Focus on Repair of the second second



New tools for improved management of osteoarthritis

• Jeffry Beer, M.D.

steoarthritis (OA) results in irreversible cartilage loss in patients of all ages. A diagnosis of OA often sets the stage for many years of pain, stiffness, inactivity and immobility.

Traditionally, this progressive deterioration required joint replacement surgery; however, an integrated program of innovative treatment and pain management can slow or prevent disease progression, relieve joint pain and stiffness, and alleviate the need for surgery.

Complexities of OA require innovative management

An individual with OA is best served by a comprehensive outpatient program that provides careful evaluation and diagnosis as well as treatment to meet unique patient needs, such as that offered at Kessler Institute for Rehabilitation.

Establishing a clear-cut diagnosis may be difficult: Pain may occur at a site unrelated to OA damage. For example, a patient with arthritis of the hip may present with only knee pain. Other conditions—such as lumbosacral nerve root irritation—may mimic arthritis.

Adding to the challenges of diagnosis and treatment, early-stage OA may represent a dynamic condition in which the body may actually repair damaged cartilage. Perhaps for this reason, some patients do not report increasing levels of pain and, over time, may even improve without treatment, experiencing only occasional flare-ups.



2 Editor's Letter

Will there be too many—or too few physiatrists in the future? **Bruce M. Gans, M.D.**, reviews new research that will provide insight and suggest strategies to meet the needs of physiatrists and their patients.

3 New technology helps patients with dysphagia Uri S. Adler, M.D., and Susan

Laskoski, M.A., CCC/SLP, report on an important electrical stimulation treatment that helps to restore patients' ability to swallow.

4 Reflections on residencies

Five doctors specializing in physical medicine and rehabilitation reflect on the valuable lessons they learned as residents.

5 When is low tech better than high tech?

Do some complicated, high-tech devices hinder rather than help recovery? Yes, says **Thomas E**. **Lammertse, M.D.**, who emphasizes the importance of matching devices to patients' lifestyles and abilities.

6 Public Policy View: Fighting unfair denials

To secure payment and avoid appeals against medical necessity denials, ensure your documentation is flaw-less, says **Bruce M. Gans, M.D**.

8 Clinical Issues: Electrodiagnostics

Jeffrey Cole, M.D., explains why electromyography has taken on a more substantive role in physical rehabilitation and research. Focus on **Rehabilitation**

EDITOR-IN-CHIEF

Bruce M. Gans, M.D. Chief Medical Officer Kessler Institute for Rehabilitation

MANAGING EDITOR

Gail Mallor Solomon Director, Corporate Communications Kessler Institute for Rehabilitation

EDITORIAL ADVISORY BOARD

Steven Kirshblum, M.D. Medical Director and Director of Spinal Cord Injury Service Kessler Institute for Rehabilitation

Bruce A. Pomeranz, M.D. Medical Director Kessler Institute for Rehabilitation

MISSION STATEMENT

Focus on Rehabilitation is published quarterly as a service to the medical community by Kessler Institute for Rehabilitation to bring current issues and advances to the attention of physicians and other clinical specialists.



a Select Medical company VOLUME 5 • ISSUE 2

Contents of this newsletter may not be reproduced without the express written consent of Kessler Institute for Rehabilitation.



The physiatrist workforce: glut or shortage?

• Bruce M. Gans, M.D.



his issue of *Focus on Rehabilitation* features comments from young physicians with whom I had the privilege of interacting during their residencies at the University of Medicine & Dentistry of New Jersey–New Jersey Medical School. As they go off to fellowships or first jobs, I am grateful that our field attracts such outstanding physicians.

They are launching their careers as the question of physician supply and demand takes on new urgency. Since the mid-1990s, experts in physical medicine have predicted a continuing shortage of physiatrists, saying that not enough of us will be available to care for aging baby boomers.

A decade ago, that prediction ran counter to prevailing wisdom, which held that the country would soon be awash in too many physicians. Now, however, even former "glut" proponents agree that the U.S. is not producing enough physicians—and the Association of American Medical Colleges (AAMC) has called for expanding medical school enrollment by 30 percent over the next 10 years.

