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19 April 2005 142 8 593-724

## ARTICLES

### **Clinical and Economic Implications of the Multicenter Automatic Defibrillator Implantation Trial-II** 593

S.M. Al-Khatib, K.J. Anstrom, E.L. Eisenstein, E.D. Peterson, J.G. Jollis, D.B. Mark, Y. Li, C.M. O'Connor, L.K. Shaw, and R.M. Califf

The Multicenter Automatic Defibrillator Implantation Trial (MADIT)-II showed that the implantable cardioverter defibrillator (ICD) prolongs life in patients with a history of myocardial infarction and an ejection fraction of 0.3 or less. Implanting defibrillators in everyone who meets these criteria will be expensive, but it is cost-effective because ICD therapy had such a large effect on survival in MADIT-II.

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### **Cost-Effectiveness of Defending against Bioterrorism: A Comparison of Vaccination and Antibiotic Prophylaxis against Anthrax** 601

R.A. Fowler, G.D. Sanders, D.M. Bravata, B. Nouri, J.M. Gastwirth, D. Peterson, A.G. Broker, A.M. Garber, and D.K. Owens

In the event of an aerosolized *Bacillus anthracis* bioweapon attack over an unvaccinated metropolitan U.S. population, postattack vaccination plus antibiotic therapy is the most effective and least expensive strategy.

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### **The Effect of Metformin and Intensive Lifestyle Intervention on the Metabolic Syndrome: The Diabetes Prevention Program Randomized Trial** 611

T.J. Orchard, M. Temprosa, R. Goldberg, S. Haffner, R. Ratner, S. Marcovina, and S. Fowler, for the Diabetes Prevention Program Research Group

At the beginning of the Diabetes Prevention Program, half of the participants had the metabolic syndrome. Both the lifestyle intervention and metformin therapy reduced the incidence of the syndrome in the remaining participants.

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### **Brief Communication: High Incidence of Venous Thrombotic Events among Patients with Wegener Granulomatosis: The Wegener's Clinical Occurrence of Thrombosis (WeCLOT) Study** 620

P.A. Merkel, G.H. Lo, J.T. Holbrook, A.K. Tibbs, N.B. Allen, J.C. Davis Jr., G.S. Hoffman, W.J. McCune, E.W. St. Clair,

U. Specks, R. Spiera, M. Petri, and J.H. Stone, for The Wegener's Granulomatosis Etanercept Trial Research Group

The authors measured the rate of venous thromboembolism in a cohort of 180 patients with active Wegener granulomatosis. The annual rate is 7.0 per 100 persons in these patients. A population of healthy people of similar age had an annual rate of 0.31 per 100 persons. Active Wegener granulomatosis is a risk factor for venous thromboembolism.

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## IMPROVING PATIENT CARE

### **Ambiguity and Workarounds as Contributors to Medical Error** 627

S.J. Spear and M. Schmidhofer

We ask: Do medical errors have common root causes? Can we draw lessons to improve the reliability of health care by learning how other types of organizations reduced errors? When people in very high-performing organizations discover a problem, they don't find ways to work around it. They fix the problem so that it doesn't happen again.

## ACADEMIA AND CLINIC

### **The Ethics of Deactivating Implanted Cardioverter Defibrillators** 631

J.T. Berger

Implanting an automatic cardioverter defibrillator can lead to ethical dilemmas, but few researchers have studied these issues. We also don't have guidelines to assist physicians who care for patients who have received defibrillators. This paper discusses bioethical issues to consider in deciding whether to turn off an implantable cardioverter defibrillator.

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### **Meta-Analysis: Computed Tomographic Colonography** 635

B.P. Mulhall, G.R. Veerappan, and J.L. Jackson

In more than 30 studies of computed tomographic (CT) colonography, the specificity of this test is consistently high, but the sensitivity varies over a wide range. This between-study variability raises concerns that must be resolved before CT colonography will be an acceptable screening test for colorectal cancer.

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**Meta-Analysis: Acupuncture for Low Back Pain** 651

**E. Manheimer, A. White, B. Berman, K. Forys, and E. Ernst**  
According to the evidence provided by 33 randomized trials, needle acupuncture provides better short-term relief for chronic low back pain than sham acupuncture or no treatment. The evidence about its effectiveness relative to other active treatments is inconclusive.

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**Preventing Sudden Cardiac Death: Can We Afford the Benefit?** 664

**S.G. Pauker, N.A.M. Estes, and D.N. Salem**  
Although implantable cardioverter defibrillators (ICDs) can prevent sudden cardiac death, the United States may not be able to afford the cost. Al-Khatib and colleagues' cost-effectiveness analysis supports using ICDs in patients similar to participants in the Multicenter Automatic Defibrillator Implantation Trial-II. However, we must continue to refine methods to select patients for ICDs in order to keep the costs in line with the benefits.

**Being Prepared: Modeling the Response to an Anthrax Attack** 667

**G.F. Webb**  
In this issue, Fowler and colleagues' analysis strongly supports the current U.S. policy of vaccination and prophylactic antibiotics after an anthrax attack rather than preattack mass vaccination. At current estimates of the risk for an attack, mass vaccination of the entire U.S. population is unwarranted because adverse effects of the vaccine outweigh its benefits.

**Can Computed Tomographic Colonography Become a "Good" Screening Test?** 669

**T.F. Imperiale**  
When prepress computed tomographic colonography achieves a reasonably high and consistent sensitivity for an appropriate target lesion, we may finally have a good screening test. At the current rate of progress, I expect the problems to be solved by the time I have to decide—as a patient—about colorectal cancer screening.

**Primary Care, Generalism, Public Good: Déjà vu? Again!** 671

**E.B. Larson, K.B. Roberts, and K. Grumbach**  
We must convince people that primary care is a public good worth supporting. The ingredients of success include credible scientific evidence of effectiveness; impassioned, sustained advocacy; and a strong alliance with the public media, lawgivers, and regulators.

**ON BEING A DOCTOR**

**Spot(s)** 675

**B. Robins**  
A physician reflects on a sick adolescent boy home alone and his own childhood pet. He wonders: "Was one of my motivations to heal born out of the memory of Spot?"

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**A.L. Back, R.M. Arnold, J.A. Tulsky, W.F. Baile, and K.A. Fryer-Edwards**  
The authors offer guidelines for saying goodbye to a dying patient. Saying goodbye is an expert practice worth learning for the sake of both the patient and the physician.

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