prompting corrective action.

“This technology has the potential to make dramatic changes to how we practice medicine,” said Spencer Rosero, MD, the URMC cardiologist who developed the technology behind the device. In 2005, Rosero founded Physiologic Communications and the company currently holds the URMC license for the technology.

As expected, the launch of the EMR system went smoothly with hospital officials crediting the vast amount of time and team member efforts dedicated to planning, training and testing.

The transition to Electronic Medical Records is just the beginning. Over the next two years, the 65-million dollar project will convert the entire RGHS System from a combination of independent paper-based and computer-based patient record systems to a single, fully-integrated electronic system that will significantly enhance quality and patient safety as well as the efficiency and effectiveness of care provided to all patients.

Protecting patient confidentiality is a major component of the Care Connect system. All of the data in the EMR is encrypted and password protected, so access to a patient’s information is strictly limited only to those who are authorized.

In addition, RGHS is partnering with many community physicians to assure they have, with the patient’s explicit permission, access to the patient’s most up-to-date records to further improve clinical outcomes and quality of care. And because other hospitals in Rochester are also moving to electronic medical record technology, sharing of patient information between Systems will be greatly simplified. In fact, on the first day of our implementation, physicians at RGH were able to access important patient information from URMC.

The Care Connect system is also protected against the loss of patient information through a robust back-up system that is readily available, in the event of a computer malfunction.

RGH recently celebrated an historic, transformative change with the launch of Care Connect, the health system’s name for its new Electronic Medical Records (EMR) system.
The research, reported online in the journal Magnetic Resonance Imaging, is preliminary, involving a small sample of athletes, but nonetheless raises powerful questions about the consequences of the mildest head injury among youths with developing brains, said lead author Jeffrey Bazarian, MD, MPH, associate professor of Emergency Medicine at URMC with a special interest in sports concussions.

Bazarian and colleagues used a cutting edge statistical approach to analyze before-and-after images of the players’ brains from diffusion tensor imaging (DTI). A DTI scan is similar to an MRI but it does not relay pictures, rather it captures and relays quantitative data that must be decoded and interpreted.

“Although this was a very small study, if confirmed it could have broad implications for youth sports,” Bazarian said. “The challenge is to determine whether a critical number of head hits exists above which this type of brain injury appears, and then to get players and coaches to agree to limit play when an athlete approached that number.”

Nine athletes and six people in a control group from Rochester, N.Y., volunteered to take part in the research during the 2006-2007 sports season. Among the nine athletes, only one was diagnosed with a sports-related concussion that season, but six others sustained many sub-concussive blows and showed abnormalities on their post-season DTI scans that were closer to the concussed brain than to the normal brains in the control group.

The URMC study is unique because it was able to compare brain scans from the same player, pre-season and post-season. Most other studies compare the injured brain of one person to the normal brain of another person from a control group. However, that becomes a problem when searching for very subtle changes, Bazarian said, because so much natural variation exists in every individual's brain.

Efforts to further understand the significance of study results are already underway. Bazarian and collaborators at the Rochester Center for Brain Imaging, the URMC Department of Emergency Medicine, Department of Athletics and Recreation, and the Department of Imaging Sciences, are working on an NFL-funded study of UR football players this fall. Ten players agreed to wear helmets with special sensors that objectively detect the number of head hits they sustain, the velocity and angle. Each player is also receiving a pre-season and 2 post-season DTI scans, and the data downloaded from the helmet sensors will be correlated with information from the images.

“Our studies are taking important steps toward personalized medicine for traumatic brain injury,” Bazarian said. “In the future we’d like to be able to have a baseline image of a brain and clearly know the significance of changes that occur later.”

Funding was provided by the National Institutes of Health and the UR Health Sciences Center for Computational Innovation.
GRO is Growing

Greater Rochester Orthopaedics is pleased to welcome Drs. Gary B. Tebor and Everett S. Weiss to its Orthopaedic team.

