

Rehabilitation



Aiming Higher

NEW REHABILITATION GUIDELINES LOOK TO STEP UP CARE FOR STROKE SURVIVORS

BY URI ADLER, M.D.

Functional independence is a major contributor to survival, comorbidities and quality of life for the nearly 800,000 people in the U.S. who experience a stroke each year. Although there is wide consensus regarding the benefit of rehabilitation in acute and post-acute stroke settings, there are gaps in the provision of care, as well as in the research base supporting the use of these therapies. A newly released set of clinical practice guidelines is attempting to rectify these issues by summarizing the current state of the science and providing guidance on the delivery of stroke assessment and treatment.

SETTING THE STANDARD

In May 2016, the American Heart Association/American Stroke Association (AHA/ASA) released guidelines on rehabilitation care for adult stroke survivors. Published in the journal *Stroke*, their

systematic review of the literature is intended to provide up-to-date information about the best clinical practices for enhancing recovery.¹ The author panel graded various levels of evidence and recommendations on the assessment, management or prevention of numerous post-stroke conditions, including skin breakdown and contractures; deep vein thrombosis; urinary and fecal incontinence; various types of pain; falls; motor and balance dysfunction; cognitive impairment; depression and other emotional sequelae; and re-engagement in functional and everyday activities, such as work and driving.

Among the highest-graded recommendations (Class I, Level A) are the implementation of:

- Personalized activities of daily living training that meet the unique needs

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of the patient and his or her discharge setting

- Balance training for individuals with stability issues or patients otherwise at risk of falling
- Formal fall prevention programs during hospitalization
- Enriched environments—those offering internet access, books, music or games—to increase patient participation in cognitive activities and reduce time spent alone
- Targeted injection of botulinum toxin into localized upper or lower limb muscles to reduce spasticity and improve range of motion

FROM PAPER TO PRACTICE

The standards reflect numerous aspects of stroke care that were already being implemented to an extent but until recently were based on either smaller clinical trials or anecdotal clinical experience rather than large randomized clinical trials. Now that the AHA/ASA is backing these treatment approaches, they are more likely to be adopted consistently and across medical facilities. For instance, the panel recommends that all stroke patients undergo formal assessment of functional needs while in acute care, even if inpatient rehabilitation cannot be initiated and must be provided on an outpatient basis. This directive authoritatively recognizes the importance of involving physical medicine and rehabilitation-trained clinicians—whether therapists or physicians—in the treatment of stroke survivors before they leave acute care in order to gain valuable input on the person's level of functioning.

Additionally, the general feeling in stroke medicine has been that inpatient rehabilitation facilities (IRFs) tend to provide more comprehensive and effective care than subacute settings, such as skilled nursing facilities (SNFs) and nursing homes, but there has been a dearth of large-scale evidence to support prioritizing discharge to IRFs. With the AHA/ASA now recommending patients be released to an IRF when possible, we have concrete evidence to justify this practice, which hopefully will lead to increased referrals and better outcomes for patients (see "Location Matters").

For example, because of the size of our staff and patient population, Kessler Institute for Rehabilitation is routinely approached by vendors of cutting-edge technologies and interventions—including robotic equipment to assist with ambulation, electrostimulation devices, and novel approaches to common stroke-related conditions, such as implementation of our free water protocol for patients with swallowing difficulties. This gives our patients early access to the most innovative treatment options, which are not as likely to be available at SNFs and other subacute settings. The AHA/ASA's support of IRFs also gives educated consumers an additional tool with which to advocate for their loved ones by requesting that acute care physicians refer to an IRF rather than elsewhere.

AHEAD OF THE CURVE

Kessler already had in place a majority of the AHA/ASA directives, which reflects our commitment to using highly advanced, evidence-based practices. For instance, the report notes that approximately 20 percent of stroke survivors are of vocational age and that, for these populations, it is vital that rehabilitation addresses occupational functioning. Kessler's cognitive rehabilitation program provides therapies in settings that simulate or replicate the patient's workplace and engages the individual in exercises that mimic the types of activities he or she will perform on the job.

