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ABOUT THE CONFERENCE
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AGENDA
8:00-8:30 A.M. Registration and Continental Breakfast
8:30-8:35 A.M. Welcome and Introduction: Conference Chairperson Anne Llewellyn
8:35-9:15 A.M. Opening Keynote: Four Things Patients Want You To Know About Our Engagement in Our Care
9:15-10:00 A.M. Health Information Exchanges: The Key to Care Coordination
10:00-10:30 A.M. Networking Break
10:30-11:30 A.M. Transforming Healthcare Through New Models of Care: ACOs, Medical Homes and Healthcare Exchanges
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12:30-1:45 P.M. Lunch and Luncheon Keynote Presentation: Becoming Ginger Rogers...How Ballroom Dancing Made Me a Happier Woman, Better Partner and Smarter CEO
1:45-2:45 P.M. Value-Based Purchasing: Merging Quality and Patient Satisfaction
2:45-3:45 P.M. Improving Care Coordination for the Dual Eligible Patient
3:45-4:00 P.M. Networking Break
4:00-5:00 P.M. Engaging Consumers in Health and Wellness
In this issue we explore neurologic conditions that impact the health and quality of life for thousands of patients. Conditions like ADHD, Alzheimer’s, epilepsy, autism and pituitary disorders affect the neurological system and impact behavior, and the ability to perform activities of daily living. Yet with advances in technology, physicians are able to diagnose people sooner, enabling the introduction of new treatments that are making a difference.

When it comes to these prevalent conditions, case managers shoulder important responsibility – including coordinating care, assisting the patient and the family in understanding their condition, finding experts who can diagnose and treat these complex conditions, and having access to the resources needed to manage these conditions. I hope you find the articles in our June issue of Case In Point helpful as you design your plans of care. Your expertise, support and ability to break down barriers can make a difficult situation manageable.

In addition to the clinical insights, we also have a range of articles that focus on the business side of healthcare. These articles will keep you in touch with the changes going on within the system and will augment the vital role that you play.

We realize your time is limited, so in addition to gaining knowledge and information you can use in your practice, you also can take advantage of the four contact hours that have been pre-approved for this issue. As a member of the Case In Point Learning Network, you now have the ability to gain 20 contact hours toward renewal of your professional license or national certification by completing the CEU test for the current issue and for the rest of the issues published so far in 2012.

If you are on a 30-day trial membership to the new Case In Point Learning Network I urge you to convert to a full member before your trial membership expires. Being part of the Learning Network will keep you up to date on clinical and business issues impacting your practice. To do so today or to learn more, go here: www.dorlandhealth.com/caseinpoint.

Please also share this important resource with your peers so they can explore the Learning Network and the two levels of membership that are available. In addition to individual memberships, we have special pricing for organizations who want to provide this resource to their individual staff member to meet professional development requirements.

I look forward to your comments, insights and ideas for topics you would like to see covered in a future issue of Case In Point.

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CLINICAL

**Some MS Patients At Risk for Drug-Related Brain Illness**

Some multiple sclerosis (MS) patients are vulnerable to developing a rare brain infection while taking a powerful drug called Tysabri, according to a study published in the *New England Journal of Medicine*. MS patients at highest risk of developing the brain infection face low odds of getting it while on Tysabri, but the infection can be deadly. The drug is used mainly to delay the progression of MS, and about 100,000 patients have taken Tysabri at least once. In the study, researchers looked at which MS patients were at highest risk of progressive multifocal leukoencephalopathy if they take Tysabri. Tysabri dampens the immune system and can potentially reduce the inflammation that is a major part of MS. But dampening the immune system can also allow an infection known as the JC virus to attack the brain and cause a condition called progressive multifocal leukoencephalopathy. Just over 1 percent of the 5,900 patients studied showed signs of exposure to the JC virus, had taken immune-suppressing drugs before Tysabri, and had been on Tysabri for 25 to 48 months. The risk for those who hadn’t been exposed to the JC virus was 120 times smaller at 0.009 percent. The JC virus is very common, affecting about half of adults by middle age, but the immune system typically keeps the virus under control so it shows no symptoms.

**Stroke Readmissions Drop, As Do LOS, Deaths**

Hospitalizations related to stroke have fallen in the United States, according to new government statistics released in May. According to the U.S. National Center for Health Statistics, hospitalizations for stroke rose to nearly 35 per 10,000 people during the 1990s but then declined to under 32 hospitalizations per 10,000 by 2009. That translates to about 800,000 hospitalizations for stroke in 1989 and nearly 1 million in 1999 and 2009 as the population grew. More than two-thirds of hospitalized patients were aged 65 or older. Overall improvements were observed among older patients. For example, between 1999 and 2009, the stroke hospitalization rate fell 20 percent for people aged 65 to 74 and by the same percentage for people aged 85 and older. That rate also decreased 24 percent for those aged 75 to 84 during those same years, according to the report. The average length of hospital stay for stroke patients also fell – from just over 10 days in 1989 to 5.3 days by 2009. In addition, the death rate among hospitalized stroke patients fell from 9 percent in 1989 to 5 percent in 2009.

ACUTE CARE

**Socioeconomics, Access to Care Play Major Role in Readmissions**

Differences in regional hospital readmission rates for heart failure are more closely linked to the availability of care and patients’ socioeconomic position than to hospital performance or patients’ degree of illness, according to new research presented at the American Heart Association’s Quality of Care & Outcomes Research Scientific Sessions in May. Researchers found that U.S. regional readmission rates for heart failure vary widely – from 10 percent to 32 percent. Communities with higher readmission rates were likely to have more physicians and hospital beds and their populations were likely to be poor, black and relatively sicker. People 65 and older were readmitted more frequently, according to the data. Poverty and minority racial makeup was linked to 9 percent of the variation in readmission rates. Hospital-performance quality accounted for 5 percent and patients’ degree of illness contributed to 4 percent of the variation in readmission rates.

**Health Reform’s Next Target? Providers’ Red Tape**

The federal government issued two new rules in May in an effort to cut onerous regulations for hospitals and healthcare providers in a decision that it hopes will save millions of dollars per year in extraneous costs. The first rule from the Centers for Medicare and Medicaid Services targets the Medicare Conditions of Participation for hospitals and critical access hospitals. Under the new rule, hospitals will be able to appoint one governing body to oversee multiple facilities in a single health system, and critical access hospitals will be able to partner with other providers, among other revisions. The second rule, known as the Medical Regulatory Reform rule, is designed to promote efficiency by eliminating “duplicative, overlapping, and outdated regulatory requirements” for providers, according to a news release, which estimates savings from the two rules to surpass more than $5 billion within five years. The final rules are available here: www.ofr.gov/inspection.aspx.
HEALTHCARE DELIVERY

Heart Attack Treatment Systems Expanding Nationwide
The number of systems of care designed to quickly transfer and treat heart attack patients has increased substantially across the country, according to new research published in Circulation: Cardiovascular Quality and Outcomes, an American Heart Association journal. Systems included at least one hospital that performs the artery-opening procedure percutaneous coronary intervention and one emergency medical service group. When someone suffers a heart attack, the initial 9-1-1 call should ideally activate the STEMI system. STEMI, or ST-segment elevation myocardial infarction, is the most severe form of heart attack. According to the study, more than 580 community-based STEMI systems are now registered in the American Heart Association’s Mission: Lifeline STEMI program, covering more than 60 percent of the United States. Two-thirds – 67 percent – of the systems were in urban areas and most followed standard quality procedures and policies.

LONG-TERM CARE

Bone Drugs May Do Long-Term Damage to Patients
Adding to existing concerns about possible long-term dangers of osteoporosis drugs comes a new study that points to increased risk for atypical fractures of the thigh bone, or femur, for individuals that take drugs known as bisphosphonates. Osteoporosis is a bone-thinning disease that is common in older women. An atypical femoral fracture is an unusual type of break that often occurs spontaneously, without any major leg injury. In the study, researchers looked at 477 patients aged 50 and older who were hospitalized with a femoral fracture. Of those patients, 39 had atypical fractures and 438 had a classic fracture, one that is more common with a typical pattern. Of the patients studied, 82 percent with atypical fractures had been treated with bisphosphonates, such as Actonel or Fosamaz, compared to about 6 percent with classic fractures. Compared to patients without fractures, use of these drugs was associated with a 47 percent decrease in the risk of a classic fracture.

A Million Snapshots of the U.S. Healthcare System
In an effort to increase the transparency of the U.S. healthcare system, the Department of Health and Human Services announced the launch of a web-based tool, known as the Health System Measurement Project, that combines datasets from multiple sources to give all Americans, including policymakers, providers, insurers and the public, access to national healthcare data. Such data-driven topics include access to care, costs, prevention and health IT, and the information can be assessed by demographics, geography and insurance coverage. “Ensuring all Americans have access to these data is an important way to make our healthcare system more open and transparent,” said HHS Secretary Kathleen Sebelius. The Health System Measurement Project is available here: healthmeasures.aspe.hhs.gov.

Latest Obesity Trends? Alarming, at Best
A recent study seeking to predict the trends of obesity over the next two decades portrays a scary picture for the nation’s cost-containment efforts in healthcare. According to a study appearing in the June issue of the American Journal of Preventive Medicine, there will be a 33 percent increase in the prevalence of obesity by 2030, and a skyrocketing 130 percent increase in the prevalence of severe obesity. The study estimates that 42 percent of all Americans will be obese within two decades, which is a bleak forecast for the nation’s cost expenditures. Should the prevalence of obesity remain at 2010 levels, according to the study, the savings in medical expenditures would total more than $549 billion over two decades. However, the study highlights the vast potential for cost savings with even modest positive interventions.

MANAGED CARE

Home Care Is Common For Alzheimer’s, More So Than Nursing Homes
A study tracking more than 1,500 patients with dementia found that most of the care that a patient received occurred in the home, dispelling the notion that most dementia patients live – and die – in nursing homes. The study also found that many patients with Alzheimer’s disease transitioned to several differing settings in a row, a trend that results in difficult patient management and increased stress for family caregivers. Of the 1,500 patients that visited a nursing home following a hospitalization, 74 percent of them did not remain there. Roughly 25 percent returned to the hospital, but the majority of others went home. The study, appearing in the Journal of the American Geriatrics Society, revealed that the majority of care for dementia patients is provided by families.

June 2012 • www.dorlandhealth.com • Case In Point
WORKERS’ COMPENSATION

Asthma a Major Problem in the Workplace

Work-related asthma affects approximately 1.4 million people annually, according to the Centers for Disease Control and Prevention, and comprises about 9 percent of all asthma cases in the U.S. Researchers analyzed data over a four-year period (2006-2009) across 38 states and found that state-by-state variations were often severe. For example, the prevalence of workplace-related asthma was 4.8 percent of total cases in Arizona, compared to more than 14 percent of cases in Florida. Researchers, publishing in the CDC’s Morbidity and Mortality Weekly Report, state that a greater focus on this preventable condition “would enhance our understanding of work-related asthma epidemiology and enable states, other government agencies, health professionals, employers, workers and workers’ representatives to better target intervention efforts to reduce the burden” of the common condition.

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Numerical Analysis of Neurologic Conditions

Neurologic conditions directly affect three main parts of the body that are essential for normal functioning: the brain, spinal cord and nerves. Conditions affecting the nervous system can have widely varied effects on functioning, including moving, swallowing, breathing, as well as one’s memory, sense and mood.

The number of known neurologic conditions exceeds 600 and includes major types such as: gene-derived diseases like Huntington’s disease and muscular dystrophy; developmental diseases like spina bifida; degenerative diseases like Parkinson’s and Alzheimer’s; seizure disorders like epilepsy; and infections like meningitis.

According to a 2007 report from the World Health Organization, more than 1 billion people suffer from neurologic conditions worldwide. Nearly one-third of that number, or 326 million, suffer from migraines.

Neurologic conditions account for 12 percent of all deaths globally.

It is estimated that upward of 50 million people in the United States suffer from neurologic conditions throughout the lifespan.

The top four neurologic conditions in the United States in terms of prevalence are migraine, Alzheimer’s disease, stroke and epilepsy.

Autism spectrum disorders occur at a rate of 5.8 per 1,000 people, according to one estimate from 2005. Recent estimates focusing on new births, however, place the estimate much higher – at approximately one per 88 new births in the country today.

Approximately 36 million Americans suffer from migraine headaches, including 18 percent of women and 6 percent of men.

As a result of migraines, American employers lose more than $13 billion every year as a result of lost productivity. This includes 113 million lost work days.

Today more than 5.4 million Americans live with Alzheimer’s disease, including one in eight older Americans.

In 2012, the direct costs of providing care for individuals with Alzheimer’s or another form of dementia totaled more than $200 billion.

Just shy of 800,000 Americans suffer a stroke every year, which occurs when blood flow to the brain is interrupted. One of the leading causes of long-term disability, stroke costs about $54 billion in healthcare expenditures and lost productivity annually.

Epilepsy affects a total of roughly 2 million people in the United States, with 140,000 new cases diagnosed on an annual basis.

Sources: Alzheimer’s Association, Centers for Disease Control and Prevention, How Common Are the “Common” Neurologic Disorders? (review article), Migraine Research Foundation, National Institutes of Health, World Health Organization
New Drug Approvals: A Case Manager’s Guide

BY RICHARD SCOTT

This edition of Rx Pipeline explores new FDA drug approvals. This pipeline of drugs has direct application to case managers and the patients they monitor. From the treatment of allergic rhinitis to pancreatic exocrine dysfunction, these drugs are new tools for to augment your mission of coordinating patient care effectively and cost-efficiently.

PERTZYE (PANCRELIPASE) DELAYED RELEASE CAPSULES

Company: Digestive Care Inc.
Date of Approval: May 17, 2012
Indication: Pancreatic Exocrine Dysfunction

The FDA approved New Drug Application (NDA) for Pertzye, indicated for the treatment of exocrine pancreatic insufficiency (EPI) due to cystic fibrosis (CF) or other conditions.

