FOCUS ON

Rehabilitation

A renewed focus: Preventing catheter-associated UTIs

BY TODD A. LINSENMEYER, M.D., KAREN LISZNER, R.N., CRRN, AND BRUCE POMERANZ, M.D., MMM

URINARY TRACT INFECTIONS (UTIs) are an inherent risk associated with any person who has an indwelling urinary catheter. In the rehabilitation population, intermittent catheterization is an important method of bladder management for those with neurogenic bladders. However, there is a wide range of conditions that require indwelling urinary catheterization. Due to the new Medicare reporting requirement, there has been a heightened interest in catheter-associated UTIs (CAUTIs). As of October 2012, the Centers for Medicare & Medicaid Services (CMS) has mandated that these infections be reported through the National Safety Healthcare Network. Failure to comply with the new reporting mandate will result in a reimbursement penalty.

The quality measure is designed for those with indwelling catheters. Those who develop a UTI on intermittent catheterization are not considered to have a catheter-associated infection.

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As the field evolves, who speaks for our patients?

EARLIER THIS YEAR we examined how advocacy created the field of medical rehabilitation, legislated civil rights for persons with disabilities (PWD) and shaped health care policy. But what is the patient’s perspective on all this?

Although advocacy is key to all medical specialties, physiatrists face unique challenges. Our patient population is diverse, ranging from infants to frail elders; experiencing musculoskeletal, neurological, cardiovascular or most any disease; and coming from all socioeconomic sectors. Furthermore, they are generally the most vulnerable and the least likely or able to speak for themselves, yet they tend to have the greatest care needs, often requiring months or years of costly medical and rehabilitation services.

Their heterogeneity aside, PWD share characteristics not seen in other medical domains. Notably, they require a multidisciplinary care team and benefit from a principal rehabilitation approach—care goals based on their residual abilities in the context of returning to the community.

While rehabilitation professionals consider PWDs’ commonalities, patients and their families focus on differences. Perceiving their disparate conditions—for example, brain injury and leg amputation—as having no common ground, they may ask, “How well could a singular approach represent my interests?”

Because PWD have an affinity with similarly affected individuals, all PWD don’t coalesce smoothly into one entity. Condition-specific organizations offer much in the way of support and information, but expecting them to advocate effectively on the broader issues of disability policy is unrealistic. Importantly, when patients primarily identify within their diagnosis, they too easily become a group with the fewest members—splintering and diluting their voices amid a cacophony of health care demands.

The most potent advocacy is that which represents the broadest-based population. And consolidating models such as the Consortium for Citizens with Disabilities (CCD) provide a mechanism for linking providers and advocacy groups.

A newer national alliance, the Coalition to Preserve Rehabilitation (CPR), organizes clinician, consumer and membership groups around maintaining access to services. Established in 2007 in response to legislative threats, CPR advocates for policies that protect Medicare payments to physicians and facilities. Negotiating fair reimbursement practices isn’t a priority for disease-based patient organizations. Yet this type of advocacy is essential at the most basic level, ensuring that rehabilitation providers remain in operation. With little public visibility, CPR has been very effective, submitting commentaries on many legislative and regulatory issues, including the so-called 75 percent rule.

We need only consider the federal policy landscape to understand what is effective—and what is at stake. The Affordable Care Act, which mandates rehabilitation services as an essential health benefit, can be a valuable blueprint as it provides access to comprehensive medical care for all Americans. Our best chance for maintaining its rehabilitation component is through coalitions like CCD and CPR. While individual condition-based groups should continue to speak out, the power to improve universal disability policy will come from collaborative efforts that prioritize the needs of the many beyond those of the few.
PARALYZED OUTPATIENTS are at particular risk for chronic edema of the legs, a swelling generated by an increase in the volume of interstitial fluid. Determining when and how to intervene can be challenging for rehabilitation professionals. Through screening and using appropriate treatment options, however, it is possible to optimally manage this condition.