The AHA/ASA also states that optimal care delivery is characterized by a multispecialty team approach that includes psychiatrists and/or appropriately trained neurologists, occupational therapists, physical therapists, speech-language pathologists, neuropsychologists, psychologists and case managers/social workers. Ideally, team clinicians should have specific training in rehabilitation medicine. Kessler is fortunate to have a large, multidisciplinary group of stroke experts who have undergone advanced education such as physical therapists who have earned certification as neurologic clinical specialists (NCS) and nurses who are certified in acute rehabilitation care (CRRN).

Medicine is still an art as much as it is a science, and variability in training approaches, staffing and care settings has led to marked diversity in the provision of stroke-related assessments and interventions. It is hoped, however, that these recent guidelines will bring greater uniformity to how survivors are treated—making standardized, evidence-based care less of a goal and more of a reality.

LOCATION MATTERS

Federal reimbursement arrangements drive much of how stroke rehabilitation is organized and implemented in this country, according to the new American Heart Association/American Stroke Association (AHA/ASA) guidelines. Almost one-third of Medicare beneficiaries referred to post-stroke rehabilitation after hospitalization are sent to skilled nursing facilities (SNFs), followed by 22 percent to inpatient rehabilitation facilities (IRFs) and 15 percent to home health care agencies.¹

What does this mean for patients? According to the AHA/ASA, and bolstered by recent findings comparing long-term clinical outcomes of individuals treated in IRFs versus SNFs, stroke survivors first discharged to an IRF appear to experience greater functional recovery and re-engagement in their communities compared with those sent to an SNF or a nursing home.² Those patients, conversely, tend to exhibit higher rehospitalization rates and worse survival than their cohorts in IRFs. However, the guidelines warn that such differences may be attributable to baseline discrepancies because many individuals in IRFs are younger, display fewer comorbidities and are more likely to have caregiver or family support.

¹ Winstein CJ, Stein J, Arena R, et al.; on behalf of the American Heart Association Stroke Council, Council on Cardiovascular and Stroke Nursing, Council on Clinical Cardiology, and Council on Quality of Care and Outcomes Research. "Guidelines for Adult Stroke Rehabilitation and Recovery: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association." *Stroke* 2016; 47.

² Dobson DaVanzo & Associates. "Assessment of Patient Outcomes of Rehabilitative Care Provided in Inpatient Rehabilitation Facilities (IRFs) and After Discharge." Vienna, VA: Dobson DaVanzo & Associates, LLC; 2014. Available at: <https://www.amrpa.org/newsroom/Dobson%20DaVanzo%20Final%20Report%20-%20Patient%20Outcomes%20of%20IRF%20v%20-%20SNF%20-%207%2010%2014%20redated.pdf>



LEARN MORE

Read the entire AHA/ASA stroke rehabilitation recommendations and ratings at stroke.ahajournals.org/content/early/2016/05/04/STR.0000000000000098.



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The doctor will 'FaceTime' you now

THE USE OF TELEMEDICINE IN MEDICAL REHABILITATION



One challenge many inpatient rehabilitation hospitals and units face is access to specialists for our patients. Surgeons, for instance, often want to perform postoperative evaluations in their offices, which is a huge inconvenience for the patient and our staff. Other specialists and even internists are loath to come into the hospital on nights and weekends to assess individuals for condition changes.

Kessler Institute for Rehabilitation recently began a pilot program using telemedicine to address these challenges and

improve our patients' access to off-site physicians.

Our system uses commercially available telemedicine "robots" that provide audio (including an electronic stethoscope) and high-resolution video to enable physicians and patients to interact remotely.

We plan to first use it for inpatients who require assessment for a change of medical status. Rather than travel to the hospital, the on-call physician can access the system through any video-enabled device—mobile or computer. On our end, a nurse brings the technology to the patient, who can have what I liken to a high-end FaceTime conversation with the clinician.

Our goal is to see how well patients and physicians accept the technology and to assess its impact on access to timely care. Ideally, we hope its use reduces readmissions and acute care transfers, and improves the patient experience.

While the potential for telemedicine is great, there are still regulatory and reimbursement barriers. A recent brief from the Robert Wood Johnson Foundation and *Health Affairs* found that Medicaid programs in 49 states and the District of Columbia cover telehealth services and most reimburse for live video care. However, there the similarities end, with differences throughout the states in terms of payment.