Pertzye is a unique pancreatic enzyme product containing bicarbonate-buffered enteric-coated microspheres and is protected by several U.S. and international patents. The Pertzye formulation was previously marketed by DCI for over a decade under the trade name Pancrecarb MS-16.

Safety and Side Effects

The short-term safety and efficacy of Pertzye were evaluated in a randomized, multicenter, double-blind, placebo-controlled, crossover study conducted in patients ages 8 to 43 years with EPI due to CF. The primary efficacy endpoint was the mean difference in coefficient of fat absorption (CFA) between Pertzye and placebo treatment. Mean CFA was 83 percent with Pertzye treatment compared to 46 percent with placebo treatment.

FABIOR (TAZAROTENE) FOAM

Company: Stiefel Laboratories Inc.
Date of Approval: May 11, 2012
Indication: Acne

The FDA approved the New Drug Application for Fabior (tazarotene) Foam, 0.1%. It is the only retinoid in a topical foam formulation for the treatment of acne vulgaris in patients 12 years of age and older.

Acne is the most common skin problem in the U.S., affecting about 40-50 million Americans at any one time. Acne can affect anyone at any age but it is most common in adolescents and young adults. Hormones and other substances can act on the skin’s oil (sebaceous) glands and hair follicles, leading to clogged pores and outbreaks commonly known as pimples. While the exact cause of acne is unknown, researchers believe it results from several factors, including hormonal changes, heredity and genetics, certain medications, and greasy cosmetics.

Safety and Side Effects

The approval of tazarotene foam was based on two multicenter, randomized, double-blind, vehicle-controlled pivotal Phase 3 studies conducted in the U.S. and Canada.

Tazarotene foam is contraindicated in pregnancy and may cause fetal harm when administered in pregnant women. The most common adverse reactions reported at an incidence greater than 6 percent were application site irritation, application site dryness, application site erythema, and application site exfoliation.

ELELYSO (TALIGLUCERASE ALFA)

Company: Protalix BioTherapeutics Inc.
Date of Approval: May 1, 2012
Indication: Gaucher Disease

The FDA approved Elelyso (taliglucerase alfa) for long-term enzyme replacement therapy to treat a form of Gaucher disease, a rare genetic disorder. Gaucher disease occurs in people who do not produce enough of an enzyme called glucocerebrosidase. The enzyme deficiency causes fatty materials (lipids) to collect in the spleen, liver, kidneys and other organs. The major signs of Gaucher disease include liver or spleen damage, low red blood cell counts (anemia), low blood platelet counts, and bone problems.

Elelyso is an injection that replaces the missing enzyme in patients with a confirmed diagnosis of Type 1 (non-neuropathic) Gaucher disease and should be administered by a healthcare professional every other week. Type 1 Gaucher disease is estimated to affect about 6,000 people in the United States.

Safety and Side Effects

The most common side effects reported during clinical studies were infusion reactions and allergic reactions. Symptoms of infusion reactions include headache, chest pain or discomfort, weakness, fatigue, hives, skin redness, increased blood pressure, back pain, joint pain, and flushing. As with other intravenous protein products, anaphylaxis has been observed in some patients during Elelyso infusions.

Other commonly observed side effects observed in greater than 10 percent of patients treated with Elelyso included upper respiratory tract infection, common cold-like symptoms, joint pain, influenza, headache, extremity pain, back pain and urinary tract infections.

DYMISTA (AZELASTINE AND FLUTICASONE NASAL SPRAY)

Company: Meda Pharmaceuticals Inc.
Date of Approval: May 1, 2012
Indication: Allergic Rhinitis

The FDA approved Dymista, a new patented product for treatment of seasonal allergic rhinitis (SAR). In several clinical studies, Dymista has consistently showed a rapid and more complete symptom relief than standard treatment.

Dymista Nasal Spray is approved in the U.S. for the relief of symptoms of seasonal allergic rhinitis (SAR) in patients 12 years of age and older who require treatment with both azelastine hydrochloride and fluticasone propionate for symptomatic relief. SAR annually affects approximately 60 million people in the U.S. Dymista is administered twice daily in each nostril. The efficacy and safety of Dymista has been documented in several studies involving over 4,000 patients, including a long-term safety study with more than 600 patients.

Further drug information, including safety information, warnings, contraindications and other facts about general use, is available online at www.fda.gov/drugs.
Health Reform, HHS Spur Workplace Wellness Programs

Meanwhile, Studies Reveal a Wide Range of ROI

BY EMILY MULLIN

Recent trends in healthcare have sparked a renewed interest in effective workplace wellness programs as the number of people with chronic conditions like obesity and heart disease increases, poor health habits persist, and the cost of health services continues to climb.

Poor health is not just a concern for individuals. It also contributes to reduced productivity in the workplace, which can erode a company’s bottom line.

Employers can use wellness programs to boost morale among staff as well as to help reduce the rate of turnover and absenteeism. Workplace wellness programs can also have a positive effect on employees, and workers may see their out-of-pocket healthcare costs reduced by participating in such a program.

According to data from the 2011 Kaiser Family Foundation and Health Research and Education Trust annual survey of employer health benefits, 67 percent of companies with three or more employees that offered health benefits also offered at least one wellness program to employees. Slightly more than half – 52 percent – also offered wellness benefits to spouses or dependents of employees.

HEALTH REFORM PUSHER WELLNESS FORWARD

To encourage more employers to adopt workplace wellness programs that will reward employees who meet health and fitness goals, the U.S. Department of Health and Human Services has made available $10 million to establish and evaluate comprehensive workplace health promotion programs across the country. The initiative uses funds from the Patient Protection and Affordable Care Act’s Prevention and Public Health Fund with the goal of improving workplace environments so that they support healthy lifestyles and reduce risk factors for chronic diseases like heart disease, cancer, stroke and diabetes.

As of 2014, the healthcare reform law will not only expand employers’ ability to reward employees who meet health goals, but it will also effectively require employees who don’t meet these goals to pay more for their employer-sponsored health coverage.

Typical features of wellness programs may include health-risk assessments and screenings for high blood pressure and cholesterol; behavior modification programs like exercise, weight management and smoking cessation; health education; and changes in the work environment or special benefits like a discounted gym or health club membership.

Studies show that wellness programs reduce healthcare expenditures. According to a May *Health Affairs* policy brief, a review of 36 peer-reviewed studies of wellness programs in large firms found that average employer medical costs fell $3.27 for every dollar spent on wellness programs, and costs for days that employees were absent fell an average of $2.73. Another analysis in 2005 showed that health promotion programs at organizations of all sizes resulted in an overall reduction of about 25 percent in sick leave, health plan costs, and workers’ compensation and disability costs.

Companies in Canada and the United States have reported substantial returns on investment (ROI). Organizations such as the Canada Life Insurance Company, Dupont, the Canadian government, Prudential Insurance, and Citibank reported positive ROI in the range of $2.00 to $6.85 savings for each $1.00 invested, according to a May white paper by Creative Wellness Solutions.

Employer wellness programs have to comply with a number of federal and state requirements, including the Americans with Disabilities Act of 1990, the Genetic Information Nondiscrimination Act of 2008, and the Health Insurance Portability and Accountability Act of 1996. Under the Affordable Care Act, employer-sponsored wellness programs will undergo one significant change. Currently, HIPAA nondiscrimination regulations limit the value of incentives that employers may offer to employees who meet health-related goals to 20 percent of the cost of healthcare coverage. Under the ACA, the maximum value of incentives will increase to 30 percent of the cost of coverage. The law also gives the secretaries of the departments of Health and Human Services, Treasury and Labor the discretion to raise this to a level as high as 50 percent of employee health benefit costs.

While there is widespread support for workplace wellness programs, the *Health Affairs* brief points out that controversy exists over the idea of tying rewards or penalties to individuals achieving standards related to health status.

On the other hand, business groups favor maximum flexibility to design programs with rewards or penalties that will encourage employees to participate and lower healthcare costs. They argue that individuals should take responsibility of their own health and lifestyle choices and that it is unfair to burden an employer’s whole workforce with the medical costs associated with the preventable health conditions of a few employees.

But consumer advocates, unions and some health organizations are generally wary of wellness initiatives that provide rewards or penalties based on employees meeting certain health goals. They argue that instead of improving health, this approach could end up shifting a bulk of healthcare costs on the sick, undermining health reforms meant to prohibit insurance companies setting premium rates based on an individual’s pre-existing conditions. In addition, these groups say that incentives can be unfair because an individual’s overall health status is a result of many factors, not all of which are under the individual’s control, such as genetic predisposition.
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Discharge Planning for the Complex Patient

BY BETTY THOMAS, LCSW

Patients with complex needs are commonplace within healthcare settings. Social work and RN case management professionals have the skills and the ability to bring collaborative strengths to the care team when working with patients who present with needs on a multitude of levels.

Within the acute care setting and outpatient settings, professional case managers are often on the frontlines, expected to assess the needs of the patient and coordinate their care plan in order to facilitate a safe and medically appropriate discharge. “The underlying premise of case management is based in the fact that when an individual reaches the optimum level of wellness and functional capability” (Case Management Society of America, 2008). This philosophy of practice is critical in all healthcare settings and is especially crucial when providing care for patients with complex issues.

As the healthcare system become more collaborative, case management is crucial in order to provide coordinated care and ensure medically appropriate discharges and safe transitions of care. It is also vital to recognize the different types of complexities which we may have to address as we are providing case management services.

MEDICALLY COMPLEX

Typically, when “complex” patients come to mind, we think of individuals with medical complexities such as chronic illness and comorbidities. Case managers, both RN and social workers, face the responsibility of guiding the medically complex patient through the continuum of care in order to discharge safely, prevent readmission and prevent unnecessary emergency room visits.

When handling medically complex patients, it is vital to ensure the patient understands her own medical needs. Determining support systems, such as family, friends and community resources, is also important. Case managers are often privy to information regarding from a variety of sources, including health professionals and the patient. Armed with this information, case managers can contribute toward the goal of preventing miscommunication and care fragmentation.

The RN case manager’s role may involve disease management and may also include planning and transitioning to the next level of care. Care for the medically complex also involves balancing clinical needs with fiduciary oversight in order to maximize resources.

The SW case manager plays a key role in assessment of discharge needs and identifying any barriers to discharge. Social workers are often tasked with communicating such needs to the clinical team so everyone is aware of the plan. Additionally, social work case managers must work closely with their RN counterparts to assess, plan and implement the plan of care. Collaboration is the key.

SOCIA LLY COMPLEX

Beyond medical complexities, many patients also present with social complexities, such as a lack of a support system and lack of access to resources.

Patients with socially complex needs require successful resources for discharge planning, which may include internal resources within the hospital system, such as medication assistance plans, or community resources, such as transportation.

In the outpatient setting, case managers must identify barriers that may prevent a patient from adhering to the recommended plan of care. If a patient has to struggle to meet their immediate needs, they may not be able to address their healthcare needs. These vital needs include shelter, food and safety. In the case manager’s assessment, it is important to inquire about such factors.

FINANCIALLY COMPLEX

With many individuals facing the crisis of unemployment, having the financial resources to meet medical needs is more challenging now than in the past. A common scenario is the patient who cannot afford medications and therefore does not fill prescriptions or only fills it every other month.

As case managers, initial assessments should include inquiries about financial resources as this may be directly linked to the acquisition or lack thereof of crucial medical care. Often, patients use the emergency room as their primary care. Case managers must be aware of resources on various levels that can help the patient maintain their health on an outpatient level in order to prevent ER visits from occurring unnecessarily.

PATIENT-FOCUSED CARE

Regardless of the complexities with which patients present, at the center of the plan should be patient-centered care. Case managers have the unique skills to collaborate with the clinical team and with the patient in order to not lose sight of remaining patient-oriented. Open communication between patients and caregivers and cultural awareness are practices that lead to patient engagement and satisfaction with their healthcare experience.

CONCLUSION

Healthcare continues to evolve with the implementation of various portions of healthcare reform. Case managers must continue to lead the interdisciplinary team in identifying, securing and conserving resources that are often dwindling. Despite the challenging clinical scenarios and patient complexities, we have the ability and the responsibility to be proactive and to serve as a stabilizing factor in our dynamic healthcare system.

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As ICD-10 Staggers, the Industry Asks: What Timeline Is Best?

A Review of Healthcare’s Divergent Points of View

BY EMILY MULLIN

In April, the U.S. Department of Health and Human Services announced a proposed rule that delays required compliance by one year – from Oct. 1, 2013, to Oct. 1, 2014 – for new codes used to classify diseases and health problems.

These codes, known as the International Classification of Diseases, 10th Edition diagnosis and procedure codes, or ICD-10, will include new procedures and diagnoses and improve the quality of information available for quality improvement and payment purposes.

Many provider groups have expressed serious concerns about their ability to meet the Oct. 1, 2013, compliance date. The proposed change in the compliance date for ICD-10 would give providers and other covered entities more time to prepare and fully test their systems to ensure a smooth and coordinated transition to these new code sets.

Despite good intentions with the delay, putting off the ICD-10 compliance deadline could have far-reaching and negative impacts on the healthcare industry’s effort to implement the mandate. That’s the finding of a recent survey of industry reaction to the HHS announcement it would consider delaying the ICD-10 implementation deadline for certain entities.

The study by health IT firm EDIFECS found overwhelming opposition to an ICD-10 delay among respondents, which included senior healthcare professionals actively involved in their organization’s ICD-10 transition.

The majority of survey respondents stated any delay would be problematic and would not have the effect intended by CMS. Overwhelmingly, respondents said that while a one-year delay would be “costly, but manageable,” a two-year delay would be either “potentially catastrophic” or cause an “unrecoverable” failure.