The two main manifestations of the phenomenon are chronic venous insufficiency (CVI) and lymphedema. The former reflects impaired return of blood flow toward the heart through the veins, and the latter results from “leakage” of fluid from local and regional lymph vessels.

CVI is by far the more common of the two. Prevalence ranges from 10 to 15 percent among men and from 20 to 25 percent among women in the general population, with even higher rates among paralyzed persons.

Multiple Causes
Many factors can lead to the development of edema, with advancing age the main unmodifiable contributor. Systemic conditions—obesity, heart, liver and/or kidney disease—are a primary cause, and local sources include varicose veins or peripheral vascular disease in general. Drugs such as calcium channel and beta blockers, steroids, glitazones, hormones and nonsteroidal anti-inflammatories also could be involved, as could a history of radiation therapy for cancer. Finally, malnutrition and malabsorption, particularly of proteins, can heighten risk.

For paralyzed people, some degree of swelling and discoloration can be “normal” due to the effects of gravity and immobility. In such cases, observation might be all that is required. However, physicians should be alert for “red flags” such as pain, redness, excess warmth, or a sudden fluid volume increase or imbalance between the limbs, all of which should trigger urgent evaluation.

Signs and Symptoms
The differential diagnosis requires a thorough physical examination and diagnostic testing. If the onset of the swelling is sudden, unilateral, and, especially, accompanied by pain, the clinician should suspect deep vein thrombosis (DVT) and refer the patient immediately for imaging testing. If left untreated, DVT can result in a fatal pulmonary embolus.

The initial clinical assessment should also encompass a review of medications and evaluation of tenderness, pitting, skin changes, any existing varicosities and signs of global disease such as jaundice or facial edema. These findings help to identify the underlying basis of the swelling. For example, lymphedema is not typically associated with tenderness. Paleness of the skin indicates a cardiovascular rather than venous origin, but purplish discoloration typically reflects the reverse. Pitting can be a sign of venous insufficiency.

Tests will vary according to the suspected etiology but will likely comprise a complete blood count, urinalysis, electrolytes, creatinine, blood sugar, thyroid-stimulating hormone and albumin levels. Electrocardiography, echocardiography or both might be performed for persons with suspected cardiac disorders, and ultrasound or angiography might be indicated for those with possible local vascular abnormalities.

Interdisciplinary Collaboration
Prevention of DVT is the key to management in individuals with paralysis. During the initial inpatient stay, such measures typically include anticoagulants. If a contraindication exists, intermittent compression devices can be used instead. For outpatients, given that CVI is the most common reason for lower extremity swelling in older people, prevention is aimed at maintaining the normal movement of fluid in this area.

Standard methods of combating mild edema include elevating the legs for one to two hours, doing exercises such as the ankle pump and using over-the-counter compression stockings. If the fluid buildup or other signs, such as skin discoloration, become more severe, prescription compression hose, dressings or Unna boots could be used, and the patient might be referred for a physiatry consultation.

The underlying bases of any systemic problems also must be addressed. A nutritionist could advise on the value of a high-protein diet, for example. A thorough pharmacological review may yield alternative therapies that lessen the danger of edema.

Through interdisciplinary collaboration among physicians, therapists and nutritionists, the risk of this disorder can be minimized.
A proactive approach to fall prevention improves patient safety and satisfaction

Q&A WITH KAREN L. KEPLER, D.O., PH.D., AND MARY ANN BRIGANTE, R.N., MSN, CRRN

IT IS FAIRLY COMMON for patients in rehabilitation settings to experience neurocognitive deficits, such as confusion, as a result of stroke and traumatic brain injury, placing them at an increased risk of falling. They are not alone in this designation. Individuals with amputations, the elderly, and those who are not fully aware of their physical limitations may all experience mobility difficulties that make them more vulnerable to falls.

