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Political Correctness (PC) exists for a reason but can be taken to extremes.

Political correctness affects all spheres of human interaction. Let us consider PC in the medical sphere. It was not long ago that we used terms that even those who now mock PC might possibly find repellent, or not, unless the terms were used to describe their family members. The word “idiot” is a good place to start. In Fyodor Dostoyevsky’s novel The Idiot, the protagonist suffered from epilepsy, just like Dostoyevsky himself, a syndrome which earned the sufferers the label “idiots.” Perhaps it was a kind, euphemistic term back then, but I doubt it. It was a term used in Western medicine that had more than one meaning. For example, there were syndromes, like Amaurotic Idiocy, now called Tay-Sachs disease, among others, that incorporated the term in the official labels given to certain diseases. In a sense, then, the term was technical, rather than jargon. It is easy to see how the “technical” term idiot was picked up by the lay public to mean what it does today. One might contrast the idiot concept of epilepsy with that of Pharaonic Egypt, where epilepsy was considered a “royal disease,” because it occurred in the royal families due to a genetic disorder, resulting from inbreeding.

Mongolian idiot was the technical term for what we now call Down syndrome, or trisomy 21. These people were sometimes called “Mongoloids” or “Mongols,” as if physiognomy signaled an ancestry, which, in turn, was linked to a denigrating term both for the patient and for people from Asian countries.

In my own subspecialty of neurology, movement disorders, terms like “reptilian stare” and “simian posture” were also used in a “technical” way. People with Parkinson’s disease, who had a fixed, staring expression, a hallmark of the disorder, were described as having a reptilian stare. The posture in PD is stooped, hence, “simian,” or “ape-like.” There didn’t used to be a lot of PD patients because they died early, and people didn’t live as long as they do now. And doctors held a more prestigious and august status than they do now so that patients and families were probably less likely to complain. How many middle-aged people would like to hear that their parent, or they, themselves, were diagnosed with PD because of their reptilian stare and simian posture?

Hysterical, of course, referred to histronic and flighty behavior ascribed to movement of the uterus.

Midget, retarded, and spastic are terms that are widely used in denigrating fashion for the non-ill. They have been, for the most part, discarded, although retardation and spastic are technical terms that, like idiot, describe syndromes. For example, spasticity is the term to describe an abnormality of muscle tone in which the tone is increased in a way that depends on the rate at which the limb is moved, and is associated with increased deep tendon reflexes and possibly positive Babinski reflexes. Describing a “spastic paraparesis” is a useful distillation of clinical findings. Calling someone “spastic” or “a spaz” is a denigrating term that presumably means clumsy, and is used only as an insult. We describe degrees of retardation, mild, moderate or severe, depending on one’s score on tests of intelligence, including ability to understand, recall and solve problems.

Not long ago it was common to use the word “senile,” which should simply mean elderly, as synonymous with dementia. This is presumably because it is tied to the term, “senile dementia,” which had meant Alzheimer’s disease. The word has continued to be used in isolation to mean demented, conflating dementia and old, implying that dementia is part of the aging process.

Dumb is an interesting word. Its real meaning is mute, but has been extended, probably because not talking is sometimes interpreted to mean stupid, to mean just that, stupid. “Struck dumb” means “struck speechless,” but “dumb bunny,” “dumb fool,” etc. means
lacking in intelligence or thoughtfulness. I agree there is sometimes an over-emphasis on political correctness. For example, I am not in favor of describing short people as “height handicapped.” And, perhaps because I’m a neurologist, I do not object to the term mental retardation, with the modifiers mild, moderate or severe, although just as much information would be present with the terms of mild, moderate or profound “learning impairment” or “intellectual limitation.”

The real issue is what the affected population experiences when we use the term. I recall giving a talk to medical students and, in talking about the epidemiology of a disorder, mentioned its prevalence in Asian countries. A student of Asian descent thanked me after the talk for using the term Asian instead of “Oriental.” I had purposely used the term because someone had told me that “Oriental” was often interpreted as denigrating. While I had no idea at that time that this was the case, it seemed quite clear to me that there would be no reason to use the term, “Oriental” anymore, except for describing certain forms of art, despite the fact that I had never heard the term used in a disparaging sense.

In the early days of clinical genetics, scientists used to coin terms they thought “cute” for a gene they isolated, for example “sonic hedgehog.” However this caused problems when a family would be told that their child has a disorder, holoprosencephaly, caused by this gene, and the terminology was quickly reined in.

Being PC simply means being sensitive to the meaning of the words we use. In Alice in Wonderland, Humpty Dumpty states that “when I use a word, it means exactly what I choose it to mean.” This is not correct. Words can hurt. We should use the terms based on how they are perceived, not how we think they should be perceived. Using denigrating labels, even if they seem not insulting to the user, is a way of distancing ourselves but also reduces how patients think they are valued.

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Grateful Patient Philanthropy (GPP) raises ethical concerns among doctors

HERBERT RAKATANSKY, MD

Recently two doctors, separately, expressed their concerns to me about being asked to participate in soliciting patients for donations to a hospital.

Medicine has evolved into a “big business” model in which doctors are regarded by management as “revenue centers.” The revenue comes mostly from patient care but asking doctors to solicit grateful patients to donate is becoming widespread. In fact, this endeavor now has a name: Grateful Patient Philanthropy (GPP). These programs are based in the institutional development office.

GPP is big business. In 2012, $28.12 billion was donated to health organizations, 75% from individuals (not all of them patients). The median cost to raise a dollar is $0.31. Gifts vary in size from $400 million given by Denny Sanford to a health system in South Dakota to gifts of a few dollars. Funding for hospitals is perilous at best and likely to get worse in the next few years. In the current political climate philanthropy is an essential component of our health care system.

You might ask how administrative staff even knows about who has been treated. Changes in HIPAA regulations (in 2013) allow institutional fundraisers to learn the name, address, age, gender, date of birth, dates of health care service, treating doctor, outcome information and health insurance status. This information permits the development office to accurately evaluate patients as prospective donors.

A recent survey indicates that 95% of institutions without a GPP were planning to start one and 88% of institutions with a GPP were planning changes and/or additions. By far the most popular change was “increasing focus on physician/clinical staff engagement in patient referrals.” No GPP programs considered downsizing! A 2016 report on GPP noted that the two top “insights” about GPP were 1.) Grateful patient programs are in growth mode and 2.) Today’s top investment: engaging physicians in referral.

Are doctors good at fundraising? The answer is “it depends.” In a randomized trial, 51 doctors were taught soliciting techniques either by email (14) or lecture (18) or personal coaching (19.) The doctors in the coaching arm generated $219,550 during the study. No gifts were received in the email or lecture arms.

The primary ethics issue is whether solicitation by doctors violates the fiduciary relationship between a doctor and a patient. The fiduciary nature of this relationship has been well established in US case law. The introduction of a third party may “destroy the trust that the patient has that the doctor’s only goal is the health of the patient.” The fiduciary duty of a doctor to his patient is a legal obligation as well as a moral commitment and violations may trigger legal consequences. The doctor’s moral and fiduciary obligations are in peril if solicitation alters clinical decision-making.

We know that gifts from drug companies to doctors be they small, such as items with a nominal value, e.g.: pens, etc. or of moderate value such as meals, influence doctor’s clinical decisions. And, despite the evidence, doctors generally believe that others might be influenced, but not themselves.
So what is a doctor to do?  
It seems obvious that a doctor should not be reimbursed a percentage of donations for soliciting patients. Indeed only 3% of 405 doctors surveyed in 2015 reported such payments. However, financial reimbursement is not the only reward doctors may receive for successful fundraising. Public recognition, titles such as “champion fund raiser,” etc. and other non-monetary rewards may be very powerful. Napoleon opined: “A soldier will fight long and hard for a bit of colored ribbon.”

The AMA Code of Ethics states that doctors should:  
“Refrain from directly soliciting contributions from their own patients, especially during clinical encounters.”

It is important to note that although non-caregivers in the hospital may have access to some data, they cannot access diagnoses or treatment details. This information is protected and may be divulged to the development office only with specific permission from the patient.

It is critical to assure patients that the quality of their treatment is in no way related to their willingness to make donations. But the erosion of trust may be subtle and doctors must be sensitive to this issue.

Doctors who engage in fundraising by giving talks about research or clinical programs to groups of patients at special events are in little danger of damaging their relationship with a specific patient. The closer one gets to an individual doctor soliciting an individual patient, the more danger there is of compromising trust. In a study of 20 Johns Hopkins’ doctors, 18 identified misuse of the doctor patient relationship as the “most significant ethical concern” in GPP.

Best practice GPP guidelines issued by management consultants state that a doctor, the more prominent and respected the better, be identified as a “physician champion” and be recognized by other doctors as the leader of the GPP effort.

Management consultants have suggested that department chairs might lead GPP in their discipline and receive a bonus if defined fundraising goals are met. Might fundraising then unwittingly influence the clinical or academic status of department members or reward “special treatment” of VIP patients by department members?

Another ethics issue is Justice. Might scarce resources be more available to donors?

Thus, I would advise the two doctors whose concerns spurred this response that policies concerning physician participation in GPP should be determined not by “management” alone. To protect us all from ethical lapses and thus protect our patients, a comprehensive discussion of GPP policies should be initiated by the hospital ethics committee and then be considered by the entire medical staff of the hospital. Joint ownership (management and doctors) of GPP policies might accomplish a dual purpose. Patients would be protected by an ethically appropriate GPP and involvement of all medical staff members might increase enthusiasm for GPP and produce increased funding by grateful patients.

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SAN DIEGO, CALIFORNIA
David W. Parke, II, MD. Executive Vice President of the American Academy of Ophthalmology, viewed the June issue’s special section on Ophthalmology from the RIMJ archives while attending the annual meeting of the Association of University Professors of Ophthalmology, San Diego in January 2017.

POINT LOMA, CALIFORNIA
Michael E. Migliori, MD. Ophthalmologist-in-Chief at RI Hospital, and Chair of RIMS Public Laws Committee, looks at RIMJ at the Cabrillo National Monument in San Diego.

In September 1542, explorer Juan Rodríguez Cabrillo and his crew, sailing for Spain, came ashore in what is now San Diego Harbor and became the first Europeans to set foot on the west coast of North America. The monument sits at the tip of Point Loma nearly 400 feet above sea level with sweeping views of the Pacific Ocean and overlooks metropolitan San Diego to the east.

Wherever your travels take you, be sure to check the latest edition of RIMJ on your mobile device and send us a photo: mkorr@rimed.org.
Medical, Surgical, Behavioral, Preventive Approaches to Address the Obesity Epidemic

DIETER POHL, MD
GUEST EDITOR

This issue of the Rhode Island Medical Journal deals with obesity and is meant for the practicing physician to get an up-to-date overview of available preventative community services from the State of Rhode Island and evidenced-based treatment modalities.

Obesity is a major personal health, society and economic problem in the United States, where, according to the Centers for Disease Control, more than one third (36.5%) of adults have obesity. In Rhode Island, about 25%, or about 200,000 persons, have obesity. Every practicing physician sees several obese patients per day. The most recent estimated annual medical cost of obesity in the U.S. was $147 billion in 2008 – $1,429 per obese person per year higher than for those of normal weight.

Obesity has been considered a disease by the American Medical Association since 2013. A person’s weight status is categorized by the Body Mass Index, BMI, which is an imperfect measure, but the one that is easiest and most widely accepted. A person with a BMI of 25–30 is considered overweight and a BMI above 30 is considered obese. Obesity itself is classified into Class 1 (BMI 30–35), Class 2 (BMI 35–40) and Class 3 (BMI above 40).

The importance of obesity lies in the systemic effects it has on almost all body systems. It creates an inflammatory state, increases insulin resistance, causes fat accumulation in organ systems such as heart and liver and causes mechanical problems such as back and lower extremity degenerative disease and obstructive sleep apnea. It affects the body from head (increased migraine) to toe (gout and diabetic foot).

The causes of obesity are multifactorial: genetic, societal, cultural, behavioral, and medical. In general, there is an oversupply of calories in proportion to energy expenditure. Over the years, the pendulum of opinion has swung from blaming too much fat intake to too much sugar intake. Although there certainly is a difference in the metabolic effects of various nutrients, there is not one single food group to blame.

The approach to overweight and obesity is also multifaceted because there is no single cause, there is no single symptom constellation and the overweight can range from a few to several hundred pounds. There is also no agreement among researchers about cause, effect and best treatment. In the primary care office the discussion about a person’s weight is a sensitive issue and therefore not an easy one and requires more time than most physicians can afford. For that reason, it is a huge market for non-scientific approaches.

There are a number of scientifically well-researched and successful treatment options available. The choice of treatment option should be individualized to each patient.

In this issue, DIETER POHL, MD, and AARON BLOOMENTHAL, MD, from the Metabolic and Bariatric Surgery Center at Roger Williams Medical Center, outline the surgical options for the treatment of obesity and the results on comorbidities.

STEPHANIE CURRY, MD, endocrinologist and obesity medicine specialist at CharterCARE Medical Associates and Roger Williams Medical Center, presents additional treatment options with a rapidly expanding field of weight-loss medications. The FDA has approved more than six medications over the past few years after a dormant period of more than a decade.

KAYLONI OLSON, MA, DALE BOND, PhD and RENA WING, PhD, from the Weight Control and Diabetes Research Center at The Miriam Hospital, describe the behavioral approaches to the treatment of obesity, including lifestyle, nutrition and activity modifications.

DORA M. DUMONT, PhD, MPH, KRISTI A. PAIVA, MPH and ELIZA LAWSON, MPH, from the Rhode Island Department of Health, explain the relevance of obesity, specifically for Rhode Island and the importance of prevention. In this article they provide information on how physicians can address the obesity epidemic with the help of the Community Health Workers program.

HOLLI BROUSSEAU, AGACNP, and DIETER POHL, MD, demonstrate the importance of quality-improvement programs for this high-risk population.

References

Guest Editor
Dieter Pohl, MD, FACS, FASMB, Director, Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) Accredited-Comprehensive Center, Division Director, General Surgery, CharterCARE Medical Associates, Roger Williams Medical Center, Department of Surgery, Providence, RI.
ABSTRACT

For many physicians, the concept of surgery as the best treatment for a medical disease such as diabetes, cardiovascular problems, hyperlipidemia, sleep apnea, hepatosteatosis, GERD, osteoarthritis, psoriasis, rheumatoid arthritis, or infertility, still sounds wrong and just a ploy by surgeons to increase their business. Since 2011, however, several non-surgical societies have recommended Weight Loss Surgery – The International Diabetes Federation, The American Diabetes Association, American Heart Association, and Obesity Society in 2015 for patients with body mass index (BMI) greater than 35 and diabetes, and to decrease cardiovascular risk factors.1

The concept is to treat the common underlying problem, which is obesity, with the most effective method for immediate and long-term weight loss, which is surgery. The term “metabolic” surgery was therefore coined to accurately describe the effects of weight loss (bariatric) surgery. Our specialty society named itself the American Society for Metabolic and Bariatric Surgery (ASMBs).

KEYWORDS: bariatric surgery, diabetes, hypertension, mortality, disease

INDICATION AND RISK

Surgery is indicated for patients with a Body Mass Index (BMI) of 35 or higher and obesity-related comorbidities or for patients with a BMI of 40 or higher without comorbidities.12 Currently, the surgeries are done almost exclusively laparoscopically, by experienced surgeons at American College of Surgeons (ACS) designated Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) Accredited-Comprehensive Center. With these standards, the complication rate has decreased to 3% for diabetics, which is the same as gallbladder surgery and much lower than for total knee replacement (16%), leg bypass (24%) or heart bypass (47%) in otherwise similar populations.1

In our MBSAQIP Accredited-Comprehensive Center, the morbidity rate in the last 12 months was 2.7% with half of these due to nausea only. Readmission rate was 3%, reoperation rate 0.3% and mortality has been 0% since 2003 for primary bariatric procedures and no previous surgery in the abdomen.

TYPES OF SURGERY

The ASMBs estimates that in the US in 2015 bariatric surgery was performed on 196,000 patients. This represents only 1.25% of all estimated 16Mill patients with BMI greater than 40.4 The types of bariatric surgery have changed over the years. In 2015 the majority of surgeries involved the sleeve gastrectomy with 54%, then the Roux-en-Y gastric bypass with 23%. The rest were revisions, gastric band, biliopancreatic diversion, balloons etc.

Laparoscopic Sleeve Gastrectomy (SG)

The sleeve gastrectomy has been used since early 2000. It consists of a resection of about 75% of the stomach, leaving behind a thin stomach from the esophagus to the pylorus. The resulting stomach resembles a banana and holds about 2-3 oz. The effect is a marked decrease in portion size and the loss of hunger during the first year. Some patients will not feel hungry for years due to a lack of Ghrelin, the hunger hormone, which was produced in the removed part of the stomach. There is also a metabolic effect as a result of faster passage of food through the new, smaller stomach. Food reaches the duodenum, jejunum and ileum faster and in a less digested fashion. This in effect leads to an increased production in glucagon-like peptide 1 (GLP1), gastric inhibitory polypeptide (GIP), peptide YY (PYY), and other digestive enzymes, which help in improved regulation of glucose homeostasis. Long-term side effects are rarely seen and limited to Vitamin B12 and iron deficiency.