If CMS does delay the compliance date, respondents almost unanimously support clearly communicated and enforced interim milestones to ensure the industry doesn’t encounter the same problem a year from now.

In February, the College of Healthcare Information Management Executives (CHIME) sent a letter of opposition to CMS saying that “a prolonged delay to ICD-10 implementation, or more specifically, prolonged uncertainty about the timing and details of a delay, will create more problems than it would solve.”

“The majority of survey respondents stated any delay would be problematic and would not have the effect intended by CMS. Overwhelmingly, respondents said that while a one-year delay would be ‘costly, but manageable,’ a two-year delay would be either ‘potentially catastrophic’ or cause an ‘unrecoverable’ failure.”

Instead, the group recommended that HHS move quickly and decisively in setting a new compliance date for converting to ICD-10. CHIME has over 1,450 members, representing chief information officers and other top information technology executives at hospitals and clinics across the country.

“If HHS insists on staggered compliance dates, we believe that payers should have a date set in advance of doctors and hospitals,” CHIME said in its letter to HHS. “This would allow providers an additional and needed opportunity to test ICD-10 transactions with payers. A consistent start date across the provider community and an earlier date for payers would make the delay much more meaningful.”

When asked what the best option would be for the impending delay, 59 percent surveyed in the EDIFECS study said the date should be moved out for all covered entities, vs. mandating different compliance dates for different types of entities. Meanwhile, 33 percent advocate keeping the same date, either as is – 14 percent – or with an extended grace period similar to what was done for the HIPAA 5010 mandate – 19 percent. Only 8 percent advocate multiple dates, based on type of entity.

Yet some groups, such as the American Medical Association, are in favor of the proposed delay.

“The postponement is the first of many steps that regulators need to take to reduce the number of costly, time-consuming regulatory burdens that physicians are shouldering,” AMA said in an April statement.

More recently, the Federation of American Hospitals submitted comments in May to CMS regarding the proposed delay, saying that it is “very beneficial to the ultimate implementation of ICD-10.”

According to the survey data, healthcare professionals generally prefer not delaying ICD-10, but if a delay is inevitable, most recommend that it not be more than one year. This feeling is likely driven by the concern among healthcare professionals that a delay could result in budget freezes, work slowdowns and redistributed resources.

The annual cost of delaying the ICD-10 deadline could exceed $4 billion, based on a 30 percent increase in costs for every year of delay, according to the study.

The proposed rule announced is the third in a series of administrative simplification rules in the new healthcare law. HHS released the first in July of 2011 and the second in January of 2012.
When Congress passed the Patient Protection and Affordable Care Act in 2010, they signed into law new incentives for providers of care to fulfill a simple mandate: reduce costs and increase the quality of American healthcare – and in so doing, participate in the savings created. What is less known is that Franklin County, Maine, has enjoyed a model of healthcare that has been achieving these objectives for 40 years. Stunning and irrefutable outcomes prove the effectiveness of this pioneering model of care.

A winning strategy: guided by ScoreHealth Software, specially trained nurse care managers personally engage patients in life-changing relationships, thus leveraging overburdened physicians. Overwhelming results: lower costs, higher health status for low socioeconomic populations. The ScoreHealth-Franklin Model of Care is "an idea whose time has come," and the advent of the Medicare Shared Savings Program creates a natural structure within which to deploy this model throughout the nation.

The “ScoreHealth-Franklin Model” refers to a pattern of comprehensive, integrated, regional, wellness promotion, disease prevention and chronic condition management that has evolved over the past 40 years in schools, worksites, communities and healthcare settings of Franklin County. The Model has been associated with substantial improvements in health behaviors (such as smoking), risk factors (such as high blood pressure), self-perceived quality of life, preventive healthcare, health resource utilization (such as preventable hospitalizations among Maine residents eligible for Medicaid and/or Medicare), healthcare costs (such as health insurance premiums and hospital charges for cardiovascular disease care), life expectancy, excess deaths from chronic diseases and age-adjusted death rates (for cardiovascular disease, cancer and all-causes combined).

For two years running, the Robert Wood Johnson Foundation’s and the University of Wisconsin’s “County Health Rankings” named Franklin the healthiest (in 2010) and second-healthiest county in Maine (in 2011), despite persistent socioeconomic adversity.

Enabling deployment of the ScoreHealth-Franklin Model has been the ScoreHealth Software Suite, an integrated set of patient-centered software applications that promotes robust involvement of all three members of the productive triad: activated patient, nurturing nurse and primary care medical provider (www.scorehealth.com).

- **FullScore** is the nurse-facing, robust central engine of the ScoreHealth Suite. FullScore screens cover relevant demographics, personal health history, family health history, medications and medication adherence, health behaviors, symptoms, and physiologic and laboratory measures. “Smart software” guides care managers and health coaches in personalized, guideline-based care. FullScore receives input from several sources: the person via WebScore, enterprise HIT and EMR via ScoreConnect and the FullScore user. FullScore output includes software-generated, editable, personalized individual reports and aggregate group reports based on intuitive search functions. Reports and data can flow back to the EMR via ScoreConnect. FullScore incorporates proprietary risk stratification algorithms that distinguish low-medium-high health risk and cost status of individuals and groups. FullScore may be deployed on desktops or laptops linked to institutional or remote databases.

- **WebScore** is a patient-facing, web-enabled, streamlined health risk assessment tool that takes six to 10 minutes to complete. It acquires sufficient information from individuals to produce accurate, useful Personal ScoreCards for patients and to risk-stratify both individuals and populations. WebScore can be deployed via Internet, intranet or waiting room kiosk or tablet.

- **eLearning Library**, a digital educational resource for patients and health professionals, features health topics that are relevant to SH users. Updated at least annually based on authoritative Web resources, each topic includes direct access to the source websites, U.S. and international guidelines, plain language tip sheets, and educational documents for clients and patients (all in English, many in Spanish and some in various other languages).

- **ScoreConnect** is a communication utility that enables either HL7 or API connectivity between ScoreHealth and EMRs and other enterprise HIT applications, such as patient registration and laboratory.

**ScoreHealth Encounters:** Patients may have pre-entered much personal information via WebScore, either at home or in the waiting room. The ScoreHealth-guided encounter takes place in a comfortable, private setting, usually with both the patient and the nurse viewing the computer screen. All behavioral items include assessment of readiness and confidence to change. The nurse uses motivational interviewing techniques to help the patient prioritize among goal options and to commit to measurable, between-encounter action steps in pursuit of those goals. Using internal conditional logic, the software generates nurse-editable, guideline-based comments that appear on the patient’s Personal ScoreCard. Many ScoreCards end up on patients’ refrigerator doors, where the “smiley faces” and “red hearts” serve as reminders to the patient and
the patient’s family.

• During the encounter the nurse has access to the many hundreds of plain language educational items in the eLearningLibrary, both to review with the patient and to print to take home. The nurse always encourages the patient with positive feedback, sends a physician report to the PCP and arranges a follow-up meeting with the patient. Over serial encounters the nurse guides the patient (and often the patient’s physician) toward achieving and maintaining guideline-based goals regarding health behaviors and physical wellness. When needed, the nurse calls on the physician for advice or real-time interaction with the patient. The patient, nurse and physician evolve into a highly functioning three-person team.

Practice-based nurse care management has been featured in primary care practices affiliated with Franklin Memorial Hospital in Farmington, Maine, since 1988 and Blue Hill Memorial Hospital in Blue Hill, Maine, since 2003. This care model has been clinically and financially successful in hospital-owned and private practices and FQHCs. Cost-effective nurse care managers usually see their patients in-person, teach patients how to take their medications, interact frequently with their patients’ physicians, work closely with local hospitals and manage patients who are neither too well nor too sick to make a difference. Practice-based nurse care managers have achieved substantial improvements in health behaviors, symptoms and physiologic measures, while generating revenue and freeing up physician colleagues for other work. Patients, nurses, providers and administrators alike have become and remain enthusiastic boosters of practice-based nurse care management.

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N. Burgess Record, MD, began practicing medicine in rural Franklin County, Maine, in 1973. Since then, Dr. Record and his wife, Sandra S. Record, RN, have been major players in the evolving Franklin-ScoreHealth Model of Care. Contact: brecord@scorehealth.com
The tragedy of preventable deaths at hospitals is one that keeps physicians, nurses and all hospital leaders awake at night. And ever since the 1999 report To Err is Human proclaimed (rightly or wrongly) that as many as 100,000 avoidable deaths occur in U.S. hospitals each year, the public, too, has been concerned with how to build a safer healthcare system.

Recently, the UCLA School of Nursing was involved in an important research study at Santa Clara Valley Medical Center (SCVMC), a large, safety-net teaching hospital in California, investigating the use and effectiveness of rapid response teams (RRTs) designed to improve patient safety by preventing code arrests and death.

The value of RRTs in this area is not without debate, for while there has been enthusiasm for the concept, the evidence about their impact on reducing patient mortality has been controversial. Three studies from teaching hospitals in Australia report improved outcomes from RRTs, and in 2010 one health system in the United States demonstrated a 31 percent reduction in severity-adjusted mortality (Hatlen, Jones, & Woodland, 2010). Yet other research on RRTs shows no significant reduction in mortality or in cardiac arrests over time.

Even though evidence has been inconclusive, hospitals throughout the nation accelerated their efforts to formalize rapid response systems in 2009 when the Joint Commission sanctioned rapid response systems as a national patient-safety goal. Our research at SCVMC shows that there may be merit in more hospitals taking this approach.

**NURSE-LED TEAMS BRING VIGILANCE TO THE BEDSIDE**

The key to the RRT program at SCVMC is delivering critical care nursing expertise directly to the patient’s bedside. These teams are made up of the bedside registered nurse, respiratory therapist, the patient’s primary physician intern and resident and an ICU-trained RN (RRT-RN) who serves as team lead.

The decision to allocate a dedicated RN position for the RRT is essential to the program’s success and differs from many institutions that rely on the ICU charge nurse to respond, regardless of the demands and activities occurring in the ICU at that moment. With the RRT-RN in place, there is a planned resource available to respond immediately to the bedside RN’s needs when an RRT is called. The RRT-RN is also responsible for developing a plan of action with the rest of the team to address immediate risks and patient care needs, collaborate with the bedside RN to implement the plan, and document the event and the team’s response to it.

The RRT-RN is also an indispensable linchpin in the hospital’s hospital early nursing recognition and intervention (HENRI) rounds program. With a goal of aggressively investigating all changes in clinical status, RRT-RNs make early rounds on each shift and engage in important dialogue with RNs to identify and discuss risk factors, early signs of decline and preventive steps to avoid deterioration. This type of collaboration not only increases surveillance and recognition of deterioration, but encourages the bedside RNs to think critically about their patients in the context of risk. Their concerns are brought to the forefront, and they have assistance with monitoring and intervention when the patient’s clinical course is uncertain.

SCVMC is also diligent in ensuring that the patient’s primary care physician remains informed of any changes in the patient’s status. That was not always the case: when the program launched in 2006, the RRT announcement did not include the patient name or team color, the two ways in which physicians at SCVMC identified their patients. In 2008, the hospital started including the color designation of the house staff team in the RRT page, which led to increased physician involvement. This changed the dynamics of the team dramatically, as the RRT-RN no longer had to negotiate with the house staff to respond to the call, and house staff could see the value of having the RRT-RN and therapist at the bedside to immediately carry out their orders.

**RESULTS SHOW INCREASE IN CALLS, DECREASE IN MORBIDITY**

Since implementation there was a gradual increase in RRT calls at first and then a more rapid increase when the program expanded to include outpatient areas. Another big increase occurred in the program’s second year with the introduction of early recognition rounds and training. Overall, RRT calls increased from more than 75 per quarter at the start of the program to roughly 275 per quarter during year two. The adult (non-emergency) hospital death rate per 1,000 discharges dropped from 18 percent in 2005 to less than 15 percent after the program began. And the death rates for all of the year’s post-RRT were lower than the pre-RRT death rate in 2005. While there may be other clinical improvement programs contributing to this result, the impact of RRTs cannot be ignored.

The post-arrest survival rate (the percentage of patients who immediately survived their non-ICU code arrest resuscitation and transfer to ICU) improved with the RRT program, increasing from 79 percent pre-RRT to 90 percent in 2010. And the rate of survival to hospital discharge after code arrest also increased, from 43 percent pre-RRT to a high of 72 percent in 2006. Though the rate has declined since then, it still remains higher than pre-RRT, which may be an important indicator of the effect of RRTs.

The dedicated approach to implementing RRTs at SCVMC represents an organizational commitment to innovation and serves as an outstanding case study for the successful enactment of a rapid response system as a patient safety initiative.

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Brain Trust: Neurosurgical Patient Navigation
A Firsthand Account Explores an Empowering Vocation

BY SANDIE HIMMELMAN, CBIS

ike so many patient advocates, I discovered my profession after experiencing my own medical crisis, which ultimately required two brain surgeries and multiple other medical procedures. After my recovery, I started to reach out to others who had received similar diagnoses. Over time, I discovered these patients were experiencing many of the same barriers and frustrations I had experienced. I had heard about the benefits of patient navigation in the field of oncology, and I began to look at how it might be beneficial in the overall neurosurgical setting.

Undergoing brain surgery can be extremely scary. Even though you may be surrounded with a wonderful support system of friends and family and may have a very capable medical team handling your treatment, the initial diagnosis can still leave you feeling isolated and overwhelmed. My personal medical experience gives me the unique ability to connect with the patient, empathize with them, and offer a different perspective and hope.

FILLING IN GAPS, AND RESPONSIBILITY
Neurosurgical patient navigation (NPN) offers support and individualized assistance to patients, families and caregivers to help identify and minimize obstacles one may face during their neurosurgical treatment process. The primary goal of NPN is to fill the gaps in medical care by determining possible barriers, identifying resources to help minimize those barriers, and educating the patient on skills necessary to take an active role in their medical care. The purpose is not to assume the management of the patient’s medical care or to do everything for the patient. That would only allow the patient to become dependent, less involved and less responsible.

