

# Rehabilitation

A publication from Kessler Institute for Rehabilitation



## Finding the right setting for geriatric rehabilitation

◆ Uri S. Adler, M.D.

**T**oo old for acute medical rehabilitation? That idea may linger in the minds of some physicians, but experience has shown there's no such thing. Today a majority of patients at Kessler are elderly, and we know that any patient who is able to participate in acute inpatient rehabilitation can benefit, achieving greater independence regardless of age.

Choosing the right setting for a patient who requires rehabilitation generally hinges on three factors: the level of medical care needed, the level of rehabilitation care required and the amount of support the patient has available at home.

These factors tend to be different for geriatric patients than they are for younger individuals. The 50-

year-old man who has had a knee replacement, for example, is usually relatively healthy and has a healthy spouse who can help care for him. But the elderly patient with a hip fracture may have numerous comorbidities and live alone or with a debilitated spouse. The rehabilitation needs for these two patients can obviously be very different.

### What the options offer

Rehabilitation services typically begin in the acute care hospital and continue there until the patient is medically stable. At that point, options for rehabilitation include an acute rehabilitation facility, nursing home based services, outpatient therapy and home therapy.

For the patient who does not

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Focus on

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## New gadgets, old values

• *Bruce M. Gans, M.D.*

**I**t's hard to believe that Kessler, with its network of inpatient and outpatient facilities, was founded less than 60 years ago—and that our entire field is not that much older. It was in the 1920s that early pioneers like Dr. John Coulter began creating new treatments for patients with disabilities. Calling their new approach “physiotherapy,” these innovators laid the groundwork for all the advances we can offer patients today.

What kind of people were these pioneers? For one thing, they were technophiles fascinated by new technologies: the marvels of electricity, the possibilities of radio and radar waves, the phenomenon of magnetism, and the physics of light and radiation. To a great extent, our field grew out of their professional curiosity about how to harness new technologies for therapy and diagnosis.

Early physiatrists were also intrigued by the potential therapeutic effect of exercise and physical manipulation. And they were comfortable working with many professionals to care for patients. That comfort helped fuel the development of fields we still depend on, such as rehabilitation nursing, physical therapy, and prosthetics and orthotics.

Most important, those early specialists had an interest in their patients' lives, not just their medical well-being. They were just as committed to their functional recovery as to their medical care, wanting to see them get back to school or work and be productive once again.

Early practitioners of physical medicine and rehabilitation treated some diseases we rarely encounter anymore—polio and pneumoconiosis, to name two. And they cared for the wounded from the two world wars. Both conflicts created a huge demand for professionals and facilities to help injured veterans regain function and independence.

Fast forward to today. Our skills are again helping veterans with war injuries to lead independent and productive lives. But instead of treating patients with polio, we now work with those who have sustained neurological injuries—strokes and brain and spinal cord injuries. We rehabilitate patients our forerunners couldn't imagine, such as people with joint replacements and heart and lung transplants.

The teams we now work with have grown to include not only nurses and physical therapists but also rehabilitation engineers, athletic trainers, dietitians and psychologists. And the technologies available to us are much more sophisticated. We now use ultrasound and fluoroscopy to perform injections that treat pain and nerve problems. We implant baclofen pumps to manage spasticity and electrical stimulators to improve function and reduce pain.

Yet even with our new teams and technologies, those of us who practice physical medicine and rehabilitation still hold the same core values. We still measure wellness in social and functional terms, as well as medical ones. And we are just as dedicated to helping patients regain function and independence as we are to freeing them from pain and weakness. As a field, we have seen enormous growth and will continue to evolve rapidly—but only because we share with those early innovators the same curiosity and commitment.

# How neurorehabilitation improves patient function

♦ Allison Averill, M.D.

**M**any patients with neurological diagnoses are in the prime of their lives. Returning them home to continue in work or school and optimizing their day-to-day function are therefore especially crucial. Regardless of the patient's age or level of damage, however, neurorehabilitation care can help facilitate the highest possible degree of independence.

Neurorehabilitation is comprehensive care for all aspects of a neurological illness or condition, such as stroke, traumatic brain injury, spinal cord injury or multiple sclerosis. For patients ranging from those with “simple” stroke to those with more complex diagnoses, comprehensive neurorehabilitation care has been shown to improve function.