On the private insurance side, 32 states and the District of Columbia have enacted parity laws that require the insurers to reimburse telehealth services at the same rate as in-person services. Again, however, there are wide differences among states in terms of what must be reimbursed.

At the federal level, the Centers for Medicare and Medicaid Services introduced a new model that would extend telehealth coverage to up to 80 percent of Medicare beneficiaries in metropolitan areas. And, in a sign that telemedicine is truly gaining ground, Congress is considering a nationwide parity act.

Another challenge has to do with physician licensing and privileges. Can a doctor licensed in New Jersey, for instance, "see" a patient sitting in New York? Do we have to give doctors temporary permission at our institution for them to remotely evaluate our patients?

These are issues that we and others will grapple with as telemedicine continues to roll out both in the post-acute care setting and throughout the health care system.

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Building the framework

for successful cancer rehabilitation

BY MICHAEL STUBBLEFIELD, M.D.



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Cancer survivorship can be viewed from several perspectives, including medical survivorship, which speaks to treatment response, prognosis and potential ongoing medical issues such as heart disease. The psychosocial domain attends to how patients adjust to their diagnoses, interpersonal relationships, sense of self and other key aspects of the disease experience. Despite the prominence of functional disorders in cancer survivors, these deficits are often ignored in this vulnerable population.

Comprehensive cancer rehabilitation addresses survivorship as it pertains to patients' everyday functioning—mobility, speaking, pain management and more. Designing a comprehensive rehabilitation program has the potential to help meet these and other immediate needs of cancer survivors—and to change the standard of care for the oncology population as a whole.

NECESSARY INGREDIENTS

One of the most significant pillars of effective cancer rehabilitation is the integration of multiple specialists with varied skill sets to address myriad function-limiting conditions. These include not only cancer rehabilitation physicians but also clinicians from oncology, physical therapy, occupational therapy, speech-language pathology, neuropsychology and others. The function-related treatment needs of cancer

patients can be diverse and debilitating, often including mobility, strength and balance difficulties; lymphedema; fatigue; pain; neuromuscular and musculoskeletal dysfunction; and any other symptom that limits a person's ability to live and function at the highest possible level. At Kessler Institute for Rehabilitation, services to treat all of these disorders are available on an inpatient or outpatient basis.

Kessler's cancer rehabilitation program provides specialized care that is tailored to patients' unique symptoms and functional needs across the cancer spectrum. To ensure the highest level of knowledge and clinical care, an educational initiative has been developed for the specialized training of rehabilitation clinicians throughout the Select Medical network. The program, named ReVital, is designed to provide the necessary didactic, hands-on and group-based learning experiences to help increase the availability of comprehensive, coordinated cancer rehabilitation programs nationwide.

TAKING THE LEAD

In addition to Kessler, Select Medical has cancer rehabilitation programs at SSM Rehabilitation Hospital in St. Louis, Baylor Institute for Rehabilitation in Dallas and Penn State Hershey Rehabilitation Hospital in Hummelstown, Pennsylvania. Kessler is considered the hub of

this network—due to the size and scope of our program—and is spearheading the training initiative. Since its inception in 2015, the program has developed multiple teaching modalities, competency requirements and content areas to maximize learning. Currently, the network is largely designed to appeal to physical and occupational therapists and speech-language pathologists within the Select Medical system. The hope is that it will soon extend to other clinicians, such as nurses and case managers, as well as possibly to external providers.

Much of the didactic teaching comprises weekly 20-minute webinars. Originally offered as live courses, these are now recorded to account for the growing number of West Coast enrollees who need access on demand to fit their time zone. Each webinar series focuses on a particular disease state per annual quarter. Previous topics have included breast cancer, brain neoplasms, head and neck cancers, and spinal tumors. Topics in the next two years will include gynecologic oncology, prostate cancer and genitourinary neoplasms. To keep pace with advances in science, modules will be updated and offered repeatedly as needed.

Another core feature of the program's approach to learning is the integration of practical, hands-on clinical experience—crucial to enabling students to understand, internalize and implement learned content. For example, a four-day lymphedema course for upper extremities, a four-day lymphedema course for lower extremities, and a two-day course on specialized lymphedema (such as that of the pelvic region) are available or in development. Other classes will cover manual therapy and exercise in oncology populations, myofascial release, kinesiology taping for lymphatic drainage, and the role of the clinician in giving difficult news about a patient's diagnosis and prognosis.