Let me give you an example: When I first started working with patients, I made the mistake of arranging all the medical appointments for my patients. It didn’t take me long to figure out that I had just enabled the patient to be less responsible. Although my intentions were sound, the outcome was less than desirable. My focus now rests on guiding the patient and empowering them to be an active, positive participant in their own treatment plan and outcome.

When a patient is referred for neurosurgical patient navigation services, we begin with a detailed intake appointment. I explain how NPN works and we discuss in detail the responsibilities of everyone involved. It is important for the patient to understand that, although I will be there to help them, they are ultimately responsible for following the care plan established by the medical team.

Should the patient choose to participate in the program, there are various aspects for education. It may be education on their conditions specifically, or education about a particular test or procedure they are facing. An example of information covered in this time frame might be the language of their diagnosis. A patient begins to learn the medical terms related to their condition. This minimizes confusion when speaking with the physician and allows the patient to ask detailed questions about their specific case. I will also assist the patient in locating reliable sources of information to learn about their conditions.

The next aspect of NPN education is to provide the patient and caregivers with suggestions on how to prepare for surgery, what they might expect after surgery and what types of things they might want to think about for their post-surgical recovery. For example, we discuss the use of a journal to keep track of their medical appointments, questions for the medical team, medications and their general progress. This is used throughout treatment to improve communication with the medical team, save time during appointments and minimize confusion. This is a critical piece of the program because, at the very least, it helps the patient stay on track. It can also be a much-needed emotional outlet for the patient. This is also a great time for patients to begin to participate in support groups.

The most common complaint I hear from my clients is in regard to their change in cognitive function and memory loss after brain surgery. Many of the patients will experience short-term memory loss, slowed processing capabilities, or an alteration in their receptive or expressive language skills. This is the time when it is crucial for the patient to have someone attend appointments with them. Due to the limited amount of time patients may have with physicians, it may be difficult to process all the information being delivered, which can cause unnecessary delays in treatment.

One patient explained to me that in many of her appointments she would still be processing what the neurosurgeon had just told her, but he had already gone over two other details that she completely missed. She began taking a family member or an advocate with her to her appointments who would take extensive notes that she was able to review at a later time that. It helped her stay on track with her treatment plan, therefore minimizing confusion or delays in care.

As a neurosurgical patient navigator, my job is not to challenge the medical team or question a patient’s treatment plan, nor is it to manipulate the medical team. My goal is to help the patient better understand their treatment plan and help them initiate the steps to receive the recommended care. One of the primary goals is to help the patient remain compliant with the treatment plan. If there are concerns that arise through the process, I can help the patient communicate their concerns, but I am never the voice of the patient. I may help the patient phrase their questions or give reminders, but ultimately they are responsible for communicating with their physicians.

As the patient progresses through their treatment plans, they learn valuable skills, including communication and organization skills, and they ultimately become more independent, active and positive participants in their future health.

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Imagine you are having an important conversation with a good friend. Someone you’ve known for years. A person you’ve trusted to always have your best interests at heart and to be honest with you. Reflect for a moment on what thoughts and feelings might flash across your mind if that friend suddenly said, “I need to be perfectly frank with you.” A statement like this may cause us to question our relationship. Has it been based on the honest qualities or has something else characterized it?

We believe it is important to reflect upon a similar set of questions when it comes to “patient-centered care.” What does this “new interest” imply about what has been the historical focus of care afforded patients? Has it been “hospital-centered care,” “doctor-centered care,” or “pharmaceutical-centered care?” Hasn’t it been self-evident that without patients there would be no reason d’être for hospitals, doctors, etc.?

Patients are, have been and always will be at the center of healthcare. Saying so, however, does not create real change. Likewise, tinkering with the past affects no real transformational change. The real transformation occurs when two things take place: 1) all of the stakeholders, including hospitals, doctors, and, of course, the patient, are focused on doing their unique part in caring for the reason d’être; and 2) they are doing so for both defensive and offensive reasons. For marketing reasons and for reasons of quality-of-care outcomes the patient will choose to return for their care and tell others to do the same. Both the marketing and quality outcomes are empirically intertwined and documented facts.

THE REAL TRANSFORMATION IN PATIENT-CENTERED CARE
The simple truth stands: “No patients, no care, no need for patient-centered care.” Of course, this isn’t new. What is new and transformational is what the Harry S. Truman Memorial Veterans Hospital in Columbia, Mo., is doing about it. Like its sister VA hospitals, this is not a mere academic truth. Not a truth that could result in just a fewer number of patients who felt uncared for who seek care elsewhere. By 2014, all veterans will no longer have to seek free care at a VA hospital or pay for their care out-of-pocket. By 2014 they will be empowered to seek free healthcare anywhere. By 2014 responses to a key question in the VA patient satisfaction survey – “If you could get free healthcare anywhere else how likely would you be to return to this hospital?” – will spell the difference in survivability for all VA hospitals. For both defensive and offensive reasons, patient-centered care in the VA has risen, dare we suggest, to its place of raison d’être.

The real potential for transformation is contained in the word care. The two strongest variables driving the likelihood that a veteran would “Definitely choose to return to this hospital for care even if [they] could get it free elsewhere” is the extent to which they “felt cared for as a person by their nurse and doctor.” These responses come not as a part of a focus group but from an individual, as a unique person and veteran.

Thus far, patient-centered approaches to care have lacked two things in common. One has to do with the fact that the “need for care” is a human value of relevance to any patient. But what this generic human need means in concrete, observable, operational terms to a patient can be expected to be influenced by the patient’s uniqueness as a person, and perhaps even their particular condition. In other words, none of the approaches thus far have had the patient define the specific behaviors she or he needs to experience to conclude, “I felt cared for as a person.” Since these individual preferences have never been sought, these patient-defined experience measures have not been clearly integrated into their treatment plan.

A WORK IN PROGRESS
A pioneering experiment is taking place – the Veteran Indicated Preference, or VIP, Project. This project centers around the use of in-room, white, dry-erase boards that are being used to propel patient-centered care into what is called the PDEM – the Patient Defined Experience Measure (see the chart below).

As part of the intake interview with a new patient, the nurse asks the patient to complete the following questionnaire:

VIP Project (Temenos, Inc.)
We are committed to ensuring that you are cared for medically and feel cared for as a person. We realize that each person can be different, so we need your help.

1. Look over the 10 behaviors listed below.
2. Check the three 3 most important behaviors you need from us for you to decide that you have been “cared for as a person.”
   • Tell me clearly what’s wrong with me.
   • Give me simple answers to questions.
   • Check to be sure you understand what I am saying.
3. Check to be sure I understand what you are saying.
4. If you’ve made a mistake [e.g., are late] apologize for it.
5. Give me positive feedback [e.g. “Atta boys/girls.”].
6. Show me you care about what I am dealing with.
7. Explain why you have prescribed a particular drug or treatment plan.
8. Don’t interrupt me until I finish speaking.
9. Motivate me to believe I can help myself.

The nurse then places the chosen magnets-backed VIP behaviors on the white board at the patient’s bedside and enters the preferences into the nurse’s notes. Hospital staff understands the goals, objectives and their roles in exhibiting the behaviors the patient has defined as relevant to their definition of being “cared for as a person.”

VERY EARLY RESULTS
It will be awhile before we can make solid pre-post quantitative results statements. Our purpose in sharing this project and
the early results is meant to inspire others to think in transformational vs. cosmetic terms about their own efforts at patient-centered care.

The first dozen or so VIP veterans at the Truman VAMC were overwhelmingly positive in feeling that their care was “personalized.” Equally exciting was the enthusiastic involvement of patients’ families. An unexpected plus has come in the form of the role family can and will play in the future.

In one experience, when the senior author was wandering the floor “sneaking glimpses,” a family member seated by a patient’s bedside spontaneously smiled, as the author did in return. Seeing that patient’s bedside spontaneously smiled, the family member pointed at the VIP portion at the bottom of the white board and said: ‘Just be sure to do those three things as they are very important to him.”

The second was an experience reported by the VIP champion nurse manager of the unit. “I rounded on patients yesterday and today VIP boards were essentially filled out with very little prompting to ‘fill in the blanks.’ One of the patients had started to fill out the board himself upon arrival to the floor, because he remembered it from his previous admissions. He and his wife remembered that I rounded on them and asked them questions regarding their stay and were impressed that I could recall certain things about our previous conversations.”

CARE: A PARTNERSHIP
Rather than experiencing an admittedly tongue-in-cheek “new interest” in patient-centered care, we are experiencing a normal cycle of growth and maturity in the meaning of the raison d’être of care. We are entering into a new era of partnership in care. A partnership in which those with the unique skill, expertise and knowledge have the primary responsibility for defining and ensuring the technical quality of care a patient receives. A partnership, which will increasingly afford the patient the opportunity to do what only she/he can do, to define in specific behavioral terms the human quality of the care he/she receives.

As this partnership continues to grow and take shape, high tech and high touch will assume their rightful place of equality in the quality of care. Ultimately, a real transformation in an old ideal will take place.

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**HEALTH REFORM**

**Healthcare Lingo: Let’s Get on the Same Page**

A health reform-inspired dictionary of top healthcare terms

BY CLAIRE LEVITT, MS

Since passage of the Patient Protection and Affordable Care Act (PPACA) in 2010, a number of key terms have been making headlines. These terms are sometimes used interchangeably, sometimes properly and sometimes improperly. This article tries to broadly define the terms and clarify some of the distinctions so we can all speak the same language.

**SYSTEMS OF CARE**

PPACA has advanced several new types of systems of care to promote transparency, integration and accountability.

Accountable Care Organizations (ACOs) are regionally-based healthcare delivery systems in which a group of doctors, hospitals and other healthcare providers are integrated to deliver coordinated high-quality care to their patients. The ACO will be “accountable” for the overall cost and quality of care for their patients. The Center for Medicare and Medicaid Services (CMS) will use ACOs to promote shared saving and care coordination initiatives to help meet quality and cost goals. ACOs will be a vehicle for paying teams of healthcare providers to care for the “whole” patient, rather than requiring patients to pay for care one service at a time. ACOs will likely use case management and disease management interventions to coordinate care across the healthcare continuum. Although many of the ACOs will be created to support Medicare, they are also emerging in the private sector.

The Patient-Centered Medical Home (PCMH) is a team-based healthcare model in which the primary care physician, who has an ongoing relationship with the patient, provides comprehensive and continuous care coordination to meet the patient’s care needs. The goal of the PCMH model is aligned with the ACO concept because they are both about improving accessibility, collaboration, record-keeping, patient safety and the overall quality of care, so many ACOs will rely on a PCMH care model. Fundamentally, the ACO is the infrastructure and the PCMH is the model for the delivery of care. PPACA has promoted the medical home model through a number of grant programs.

Collaborative Care Networks (CCNs) are community-based consortiums of healthcare providers established by PPACA with a unified governance structure. Like an ACO, their primary goal is to provide comprehensive coordinated and integrated healthcare services, in this case for low-income populations. HHS will help fund these network programs, which must include a hospital and a qualified health center. Among other services, CCNs must provide case and care management services.

Exchanges refer to the state-based insurance exchanges envisioned by PPACA as a way for individuals and small employers to more easily obtain healthcare coverage at rates similar to those enjoyed by large groups, which have the ability to negotiate favorable discounts. Assuming PPACA is fully implemented in 2014, these exchanges will serve as a central healthcare marketplace for millions of people.

The exchanges also will provide assistance to those who qualify for enrollment in state Medicaid programs (incomes below 138 percent of the federal poverty level), and be a conduit for offering federal subsidies to those who don’t qualify for Medicaid and can’t afford private health insurance. In addition, PPACA allows states to form a Small Business Health Options Program (“SHOP Exchange”), which is designed to help small employers coordinate and gain access to affordable health insurance for their employees.

**CARE MANAGEMENT**

PPACA has done a great deal to promote care management programs, but the nuances associated with various programs are often obfuscated. This is highlighted by the fact that many of the key terms were not actually defined in the PPACA legislation itself, but through the emerging regulations.

One good resource is the Case Management Model Act sponsored by the Case Management Society of America (CMSA). The Model Act defines the term case management as a “collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual and family’s comprehensive health needs through communication and available resources to promote quality cost-effective outcomes...Related activities to case management include care coordination, complex condition management, population health management through wellness, disease and chronic care management, and promoting transitions of care services.”

Here are several terms related to case management processes:

- **Care Coordination** ensures a patient’s needs and care preferences are understood and shared between providers, the patients and their families. It also helps to streamline transitions in the care continuum. Many use the terms case management and care coordination interchangeably, but there are some nuances. Whereas case management often is used to describe the profession of case managers and programs that help coordinate care, care coordination is more often used to actively describe the process of how to promote a dynamic and integrated care paradigm for patients.

- **Chronic Disease Management**, which is referred to throughout PPACA, is actually specified as an “Essential Health Benefit” that must be covered. Chronic disease management programs are classified as quality initiatives under the medical loss ratio (MLR) guidelines (see below), so we should expect to see them continue to proliferate.

- **Transitions of Care** refers to the movement between providers and settings that
a patient experiences during the care process. The importance of care transitions lies in the ability for hospitals to control readmissions by providing more effective transitions throughout the patient care process – from doctor, to hospital, to specialist, to home, for example. Many health plans are using “readmission management” to help assure appropriate care transitions.

KEY INSURANCE TERMS
PPACA reintroduces several key insurance reform concepts that have been around at the state level for several decades.

