there's no disputing the attractions of a large-volume academic hospital—diverse and commodious facilities, specialized staffing, cutting-edge research. But when it comes to a rehabilitation program for traumatic brain injury (TBI), a community rehabilitation hospital has key advantages as well for both patients and physicians.

While Kessler Institute for Rehabilitation in East Orange, N.J., is a large teaching hospital, Kessler-Welkind in Chester, N.J., is an example of a smaller, community-based facility that is able to devote staff energies exclusively to patient care.

At Kessler-Welkind, the TBI patient census ranges from 14 to 18, accounting for only a small percentage of the hospital’s 72 beds. The unit includes 10 dedicated beds and eight “swing” beds, which are made available to other patients if no TBI patients require them. The rest of the facility is dedicated to stroke, orthopedic/amputation and general rehabilitation patients. Carving out an environment for the TBI patient therefore entails sharing space and resources with other patients.

A two-level approach

The unit is divided into two distinct areas with separate rooms and access: special care and progressive care. Overall, the special care area is designed to provide a less stimulating environment and a more intensive level of medical care for patients with more severe or acute injury. Patients who have improved

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Whenever I ask myself “What is a doctor?” the idea that immediately springs to mind is the physician as a healer, counselor and expert who diagnoses and treats patients. Yet our role as physicians is so much more.

We are also people who orchestrate care for our patients and direct resources—in other words, we are managers. And sometimes we are leaders.

Being a manager is not the same as providing leadership. Leaders set an objective for the group, whereas managers perform the tasks to achieve that objective. Leaders define missions and articulate values, and managers fulfill them. A leader envisions things as they should be; a manager deals with things as they currently are.

I am not suggesting all physicians are leaders. Many of us lack the temperament or personal style to direct an organization, and therefore leave leadership to others. We need only look around us to see evidence of this. In most rehabilitation hospitals today, top administrative positions are not filled by individuals with medical backgrounds. Rarely, for instance, is the chief executive officer a physician.

What would it take for more physicians to assume leadership roles? A physician can begin acting as a leader by thinking as a leader, even within his or her own professional practice. For example, by managing a patient with COPD, you are acting as a manager. But by taking the initiative to create a program for pulmonary rehabilitation that can benefit many patients, you act as a leader.

Hospitals and medical schools offer physicians the opportunity to lead. If you choose to become a department head, director or chairman, you can establish a vision for what your department will accomplish. Helping physicians in other medical disciplines recognize, understand and appreciate what your program can do is another way to influence and lead. In so doing you are helping them exert their best influence on patient care within their own organization.

Physicians also can provide leadership by becoming involved in local, regional, national or international organizations. Advocating for governmental or quasi-governmental organizations or helping voluntary health organizations such as Easter Seals is yet another way.

Yet why bother, especially if treating patients is keeping you busy enough as it is? With your own personal actions and by using your own two hands, you are able to help a limited number of people at any given time. But by influencing an organization, a community or a government, you could have a much broader impact and produce beneficial changes for many more. Leading allows you to leverage your ability to do things that you think are important and that relate to your values. And in a very real way, you are truly making the world a better place for patients, for people in need and for yourself.
Proper foot care: a necessary part of rehabilitation

*Eric L. Kolodin, D.P.M.*

For the rehabilitation patient, painful foot problems can interrupt therapy or lead to serious complications.

Overgrown and mycotic toenails are a common finding among patients in the rehabilitation setting, especially in patients with diabetes and other peripheral vascular problems. They may cause discomfort when walking or undergoing therapy, but trimming or debridement of the toenails usually brings immediate relief. Topical or oral medication may also be used.

An infected ingrown toenail (paronychia) is also seen frequently in the rehabilitation setting, particularly among patients with spinal cord injury. Addressing this condition is especially important to spinal cord injury patients T6 or higher, since a simple paronychia can lead to autonomic dysreflexia. Treatment generally calls for removal of the nail border under local anesthesia, because oral antibiotics do not alleviate the underlying problem. If the difficulty persists, patients without circulatory conditions may require a phenol and alcohol procedure to destroy permanently the root of the nail (matrix).

Ulcerations are usually seen on the heels and metatarsal heads of the foot or the medial or lateral malleolar region of the ankle. While spinal cord injury patients are at high risk for developing ulcers to detect an underlying bone infection, and vascular studies can diagnose ischemia problems. Necrotic tissue may be removed at bedside with sharp debridement and the use of topical enzymes. Once a clean pink granular base has formed, silvadene, hydrogel or Regranex gel may be used. Avoiding pressure on the wound is also important. A Multi-Podus boot works well when it is fitted correctly. Boots and wound care dressings are also used to reduce pressure. As a general rule, patients with plantar ulcerations should avoid weight-bearing.