Laparoscopic Gastric Bypass

The gastric bypass has been performed since the 1960s in various forms and in the current laparoscopic form since 1993. It consists of the creation of a 15-30cc new stomach – resembling a thumb –, and the stapling, cutting and reorganization of the jejunum. The result is that food passes from the esophagus through the small stomach pouch, through a narrow anastomosis directly into the jejunum. Food bypasses the old stomach remnant, the duodenum, and the proximal jejunum. The result is a marked decrease in portion size, a loss of hunger due to the decreased production of Ghrelin, and an even more beneficial change in the homeostasis of many humoral factors such as GLP1, GIP, PYY than in the sleeve gastrectomy that lead to the positive effect on many medical problems. There are also changes of nerve pathways and the microbiome after the gastric bypass, which lead to metabolic changes and eating behavior modification.
Long-term side effects are infrequent and involve iron deficiency, hypoglycemia, and anastomotic ulcer.

Other Surgeries
The gastric band was used frequently in the past, but has recently been used rarely because it does not provide significant, short or long-lasting effects in many patients but leads to further operations in 50% of the patients to either treat problems or to remove the band completely with or without another weight loss operation. Only a few surgeons in RI still offer the band.

The biliopancreatic diversion, duodenal switch surgery is very effective but leads to more malabsorption and requires intense follow-up. This surgery is not performed anywhere in New England.

The balloons have been approved in the USA for about one year. They are approved by the FDA for persons with BMI 30-40, and lead to weight loss of 10-20%. They need to be removed after 6 months, at which point the patient needs to have changed their lifestyle to maintain weight loss, and are currently not covered by insurance. At this time, Roger Williams Medical Center is the only program that offers the balloon.

WEIGHT LOSS
Sleeve gastrectomy and gastric bypass patients lose weight in a similar fashion. As opposed to every other weight-loss method, 100% of patients lose weight for several years, which initially happens fast and continues for about a year. After the first year, the average weight loss is about 70% of excess weight. More importantly, after 5 years the average weight loss is still about 50-70% of excess weight.

Stated differently, as percentage of total body weight lost, The Swedish Obesity Subjects trial (SOS), which looked at 2010 surgical patients and at 2037 non-surgical patients and has a >90% follow-up rate, shows total weight loss for gastric bypass to be at 32% after 2 years, 25% after 10 years, and 27% after 15 years. Weight loss stayed stable after 8-10 years. The matched control group that did not have surgery had weight loss of 0%, 1%, and -1% at these time intervals.

METABOLIC MEDICAL DISEASE IMPROVEMENTS AFTER SURGERY

Diabetes Type 2
We frequently see that patients who are on oral diabetes treatment and often even on insulin, are discharged after surgery off all medications.

The SOS has the best long-term data. The remission rate after weight-loss surgery was 72% at 2 years, 36% at 10 years, and 30% at 15 years, compared to 21, 13, and 7% respectively for the control group of patients without surgery. Even in poorly controlled diabetics with a HgBA1C of >9%, the complete remission to a HgBA1C <6% was achieved in 42% after gastric bypass and 37% after sleeve gastrectomy compared to only 12% of patients with intense medical therapy. Surgery also prevented the occurrence of diabetes overall with a relative risk reduction of 78%. There were also decreased microvascular and macrovascular complications. Although the impact of surgery on diabetes is unfortunately not perfect, surgery is clearly more beneficial in the short and long term.

Mortality
The mortality rate for obesity surgery is very low (0.3%). In our hospital it was 0% since 2003 for primary bariatric procedures and no other surgery in the upper abdomen. In addition, many studies have shown that the survival benefit for patients begins within 2 years of surgery. Several studies have shown a reduction in the 5-year relative risk of death from 50% up to 89%. The relative risk for a surgical patient to die was only 0.11 compared to a non-surgical patient. This means the risk for an obese patient to die without surgery is up to 8 times higher than with surgery.25,8

Hypertension
We frequently discontinue or reduce anti-hypertension medication at discharge from the hospital, because patients report dizziness and light-headedness at home due to lower blood pressure. Hypertension is either in complete remission or improved in 60-70% even after 5 years.1

Osteoarthritis
Weight causes a high amount of pressure on joints and lower extremity and back pain is frequently seen in obese patients. Obesity surgery decreases the number of patients who report joint pain by 50%, even years after the surgery. Furthermore, many orthopedic surgeons will not perform arthroplasties or back surgery above a certain BMI. Besides the fact that complication rates for arthroplasty are much higher than for weight-loss surgery, the arthroplasty also does not lead to a comparably good result in a morbidly obese person compared to a non-obese person. A recent study showed that bariatric surgery two years before a knee replacement tends to lead to fewer complications, and improved quality of life after the knee replacement.9

Fatty liver
Almost all male patients and the majority of female morbidly obese patients have at least nonalcoholic fatty liver disease [NAFLD], but in about 30% the fatty liver disease has progressed to nonalcoholic steatohepatitis [NASH], and rarely cirrhosis.10 Depending on the stage of the disease obesity surgery leads to either complete resolution of NAFLD or improvement of fibrosis and inflammation. Liver disease due to obesity is becoming one of the most frequent reasons for liver transplant. Prevention with obesity surgery is extremely beneficial.

Hyperlipidemia
A joint scientific statement by the National Lipid Association, the Obesity Medicine Association and the ASMS published in the January/February 2016 issue of the journal...
of Clinical Lipidology states that bariatric surgery is effective in improving cholesterol and lipid levels, which are important risk factors for cardiovascular disease.4

Sleep apnea (OSA)

Obesity is the cause of more than 50% of sleep apnea cases. CPAP treats OSA but the patient adherence is not very good and CPAP does not treat the cause. Weight loss is the most successful treatment of OSA. Weight loss surgery results in the highest weight loss and best weight maintenance and consequently in the most successful OSA treatment.

Cancer

The SOS and other studies also looked at cancer incidence. Overall the relative risk of cancer after surgery was 0.55%. In other words, patients after obesity surgery get only half as many cancers as patients without surgery. Surprisingly, this benefit was almost exclusively seen in women. Men had hardly any benefit.

Rheumatoid arthritis

In a group of patients the remission rate was 26% before surgery and at a mean of 5.8 years after surgery 74%. ESR, CRP and related medicines were lower as well.10

Other

We also see many other diseases improve after surgery such as infertility, GERD, asthma, shortness of breath, and pseudotumor cerebri. There are reports of 100% restoration of menstruation in polycystic ovarian syndrome PCOS and 50% reduction of migraine days.

COST

The many benefits of weight-loss surgery are also reflected in a decrease in patient care cost. A recent study showed that bariatric surgery decreases cost per patient after surgery. The cost decrease for each of 4 years post-op was 12% for the first year, 28% for the second year, 37% for the third year, and 35% for the fourth year. This amounted to $7,592 over 4 years. For diabetics the cost decrease was 23%, 49%, 61%, 69%, respectively, and $22,609 total.13

SUMMARY

In summary, bariatric surgery is currently one of the lowest risk surgeries and produces greater long-term benefits than any other intervention for obesity.

References


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Disclosures

None

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Obesity Epidemic: Pharmaceutical Weight Loss

STEPHANIE A. CURRY, MD

ABSTRACT
Obesity is a chronic disease universally defined as an excess of adipose tissue resulting in body mass index (BMI) ≥ 30.0 kg/m². Over the past few years, the concept of prevention has gained increased awareness, thus leading to the development of additional pharmaceutical options for the treatment of obesity since 2012. Treating obesity revolves around an individualized, multi-disciplinary approach with additional focus on a healthy and supportive lifestyle to maintain the weight loss.

KEYWORDS: obesity, morbid obesity, overweight, anti-obesity therapies, weight-loss medications

THE IMPORTANCE OF MEDICAL WEIGHT LOSS
In 2008, the World Health Organization reported that more than 1.4 billion adults were overweight, BMI > 25 kg/m², and more than half a billion were obese.¹ This global epidemic has led to growing concerns, for adults, and for the increased rate in childhood obesity that predisposes them to become obese adults.¹ Prevention is imperative regardless of age.

Initiating lifestyle interventions, including behavioral modifications, diet and exercise are recommended first-line approaches for anyone with a BMI >25 kg/m². Anti-obesity medications have been approved for use in conjunction with the above mentioned lifestyle interventions for patients with a BMI ≥ 30 kg/m² with no co-morbidities and those with a BMI ≥ 27 kg/m² with obesity related co-morbidities.²,³ Weight related co-morbidities include metabolic syndrome, pre-diabetes, type 2 diabetes mellitus, dyslipidemia, hypertension, nonalcoholic fatty liver disease, polycystic ovarian syndrome, female infertility, male hypogonadism, obstructive sleep apnea, asthma/reactive airway disease, osteoarthritis, urinary stress incontinence, gastrointestinal reflux disease and depression.²

There have been an increasing number of prominent medical studies displaying the benefits of medical weight loss. The Diabetes Prevention Program Research Group performed a large, randomized clinical trial which displayed a reduction in progression from impaired glucose tolerance to type 2 diabetes mellitus with both metformin and lifestyle changes, focusing on diet and exercise.⁴ This study clearly showed that type 2 diabetes mellitus can be prevented or delayed for high-risk patients, such as those who are obese.⁴

OBESITY THERAPEUTIC INTERVENTIONS
There are now multiple clinical practice guidelines published from various societies endorsing medical weight loss. Recently, the American Association of Clinical Endocrinologists (AACE) and American College of Endocrinology (ACE) published the clinical practice guidelines for comprehensive medical care of patients with obesity.

Currently, there are a total of 6 FDA-approved anti-obesity medications on the market. This is a very exciting time, because since 2012, there have been 4 new agents approved for use by the FDA.

When treating patients with weight-loss medications, as with all medications, it is important to remember that there may be a wide heterogeneity of responses. The goal of obesity medications is to see a 5-10% decrease in weight within the first 6 months of therapy. If there is < 5% weight loss in 3–6 months, it is recommended to consider a dose adjustment or discontinue the medication.

ORLISTAT
Orlistat, also known as Xenical, is a non-systemic, gastric and pancreatic-lipase inhibitor that was approved in 1999. By inhibiting pancreatic lipase, it blocks the absorption of approximately 30% of dietary fat.⁶ At 1 year, patients treated with orlistat had a 4.0% decrease in body weight compared to placebo.² Several randomized controlled trials, ranging from 2–4 years in duration showed long-term weight reduction, in addition to improvement in blood pressure, insulin resistance and serum cholesterol levels.⁷,⁸ It is dosed three times a day before meals. A co-prescription for fat soluble vitamin supplementation including A, D, E and K is recommended, given the mechanism of inhibiting fat absorption to prevent deficiencies.⁶,⁸

The main disadvantage is the side effect profile with a higher incidence of unpleasant gastrointestinal adverse effects including abdominal pain, bloating, diarrhea, flatulence, steatorrhea, fecal incontinence and dyspepsia.⁷,⁸ Contraindications to use include chronic malabsorption, cholestasis, oxalate nephrolithiasis, pregnancy, and breastfeeding.²

PHENTERMINE
Phentermine, also known as Adipex-P, is a sympathomimetic that was approved for monotherapy in 1959.⁹,¹⁰ This is
the most common, inexpensive, anti-obesity medication prescribed in the United States. It is a central, norepinephrine-releasing agent that reduces appetite, which has been approved for short-term use. Aside from the weight loss benefits, it improves total cholesterol and low-density-lipoprotein cholesterol levels.

The main adverse effects are secondary to the stimulant effects, including increased heart rate, palpitations, hypertension, restlessness, agitation, dry mouth, headache and insomnia. It is prescribed once a day and is given in the morning. Contraindications include heart disease, uncontrolled hypertension, hyperthyroidism, glaucoma, MAO inhibitors, anxiety disorders, seizure disorder, pregnancy, and breastfeeding. Currently, there are no long-term clinical trials to demonstrate efficacy past one year.

**Qsymia (Phentermine/Topiramate)**

Qsymia is a fixed dose, combination of phentermine immediate-release and topiramate extended-release. This is a synergistic combination that was approved in 2012. Topiramate functions as a GABA receptor modulator that further adds to the appetite suppressant effect by modulation of the voltage-gated sodium ion channels. This combination therapy was found to produce significant, dose-related weight loss. At 1 year, patients treated with qsymia had an 8.6 - 9.3% decrease in total body weight compared to placebo on high dose and 6.6% decrease on the lower, recommended treatment dose. There were also sustained improvements in both cardiovascular and metabolic variables, including hyperglycemia, hypertension, hyperlipidemia and a reduction in progression to type 2 diabetes mellitus.

Adverse effects are consistent with the adverse effects of the two medications individually including headache, insomnia, constipation, paresthesia, dizziness, dysgeusia, nasopharyngitis, anxiety, depression, concentration, memory impairments and decreased bicarbonate. It is also recommended to be taken in the morning to prevent the phentermine stimulatory effects. Contraindications include hyperthyroidism, acute angle-closure glaucoma, concomitant MAO inhibitor, pregnancy and breastfeeding. Topiramate is teratogenic; all females of childbearing age are required to have a pregnancy test before and every month during use. In patients with a history of seizures or epilepsy, topiramate has been associated with seizures, therefore, it is advised to taper off of this medication and avoid abrupt discontinuation.

**Belviq (Lorcaserin)**

Belviq, also known as lorcaserin, is a selective serotonin (5-HT2c) receptor agonist that was approved for weight loss in 2012. 5-HT2c has a role in food intake and its activation results in increased satiety. At 1 year, patients treated with belviq had 3.0-3.6% decrease in total body weight compared to placebo. Belviq is dosed twice a day and more recently as extended release, once a day formulation has become available called Belviq XR.

It has a fairly favorable side effect profile and is generally well tolerated. Adverse effects include headache, nausea, diarrhea, constipation, dizziness, fatigue, xerostomia, dry eye, hypoglycemia, headache, back pain and cough. It was also associated with improvements in hyperlipidemia, insulin resistance, levels of inflammatory markers and hypertension. Contraindications include the use of other serotonergic drugs due to concern for serotonin syndrome, pregnancy and breastfeeding.

**Contrave**

Contrave, a combination of naltrexone and bupropion extended release, was approved in 2014. Naltrexone is a non-selective opioid receptor antagonist and bupropion is an inhibitor of dopamine and norepinephrine transporters. Together, the two medications in combination revealed a synergistic effect by producing a greater reduction in food intake and appetite regulation, thought to involve the food reward mechanism. At 1 year, patients treated with Contrave had a 4.2–5.2% decrease in total body weight compared to placebo.

Adverse effects are consistent with the known adverse effects of the two medications individually, including nausea, vomiting, constipation, headache, insomnia, diarrhea, dizziness, anxiety and xerostomia. Contraindications include uncontrolled hypertension, seizure disorder, tachyarrhythmia, severe depression, chronic opioid use, concomitant use of MAO inhibitors, anorexia or bulimia nervosa, drug or alcohol withdrawal, liver failure, narrow angle glaucoma, pregnancy and breastfeeding. It is recommended to discontinue this medication gradually and avoid abrupt cessation given the lowered seizure threshold associated with bupropion.

**Saxenda (Liraglutide)**

Saxenda, also known as liraglutide, is the only long-acting, daily, injectable therapy approved for medical weight loss. It is a glucagon-like peptide-1 (GLP-1) receptor agonist that was approved in 2014. It previously was approved at a lower dose by the FDA for treatment of type 2 diabetes mellitus, known as Victoza. The mechanism of delaying gastric emptying and agonist effects on GLP-1 receptors in the brain have been implicated in decreasing appetite thereby decreasing caloric intake. At 1 year, patients treated with saxenda had a 5.6 % decrease in total body weight compared to placebo. It has also been shown to improve fasting and postprandial glycemia, beta-cell function, insulin sensitivity and delayed onset of type 2 diabetes mellitus. This is the most expensive medication on the market, costing approximately $1100 monthly if the employer has not opted into coverage which has limited its use.
Adverse effects include nausea, vomiting, diarrhea, constipation, headache, increased heart rate, dyspepsia and hypoglycemia. Contraindications for use include gastroparesis, personal or family history of medullary thyroid cancer, acute gallbladder disease, pregnancy and breastfeeding.\textsuperscript{2,3,12} The dose of this medication is titrated based on tolerability of adverse effects. Thyroid C-cell tumors have been reported in rodents only; however, the FDA has required a boxed warning of contraindication for patients who have a personal or family history of medullary thyroid cancer or those with multiple endocrine neoplasia syndrome type 2 (MEN 2). The significance in humans is unclear and ongoing post-marketing evaluations are planned to evaluate the incidence of medullary thyroid cancer and the potential risk of breast cancer.\textsuperscript{8,12}

CONCLUSION

The CDC estimates that each year at least 2.8 million people die secondary to being overweight or obese. Both awareness and prevention is the cornerstone of treatment for this disease. Obesity medications have proven to be a favorable, additional therapeutic intervention to complement diet, behavior modifications, physical activity and bariatric surgery. Hopefully, continued awareness, dedication and research will bring more options for providers and patients to treat obesity.

References

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Disclosures
None

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INTRODUCTION
Behavioral (or lifestyle) interventions are considered the cornerstone of obesity treatment. These programs are designed to produce long-term weight losses through changes in diet and physical activity. Behavioral approaches form the basis for the prevention and treatment of obesity in both children and adults. In addition, they are critical components of pharmacological and surgical approaches to obesity.