Essential Health Benefits are a set of healthcare service categories that must be covered by certain health plans beginning in 2014. While PPACA doesn’t give an exact definition of what constitutes an essential benefit, it does identify the following broad categories: ambulatory patient services; emergency services; hospitalization; maternity and newborn care; mental health and substance use disorder services, including behavioral health treatment; prescription drugs; rehabilitative services and devices; laboratory services; preventive and wellness services; chronic disease management; and pediatric services, including oral and vision care. HHS has elected to give states the ability to ultimately decide what services to include in the essential health benefits package.

The Individual Mandate portion of PPACA requires a person to purchase and maintain health insurance benefits. The individual mandate will take effect in 2014 if the Supreme Court does not strike it down. At press time, the Court was deliberating the constitutionality of the provision.

Medical Loss Ratios (MLR) is one of the most contentious provisions of PPACA. The MLR requirement forces insurance companies to allocate 80-85 percent of premium revenues to claims and efforts to improve the quality of healthcare services. If health plans charge too much for administrative costs, they must rebate some of the premiums back to the consumers. Many experts have expressed concerns about how the MLR will be calculated along with any rebates. Traditional utilization management functions are typically categorized as an administrative function of the MLR and therefore fall into the 15-20 percent bucket. In contrast, most case management programs that focus on coordinating care and chronic disease management programs fall under the larger bucket to improve the quality of care.

External Review occurs when an independent third party reviews a claim to determine if the insurer is obligated to pay. External review offers patients or their providers an opportunity to appeal an adverse medical necessity or benefit determination.

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Attention deficit hyperactivity disorder (ADHD) is clinically defined as a disorder presenting with symptoms such as inattentiveness, overactivity, and impulsivity. For these symptoms to be diagnosed as ADHD, they must be out of the normal range for a child’s age and development (PubMed website 2011). According to the Diagnostic and Statistical Manual (DSM) IV, ADHD can be sub-typed into inattention and hyperactive (ADHD) and non-hyperactive or inattentive types labeled attention deficit disorder (ADD). In the book Managing The Gift of Your ADD/HD Child, Emery shifts the paradigm from a western viewpoint of it being a disability to a view of ADD/HD as an evolutionary process which is expanding the human potential. The ADD/HD term is also used to both highlight the over-reliance of the DSM which can result in mis-diagnosis, and unnecessary drug therapies and medical costs.

It is a widely accepted correlation that the prefrontal cortex mediates executive function. It has been theorized that dysfunction in this brain region results in inattention and impulsivity, which are characteristic of ADHD. In fact, studies have shown that in some people diagnosed with ADHD, the prefrontal cortex matures more slowly (NIMH website, 2007). However, delayed maturation appears to abate with time and “catches up” with normal brain growth (NIMH, 2007). Other theories of the etiology of ADHD include genetic and environmental causal factors such as: parenting, diet, poor lighting, air quality, exposure to chemicals and metals, and an ineffective educational curriculum for this population.

HOW IS IT DIAGNOSED?
Initially there is an observation by trained (or untrained) school personnel or parents (Sax & Kautz, 2003), followed by consultation with a pediatrician, school psychologist, psychologist, psychiatrist, or other healthcare professional. “From 2000 to 2010, the number of physician outpatient visits in which ADHD was diagnosed increased 66 percent from 6.2 million (95 percent confidence interval 5.5-6.9M) to 10.4 million visits (95 percent confidence interval 9.3-11.6 million)” (Garfield et al., 2012), or a two-thirds increase in ADHD diagnosis. Is the incidence of ADHD more prevalent or are there possible misdiagnoses? Ultimately, ADHD has no known etiology or blood test. Diagnoses are based upon observation and guidelines put forth by the DSM IV.

HOW COULD ADHD BE MISDIAGNOSED?
The DSM-IV criteria of ADHD are strikingly similar to the characteristics of giftedness which are: “...boredom, lack of attention and daydreaming (Webb, 1993). A gifted child could be able to master tasks quickly as they can quickly see patterns and relationships (McAlpine & Reid, 1996). This could mean the child has difficulty sustaining attention on some tasks they have quickly mastered. A child who is intellectually playful, imaginative, or enjoys fantasy may be inattentive (McAlpine and Reid, 1996). Dubrowski’s (1972) imaginative overexcitability includes dramatization to escape from boredom” (excerpted from: Edwards, 2009). The differences are subtle and require a discriminating eye to detect.

Misdiagnoses can happen for a number of reasons, such as being the youngest in the class; not enough vigorous playtime (preferably in nature); unresolved emotional traumas; chemical/metal toxicity; substance sensitivities such as food colorings, gluten, dairy, high fructose corn syrup, corn, and MSG; or simply being a gifted child (Edwards, 2009). The ever-growing list of disorders that are being misdiagnosed as ADHD contributes to the understanding of a recent study that indicates “the mis-diagnosis of ADHD is potentially 20 percent” (Science Digest). If diet and environment were shifted, and the giftedness of the child examined, an ADHD diagnosis might be unnecessary (Emery, 2011; Edwards, 2009; Elder & Lubotsky, 2009).

HOW IS ADHD TREATED?
ADHD is often treated with drugs including but not limited to: Ritilan, Focalin, Concerta, Daytrana, Adderall, (methylphenidate, stimulant medications), Strattera (atomoxetine HCl, norepinephrine reuptake inhibitor) and Intuitive (guaifencine, an alpha andraenergic blocker). The long-term effects of these pharmacologic interventions are currently unknown, and most of these drugs come with a warning. For example, methylphenidate Ritalin, Focalin, Concerta, Daytrana, Adderall, Strattera, have a black box warning, which is the most serious warning imposed by the Food and Drug Administration (FDA) and highlight potentially fatal, life-threatening, or disabling adverse effects for prescription drugs.

AT WHAT COST?
Medical costs associated with an ADHD classification are approximately double for each individual diagnosed. This adds up to approximately $14,500 per household in the U.S. (Pelham, Foster & Robb, 2007). Mistreatment and misdiagnosis of ADHD also comes with a cost. “Such inappropriate treatment is particularly worrisome because of the unknown impacts of long-term stimulant use on children’s health,” Elder said. “It also wastes an estimated $320 million-$500 million a year on unnecessary medication -- some $80 million-$90 million of it paid by Medicaid” (Science Daily). That would leave some $200-$500 million to be picked up by insurance companies along with unknown medical care costs later in life.

There is also the issue of a 50 percent increased chance of the ADHD child to have drug addiction issues as an adult, which causes its own set of long-term cost (Sales, 2000). Other potential immeasurable and unanticipated costs of ADHD are potentially lowered self-esteem of the ADHD-labeled individual (Treutling & Hinshaw, 2001), along
with potential long-term health issues such as addiction and possible latent heart disease, due to taking these medications.

**ALTERNATIVE SOLUTIONS FOR ADHD**

Changes in diet and supplementation, better crafted educational programs, shifts in environment, along with creative, interactive, inclusive and critical thinking parenting and teaching programs will create dramatic positive effects in the associated costs of ADHD. Here are some more specific solutions:

**Diet:** It was recently reported in *The Lancet* that 64 percent of children diagnosed with ADHD are actually experiencing a hypersensitivity to food (Raz & Pelssner, March 12, 2011). The disorder is triggered in many cases by external factors, and can be treated through changes to one’s environment such as food.

- **Solution:** Nutrient dense foods. Today’s child has access to plenty of calories but often the majority of them are empty calories not providing enough nutrients to function at their maximum capacity.

**Supplementation:** The supplements that seem to have positive effects within ADHD population are:

- **Omega-3:** This essential fatty acid assists with reducing impulsivity.
- **Zinc:** “… is an important modulator of neuronal excitability. … zinc deficiency is linked to problems in cognitive development evident by alterations in attention, activity, neuropsychological behavior and motor development.” (Mohammadi, M. & Akhondzadeh, S. 2011)

**Parenting:** Enacting an action-and-consequence-based parenting strategy empowers children to participate in the creation of their own lives. Parenting and educating very bright, highly creative and high energy children takes more investment of time and energy in early childhood. Strategies have to be in place that include the child and teach them how to better understand and advocate for themselves.

**Teaching:** “We need to make learning for these children applicable to their lives and interactive in nature. Information needs to be taught in multiple learning formats that challenges and engages this population. This can be done by engaging and developing their own critical thinking skills which gives them a feeling of ownership in the process [of learning]” (Emery, 2011).

**Outdoor play time:** For children with ADHD, regular “green time” is correlated with milder symptoms. There is a link between the children’s routine play settings and the severity of their symptoms. Those who regularly play in outdoor settings with lots of green (grass and trees, for example) have milder ADHD symptoms than those who play indoors or in built outdoor environments. The association holds even when the researchers controlled for income and other variables. This article has presented both traditional and alternative perspectives along with some solutions to the ever-growing problem of ADHD misdiagnosis (20 percent), reviewed the alarming rate of increased diagnosis (66 percent), the black box warnings of most ADHD medications, and the rising cost of care. The alternative solutions of diet, supplementation, educational strategies and giving children more play time were also examined.

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Autism is a neurodevelopmental disorder characterized by a triad of symptoms related to impairments in social interaction, deficits in the development of speech and language, and restricted and repetitive patterns of behavior (Levy, Mandell, & Schultz, 2009). One of the most significant disabilities relates to a qualitative impairment in verbal and nonverbal communication. This communication disorder includes a “delay in, or total lack of, the development of spoken language” (American Psychiatric Association, 2000).

Approximately 50 percent of children diagnosed with autism are functionally nonverbal and will not develop sufficient natural speech or writing to meet their daily communication needs (Light et al., 1998; Wing & Attwood, 1987). These individuals may show only pre-intentional communication, such as reaching for a desired item, or communication may show intent through behaviors such as pointing (Yoder, McCathren, Warren, & Watson, 2001). When speech does develop it is often limited to unusual or echolalic (parroting) verbalizations (Paul, 2005). According to most recent prevalence data, autism is on the rise and now affects one out of 88 children in the United States, a tenfold increase compared to 40 years ago (CDC, 2012). These numbers indicate an urgent need for focused and ongoing intervention.

**Augmentative and Alternative Communication**

Augmentative and alternative communication (AAC) is a commonly used intervention approach to help autistic children develop effective communication skills (Mirenda & Schuler, 1988). AAC is the supplementation or replacement of natural speech and/or writing through alternative means of communication, such as electronic communication aids, gestures, graphic symbol sets and systems, or manual signs.

One of the most prominent AAC intervention strategies to enhance functional communication skills in autism is the picture exchange communication system (PECS). PECS uses behavioral strategies and a series of training phases to teach the exchange of graphic symbol cards in return for desired items, an approach that consequently increases spontaneous communication with others (Bondy & Frost, 1994, 1998).

PECS has been successful for several reasons (Preston & Carter, 2009): First, it requires very few prerequisites; the only prerequisite is that the individual can clearly indicate what he or she wants. Second, the first skill taught in PECS is requesting. Requesting has often been targeted in early instruction of individuals with developmental disabilities due to motivational considerations (Reichle & Sigafos, 1991). Third, PECS systematically targets spontaneous communication acts, a particular deficit in autism. And fourth, graphic symbols used within PECS are highly iconic, i.e., they closely resemble their referents. Thus, they can be easily recognized by the learner and are more recognizable by communicative partners.

**Using iPads and Similar Devices for AAC Intervention**

Another AAC strategy that is becoming increasingly popular in the autism community is the use of iPads and other tablet PC devices for communication purposes (CBS 60 Minutes, 2011). iPads can function as speech-generating devices (SGDs), that is, electronic communication aids that provide recorded or synthesized speech upon activation. SGDs are purported to have advantages over nonelectronic systems because they provide additional auditory stimuli for the learner via speech output. It has been argued that this additional provision of speech output presented as (a) antecedent auditory stimuli (a.k.a. “augmented input”), and/or (b) consequence auditory stimuli (a.k.a. “feedback”) may benefit learners with developmental disabilities.

The inherent consistency of synthetic speech, combined with increased opportunities to hear it, contributed to gains in receptive and expressive language skills in adolescents with intellectual disabilities using SGDs (Romski & Sevcik, 1993, 1996).

iPads with communication apps can provide exactly these advantages. In addition, iPads are a promising intervention strategy because they are lightweight and portable, motivating for young children to use, convenient to access and operate, and socially appealing (Flores, et al., 2011; Sennott & Bowker, 2009).

**Not All Apps Are Created Equal**

Many AAC apps have appeared in recent months for turning an iPad into an SGD, but the vast majority of them tend to ignore particular behavioral and learning characteristics of individuals with autism. Available apps are often equipped with large sets of graphic symbols that, when displayed on the iPad screen, overwhelm the autistic child with visual stimuli.

For the beginning communicator with autism, graphic symbols should be carefully chosen and not be presented alongside other conflicting visual stimuli on the screen. For other features, like a hierarchical organization of graphic symbol vocabulary, cognitive processing issues in autism make these a less ideal choice.

**Addressing Particular Needs of Learners with Autism**

Considering the specific needs in severe autism, an interdisciplinary team of Purdue University students from engineering, special education, and speech-language pathology developed an iPad app that resembles the PECS approach mentioned above, and that can be taught using the same behavioral principles. This free app is called SpeakAll! and is available for download at the iTunes store.

Intervention with SpeakAll! follows all major stages of the six-phase PECS protocol, starting with teaching of requesting skills up to more elaborated and spontaneous communication acts. The difference lies in a variation...
of the graphic symbol exchange act. While in PECS the graphic symbol card is put on a “sentence strip” for static display of the symbol(s) and subsequent provision of the desired items, the SpeakAll! app displays a “sentence strip that actually speaks;” whenever a graphic symbol is dragged onto the sentence strip area, the iPad will speak out the symbol referent in the form of pre-recorded speech. Several graphic symbol cards can be combined to speak whole sentences. It is this provision of additional speech feedback that differentiates the app from the original PECS approach.