The AAMC is also spearheading a comprehensive effort to assess physician workforce needs. I have been asked to contribute to that endeavor on behalf of the American Academy of Physical Medicine and Rehabilitation (AAPM&R).

This will be the third time our field has engaged in such an exercise in just over 10 years. The first assessment—a collaboration among the AAPM&R, the American Board of Physical Medicine and Rehabilitation, the Association of Academic Physiatrists and the American Physiatric Education Council—took place in 1995, with a 1999 update.

Estimating future workforce needs is both an art and a science—and any estimate is only as good as the assumptions upon which it is based. A dedicated effort must take into account not only expert opinion, but also trends related to population growth and aging, predicted incidence rates for a host of medical conditions and prognoses related to both future health care delivery systems and technological resources.

At stake is our ability to accurately gauge the type of practice opportunities that will be available to the next generation of physiatrists, as well as the direction of future advocacy and public policy efforts.

If this assessment continues to point to a looming shortage, we will have several decisions to make. What incentives will encourage more medical students to choose physical medicine and rehabilitation, and how should the physiatrists now in training be deployed? What substitute labor strategies might we need, and how should we tailor advocacy efforts to make the most of scarce personnel?

Conversely, if our evaluation points to an imminent glut, which I do not think is likely, we will then need to focus our efforts on helping physiatrists weather a shrinking job market.

Regardless of the outcome, the whole field needs to be engaged in this exercise—and to be prepared to act on the forecast that is produced. Physiatrists will not accept the validity of such an assessment unless we use the most sophisticated methodology. And neither policy-makers nor the public will be persuaded by our advocacy efforts unless those efforts are backed up by what we legitimately see in that complex crystal ball.

New technology helps patients with dysphagia and improves stroke recovery

• Uri S. Adler, M.D., and Susan Laskoski, M.A., CCC/SLP

he act of swallowing seems simple, but it requires a complicated and perfectly timed set of muscle actions. In more than two-thirds of all stroke patients, however, the ability to coordinate this action is impaired. Dysphasia can limit recovery from stroke and impact the rehabilitation therapy. It can lead to malnutrition and dehydration, placing a patient at risk for aspiration

and aspiration pneumonia. Additionally, individuals who require tube feeding are deprived of the sensory pleasures associated with eating and drinking, often leading to severe depression.

Electrical stimulation: A valuable tool

Electrical stimulation, made possible by VitalStim[®] technology, offers individuals with refractory and/or chronic dysphagia an effective, safe and long-lasting

treatment. Appropriate for use in the inpatient and outpatient settings, this tool improves outcomes for many patients at Kessler's Center for Stroke Rehabilitation.

The only neuromuscular electrical stimulation system approved by the Food and Drug Administration (FDA) to treat dysphagia, this device includes specially designed electrodes placed on the patient's neck that deliver a calibrated current to the muscles and causes them to contract. This, in turn, facilitates swallowing and helps tone and retrain the muscles. Additionally, electrical stimulation helps to reeducate the brain to control swallowing. Treatment candidates must be cognitively able to follow their plan. Caution must be used in those with cardiac pacemakers.

The medical literature supports the use of this important technology: In data submitted to the FDA, 98.4 percent of 892 patients with dysphagia improved their swallow function score after treatment. Of patients with severe dysphagia, 97.5



VitalStim[®] uses an electrical current to tone swallowing muscles, improving function in patients who have severe dysphagia.

percent improved sufficiently to discontinue dependency on a PEG feeding tube, and 38.3 percent regained normal swallow function. At a threeyear follow-up, only three percent reported aspiration, and more than 76 percent retained their ability to swallow safely. Similarly, in a study of 110 patients with dysphagia, 62 of the 63 individuals treated with electrical stimulation showed improvement in swallowing.

Part of a comprehensive treatment plan

At Kessler, individuals with dysphagia receive a thorough clinical evaluation and videofluoroscopic swallow study, which help the clinician tailor a plan of care. Vital-Stim treatment is administered daily in one-hour sessions over one to several weeks, depending on individual needs and progress. It is generally well tolerated. Patients describe the initial sensation as a vibration. When the current is increased, the patient experiences a feeling of warmth, then of pressure over the throat. Soreness

or irritation at the electrode site is the only reported adverse effect.