The Weight Control and Diabetes Research Center, which is affiliated with The Miriam Hospital, conducts research to develop and evaluate new behavioral approaches to weight control [http://weightresearch.org]. Participants entering these research studies receive state-of-the-art behavioral programs at no cost.

COMPONENTS OF A BEHAVIORAL WEIGHT LOSS PROGRAM
Lifestyle programs are designed to help patients lose 1–2 pounds per week resulting in a 5–10% weight loss by 6 months. Subsequent efforts are focused on maintaining the weight loss or, if desired, losing additional weight. Such weight losses are realistic for patients and as will be discussed below, produce important health benefits. To accomplish these weight changes, behavioral programs include the following components, which are summarized in Table 1.

Diet Interventions
Weight loss requires an energy, or calorie, deficit, created primarily through restriction of dietary intake. Patients are given individualized calorie goals to produce a 500 to 1000 kilocalorie [kcal] deficit from their baseline intake and thus produce a 1–2 pound per week weight loss. In most programs, individuals under 200 lbs are prescribed a 1000–1500 kcal/day diet, whereas those over 200 lbs are given a 1500–1800 kcal/day goal. Although there are extensive data that weight loss is primarily related to caloric restriction rather than to the macronutrient composition of the diet, behavioral programs typically encourage participants to reduce fat intake (< 30% of calories from fat) to help achieve the calorie goal. Weight loss can be achieved with a low fat or low carbohydrate diet, as long as the diet produces a decrease in overall calories consumed. Since adherence to diet prescription and reduction in calorie intake is critical, behavioral programs often include use of meal replacement products or structured meal plans to help patients adhere to the calorie goals. Self-monitoring of intake also is a key component (see below).

Table 1. Key components of a Behavioral Weight Loss Program

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calorie Restriction</td>
<td>Individualized calorie goals to produce a 500 to 1000 kcal deficit from baseline</td>
</tr>
<tr>
<td></td>
<td>• Those &lt; 200 lbs: prescribed a 1000–1500 kcal/day diet,</td>
</tr>
<tr>
<td></td>
<td>• Those &gt; 200 lbs: prescribed a 1500–1800 kcal/day diet</td>
</tr>
<tr>
<td></td>
<td>• Reduce fat intake to help achieve calorie goals</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>Increases in moderate intensity activities such as brisk walking</td>
</tr>
<tr>
<td></td>
<td>• Begin with 50 minutes/week (10 min on 5 days in the week)</td>
</tr>
<tr>
<td></td>
<td>• Gradually increase to 150 minutes/week (30 minutes on 5 days in the week)</td>
</tr>
<tr>
<td></td>
<td>• For better maintenance of weight loss, increase further to 200 or 250 minutes/week</td>
</tr>
<tr>
<td>Behavioral Strategies</td>
<td>Behavioral strategies to increase adherence to the diet and activity goals</td>
</tr>
<tr>
<td></td>
<td>• Self-monitoring (recording weight, diet and activity on a daily basis)</td>
</tr>
<tr>
<td></td>
<td>• Stimulus control (removing high calorie foods from the home)</td>
</tr>
<tr>
<td></td>
<td>• Goal setting, preplanning, and problem solving areas</td>
</tr>
</tbody>
</table>

Physical Activity
Behavioral programs encourage gradual increases in physical activity using moderate intensity activities such as brisk walking. The goals for physical activity typically start at 50 minutes/week, but they are gradually increased to 150 minutes/week, with patients encouraged to achieve this goal over 5 days in the week. Reaching these goals can be done in short bouts of 10 minutes and accumulated over the course of the day. Recent data suggest that even higher levels of physical activity (200–250 minutes per week) are associated with better maintenance of weight loss; thus programs now encourage participants to try to achieve these higher goals. In addition, patients are encouraged to identify and decrease sedentary behaviors, particularly watching television given its association with increased intake of energy dense foods. This is in addition to finding ways to increase lifestyle (or non-structured) physical activity such as using stairs rather than elevators. It remains unclear whether using contemporary fitness tracking devices [such as a FitBit] are helpful in promoting adherence to the physical activity goal and improving weight loss outcomes.
Behavioral Strategies
To help patients make and sustain the prescribed changes in eating and activity behaviors, a variety of behavioral strategies are used, chief of which is self-monitoring. Self-monitoring, or recording of weight, diet, and activity on a daily basis, has been shown to be the most important component of a behavioral weight loss program. Participants are encouraged to weigh themselves daily so that they can see the relationship between their diet and activity and their body weight. Other behavioral strategies include stimulus control (removing high-calorie foods from the home and encouraging certain that low-calorie, healthy options are available), goal setting, preplanning, and problem solving. These strategies, and in particular the use of problem solving, allow for individualization of the program to address specific problem areas (e.g., emotional eating, restaurant eating, etc.).

Format
Behavioral programs are typically offered in a closed group format, with approximately 15–20 patients treated together in weekly sessions ranging from 16–24 weeks. Following the chronic disease model, continuation of contact is important but is gradually reduced to bi-weekly and monthly check-ins. Although longer programs have been shown to increase weight loss and delay weight regain, these time-intensive programs have been criticized as too costly and burdensome to translate and deliver outside of research settings. Recent studies have shown that phone contact can be used successfully in lieu of face-to-face contact. Likewise, providing the intervention via Internet or mobile devices can allow for more cost-effective dissemination of these programs.

OUTCOMES ACHIEVED IN BEHAVIORAL WEIGHT LOSS PROGRAMS

Weight and Health Outcomes
On average, behavioral programs produce weight losses averaging approximately 7–9 kg, with maximum weight loss typically achieved around 6–12 months. This modest weight change has been shown to facilitate meaningful improvements in cardiovascular risk factors and to reduce hypertension and hyperlipidemia and the incidence of type 2 diabetes. For example, in the Diabetes Prevention Program, the lifestyle intervention produced a mean weight loss of 7% at 6 months and 4.9% at 3 years. These modest weight losses were successful in reducing the risk of developing diabetes by 58% relative to a control group. In Look AHEAD, a study of 5,000 individuals with type 2 diabetes, those assigned to the lifestyle intervention had greater improvements in sleep apnea, kidney disease, urinary incontinence, depression, number of hospitalizations and medications. However, there were no significant differences between the intervention and control group on the incidence of cardiovascular morbidity and mortality. The benefits of weight loss are not limited to medical morbidity but also include psychological benefits such as reduced depressive and anxiety symptoms, increased self-esteem, improved body image and quality of life.

Variability in weight loss outcomes
There is marked variability in weight loss outcomes in behavioral programs, with the standard deviation for weight loss as large as the mean. Thus, some individuals do well whereas others lose little or even gain weight during treatment. It remains a challenge to identify pre-treatment indicators of success or to determine who may be at risk for poor results. Countless baseline predictors have been studied over the past two to three decades but few have proven to be reliable indicators of treatment outcome. The single best predictor of successful weight loss is adherence to regular self-monitoring of dietary intake. Because dietary changes are an essential target of treatment in order to alter an individual’s energy balance in favor of weight loss, careful attention to food intake through tracking is thought to facilitate adherence to caloric goals. Additionally, early response to treatment, defined by the weight loss observed within the first month of treatment, has been associated with the likelihood of achieving 10% weight loss after one year of treatment.

Weight maintenance
Among those who lose weight, weight regain occurs commonly in the months following weight loss treatment. This weight regain occurs in part due to physiological adaptations to weight loss (which predispose to weight regain) and to the obesogenic environment (broadly defined as micro- and macro-level features of the environment that promote inactivity and overconsumption), which makes it challenging to sustain healthy changes in eating and activity long-term. A major objective of obesity researchers is to better understand how and why weight regain occurs, who is at risk, and how to enhance maintenance over time. The National Weight Control Registry, established by Hill and Wing, includes over 10,000 individuals who lost 30 pounds or greater and maintained the weight loss for at least one year. It was developed to provide empirical support for the notion that weight maintenance is possible and to better understand factors that impact long-term weight control. Perhaps unsurprisingly, individuals who continue to adhere to a low calorie/low fat diet, engage in regular exercise, and self-monitor their weight are more likely to maintain weight loss over time. In fact, regular exercise is one of the strongest and most reliable predictors of long-term weight control following weight loss. However, it is not clear how to promote long-term adherence to these behaviors, and there have been only a few randomized trials which have successfully improved the maintenance of weight loss.
PHARMACEUTICAL ADJUVANT THERAPY

A number of anti-obesity drugs are available to assist with weight loss; these agents are reviewed in a separate contribution in this issue (Obesity Epidemic: Pharmaceutical weight loss – Stephanie A. Curry, MD). Current guidelines recommend using these medications in combination with intensive lifestyle intervention to augment weight loss outcomes. This combination produces greater mean weight loss and greater likelihood of achieving 5% weight loss compared to use of either medication or lifestyle intervention alone. Anti-obesity drugs have also been explored as a ‘rescue strategy’, with the medication prescribed when an individual fails to achieve significant weight loss or starts to regain. This approach has received minimal research attention but preliminary data indicate no benefit of implementing anti-obesity medication treatment to rescue non-responders. Conversely, more promising empirical support has been found for the introduction of pharmaceutical treatments following successful weight loss during behavioral treatment. When administered to individuals who lost at least 5% of their body weight during intensive lifestyle intervention, anti-obesity medication was associated with greater likelihood of maintaining initial weight loss as well as continued weight loss compared to a placebo control condition. As maintenance of weight loss following behavioral treatment continues to be a major clinical concern, these preliminary findings are encouraging and require further evaluation.

BARIATRIC SURGERY

Bariatric surgery is described in detail in another article in this issue (Diabetes, obesity, and other medical diseases – is surgery the answer? – Dieter Pohl, MD, FACS, FASMBS; Aaron Bloomenthal, MD, FACS). While bariatric surgical procedures generally produce weight losses that are far superior and more durable than behavioral or pharmacological weight loss treatments, most patients begin to experience weight regain as early as after the initial postoperative year. Importantly, bariatric surgery is not an obesity cure, but another tool patients may use in combination with behavioral changes to achieve weight loss and related health improvements. To be most successful after bariatric surgery, patients must make multiple behavior changes such as consuming small meals/snacks (≤ 8 oz), ≥ 5 meals/snacks each day, eating slowly, stopping at satiation, and avoiding alcohol and concentrated sweets/snacks. Although surgical outcomes are enhanced when combined with changes in diet, activity, and other weight-related (e.g., self-weighing) behaviors, development and testing of behavioral interventions for bariatric surgery patients has received limited attention. Our group recently tested a behavioral intervention to increase moderate-intensity walking before bariatric surgery, as prior studies have shown that higher physical activity levels before surgery are related to greater physical activity levels and weight loss after surgery. Our intervention employed standard behavioral strategies (e.g., self-monitoring, goal-setting) to help patients increase their physical activity in bouts ≥ 10 minutes. Patients in the intervention group increased objectively-monitored moderate to vigorous physical activity in bouts ≥ 10 minutes by nearly 5-fold (from 4.4 to 21.0 min/d) where patients randomly assigned to standard care did not change (from 7.9 to 7.6 min/d). Additionally, in those patients who went on to have bariatric surgery, those who had received the intervention maintained higher physical activity levels through 6-months post-surgery compared to those in the control condition. Other recent randomized controlled trials showed that patients who received dietary counseling or were given a structured dietary intervention incorporating portion-controlled foods after surgery achieved better results than those given standard care. Research on the role of adjunctive behavioral treatments in bariatric surgery is in its infancy and critical questions regarding appropriate timing, intensity, duration, and content need to be answered.

CONCLUSION

Changing behavior is critical to weight loss success. Comprehensive behavioral interventions that help patients change their eating and exercise behaviors produce weight losses of 5–10% of body weight and clinically significant improvements in health. Such behavioral approaches are important as a stand-alone approach to weight loss as well as a key component of pharmacologic therapy or surgical approaches to weight control.

References


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In 2013, the American Medical Association (AMA) declared obesity a disease, despite the opposing recommendation of its own Council on Scientific Affairs [1]. The commentaries stemming from the AMA’s decision have highlighted how difficult it is for providers to respond to what is now regularly called an epidemic of obesity. We provide a population health context for the medical approaches discussed in the other contributions to this special issue.

Despite a “health at all sizes” paradigm that argues anti-obesity campaigns have been driven by moral panic and the weight loss industries rather than actual health risks associated with obesity [2, 3], this “myth of healthy obesity” has been effectively debunked by much evidence showing that obesity does indeed increase the risk of cardiovascular events, diabetes, joint problems, apnea and some forms of cancer – in addition to its social and economic consequences. While pharmacological and surgical interventions may certainly benefit some individuals, they are not a solution for the underlying causes of the nearly three-fold increase in obesity in one generation. In Rhode Island (RI), this translates to an estimated 201,400 adults with a body mass index (BMI) indicating obesity and another 94,400 at the high end of the overweight bracket (BMI 28-30 kg/m²), in a state where the total population is barely over 1 million.

THE WEIGHT OF RI

In the past 15 years alone, obesity trends in RI reveal the extent to which unhealthy weight has become a mainstream issue. The RI Behavioral Risk Factor Surveillance System (RI BRFSS) survey is the state’s largest source of information on the health status and behaviors of RI adults. We pooled 2011-15 data to assess the most recent prevalence and distribution of obesity and severe obesity, compared to RI adults 15 years ago [pooled 1997-2000 data; full descriptions of the survey data and methodology are available from the authors, along with additional data].

In keeping with national trends, the prevalence of obesity continued its generation-long rise in RI during this period. However, a comparison across race/ethnicity and educational attainment shows that the protective effect of traditional social advantage [4] may be declining: obesity rates grew much more rapidly among non-Hispanic whites relative to non-Hispanic blacks [Table 1a, Figure 1a] and among adults with higher levels of education compared to adults without a high school degree [Table 1b, Figure 1b]. At the same time, rates have risen almost as much among Hispanic/Latino adults; while this, too, might reflect the same trends of relative social advantage [health behaviors have been shown to worsen with acculturation and its accompanying improved access to healthcare] [5], different sociocultural trajectories may be driving different populations to statistical parity.

Many explanations for the overall rise in obesity have been suggested, but changes leading to increased energy consumption and decreased activity are clearly the main drivers. We draw attention to two findings in particular. First, Hill et al. calculated that very incremental energy accumulations – a median 15 kcal/day – were driving U.S. weight gain [6]. Second, Kranjac and Wagmiller found both a cohort and an intracohort effect – i.e., not only the changing demographic composition of more recent population cohorts and changing behaviors across all cohorts are accounting for the collective weight gain [7].

At the same time, it is important that providers be alert to the possibility of mental distress underlying weight gain, as it has been found to underlie the rising white mortality rate [8]. Compared to people with a BMI below the obesity

**Table 1A. Prevalence of weight categories among RI adults in 1997–2000 and 2011–2015, by race/ethnicity**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Normal weight</td>
<td>45.3</td>
<td>35.8</td>
<td>33.0</td>
<td>33.1</td>
<td>39.4</td>
<td>33.0</td>
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<tr>
<td>(BMI &gt;18.5 &amp; &lt;30)</td>
<td>(44.2-46.5)</td>
<td>(34.9-36.6)</td>
<td>(27.1-38.8)</td>
<td>(28.8-37.5)</td>
<td>(35.1-43.7)</td>
<td>(30.2-35.9)</td>
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<tr>
<td>Overweight</td>
<td>36.9</td>
<td>36.8</td>
<td>36.5</td>
<td>33.6</td>
<td>40.7</td>
<td>38.3</td>
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<td>(BMI 25-29.99)</td>
<td>(35.8-38.0)</td>
<td>(36.0-37.7)</td>
<td>(30.7-42.3)</td>
<td>(29.6-37.6)</td>
<td>(36.2-45.1)</td>
<td>(35.4-41.2)</td>
</tr>
<tr>
<td>Class 1 obesity</td>
<td>11.5</td>
<td>16.4</td>
<td>18.5</td>
<td>19.9</td>
<td>13.0</td>
<td>17.9</td>
</tr>
<tr>
<td>(BMI 30-34.99)</td>
<td>(10.8-12.3)</td>
<td>(15.7-17.0)</td>
<td>(13.9-23.0)</td>
<td>(16.7-23.0)</td>
<td>(10.2-15.7)</td>
<td>(15.8-20.1)</td>
</tr>
<tr>
<td>Class 2 obesity</td>
<td>4.1</td>
<td>9.6</td>
<td>10.6</td>
<td>12.3</td>
<td>5.1</td>
<td>9.7</td>
</tr>
<tr>
<td>(BMI &gt;35)</td>
<td>(3.7-4.6)</td>
<td>(9.1-10.1)</td>
<td>(6.9-14.3)</td>
<td>(9.7-14.9)</td>
<td>(3.1-7.0)</td>
<td>(8.1-11.3)</td>
</tr>
</tbody>
</table>

Data source: RI Behavioral Risk Factor Surveillance System
Table 1B. Prevalence of weight categories among RI adults in 1997–2000 and 2011–2015, by educational attainment

<table>
<thead>
<tr>
<th></th>
<th>No high school degree</th>
<th>High school degree/GED</th>
<th>1-3 years of post-secondary education</th>
<th>4+ years of post-secondary education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal weight (BMI &gt;18.5 &amp; &lt;30)</td>
<td>35.3 (32.4-38.2)</td>
<td>33.0 (30.3-35.6)</td>
<td>44.9 (43.0-46.8)</td>
<td>32.0 (30.5-33.5)</td>
</tr>
<tr>
<td>Overweight (BMI 25-29.99)</td>
<td>39.9 (36.9-42.9)</td>
<td>35.4 (32.9-38.0)</td>
<td>37.2 (35.3-39.0)</td>
<td>37.1 (35.6-38.6)</td>
</tr>
<tr>
<td>Class 1 obesity (BMI 30-34.99)</td>
<td>18.4 (16.1-20.7)</td>
<td>17.7 (15.8-19.7)</td>
<td>12.8 (11.5-14.1)</td>
<td>18.3 (17.1-19.4)</td>
</tr>
<tr>
<td>Class 2 obesity (BMI&gt;=35)</td>
<td>6.3 (4.9-7.8)</td>
<td>12.4 (10.7-14.1)</td>
<td>5.1 (4.3-5.9)</td>
<td>10.9 (9.9-11.8)</td>
</tr>
</tbody>
</table>

Figure 1a. Risk differences (between 2011–2015 and 1997–2000) by weight category among RI adults, by race/ethnicity

threshold, obese adults in 2015 were more likely to report multiple days of poor mental health in the past month or past/current depression [Figure 2]. BRFSS does not provide other measures of mental distress, nor the use of atypicals and antidepressants, both of which carry the risk of serious weight gain. A medical-public health framework also needs to find a way to address the associations between high BMI and anxiety over affording nutritious meals and rent/mortgage, as this may be the kind of stress for which people turn to constant energy-dense but low-nutrition snacks as a coping mechanism [Figure 2; additional data available on request].