SpeakAll! is inherently customizable: Any graphic symbol or photo taken with the iPad camera can be added to its image library and a sound file with pre-recorded speech can be added. To reduce issues with cognitive load and visual processing, selection area and sentence strip are clearly separated and only a limited amount of graphic symbols is displayed at one time. Graphic symbol vocabulary can be added by creating a variety of “activity sheets” for different contexts that the clinician selects prior to starting intervention with the child.

Further unique features of SpeakAll! include a randomization option for the graphic symbols. The randomization feature allows the clinician to display graphic symbols always at a different screen location so that the child truly learns symbolic comprehension and not a simple, automated sequence of symbol selection.

RESEARCH BEHIND THE APP

SpeakAll! is a research-based app that has been derived from clinical investigations into the benefits of SGD for learners with severe autism. Several single-subject experiments have demonstrated its efficacy and effectiveness: In an early investigation our research team showed that children can easily transition from early PECS stages to communicating with SpeakAll! on an iPad (Wendt, Boesch, Subramanian, Hsu, & Johnstone, 2011).

A follow-up study demonstrated that AAC intervention can start directly with iPad and SpeakAll! even without training of early PECS phases for elementary age students with autism (Wendt, Boesch, & Hsu, 2012). A third study is currently underway trying to replicate these effects with an older cohort of high school-age students. The app is not limited to individuals with autism and similar benefits were reported for a child with Down Syndrome during treatment in our speech-language clinic.

This ongoing research allows systematic improvement and updating of SpeakAll! Future additions will include the option of different types of synthetic speech voices (instead of pre-recorded speech), and a larger variety of premade graphic symbols to choose from. Input from the professional community on how to further improve SpeakAll! is very much appreciated and feedback can be given through the iTunes store or at the accompanying YouTube tutorial (search “SpeakAll! app for iPad”).

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Mission Critical: Showing Outcomes for Population Health Management

For Successful Endeavors in Population Health, Outcomes Are a True Lifeblood

BY ROBIN F. FOUST, BS, PAHM AND MICHELLE LAYTON, BSN, MBA

Why bother?” may be the first question that comes to mind when discussing population health outcomes, as evaluation is in itself an investment, and population analysis in its purest form does not produce savings; however, in some approaches it can.

Let it be said in advance: data can be leveraged to identify individuals who can benefit from care management and health education, and are not being managed based on stratification, identification, and referrals to any program provider along the care continuum, e.g., lifestyle, maternity, disease, case/care management, and end-of-life care support. An independent audit, along with identification and referrals ensures best outcomes from both a health and financial aspect. Identification and referrals work best when founded in response to:

• Receipt of claims and other health risk data; and
• Use of physician data from a participating and cooperating network such as a medical home, high performing networks and/or accountable care organizations (ACO).

In addition to leveraging data to ensure optimal population health and productivity management, it is vital to find an independent auditor to serve as an advocate to monitor, report and improve performance of program providers. This is accomplished retrospectively to evaluate data to determine what is working well and what opportunities there are to improve, by studying the effect of programs on outcomes achieved.

An evaluation should:

1. Prove the investment is worth it. A financial officer or other leader in any organization will eventually ask if the investment is worth it; therefore, the analysis must document a return-on-investment and a return-on-outcomes. Be prepared and proactive with a solid answer to the question before it is asked, or the program strategy will lose funding support and will not survive.
2. Identify areas in need of attention to make the investment worthwhile.
3. Provide a forum for continuous quality improvement. If a program strategy is not effective, use data to modify the approach, even if that means changing vendors, providers and/or systems.
4. Perform in a manner that is defendable, and therefore supported by leadership or organizations (grants) funding the program.

The definition of outcomes includes creating a baseline of performance measures or benchmarks in order to measure improvement in outcome performance to the measures selected, for any given population, including Medicare or Medicaid beneficiaries, fully insured health plan members, self-insured employer covered lives, the uninsured, the patient population under the care of a physician or physician networks, etc. As an example, performance measures may include, but not be limited to:

- Individuals with diabetes who exhibit evidence of risk control by:
  - Performing a monthly foot check and/or obtaining a monofilament foot exam in the previous 12 months.
  - Receiving an annual retinal eye exam.
  - Maintaining a hemoglobin A1c of less than 7 mg/dl.
  - Maintaining systolic blood pressure level of < 140, and diastolic level of < 90.
  - Exhibiting a low density lipoprotein (lipid) level of < 100.

When clinically integrated, physician networks are accountable for outcomes, and a peer council – an administrative body of physicians – selects a set of outcome measures by specialty type so the provider’s performance with their patient population(s) can be monitored and improved. Primary care, oncology, obstetrics, radiology, and pediatrics are all examples of physician types. The council also sets up policies and procedures for any remediation should physician(s) fall below acceptable performance levels; including probation or removal from the network, e.g., three or more measures at less than 80 percent of the eligible population for the designated reporting period. A performance measure for physicians may include:

- 80 percent of patients with evidence a select condition is being managed well, or
- Age appropriate test(s) such as annual mammogram for women 50 years of age and older, and or that a procedure is not being appropriately utilized, e.g., bone scans by age, gender and other measures.

The idea is to leverage data to get patients in for visits who need it and/or referred to care managers to ensure best outcomes.

Other performance and outcome measures may include but are not limited to:

- Identification of specific conditions, risks and utilization patterns that are driving costs. Recommendations include sorting by categories with subsequent drill down to the transactional level, such as by:
  - Core Conditions – These are prevalent, therefore tend to be cost drivers and conducive for disease management (asthma, COPD, coronary artery disease, diabetes, heart failure, hypertension). The following measure types can apply to the other categories that follow.
  - Compliance to Standards of Care (SOC)/compliance with evidence-based medicine guidelines (EBM).
  - Trending actual per member per month (PMPM) rates to forecasted PMPM or drilling down to report by subscriber, spouse or dependent.
  - Evaluating the intervention influence...
(treatment effect) of disease, lifestyle, or case management on outcomes.

- Core Extended Conditions – These may be prevalent and also conducive for management, such as obesity, back pain, sleep disorders, etc.
- Complex Chronic Conditions – These are rare and crisis-oriented; however, they are expensive to treat. The crises can be prevented or abated through management and education (hemophilia, multiple sclerosis, Parkinson’s disease, etc.)
- Other Conditions.
- Key Risks (high lipid and glucose levels, hypertension, poor weight management, physical inactivity, stress).
- For employers, productivity in days and dollars by:
  - Short- and long-term disability
  - Workers’ compensation.
  - Utilization by:
    - Place of service.
    - Avoidable emergency room.
    - Avoidable hospital readmissions.

SAMPLE OUTCOMES REPORTING

Risk reduction: The following represents an employer who performs regular health risk assessment with biometric screening. Figure 1 demonstrates the reduction in risk from the first to the last time individuals were assessed. The evaluator uses a validated method to stratify the participants into five risk levels, taking into consideration that risks tend to cluster comparing first to last risk. In Figure 1 follow the row over to the corresponding column which reveals that 0.3 percent of risk level 5 participants maintained their risk level, 0.7 percent reduced their risk to a Level 4, and 0.2 percent reduced their risk from 5 to 3. Likewise, 0.5 percent of Risk Level 4 participants increased their risk to a Level 5, 22.7 percent maintained their risk, 11.5 percent reduced their risk to a Level 3, and so on.

When comparing the blue shaded column labeled “% First Risk” to the corresponding row labeled “% Last Risk,” one can equate overall reduction, maintenance, or escalation in risk for the whole population by risk level. According to Dr. Dee Edington and his research with the University of Michigan, it is just as important to maintain risk as it is to reduce it. In this population, 77.4 percent maintained or reduced their risk, compared to 22.6 percent whose risks increased.

Overall trending: The following is a group level report and is not at the individual level. Figure 2 demonstrates the trending difference, using propensity score matching (PSM) within a health plan population to compare groups who implemented the program (study) to those who did not implement the integrated care management program (ICM).

In order to provide an unbiased evaluation of the ICM program, PSM was applied to identify populations that were similar to the studied employer groups. This comparison known as the “control group” was based on matching variables for age, gender and medical services utilization (ER encounters, physician visits, and percentage of population with core conditions).

By comparison, the treatment effect for the study population impacted the rate of trend, and the shape of the trend line – shape of the curve – is directed downward. The rate of trend is also almost half for those with ICM compared to groups without it. The population size included 56 groups, representing 22,500 lives, in both the study and control.

In addition to group level reporting, outcomes reporting should be conducted at the individual and population levels, and the intervention influence on participants.

In a medical home environment the patient’s personal physician spearheads coordination of care efforts, in collaboration with designated system users, also known as outcomes monitors, or physician surrogates working in the system, and stratifies the population for referrals and study data and reports in order to:

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Seizing the Future: New Developments on Epilepsy

BY BRIEN SMITH, MD

Epilepsy is a medical condition that produces seizures affecting a variety of mental and physical functions. When a person has two or more unprovoked seizures, they are considered to have epilepsy. Seizures can have many symptoms, from convulsions and loss of consciousness to more obscure symptoms like blank staring, lip smacking, difficulty finding words, and jerking movements.

Epilepsy is the fourth most common neurological disorder in the U.S. after migraine, stroke, and Alzheimer’s disease. It is more prevalent than cerebral palsy, multiple sclerosis and Parkinson’s disease combined. Yet it remains among the least understood of major chronic medical conditions, even though, as the Epilepsy Foundation notes, one in three adults knows someone with the disorder. According to a recent Institute of Medicine report one in 26 people in the U.S. will develop epilepsy at some point in their lifetime.

Despite the limited amount of national funding for research on this condition, much is happening in the research and treatment of epilepsy on a number of fronts: understanding its origins; producing new drugs; and developing new treatments. These developments offer increased hope in the fight against epilepsy.

We have known for many years of genetic links to epilepsy, but today researchers are identifying particular syndromes and their genetic connections. As that knowledge increases, new therapies are being developed.

In addition, we’re learning more about how to treat patients for whom the cause of an epileptic seizure – typically the result of a birth complication, infection, head trauma, stroke, or brain tumor – is not readily apparent. A Mayo Clinic study, for instance, has shown that some epilepsy patients have certain antibodies, and immunotherapy may reverse or improve the condition.

SURVEYING THE DRUG LANDSCAPE
A number of new drugs have appeared on the U.S. market, and they offer increased options for epilepsy patients. Four new drugs have emerged in the U.S. market, including lacosamide, vigabatrin, rufinamide, and clobazam. E cachitin is a new antiepileptic drug that has recently been approved by the FDA and is now available for clinical use. It has a novel mechanism of action on potassium channels.

Each new drug increases the possibilities of finding the most effective treatment for a given patient. Although we expect about two-thirds of epilepsy patients to be controlled with antiepileptic drug therapy, formulation substitution (brand to generic, or generic to generic) has become a concern for clinicians.

Dr. Gregory L. Krauss wrote in the Annals of Neurology that “Patients with epilepsy are often concerned that switching between brand-name and generic formulations of antiepilepsy drugs may cause clinically significant changes in plasma drug concentrations.” The study concluded that “most generic anti-epilepsy drug products provide total drug delivery similar to reference products; differences in peak concentrations between formulations are more common. Switches between generic antiepilepsy drug products may cause greater changes in plasma drug concentrations than generic substitutions of reference products.”

This study suggests that substitution of some generic antiepileptic preparations that have been approved by the FDA still may result in significant variability in drug concentration which can result in seizures or toxicity. Many clinicians continue to face the challenges of maintaining a therapeutically bioequivalent antiepileptic drug treatment for their patients when pharmacies and insurance companies continue to interchange these agents and ignore the concerns that the literature and recently funded studies by the FDA question. Unfortunately, data suggests that the most problematic switch for patients is between approved generic preparations, and not even the FDA has completed clinical trials addressing this scenario. (The FDA, working with the American Epilepsy Society and the Epilepsy Foundation, has recently approved an additional study that should shed more light on this issue.)

An additional concern is the underutilization of epilepsy surgery as an option for patients with refractory epilepsy. Approximately one-third of epilepsy patients will not become seizure-free with the use of antiepileptic medications either in mono- or polytherapy. A percentage of them will be ideal candidates for surgical resection, but only a minority is referred to comprehensive epilepsy programs. In a recent article in The New England Journal of Medicine, Dr. Pete Engel Jr. explored the timing of epilepsy surgery, and how favorable the outcome may be when comparing surgery vs. continued medical therapy.

A major advance in recent years has been the acknowledgement that epilepsy has many comorbidities that are often not appreciated by clinicians. Psychiatric comorbidities, such as depression and anxiety, need to be monitored for in all patients with a chronic seizure disorder. Comprehensive epilepsy programs realize how integral psychiatrists, psychologists, neuropsychologists and social workers are in managing this condition. This need for multidisciplinary care in managing epilepsy patients is beginning to permeate the primary care and general neurology settings.

As epilepsy begins to be appreciated as a spectrum of disorders from mild to severe, even catastrophic, the options for therapy have to be further expanded. Presently, the effectiveness of radiosurgery and the use of deep brain stimulation in treating refractory patients with epilepsy are being investigated. Neurmodulation gained significant interest as a potential therapy for epilepsy after vagus nerve stimulation (VNS) became available for refractory partial epilepsy in 1997.

Continued advances in neuroimaging have helped clinicians better identify subtle areas in the brain that are responsible for initiation of seizures. With this information, surgical resection of a seizure focus or neur modulation of epileptic networks can be more specifically directed with less risk to the patient. More also needs to be learned about the risk factors for sudden unexpected death in epilepsy (SUDEP) and about the risk of birth defects from seizure medications – and, therefore, which medications should be avoided during pregnancy.

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Listen Up, Turn It Down: Noise Can Zap Your Hearing

BY MARY MARGARET KEATON

Noise is not innocuous. It is an increasing public health problem with numerous adverse effects, including noise-induced hearing loss (NIHL). Sounds that are too loud, too close, or last too long can injure nerve cells in the inner ear. Although damage is permanent, it is also preventable.

