Research

Cigarette Smoking-Attributable Morbidity in the United States 1922
New research shows that Americans have had at least 14 million major medical conditions that were the result of cigarette smoking. Using publicly available data sources, Rostron and colleagues estimated smoking-attributable morbidity in the United States. Chronic obstructive pulmonary disease represents the leading cause of smoking-attributable disease in the United States, with an estimated 7.5 million current and former smokers having the condition because of cigarette use, followed by 2.3 million people having had myocardial infarctions because of smoking. These results demonstrate that smoking continues to be the leading cause of preventable disease in the United States and that vigorous public health efforts are needed to reduce this health burden. Schroeder provides an Invited Commentary.

Invited Commentary 1928

Evidence Supporting Pharmacogenomic Biomarker Testing 1938
Much attention has been given to the significant role that pharmacogenomics can play in the personalized medicine movement. However, there is concern of insufficient evidence linking use of some biomarkers to clinical benefit. In an analysis of 119 US Food and Drug Administration-approved drug labels containing pharmacogenomic biomarker information, Wang and coauthors evaluated the evidence base described or cited in this clinician resource that supports the biomarkers’ clinical validity (ability to predict phenotype) and clinical utility (ability to improve clinical outcomes). They found that 36% of the labels provided convincing clinical validity evidence and 15% provided convincing clinical utility evidence, while 51% of labels made recommendations based on biomarker test results. Burke and Thummel provide an Invited Commentary.

Invited Commentary 1945

Tapering vs Maintenance Therapy for Opioid Dependence 1947
Office-based buprenorphine treatment of opioid dependence has created new opportunities for physicians to address the epidemic of prescription opioid dependence. Physicians and patients often prefer tapering (detoxification) over maintenance. In a randomized clinical trial, Fiellin and coauthors demonstrate that among prescription opioid-dependent patients receiving treatment with buprenorphine, maintenance treatment results in more opioid abstinence and improved treatment retention compared with tapering. Few (10%) of the patients who underwent tapering completed the study, and 28% required reinitiation of buprenorphine therapy following taper because of relapse.

Insight Into the Cardiovascular Risk Calculator 1964
The pooled cohort equations used to assess cardiovascular risk in the recent American College of Cardiology/American Heart Association guidelines have been found to overestimate risk in contemporary cohorts, but the reasons for this are unclear. Cook and Ridker examined whether increased use of statins over time, incident coronary revascularization procedures, or underascertainment of vascular events could account for the discrepancy in data from the Women’s Health Study. While statistical adjustment for these factors improved calibration, the pooled cohort equations continued to overestimate risk. Other explanations for the discrepancy include changing patterns of risk within more contemporary populations. Nissen provides an Invited Commentary.

Invited Commentary 1972

Opinion

Perspective

1889 Statin-Related Cognitive Impairment in the Real World: You’ll Live Longer, But You Might Not Like It 1970
J McDonagh

1890 Acute Renal Failure Following Treatment of a Common Culture Contaminant: A Teachable Moment 1974
JH Maley and EC Kiskis

1891 In-Hospital Delirium While Awaiting Temporal Artery Biopsy: A Teachable Moment 1977
KT Hamilton and BJ Lee

1892 Doubts About Treating Hypogonadism Due to Long-term Opioid Use With Testosterone Therapy: A Teachable Moment 1977
EN Murphy and R Miranda

Editor’s Note

2023 Lung Cancer Screening With Low-Dose Computed Tomography for Medicare Beneficiaries 2024
R Steinbrook

Clinical Review & Education

Challenges in Clinical Electrocardiography

2024 The Importance of the Ladder Diagram in the Evaluation of Tachyarrhythmia 2027
CM Steyers and PD Bhave

2027 A Patient With Systolic Dysfunction and an Alternating Axis 2027
PE Miller and Coauthors

Invited Commentary

1928 Author Audio Interview jamainternalmedicine.com
Outcomes Associated With Invasive and Noninvasive Ventilation

While small randomized trials have established the efficacy of noninvasive ventilation (NIV) in the management of patients with severe exacerbation of chronic obstructive pulmonary disease (COPD), little is known about the effectiveness of NIV in routine clinical practice. Using data from a sample of 420 US hospitals, Lindenauer and colleagues compared the outcomes of patients with COPD who were treated with NIV or invasive mechanical ventilation (IMV) at the time of hospital admission. Of the patients who were initially treated with NIV, 15.3% later required IMV. In a propensity-adjusted analysis, initial treatment with NIV was associated with lower risk of mortality, lower risk of hospital-acquired pneumonia, lower costs, and a shorter length of stay, but there was no difference in 30-day all-cause readmission or COPD-specific readmission.

Clinical Review and Education

Lowering Medical Costs Through Inclusive Shared Savings

Current approaches to controlling health care costs have strengths and weaknesses. Schmidt and Emanuel propose an alternative, “inclusive shared savings” that aims to lower medical costs through savings that are shared by physicians and patients. Inclusive shared savings may be particularly attractive in situations where treatments, such as those for gastric cancer, are similar in clinical effectiveness and have modest differences in convenience but substantially differ in cost. Inclusive shared savings incorporates features of typical insurance coverage, shared savings, and value-based insurance design. Inclusive shared savings offers financial incentives to physicians and patients to promote the use of lower-cost but equally effective interventions. Baicker and Rosenthal provide an Invited Commentary.

Research (continued)

Low-Dose Computed Tomography Screening for Lung Cancer

Medicare is currently considering whether to offer coverage for low-dose computed tomographic (CT) screening among high-risk current and ex-smokers. Woolf and colleagues argue that although the National Lung Screening Trial demonstrated the efficacy of low-dose CT, national screening may be premature because the magnitude of benefit outside of trial conditions is uncertain. Benefits may be outweighed by the potential harms of screening, which include false-positive results, patient anxiety, radiation exposure, diagnostic workups, and resulting complications. Until better data are available for older adults who are screened in ordinary community settings, coverage of low-dose CT screening for Medicare beneficiaries should be postponed. Steinbrook provides an Editor’s Note.

Related Article 2019  Editor’s Note 2023

Importance of Lung Cancer Screening for Medicare Beneficiaries

The National Lung Screening Trial has provided convincing evidence of a substantial mortality benefit of lung cancer screening with low-dose computed tomography (CT) for current and former smokers at high risk. The US Preventive Services Task Force has recommended screening, triggering coverage of low-dose CT by private health insurers under provisions of the Affordable Care Act. The Centers for Medicare and Medicaid Services (CMS) is currently evaluating coverage of lung cancer screening for Medicare beneficiaries. As 70% of lung cancer occurs in patients 65 years or older, Wood argues that the CMS should cover low-dose CT, thus avoiding the situation of at-risk patients being screened up to age 64 years through private insurers and then abruptly ceasing screening at exactly the ages when their risk for developing lung cancer is increasing. Steinbrook provides an Editor’s Note.

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