Corns and calluses are temporarily and painlessly removed with a scalpel blade. For stroke and other rehabilitation patients, properly fitted shoes, as well as custom-made orthotics (inner soles), may reduce the pressure causing the problem. Blisters are usually treated with a dry protective bandage. When there is a large amount of fluid inside the blister, the lesion may be incised and drained and treated with a topical antibiotic.

In stroke patients, spastic hammertoe deformity is a fairly common condition that makes walking painful and may interfere with therapy. This type of deformity also can lead to corns, ulcerations and infections. The patient is often fitted with a high toebox shoe to prevent friction, or a buttress may be placed under the base of the toes to straighten the digits. Botox injections can also be used to provide temporary relief. Surgery to reduce the contraction at the metatarsophalangeal joint is a last resort. Digital fusions may be performed with K-wires or internal screw fixation.

Managing these foot problems is crucial in the rehabilitation process, and for the diagnosis and treatment of potentially serious conditions, the podiatrist should be utilized as a valuable and important member of the interdisciplinary rehabilitation team.

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Focus on Rehabilitation asked Steven Kirshblum, M.D., associate medical director of Kessler’s West Orange facility and director of its spinal cord injury program, about the pros and cons of conducting drug trials in the clinical rehabilitation setting.

FOCUS: Why does an organization like Kessler participate in studies of new medications?
KIRSHBLUM: It’s exciting to be in the forefront of clinical research, and solid research is crucial for the advancement of the physical medicine and rehabilitation field. At Kessler, we are in an ideal setting to study new treatments for the spinal cord injury (SCI) population. We have a large cohort of both acute and chronic patients with SCI, and we can monitor not only the potential neurologic impact of a drug on them, but the functional effects as well.

FOCUS: Are there drawbacks to doing research in a rehab facility?
KIRSHBLUM: Challenges, I’d say. An infrastructure for research activity must be in place, and that entails dedicating staff, time and equipment. It also calls for the flexible use of our resources to meet both clinical and research needs effectively. And certainly, a commitment on the part of the hospital and the administration to conducting impartial research is necessary. We are fortunate to have that at Kessler.

FOCUS: How do you choose which research projects to participate in?
KIRSHBLUM: We get proposals from many drug companies and device manufacturers. We select those for which we have the personnel and resources, those most relevant to our patients’ needs and those that promise practical benefits sooner rather than later—making sure they’re safe.

FOCUS: What results have you found for these two drugs?
KIRSHBLUM: In the most recently announced results of the Phase III trials, Fampridine SR did not reach statistical significance for reducing spasticity in SCI patients, although the two Phase III trials provided some evidence of potential benefit consistent with previous studies.

As Steven Kirshblum, M.D., explains, drug trials can help patients over the long haul—and often sooner.

FOCUS: Are there any current investigations you can tell us about?
KIRSHBLUM: There is a treatment called ProCord, from Proneuron Biotechnologies, for patients with acute, neurologically complete spinal cord injury. It uses an autologous, “activated” macrophage therapy given within 14 days of the injury.

Macrophages from the patient’s blood are specially activated using a proprietary process, then surgically injected into the injured spinal cord. The activated macrophages secrete growth factors that promote a controlled inflammatory reaction—the first phase of the wound-healing process. While this process occurs in most tissues, it does not normally occur in the spinal cord.

The company is launching Phase II trials in five sites around the world, including Kessler Institute in West Orange, N.J. Because it’s crucial for investigators to learn of potential candidates within a few days of the injury, a 24-hour call center is being set up in the U.S. for patients, family members and physicians.

FOCUS: What else is being studied?
KIRSHBLUM: We have just finished a Phase III trial of Fampridine SR, sponsored by Acorda Therapeutics. It’s an oral, sustained-release, selective neuronal potassium channel blocker. The goal was to learn if the drug can reduce muscle spasticity in patients with chronic, neurologically incomplete SCI.

The drug has been shown to restore nerve conduction by blocking potassium channels in damaged nerve fibers that have lost their myelin sheaths. It is also being studied elsewhere for its effect on muscle strength in multiple sclerosis patients.

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For ProCord, preliminary results for the first group of Phase I patients showed that three of eight individuals improved from a neurologically complete injury—American Spinal Injury Association (ASIA) Impairment Scale A—to a neurologically incomplete one—C—at one-year follow-up. Researchers hope the product will ultimately meet a major clinical need.

Readers may contact Dr. Kirshblum at skirshblum@kessler-rehab.com.
Alternative therapies are gaining greater acceptance today among Western patients and medical practitioners. Several of them are in use at Kessler Institute for Rehabilitation, because they have proven effective, particularly for the management of pain.