Quota International, a 93-year-old service organization known for promoting hearing health, aims to raise awareness of NIHL. Through "Listen Up, Turn It Down," a campaign set to launch next month, Quota hopes to educate people about the dangers of noise. The organization will offer a variety of age-appropriate audiovisual presentations and learning materials (from ages four to adult) for Quota clubs and members to share with healthcare professionals, groups, organizations, schools and others in their local areas.

The inclusion of materials for young children addresses an alarming statistic—the average youth in today’s noisy world begins to suffer NIHL by the age of eight. From televisions and video games to deafening concerts and events, hearing damage can be significant by the time a child reaches the teen years. By educating parents and young kids as well as older children and other concerned adults, Quota hopes to increase early intervention and protection against noise to safeguard hearing health in the youngest generation.

WHAT IS NIHL?

Noise is part of everyday life. From household appliances to traffic to iPods, noise exposure in the 21st century is nearly constant. Most of these sounds occur at safe levels, but noise that is too loud, too close or lasts too long damages tiny hair cells in the inner ear. These sensitive cells, responsible for converting sound energy into electrical signals that travel to the brain, do not grow back after sustaining acoustic trauma. The result is a permanent condition called noise-induced hearing loss (NIHL).

Many people lose hearing on the job from noisy tools and machinery. Nevertheless, among the millions of NIHL sufferers around the world, including more than 26 million in the U.S. alone, only 16 percent lost hearing from exposure to noise at work, according to the World Health Organization. That means most people with NIHL—a whopping 84 percent, based on WHO data—encountered hazardous noise at home or in the environment. As a result, everyone is at risk of developing NIHL.

HOW MUCH IS TOO MUCH?

Sound is measured in units called decibels. The decibel scale, an increase of 10 decibels means that a sound is 10 times more intense, although it sounds only twice as loud to the human ear, not 10 times as loud. The difference can be deafening, for the louder and more intense the sound, the shorter the time before it causes hearing loss.

The danger zone for noise is at or above 85 decibels. To put it in perspective: the everyday hum of a refrigerator is about 45 decibels; a normal conversation is 15 times more intense than a fridge at about 60 decibels. Typical traffic noise can reach the danger threshold at 85 decibels, while a motorcycle or gunshot can hit 120 to 150 decibels—more than 60 times more intense than traffic. Exposure to noise at these levels will cause hearing loss rapidly.

But loud sounds are not the only culprits in causing NIHL. Prolonged exposure to lower levels of noise can also damage hearing. A sound just under the danger level at 75 decibels, for example, causes NIHL if it goes on too long or is repeated frequently. Likewise, lower levels of noise originating too close to the ear can cause NIHL—such as the impact of standing next to the speaker at a rock concert or simply relaxing with an iPod. The earbud, in fact, is a serious threat to hearing health today because sound pours directly into the ear canal. That sound is noise, even if it’s Mozart, and will damage hearing, especially if it continues over a long period of time.

PREVENT HEARING LOSS

In a world where constant exposure to noise is normal, Quota aims to promote awareness as key to healthy hearing. Paying attention to environmental sounds and taking precautions when noise is too loud, too close or lasts too long will help reduce the incidence of NIHL, especially if care begins in early childhood before significant damage to the inner ear has occurred.

One California Quota club has already experienced success with a healthy hearing project that served as a catalyst for “Listen Up, Turn It Down.” Quota International of Mountain View used a local grant to create and distribute “Healthy Hearing Packets” for every third grade student, parent and teacher in their school district. Student packets, available in both English and Spanish, included games and worksheets on NIHL, while teacher packets included these materials plus earplugs and Quota pencils for each student and a poster for the classroom. In addition, the club provided materials to every school principal and nurse and to the superintendent’s office. The Mountain View Quota resources will be available to all Quota clubs along with the new awareness campaign materials.

QUOTA AND EARPLUGS

Quota clubs have long supplied earplugs for noisy community events. Members of the Quota club of Shenandoah County, Va., are known locally as “the earplug ladies” for distributing them at an annual tractor pull and demolition derby. Likewise, the Quota club of Sterling, Colo., distributes thousands of earplugs at the Logan County Fair each year. “Some people are reluctant,” noted past club president Karen Bargell, “but we encourage everyone to take earplugs. Many people who refuse initially come back to ask for them.”

On the Caribbean island of Curaçao, the local Quota club has been associated with hearing health for many years. The club sponsors an annual media blitz about NIHL before Carnivale season (February to April) and provides earplugs for noisy festivities. “During the entire celebration, loud and constant sound is crashing into the ears of musicians, participants, and spectators along the parade routes. Quota earplugs reduce the risk of hearing loss,” said past club president Ingeborg Campman.

QUOTA’S EDUCATIONAL RESOURCES

Earplugs are among the educational tools and resources available through Quota’s worldwide...
Hearing Loss: Ways To Control It, Before It Controls You

BY LILY SARAFAN

The Mayo Clinic estimates that one in three people in the United States between the ages of 65 and 75 and more than half of all people older than 75 suffer from some type of hearing loss. There are many different reasons why our sense of hearing may become impaired as we age.

Presbycusis. Presbycusis is an umbrella term that refers to the slow, irreversible hearing loss that many people suffer as they grow older. Scientists say that the most likely culprit is the decline of the tiny hair cells in the organ of Corti in the inner ear. With these cells dead or damaged, electrical impulses have a much harder time reaching the auditory cortex where sounds can be processed and referred to other areas of the brain for appropriate responses.

Researchers are unsure why these tiny hair cells suffer damage as we age. It may be because, like the hair on our heads, the hairs in the organ of Corti naturally age and become thin and brittle over the years.

Ear Wax (Cerumen). Ear wax, or cerumen, is a substance secreted close to the eardrum in the external ear. Its function is to clean and lubricate the ear and to protect the sensitive structures of the middle ear and the inner ear from infection. Ear wax is usually self-cleaning. Once it has served its purpose, it will dry up and be expelled from the outer ear in small flakes that are almost invisible to the naked eye.

Ironically, hearing loss due to ear wax blockage usually does not become a problem unless a person uses a cotton-tipped stick or a similar object to try to remove the ear wax. Instead of removing it, they usually only succeed in pushing dry wax deeper into the ear where it becomes stuck and impairs hearing.

Luckily, cerumen blocks do not cause permanent harm. They usually clear themselves if you put a few drops of mineral oil or baby oil into the ear for a little extra lubrication. More serious impactions can be irrigated by a doctor.

Meniere’s Disease. Meniere’s disease is a distressing condition that results in balance and hearing problems. Victims may experience dizziness, nausea and vomiting, or ringing and significant hearing loss in one ear. Doctors do not fully understand Meniere’s disease, but they suspect it has something to do with an increase of pressure within the inner ear.

Conductive Hearing Loss. Conductive hearing loss is typically seen in younger patients, though it can affect people of all ages. Conductive hearing loss occurs when sound is not properly conducted through the ear drum or the middle ear. The victim usually complains of hearing loss in one ear, as well as a feeling of the ear being “plugged up.”

Several problems can cause conductive hearing loss including a punctured eardrum, fluid build-up in the middle ear, or even a genetic malformation. The problem can usually be resolved by corrective surgery.

SYMPTOMS OF HEARING LOSS

The following are several common symptoms and signs of hearing loss to pay close attention to:

- Difficulty understanding certain words.
- Frequently asking people to repeat themselves.
- Playing the television, CD player, or radio so loudly that it becomes a nuisance to neighbors.
- Not hearing certain sounds like a doorbell or a ringing telephone.

GETTING HELP

Taken together, these signs point to a hearing problem, but individually, they could also be caused by other factors. If you are experiencing a combination of these symptoms, set up an appointment with an ear, nose and throat specialist (ENT) or audiologist for additional testing and possibly a hearing aid.

If the specialist or audiologist does find that you have a hearing problem, depending on the level of severity, there are a number of devices that can improve hearing loss.

HEARING AIDS

Hearing aids are small, unobtrusive devices that rest on or just inside the external ear. They process and amplify sounds as they pass to the middle ear and the inner ear. A hearing aid consists of at least four distinct components:

1. The microphone, much like the pinna, detects and collects sounds.
2. The amplifier increases the volume of certain sounds.
3. The speaker then sends those amplified sounds into the ear where they can be processed and transmitted to the brain.
4. A small battery acts as the power source.

There are two basic kinds of hearing aids available on the market. The older is the analog, which turns sounds into amplified electronic signals. The newer model of hearing aid, the digital hearing aid, converts symbols into binary numbers. These numbers can actually help distinguish important sounds, like your spouse asking you a question, from unimportant sounds, like a bird chirping outside your window.

RELUCTANT CONSUMERS

A 2010 study published in the journal Gerontology found that hearing aids were effective in helping people with mild to moderate hearing loss, especially if they are professionally fitted and calibrated. Unfortunately, the study also found that just 20 percent of Americans who could benefit from hearing aids actually wore them.

Two of the most common reasons seniors and others who are hard of hearing don’t wear hearing aids are embarrassment and cost. It may help to go to a hearing clinic and see just how small today’s hearing aids really are. It’s unlikely that a casual acquaintance would even notice the hearing aid.

Cost is also a factor that prevents those hard of hearing from obtaining hearing aids. If you are afraid you can’t afford the device, take some time to shop around at various hearing clinics and locate the most reasonable prices. When you visit the clinics, you might also ask if there are any city, county or state funds available to help finance the purchase of hearing aids.

OTHER DEVICES

If you find the hearing aid helpful, there are other types of assistive technology you might also find useful.

A telephone amplifying device, for
instance, contains a special receiver that amplifies the voice of the person to whom you are speaking.

If you still enjoy watching television, ask the hearing clinic about an amplifying head phone device so you can watch television without disturbing neighbors or other people in the house. In some places, you may also be able to arrange with your cable company to get closed captioning for the majority of programs.

Finally, if you have trouble hearing the high frequencies of the telephone and the doorbell, try purchasing a device that flashes colored lights or vibrates in your pocket to alert you of a visitor or a phone call.

COCHLEAR IMPLANTS
Used mainly in cases of profound hearing loss, which involves damage to the inner ear, the cochlear implant is a small, electronic device that is surgically placed just under the skin behind the ear. Basically, the device bypasses the inner ear and sends messages directly to the brain for processing.

Hearing loss is a common, yet scary sensory change that older adults experience as they age. It’s important to understand the different types of hearing loss, how to identify a hearing problem and ways you can help someone compensate for hearing loss to ensure they continue to live a quality life as they age.

TIPS TO HELP COMPENSATE FOR HEARING LOSS

• When you speak to your loved one, either face him or her head on or, if hearing is better in one ear than in the other, speak directly into their good ear.
• Do not yell or shout. Yelling makes you sound angry, even if that is not your intent.
• Do not cover your mouth as you talk. Some people who have suffered slow hearing loss over a long period of time have taught themselves to read lips.
• Use facial expressions and gestures, as well as words, to communicate.
• Do not talk about the person who has a hearing problem. Talk to him or her. If you need to share private information with a third party, beckon that person outside the room.
• Lowering the pitch of your voice may make it easier for your loved one to hear you.
• Reduce background noise before starting a conversation with your loved one.
• Don’t become tired or frustrated with your loved one. Instead, stay calm and work with them to figure out the best ways to communicate.

If you do not live nearby and notice that your parent or other loved one is struggling with their hearing and needs more assistance than a hearing aid or other device, hiring a caregiver from a reputable home care agency can be helpful. Here is how a hired caregiver can help make life easier for someone who needs additional assistance as a result of hearing loss:

HOW A CAREGIVER CAN HELP
1. Checking batteries and keep hearing aids clean. This is especially important if your loved one has cognitive problems like Alzheimer’s disease or if he or she has other sensory deficiencies that make handling the small hearing aids difficult.
2. Help with socialization. Many people with hearing loss withdraw from social situations because they are embarrassed if they don’t understand what is said to them or if they have to ask someone to repeat themselves. A home health worker can quickly learn the best ways to communicate with your loved one, and the two of them should be able to have at least some enjoyable interaction each day.
3. Attending medical appointments. If your loved one doesn’t hear well, he or she may not understand everything the doctor says. If you can’t go to appointments with loved ones on your own, ask the home care worker to go and take careful notes that you and your loved one can examine later.
4. Educating the family. Since the home health worker typically spends several hours a week with your loved one, he or she may pick up on some communication tips and techniques that you haven’t discovered yet. The home health aide can share this advice with you, making it easier for you and your loved one to understand each other.

Lily Sarafan is the president of Home Care Assistance, the leading provider of home care for seniors across the U.S. and Canada with a mission to change the way the world ages. Web: www.homecareassistance.com | Contact: kzaksorn@homecareassistance.com
A Role for Non-medical Practitioners: Treatment of Pituitary and Other Neuroendocrine Disorders

BY LINDA M. RIO, MA, MFT

Throughout my more than 25-year career as a marriage and family therapist (MFT), I have had to continually broaden my understanding of the clinical issues I was originally trained to treat. In recent years, understanding the brain-body connection is one of those issues very few of us therapists were properly trained to deal with originally, but one we can no longer ignore.

In fact, the 2011 American Association for Marriage and Family Therapy (AAMFT) annual conference’s theme focused on “The Science of Relationships,” recognizing the need for a greater scientific and medical understanding in mental health. This truly highlights the growing awareness in the healthcare community of the need for building bridges, not walls, between medicine, mental health, and other allied professions. Building bridges between medicine and mental health is extremely beneficial to patients. One group in particular are pituitary tumor patients, as a pituitary tumor has an enormous impact on both physical and mental health.

AT THE CENTER OF A COMPLEX SYSTEM

The pituitary gland is called the “master gland” because it controls the secretions of hormones that have dramatic effects on metabolism, growth and maturation, sexuality and reproduction, and other important bodily functions (Kelly & Cohan, 2004).

