Neurohospitalists and Patient Safety: Lessons Learned in 2013

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Hospitalization remains unacceptably risky, as recent studies indicate the incidence of adverse events has improved only marginally over the past several years.¹ This disappointing reality has prompted safety experts to call for shifting focus from interventions to prevent individual adverse events to redesigning systems of care to improve safety across multiple dimensions. Neurohospitalists care for patients who are particularly vulnerable to errors and therefore play a key role in improving patient safety. In this article, we review 2013's most important patient safety developments relevant for neurohospitalists (and frontline clinicians in general).

Specific Practices Neurohospitalists Should Implement

The seminal *Making Health Care Safer* report, issued in 2001 by the Agency for Healthcare Research and Quality (AHRQ), galvanized the safety field by issuing evidence-based recommendations to prioritize safety efforts.² Published this past year, the follow-up *Making Health Care Safer II* again used a rigorous process to review the evidence supporting 41 commonly used safety practices.³ The authors identified 10 "strongly recommended" practices suitable for wide implementation; Table 1 summarizes those most relevant for neurohospitalists. Implementation of these practices has been shown to result in decreased rates of health care-associated infections, pressure ulcers, and hospital-acquired deep venous thromboses.

Improving Patient Safety at the System Level

The most important contribution of *Making Health Care Safer II* may be its emphasis on the need to redesign systems of care to improve safety for all patients. Although this work will require multidisciplinary efforts and engagement of expertise from other industries, there are 2 ways in which neurohospitalists can contribute to improving flawed systems of care.

Eliminating Waste in Health Care

The issue of overuse of unnecessary health care services was widely discussed in 2013, with the Institute of Medicine estimating that US\$750 billion is spent annually on care that does not result in improved health outcomes.⁴ Policy initiatives within the Affordable Care Act seek to realign hospitals' financial incentives to focus on the provision of value (defined as quality divided by cost) rather than merely reward production.⁵ In addition, professional organizations have developed the "Choosing Wisely" campaign to provide frontline clinicians with guidance on targeting overuse of low-value, nonevidence-based practices. In 2013, both the American Academy of Neurology (AAN) and the Society of Hospital Medicine (SHM) joined more than 50 specialty societies that have released a list of "Five things that physicians and patients should question."⁶⁻⁸ The low-value practices targeted by the AAN and SHM include many relevant for neurohospitalists, such as avoiding carotid artery imaging in patients admitted with syncope and unnecessary use of urinary catheters (Table 2).

Developing a Culture of Patient Safety

High-risk industries (such as aviation and nuclear power) have long recognized the importance of developing a "culture of safety," characterized by continual efforts to improve safety through encouraging a blame-free approach to reporting and analyzing safety problems and engaging both leadership and frontline clinicians in addressing safety issues. A robust safety culture is essential to ensure that specific interventions can be implemented to improve safety. Two analyses published in

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Table 1. “Strongly Encouraged” Patient Safety Practices From the AHRQ Making Health Care Safer II Report Most Relevant for Neurohospitalists.

Patient Safety Practice
Practices to prevent health care-associated infections
Bundles that include checklists to prevent central line-associated blood stream infections
Interventions to reduce urinary catheter use which include catheter reminders, stop orders, or nurse-initiated removal protocols
Bundles that include elevation of head-of-bed, sedation vacations, oral care with chlorhexidine, and subglottic suctioning endotracheal tubes to prevent ventilator-associated pneumonia (VAP)
Hand hygiene
Practices to prevent specific adverse events
Multicomponent interventions to reduce pressure ulcers
Interventions to improve prophylaxis for venous thromboembolism
Documentation of patient’s advanced care planning desires
Practices to reduce radiation exposure from fluoroscopy and CT scans

Abbreviations: AHRQ, Agency for Healthcare Research and Quality; CT, computed tomography.

Table 2. “Choosing Wisely” Recommendations From the American Academy of Neurology and the Society of Hospital Medicine.^a