A third modality provides group learning through virtual patient rounds. As teams at Kessler are joined online by providers in other facilities, the group collectively discusses patients' cases. Participants review one another's evaluations so that learning is collaborative and based on feedback from both instructors and peers.

LASTING CHANGES

Because an overarching goal is for Select Medical to be internationally recognized as the pioneer in providing functional rehabilitation for cancer patients, additional efforts are being directed at developing certification for participants and an accreditation program for facilities.

Clinical certification will be administered on three levels. Certification at the cancer rehabilitation clinician level requires 100 hours of training,

or about one year's worth of webinars, hands-on experience in key courses such as lymphedema and myofascial release, and a number of group learning sessions. A cancer rehabilitation specialist requires 200 hours and more extensive participation in all three learning modalities. And a cancer rehabilitation educator requires completion of all webinars and courses as well as leadership in educational content development.

Accreditation of facilities will help demonstrate to patients and other medical centers that a site is committed to providing evidence-based, patient-centered cancer rehabilitation. Programs that offer the full panoply of services—like Kessler's West Orange campus, which includes occupational therapy, physical therapy, speech-language pathology, cognitive rehabilitation and neuropsychology—could potentially be designated a Level 1 cancer rehabilitation center, otherwise known as a comprehensive cancer rehabilitation center. Other institutions offering just one or two services might still be accredited as a cancer rehabilitation center but will not receive the "comprehensive" designation. Programs offering important services but no defined program can also attain accreditation. These standards set the framework by which other hospitals and clinics can achieve the cancer rehabilitation title, helping to ensure patients everywhere have access to the same high-quality therapies and interventions.

EARLY ACHIEVEMENTS

Although the program is still growing, positive feedback from enrollees suggests that success has already been achieved. Therapists have expressed support for the initiative and acknowledge the dire need it fills. And Kessler physicians and hospital administration staff appear optimistic because they understand that the opportunity to grow our services—which are already well-recognized in spinal cord injury, brain injury and stroke care—represents yet another area in which we can cultivate our leadership.

Even greater accomplishments are within sight. Many oncologists feel trepidation at seeing functional impairments in their patients because they do not have the training to adequately address these symptoms. But once referring physicians are aware that a cancer rehabilitation clinic exists as a viable resource, they take advantage of its services (see "Word-of-Mouth Marketing"). Through this novel education initiative, Kessler is helping develop the blueprint for facilities across the country to adopt such a program, which will in turn drive referrals and improve outcomes. And by reaching just one oncologist at a time, we can effectively alter the way patients with cancer are cared for.



LEARN MORE

To read about the American Cancer Society's latest survivorship care strategies for patients with head and neck cancer, including rehabilitation recommendations, visit onlinelibrary.wiley.com/doi/10.3322/caac.21343/epdf.

WORD-OF-MOUTH MARKETING

Select Medical has about 40,000 employees, including more than 10,000 therapists in 1,600 outpatient therapy clinics across 40 states—making for a sizable classroom for Select University enrollees. But it is the cancer rehabilitation patient network that is proving to be remarkably influential in extending the program's reach.

Kessler attracts patients from far beyond the New York-New Jersey-Pennsylvania metropolitan area. Participants in the cancer rehabilitation program have expressed gratitude and praise for how well-coordinated and thorough the service is, and they often extend their stays to maximize their time spent in the program. Upon returning home, patients share their positive experiences with their oncologists, which helps support our referral relationships. This pattern is also occurring at other cancer rehabilitation clinics across the country and demonstrates the powerful role patients play in shaping the future of oncology care.

Bringing the value to value-based payment in the inpatient rehabilitation setting

BY BRUCE M. GANS, M.D.

There is no question that the U.S. health care system is well on its way to transitioning from a fee-for-service reimbursement model to one based on value. By its very name, value-based payment focuses on the intersection between cost and outcomes.