WHAT CAN RI PROVIDERS DO?

Given the scale and drivers of the obesity epidemic, RI providers might feel there is little they can do – or even that the responsibility does not rest with them. Despite the increased prevalence of obesity, several studies have found that providers are even less likely to counsel their patients about weight than they used to [9]. Providers can’t bear sole responsibility for helping their unhealthy-weight patients lose weight, but they do have a critical role to play. While acknowledging the very real barriers such as competing demands on limited consultation time, discomfort with starting a sensitive conversation, and frustration with patient failure to progress, we suggest several public health approaches for providers to consider.
• Screen and intervene before BMI hits 30, as well as after
Weight loss is difficult to both achieve and sustain once people have become obese, and in this as in every public health problem, prevention is the best solution. Although the overweight adult population as a whole has remained relatively stable (above 1 in 3 adults), providers should be especially concerned about the rising percentage in the “red zone” (BMI 28-30, or just below the obesity line).

• Refer patients to lifestyle change programs
Much of the medical literature on obesity is driven by genetics research and pharmacological interventions. But sustained reliance on pharmacological approaches, with all their attendant side effects and price tags, is not a solution to so widespread a health problem. The RI Department of Health (RIDOH) provides a centralized location (the Community Health Network) where providers can refer patients with or at risk of chronic disease to free lifestyle modification classes that teach patients how to develop healthier habits; providers simply submit a referral form and a RIDOH patient navigator contacts the patient to help them enroll in a class. Providers are then sent updates on their patients’ enrollment status. Providers can make arrangements by emailing DOH.Community@health.ri.gov or calling (401) 222-3600. Patients can also view and register for programs at http://www.health.ri.gov/find/communityhealthnetworkprograms/. However, multiple studies have found that patient engagement is higher with provider involvement in the process.

• Work with a Community Health Worker (CHW) to help patients with life’s challenges
Most providers know that simply telling their patients to lose weight and sending them on their way is unlikely to be effective. As Figure 2 reminds, obese patients may face complex challenges involving not only long-ingrained habits but socioeconomic barriers: they may struggle to find time and money, to shop for and prepare fresh produce, or they may be using unhealthy behaviors as coping mechanisms to deal with stress or anxiety. While the RI Medical-Legal Partnership can help with some legal problems [e.g., delinquent landlords], medical practices are increasingly finding that CHWs can help with both psychosocial and logistical challenges outside the clinical setting through such things as helping patients apply for the Supplemental Nutrition Assistance Program (SNAP), providing informal counseling and social support, or ensuring patients with low health literacy understand the information or materials they were given.

• Invest in communication
Weight can be a difficult topic to broach with patients. With RI’s increasingly diverse population, it is especially important to understand the social and cultural conflicts that can arise despite the best of intentions [10]. CLAS (culturally and linguistically appropriate services) resources like https://www.thinkculturalhealth.hhs.gov/education/physicians and https://www.niddk.nih.gov/health-information/health-topics/weight-control/talking-with-patients-about-weight-loss-tips-for-primary-care/Pages/talking.aspx can provide helpful tips.

• See your patients in a population-health perspective
The individual patients in front of you are above all your individual patients: but we hope that remembering the extent of health-imperiling weight in RI – not least the doubling of class 2 obesity as reflected in Table 1b – will encourage providers to work together with the public health sector toward primary as well as secondary prevention.

Like quitting smoking, losing weight is hard and may require multiple attempts. But providers can make it easier for their patients to succeed if they provide not only medical treatment for the individual, but professional and civic partnership on public policies that facilitate choosing healthier options throughout the day.

References

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Quality Improvement Processes in Obesity Surgery Lead to Higher Quality and Value, Lower Costs

HOLLI BROUSSEAU, AGACNP; DIETER POHL, MD, FACS, FASMBS

ABSTRACT
In the era of changes in the evaluation of medical services and performance, the Centers for Medicare and Medicaid Services (CMS) has determined that the key components are quality, value, and clinical practice improvement (MACRA). Weight Loss Surgery, also called Bariatric or Obesity Surgery, has been at the forefront of quality improvement and quality reporting through the Center of Excellence Program since 2005. As a result, weight loss surgery is now as safe as gallbladder surgery. Even within this culture of quality and safety, improvements are still possible, as described in this article.

KEYWORDS: bariatric surgery, quality improvement, readmissions, MACRA, ACS

INTRODUCTION
Quality project D.R.O.P.: Decreasing Readmissions through Opportunities Provided
The American College of Surgeons (ACS) provides several quality improvement programs, for surgery in general, and for surgery in specialties such as bariatric, breast, cancer, pediatric, and trauma. These programs contract with Medicare and are Qualified Clinical Data Registries (QCDR), and participation in these programs automatically fulfills the Physician Quality Reporting System (PQRS) requirement for each participating provider.

The program for bariatric surgery is called Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP). Participating hospitals in this program employ a full-time, independent chart reviewer who records an extensive list of perioperative and operative data in a national database.

Roger Williams Medical Center (RWMC) is a MBSAQIP Accredited-Comprehensive Center. In 2015 RWMC participated in a national pilot project called D.R.O.P: Decreasing Readmissions through Opportunities Provided. It was an opportunity for RWMC to improve patient care, quality and value by implementing several measures to decrease readmissions.2

METHODS
The study period was March 1, 2015–March 31, 2016 and was compared to 2014. Data were collected for all readmissions within 30 days post-op, reason for readmission, and length of stay of a readmission. The hypothesis was that the intervention D.R.O.P would decrease the number of readmissions. Other questions of interest were to see if the cause of readmissions would change and whether there was a correlation between length of stay and reason for readmission.

The project included implementing the pre-operative handout of the narcotic pain management prescription to patients’ family members in order to avoid any issues at the pharmacy on the day of discharge. The patients were discharged with improved verbal and written education about post-op hydration, nausea and vomiting, pain management, and they were given a business card-like information card, the “Bariatric Help” card, with emergency numbers, as well as the physician’s office number. The physician or bariatric coordinator called the patients within 24 hours post discharge. The call was made with the purpose to speak directly to the patient and assess their status at home by asking them the predetermined questions for the quality project. The nine questions included: Is there someone to care for you at home, hydration status and tolerance of oral intake, pain managed with their medicine, have they started taking their vitamins, do they have the bariatric help card with the phone numbers they would need, questions about surgical incision redness or swelling, bowel movement, walking 3 or 4 times a day, and do they have their follow-up appointment with a dietitian within 30 days. Depending on the individual patient’s answers any issues could be triaged while they were at home and on the phone. The patients often needed some re-education on the phone call about hydration and its importance.

RESULTS
In 2014, RWMC did 310 bariatric surgeries with a total number of 23 readmissions (7.42%). Of those, 232 were Laparoscopic Roux-En-Y Gastric Bypass surgeries with 19 readmissions (8.9%) and 78 Laparoscopic Sleeve Gastrectomy surgeries with 4 readmissions (5.13%).

In 2015/2016, the study period, RWMC did 390 surgeries with 12 readmissions (3.08%). Of those, 291 were...
Laparoscopic Roux-En-Y Gastric Bypass procedures with 8 readmissions (2.75%) and 94 Laparoscopic Sleeve Gastrectomy surgeries with 4 readmissions (4.26%).

Less than 24-hour hospital stay readmissions occurred for 8 out of 310 patients (2.5%) in 2014, compared to 0 patients in the study period.

For the hospital stay 24–48 hours there were 8 readmissions for 310 patients (2.5%) in 2014, compared to 5 patients out of 390 (1.2%) in the study period.

For the hospital stay greater than 48 hours there were 8 readmissions (2.5%), compared to 8 readmissions for 390 patients (2%) in the study period.

Looking at the reasons for readmissions in 2014, 6 out of 310 patients (1.9%) were classified as “Other” whereas in the study period 2015/16, it was 4 out of 390 patients (1%). “Nausea, Vomiting, and Dehydration” etc. occurred in 2014 in 4/310 patients (1.3%) and in 2015/16 it was in 6/390 patients (1.5%). More serious complications such as bleeding, leak, intestinal obstruction or sepsis did not occur in the study period.

**INTERPRETATION**

**Readmissions**

The rate of readmission decreased from 7.4% to 3%. This was primarily achieved by decreasing overall complication rates in laparoscopic gastric bypass and by decreasing the readmissions that required only short stays in the hospital. Stays less than 24 hours were completely eliminated. Stays 24–48 hours went from 2.5% to 1.2%. Because the longer hospital stays and the nausea/vomiting category stayed the same, one can deduct that patients who stayed longer had more serious cases of nausea/vomiting/dehydration. The classification of more non-specific reasons in the “Other” category improved which made the data from the study period more specific.

According to CMS, in the new healthcare delivery system reform and Medicare payment reform, quality encompasses the major determinant of compliance. Included in quality is the former value modifier. One of the value modifiers is all-cause readmission, which, according to patient understanding, physician perception, hospital quality departments, CMS and all commercial insurers, is seen as a complication.
Obesity treatment Options – an Overview

Readmission is also one of the quality measures in the proprietary Center of Excellence and value programs of all commercial insurance companies. Reducing readmission improves those quality and value measures.

Although cost was not measured in this study, The Agency for Healthcare Research and Quality reported that in 2011 all-cause readmission for all medical conditions cost hospitals $41.3 billion. Besides the patient care quality improvement, another major benefit of reduced readmissions would therefore be reduced hospital and health care cost.

SUMMARY
The premise of MACRA is that patient care and reimbursement will be tied more to quality, value, and improvement programs. Participation in one of the many quality improvement programs of national professional organizations such as the American College of Surgeons can enable physicians and institutions to reach these goals – for their own, their patients and society’s benefits.

References

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A Review of Anatomical Placement of Corticosteroid Injections for Uncommon Hand, Wrist, and Elbow Pathologies

GREGORY R. WARYASZ, MD; ROBERT TAMBONE, MS; TODD R. BORENSTEIN, MD; JOSEPH A. GIL, MD; MANUEL DASILVA, MD

ABSTRACT
Corticosteroid injections are a common nonsurgical treatment of intersection syndrome, flexor carpi radialis tendonitis, flexor carpi ulnaris tendonitis, and medial epicondylitis. The benefits of corticosteroid injections for these conditions have been well studied and documented in the medical literature. Patients with less common upper extremity complaints usually first present to their primary care provider. A correct anatomical diagnosis will help with early definitive treatment, as the injection must be in the proper location for maximal benefit to the patient. The following review on uncommon upper extremity complaints provides information for a correct diagnosis and treatment plan, followed by a possible injection. This review will hopefully provide high quality care while also cutting health care costs by making the correct diagnosis at the initial presentation.

KEYWORDS: flexor carpi ulnaris, flexor carpi radialis, intersection syndrome, medial epicondylitis

INTRODUCTION
Upper extremity complaints are a common cause of patient visits to primary care providers. Quality of life markers can be low in patients with chronic wrist pain. A thorough patient history will help with the diagnosis of most upper extremity conditions, as work activities are a common culprit.

The tendons of the flexors and extensors of the wrist often become inflamed and lead to tenosynovitis, with complaints of swelling and wrist discomfort. Steroid injections can usually help most tenosynovitis or tendonitis conditions in the wrist and forearm. A correct anatomical diagnosis will guide the practitioner as to the injection site. The common types of steroid used in the upper extremity are betamethasone, methylprednisolone, and triamcinolone. We prefer water-soluble steroids such as betamethasone, because they are less likely to cause depigmentation of the skin. The following review is a guide for managing less common upper extremity complaints, through the correct diagnosis and anatomical location for an injection.

INTERSECTION SYNDROME
Intersection syndrome is a painful disorder of the dorsal forearm caused by inflammation at the crossing point of the tendons of the first and second extensor compartments. It is characterized by pain, swelling and crepitus proximal to Lister’s tubercle of the distal radius. Symptoms occur as the abductor pollicis longus (APL) and extensor pollicis brevis (EPB) tendons of the first extensor compartment cross over the extensor carpi radialis longus (ECRL) and extensor carpi radialis brevis (ECRB) tendons in the second extensor compartment. This overuse syndrome has been reported in rowing, canoeing, racket sports, weight lifting, and skiing. Intersection syndrome has also been referred to as peritendinitis crepitans, crossover syndrome, subcutaneous perimyositis, abductor pollicus longus syndrome, and adventitial bursitis.

Diagnosis
The diagnosis may be difficult because of nonspecific complaints and subtle objective findings. It is important to determine if work activities have contributed to the development of the syndrome. The finding of crepitus over the dorsal forearm with resisted wrist and thumb extension, approximately 4–8 cm proximal to the wrist, helps with diagnosis of this condition.

Symptoms of intersection syndrome vary with the specific location and may include focal, diffuse, or referred pain, swelling, crepitus, weakness, numbness, atrophy, and various vasomotor phenomena. In contrast to deQuervain’s tenosynovitis (inflammation of the EPB and APL tendons), in intersection syndrome the area of pain, tenderness, edema is located 4 to 8 cm proximal to the radial styloid; crepitus is present in severe cases.

Treatment
Current management of intersection syndrome includes rest, NSAIDs, splinting, steroid injections and surgical release. Studies have shown that crepitus induced by thumb movement in patients with intersection syndrome may be reduced by taping across the dorsal forearm with force applied in an ulnar direction; taping in the radial direction had no alleviating effects. Proper taping techniques improved upper limb function during the period of taping as well as over a period of one year.

Using a spica splint is also indicated for patients with intersection syndrome. Two or three weeks of immobilizing the forearm with the wrist in 15 degrees of extension.
is usually effective in decreasing symptoms. Physical therapy to provide gradual increase in range-of-motion and wrist extensor strengthening has also proven beneficial in some instances.

Corticosteroid injection is recommended for patients who do not improve with conservative treatment. The corticosteroid solution should be injected within the second compartment of the extensor retinaculum, inside the bursae of the ECRL and ECRB tendons. In rare cases, surgical debridement and release are indicated in recalcitrant cases of intersection syndrome.

**Flexor Carpi Radialis Tendonitis**

Pain over the flexor carpi radialis (FCR) tendon at the wrist may be caused by stenosing tenosynovitis. The musculotendinous area of the flexor carpi radialis muscle is located approximately fifteen centimeters proximal to the radiocarpal joint and the synovial sheath extends the entire length of the tendon. The tendon enters a fibro-osseous tunnel at the proximal border of the trapezium and is separated from the carpal tunnel by a thick septum that functions as a pivot point for the flexor pollicis longus. FCR tendonitis is caused by narrowing of the tendon sheath due to post-traumatic thickening of the osteofibrous gliding tunnel of the joint between the scaphoid and trapezium. This inflammation in the trapezio-scaphoideal joint may irritate the tendon and lead to tenderness and pain along the radial side of the wrist.

**Diagnosis**

Symptoms of flexor carpi radialis tendonitis include pain, tenderness, swelling, warmth, or erythema of the volar wrist. The pain may worsen when flexing the wrist, especially against resistance or when turning the palm down against resistance. Furthermore, patients often feel pain with gripping and have limited mobility of the wrist. Crepitus may occur with wrist flexion. Some patients also experience numbness of the palm or hand secondary to FCR tendinitis.

**Treatment**

Treatment begins with stopping or limiting activities that increase pain or swelling. Often, modified lifting with the palm facing down provides significant relief. Corticosteroid injections may also be given in the region of the forearm shown below. Finally, surgical release of the FCR tendon may help if little or no changes were seen with activity modification or corticosteroid injections.