Treatment may also include oral and pharyngeal muscle exercises, thermal stimulation and other interventions to enhance recovery.

Improved outcomes for patients

Therapists and physicians at Kessler note that patients progress faster and further with electrical stimulation than with traditional therapy alone. In some patients for whom other therapies and

treatments have failed, use of electrical stimulation has succeeded to such a degree that feeding tubes are removed.

Impaired swallowing function increases the challenges of stroke recovery. Specialized electrical stimulation offers many patients a highly effective treatment option.

Uri S. Adler, M.D., is director of stroke rehabilitation at Kessler Institute for Rehabilitation. He can be reached at uadler@kessler-rehab.com. Susan Laskoski, M.A., CCC/SLP, is clinical manager of speech therapy at Kessler Institute for Rehabilitation. She can be reached at slaskoski@kessler-rehab.com.



Reflections on residencies in physical medicine and rehabilitation

Practical experiences in real-world medicine shape future goals

hat key lessons do young doctors learn during their residencies? How will they apply these experiences to their new careers?

Focus on Rehabilitation asked five residents to share their thoughts. These promising individuals were among more than 30 residents whose Kessler rotation is a part of the physical medicine and rehabilitation program at the University of Medicine & Dentistry of New Jersey (UMDNJ)-New Jersey Medical School. They have recently finished their training or are now in their fourth year of the program.

Among these residents, common threads emerged. All noted that their residencies had helped them to recognize the importance of: providing compassionate service to their patients; understanding the need to treat the whole person, not just the diagnosis; communicating effectively with both patients and family members; and dealing with the economic realities of modern-day health care. They all credited the attending physicians who served as their mentors and role models for helping them become better clinicians.

KELLY M. HEA TH. M.D., fourth-



year resident:

I learned that. to be effective in physical medicine rehabilitaand tion, I need to focus on the patient as а

whole person, not just on the medical diagnosis. This was an important revelation; in medical school, our studies focused on only one problem or organ system at a time versus a holistic approach.

We also must educate other physicians about our specialty and demonstrate what we have to offer, particularly in relation to today's aging population. Our fellow physicians comprise our referral base and access point to the patients who need our services. We need to establish good relationships with them.

CHARLES J. BUTT ACI, D.O., enter-



ing private practice in York, PA: I learned the

importance of making the time to listen to every patient and give individual each

my full attention. Only with that level of dedicated focus can I establish a rapport with patients and their families, understand family dynamics and gain their trust-as well as obtain the comprehensive information I need to make good clinical decisions.

This concentration and focus has helped me at home, too. There, I give my family my complete attention, just as I give my patients 100 percent. That way, I know I have done my best for my family and my patients.

AKSHAT SHAH. M.D.. beginning



a spinal cord injury fellowship at Kessler Institute for Rehabilitation:

Residency has taught me that physicians have the

power to really help people in more than a clinical sense. If we provide just a touch or a reassuring nod, we can put patients much more at ease. Just a few words from us can prevent many hours of worry on the part of patients or their families.

I have also learned that the art of practicing good medicine demands balance: You have to be both objective and caring. The ability to fulfill both criteria requires considerable skill.

Modern medicine emphasizes objectivity. To cope with the stress of seeing people suffer, you have to remain objective in order to do your job well. If you lose that objectivity, you will make poor medical judgements.

If you go to the opposite extreme and lose the humanistic side of medicine, you will not be able to connect effectively with your patients-and, as a result, you will not be able to help them.

GARY P . CHIMES, M.D., P h.D..



beginning a fellowship in sports and spine rehabilitation at Rehabilitation Institute of Chicago:

The greatest advantage of our

residency program was being able to train in so many settings, including Kessler, the Veterans Administration in East Orange [N.J.] and at the UMDNJ-University Hospital. We were exposed to so many skilled clinicians and various approaches to helping patients.

I learned that the goal of rehabilitation is to try to help people function as well as they can within their limitations. In that respect,



When is low tech better than high tech?

* Thomas E. Lammertse, M.D.

rehabilitation differs very little from any learning process, including the residency experience. In both settings, you accept certain restrictions regarding what you can accomplish and work within those limits.

It is important that we clearly delineate and articulate the patient's goals and determine what barriers exist to prevent achieving them. Once we do that, we can work with patients to eliminate obstacles or develop strategies to overcome them.