## A team approach

The focus of the neurorehabilitation team is on treating a vast array of possible symptoms for the neurorehabilitation patient. As a result, a stroke patient may receive rehabilitation treatment similar to that given a brain injury patient. Potential symptoms include motor weakness; bowel or bladder disorders; behavioral problems or deficits in cognition, memory, sensory perception and speech. An integrated program that addresses this full spectrum of symptoms may help even the patient with a “simple” stroke by identifying problems that he or she may not immediately recognize.

The neurorehabilitation team usually consists of a physician,

physiatrist or neurologist; neuropsychologists; nurses; and physical, occupational and speech therapists who are trained and experienced in treating specific neurological conditions. All team members play a vital role in providing care. Therapists provide specialized treatments to improve physical function. For example, constraint-induced therapy

video swallowing studies and electric stimulation can help patients with acute or chronic dysphagia. Patients can also receive vision screenings and therapy to address problems such as double vision or hemianopsia. Balance screenings can identify vestibular dysfunction.

## Meeting patients' needs

Case managers are also valuable members of the neurorehabilitation team and often prove adept in meeting the numerous post-discharge requirements of patients. These needs are varied and often complex and can include equipment and home adaptations, nursing care, outpatient therapy, family education and social services. Along with other team members, case managers also collaborate with employers and schools to solve problems—for example, when a person who has progressed to outpatient care becomes overstimu-

lated in the workplace or tires easily on the job. Such issues frequently emerge after the patient has returned to everyday life. Patients therefore continue therapy as outpatients to help them identify and address new issues that may arise.

With a comprehensive program of neurorehabilitation that integrates these elements, patients of all ages and neurological diagnoses can optimize function and independence.

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Neurorehabilitation can help a wide variety of patients return to work or school, explains Allison Averill, M.D.

involves restraining the unaffected arm so that the patient is “forced” to use the affected limb. Body weight-supported treadmill exercise, which uses a harness and treadmill, can help some patients walk. Nurses may teach patients with bladder problems how to use catheters properly, to maximize continence, minimize bladder and kidney infections and prevent skin breakdown.

Neuropsychologists can address cognitive and behavioral issues such as agitation with coordinated behavior management and/or medication regimens. Services such as

## Writing the book on medications in rehabilitation

**D**espite the derivation of the name, physiatrists aren't focused solely on physical means to restore physical function. Many of the impairments they treat can improve with the use of medications.

To help physicians stay abreast of advances in the pharmacology of medical rehabilitation, Robert Klecz, M.D., clinical chief of orthopedic rehabilitation for Kessler Institute for Rehabilitation in East Orange, N.J., and clinical assistant professor of physical medicine and rehabilitation at the University of Medicine and Dentistry of New Jersey (UMDNJ), helped

write the chapter "Pharmacotherapy of Disability" for the latest edition of the reference book *Physical Medicine and Rehabilitation: Principles and Practice* (fourth edition). *Focus on Rehabilitation* recently spoke with Dr. Klecz about this project.

**FOCUS:** I understand that at any given time you're treating about 18 inpatients with physical challenges daily. With such an active practice, why take on a book chapter?

**KLECZ:** I was invited to write a portion of the same chapter in the previous (third) edition by Todd Stitik, M.D., principal author of the chapter and a fellow physiatrist. This time we were able to expand on what was pertinent five years ago when we originally produced it. It still took a great deal of effort, but proved easier and all the more interesting the second time around. Research adds to one's knowledge base, and working on the chapter



Helping to revise a chapter in a widely used text drew on Robert Klecz, M.D.'s knowledge of recent changes in the role of medications in rehabilitation.

elucidated for me a number of developments in my field.

**FOCUS:** How was the work shared?

**KLECZ:** My practice focuses mostly on patients undergoing acute inpatient rehabilitation, many of whom are older and have multiple medical comorbidities. Other co-authors of the chapter addressed their own areas of greatest expertise; the goal was a rich, well-rounded look at pharmacologic interventions in all aspects of physical medicine and rehabilitation. We wrote separately and merged our work, communicating through phone calls and e-mails.

**FOCUS:** How long did it take?

**KLECZ:** I was able to work on the chapter only during my spare time, typically in the evenings after my two children went to bed. It was completed in about three months, but probably could have been done within a few weeks if I had been able to work on it continuously. Thanks

to the Internet, research can be done quickly on a computer almost anywhere today.

**FOCUS:** How did the chapter enrich your work with patients?

**KLECZ:** It opened my eyes to new trends in our field, as well as more scenario-based treatment methods. For example, cardiovascular illnesses are a growing problem in the United States and new research is addressing how to help. A better understanding of the latest in our field lets me offer my patients more treatment options and explain them more clearly.

