The Critical Importance of Stress Testing Before Low-Risk Antibiotics "Just-In-Case" in a Bedside Encounter

Delirium is an acute disorder with high morbidity and mortality, which is often preventable through multicomponent nonpharmacologic strategies. In a meta-analysis that included 14 studies, Hsieh and colleagues evaluated evidence on these delirium interventions in reducing incident delirium and preventing poor outcomes associated with delirium. Overall, 11 studies demonstrated significant reductions in delirium incidence, and rate of falls decreased significantly among intervention patients in 4 studies. Greysen provides an Invited Commentary.

Mindfulness Meditation in Sleep-Disturbed Adults

To determine the efficacy of a mind-body medicine intervention to promote sleep quality in older adults with moderate sleep complaints, Black and colleagues conducted a randomized clinical trial to test a mindfulness meditation program against a sleep hygiene education intervention across a 6-week period. Findings from the trial showed that the use of a community-accessible, mindfulness meditation program resulted in improvements in sleep quality and sleep-related daytime impairments immediately after the intervention, which were superior to a sleep hygiene education program. Spira provides an Invited Commentary.

Research Misconduct Identified by the FDA

Every year, the US Food and Drug Administration (FDA) inspects hundreds of clinical sites and on occasion finds evidence of substantial departures from good clinical practice, of research misconduct, and even of fraud. However, the FDA has no mechanism whereby such findings are communicated to the scientific community. As Seife shows, this results in a situation where research misconduct that had been detected by a government agency—sometimes misconduct grave enough to result in criminal charges—usually goes unnoticed and unremarked in the peer-reviewed literature.

## Research

### Mindfulness Meditation in Sleep-Disturbed Adults

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### HEALTH CARE REFORM

### Effectiveness of Multicomponent Nondrug Delirium Interventions

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### Functional Trajectories Before and After Critical Illness

In a prospective cohort study, Ferrante and colleagues evaluated the course of disability (ie, functional trajectories) in the year immediately before and after critical illness among 291 older persons. Three distinct functional trajectories were identified in the year before and after critical illness: minimal disability, mild to moderate disability, and severe disability. More than half of the participants experienced significant functional decline over the following year or died within 1 month of intensive care unit (ICU) admission, with particularly poor outcomes among those who had high levels of pre-ICU disability. The pre-ICU trajectories of mild to moderate and severe disability were associated with more than double and triple the risk of death within 1 year of critical illness, respectively. These results underscore the importance of pre-ICU functional trajectory on the course of disability and mortality after critical illness. Covinsky provides an Editor’s Note.

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Blood Pressure in Cognitively Impaired Elderly Patients

The prognostic role of high blood pressure in cognitively impaired older patients is still unclear. In an observational cohort study conducted with ambulatory blood pressure monitoring in this population, for 9 months Mossello and colleagues followed up 172 patients with dementia or mild cognitive impairment referred to 2 outpatient memory clinics. Participants with a daytime systolic blood pressure of 128 mm Hg or lower at baseline showed a greater cognitive decline compared with those with normal to high (129-144 mm Hg) and elevated (≥145 mm Hg) values. Sabayan and Westendorp provide an Invited Commentary.

HIV Transmission Along the Care Continuum

Previous analyses of the human immunodeficiency virus (HIV) care continuum have focused only on its clinical implications for reducing morbidity and mortality rather than the potential benefits for HIV prevention. Using 3 national HIV surveillance systems to combine data on sexual and drug use behavior with information on HIV viral load, Skarbinski and colleagues estimated the rate and number of HIV transmissions attributable to persons with HIV at each of the 5 care continuum steps. Undiagnosed persons infected with HIV (18.1% of total HIV-infected population) and persons diagnosed as having HIV but not retained in care (45.2% of population) were responsible for 91.5% (30.2% and 61.3%, respectively) of the estimated 45,000 HIV transmissions in 2009. Giordano provides an Invited Commentary.

Opioid Duration of Action and Risk of Unintentional Overdose

To assess whether the risk of unintentional overdose injury is associated with the duration of opioid action, Miller and colleagues examined veterans with chronic painful conditions who initiated therapy with opioid analgesics between January 1, 2000, and December 31, 2009. A total of 319 unintentional overdose events were observed. Patients initiating therapy with long-acting opioids were more than twice as likely to overdose compared with persons initiating therapy with short-acting opioids. Findings from this study provide evidence that unintentional overdose injury is related to the prescribed opioid’s duration of action. Katz provides an Editor’s Note.

Sexually Transmitted Infections After HPV Vaccination

Using a large, longitudinal insurance database of US female adolescents aged 12 to 18 years insured between 2005 and 2010, Jena and colleagues examined whether human papilloma virus (HPV) vaccination was associated with an increase in incident sexually transmitted infections (STI) among female adolescents who were vaccinated compared with those who were not. In a difference-in-difference analysis to compare changes in STI rates among HPV-vaccinated females before and after vaccination (index quarter) with changes among age-matched nonvaccinated females before and after the index quarter, HPV vaccination was not associated with an increase in STIs, suggesting that HPV vaccination is unlikely to promote unsafe sexual activity. Bednarczyk provides an Invited Commentary.