American Academy of Neurology Choosing Wisely Recommendations	Society of Hospital Medicine Choosing Wisely Recommendations
1. Don’t perform EEGs for headaches	1. Do not place, or leave in place, urinary catheters for incontinence or convenience, or monitoring of output for noncritically ill patients (acceptable indications: critical illness, obstruction, hospice, perioperatively for <2 days, or urologic procedures; use weights instead to monitor diuresis)
2. Don’t perform imaging of the carotid arteries for simple syncope without other neurologic symptoms	2. Do not prescribe medications for stress ulcer prophylaxis to medical inpatients unless at high risk for GI complication
3. Don’t use opioids or butalbital for treatment of migraine, except as a last resort	3. Avoid transfusing red blood cells just because hemoglobin levels are below arbitrary thresholds such as 10, 9, or even 8 mg/dL in the absence of symptoms
4. Don’t prescribe interferon- β or glatiramer acetate to patients with disability from progressive, nonrelapsing forms of multiple sclerosis	4. Avoid overuse/unnecessary use of telemetry monitoring in the hospital, particularly for patients at low risk of adverse cardiac outcomes
5. Don’t recommend carotid endarterectomy for asymptomatic carotid stenosis unless the complication rate is low (<3%)	5. Do not perform repetitive CBC and chemistry testing in the face of clinical and lab stability

Abbreviations: EEG, electroencephalogram; CBC, complete blood count; GI, gastrointestinal.

^a The complete lists from all participating societies, along with explanations and references for each recommendation, are available at www.choosingwisely.org.

2013 identify challenges to establishing safety culture and evidence-based methods for improving safety culture.

The United Kingdom’s National Health Service (NHS) has suffered high-profile safety failures in the recent years, prompting an exhaustive mixed-method analysis of safety culture within the NHS.⁹ The investigators found wide variation in safety culture between and within institutions, with high- and low-performing units often coexisting within a single hospital—a finding that will not surprise anyone whose practice spans multiple units or sites of care. The barriers to improving safety culture included a lack of actionable data, suboptimal organizational and information systems, and variations in staff and leadership commitment. This study, as well as a systematic review performed as part of *Making Health Care Safer II*, did identify ways that organizations can improve safety culture.¹⁰ The priorities should include active engagement of frontline providers in error reporting and analysis, an explicit

commitment between clinicians and leadership to prioritize safety, structured approaches to improve communication between disciplines, and formal teamwork training where possible. Although some of these interventions require additional resources and commitment, frontline clinicians can emphasize safety culture through everyday actions such as reporting safety hazards, openly discussing errors, and treating the entire health care team with respect (especially after an error occurs).

Conclusions

Neurohospitalists are ideally positioned to improve patient safety at their institutions through their role in caring for complex hospitalized patients and as consultants interfacing with multiple specialties and disciplines. Neurohospitalists should partner with safety champions to introduce the practices

strongly recommended in the AHRQ *Making Health Care Safer II* report and should help shape safer systems of care by minimizing overuse of unnecessary care and establishing a culture of safety.

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References

1. Wang Y, Eldridge N, Metersky ML, et al. National Trends in Patient Safety for Four Common Conditions, 2005-2011. *N Engl J Med*. 2014;370(4):341-351.
2. Shojania KG, Duncan BW, McDonald KM, Wachter RM, eds. *Making Health Care Safer: A Critical Analysis of Patient Safety Practices*. Rockville, MD: Agency for Healthcare Research and Quality; 2001.
3. Shekelle PG, Wachter RM, Pronovost PJ, eds. *Making Health Care Safer II: An Updated Critical Analysis of the Evidence for Patient Safety Practices*. Rockville, MD: Agency for Healthcare Research and Quality; 2013.
4. Institute of Medicine. Committee on the Learning Health Care System in America. *Best Care at Lower Cost: The Path to Continuously Learning Health Care in America*. Washington, DC: National Academies Press; 2012.
5. VanLare J, Conway P. Value-based purchasing—national programs to move from volume to value. *N Engl J Med*. 2012; 367(4):292-295.
6. Langer-Gould AM, Anderson WE, Armstrong MJ, et al. The American Academy of Neurology's top five choosing wisely recommendations. *Neurology*. 2013;81(11):1004-1011.
7. Bulger J, Nickel W, Messler J, et al. Choosing wisely in adult hospital medicine: five opportunities for improved healthcare value. *J Hosp Med*. 2013;8(9):486-492.
8. American Board of Internal Medicine Foundation. Choosing Wisely—An Initiative of the ABIM Foundation. <http://choosingwisely.org/>. Accessed January 14, 2013.
9. Dixon-Woods M, Baker R, Charles K, et al. Culture and behaviour in the English National Health Service: overview of lessons from a large multimethod study. *BMJ Qual Saf*. 2014; 23(2):106-115.
10. Weaver SJ, Lubomksi LH, Wilson RF, Pfoh ER, Martinez KA, Dy SM. Promoting a culture of safety as a patient safety strategy: a systematic review. *Ann Intern Med*. 2013;158(5 pt 2):369-374.