In patients recovering from surgery, the goals of mechanical ventilation are to open collapsed alveoli and improve gas exchange while minimizing barotrauma to the lungs. This single-center randomized clinical trial by Leme and colleagues randomized 320 patients requiring mechanical ventilation after cardiac surgery to undergo lung inflation maneuvers at higher vs lower airway pressures to recruit alveoli while maintaining a low tidal volume to minimize barotrauma. The patients who received lung inflation at higher pressures had less severe pulmonary complications. In an Editorial, Neto and Schultz discuss the benefits and harms of ventilation strategies for patients with severe lung injury.

Editorial 1413
CME jamanetworkcme.com

US Norepinephrine Shortage and Mortality

In 2011 to 2012, the United States experienced a severe nationwide shortage of norepinephrine, the first-line vasopressor for treatment of hypotension in patients with septic shock. To assess potential harms of this shortage, Vail and colleagues conducted a retrospective cohort study of 27,835 patients with septic shock admitted to 26 US hospitals with at least 1 quarter of norepinephrine shortage in 2011. Patients admitted to these hospitals during times of shortage had greater in-hospital mortality. In an Editorial, Donohue and Angus recommend 5 broad solutions for preventing shortages of sterile injectable drugs.

Editorial 1415
CME jamanetworkcme.com

Vascular Risk Factors and Brain Amyloid Deposition

Hypertension, diabetes, smoking, and hypercholesterolemia are risk factors for Alzheimer disease, but it is not known whether this risk is mediated by an increase in amyloid deposition. In a prospective cohort study of 322 participants aged 45 to 64 years who were free of dementia at baseline and were followed up for 20 years or more, Gottesman and colleagues found that midlife exposure to vascular risk factors was associated with amyloid deposition in later life; this finding is consistent with a role of vascular disease in the development of Alzheimer disease.
Research (continued)

Spinal Manipulative Therapy and Acute Low Back Pain 1451
Common treatments for acute back pain include heat, analgesics, muscle relaxants, exercises, physical therapy, and spinal manipulation. Systematic reviews have reached different conclusions about the effectiveness of spinal manipulation compared with nonmanipulative therapies. In this review by Paige and colleagues of 26 randomized clinical trials, spinal manipulative therapy was associated with modest improvements in acute low back pain and function at up to 6 weeks, with transient minor musculoskeletal harms. In an Editorial, Deyo discusses the potential benefits of spinal manipulative therapy and explains how it may relieve pain.

Editorial 1418

Clinical Review & Education

Vital Directions for Health and Health Care 1461
Dzau and colleagues review and synthesize the findings of 19 National Academy of Medicine-commissioned white papers on infrastructure and policy priorities considered essential to improving health and health care in the United States. In an Editorial, Berwick suggests that national adoption of this template for change would result in better health care quality, better health status, and more sustainable health care costs.

Editorial 1420

CME jamanetworkcme.com

Acute Anuric Renal Failure in an 80-Year-Old Man 1471
This JAMA Clinical Challenge article by Summa and Jain presents a man with hypertension, gastroesophageal reflux disease, chronic kidney disease, and anuria who was tested for multiple myeloma. What would you do next?

From The Medical Letter: Lifitegrast (Xiidra) for Dry Eye Disease 1473
This Medical Letter on Drugs and Therapeutics article discusses the safety and effectiveness of an anti-inflammatory ophthalmic solution for treatment of the symptoms of dry eye disease.

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Editor's Audio Summary
Derek C. Angus, MD, MPH, summarizes and comments on this week’s issue.

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