CRISTIN McKENNA, M.D., P h.D.,



fourth-year resident:

I have become more aware of the financial influences in today's health care. Money often makes a difference

in the care a patient receives. Despite the best efforts of therapists and doctors, medical decisions are sometimes driven by economics. Frequently, you have to strike a compromise between what is medically necessary, what an insurer will cover and what a patient's personal resources can bear.

Those facts were alluded to in medical school, but I did not realize the extent of their meaning until I was a resident. I have seen attending physicians spend a lot of time calling medical directors, working through the insurance appeals process and collaborating with case managers to secure the best care for their patients. Even though patients may not be aware of this, physicians often have to (and do) fight for them behind the scenes. I believe I now have the insight and skills I need to be a strong patient advocate in the future. n the world of hightech wheelchairs, hydraulic prostheses and complex orthotic devices, what may work perfectly for one patient may be too complex, cumbersome or technologically challenging for another. The rehabilitation team plays a key role in matching the most appropriate equipment to each individual—a process that requires experience, knowledge, understanding and sometimes a little "trial and error."

The patient's health status, individual strengths, abilities and endurance level must first be assessed. These factors will help determine, for example, whether a manual or power-assist wheelchair will meet the patient's needs. Similarly, some above-knee amputees may find that a lighter-weight prosthesis may be easier to put on and remove and may provide increased independence.

The patient's activity level and lifestyle enter the equation. Active amputees may appreciate high-end hydraulic knee components and lightweight carbon prosthetic feet. These features may be unnecessary or unsuitable for less active or elderly persons.

Patients' abilities and technological savvy differ widely, and a device's relative complexity or simplicity should be considered. A complicated system is not always superior to a basic piece of equipment, especially if the simpler device will meet a patient's needs.

Fitting the device to the patient's needs

Clinicians need to educate patients concerning the many available options.

The rehabilitation team, which at Kessler Institute includes the physician, therapists, technology specialists and the patient, works together to select the best possible device. Before any device is presented, it is assessed in terms of its safety, complexity, ease of use and effectiveness for the specific patient.

A patient will often hear about a particular device and feel it would suit him or her well. However, the physician may know that such equipment is not appropriate for medical, safety or other reasons. While the physician can share clinical data, as well as the experiences of other users, the patient may benefit from actual trial of the device. A trial period can last from two sessions to several weeks, depending on the patient's schedule and the type of equipment. During this time, feedback is exchanged, modifications are made and a decision can be reached.

Follow up is critical to the success of this process. At Kessler, after patients receive their equipment, they continue to report back on their experiences, any difficulties they encounter or lifestyle changes. This allows for adjustments to be made, reevaluations conducted and new equipment introduced.

Rehabilitation technology can offer individuals with disabilities greater independence and a more active lifestyle. The key is to ensure that the technology meets the patient's needs and abilities.

Thomas E. Lammertse, M.D., is director of medical quality management at Kessler Institute for Rehabilitation. He can be reached at tlammertse@kesslerrehab.com.

Pushing back on medical necessity denials

* Bruce M. Gans, M.D.

ast year, the Centers for Medicare and Medicaid Services (CMS) revamped its process for appealing inpatient (Part A) medical necessity denials. The process, which now consists of five appeal levels, claims to offer a more streamlined time frame for deciding an appeal.

The new appeals process will likely become familiar to those of us in physical medicine and rehabilitation. Why? Many of CMS' fiscal intermediaries have embarked on an aggressive campaign to push medical necessity denials as a way to cut Medicare expenditures.

Payment denials: A worsening problem

Many Medicare contractors have issued highly restrictive local coverage determinations (LCDs), based on their own skewed interpretation of medical necessity standards and the field of medical rehabilitation. This has led increasingly to denial of inpatient hospital stay claims on the basis of medical necessity—and it constitutes a growing threat to our patients' coverage and access to appropriate inpatient rehabilitation.

Some payment denials are issued as stall tactics just to see if a provider might take "no" for an answer. Claims may be denied without any review, simply to slow payment and discourage appeals.