Managing pain is not only essential for patient quality of life, it is also an important goal in rehabilitation, because pain can be an obstacle to recovery. Effective pain management can decrease the need for medications and increase function and productivity. And one advantage of alternative methods is that they are generally safe, minimally invasive and non-systemic.

One of the most common alternative techniques is the ancient Chinese practice of acupuncture, which involves the insertion of needles into a varying number of 401 “acupoints” in the body. Investigators have shown that acupuncture decreases activity in the brain’s pain centers in patients experiencing pain. Studies also indicate that acupuncture may work by increasing the activity of endogenous opioids and biogenic amines.

Acupuncture has been in use at Kessler for eight years. Treatments are effective for patients with both chronic and acute pain, including pain from musculoskeletal injuries, myofascial pain syndromes, sports injuries, spinal cord injury and stroke. Headache, arthritis pain and phantom pain following amputation may also respond to acupuncture. Patients generally receive one treatment per week and are re-evaluated after five weeks. If they have responded well, the therapy continues until the next evaluation. Some patients with chronic pain are helped by maintenance acupuncture treatments.

Most patients report a 40 to 60 percent reduction in pain levels with acupuncture. It has also been shown to reduce spasticity in some patients and improve swallowing in those with dysphagia due to stroke. A four-week course of acupuncture is prescribed if traditional treatments fail.

Adverse effects are extremely rare and generally mild. They may include infection at the insertion site, syncope, bleeding and organ puncture. To minimize these risks, only experienced acupuncture practitioners should provide treatments.

Relaxation therapy is also used to help ease chronic pain. During therapy, a psychologist encourages the patient to use positive visual imagery and audiotapes that play calming music and other relaxing sounds to relieve anxiety.

Structural integration has been used at Kessler for 10 years. Also called Rolfing, this is a deep massage therapy that can help increase mobility and decrease pain, generally in patients with chronic pain and musculoskeletal problems. It uses aggressive massage to stretch and lengthen connective tissue that has hardened over time, leading to impaired joint mobility and muscle activity and postural misalignment. The massage therapy is reinforced by giving the patient motion and postural re-education. The structural integration program at Kessler includes 10 45-minute sessions by certified structural integration therapists. Five advanced sessions are prescribed for patients who could benefit from further therapy.

Manipulation therapy is also used in rehabilitation, especially for managing pain from musculoskeletal problems and spinal misalignments. It employs techniques like those used in chiropractic and has been provided at Kessler for 10 years. Therapy is administered two times a week for six weeks by a physical therapist.

For women with pelvic pain syndrome, Kessler provides a course of therapy that uses biofeedback and exercises to help build and retrain pelvic muscles. Besides reducing pain, this method can help restore urinary continence, particularly after childbirth. Therapy is given twice a week for six weeks and is administered by a physical therapist.

When used along with traditional rehabilitation treatments, these alternative methods have helped many patients reach their recovery goals.

Robert Krotenberg, M.D., is senior medical officer at Kessler Institute for Rehabilitation. He may be reached by e-mail at rkrotenberg@kessler-rehab.com.
When to hospitalize? The physician should decide

Bruce M. Gans, M.D.

If you were asked, “What is an LMRP or an LCD?” would you say they are a) nostalgic cigarette advertisements; b) high-definition TV displays; c) new infectious diseases like SARS; or d) a policy that could mean the biggest change in inpatient rehabilitation since Medicare was launched?

Not long ago, most people would have missed this question, but the answer is d. Those responsible for administering the Medicare benefits in local jurisdictions (fiscal intermediaries) have been drafting local medical review policies (LMRPs)—recently renamed local coverage determinations (LCDs)—to decide which patients may use their Medicare benefit for inpatient rehabilitation. These policies could destroy inpatient rehabilitation. These policies could destroy inpatient rehabilitation as we know it. Why? Because they have been written with a strong bias against any patient ever receiving care in a rehabilitation hospital.

What Medicare says goes

As the dominant payer for inpatient rehabilitation in the country, Medicare sets the stage for the inpatient rehabilitation community. Whatever Medicare does, all other insurers are likely to emulate. And if these criteria were in effect today, I believe the majority of beds in inpatient rehabilitation facilities would be forced to close—a terrifying prospect, given the growing need for inpatient rehabilitation care that I see in our near future.

Fiscal intermediaries certainly have the right to develop appropriate medical necessity guidelines to help define who should and shouldn’t receive inpatient care in a rehabilitation hospital using the Medicare benefit. What is inappropriate is eliminating the dominance of a responsible physician’s clinical judgment from this process.

Each time we as physiatrists decide to admit a patient to a rehabilitation facility we are making a decision based on medical necessity—that is, we think the patient must be hospitalized to receive adequate care. Making that judgment is the practice of medicine. I would argue that any medical director for a fiscal intermediary who makes a decision contrary to that of the patient’s doctor is practicing medicine and must bear the consequences.