Currently, there is no national benchmark for fall rates in acute rehabilitation hospitals. Recent data, however, indicate that falls in inpatient rehabilitation settings may be as high as 16 falls per 1,000 patient days, compared with approximately 2.5 to 4 falls per 1,000 patient days in general hospital settings. Karen L. Kepler, D.O., Ph.D., director of neurocognitive rehabilitation, and Mary Ann Brigante, R.N., MSN, CRRN, director of nursing, both at Kessler Institute for Rehabilitation’s Chester campus, recently spoke with Focus on Rehabilitation about the increased risk of falls in rehabilitation facilities and how Kessler has initiated several measures to help prevent incidences.

Focus on Rehabilitation: How do falls affect patient recovery?
Karen L. Kepler, D.O., Ph.D.: They can be quite disruptive to the rehabilitation process. Even falls without an apparent injury can negatively affect a person’s confidence and result in increased pain or muscle soreness. In contrast, if there is a suspected injury, it may be necessary to do additional imaging studies to assess for fractures. In the case of suspected head trauma, we may have to transfer the patient out for a CT scan. As many of our patients are on blood thinners, we also have to be concerned about the risk of internal bleeding.

Mary Ann Brigante, R.N., MSN, CRRN: Some individuals may experience a psychological impact of being fearful of another incident or feeling the need to self-limit their activities, again even without injury. Patients may be more cautious, which is sometimes a good thing; the clinical staff may need to boost the person’s self-confidence by progressively increasing his or her mobility. Another negative impact of a fall is a potential loss of trust by the family. Our practice lends itself to transparency; after a fall, we notify the appropriate family member in order to discuss the event and any preventive measures that we have initiated.

IS PREVENTION THE BEST MEDICINE?

Results from a clinical trial recently published in Clinical Rehabilitation support the idea that prevention measures can be effectively applied to rehabilitation settings. Researchers at the University of Miami evaluated a comprehensive fall assessment and intervention program for geriatric rehabilitation patients wherein individuals were randomly assigned to one of two hospital wards: an intervention ward outfitted with fall prevention-related modifications, or a control ward. While the control ward utilized usual fall prevention and assessment procedures, the study ward provided additional features, including various environmental changes, such as ensuring clear pathways in the room and improved lighting, and enhancements in staff training.

The number of patient falls on each ward was compared before and three and six months following intervention. For the study ward, falls per 1,000 patient days prior to implementation was nearly double the number of falls that occurred post-intervention. In the usual care ward, the rates over time were essentially unchanged. Compared with the number of falls from three years prior to the study, the intervention ward had 43 percent fewer, while the control ward had 13 percent more. The absolute risk reduction from applying the intervention was 12 percent.

Focus: Along those lines, how are family members educated about the potential risk of their loved one falling?
Kepler: A risk assessment is always performed on admission by the registered nurse and communicated to the clinical team. It includes history of a fall in the past three months; impaired judgment or lack of safety awareness; exhibition of agitation; urgency or elimination resulting in incontinence; dizziness or vertigo; and impaired gait or unsteady walk. If someone appears to be a significant risk for a fall, we would discuss with the patient and the family the need for implementing certain safeguards.
Brigante: Upon admission, our clinical team starts a care plan, which may
include initiating preventive measures such as bed or wheelchair alarms, low beds with floor mats, or room/furniture rearrangements. We always try to involve the patient and the family and educate them about the reasons for our concerns.

**Focus:** What about staff education? How do you ensure that the rehabilitation team is properly prepared to handle falls or prevent them altogether?

**Brigante:** For all involved in direct patient care, there is mandatory safety and fall-prevention training during general employee orientation. Each staff member also completes an orientation in his or her assigned clinical area. We hold education fairs throughout the year, online courses and required annual competency reviews. The training is both didactic and hands-on, as appropriate. Reviews and updates are also an important focus of conversation at staff meetings and committees where we share data through the use of report cards. There is an organization-wide multidisciplinary committee titled “Stand Up for Safety” that oversees the fall prevention program, and each of the three Kessler campuses also has workgroups responsible for oversight.