**Flexor Carpi Ulnaris Tendonitis**

Injuries to the flexor carpi ulnaris tendon are typically calcific in nature. Histology from six cases of FCU tendinitis showed findings of angiofibroblastic hyperplasia, with dense populations of hypertrophic plump active fibroblasts, vascular hyperplasia, and disorganized collagen. This histology is distinct from that of a normal tendon, which has tightly packed and highly organized bundles of collagen. If there is concern for an acute triangular fibrocartilage complex (TFCC) tear, referral to a hand surgeon is essential for repair of the injury.

**Diagnosis**

Similar to other tendon injuries, FCU tendinitis is probably caused by excessive mechanical overload. Calcific tendinitis in the wrist is rare and is frequently misdiagnosed. Pain due to FCU tendinitis may develop along the anteromedial aspect of the forearm. Common activities leading to FCU tendinitis include excessive keyboard typing, piano playing, or weight lifting.
Treatment

Treatment is similar to that of FCR tendinitis. The patient should modify activities by cutting back on aggravating factors of the wrist/forearm pain, and a removable brace for temporary immobilization may also help. Corticosteroid injection can be placed in the region shown below (Figure 3). As with FCR tendinitis, if these measures are not effective, tendon release surgery may be performed on the flexor carpi ulnaris tendon/muscle.

Medial Epicondylitis

Medial epicondylitis is an overuse injury commonly found in golfers and baseball players that results in pain. Medial epicondylitis has a prevalence of 4% to 13% in the general population, but can be up to 20% in athletes. Medial epicondylitis has been noted in athletes of many different sports including bowling, racquetball, football, archery, weightlifting, and javelin throwing. It is also associated with many occupations in which repetitive wrist flexion and pronation are required, such as carpentry.

The main symptom of medial epicondylitis is pain on the medial aspect of the elbow, especially when the player acts to pronate or flex the wrist while holding on to a golf club or baseball. This pain prevents athletes from using as much force as they could prior to injury. Another characteristic of medial epicondylitis is pain with palpation at the medial aspect of the wrist flexor muscle group. Medial elbow pain usually occurs with acceleration of the arm while swinging a golf club or throwing a ball. It is also seen with increased valgus torque of the elbow, which causes traction at the junction between the wrist flexor muscle group and the medial epicondyle of the elbow.

Diagnosis

Patients with medial epicondylitis usually report a gradual onset and increased symptoms, with no particular inciting event. Pain at the medial epicondyle or just distal in the flexor-pronator mass usually occurs during the acceleration phase of throwing, when the FCR and pronator teres are most active. Pain over the flexor-pronator mass is not necessarily specific to medial epicondylitis and further examination of the deep muscles of the forearm should be performed. Pain during resisted pronation is the most sensitive finding for medial epicondylitis (Gabel). It is important to differentiate cubital tunnel syndrome [ulnar nerve compression at the elbow] from medial epicondylitis.

Treatment

Treatment of medial epicondylitis depends on the age of the patient and his or her particular circumstances. Nonsurgical treatment is usually successful and includes rest, ice, and nonsteroidal anti-inflammatory medication. Steroid injections provide good short-term results, but significant long-term improvements have not been documented compared with conservative treatments alone. Surgical treatment is reserved for patients who do not show significant improvement with rest and a supervised course of prolonged rehabilitation; a period of 6 to 12 months has been recommended. Surgical options include percutaneous epicondyloplasty muscle release, open detachment of the flexor muscle origin without debridment, open detachment of the flexor origin with debridment of pathologic tendinous tissue followed by secure common flexor repair, open medial epicondylectomy, and open resection of pathologic tendinous tissue.
Methylprednisolone acetate 4 to 10mg for tendon sheath/small joint
Betamethasone acetate
Betamethasone sodium phosphate/
Medication Dose

Table 1. Common Corticosteroid Injection Doses

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betamethasone sodium phosphate/betamethasone acetate</td>
<td>1.5 to 3mg for tendon sheath/small joint</td>
</tr>
<tr>
<td>Methylprednisolone acetate</td>
<td>4 to 10mg for tendon sheath/small joint</td>
</tr>
<tr>
<td>Triamcinolone acetonide</td>
<td>10mg for tendon sheath/small joint</td>
</tr>
</tbody>
</table>

Table 2. Complications/Side Effects of Steroid Injections

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevated blood glucose levels</td>
<td>Subcutaneous fatty atrophy/necrosis</td>
</tr>
<tr>
<td>Anaphylaxis</td>
<td>Infection</td>
</tr>
<tr>
<td>Nerve injury</td>
<td>Pain at injection site</td>
</tr>
</tbody>
</table>

CONCLUSION

Uncommon types of wrist and forearm tendonitis/tendinovestis conditions may be misdiagnosed and incorrectly treated. Familiarity with upper extremity tendon anatomy can assist in diagnosis and lead to expedited care either by the primary care provider or by referral to a hand surgeon. Most conservative treatments are effective and include hand therapy, bracing/splinting, and corticosteroid injections. Patients should be warned about the side effects of a corticosteroid injection prior to the injection.31

References


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Subjective Cognitive Decline and Associated Health Problems among Rhode Island Adults

TRACY L. JACKSON, PhD, MPH; TARA COOPER, MPH

Cognitive functioning is generally defined as the ability to think, reason, and remember, and includes components such as memory, attention, executive functioning, and ability to carry out remembered skills (e.g., driving). Declines in cognitive functioning can have significant implications on health, and increasing problems with memory are often the first signs of emerging, more serious cognitive health issues, such as dementia and Alzheimer's disease. Because of this, as part of the Healthy Brain Initiative, the Centers for Disease Control and Prevention and the Alzheimer’s Association identified cognitive decline as a significant public health problem and made the recommendation to develop population-based surveillance of cognitive impairment. As a result, a Cognitive Decline module was added to the Behavioral Risk Factor Surveillance System (BRFSS), a national survey of adult behavior and health. This article is the first to examine the burden of self-reported cognitive decline in Rhode Island and evaluates the relationship between subjective cognitive decline and demographic factors, chronic disease and mental health.

METHODS

Data were from the 2015 Rhode Island BRFSS. The BRFSS is a telephone survey of non-institutionalized adults 18 years of age and older and is used to measure risk behaviors and health. Data obtained from the survey sample are weighted to obtain state population estimates.

Subjective cognitive decline (SCD) was assessed among respondents ages 45 and older with the question “During the past 12 months, have you experienced confusion or memory loss that is happening more often or is getting worse?” Those who answered “yes” were defined as having SCD and were asked six follow-up questions to measure the degree to which SCD has interfered with their lives.

Chronic disease conditions assessed included history of diabetes (excluding gestational); cardiovascular disease (myocardial infarction, stroke, or angina/coronary heart disease), high blood pressure (excluding pregnancy-related), arthritis, chronic obstructive pulmonary disease (COPD), and current obesity (Body Mass Index ≥30). Mental health variables measured included history of depression, frequent mental distress (FMD; ≥14 days in the last 30 days where mental health was not good), adequacy of social and emotional support (always, usually, rarely, or never get support needed), and overall satisfaction with life (very satisfied, satisfied, dissatisfied, very dissatisfied). Demographic characteristics assessed included respondent sex, age, race/ethnicity, education level, employment status, relationship status, income, and veteran status.

Univariate analyses and multivariable logistic regression were conducted to measure the prevalence of SCD and its association with demographic variables. Univariate analyses were conducted to examine the relationship between SCD and chronic disease and mental health. All analyses were conducted in SAS 9.4 (SAS Institute, Inc., Cary, North Carolina) to account for the complex sampling design.

RESULTS

There were 4,129 Rhode Island adults ages 45 and older who gave a valid (“yes” or “no”) response to the SCD measure “During the last 12 months, have you experienced confusion or memory loss that is happening more often or is getting worse?”. Of this sample, 11.5% [95% Confidence Interval [95% CI]: 10.0–12.9] reported they had experienced SCD in the preceding 12 months. When weighted to the state population this is equivalent to approximately 45,755 adults.

Univariate analyses found that prevalence of SCD differed significantly based on age, sex, education, income, race/ethnicity, relationship status, and employment status. Table 1. After controlling for demographic variables significantly associated with SCD, male sex, income less than $25,000, age 45–54 years, age 55–64 years, unemployment, and being retired/homemaker remained associated with significantly increased odds of SCD (Table 2).

Among those with SCD, 54.7% reported that memory problems have at least sometimes forced them to give up day-to-day activities (e.g., cooking, driving) and/or interfered with work, volunteer or social activities. About half [51.6%] reported they or someone else discussed these memory problems with a healthcare professional (Table 3).

SCD was significantly associated with increased prevalence of cardiovascular disease, COPD, diabetes, arthritis, high blood pressure, and obesity (Figure 1). Analysis of mental health indicators revealed those with SCD were significantly more likely to have depression, be dissatisfied with life, experience FMD, and feel they do not get adequate social/emotional support (Figure 2).
Table 1. Self-reported subjective cognitive decline (SCD) among RI adults aged ≥ 45 years by selected characteristics (N=4,129)

<table>
<thead>
<tr>
<th></th>
<th>SCD (N=445; 11.5%)</th>
<th>No SCD (N=3684; 88.5%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Weighted %</td>
</tr>
<tr>
<td><strong>SEX</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>191</td>
<td>13.5</td>
</tr>
<tr>
<td>Female</td>
<td>254</td>
<td>9.8</td>
</tr>
<tr>
<td><strong>RACE/ETHNICITY</strong>*</td>
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<td></td>
</tr>
<tr>
<td>White</td>
<td>367</td>
<td>9.9</td>
</tr>
<tr>
<td>Nonwhite</td>
<td>70</td>
<td>21.2</td>
</tr>
<tr>
<td><strong>AGE</strong></td>
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<td></td>
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<tr>
<td>45-54 years</td>
<td>106</td>
<td>14.4</td>
</tr>
<tr>
<td>55-64 years</td>
<td>149</td>
<td>11.2</td>
</tr>
<tr>
<td>65 years and older</td>
<td>190</td>
<td>9.2</td>
</tr>
<tr>
<td><strong>RELATIONSHIP STATUS</strong>*</td>
<td></td>
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</tr>
<tr>
<td>Partnered</td>
<td>184</td>
<td>9.9</td>
</tr>
<tr>
<td>Not partnered</td>
<td>258</td>
<td>13.6</td>
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<tr>
<td><strong>EMPLOYMENT STATUS</strong>*</td>
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<td></td>
</tr>
<tr>
<td>Employed</td>
<td>98</td>
<td>6.2</td>
</tr>
<tr>
<td>Homemaker/Retired/Student</td>
<td>188</td>
<td>10.1</td>
</tr>
<tr>
<td>Unemployed/Unable to work</td>
<td>156</td>
<td>30.1</td>
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<tr>
<td><strong>INCOME</strong>*</td>
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<tr>
<td>$0-$24,999</td>
<td>168</td>
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<tr>
<td>$25,000-$49,999</td>
<td>71</td>
<td>10.7</td>
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<tr>
<td>$50,000 or more</td>
<td>122</td>
<td>7.0</td>
</tr>
<tr>
<td><strong>EDUCATION</strong>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school or less</td>
<td>183</td>
<td>13.7</td>
</tr>
<tr>
<td>Some college</td>
<td>127</td>
<td>12.8</td>
</tr>
<tr>
<td>College graduate</td>
<td>134</td>
<td>7.4</td>
</tr>
<tr>
<td><strong>VETERAN</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>83</td>
<td>12.3</td>
</tr>
<tr>
<td>No</td>
<td>362</td>
<td>11.3</td>
</tr>
</tbody>
</table>

Source: BRFSS, 2015
*Nonwhites included Hispanic, African American, Asian, Native American/Alaska Native, Pacific Islander, and Other race. Numbers were too small to report by individual race/ethnic group.

**p<.01; ***p<.001; ****p<.0001

DISCUSSION

Analysis from the 2015 BRFSS shows the prevalence of SCD among adults 45 years and older in RI is approximately 11.5%; a rate similar to the national average of 11.6%. More than half of RI adults with SCD reported that these problems have interfered with their day-to-day activities around the home or their social and work activities outside the home. Males, individuals aged 45–64 years, those with incomes less than $25,000, and those who were unemployed or retired were more likely to report SCD. Individuals with SCD were significantly more likely to be obese; have been diagnosed with diabetes, cardiovascular disease, arthritis, COPD, high blood pressure, and depression; have recently experienced FMD; be dissatisfied with life; and feel they do not get needed social/emotional support.

The finding that rates of SCD were highest among the youngest age group evaluated (45–54 years) was surprising. Cognitive decline is generally believed to become more

Table 2. Multivariable logistic regression of characteristics associated with subjective cognitive decline (SCD) among RI adults ≥ 45 years (N=3,242)

<table>
<thead>
<tr>
<th></th>
<th>Adjusted Odds ratio (AOR)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEX</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1.42</td>
<td>(1.02-1.97)</td>
</tr>
<tr>
<td>Female</td>
<td>Ref.</td>
<td>--</td>
</tr>
<tr>
<td><strong>RACE/ETHNICITY</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>Ref.</td>
<td>--</td>
</tr>
<tr>
<td>Nonwhite</td>
<td>1.44</td>
<td>(0.89-2.33)</td>
</tr>
<tr>
<td><strong>AGE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45-54 years</td>
<td>1.93</td>
<td>(1.21-3.10)</td>
</tr>
<tr>
<td>55-64 years</td>
<td>1.55</td>
<td>(1.06-2.28)</td>
</tr>
<tr>
<td>65 years and older</td>
<td>Ref.</td>
<td>--</td>
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<tr>
<td><strong>RELATIONSHIP STATUS</strong></td>
<td></td>
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<tr>
<td>Partnered</td>
<td>Ref.</td>
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</tr>
<tr>
<td>Not partnered</td>
<td>0.62</td>
<td>(0.41-0.92)</td>
</tr>
<tr>
<td><strong>EMPLOYMENT STATUS</strong>*</td>
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</tr>
<tr>
<td>Employed</td>
<td>Ref.</td>
<td>--</td>
</tr>
<tr>
<td>Unemployed/Unable to work</td>
<td>4.10</td>
<td>(2.42-6.95)</td>
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<tr>
<td>Homemaker/Retired/Student</td>
<td>2.32</td>
<td>(1.51-3.55)</td>
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<tr>
<td><strong>INCOME</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0-$24,999</td>
<td>2.92</td>
<td>(1.71-4.98)</td>
</tr>
<tr>
<td>$25,000-$49,999</td>
<td>1.52</td>
<td>(0.91-2.53)</td>
</tr>
<tr>
<td>$50,000 or more</td>
<td>Ref.</td>
<td>--</td>
</tr>
<tr>
<td><strong>EDUCATION</strong>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school or less</td>
<td>0.95</td>
<td>(0.64-1.42)</td>
</tr>
<tr>
<td>Some college</td>
<td>1.12</td>
<td>(0.75-1.68)</td>
</tr>
<tr>
<td>College graduate</td>
<td>Ref.</td>
<td>--</td>
</tr>
</tbody>
</table>

Source: BRFSS, 2015
*Nonwhites included Hispanic, African American, Asian, Native American/Alaska Native, Pacific Islander, and Other race. Numbers were too small to report by individual race/ethnic group.

Ref. = reference group
prevalent and worsen with age. It is possible that these findings are due to the self-reported nature of the data. Adults in the youngest age group may be more aware of and more likely to report memory changes. Additionally, this survey likely only captures less severe cognitive decline or decline in its early stages; those with more severe cognitive problems would likely be incapable of completing the survey. However, the finding that 14% of adults ages 45–55 are experiencing confusion or memory loss highlights the importance of understanding cognitive issues even among middle-aged adults.

Overall, only about half of adults with SCD had spoken to a healthcare provider about their symptoms. The reasons individuals do not discuss cognitive issues with healthcare providers are unclear. Some possibilities are that onset of symptoms was relatively recent, patients are unsure if symptoms are worth discussing, or they forget to discuss the issue. It may be helpful for providers to ask patients about SCD as part of a standard evaluation, instead of relying on patients bringing the concerns to their attention.

We found a high rate of comorbidity between SCD and other health issues. Those with SCD were more likely to suffer from a number of chronic diseases and mental health problems. Due to the cross-sectional nature of the dataset, we cannot analyze causation or determine the reasons for the relationship between SCD and other health conditions.

It is possible symptoms of disease or medications used to treat them can cause memory issues, that SCD led to other health problems, or just that the two issues share common risk factors [e.g. low income]. More work is needed to better understand these relationships. Regardless of the exact nature of the association, it is important to consider how SCD may contribute to the worsening of chronic disease and mental health conditions. For example, individuals with diabetes who are experiencing confusion may forget to check...
their blood sugar or take medications. The findings on the associations between SCD and mental health problems were striking, indicating that many of those with SCD are experiencing frequent distress and are much less satisfied with their day-to-day life.

This study had limitations. First, data were based on self-report which is prone to recall bias. As the name subjective cognitive decline indicates, all reports of cognitive decline were subjective to the respondent and not based on clinical assessment. Also, the study population included only adults in non-institutionalized settings and therefore, those in nursing homes or hospitals were excluded. This limits the generalizability of the findings and may result in an underestimate of the number of adults in the state experiencing cognitive problems.