Yet the Medicare Post-Acute Care Value-Based Purchasing (PAC VBP) Act of 2015, H.R. 3298 pending in Congress, ignores that intersection. The act, which evaluates providers on Medicare spending per beneficiary (MSPB) over two years, unfairly holds post-acute care providers accountable for “upstream” acute care expenditures made on the patient’s behalf before the post-acute provider even saw that individual. Worse, it considers just one quality outcome factor and then only after the first two years of the program.

MSPB is an economic measure intended to assess Medicare utilization and distinguish between efficient and inefficient providers within a given setting. It does not measure outcomes, duration, scope, quality of care, or intensity of health care services provided to patients. It also fails to adequately recognize severity of illness, the level of resources provided to meet patient needs, and the functional gains that can be achieved through higher-intensity, coordinated, multidisciplinary rehabilitation for Medicare beneficiaries with brain injuries and other serious conditions.

In other words, it evaluates and bases reimbursement for post-acute care providers strictly on spending. It also withholds 5 percent of Medicare reimbursement from post-acute providers who are already subject to other payment cuts. Other value-based purchasing programs in the Medicare system were typically introduced with a 1 percent initial withhold of payment that escalated to 2 percent. For a facility to recover that withheld money, it needs to meet or exceed Medicare’s prediction of acceptable quality performance.

Introducing a value-based purchasing program for post-acute care that rewards only MSPB performance is fundamentally and

fatally flawed. It also ignores the Improving Medicare Post-Acute Care Transformation (IMPACT) Act. Passed in 2014, the IMPACT Act requires that post-acute care providers report quality indicators, resource use and other measures that have been and are still being developed (see graphic). Part of the goal of the act is to “provide access to longitudinal information for such providers to facilitate coordinated care and improved Medicare beneficiary outcomes.” The field started reporting some of these measures more than a year ago, with additional measures introduced each October.

Why would Congress ignore this treasure trove of soon-to-be-available data—information that could be used to ensure that people receive not only cost-effective care but also high-quality care to provide patients with the quality of life they want?

MEETING THE TRIPLE AIM WITH VALUE-BASED REIMBURSEMENT

Post-acute care providers are not opposed to value-based purchasing and reimbursement. We understand it is a potentially useful way for the health care system to meet the “Triple Aim” of improving the quality of care provided, reducing costs and improving population health.

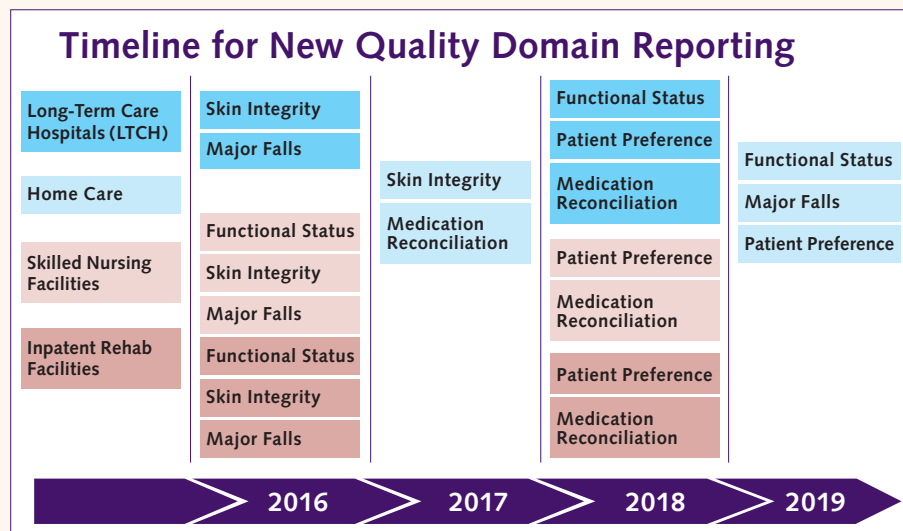
However, economic incentives to providers need to be balanced with policies that protect patients from harm, and quality outcomes need to be recognized as more important in the long term than short-term cost savings.

Instead of basing our reimbursement entirely on cost, Congress needs to revamp the act to incorporate accountability for performance along the six domains of quality we have identified, abbreviated as PIECES:

- Preventing harm
- Improving health
- Enhancing function
- Considering the experience of care by the patient and family
- Enduring benefit of care
- Saving cost to payers and patients

The implications of the PAC VBP Act are so disturbing that, for the first time, post-acute care organizations representing all sectors have come together to oppose it.