**Focus:** Are there any other policies, programs and strategies used to minimize risk?

**Brigante:** Our standard for all patients is an hourly rounding model, but the nursing staff will increase the frequency of rounds for certain individuals at risk for falls, sometimes even as often as every 15 minutes. If necessary, we use one-to-one staffing where we assign a staff member to continuously monitor and reinforce safety strategies with the patient. Other options may include hip protectors for someone at a very high risk for injury, such as an elderly person with osteoporosis. After every fall, a team is convened, usually within 15 minutes, to review all potential contributing factors and to update the safety plan. However, the bottom line is, every patient needs an individual care plan based on his or her risks and behaviors, and it should be created by the entire clinical team along with the family and the individual.

**Kepler:** If a fall occurs, the hand-off communication between all team members is critically important. We need to understand the factors that may have precipitated the incident, such as decreased safety awareness or balance issues. Depending on the nature of the case, new strategies may be implemented. For example, the therapy team may reassess mobility status or ability to transfer safely. From a physician’s perspective, a review of medications, particularly a new drug or a recent change, may be a contributory factor. We also carefully review potential cardiac or neurological issues that may negatively impact a person’s safety.

**Focus:** Are quality measurements in place to assess effectiveness of these strategies?

**Brigante:** Management staff closely reviews every fall shortly after occurrence. Over time, we look for trends that may give some insight into areas requiring potential quality improvements or program changes. We do have report cards delineating the falls by campus, diagnostic group and level of injury that are reviewed by both campus and organization-wide committees.

**Kepler:** Falls are an important quality indicator in all health care settings. They are a potential cause of morbidity, and in extreme cases, mortality. We know that a strong prevention program positively impacts not only patient outcomes but also individual and family satisfaction. We strive for functional independence for our patients, but we have to balance that with their safety. Since such safety is the foundation of successful rehabilitation, at Kessler we are very proud of our ongoing efforts to prevent falls and optimize outcomes.

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Now what? The post-ruling impact of the Supreme Court’s ACA decision

BY BRUCE M. GANS, M.D.

NOW THAT THE SUPREME Court of the United States (SCOTUS) has ruled on the Affordable Care Act (ACA), what are the implications for health care and for rehabilitation medicine? The decision upheld the constitutionality of the law’s individual insurance mandate, but it invalidated provisions pertaining to Medicaid expansion— affirming states’ prerogatives to chart their own way. Essentially nothing else has changed, leaving almost all of the legislation’s programs in effect.

Many ACA elements that relate to our field remain operative. Although the law mandates “rehabilitative and habilitative services” as one of 10 essential health benefits categories, it lacks specification. Much in the way of opportunity and threat depends on how the term is defined.

Maintaining Momentum

Programs such as accountable care organizations, medical homes and bundled payment initiatives (BPI) continue to emphasize care coordination in making acute care hospitals and physicians interdependent. Rehabilitation clinicians have special skills in this arena, as their long-term perspectives can ease the inter- and intrafacility transitions of patients with complex conditions.

The Center for Medicare & Medicaid Innovation’s BPI offers opportunities to link acute and post-acute care services. By making entities accountable for outcomes over an expanded episode of care, it incentivizes collaboration and resource management.

In 2013, the ACA will require Medicare to trial another innovation known as the continuing care hospital (CCH). Theoretically, this model would simplify the post-acute environment by creating a new hospital provider type that offers all three inpatient levels—rehabilitation, long-term acute and skilled nursing—under a common payment system.

Because of the SCOTUS ruling, revised numbers of uninsured Americans will present major issues for both policymakers and our field. Initially, it was projected that the ACA would extend coverage to 32 million more people, split evenly between two programs. One expands Medicaid eligibility to people earning up to 133 percent of the federal poverty level. The other creates state health insurance exchanges enabling those with incomes of 134 to 400 percent of the poverty level to purchase affordable health care and to link acute and post-acute care services.

The court’s pronouncement that state Medicaid expansion is optional resulted in up to 16 million continuing to be uninsured. This unexpected, ongoing burden of uninsured patients, together with full ACA-mandated reimbursement cuts, will place extreme pressure on hospital operating budgets, risking closure of “discretionary” programs like rehabilitation units.