Despite these limitations, these data provide a valuable tool by measuring the burden of subjective cognitive decline in RI. Public health professionals, aging service providers, the Division of Elderly Affairs, and other partners can consider this data when developing programs and policies to address the needs of adults living with SCD across the state. SCD is associated with a number of health issues and can have a severe impact on overall quality of life. Understanding and evaluating cognitive decline should continue to be a focus area in medicine and public health.

References

Acknowledgments
This brief was supported by the Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, National Center for Environmental Health (NCEH) for the RI BRFSS (3U58SO000044-03S2 and 1U58DP006067-01) and the Alzheimer’s Association.

Authors
Tracy L. Jackson, PhD, MPH, is a Senior Public Health Epidemiologist in the Center for Health Data and Analysis (CHDA) at RIDOH.
Tara Cooper, MPH, is a Health Program Administrator who leads the Behavioral Risk Factor Surveillance System within CHDA.
Rhode Island Monthly Vital Statistics Report
Provisional Occurrence Data from the Division of Vital Records

<table>
<thead>
<tr>
<th>VITAL EVENTS</th>
<th>SEPTEMBER 2016</th>
<th>12 MONTHS ENDING WITH SEPTEMBER 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Number</td>
</tr>
<tr>
<td>Live Births</td>
<td>983</td>
<td>11,742</td>
</tr>
<tr>
<td>Deaths</td>
<td>776</td>
<td>9,976</td>
</tr>
<tr>
<td>Infant Deaths</td>
<td>4</td>
<td>63</td>
</tr>
<tr>
<td>Neonatal Deaths</td>
<td>4</td>
<td>47</td>
</tr>
<tr>
<td>Marriages</td>
<td>1,025</td>
<td>6,925</td>
</tr>
<tr>
<td>Divorces</td>
<td>265</td>
<td>3,067</td>
</tr>
<tr>
<td>Induced Terminations</td>
<td>169</td>
<td>2,191</td>
</tr>
<tr>
<td>Spontaneous Fetal Deaths</td>
<td>22</td>
<td>546</td>
</tr>
<tr>
<td>Under 20 weeks gestation</td>
<td>18</td>
<td>473</td>
</tr>
<tr>
<td>20+ weeks gestation</td>
<td>4</td>
<td>73</td>
</tr>
</tbody>
</table>

| Rates | 11.1* | 9.4* | 5.4# | 4.0# | 6.6* | 2.9* | 186.6# | 46.5# | 40.3# | 6.2# |

* Rates per 1,000 estimated population
# Rates per 1,000 live births

<table>
<thead>
<tr>
<th>Underlying Cause of Death Category</th>
<th>MARCH 2016</th>
<th>12 MONTHS ENDING WITH MARCH 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (a)</td>
<td>Number (a)</td>
</tr>
<tr>
<td>Diseases of the Heart</td>
<td>181</td>
<td>2,367</td>
</tr>
<tr>
<td>Malignant Neoplasms</td>
<td>199</td>
<td>2,285</td>
</tr>
<tr>
<td>Cerebrovascular Disease</td>
<td>38</td>
<td>431</td>
</tr>
<tr>
<td>Injuries (Accident/Suicide/Homicide)</td>
<td>88</td>
<td>866</td>
</tr>
<tr>
<td>COPD</td>
<td>50</td>
<td>476</td>
</tr>
</tbody>
</table>

(a) Cause of death statistics were derived from the underlying cause of death reported by physicians on death certificates.
(b) Rates per 100,000 estimated population of 1,056,298 (www.census.gov)
(c) Years of Potential Life Lost (YPPL).

NOTE: Totals represent vital events, which occurred in Rhode Island for the reporting periods listed above.
Monthly provisional totals should be analyzed with caution because the numbers may be small and subject to seasonal variation.
First, do no harm.

Second, have great insurance.
When things go wrong, your coverage really matters. For more than 25 years we have specialized in physicians’ insurance. Working with multiple insurers allows us to offer you choice, competitive rates, and the benefit of one-stop shopping. Call us.

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RIMS NOTES: News You Can Use

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Informative.

Respectful of your time.

RIMS NOTES is published electronically on alternate Fridays.

Contact Sarah if you’ve missed an issue, sstevens@rimed.org.
It’s a new day.

The Rhode Island Medical Society now endorses Coverys.

Coverys, the leading medical liability insurer in Rhode Island, has joined forces with RIMS to target new levels of patient safety and physician security while maintaining competitive rates. Call to learn how our alliance means a bright new day for your practice.

401-331-3207
# Working for You: RIMS advocacy activities

**February 1, Wednesday**  
“Employment 101” presentation for residents and fellows, RI Hospital  
Legislative Hearings

**February 3, Friday**  
Healthcare Workforce Transformation Committee (SIM project, Executive Office of Health & Human Services)

**February 6, Monday**  
Conference call regarding out-of-network billing legislation in the General Assembly  
RIMS Council Meeting: Sarah J. Fessler, MD, President

**February 7, Tuesday**  
RIMS Physician Health Committee: Herbert Rakatansky, MD, Chair  
Weight + Wellness Summit Planning Committee  
Senate Committees on Health and Human Services and Finance joint meeting on Affordable Care Act  
Legislative Hearings: Peter A. Hollmann, MD, RIMS Vice President, testifying  
RIMS Reception for New Legislators at RIMS headquarters

**February 8, Wednesday**  
Board of Medical Licensure and Discipline, Department of Health  
Governor’s Overdose and Intervention Task Force  
Legislative Hearings

**February 13, Monday**  
Tobacco Free Rhode Island/RI Tobacco Policy Committee meeting at RIMS

**February 14, Tuesday**  
Meeting with PACE [Program of All-inclusive Care for the Elderly]  
AMA Advocacy Resource Center conference call regarding Aetna-Humana merger  
Legislative hearings

**February 15, Wednesday**  
Primary Care Physician Advisory Committee, Department of Health  
Legislative hearings: Michael E. Migliori, MD, Chair, RIMS Public Laws Committee, testifying  
Speaker Mattiello fundraiser

**February 16, Thursday**  
Health care lobbyists meeting, hosted by RIMS  
Chuck Jones, CEO, Thundermist, farewell reception

**February 17, Friday**  
Congressman Cicilline roundtable discussion on the Affordable Care Act  
Conference Call with United Networks of America re: pharmacy cards for patients

**February 20, Monday**  
Meeting with Governor’s Office regarding legislation

**February 21, Tuesday**  
CME Committee [Patrick J. Sweeney, MD, PhD, MPH, Chair] conference call with Graham McIntosh, MD, MMSc, President, Accreditation Council for Continuing Medical Education  
Weight + Wellness Summit Planning Committee  
Meeting with RI Health Center Association regarding  
Weight + Wellness Summit  
Office of the Health Insurance Commissioner: Health Insurance Advisory Council

**February 22, Wednesday**  
RI Emergency Department Directors meeting regarding potential legislation, RIMS staff

**February 23, Thursday**  
Meeting with former Secretary of Health and Human Services Elizabeth Roberts regarding Weight + Wellness Summit

**February 27, Monday**  
RI Psychiatric Society Law and Legislation Committee, RIMS Staff

**February 28, Tuesday**  
Diabetes Prevention in Rhode Island Launch Meeting, Providence: RIMS’ Executive Director, speaker  
AMA National Advocacy Conference, Washington, DC: meetings with Rhode Island congressional delegation; Bradley Collins, MD, President-elect, RIMS staff  
AMA honors former RI Secretary of Health and Human Services Elizabeth Roberts for her career in public service, Washington, DC; Bradley Collins, MD, President-elect, RIMS staff
Rhode Island’s First
Weight + Wellness Summit

Convening community resources to create a Rhode Island where healthful, affordable choices in food and physical activity are the natural daily default for all.

Who should attend? Healthcare professionals, policy makers, health advocates, educators, producers and purveyors of wholesome foods, nutritionists, community leaders, urban planners and everyone who has an interest in making regular exercise and sound nutrition convenient and affordable for all Rhode Islanders.

For more information contact Catherine Norton at the Rhode Island Medical Society: 401-443-2386 or cnorton@rimed.org rimed.org/weight+wellness.asp

The summit’s Luncheon Program and Mindfulness Demonstration sponsored by Blue Cross & Blue Shield of Rhode Island.

This event is made possible through an educational grant from the Coverys Community Healthcare Foundation.
The Rhode Island Medical Society continues to drive forward into the future with the implementation of various new programs. As such, RIMS is expanded its **Affinity Program** to allow for more of our colleagues in healthcare and related business to work with our membership. RIMS thanks these participants for their support of our membership.

**Contact Marc Bialek for more information:** 401-331-3207 or mbialek@rimed.org

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**RIMS Corporate Affiliates**

**Doctor's Choice**

Doctor's Choice provides no cost Medicare consultations. Doctor's Choice was founded by Dr. John Luo, a graduate of the Alpert Medical School at Brown University to provide patient education and guidance when it comes to choosing a Medicare Supplemental, Advantage, or Part D prescription plan. Doctor's Choice works with individuals in RI, MA, as well as CT and helps compare across a wide variety of Medicare plans including Blue Cross, United Health, Humana, and Harvard Pilgrim.

[John@insurehealthgroup.com](mailto:john@insurehealthgroup.com)

**Neighborhood Health Plan of Rhode Island**

Neighborhood Health Plan of Rhode Island is a non-profit HMO founded in 1993 in partnership with Rhode Island’s Community Health Centers. Serving over 185,000 members, Neighborhood has doubled in membership, revenue and staff since November 2013. In January 2014, Neighborhood extended its service, benefits and value through the HealthSource RI health insurance exchange, serving 49% the RI exchange market. Neighborhood has been rated by National Committee for Quality Assurance (NCQA) as one of the Top 10 Medicaid health plans in America, every year since ratings began twelve years ago.

[www.nhpri.org](http://www.nhpri.org)

**RIPCPC**

RIPCPC is an independent practice association (IPA) of primary care physicians located throughout the state of Rhode Island. The IPA, originally formed in 1994, represent 150 physicians from Family Practice, Internal Medicine and Pediatrics. RIPCPC also has an affiliation with over 200 specialty-care member physicians. Our PCP’s act as primary care providers for over 340,000 patients throughout the state of Rhode Island. The IPA was formed to provide a venue for the smaller independent practices to work together with the ultimate goal of improving quality of care for our patients.

[www.ripcpc.com](http://www.ripcpc.com)
RIMS gratefully acknowledges the practices who participate in our discounted Group Membership Program.

For more information about group rates, please contact Marc Bialek, RIMS Director of Member Services.
RIMS: Your Voice for 200+ Years
Join your colleagues and add your voice

Membership in The Rhode Island Medical Society (RIMS) makes you a part of a dynamic network of physicians, residents, students, physician assistants, and healthcare professionals who represent, like you, the best of the profession.

The ABCs of membership
Advocacy: RIMS membership offers a cohesive platform for its members to speak with a unified voice on local, state and national issues through committee participation, policy development, legislative representation, educational conferences, and stakeholder seminars.

Benefits: CME sessions, physician health services, preferred career, financial and personal services from our sponsors, membership portal.

Collegiality: Social events, networking opportunities, professional development.

Strength: In numbers. If you are already a member, thank you for your support. If you’re not, join us today. Group, military and new practitioner discounts; medical students join for free.

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Contact Mark Bialek, Director of Membership

RIMS Leadership: Treasurer José Polanco, MD; Secretary Christine Brousseau, MD; President-Elect Bradley J. Collins, MD; President Sarah J. Fessler, MD; Vice President Peter A. Hollman, MD; and (seated) Immediate Past President Russell A. Settipane, MD.

RIMS maintains close contact with federal and state lawmakers to represent physician and patient interests in emerging legislation. RIMS Public Laws Chair Michael E. Migliori, MD, at left, and RIMS Director of Government and Public Affairs Steven R. DeToy shown here following their meeting with RI Representative David R. Cicilline.

RIMS hosts social events throughout the year for members and guests.

RIMS Executive Director Newell E. Warde, PhD, hosting a free CME seminar for members of the Medical Society.

Alyn L. Adrain, MD, and Peter A. Hollmann, MD, Rhode Island Delegates to the AMA, participate in the formation of national AMA policy at annual House of Delegates meetings in Chicago.
Finally, some good news about insurance for medical professionals

We have partnered with the Rhode Island Medical Society to offer an exclusive Concierge Program designed specifically for medical professionals to save on their personal and business insurance.

Contact Robert A. Anderson, AAI at 401.272.1050 – randerson@rimsibc.com
Lifespan Cancer Institute created; formerly Comprehensive Cancer Center

PROVIDENCE – Lifespan announced on February 15 that cancer care services at all of its hospitals and outpatient centers will be unified and operate under a single name, the Lifespan Cancer Institute. Formerly known as the Comprehensive Cancer Center, the Lifespan Cancer Institute will encompass all cancer care across Lifespan as well as the system’s thriving research program.

The naming reflects a new era of collaboration to ensure that every patient has access to a full array of comprehensive treatments, medical technology, support services, and clinical trials.

“Lifespan is leading efforts regionally to find new treatments, improve the delivery of cancer care, and, ultimately, save more lives,” said Timothy J. Babineau, M.D., president and CEO of Lifespan. “The Lifespan Cancer Institute will be synonymous with treatment excellence and pioneering research.”

Dr. Babineau also announced that internationally renowned researcher and clinician HOWARD SAFRAN, MD, a longtime Rhode Island Hospital and The Miriam Hospital physician, will be the chief of hematology/oncology of the Lifespan Cancer Institute. Dr. Safran earned his MD at Boston University and completed a fellowship in hematology/oncology at the Boston University Medical Center. He has served as Lifespan’s director of oncology cancer research since 2009 and interim director of hematology/oncology since 2015. Dr. Safran is also a professor of medicine at Brown University’s Warren Alpert School of Medicine. His 30-year medical career includes appointments to numerous national task forces and committees; more than 100 peer-reviewed and invited publications; national and international presentations; and principal investigator roles on nearly $14 million of grant-funded research.

“This is an exciting time for providers and researchers in the myriad of cancer fields, and our goal is to accelerate progress,” said DAVID E. WAZER, MD, director of the Lifespan Cancer Institute. “New frontiers in treatment including precision medicine and immunotherapy are showing promise for our patients in the battle against cancer. Greater coordination of Lifespan’s diverse resources will be critical to achieving the best possible outcomes and advancing toward a cure as quickly as possible.”

Advance Clinical and Translational Research (Advance-CTR), awarded first two Pilot Project grants

PROVIDENCE — With the first two Pilot Project grants from Advance Clinical and Translational Research (Advance-CTR), teams of researchers will set out to test new ways of fighting a diabetes complication and orthopaedic tissue injury.

The Brown University-based Advance-CTR launched in July 2016 with a $19.5 million, five-year Institutional Development Program Award from the National Institute of General Medical Sciences. Its purpose is to provide infrastructure and support to catalyze biomedical research and clinical trials that will translate the benefits of basic research to patient care in Rhode Island. One of its programs is the Pilot Projects awards to kickstart such team science.

“We couldn’t be more excited by the response we received to the program and the high caliber of applications that were ultimately submitted,” said DR. SHARON Rounds, director of the Pilot Projects program, professor of medicine in the Warren Alpert Medical School and Providence VA Medical Center physician. “This underscores a true unmet need in Rhode Island for pilot funding.”

Each grant provides $75,000 for one year with an option for a second year.

In one of the new projects, two researchers will delve deep into the molecular biology of why people with diabetes often have vasculature that does not dilate to accommodate increased blood flow. The researchers will conduct tests on vasculature and key proteins in discarded tissue from diabetic and non-diabetic patients and will then test different interventions in diabetes model mice to see if it improves vascular dilation. The lead researchers are RICHARD Clements and Dr. Neel Sodha, assistant professors of surgery in the Warren Alpert Medical School, and researchers at Rhode Island Hospital. Clements is also affiliated with the Providence VA Medical Center. Their mentors will be Drs. Frank Sellke and Samuel Dudley, professors of medicine and physicians at Rhode Island Hospital.

Researchers on the other project will study and evaluate the potential for certain stem cells to help heal damage to the meniscus cartilage in the knee. The team will begin the study by isolating cartilage-derived stem cells from the tissue of patients undergoing knee replacement surgery. Then they will test the healing response of applying such stem cells to meniscal injuries in laboratory rats. Alpert Medical School orthopedics faculty members and Rhode Island Hospital researchers Chathuraka Jayasuriya, assistant professor, and Dr. Brett Owens, professor, lead the project. They will be mentored by orthopedics professors and Rhode Island Hospital physicians Drs. Michael Ehrlich and Qian Chen.

More awards are planned for later this year among the partners in the Advance-CTR, a statewide collaboration that includes Care New England, Lifespan, the Providence VA Medical Center, Rhode Island Quality Institute, and the University of Rhode Island.
Southcoast Health unveils state-of-the-art electrophysiology lab at Charlton

FALL RIVER, MASS. – Southcoast Health unveiled its state-of-the-art electrophysiology lab at Charlton Memorial Hospital in Fall River in February.

The $4 million, 3,800-square-foot electrophysiology lab will be dedicated to performing complex ablations for patients with atrial fibrillation, ventricular tachycardia and atrial tachycardia.

“With this state-of-the-art lab we will be able to continue to provide outstanding outcomes for our patients but with less radiation and greater precision,” stated DR. RAMI DAVODUI, Director of Electrophysiology for Southcoast Health.