New Medicare guidelines written with a bias against inpatient rehabilitation are putting the entire field in great jeopardy.

Without question, determining the patient’s need for inpatient rehabilitation should be evidence-based. The problem, however, is that there is almost no “high-quality” published scientific evidence—by which I mean well-controlled, randomized clinical trials—that supports, standardizes or defines which patients must receive care in what setting. So, in lieu of scientific evidence, the best standard for deciding who should qualify for care is the responsible physician’s clinical judgment and opinion. The practice of the art of medicine becomes key, and must heavily favor the wisdom of a treating physician as opposed to a disinterested, non-treating one.

If you’re thinking this isn’t a national problem, think again. Although Medicare benefits are controlled by fiscal intermediaries (FIs) in local jurisdictions, most span several states. Further, the medical directors of these FIs have been collaborating so that multiple versions of essentially the same LMRP have been proposed. Hence, Medicare is putting the entire field of medical rehabilitation in great jeopardy.

Personally, I find it hopeful that so many local and national stakeholders, including physicians, rehab hospitals, medical societies, hospital societies and patients, have been voicing their objections to these guidelines. But more must be done.

For example, Medicare is not the only insurer we must watch. Private companies like InterQual and Milliman USA also create guidelines that insurance companies can use to decide whether or not a benefit should be paid. In response, the American Academy of Physical Medicine and Rehabilitation has formed a task force to create a standards document that will identify the criteria that should be applied to any medical necessity guideline to see whether it is meaningful, relevant and clinically appropriate.

What doctors can do

But the field needs your help, too. You should express your viewpoint and support the needs of your patients, your organizations and your facilities. Most important, you should continue to do the right thing medically for your patients by making decisions based on patient need rather than on a third parties’ strategy to avoid expenses for delivering care. And you should strongly advocate for the needs of your patients by appealing adverse judgments by an insurer when you believe those judgments are in error.

Bruce M. Gans, M.D., chief medical officer of Kessler Institute for Rehabilitation, is reachable at bgans@kessler-rehab.com.
Without the aid of residents and students, attending physicians at Kessler-Welkind often find themselves addressing a wider range of needs for the TBI patient, including depression, spasticity, pain and prosthetics. The result is that team members tend to take a more holistic and individualized approach to patient care, which helps foster strong clinical relationships with the patients. Staffers also help family members cope with what can be a puzzling condition.

Getting the word out

Just as a close bond is often forged between the community-based hospital physician and the TBI patient, so clinicians tend to form close relationships with their community. Physicians in the Kessler-Welkind TBI program work closely with various community groups, such as the Brain Injury Association of New Jersey, and often appear on local radio and cable television programs. Kessler-Welkind also makes a special effort to inform underserved populations about the importance of comprehensive TBI care—for example, through Spanish-language radio and television programs.

While a TBI program in a community-based hospital may have staff and resources limitations compared with one in a large teaching facility, the setting—correctly used—can be an effective one for allowing the rehabilitation team to focus exclusively on the complex needs of the TBI patient.

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How universal design builds accessibility into daily life

Daniel C. Fechtner, M.D.

Like all wheelchair users of his time, Ronald L. Mace found barriers everywhere he went—even in his own home. As an architect, his vision was for “the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.” He called this new paradigm “universal design.”

Mace coined that term in the 1980s. Today, it describes an important trend in architecture and product design. The concept embraces every aspect of daily living—from building home entryways that are free of stairs to manufacturing stoves and microwave ovens with controls that can be used by sight-impaired individuals and people with weakness of the upper limbs.

One basic tenet of universal design is to incorporate usability into homes and products when they are being built. Important elements such as placing a bedroom and bathroom on the first floor and avoiding the need for steps to enter the home can be very costly to incorporate after a home is constructed. But they do not cost more to include initially or when a home is being renovated. And, like curb cuts that allow wheelchairs to navigate outside, the designs also benefit others, including older adults, small children, parents pushing strollers and people temporarily on crutches. Universal designs would also allow many people to return home sooner from a hospital stay, because there would be fewer obstacles to overcome on a daily basis. Many could remain in their homes rather than going to a nursing home if they who never require special adaptations to accommodate disabilities can enjoy a new advantage: a home that is accessible to everyone.

Physicians and rehabilitation care providers can greatly advance the use of universal design by educating their patients and others whenever possible. An excellent resource to consult to find out more is www.aarp.org/life/homedesign, which includes a virtual tour of a universal design home, information on finding trained specialists and a checklist for how homes stack up in terms of universal design. Two other sites—www.design.ncsu.edu/cud/ and www.universaldesign.net/links.htm—provide a wealth of information on products and design specifications, including a comprehensive list of features that should be considered when designing and building homes. As with all worthy efforts, getting the word out is half the battle.

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