More Uncertainty Ahead

Legal, legislative and political challenges will compound health care policy uncertainty. ... Congress will face much unfinished business—some with profound impact on rehabilitation medicine.

The presidential election may have tremendous implications for health care. A new administration could dramatically upend the implementation of the ACA simply by executive actions and budgetary constraints. If Republican majorities

exist in both houses of Congress, virtually any health care policy changes are conceivable.

Going forward, we should anticipate continued pressure on reimbursement and on providers to justify the value of our services. As a minority patient population, persons with disabilities are especially vulnerable. The broadest-based advocacy on their—and the medical rehabilitation field’s—behalf will be the most effective. Because when lawmakers prioritize funding needs, they will favor well-represented, highly visible groups at the expense of smaller, less influential sectors. A patient population that doesn’t aggressively advocate for itself is at tremendous risk.

Now is also the time to stay vigilant and organized to facilitate rehabilitation medicine’s embrace by and integration into the post-acute care structure—and into the health care system as a whole.
A renewed focus: Preventing catheter-associated UTIs
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There are two specific definitions or types of CAUTIs for reporting purposes, symptomatic and asymptomatic bacteremic UTIs (ABUTIs). These types are differentiated by the presence or absence of symptoms as well as specifically outlined laboratory criteria. At Kessler Institute for Rehabilitation, data evaluation and reporting will be overseen by the Director of Quality Management and communicated back to each of our hospitals as part of the ongoing quality improvement efforts.

Joint Commission Recommendations
In addition to the CMS reporting requirement, the Joint Commission published guidelines in 2011, “Clinical Care Improvement Strategies: Preventing Catheter-Associated Urinary Tract Infections,” focused on the prevention of these infections. The recommendations include several standards of care such as proper hand hygiene and timely removal of a urinary catheter.

Other recommendations for prevention are emptying drainage bags before they become two-thirds full, choosing the smallest diameter tube, securing the device to avoid displacement or tissue damage, cleansing the perirethral area daily with soap and water, collecting urine samples aseptically, not routinely changing catheters unless obstruction or infections occur, and ensuring intake of 2 to 3 liters of fluid daily. Another recommendation is to use a “closed” system, meaning that the connections between the catheter, tubing and drainage bag should not be “opened” after the initial connection is made.

At Kessler, protocols for maintaining catheters and tracking the incidence of CAUTIs have been a long-term focus. Nurses are frequently educated on catheter management and they are to assess for signs and symptoms of a UTI at least once per shift. Physicians know that every individual is different and consider the entire clinical picture rather than just relying on specific symptoms or data in isolation before making a diagnosis. In some cases of suspected yet unconfirmed UTIs, waiting for the urine analysis and culture and sensitivity results can avoid overtreatment and unnecessary antibiotic use.

Exploring New Approaches
With policies already in place, nursing is continually looking for quality improvement opportunities based on the Joint Commission’s recommendations. Nursing identified and began using devices to secure the catheter tubing to prevent or reduce mucosal damage. The “closed” system presents a larger challenge since it means that no change to the drainage bag should occur once it is connected. Usually patients use a small “leg” bag during the day that facilitates concealment and mobility, and switch to a larger drainage bag in the evening. Nursing is now testing a dual-bag system that will allow urine to drain from the “leg” bag into another larger bag while maintaining the catheter system’s integrity.

Having guidance focused on CAUTIs from both the Joint Commission and the CMS reporting requirement has provided Kessler the opportunity to re-examine how catheterized persons are managed. We are looking for new methods that will help to strategize consistent, quality care. If expediting catheter removal is not the best clinical approach, then it should not be done.

CMS requires that CAUTIs be reported as the number of infections per patient catheter days. Obviously, removal of a catheter should only be done when it is clinically indicated, regardless of the impact on CAUTI rates. The recommendation to remove catheters in a timely manner remains a clinical decision that should be based on what is best for the patient.

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