GARY B. TEBOR, M.D.

- Rochester’s most experienced pediatric orthopaedic surgeon received his Medical Degree from Albany College of Medicine/Union University
- Fellowship in Pediatric Orthopaedic Surgery at Massachusetts General Hospital, Harvard Medical School
- Orthopaedic Surgery Residency at Albany Medical Center
- Certified by the Board of Orthopaedic Surgeons

Member of:
- American Academy for Cerebral Palsy & Developmental Medicine
- American Board of Orthopaedic Surgeons
- Pediatric Orthopaedic Society of North America
- Scoliosis Research Society

Interests include
All aspects of pediatric orthopaedics including the treatment of developmental and neuromuscular conditions, scoliosis, arthritis and trauma.

EVERETT S. WEISS, M.D.

- Earned his Medical Degree from the University of Rochester School of Medicine and Dentistry.
- Completed the Otto. E. Aufranc fellowship in Adult Reconstructive Surgery at New England Baptist Hospital, Boston Massachusetts.
- Completed his Orthopaedic Surgery Residency at SUNY Upstate Medical University, Department of Orthopaedic Surgery, Syracuse, NY.

Member of:
- The Monroe County Medical Society
- Medical Society of the State of New York

Interests include
Primary and complex hip and knee replacement, revision hip and knee replacement, hip arthroscopy, and uni-compartmental knee replacement.

On behalf of the GRO Team, we welcome your referrals and value your trust. To schedule an appointment please call: (585) 295-5350

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URMC Orthopaedic Surgeon Wins Prestigious Fellowship

John C. Elfar, MD, was awarded the North American Traveling Fellowship by the American Orthopaedic Association, an honor considered to be one of the most exclusive in the field of orthopaedic surgery.

Elfar, an assistant professor of Orthopaedics at URMC specializes in treating hand, wrist, elbow and shoulder problems for patients of all ages. The Traveling Fellowship is awarded to young surgeons with great academic potential for national and international leadership. Elfar was one of five people selected this year.

Elfar received his MD from Harvard Medical School. After completing an internship and residency he returned to URMC to practice. Elfar has a special interest in sports-related hand injuries and is the team hand surgeon for the University of Rochester athletic program.

Golisano Pediatrician Named President-Elect of the American Academy of Pediatrics (AAP)

Tom McInerny, MD, FAAP, associate chair for Clinical Affairs in the Department of Pediatrics at the URMC, was named the next president-elect of the AAP, the nation’s largest pediatric organization, with a membership of 60,000 primary care pediatricians, pediatric medical subspecialists and pediatric surgical specialists.

“The highest priorities for the AAP and its membership are to ensure that, as health care reform continues to unfold, all children have access to high-quality health care,” McInerny said. As president, he will work with legislators and other organizations to promote “facilitated enrollment,” which identifies and encourages eligible families to acquire continual health insurance for children. McInerny will also press for pediatricians to be paid appropriately for providing a coordinated medical home for children.

McInerny has been a pediatrician in private practice at Panorama Pediatric Group for 40 years and is professor and associate chair for clinical affairs in the Department of Pediatrics at URMC and Golisano Children’s Hospital.

McInerny is a graduate of Harvard Medical School and did his pediatric residency training at Cincinnati Children’s Hospital and Children’s Hospital Boston. McInerny has held many elected and appointed positions in the AAP, and is editor-in-chief of the AAP Textbook of Pediatric Care and Pediatric Care Online. He served on the AAP Task Force on Mental Health, which developed the AAP Mental Health Toolkit and was one of the authors of the EQIPP module on the medical home. He is a member of the American Pediatric Society, the Academic Pediatric Association, and a certified physician executive and fellow of the American College of Physician Executives. He served on the board of directors and was chief medical officer of the Rochester Community Individual Practice Association serving 500,000 patients.