During the denial process, some fiscal intermediaries still rely on the well-worn and dangerous managedcare stratagem: Having lower-level professionals—or even M.D.'s who have no expertise in physical medicine and rehabilitation make medical necessity determinations. Or denials may be based on rules of thumb or guidelines promulgated by contractors themselves, rather than on patient need, despite Medicare rules to the contrary.

Increasingly, retroactive payment denials are being based on LCDs that go well beyond appropriate interpretation of Medicare regulations. In one recent case at a rehabilitation facility, the charts of 40 patients were reportedly reviewed and the contractor denied payment for 39 of those cases.

Strategies to prevent medical necessity denials

What can we do? The best way to deal with medical necessity denials is to avoid them by making good clinical decisions and scrupulously docu-

We must commit to appeal each and ever y medical necessity denial.

•••••

menting our admitting decision-making process. Our documentation must demonstrate our clinical judgment that each admission satisfies the CMS' medical necessity criteria—and that a rehabilitation facility, not a less intensive setting, is the appropriate place to treat the patient.

We need to be familiar with Medicare's medical necessity language, which is contained in Section 110 of the CMS' online Hospital Benefit Policy Manual: Fiscal intermediaries are allowed only to interpret Section 110 criteria, not modify or expand them. We need to understand medical necessity language and take steps to ensure that it is accurately applied to all our admissions.

But what do we do if, despite rigorous decision making and documentation, we experience increasing medical necessity denials? We make an organizational commitment to appeal each and every one of them.

Under the CMS' old appeal mechanism, providers who persevered through the appeals process saw denials reversed an astonishing 99 percent of the time. The present system is still too new to assess success rates—but we have every reason to believe they should be favorable.

As individual hospitals and facilities, as well as local and national medical societies and organizations, we need to look beyond fighting back on only specific claims and use the appeals process to challenge the LCDs themselves. If intermediaries lose appeals related to LCDs, they may realize it is not worth their financial while to issue them.

And if we do not mount such challenges, fiscal intermediaries will continue to act inappropriately. They will be emboldened to expand their mandated role even further, modifying medical necessity criteria and chipping away at both our reimbursement and our patients' access.

At the same time, we need to enlist another party in this fight: our patients. Even though it is our fiscal integrity that is at stake, it is really our patients' right to appropriate care that is being denied.

Along with our sustained commitment to appeal all inappropriate denials, patients need to focus their anger and advocacy efforts on their insurers before those benefits are further eroded. By pushing back on unfair denials, we are safeguarding not only what is due to us professionally but what we owe our patients in terms of care.

Bruce M. Gans, M.D., is chief medical officer of Kessler Institute for Rehabilitation. Readers may reach him by e-mail at bgans@kessler-rehab.com.

New tools for improved management of osteoarthritis

continued from page 1

Physical therapy and so much more

At rehabilitation hospitals such as Kessler, patients receive a detailed course of treatment to best manage this condition. While physical therapy remains a cornerstone of OA management, the comprehensive program provides many interventions.

Orthotic devices, such as shoe inserts, eliminate physical alignment problems that may worsen OA.

A variety of medications provide pain relief, among them acetaminophen, nonsteroidal anti-inflammatory drugs, tramadol or more potent opioids.

Overweight individuals receive counseling regarding diet and nutrition and the role of excess weight in OA symptoms.

Patient education is key as are exercise programs, including tai chi, to help improve flexibility and strength. Kessler recently collaborated with the New Jersey chapter of the Arthritis Foundation to make these special programs available

both to Kessler patients and to the general public.

Acupuncture is often helpful in alleviating OA symptoms. Recent research has shown that this treatment can help reduce pain and restore mobility for patients with arthritis of the knee. Although not yet studied extensively in the management of OA in other joints, it is likely to be helpful.

New treatment to ease the pain of damaged joints

Hyaluronic acid (HA) represents a new treatment option to enhance joint function and relieve pain. Injections of HA improve the quality of joint fluid, providing more efficient lubrication and better shock absorption within the joint. Currently approved to treat OA of the knee, the effectiveness of HA in other joints is being investigated. Better



For many arthritis patients, hyaluronic acid injections lead to significant pain reduction and improved mobility.

> tolerated than steroid injections, HA also avoids the systemic effects of those agents.