We are certain that value-based purchasing for post-acute care could be a positive contribution to patients, the health of the nation, and Medicare expenditures, but only if it is done properly.



Getting to the heart of the matter

CARDIAC REHABILITATION FOR PATIENTS WITH LEFT VENTRICULAR ASSIST DEVICES

BY BEN SEIDEL, D.O.



The advent of the left ventricular assist device, or LVAD, has helped extend mortality and improve symptoms and quality of life for people with end-stage heart failure. As is the case with nearly any other hemodynamically stable cardiac patient, participation in supervised exercise therapy is a valuable opportunity for these individuals to further improve their functioning, mobility and independence and may represent a future approach to optimizing their care.

A FAVORABLE IMPACT

Cardiac rehabilitation has a strong empirical foundation to support its value for improving physical and psychosocial outcomes in patients with ischemic heart disease or congestive heart failure and those who are postoperative for cardiovascular surgery. Comparatively less is known about prescribed exercise for LVAD recipients, in large part because the population is small and understudied. However, early evidence suggests that cardiac rehabilitation for these patients is safe and can be useful for improving strength, hemodynamic and exercise capacity, mobility, range of motion and quality of life.^{1,2}

Ultimately, the goal of cardiac rehabilitation for patients with mechanical circulatory support is the same as for any other participant: to improve functioning and activities of daily living while also ensuring proper attention is given to the medical and psychosocial nuances that accompany having one of these devices. And because LVAD recipients are living longer, interventions that improve their morbidity and quality of life, such as exercise therapy, are becoming increasingly relevant to their care.

SPECIAL PRECAUTIONS

Most cardiac rehabilitation therapists are accustomed to monitoring specific exercise-related parameters in their patients, such as heart rate, oxygen saturation and blood pressure. But extracorporeal devices cannot detect those levels through traditional means, like sphygmomanometer or pulse oximeter readings, because the equipment is continuously supplying mechanical circulatory support. Alternative measures, such as self-rated scales of exertion and shortness of breath, must be used to observe patient progress and determine whether the person needs to reduce his or her speed or workload.

Treatment protocols will also vary depending on whether the individual's LVAD placement is serving as bridge therapy versus destination therapy. A patient who is going to have the device for only a short time would probably have a less intensive and frequent dose of prescribed exercise.

The complex design of the LVAD itself can present challenges and safety matters. Patients wear an external battery that is connected to an implanted pump through a drive line that exits the body through the skin. Falls or accidental tangles with exercise equipment can pose a potential risk of causing lead fractures or disconnecting the pump from its power supply.

Dehydration is another concern. Loss of fluid, whether from sweating or through urination, will cause the device to fluctuate the blood flow, potentially leading to exercise intolerance, hypotension, fatigue or dizziness. It's critical that hydration be adequately maintained.

Most rehabilitation professionals are not trained on how to manage LVAD equipment or these patients' unique medical needs. At Kessler

Institute for Rehabilitation, we help bridge this gap by maintaining close ties with each device recipient's transplant team and coordinators to ensure that a nurse or advanced nurse practitioner is always available should difficulties arise during therapy.

Feelings of uncertainty regarding physical activity are not uncommon in LVAD recipients, who may fear that exercise will exacerbate their symptoms, like shortness of breath, or cause further damage to an already-decompensated heart. This underscores the importance of providing a fully integrated cardiac rehabilitation program that includes emotional support from psychologists and psychiatrists who can help patients who have anxiety, depression or poor coping skills.

Although more research is needed into the feasibility and efficacy of supervised exercise training for individuals with LVADs, the growing consensus is that, with proper vigilance to their unique medical needs, cardiac rehabilitation represents a valuable opportunity to help these patients optimize their health status and well-being.

¹ Ueno A, Tomizawa Y. "Cardiac rehabilitation and artificial heart devices." *J Artif Organs* 2009;12:90-97.

² Compostella L, Russo N, Setzu T, Bottio T, Compostella C, Tarzia V, Livi U, et al. "A practical review for cardiac rehabilitation professionals of continuous-flow left ventricular assist devices." *J Cardiopulm Rehab Prev* 2015;35:301-311.



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