The new electrophysiology lab has more cameras to allow for better and quicker visualization of catheters. It uses highly advanced technology to minimize radiation from x-rays. In some cases, it can reduce x-ray exposure by up to 80 percent. It was designed by JACA Architects with Shawmut Design and Construction serving as general contractor.

The lab also has a brand new mapping system that helps physicians localize abnormal electrical signals from the heart at 10 times the speed of the old system. This will cut down procedure times for the patient and the operator, and improve accuracy and success. This mapping system was recently approved by the FDA, and Southcoast Health is one of just 30 in the U.S. to utilize this technology.

The addition of the lab will allow Southcoast Health to accommodate the increasing volume of patients and significantly decrease the wait time for many complex procedures. According to the CDC, an estimated 2.7 to 6.1 million people in the U.S. have A-Fib. In 2012, Southcoast Health discharged more than 700 A-Fib cases, the second highest number of all the commonwealth’s health systems.

The electrophysiology lab is housed in the multi-level, 6,700-square-foot Harold and Virginia Lash Heart and Vascular Center at Charlton Memorial Hospital, which is also the location of the hybrid operating room. The Lash Center was completed in October 2015 at a cost of approximately $14 million.

$2.9M grant supports study of suicide risk assessment

Researchers at Butler Hospital, Brown University, and the University of Michigan to study novel approach

A multidisciplinary team from Butler Hospital, Brown University and the University of Michigan has come together to advance screening capabilities for suicide risk. The group received a $2.9 million grant from the National Institute of Mental Health to conduct a five-year research study utilizing innovative smartphone technology. Using the smartphone app PRIORI (Predicting Individual Outcomes for Rapid Intervention) designed by the team at the University of Michigan, researchers will record and analyze changes in speech patterns to identify how they relate to changes in suicide risk.

The tenth leading cause of death in the United States, suicide is responsible for 42,000 deaths in the country each year. Although there are many known risk factors for suicide, the majority of individuals who have these risk factors do not go on to attempt suicide – pointing to the importance of identifying new strategic risk factors for suicidal thoughts and behaviors.

“It is our hope that results of this study will have implications for both prevention and early intervention of suicide, and that the smartphone technology will provide methods for monitoring patients’ suicide risk over time,” said HEATHER SCHATTEN, Ph.D., a research psychologist at Butler Hospital and assistant professor of research at the Alpert Medical School. One of three principal investigators for the study, Dr. Schatten is joined by a multidisciplinary team that includes research psychologists, psychiatrists, computer scientists and engineers, and a quantitative scientist.

Participants in the study will be recruited in a psychiatric inpatient setting, an important population given the elevated suicide rates in the weeks and months following hospital discharge. The study begins recruitment this month.
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• #1 in Rhode Island for overall sales volume. (2017 PBN Lists)
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NEW YORK – The American Geriatrics Society (AGS) will launch a new national program that positions geriatricians and geriatrics-trained clinicians as co-managers with orthopedic surgeons to improve care and health outcomes, while lowering costs, for older adults with hip fractures, funded by a $1.4 million grant from The John A. Hartford Foundation.

At Brown, the program is co-led by Richard W. Besdine, MD, AGSF, Professor of Medicine and of Health Care Policy and Practice, Director of the Division of Geriatrics and Palliative Medicine, and Director of the Center for Gerontology and Health Care Research, Alpert Medical School and Lynn McNicoll, MD, AGSF, Director of Education, Division of Geriatrics and Palliative Medicine, Alpert Medical School.

Geriatrics-orthopedics co-management incorporates a geriatrics approach to care as soon as possible after an older person enters the hospital for a hip fracture, helping to identify and reduce the risk for harmful events ranging from falls and delirium to infections. The model has been shown to reduce length of stay, readmissions, and most complications, and to increase an older person’s chances of going home directly from the hospital, often resulting in improved function and independence.

An earlier planning grant from The John A. Hartford Foundation allowed the AGS to develop a viable business strategy and implementation plan to disseminate the geriatrics-orthopedics co-management model to hospitals and health systems nationwide.

Now, the AGS team will move forward with a three-year implementation plan for its first specialty-specific co-management program. They will work with early-adopter sites to:

- Create and test training, evaluation, and implementation tools for the co-management program;
- Assist participating hospitals with measuring success and sharing lessons learned; and
- Provide ongoing consultation, networking opportunities, and additional co-management resources as the program is expanded to a network of hospitals and health systems around the country. ✷
Research at W&I supports expanded use of cell free DNA prenatal testing

Study out of Women & Infants Hospital published in Genetics in Medicine

PROVIDENCE – A DNA-based prenatal blood test used to screen pregnancies for Down syndrome and similar chromosome abnormalities in high-risk women has moved a step closer to use in the general pregnancy population. Researchers at Women & Infants Hospital have published a study in *Genetics in Medicine* that shows that this non-invasive test can be effectively and appropriately offered to all pregnant women, regardless of maternal age or risk factors, through primary obstetrical care providers.

The research, “The clinical utility of DNA-based screening for fetal aneuploidy by primary obstetrical care providers in the general pregnancy population,” was led by Glenn Palomaki, PhD, Edward M. Kloza, MS, CGC, Eliza- beth Eklund, MS, and Geralyn Messerlian, PhD, of the Division of Medical Screening and Special Testing in the Department of Pathology and Laboratory Medicine at Women & Infants Hospital of Rhode Island and The Warren Alpert Medical School of Brown University, as well as maternal-fetal medicine specialist Barbara M. O’Brien, MD, formerly of Women & Infants Hospital. This independent study was funded by a grant from Natera, Inc. (San Carlos, CA) and the DNA*First* test was primarily based on Natera’s Panorama offering.

“We already know that DNA-based screening is highly effective. This study enabled us to look at its implementation in the general population to determine how best to educate professionals and patients,” said Dr. Palomaki.

The study aimed at determining the knowledge and satisfaction of women who chose the DNA*First* screening test as part of routine prenatal care. Of the approximately 2,700 women in Rhode Island who chose DNA*First* screening, a subset with specific test and demographic characteristics was contacted. These women participated in a 15-minute structured telephone interview about their experience.

“We developed patient education materials and trained the providers on speaking with their patients about the DNA*First* test. The providers and patients were then surveyed concerning their knowledge about the test, how they made their decision about the test, and their overall satisfaction,” explained Dr. Palomaki. “Ultimately, we found that the materials were highly effective for both the providers and the patients.”

Women & Infants Hospital has been an international center for prenatal screening research. For more than three decades, under the leadership of the late Jacob Canick, PhD, the faculty in the Division of Medical Screening and Special Testing has led research to develop and improve screening tests for Down syndrome and other fetal abnormalities. In 2011, Dr. Palomaki and colleagues published the first external validation study of next generation sequencing of circulating cell free DNA in maternal plasma to identify common chromosome abnormalities.

“The current study results will be utilized by policy-makers, professional organizations and insurance providers when deciding how and to whom DNA-based prenatal screening will be offered,” said Dr. Palomaki.

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Lifespan Physician Group, Inc., participating in Comprehensive Primary Care Plus (CPC+)

PROVIDENCE – Lifespan Physician Group, Inc.’s Metacom Medical, Women’s Medicine Collaborative, Family Physicians of Newport and Jamestown Family Practice are among more than 2,900 primary care practices nationwide participating in Comprehensive Primary Care Plus (CPC+), a partnership between payer partners from the Centers for Medicare & Medicaid Services (CMS), state Medicaid agencies, commercial health plans, self-insured businesses, and primary care providers. This partnership is designed to provide improved access to quality health care at lower costs.

CPC+ is administered by the Center for Medicare & Medicaid Innovation (CMS Innovation Center). The CMS Innovation Center was created by the Affordable Care Act to test innovative payment and service delivery models that have the potential to reduce program expenditures while preserving or enhancing the quality of care.

Through CPC+, CMS will pay primary care practices a care management fee, initially set at an average of $15 per beneficiary per month in Track 1 and $28 per beneficiary per month in Track 2, to support enhanced, coordinated services on behalf of Medicare fee-for-service beneficiaries. Simultaneously, participating commercial, state, and other federal insurance plans are also offering enhanced payment to primary care practices designed to support them in providing high-quality primary care on behalf of their members.

For patients, this means that physicians may offer longer and more flexible hours; use electronic health records; coordinate care with patients’ other health care providers; better engage patients and caregivers in managing their own care; and provide individualized, enhanced care for patients living with multiple chronic diseases and higher needs.

The five-year model started on January 1, 2017, with CMS soliciting a diverse pool of commercial health plans, state Medicaid agencies, and self-insured businesses to work alongside Medicare to support comprehensive primary care. Public and private health plans in 14 regions across the country signed letters of intent with CMS to participate in this model: Arkansas, Colorado, Hawaii, Kansas and Missouri’s Greater Kansas City region, Michigan, Montana, New Jersey, New York’s Capital District-Hudson Valley region, Ohio and Kentucky’s Cincinnati-Dayton region, Oklahoma, Oregon, Pennsylvania’s Greater Philadelphia Region, Rhode Island, and Tennessee. The markets were selected in August 2016 based on the percentage of the total population covered by payer partners who expressed interest in joining this partnership.

Eligible primary care practices in each market were invited to apply to participate in the winter of 2016. Through a competitive application process, CMS selected primary care practices within the selected markets to participate in CPC+. Practices were chosen based on their use of health information technology; ability to demonstrate recognition of advanced primary care delivery by leading clinical societies; service to patients covered by participating payer partners; participation in practice transformation and improvement activities; and diversity of geography, practice size, and ownership structure.

“Our primary care practices are excited to participate in CPC+,” said Steven Lampert, president of Lifespan Physician Group. “This program will provide resources, both financial and educational, that will increase the value of the care we provide our patients. We will be able to provide more coordinated care for our patients while we transform the way primary care is practiced at Lifespan Physician Group.”

For more about CPC+: https://innovation.cms.gov/initiatives/comprehensive-primary-care-plus/

Kent’s Breast Health Center providing radioactive seed localization procedure

WARWICK – The Breast Health Center at Kent Hospital now offers patients radioactive seed localization (RSL), a preliminary procedure for those undergoing surgery for non-palpable, image detected breast cancer or high risk lesion. The technique enhances the surgeon’s ability to locate, dissect, and remove the lesion. RSL minimizes the volume of tissue removed compared to the traditional technique, wire localization procedure (WLP), by placing the seed at or adjacent to the lesion. Unlike WLP, where a wire is placed the morning of surgery, RSL implants a radioactive seed (radioactive iodine-125 or I25) up to five days prior.

The new procedure was recently granted approval from the Rhode Island Department of Health and is only available in Rhode Island at Kent Hospital.

Developed in the late 1990s and tested in randomized trial since 2001, RSL has grown in popularity throughout the nation. It is now the preferred clinical procedure to WLP. CANDACE DYER, MD, and NAVEH LEVY, MD, of Kent Hospital’s Breast Health Center were trained in the procedure at the Mayo Clinic and Baystate Medical.

“Radioactive seed localization resolves many of the challenges WLP presented. The technique allows for more directed surgery, resulting in less pain, better cosmetics, and fewer incidences of re-excisions,” said Dr. Dyer, physician director of the center.

The seed, which is about the size of a grain of rice, is placed by a radiologist at Kent Hospital’s Women’s Diagnostic Imaging Center yielding minimal radiation exposure. A mammogram ensures the seed is located as close as possible to the lesion. The seed is removed with the lesion and additional tissue during surgery.
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New VA clinical trial studies if high-risk cardiovascular patients benefit from higher dose of flu vaccine

Boston – A VA Boston-based cardiology consortium completed its first year of a landmark clinical trial testing whether a higher dose of flu vaccine is superior to standard flu vaccine in reducing the risk of death or cardiopulmonary hospitalization among high-risk cardiovascular patients.

VA Boston Healthcare System’s Dr. Jacob Joseph and Dr. J. Michael Gaziano and their research team are leading a nationwide consortium of VA Medical Centers, including the Providence VA, in the INfluenza Vaccine to Effectively Stop Cardio Thoracic Events and Decompensated heart failure (INVESTED) trial, funded by the National Heart, Lung, and Blood Institute (NHLBI).

INVESTED began accepting participants across the U.S. and Canada in September 2016. VA facilities at Providence, West Haven, and White River Junction are all participating in INVESTED. The Bedford VA Campus will be added as a new trial site this year.

Dr. Joseph is a member of the INVESTED Executive Committee and meets weekly with trial leadership to discuss study conduct and the direction of the trial. Under Dr. Joseph’s direction, the Boston-based VA Network Coordinating Center was responsible for providing support to nine VA sites in contracting, acquiring regulatory approvals, and general study conduct.

The VA Network Coordinating Center provided recruitment lists tailored to each site in order to pre-screen potential participants, enhancing and streamlining the recruitment process.

By fall of 2017, the VA Network will bring on approximately thirty more VA sites across the U.S. and will aim to enroll around 3,100 total patients over the next three flu seasons. The INVESTED trial, slated to end in 2020, plans to enroll 9,300 cardiovascular patients in total.

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Dr. Wen-Chih Wu publishes study showing sickle cell may confound blood sugar readings of African-Americans

PROVIDENCE – A new study in the Journal of the American Medical Association provides evidence that a common blood biomarker used to measure blood sugar over time may not perform as accurately among African-Americans with sickle cell trait.

“For patients with diabetes, HbA1c is often used as a marker of how well they are managing their diabetes, so having an underestimation of their blood sugars is problematic because they might have a false sense of security, thinking they are doing okay when they are not,” said Dr. Wen-Chih Wu, a cardiologist at the Providence Veterans Affairs Medical Center and associate professor of medicine and of epidemiology at Brown University, who is the study’s senior author. “This could be a particular concern of African-American Veterans, because diabetes is roughly twice as prevalent among Veterans versus the general population.”

Sickle cell trait (SCT) is a genetic hemoglobin variant found in 8 to 10 percent of African-Americans. It occurs in people with one copy of the mutation that, if they had two copies, would result in sickle cell disease. The analysis of data from more than 4,600 people participating in two major studies found that HbA1c readings were significantly lower in individuals with SCT than in those without SCT, even after accounting for several possible confounding factors.

While the study showed that HbA1c readings were significantly different between people with and without SCT, it also showed that blood glucose readings were not, suggesting that glucose metabolism is not necessarily different between the two groups as the HbA1c readings alone would suggest. The study does not explain why the HbA1c readings differ.

“Irrespective of the reason of the underestimation, the underestimation is very real, and clinicians should consider screening for sickle cell trait and account for the difference in HbA1c,” Wu said.

More information about the study and paper can be found on the Brown University website at https://news.brown.edu/articles/2017/02/sickle.

In addition to Wu, the paper’s other authors are lead author Mary Lacy, a doctoral candidate at the Brown University School of Public Health, and Drs. Gregory Wellenius, Anne Sumner, Adolfo Correa, Mercedes Carnethon, Robert Liem, James Wilson, David Sacks, David Jacobs Jr., April Carson, Xi Luo, Annie Gjelsvik, Alexander Reiner, Rakhi Naik, Simin Liu, Solomon Musani and Charles Eaton. The National Institutes of Health and the Department of Veterans Affairs funded the study.

500 area veterans enrolled in genomic research database

PROVIDENCE – The Providence VA Medical Center enrolled its 500th veteran into the world’s largest genomic database Tuesday, February 07, 2017.

A veteran and VA employee from the Providence VAMC, who wishes to remain anonymous, voluntarily enrolled in the VA’s Million Veteran Program, in which participants donate blood from which DNA is extracted. Baseline and periodic follow-up surveys track Veterans’ military, health and lifestyle experiences over time. Samples and data used are coded to protect participants’ identification and privacy.

Researchers believe information contained in the database could hold the key to preventing and treating diseases, both in veterans and in the general population. The program, which was launched in 2011, now has more than 500,000 participants nationwide. The Providence VAMC has been participating since May 2016.

“This is a perfect example of how veterans continue to serve our nation,” said Dr. Susan MacKenzie, director of the Providence VA Medical Center. “Their participation in this program has the potential to save lives and improve medical care for generations to come.”

Research using MVP data is already underway, studying a wide range of medical issues, such as mental illness, and heart and kidney diseases.
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Recognition

Anthony A. Caldamone, MD, has received the 2017 Distinguished Contribution Award from the American Urological Association for his significant contributions to academic urology and exemplary humanitarian dedication to pediatric urologic missions in Asia, Africa, the Middle East, and South America.

Dr. Caldamone is the Director of Pediatric Urology, Hasbro Children’s Hospital, and Professor of Surgery (Urology) and Pediatrics, Hasbro Children’s Hospital Warren Alpert Medical School.

The Palliative Care program at Roger Williams Medical Center is now a member of the Center to Advance Palliative Care (CAPC), and was also voted into the Global Palliative Care Quality Alliance (GPCQA), making Roger Williams the only hospital in the Northeast to hold this designation. CAPC and GPCQA will provide the technical assistance for program development and quality tracking to further improve delivery of palliative care.

Team members who made these memberships possible including Dr. John Stoukides, Dr. Maria Aileen Soriano-Pisaturo, Lynn Leahey, RN, and Nancy Fogarty.