> Research indicates that use of HA may retard progressive OA and inhibit production of chemicals that are tied to the inflammatory response and cartilage loss. Additionally, HA may decrease the sensitivity of nerves within the affected joint and thus contribute to pain relief.

> Improvement is usually temporary; repeated courses of injections may be performed at intervals of six months or longer.

Minor side effects, such as injection site soreness, are rare and usually self-limited. No long-term adverse effects have been seen with HA use. Contraindications include the presence of local or systemic infections, skin lesions at the injection site or an allergy to avian or hyaluronan products. Synthetic

> HA preparations may be used in patients with avian allergies.

High-tech advances in administration of HA

In the treatment of OA, hyaluronic acid is given in a series of three to five weekly injections. Fluoroscopy may be a helpful tool to visualize and pinpoint delivery into the joint. In fact, researchers at Kessler are designing a study that will evaluate how to most effectively use this imaging method to improve medication delivery.

For many patients, the use of HA injections has meant significant pain reduction and greater mobility. Some patients have been able to resume activities previously curtailed because of OA.

By combining both traditional and innovative approaches for treating the symptoms of OA, a comprehensive program of care provides effective nonsurgical options to help patients overcome the debilitating effects of this condition and reserves surgery for those patients for whom conservative treatment has failed.

Jeffry Beer, M.D., is a staff physiatrist specializing in spine, sports and musculoskeletal medicine at Kessler Institute for Rehabilitation. He can be reached at jbeer@kessler-rehab.com.



Electrodiagnostics: A growing role in medical rehabilitation and research

* Jeffrey Cole, M.D.

Rectromyography (EMG) is a valuable technology for pinpointing injury and pathology of peripheral nerve or muscle. In the rehabilitation setting, electromyography is useful for determining why a patient has pain, weakness or sensory changes. And for researchers in physical medicine and rehabilitation, EMG represents a powerful tool for understanding the musculoskeletal system. When administered by a qualified practitioner, EMG provides data that would otherwise be unattainable.

EMG as diagnostic tool

Physiatrists use EMG as an extension of the clinical examination to confirm a diagnosis. Common conditions that require EMG include nerve entrapment syndromes and spinal column pain. The technology measures the specific activity response of a muscle or nerve to electrical stimulation.

There are several responses that can be consistent with denervation or injury. In fact, hundreds of diagnoses can be established through EMG. These include extremely rare conditions, such as McArdle's disease, in which there is an abnormal accumulation of glycogen in the muscle tissue due to a deficiency of myophosphorylase B. Interestingly, EMG established a diagnosis of McArdle's disease in two patients out of almost 20,000 studies performed at Kessler Institute for Rehabilitation. Because of complexities of diagnosis, experience with EMG is essential to enable clinicians to recognize these more unusual conditions.

Applying EMG to research

In addition to diagnostics, EMG can be utilized in the research setting. Investigators at Kessler rely on EMG technology to better understand pathologies such as radiculopathy, peripheral neuropathy, myopathy, neuromyopathy and nerve entrapment, and to study spinal cord and brain conduction.

An important application of EMG research is the study of ergonomics for assistive devices. Researchers can determine, for example, which shoulder muscles fire and then correlate these effects with force or range of motion analyses. Currently, researchers at Kessler are investigating the cause and nature of shoulder injuries in tetraplegia, as well as other potential motion problems. EMG technology is also being used to study ways to prevent repetitive motion injuries in the workplace.

A need for user expertise

Subtleties and differences in the machine itself also require technical knowledge on the part of the user. Today's EMG equipment varies in quality and specifications, ranging in cost from about \$9,000 to more than \$40,000. Overall, the new digital machines are more user-friendly and accurate than older analog models, but they give the practitioner less control over signal and filtering adjustments. Even a good system with a powerful amplifier and preamplifier requires particular expertise to use it effectively.

Electrodiagnostic testing has a valuable role in clinical practice, as well as in research. But the knowledge to both perform and interpret EMG is critical to ensure the technology will produce accurate and useful data.

Jeffrey Cole, M.D., is director of electrodiagnostic services and musculoskeletal rehabilitation at Kessler Institute for Rehabilitation. He can be reached at jcole@kessler-rehab.com.





PRSRT STD U.S. POSTAGE PAID Lebanon Junction, KY PERMIT 19