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## ARTICLES

### **Intensive Intraoperative Insulin Therapy versus Conventional Glucose Management during Cardiac Surgery. A Randomized Trial** 233

G.Y. Gandhi, G.A. Nuttall, M.D. Abel, C.J. Mullany, H.V. Schaff, P.C. O'Brien, M.G. Johnson, A.R. Williams, S.M. Cutshall, L.M. Mundy, R.A. Rizza, and M.M. McMahon  
To determine whether rigorous intraoperative glycemic control reduces death and morbidity in cardiac surgery patients, the authors randomly assigned 400 cardiac surgical patients to tight glycemic control during surgery or to usual intraoperative care. All patients received tight glycemic control in the cardiac intensive care unit. The groups had the same rate of perioperative adverse events. However, the intensive treatment group had more strokes (8 vs. 1 in the control treatment group) and more deaths (4 vs. 0 in the control treatment group). Tight intraoperative control of blood glucose offered no advantage and may cause harm.

### **A Quantitative Immunochemical Fecal Occult Blood Test for Colorectal Neoplasia** 244

Z. Levi, P. Rozen, R. Hazazi, A. Vilkin, A. Waked, E. Maoz, S. Birkenfeld, M. Leshno, and Y. Niv  
The authors measured the sensitivity and specificity of quantitative immunochemical measurement of fecal hemoglobin for detecting cancer and advanced adenoma in 1000 patients undergoing colonoscopy for various indications. Hemoglobin content was highest in samples from people with cancer and advanced adenomas. Fecal hemoglobin content greater than 75 ng/mL has a sensitivity and specificity of 67% and 91%, respectively, for cancer or advanced adenoma. Positive and negative likelihood ratios were 7.8 and 0.36, respectively. The sensitivity and specificity for cancer was 94.1% and 87.4%, respectively. Performance of this test is superior to that of guaiac-based tests.

### **The Effectiveness of a Primer to Help People Understand Risk. Two Randomized Trials in Distinct Populations** 256

S. Woloshin, L.M. Schwartz, and H.G. Welch  
Many studies have shown that patients have difficulty with understanding risk information. This study assessed a method to teach better interpretation skills. Adults with high socioeconomic status (SES) were randomly assigned to receive a primer about understanding risk or a general health booklet. A separate trial randomly assigned low SES patients to the same interventions. In both SES groups, adults receiving the primer were more likely to pass a medical data

interpretation test. They also expressed greater interest in medical statistics but not greater confidence in interpreting statistics. Most participants considered the primer to be helpful or very helpful.

### **Brief Communication: Tolerability of Meropenem in Patients with IgE-Mediated Hypersensitivity to Penicillins** 266

A. Romano, M. Viola, R.-M. Guéant-Rodriguez, F. Gaeta, R. Valluzzi, and J.-L. Guéant  
The authors performed skin tests with penicillin and meropenem in 104 patients with a history of immediate reaction to penicillin. Every patient had a positive skin test result with penicillin, but only 1 patient had a positive skin test result with meropenem. None of the 103 patients with negative results on the meropenem skin test had an allergic reaction after an intravenous meropenem challenge. Penicillin and meropenem seldom crossreact, suggesting that avoiding meropenem in patients with penicillin allergy is not necessary.

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## IMPROVING PATIENT CARE

### **Automated Review of Electronic Health Records to Assess Quality of Care for Outpatients with Heart Failure** 270

D.W. Baker, S.D. Persell, J.A. Thompson, N.S. Soman, K.M. Burgner, D. Liss, and K.S. Kmetik  
In this study, Baker and colleagues compared automated review of electronic health record (EHR) fields with automated review followed by manual review of the EHR to assess the quality of care of out patients with heart failure. Automated review of EHR data was similar to hybrid review for measuring left ventricular ejection fraction, prescription of  $\beta$ -blockers, and prescription of angiotensin-converting enzyme inhibitors or angiotensin-receptor blockers. However, automated queries often underestimated provider performance for prescribing warfarin for atrial fibrillation because the queries did not detect documentation of legitimate reasons for not prescribing warfarin.

## REVIEWS

### **Meta-analysis: Anticoagulant Prophylaxis to Prevent Symptomatic Venous Thromboembolism in Hospitalized Medical Patients** 278

F. Dentali, J.D. Douketis, M. Gianni, W. Lim, and M.A. Crowther  
Anticoagulant prophylaxis for hospitalized medical inpatients at risk for venous thromboembolism (VTE) is underutilized. The goal of this meta-analysis of randomized trials was to

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assess the effects of anticoagulant prophylaxis in reducing VTE in hospitalized medical patients. The authors found that prophylaxis with anticoagulants (unfractionated heparin, low-molecular-weight heparin, or fondaparinux) is effective in preventing symptomatic VTE.

**Systematic Review: The Value of the Periodic Health Evaluation** 289

L.E. Boulware, S. Marinopoulos, K.A. Phillips, C.W. Hwang, K. Maynor, D. Merenstein, R.F. Wilson, G.J. Barnes, E.B. Bass, N.R. Powe, and G.L. Daumit

The authors did a systematic review of studies comparing receipt of preventive services, clinical outcomes, and costs among patients receiving the periodic health evaluation (PHE) or receiving usual care. The evidence suggests that the PHE improves delivery of some recommended preventive services and may reduce patient worry. The long-term benefits, harms, and costs of receiving the PHE are less well-understood. However, the evidence of benefit in this study justifies the PHE.

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**The Primary Care–Specialty Income Gap: Why It Matters** 301

T. Bodenheimer, R.A. Berenson, and P. Rudolf

Most experts believe that payment reform is essential to guarantee a healthy primary care base to the U.S. health care system. This article discusses the process used to set reimbursement for patient care services. This process is an important reason for the widening gap between the incomes of primary care physicians and those of many specialists. This income disparity is important because lower primary care incomes discourage medical school graduates from choosing primary care careers.

**EDITORIALS**

**Does Tight Blood Glucose Control during Cardiac Surgery Improve Patient Outcome?** 307

G. Van den Berghe

The success of a previous postsurgical intervention in cardiac patients who had tight blood glucose control after cardiac surgery raised the question of whether such control in patients with or without diabetes could further improve patient outcomes. Gandhi and colleagues randomly assigned 400 patients to receive either intensive insulin therapy or conventional therapy during surgery. The study clearly shows that adding tight blood glucose control during surgery does not cause a large additional benefit compared with starting tight blood glucose control in intensive care.

**Quantitative Immunochemical Fecal Occult Blood Tests: Is It Time to Go Back to the Future?** 309

T.F. Imperiale

Immunochemical fecal occult blood tests (I-FOBTs) provide a

superior alternative to the standard guaiac-based tests. Levi and coworkers show that the I-FOBT is more sensitive and specific than the guaiac-based tests for detecting occult bleeding. In addition, the I-FOBT output is a continuous variable, which means that a clinician can choose a positivity threshold to suit the patient's clinical characteristics. Screening rates for colorectal cancer should be similar to breast and cervical cancer screening rates. Quantitative I-FOBT may be the key to reaching that goal.

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