Symptoms of pituitary disease may appear months or years prior to proper diagnosis and may cause patients to seek primary care or mental health treatment first due to the feelings of depression and fatigue. This is not to say that patients cannot also develop clinical depression as a result of any disease, but not everything that looks like depression is, in fact, depression (Weitzner, 2004). Prevalence rates for benign pituitary tumors (adenomas) in the general population were found in one meta-analytic study to be approximately 17 percent (Ezzat et. al, 2004). Non-cancerous tumors may even be as high as 25 percent since benign tumors are much more prevalent (Khandwala, H., McCutcheon, I., & Friend, K., 2004).

Thankfully, most pituitary tumors are benign, but may still cause serious life-disrupting symptoms. Emotional, relationship and psychiatric symptoms, in addition to those physical, often accompany hormonal disturbances. These symptoms can range from uncomfortable to life threatening. Family therapists, social workers, case managers, physical therapists, alternative medicine practitioners and others can learn to work more closely with primary care physicians and those specializing in endocrinology, cardiology, neurosurgery and more in the management and treatment of pituitary patients and their families.

Unfortunately, some physicians may be insensitive to the emotional impact of pituitary tumors. Patients may have difficulty finding properly trained, experienced doctors and it is not uncommon for patients who have a diagnosed endocrine condition to be dismissed as “it is all in your head… or it is just incidental.”

Pituitary patients may recognize the first signals of something being wrong with their system and/or body when they find their sexual health and/or mental health deteriorating. For example, Cushing’s disease is a complex endocrine condition that results from abnormally high levels of cortisol. This is characterized by such symptoms as truncal (central body) obesity, diabetes, hypertension, muscle weakness, and emotional lability. Major depression is noted as a prominent feature as well. Since women are affected five times more often than men, and are often misdiagnosed as obese or depressed (Stewart, D., 2004) they may first find themselves in a therapist’s office searching for help. Dr. Cushing acknowledged that “psychic traumas” may play an important role in the pathogenesis of pituitary disease (Cushing, 1913).

Acromegaly is another serious and often undiagnosed and unrecognized condition that may be characterized psychologically with changes in personality and increased irritability, anxiety and agitation. An increase in anger, with outbursts at the slightest provocation is possible. Acromegaly is a chronic and debilitating condition that usually results from a growth hormone (GH)-secreting pituitary tumor (Furman & Ezzat, 1998). Unfortunately, such symptoms may go improperly diagnosed unless observed by a professional like an endocrinologist with a specialization these disorders.

Families operate as a unit, one that strives to maintain its stability. When a family member begins to demonstrate behavior outside of the usual and familiar, as with a hormonal disorder, this disturbs the status quo and is a threat to the whole family, not just the patient with the illness. Whether it is the onset of sudden and angry outbursts, loss of sexual interest, withdrawal and isolation, or memory or mood changes, these all affect the family as well as the patient. Nichols (2005) uses the analogy of a home heating/cooling system to understand how families attempt to deal with such changes in a member. When the thermostat drops below a certain point, the thermostat triggers the furnace to heat the house back to the pre-arranged temperature. It is this self-correcting feedback loop that is the system’s response to change and restore its previous state. With small changes or stressors most families can adjust with ease, like the thermostat, and bring things back to their original stability. When the temperature drops too far, like discovering a pituitary adenoma in a family member, getting back to the comfortable state may be quite difficult.

Mental health professionals are needed as essential members of a well-formed treatment team. Increasingly, the more traditional medical field is also recognizing the need for treatment approaches that incorporate the mental health needs of patients as well as their physical care. Research on families and health suggests that marriage and fam-
ily therapists have an important, but unmet, role in the treatment of physical illness (Campbell, 2002). Medical family therapy, or family systems medicine (Block, 1984) provides us in the mental health field with skills to work within, and with the medical field (McDaniel et al., 1992). And, there is a growing need for mental health professionals to become more educated, aware, sensitive, and trained in preliminary identification of potential neurophysiological and physiological disorders (Rio, 2005).

Learn more about the Pituitary Network Association online: www.pituitary.org.

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Linda Rio serves as director of education for the Pituitary Network Association, www.pituitary.org, and also is a marriage and family therapist in practice at New Beginnings Counseling Center, Camarillo, Calif. Contact: linda@pituitary.org

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Patient Self-Testing: A New Standard of Care for Patients on Warfarin

By Gary Liska, BS and Laura Spear

Exciting new research shows how management of patients taking Coumadin® (warfarin) can be improved and can also result in decreased risk of patient bleeding or blood clots. Coumadin, or warfarin, is often prescribed to prevent stroke, a secondary stroke, or a heart attack. Stroke remains the number-one cause of adult disability. Managing the medication level of warfarin can be an ongoing challenge as many factors influence its effectiveness. Due to continual changes in a patient’s diet, other medications and general health, successful management one month is not assurance of success the following month.

Warfarin is an anticoagulant used to prevent blood clots from forming or growing larger in your blood and blood vessels. Too much warfarin increases patient bleeding risk while too little warfarin increases the risk of blood clot development in patients predisposed to blood clot development. Warfarin has been used for over 60 years by physicians in patients with medical conditions such as atrial fibrillation, mechanical heart valve placement, deep vein thrombosis, pulmonary embolus, previous heart attack or stroke. The drug is available in a generic form for only $10 for a three-month supply or about 11 cents a day at major retail drug store chains. Managing the drug requires a team effort and good communication between the patient, their physician, nurse and other healthcare professionals. Case managers are in a unique role to facilitate those communications and influence the quality of care for patients on warfarin.

THE CRITICAL INR TEST

To ensure correct dosing and avoid any adverse drug reactions, it is important to test or monitor blood regularly. The test is called a protime test, or a “PT” test. The test results are expressed as a number called an INR (International Normalized Ratio) result. The INR is an important indicator whether the patient is taking the correct amount of medication. Patients are given a target range to help reduce the risk of side effects and increase the protection warfarin can provide. Fluctuations in test results are common due to dietary vitamin K intake, changes in overall health and interactions with other medications. The goal of therapy is not to be perfect but to remain as close to the prescribed target range as possible. The further a patient is from their target range, the greater their risk of a bleeding event or stroke.

TESTING FREQUENCY

Historically, tests have been performed monthly as it was impractical for patients to travel to laboratories to test more frequently. Testing frequencies have not changed since FDA (Food and Drug Administration) approval of the drug in the 1950s following Dwight D. Eisenhower’s heart attack. For 60 years, the average testing frequency for warfarin patients has remained as it began, at monthly testing, landing warfarin in high-risk drug category every year since its commercial availability. As a result, today warfarin still remains a leading cause of emergency room visits.

However, there is good news for patients on warfarin and their healthcare professionals. Since benefit/risk of the drug is based purely on how well warfarin can be controlled, a study was conducted looking at the relationship of testing frequency and patient safety, called the Self-Testing Analysis Based on Long-Term Experience (STABLE) study.

WEEKLY TESTING INCREASES INR TIME IN TARGET RANGE

The STABLE study, the largest study ever conducted, evaluated whether increasing the blood test frequency of patients taking warfarin would result in greater patient safety and better control of the drug. The study findings, presented at the American College of Cardiology in March 2012, evaluated 29,450 patients who tested their INR at home for two-and-a-half years. The study found that patients who tested weekly at home were in their target range far more often than patients testing less often and at a variable testing frequency. In fact, when it came to reducing blood tests to critical values (a test result that increased the patient risk of bleeding or blood clot development...
by three-and-a-half times normal), weekly self-testers were 47 percent less likely to have these extreme values.

The STABLE study also analyzed if patient self-testing at home is realistic for the elderly who are commonly not prescribed warfarin due to concerns over compliance. These patients could benefit the most from the use of anticoagulants in stroke prevention. Professionals have expressed concern and doubt whether patients are able to perform their own tests and can be reliable in doing so. The STABLE study discounts perceptions that the elderly cannot take warfarin safely or successfully self test as shown in Figure 2.

Advanced age was not found to be a barrier to using warfarin nor to a patient’s ability to self test. In typical care settings (usual care), time in target range is often between 50-55 percent. The higher time in range for weekly testing frequency suggests that patients get into a comfortable rhythm testing weekly and their efforts are rewarded with an increase in control of their medication by more than 5 percent over patients who test their INR at different times throughout the month.

The final goal of the STABLE study was to evaluate whether patients could maintain a higher level of safety on warfarin by testing more often and on a structured regimen than traditional testing. Figure 3 illustrates that a high level of warfarin control was sustainable after patients’ initial training.

It is uncommon for a chronic, asymptomatic relief drug to become better controlled over time as adherence and other variables usually have a negative impact. STABLE demonstrated that weekly testers remained highly compliant to taking their medication and testing.

**HOW DOES ONE BECOME A SELF-TESTER?**

Home testing or patient self-testing (PST) requires a prescription and the support of a patient’s physician. The prescription includes the brand of the home testing monitor, the testing frequency and instructions on how the clinician would like to receive the home test results.

PST is a service of special companies called Independent Diagnostic Testing Facilities (IDTF), and Alere™ Home Monitoring is the nation’s leading provider of anticoagulation services. The IDTF receives the prescription, provides insurance adjudication for each patient, arranges for a face-to-face training of the patient, often in their home, and integrates the test results from patient home to the physician’s practice.

PST is a covered benefit from Medicare and most private insurance resulting in very little or no out-of-pocket expense to the patient and no cost to the treating clinician. PST provides both the patient and the healthcare professional better INR visibility and control, which results in improved patient safety.

Well managed warfarin utilizing PST represents an efficacy and safety profile comparable to or better than new warfarin replacement drugs. “If you are effective at managing warfarin, the benefits of the new drugs are not so great,” according to STABLE’s principal investigator Dr. Jack Ansell.

Although PST has been around for a number of years, many patients and healthcare professionals still do not know it is available or that it is reimbursed by Medicare for up to 52 tests a year. Case managers can help spread the news and influence the future of optimal anticoagulation therapy. It only takes a few minutes for patients to do the test and, that few minutes a week can significantly change the lives of warfarin patients with real-time, accurate home test results.

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Gary B. Liska, B.S., is the director of global clinical education and development for Alere Anticoagulation Solutions. Gary has 22 years of experience in oral anticoagulation market development and risk management. Contact: gary.liska@alere.com

Laura Spear is marketing manager for Alere Home Monitoring and is involved in creating patient and provider education materials focused on healthy living on warfarin. Contact: laurel.fuqua@alere.com
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- Schedule patients in need of office visits for follow-up care and observation. For example, the SOC for patients with heart failure is two office visits per year or more if warranted.
- Track and monitor referrals to physicians.
- Eliminate redundancy of services by avoiding duplication of diagnostic tests, exams, etc.
- Refer to care management program, as prescribed by the physician or as identified by data outcome monitors.
- Alert the physician of outcomes performance, especially when in need of additional intervention.
- Leverage data and resources to get optimal outcomes.

Benefits from local people taking care of local people include:

- In general, regardless of the configuration of human and information infrastructure:
  - Optimal patient and population health and financial outcomes are apparent.
  - Reduced loss is evident through the management of avoidable readmissions, avoidable ER use, and increased efficiency through the prevention of duplicate services.

- Providers of health management services should provide case/care, maternity, disease management and/or lifestyle coaching for their patient population, as well as services to employers and other payers by encouraging a whole person approach and offering outcomes monitoring and management. In addition to the above, healthcare transformation is bringing payment for outcomes which creates:
  - A revenue source to support achieving business and healthcare goals.
  - Loyalty from the community.
  - As a provider, satisfaction in being recognized as a high-performing physician by ensuring patient outcomes are being monitored and managed for their patient populations served (Medicare, Medicaid, commercial, charity care, and general population), and for reimbursement alignment.

FINAL THOUGHTS

Much like the proverb “It takes a village to raise a child,” if we have learned anything in the past decade, it takes a village to achieve optimal population health and financial outcomes. However, in healthcare it takes a coordinated village to attain desired outcomes. Communities are coming together through universal data connection of all stakeholders for both the human and data infrastructure involved in population health and productivity management.

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Robin Foust, PAHM, is an award-winning health scientist and architect in the field of population health management. Contact: rfoust@mymaycoast.com  

Michelle Layton, BSN, MBA, has extensive experience in healthcare, working in the areas of health IT, managed care and medical homes, among others.

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“Listen Up, Turn It Down” campaign. Quota collaborations with the American Association of Audiology and the National Institute on Deafness and Other Communication Disorders afforded a series of pamphlets, flyers, posters, worksheets, promotional items, and PowerPoint presentations for ages four to seven, eight to 11, and adult/teen that clubs and members may use to disseminate information about noise and NIHL.

Clubs also can assist teachers and home-schoolers in acquiring lesson plans on NIHL, suitable for science curricula in grades seven and eight.

CHANGING LIVES SINCE 1919

“Listen Up, Turn It Down” is part of Quota International’s longstanding commitment to hearing health. Founded in 1919 in Buffalo, N.Y., as the first international service organization for women, Quota International adopted speech and hearing as a service focus more than 60 years ago. Today, Quota clubs in 12 countries assist people with needs related to hearing and other forms of poverty.

For more information, visit Quota’s website at www.quota.org.

Mary Margaret Keaton has written about Quota International for over a decade. The former Quota communications director in Washington, D.C., she continues to cover inspirational Quota stories from her home near Charlotte, N.C. Contact: mmkyodzis@yahoo.com

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Dr. Kevin Ross Emery’s books, Managing the Gift of your ADD/HD Child and Managing the Gift: Alternative Approaches to Attention Deficit Disorder are built upon more than 14 years of experience working with individuals of all ages living with attention deficit disorder – and a lifetime of personal experience dealing with it himself. Web: www.KevinRossEmery.com

Donna Bass graduated from the University of New England in 2010 with a degree in Behavioral Neuroscience and is currently pursuing her PhD in Psychology at the Institute of Transpersonal Psychology.
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