**FOCUS:** What new developments reported in the chapter do you find most exciting?

**KLECZ:** The usage of low-molecular-weight heparins has expanded beyond prophylaxis for deep-vein thrombosis into treatment as well. Also, these heparins are administered subcutaneously, so patients don't need to receive the drugs intravenously. The subcutaneous method allows for virtually uninterrupted rehabilitation sessions.

**FOCUS:** Excellent. Anything else?

**KLECZ:** Oh, yes! In this edition, we expanded on scenario-based, off-label uses of various medications—for instance, the benefit of statins, ACE inhibitors and angiotensin receptor blockers in reducing risk of recurrent stroke or other cardiovascular events in recovering patients.

**FOCUS:** How can physicians benefit from your chapter?

**KLECZ:** Medicines are increasingly prevalent in treating rehabilitation patients. The chapter offers precise and pertinent guidelines for their use. It's a reference source on medications encountered in the rehabilitation setting, as well as new medications and uses that are on the horizon.

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♦ *Physical Medicine and Rehabilitation: Principles and Practice*, 4th edition (2 vols., 1,926 pp., 478 illustrations) was published in September 2004 by Lippincott Williams & Wilkins. If you'd like to order a copy for \$199, plus shipping and handling, visit [www.lippincott.com](http://www.lippincott.com) or any medical bookstore.

# Improving outcomes to improve lives

♦ Joan P. Alverzo, Ph.D., C.R.R.N., and Sue Kida, P.T., M.H.A.

**W**hat can a rehabilitation hospital do to improve a patient's chances of returning home? For Kessler Institute, using a data-driven quality management program was the key to helping stroke, brain injury and spinal cord injury patients return home after discharge.

The program is driven by quality teams formed to review data from various areas of the hospital. Nurses, for example, may review data on patient falls, while physical therapists may review functional progress over the course of therapy. Data from patient surveys and focus groups are also used. The teams make quarterly reports to a clinical oversight committee, which then identifies potential areas for improvement and devises action plans. Discharge disposition was identified as one area for improvement after comparing Kessler discharge data with national benchmarks. In addition, returning home is a crucial quality of life factor and an important quality measure for rehabilitation care.

Once home discharge was chosen as a priority, a team was formed to flush out major issues. Four categories were identified: patient safety, family pressure, time required for home discharge and patient and family expectations regarding discharge. The team identified three key times when specific strategies could be used: patient admission,

team conferences and family conferences. At patient admission, for example, new strategies include establishing discharge goals and assessing patients' home situations. If needed, families can be given training and recommendations can be made for modifying the home environment at this early stage. After a little more than a year of this ongoing effort, home discharge

patient education and functional training techniques.

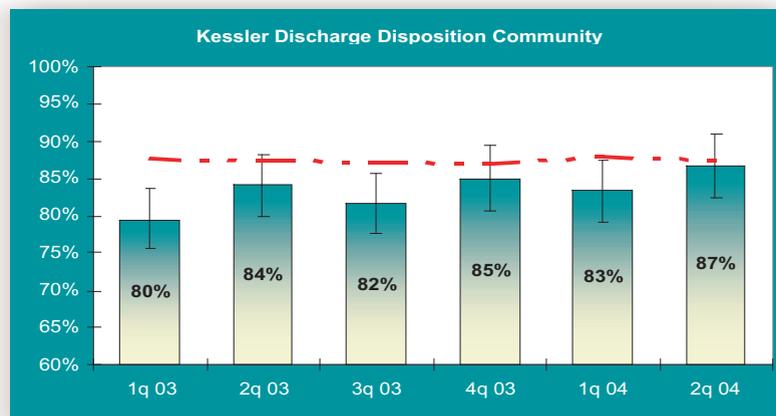
Another new effort is to identify and address predictive factors for discharge to a nursing home. We found, for example, that women are generally less likely to return home than men because they more often lack caregivers. We are therefore devising ways to find support from family members other than spouses.

One challenge for quality improvement is to ensure that the data are meaningful and valid. To achieve this, data on patient functional status are periodically validated by having two different clinicians score a patient, then compare the scores using inter-rater reliability techniques. Internal and external audits are

also conducted each year. To prevent changes in one area of care from having a negative impact on another area of care, performance indicators are monitored quarterly.

Involving clinicians and team members in every step of this process is critical. With team support, data-driven quality management can help achieve the important goal of improving patient outcomes.

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This chart tracks the percentage of discharged patients for whom home is the destination. Thanks to a data-driven program, the trend is upward.

increased from 80% to 87%.