Women & Infants Hospital Richard P. Welch Awards for Continued Excellence in Patient and Family Centered Care were recently awarded in both clinical and non-clinical categories. Susan Fair, RN, nurse manager of Labor/Delivery/Recovery, received the clinical Welch Award. Diane Silva, site manager of Patient and Financial Services, was honored with the Welch non-clinical recognition.

The Excellence in Patient and Family Centered Care Award went to Therese Stafford, who has sat on the NICU Advisory Council since 2005 and the Hospital-Wide Council since 2007.

Brown alumnus Charles J. Lockwood, MD, was recognized with a Lifetime Achievement Award from the Society for Maternal-Fetal Medicine at the SMFM annual meeting in Las Vegas in February. He earned a bachelor of science, magna cum laude with distinction from Brown University and his medical degree from the University of Pennsylvania School of Medicine.

Dr. Lockwood is currently the senior vice president of USF Health and Dean of Morsani College of Medicine at the University of South Florida in Tampa.

Appointments

Timothy J. Babineau, MD, was appointed to the Council of Teaching Hospitals and Health Systems (COTH)’s administrative board. Dr. Babineau, president and CEO of Lifespan, was elected to serve a three-year term. The council comprises nearly 400 teaching hospital and health system members that belong to the Association of American Medical Colleges (AAMC).

Rachel McCormick, MD, has been elected president of the Westerly Hospital medical staff, a position she was elected to last month. She takes over the position from Dr. Adrian Hamburger.

Kenneth S. Korr, MD, FACC, SVU, Associate Professor Emeritus of Medicine, Alpert Medical School; Cardiovascular Institute/Lifespan, has been named Associate Editor of the Rhode Island Medical Journal, succeeding Dr. Sun Ho Ahn. Dr. Korr has been a member of the Journal’s editorial board for the past two years.

Joseph W. Hogan, ScD, has been named as chair of the Department of Biostatistics effective July 1, 2017, to succeed Constantine A. Gatsonis, PhD, who will continue to lead the Center for Statistical Sciences.

Professor Hogan came to Brown in 1995 shortly after completing his doctoral work at Harvard. Most recently, he has served as associate dean for faculty affairs at the School of Public Health.

Professor Hogan’s research focuses on the development of statistical methods for missing data and causal inference. He has a long-standing interest in HIV and AIDS and holds leadership positions in the AMPATH Consortium and the Providence-Boston Center for AIDS Research, and co-directs a partnership with Moi University in Kenya focused on building research capacity in biostatistics.

Xavier Arinez has been named director of the St. Joseph Health Center. He previously held the position of chief operating officer for Family Health Center of Worcester, and served as a site executive director for Thundermist Health Center in West Warwick with an emphasis on practice transformation for a large outpatient medical and dental center. He graduated from the University of Illinois with an MS degree in engineering.

People/Places

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March 2017  Rhode Island Medical Journal

Xavier Arinez has been named director of the St. Joseph Health Center. He previously held the position of chief operating officer for Family Health Center of Worcester, and served as a site executive director for Thundermist Health Center in West Warwick with an emphasis on practice transformation for a large outpatient medical and dental center. He graduated from the University of Illinois with an MS degree in engineering.
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South County Hospital participates in Little Hats, Big Hearts program

AHA/Children’s Heart Foundation awareness program part of nationwide effort

WAKEFIELD – The American Heart Association in partnership with The Children’s Heart Foundation visited the Women & Newborn Care Unit at South County Hospital as a part of their nationwide effort, Little Hats, Big Hearts.

The campaign raises awareness of heart disease, the number one killer of Americans, as well as congenital heart defects, the most common type of birth defect in the country.

“Heart disease and other heart health issues are paramount on a national healthcare scale. Continuing to raise awareness and encourage discussion around cardiac care is vitally important to the future of the health of our community,” said Dr. Steven Fera, cardiologist at South County Health and member of the South County Medical Group.

Volunteers assisted through all phases of the Little Hats Big Hearts program. Hundreds donated handmade red hats and came together to assist with packaging and preparing the hats to be delivered to newborns. Pier Cleaners in Wakefield and Westerly donated laundry services led by heart survivor Larry Fish.

As part of the program all babies born at participating hospitals during the month of February received a knitted or crocheted red baby hat. More than 2,000 hats were collected in the Providence office with 6 participating hospitals in Southern New England.

From left to right: In the front row are Sue Smith, PCT (Patient Care Technician); Dah Hennessy, EVS (Environmental Services); Maureen Pearlman, RN, Director of Women’s Health Services; and Michelle Karn, Director of Communications, American Heart Association. In back row are Phyllis and Larry Fish, owners of Pier Cleaners; Aimee Quigley, RN; Bea Mattysozvky, RN; and Sue Andrews, RN.
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BOOK REVIEW

Ordinarily Well: The Case for Antidepressants

AMY R. HALT, MD, PhD

As an early-career psychiatrist, I did not experience the paradigm shift in my specialty that many of my more senior colleagues and mentors did. I completed medical school, residency, and fellowship training long after Prozac (fluoxetine) and other antidepressants had revolutionized the role of psychiatrists in treating depression. (I also have a PhD in pharmacology, so that may also speak to my biases.) I came of age in a field of medicine fully invested in treating depression and other psychiatric illnesses similarly to other medical illnesses, with pharmacologic and somatic treatments. Yet, I, like many of my colleagues in training, have struggled with the backlash against antidepressants and the idea that they are little better than placebo. It is from this perspective that I read Peter Kramer’s latest work, *Ordinarily Well: The Case for Antidepressants*.

*Ordinarily Well* is an appropriate and timely follow-up to Dr. Kramer’s well-known earlier work, *Listening to Prozac*. It speaks to every psychiatrist, internist, family practice physician and medical practitioner who treats depression and struggles with explaining the data about antidepressants from evidenced-based trials to patients. Dr. Kramer’s book may be directed towards a more general audience with an interest in psychiatric illness and treatment with its definitions of terms used in controlled trials, but his explanations of the processes involved in randomized clinical trials is beneficial to any prescriber in the era of data-driven prescribing.

Dr. Kramer effectively outlines the case for continued and vehement support of antidepressant use in *Ordinarily Well*. He provides a historical context for the use of antidepressants, beginning with Roland Kuhn’s use of G22355, otherwise known as imipramine. He takes a critical look at the development, processes, and interpretation of clinical trials on antidepressants, in an invaluable and in-depth manner. Dr. Kramer elegantly parses the concept of the placebo effect and the idea that placebo effect cannot simply be subtracted from antidepressant efficacy. He tackles the concept of effect sizes related to the use of antidepressants. One of my favorite chapters was the description of the for-profit clinical research center and its potential confounding effects on the results of clinical trials. At times, I did find myself rereading chapters on aspects of clinical trials, because of the density of the material and because it explained a concept in a way that was accessible in a manner that I hadn’t previously encountered.

I most appreciated Dr. Kramer’s descriptions of clinical experiences and patient encounters throughout the book. As a fairly “young” psychiatrist, while I commonly treat profoundly and severely depressed patients on the inpatient unit, they have often already trialed several antidepressants. Dr. Kramer’s anecdote of his experiences doing psychotherapy with “Adele”, in which he stated, “Imipramine had made me a more competent therapist,” was compelling. I was drawn in by the book’s prelude, with the anecdote about his friend Alan who suffered post-stroke depression.

Nonetheless, what was most compelling to me about Dr. Kramer’s latest book were the interspersed chapters in which he relates his clinical experiences with patients and the effects of antidepressants. As an early-career psychiatrist, I find these similar discussions with my colleagues to be invaluable. We are constantly looking to diagnostic criteria to make a psychiatric diagnosis and we are looking to the literature and evidenced-based medicine to inform treatment, but patients often do not fit into specific boxes and it ultimately is the subtlety of patient encounters and treatments, including prescribing balanced with psychotherapy, that makes the practice of psychiatry intellectually challenging. Dr. Kramer captures this tension, that of balancing our clinical encounters with patients with the literature: how do the numbers needed to treat affect a particular patient, for example.

I come from a background in which I view psychiatric illness as a biologic construct similarly to other medical specialties, and which I believe in wholeheartedly. However, my interest in the brain in medicine stems from the complexity of the brain: how its basic biologic functions develop the concept of the mind and higher-ordered thinking. *Ordinarily Well* captures that quality of the treatment of depression and the mind; our patients are not just a list of symptoms on the Hamilton Rating Scale but are individuals with psychiatric symptoms and complex human interactions. Effective treatment of depression utilizes both consideration of efficacious antidepressant prescribing as well as psychotherapy.

Dr. Kramer makes a compelling argument on the use of antidepressants in the treatment of depression for psychiatrists and other prescribers who have been concerned by the results of antidepressant clinical trials. He clarifies the data from clinical trials and discusses his own clinical cases that illustrate the point that psychiatrists have seen time and time again: antidepressants work to treat depression and move patients to become *Ordinarily Well*.

Dr. Amy R. Halt is Clinical Assistant Professor of Psychiatry and Human Behavior at Brown University.
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Editorial

Medical Progress in Rhode Island
The present war teaches, as it has never been taught before, the value of organized effort. From the munitions plants at home to the trenches at the front all are working as parts of the definite plan. Success depends on efficiency, which is the result of coordination of effort.

Similarly, in the unending war which humanity is waging against disease, the greatest advances are made when the trained troops, the medical profession, work in harmony and according to a definite plan. To the work of great clinics, under the guidance of men of especial ability and training, we may ascribe the greatest progress against the enemy.

In Rhode Island the work of the profession is distinctly lacking in the organization of effort, which spells efficiency and progress. Several factors contribute to this condition. The most important of these is the absence of the unifying and stimulating influence of a local medical school. Another is the perhaps unfortunate proximity of Boston. This encourages local man to sit at the feet of their Massachusetts colleagues and gather from them new ideas and principles instead of working these out for themselves amid the wealth of material presented by the clinics of the state.

... It is a pity that the larger hospitals do not make a more definite provision for the carrying on of clinical and laboratory research. Clinical material is here in abundance and men of training and enthusiasm are not lacking. By encouraging and practically providing for research the hospitals of this state will vastly increase their usefulness in the community and to mankind and will place the medical battalions of Rhode Island where they should be, in the forefront of the battle against the host of death.

Letter to the Editor

Instruments for the European War
Editor’s note: No new donations have been made since last month by the medical profession of the state. There were sent in the last shipment surgical instruments... one major operating set, one minor operating set, and a pocket case. The great necessity for thermometers is well described in the letter below.

The following extracts are from a letter acknowledging receipt of instruments given as being of interest to readers.

To the Rhode Island Medical Society:

I must mention particularly the gratitude expressed for the surgical instruments. There is a great dearth of them, for they are, alas, much used and the consequent constant sterilizing is very hard on them. Most doctors are using their own, many of them can ill afford to replace or add to them, and all such articles are keenly appreciated. There is a tremendous need for thermometers – those that are divided into centigrade degrees; they have increased 300% in price and decreased in quality as much. In the hospitals we consider a calamity whenever one of them in our charge breaks and if some could be given they would receive a particularly warm welcome from the nurses, who bear all the brunt of the wear and tear of thermometers.

Metallic iodine is also in great request, should it ever come your way. The operating rooms can make their own solutions as the need occurs and the tincture never has time to grow old and noxious.

Yours very gratefully,
Margaret Gaulin
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Hookworm Disease in Rhode Island

ALEX M. BURGESS, MD; PERCY D. MEADER, SCM

The occurrence of hookworm infection among people who may be considered as permanent residents of the state of Rhode Island is, in the judgment of the writers, of sufficient interest to justify a brief report. Of the cases of the disease previously observed in New England, so far as can be determined, have occurred in persons who have recently come from parts of the world where the parasite is known to be common. Of the eight patients mentioned in this report, however, four had lived in Providence for two years when the diagnosis was made, and two had arrived very recently.

There can be no doubt that persons with the disease are constantly entering this State. The last report of the United States Commissioner General of Immigration states that in the year ending June 30, 1914, over nine thousand aliens were admitted through the port of Providence. The majority of the immigrants are Portuguese, French, Italian and Armenians. They sail principally from Marseilles, Naples, Gibraltar, Lisbon and the Azores. Since they come from regions where hookworm disease is common, it is reasonable to suppose that the proportion of infected persons is not negligible. That these cases usually remain unrecognized is probably because practitioners in this region are not in the habit of suspecting hookworm on account of its non-occurrence in natives. While it is in general true that this disease is very rare in New England, it is safe to say that if the actual number of cases existing within the boundaries of the state could be revealed, it would be found to be surprisingly large.

The following five cases came in the practice of one of the writers, and were all members of an Italian family. All but one had lived two years in Providence.

This family consists of the mother, age 52, five sons and three daughters, and the wife and three small children of the eldest son. The father and another son remained in Brazil. The eldest son, Angelo, age 30, and his family arrived in this country from Brazil one year before he came under our observation. The other members of the family emigrated from Brazil two years previous. All had resided there since 1909, at which time they left Italy. The sons, the youngest of whom was nineteen years old, were weavers employed in the Atlantic Mills in Olneyville. Two older daughters were also employed in the mills, and the youngest, aged thirteen years, attended school. They lived in the Federal Hill district.

The oldest son, Angelo, was first seen professionally on March 27, 1915. He was apparently recovering from a slight failure of cardiac compensation, and gave a history of 40 days recently spent in the Rhode Island Hospital with a diagnosis of pneumonia and bronchitis. A routine blood count at this time disclosed an eosinophilia of 23% and a species of feces was requested. As the specimen was not saved, the question of internal parasites was for some time forgotten, and it was not until just three months later, when called to see the youngest son, Pasquale, who complained of persistent abdominal pain and tenderness, that the suspicion of
hookworm infection was entertained. A specimen of feces from Pasquale confirmed the diagnosis in his case by showing living uncinaria embryos and ova.

A systematic examination of the entire family was undertaken at once, with the results tabulated below. With the exception of the mother and wife of the oldest son, all were of slender build and several were markedly anæmic. It seemed not improbable that all might have suffered previously from uncinariaisis, and the examination of the feces and blood were made to determine what individuals were at the time infected with the parasite.

**Treatment**

The treatment carried out was that recommended by Ferrell. In the evening before the day of treatment very little supper was allowed and one ounce of MgSO₄ was given. The following morning, as soon as the bowels had acted, thymol (20 grains) and an equal amount of lactose was given in capsules. The patient was directed to lie for a half hour on his right side to facilitate the passage of the drug into the small intestine. Two hours after the first dose of thymol, a second of 30 grains was given and the patient again directed to lie on his right side. Two hours afterwards, a second ounce of MgSO₄ was given. No food except a little water or strong coffee was allowed until the second dose of salts had acted.

The first dose of MgSO₄ is given to clear from the small intestine all mucus that may protect the parasites. The second does of MgSO₄ clears away the toxic thymol before it can be absorbed, and takes with it the paralyzed parasites which have let go their hold on the intestinal wall. All feces were saved and strained through gauze to recover the adult worms.

Carmela, Giuseppe, and Gregorio remained in good health up to January 18, 1916, when they were last seen. As the other two had not shown any definite symptoms of their infection, the effect from the treatment was of course not striking.

<table>
<thead>
<tr>
<th>Name</th>
<th>Eosinophile count</th>
<th>Hookworm ova</th>
<th>Other parasites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carmela</td>
<td>20%</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Pietro</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lucia</td>
<td>33½%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mary</td>
<td>8½%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mother</td>
<td>8%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lina</td>
<td>7%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Gregorio</td>
<td>23⅔%</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Micheina</td>
<td>5%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Giuseppe</td>
<td></td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Rosina</td>
<td>16⅓%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Jose</td>
<td>25%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pasquale</td>
<td>29%</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Angelo</td>
<td>9%</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table I.**

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†for dextro-amphetamine sulfate, S.K.F.
News

Rhode Island Hospital Club hears speaker on ‘Romance and Terror of Aerial Warfare’

The twenty-first annual dinner of the Rhode Island Hospital Club was held at the Turks Head Building, February 20, 1917. Dinner was served at 8 p.m. and was attended by about 160 members and guests.

The president of the club, Dr. Arthur T. Jones, presided and introduced as the speaker of the evening Cosmo Hamilton. Mr. Hamilton gave an intensely interesting address on “The Romance and Terror of Aerial Warfare” and regaled his hearers with amusing incidents and intimate touches of this thrilling profession.

During the First World War Cosmo Hamilton was a lieutenant in the Royal Naval Air Service. He gave lectures on his aerial exploits.

Miscellaneous

**DR. PAUL APPLETON** has opened an office at 6 Thomas Street.

**DR. M.J. O’NEIL** has removed his office from 665 Broad Street to 399 Prairie Avenue.

**DR. GEORGE A. MATTESON** has recently returned from hospital duty with the Harvard Surgical Unit in France, and has removed his office to 106 Waterman Street.

**DR. FRANK T. FULTON** has recently returned from an extended trip to Baltimore and Atlantic City.

Necrology

**DR. EDWARD STARK PARKER**, 42, died at his home in Pawtucket after a short illness on Feb. 18, 1917. He was born in Derby Line, Vt., May 23, 1874.

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This poster appeared in the U.S. Army recruiting station in Providence in 1917.

There is a pasted-on paper banner at the bottom, which states that as of June 3, 1916 the Hospital Corps is discontinued and replaced with the “Enlisted Force of the Medical Department” and the text below lists the job categories and pay per month.