

Industry Trends

New Study Released on the Economic Value of Professional Nursing

A study quantifying the economic value of nursing is the first of its kind and is published in the January 2009 issue of *Medical Care*. According to a December 24, 2008, press release from the American Nurses Association (ANA), the study was conducted by the Lewin Group, a healthcare policy research and management consulting firm, and supported by grants from Nursing's Agenda for the Future, the ANA, and a coalition of nursing associations dedicated to addressing nursing workforce issues.

The economic implications of changes in registered nursing staff levels were determined based on a meta-analysis of the relationship between higher staffing levels and patient outcomes. These outcomes included reductions in hospital-related mortality, hospital-acquired pneumonia, unplanned extubation, failure to rescue, nosocomial bloodstream infections, and length of stay. The study's authors assert that reduced length of recovery and mortality have consequences on national productivity, although not all services provided by professional nurses can be quantified.

The study's authors examined the relationship between changes in RN hours per patient day (HPPD) and changes in nurse-sensitive patient outcomes (NSOs). To do this, the authors used estimates of incidence and cost based on data from the 2005 Nationwide Inpatient Sample (NIS) and included a comprehensive analysis of 28 different studies found to evaluate the relationship between higher RN staffing and patient outcomes. These studies demonstrated that increases in nursing staffing levels were linked to decreased risk of patient complications and hospital length of stay, resulting in medical costs savings, improved national productivity, and increase lives saved.

In ANA's press release, President Rebecca M. Patton, MSN RN CNOR, said, "This nursing-funded study provides a model that shows how nurses affect the delivery of cost-effective, high-quality care, and prevent adverse events." The study's findings also pose concerns about issues related to policies that prevent healthcare facilities from fully realizing the economic value of nurses.

Read more about the study and its findings by visiting <http://www.lww-medicalcare.com/pt/re/medcare/fulltext.00005650-200901000-00014.htm>.

To Bridge or Not to Bridge: One Protocol Doesn't Necessarily Fit All

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The debate over when and how to anticoagulate after cardioembolic acute ischemic stroke is a continuing clinical dilemma. After years of research and several published studies, the most recent of which appeared in *Archives of Neurology* (Hallevi et al., 2008), there are still no definitive answers. *Guidelines for the Early Management of Adults with Ischemic Stroke* (Adams et al., 2007) does not recommend early anticoagulation with the goal of "preventing early recurrent stroke, halting neurologic worsening, or improving outcomes" (p. 1680).

We know that patients with atrial fibrillation (afib) and multiple risk factors are particularly vulnerable to secondary strokes (Baruch et al., 2007), but it's been identified that

early anticoagulation carries a higher risk of hemorrhagic conversion. Hallevi and colleagues (2008) found that hemorrhagic conversion had a bimodal occurrence, the first within 3 days of the stroke, and the second after 9 days. Late hemorrhagic conversion with mass effect was observed in 10% of the group bridged with enoxaparin, and 17% showed some type of hemorrhagic conversion. The group that was bridged with heparin was associated with benign hemorrhagic conversion (9%) and a small risk of systemic bleeding (5%).

As with most clinical decisions, there needs to be a risk/benefit consideration. A discussion between a cardiologist and neurologist should take into account a patient's medical history, the most recent events and findings, and the goal of clinical care. The discussion should include the following:

1. Is there a history of afib, stroke/transient ischemic attack (TIA), cardiovascular disease, or cardiac surgery?
2. Does the patient have a mechanical valve or stents?
3. Is there a history of or current uncontrolled high blood pressure?
4. Has the patient been on warfarin in the past, and, if so, were there complications?
5. Is there a significant family history?
6. What is the patient's age?
7. What are the patient's current stroke deficits and treatment goals?
8. What is the size and source of current stroke?
9. Is there a Protein C deficiency or other hypercoagulable state?
10. Is a thrombus present on transesophageal echocardiography (TEE)?
11. Is there a patent foramen ovale?

In acknowledgement of the findings by Hallevi and colleagues, if a patient at Morristown Memorial Hospital in Morristown, NJ, is not considered to be at moderate-to-high risk for recurrent stroke and is admitted with a cardioembolic stroke due to afib, we will usually treat with aspirin in the short term. Many times, the patient is started on warfarin without a bridge to decrease the risk of bleeding. However, if the patient presents with a small stroke, we may start anticoagulation within a few days using a heparin bridge. Many patients come with comorbidities that can bring a much higher risk of secondary stroke if they are not started on anticoagulation early. There are also patients who have larger strokes; after a discussion between the cardiologist and neurologist, they decide the benefit outweighs the risk and anticoagulation with a heparin bridge is started in the first few days.

Whenever the decision is made to start anticoagulation, a repeat head CT scan is performed to evaluate for hemorrhagic conversion before treatment begins (cardioembolic strokes come with a greater risk of hemorrhagic conversion even without anticoagulation). Whether it is decided to start IV heparin within a couple of days or warfarin with no bridge in several days, a CT scan should be considered to ensure blood is not present before beginning anticoagulation (especially with larger strokes). After anticoagulation is started, nurses should be educated on the risk for hemorrhagic conversion. When a heparin bridge is used, a bolus dose of heparin is not usually given and the patient is monitored closely with frequent neurological assessments. If there is worsening of symptoms or a sudden onset of neurological change, the patient should have another CT scan to rule out hemorrhagic conversion. After the patient's discharged, the rehabilitation center should be educated about the patient's risk for late

hemorrhagic conversion. The nurses and therapists at the rehabilitation center should be taught to monitor for a worsening of symptoms or sudden neurological change and to expedite a repeat head CT scan if the patient has a neurological change in status.

The decision “to bridge or not to bridge” and the time at which it is best to start anticoagulation therapy for patients with acute ischemic stroke is not a decision that can fall under the realm of a specific protocol. At Morristown Memorial Hospital, it is our current practice to be sure to complete a CT scan of the head just before the start of anticoagulation therapy to ensure that no blood is present before therapy begins. Practitioners need to be cognizant of the literature and consider the risk/benefit ratio, stratifying risk and benefits for each patient. An interdisciplinary-team approach should be used and a collaborative decision should be made. Information about possible complications should be relayed to practitioners who care for these patients to ensure frequent neurological monitoring and diagnostic and emergent CT when indicated.

References

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nutritionDay Moves to the United States

The American Society for Parenteral and Enteral Nutrition (ASPEN) is challenging healthcare colleagues to support a new annual event, nutritionDay U.S. A joint initiative of the nutritionDay-Global Team, this event focuses on gathering nutrition intake and patient outcome data for patients in the United States. It is an opportunity to increase awareness of the prevalence of disease-related malnutrition in the United States through patient monitoring and benchmarking.

This event has already been successful in more than 25 countries, led by the European Society of Parenteral and Enteral Nutrition, and now ASPEN seeks participation from U.S. hospitals. The nutritionDay-Global Team aims to have 100 participate by collecting data on one day—November 5, 2009—on one inpatient unit or intensive care unit in each facility.

For more information on how your facility can participate, contact the U.S. coordinator at 847/254-2034 or nutritiondayus@gmail.com. Information on the European nutritionDay can be found at www.nutritionday.org.