Geneva General Hospital and Soldiers & Sailors Memorial Hospital Medical Staffs Welcome New Physicians

The following physicians have joined the medical staffs at Finger Lakes Health and are assigned as hospitalists at both Geneva General Hospital and Soldiers & Sailors Memorial Hospital:

Medhat E. Barsoom, MD specializes in internal medicine. He attended medical school at Cairo University, School of Medicine in Cairo, Egypt and completed his residency at the University of Buffalo/ Catholic Health System in Buffalo, N.Y.

Golisano Pediatrician Named President-Elect of the American Academy of Pediatrics (AAP)

Tom McInerny, MD, FAAP
surveyors evaluated Geneva General for compliance with standards of care that directly affect the quality and safety of diagnostic services and patient care. Specifically, the surveyor stated that the “Laboratory provides an excellent service and performs at the highest level.”

**Rashmi Khadilkar, MD JOINS ROCHESTER GENERAL HEALTH SYSTEM**

Rashmi Khadilkar, MD specializes in Rheumatology. She received her MD from Temple University School of Medicine, Philadelphia, PA and completed her Residency and Fellowship at Temple University Hospital.

She is Board Certified by the American Board of Medical Specialties in Internal Medicine and Rheumatology.

**Ana Molovic-Kokovic, MD JOINS ROCHESTER GENERAL HEALTH SYSTEM**

Dr. Molovic-Kokovic attended the University of Belgrade, in Serbia and completed her residency at Mount Sinai School of Medicine, Bronx, NY. She specializes is Internal Medicine and is Board Certified by the American Board of Internal Medicine.

**Irondequoit Pediatrics Welcomes Daniela DeRosa, DO**

Dr. DeRosa has joined the staff of physicians at Irondequoit Pediatrics. She is the newest of four pediatricians at the Irondequoit-based practice.

Dr. DeRosa sees her new role at Irondequoit Pediatrics not only as a means to care for children, but also as an opportunity to educate families on the risks associated with childhood obesity, and the importance of healthy eating and exercise habits.

She received her medical training in pediatrics at the University at Buffalo and Women & Children’s Hospital and a Doctorate degree in Osteopathic Medicine from Lake Erie College of Osteopathic Medicine.

**Geneva General Hospital Laboratory Awarded Accreditation from The Joint Commission**

The Geneva General Hospital Laboratory has earned The Joint Commission’s Gold Seal of Approval™ for accreditation by demonstrating compliance with The Joint Commission’s national standards for health care quality and safety in laboratories.

The accreditation award recognizes Geneva General Hospital’s dedication to continuous compliance with The Joint Commission’s state-of-the-art standards.

Geneva General Hospital underwent a rigorous unannounced on-site survey in August. A team of Joint Commission expert
How much money will I need to retire?

Everyone’s retirement goals are unique; clearly defining them is the key.

At Manning & Napier Advisors, Inc. we understand that planning for retirement can seem overwhelming. That’s why we actively work with our clients to define and maintain clear retirement objectives. By addressing variables such as personal risk tolerance, time horizon, and lifestyle needs, we create customized solutions designed to meet individuals’ goals. Our focus on meeting these expectations has helped us build meaningful relationships with our clients for nearly 40 years.

To start planning for your retirement, please contact us at (585) 325-6880 or visit us at www.manningnapieradvisors.com.
Having a great hospital is important. But so is having a great transitional care facility. That’s why it’s critical for you to choose one of the very best: St. Ann’s Community.

At St. Ann’s, we provide the most comprehensive and advanced rehabilitation services in the area. And 99% of our patients rated our rehab therapists “Excellent/Good” in 2010.

So whether you are recovering from a stroke, heart surgery or joint replacement, you can rest assured that you will get the support and encouragement you need.

But here’s the most important thing to know: you can plan ahead for your rehab. Just call St. Ann’s at 585-697-6311 for your free Transitional Care Planning Kit.

The choice of a transitional care facility is totally up to you. So why leave that choice up to someone else?

Because a great transitional care facility does more than make you feel healthy again. It makes you feel good about life again.