Discharge disposition is just one of many quality improvement projects using the data-driven process. An effort to reduce patient falls with closer patient monitoring decreased their incidence from 9 to 5 per 1,000 patient days at one facility. The program is now being implemented at other sites.

Kessler also has applied the quality management system to improving the functional status of patients. Patients are assessed at admission using 18 aspects of function, such as ability to transfer or eat. The care teams then identify specific areas where functional progress is limited and develop strategies for improvement in

# Is Medicare's myopia a never-ending story?

♦ By Bruce M. Gans, M.D.

**W**hen my children were younger, they loved to watch a fantasy film entitled *The Never-Ending Story*. Taken from a book by German author Michael Ende, the film portrayed the power of imagination to add richness to life and to solve seemingly impossible problems.

Unfortunately, the story's title comes to mind as we take stock of recent changes made by the Centers for Medicare and Medicaid Services (CMS) to rules defining inpatient rehabilitation hospitals. After years of working to change that definition by gathering strong Congressional support, forging alliances with other professional organizations and collaborating with patient advocacy groups, where do we find ourselves? Pretty much right back where we started.

The CMS has published its final rule, which took effect this past summer. It imposes the same flawed criteria that we've been trying to fix for the past two years. (The final rule's four-year escalating threshold is woefully temporary and provides no real relief.) That means that the CMS's device for defining rehabilitation is still terribly broken, and we must renew our efforts to get it fixed.

## Goals are in sync

Why are we and the CMS on such different tracks? Ironically, we both claim to share the same objectives when it comes to inpatient rehabilitation hospitals. We both want a sound and useful method to distinguish between rehabilitation and acute care hospitals, so each can be paid appropriately for the work it does.

Also, we both want unambiguous criteria to help identify the

most appropriate patients for inpatient rehabilitative care. And we both want to rein in expenses, to keep costs down and ensure the viability of the Medicare trust fund for years to come.

So why are we so much at odds? Because we don't agree on how to accomplish those goals. We have different views about how the CMS has defined our hospitals—and we believe the CMS is misusing that definition to parse out patients who should be admitted for inpatient rehabilitation.

We don't agree on whether we should trust physicians to make the

Members of Congress and the medical community agree that holding onto an outdated rule first promulgated in 1984 is counterproductive and impractical.

right call as to which setting is most appropriate for individual patients. Medicare wants instead to substitute hard and fast rules, and ignore the seasoned, professional judgment of both referring and admitting physicians.

And remarkably, we don't even agree on how much medical care and rehabilitation have changed during the past 20 years. Members of Congress and the greater medical community are convinced, as are we, that holding on to an outdated rule first promulgated in 1984 is counterproductive and impractical. But the CMS has rejected that reasoning flat out.

We once again find ourselves advocating the same key solutions to the problem. We still need a reasonable, practical definition of what a rehabilitation hospital is. That definition must be based on

the facilities themselves and the unique programs and services they provide, not on the diagnoses of the patients served.

Separately, we need rational, clinically appropriate criteria to define medical appropriateness for each patient—solutions the CMS as yet hasn't moved to provide.

## Wisdom will prevail

But I believe it is only a matter of time before we succeed in this effort. Why am I so optimistic? Because our field is united, and our support in Congress and in medicine as a whole is broad and committed. Even more important, we will succeed because the health and functional welfare of our patients are at stake. The CMS seems to think this debate is all about money, but they are wrong. Our disagreement is about what is right for patients and what they require in order to achieve functional independence and a decent quality of life.

We'll also prevail because the stakes in this dispute are very high for a huge segment of our population—the baby boomers—who are just now reaching the age when many will need access to our care.

It's enormously frustrating to find so many articulate voices—from members of Congress, patients and physicians—falling on deaf regulatory ears. But despite CMS's apparent intractability, I am sure this “never-ending” story will sooner or later reach the happy ending our patients deserve.

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## Geriatric rehabilitation: Where should it take place?

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need nursing care and has a strong home support system, discharge to home and outpatient therapy may be appropriate. The nursing home generally fits the geriatric patient who does not have a support system at home, but also does not require 24-hour medical care or cannot tolerate intensive therapy. The patient who can participate in intensive therapy and/or needs medical care, however, is more apt to succeed in an acute rehabilitation hospital. Patients in these facilities generally receive at least four times more therapy than those in outpatient programs and more than double that of patients in a nursing home. And experience has shown that the elderly patient who is extremely debilitated can gain strength and function with intense therapy.

In addition, programs of care in the acute rehabilitation hospital go far beyond the bedside therapy that an elderly patient is likely to receive in an acute hospital. The patient will use different therapy devices and equipment in different environments, including simulated home settings that have bathtubs, showers and conventional beds. Learning skills such as how to transfer, dress and use assistive devices may make the elderly patient even more independent than before the procedure or illness.

### **Problem: comorbidities**

The medical needs of the patient are also a crucial consideration. Many elderly patients have comorbidities that require medical management, such as coronary artery disease, congestive heart failure, hypertension, stroke, Parkinson's disease, bladder and bowel problems, balance issues, vision or hearing loss, diabetes, osteoporosis, arthritis and depression. All of these can be readily managed in an acute

rehabilitation hospital, which offers 24-hour nursing and daily physician care as well as rehabilitation services.

### **The cascade effect**

The ideal situation for many elderly patients is a facility with a specialized geriatric rehabilitation program. These offer more than medical and nursing care to help meet a broad range of needs for the geriatric patient. Often, for example, older patients find themselves in the hospital because of a cascade effect due to worsening function. Consider the older person who breaks a hip because of a fall caused by general weakness or poor vision. A rehabilitation program provides physical, speech and occupational therapy that can help him or her achieve a higher level of strength and function. A comprehensive geriatric program would also provide hearing and vision screening and therapy.

The Kessler Institute geriatric program incorporates a number of services that can help the older patient gain independence. In the driving program, for example, the patient is evaluated with vision and pen-and-paper tests. Patients who pass then take a behind-the-wheel test in an adapted vehicle. When needed, the program provides driving lessons and recommendations for appropriate vehicle adaptations, such as alternative hand and/or foot controls.

In a specialized program, older patients also have the benefit of being with others their own age, particularly during recreational therapy



For an elderly person with an illness or injury that compromises independence, a program of inpatient rehabilitation often can make a dramatic difference.

sessions. And because depression is a common comorbidity in the elderly, psychological services are an integral part of the spectrum of care.

Helping to ease the process of going home and making the home environment safer are especially challenging—and crucial—for elderly patients. A comprehensive geriatric program includes home assessment and recommendations for modifications such as grab bars, lighting improvements and ramps. Additionally, specialized services can help direct geriatric patients to appropriate social organizations.

Not every elderly patient requires a specialized geriatric rehabilitation program. For those with medical or specialized therapy needs, however, an acute rehabilitation facility may be the best option.

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# How rehabilitation psychology helps patients cope

• Loran C. Vocaturo, Ed.D.

**R**ehabilitation patients often face a new kind of life after discharge, and patients often need more than physical treatment to adjust. Individuals, and sometimes their families, may need treatment for the severe emotional impact a disability or a debilitating illness can present. The rehabilitation psychologist works closely with patients and family members, who may face critical challenges and difficult decisions. The rehabilitation patient is not always clinically depressed, but psychological symptoms including depression and anxiety are common. Early psychological support is vital in addressing these issues, which can have long-term effects on mental health, and providing that support is the job of the rehabilitation psychologist.

Patients also may have cognitive deficits following a traumatic brain injury or stroke or from a chronic progressive illness. The neuropsychologist helps to identify these deficits using neuropsychological assessment, so as to set goals, develop care plans and track progress. The objective is to identify and facilitate interventions that address cog-

nitive and psychological problems quickly, so the patient can participate as fully as possible in therapy. Cognitive and psychological problems are potentially serious barriers to rehabilitation. In today's world of earlier discharges, problems must be resolved quickly so patients can take full advantage of the course of therapy and optimize their level of independence after discharge. Psychological support, problem-solving and in some cases medications are all tools the rehabilitation psychologist can use to help individuals participate fully in therapy. The patient with a traumatic brain injury may benefit from receiv-



Rehabilitation psychologists identify cognitive impairments through a variety of neuropsychological testing.

ing therapy in a less stimulating environment. Patients who are depressed may require more encouragement and support. Anxious patients may benefit from relaxation techniques. The rehabilitation psychologist's role is to help identify and overcome these and other barriers to therapy.

This role does not end at discharge. As the patient reintegrates into the community, new psychological and physical challenges can arise, and many patients will have a long-term need for psychological support. Out-patient psychological service may be required to help solve problems at home, school or on the job or to help patients develop skills to compensate. A comprehensive approach to rehabilitation includes meeting the complex emotional needs of the patient. Rehabilitation psychologists help meet these needs, maximizing a patient's opportunity to participate in therapy—and to live a satisfying and productive life.

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