

# Clinical Briefs in Primary Care<sup>™</sup>

The essential monthly primary care update

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## Influenza Vaccination and Reduction in Hospitalizations

**Source:** Nichol KL, et al. *N Engl J Med*. 2003;348:1322-1332.

**D**ESPITE THE FACT THAT INFLUENZA and its consequences are well recognized, the number of at-risk individuals for serious sequelae to an influenza infection who receive vaccination remains suboptimal. Perhaps some clinicians remain unconvinced of the efficacy of influenza vaccine to reduce important outcomes. Nichol and colleagues studied the effect of influenza vaccine in 2 successive years (1998-2000) upon a large cohort (n = 140,000) of senior citizens aged 65 or older, which represent pooled data from 3 large managed-care organizations.

In each of these 2 influenza seasons, just over half of the population were immunized (55.5, 59.7%, respectively). Outcomes measured included odds of hospitalization for cerebrovascular disease, cardiac disease, and pneumonia or influenza. All-cause mortality was also assessed.

Influenza vaccination was associated with reductions in all outcomes measures, including 16-23% for cerebrovascular disease, 19% for cardiac disease, and 29-32% for pneumonia or influenza. Influenza vaccination was associated with a 48-50% reduction in all-cause mortality.

Only about two-thirds of senior citizens in the United States received influenza vaccination in 2001, leaving a very substantial gap from the intended current goal of 90% immunization. Perhaps such robust associations of influenza vaccine with favorable outcomes will stimulate clinicians to re-invigorate their energies toward enhanced vaccination. ■

## Screening Men for Prostate and Colorectal Cancer

**Source:** Sirovich BE, et al. *JAMA*. 2003;289:1414-1420.

**P**ROSTATE CANCER (P-CA) AND COLORECTAL cancer (C-CA) do not share the same evidence base for potential efficacy in reducing mortality. For P-CA, there remain no data to confirm whether screening with PSA will lead to reductions in all-cause mortality. Even the recent trials, which have confirmed reductions in P-CA related mortality from cancers discovered by PSA screening, have not shown a reduction in all-cause mortality, leading to great uncertainty about the overall benefits for an individual patient and divergence of opinion by major policy making bodies about the best course of action for PSA screening. C-CA, on the other hand, is endorsed by essentially all policy-making and consensus groups, based upon multiple randomized controlled trials that show reductions in C-CA mortality with FOBT, and probably even greater benefit with sigmoidoscopy or colonoscopy.

The Behavioral Risk Factor Surveillance system is an annual study that obtains information for the CDC by random-digit dialing telephone surveys. In these data, questions about P-CA and C-CA screening in men older than 40 were included in 2001 (n = 49,315).

In this large population, 75% of men older than age 50 had undergone PSA testing, and the likelihood increased with increasing age. In contrast, only 63% of men in the same age group had been screened with either FOBT or endoscopy. Considering that an approximately equal number of deaths occur from these 2 disorders (C-CA = 27,800; P-CA = 30,200

estimated for the year 2002), and the considerably less robust evidence for the efficacy of P-CA screening, clinicians would be wise to expend more intensive energies to enhance C-CA screening practices. ■

## Weight Loss in CHF and Treatment with ACE-I

**Source:** Anker S, et al. *Lancet*. 2003;361:1077-1083.

**W**EIGHT LOSS TO THE DEGREE OF cachexia complicates cancer, some infectious diseases (eg, HIV, thyrotoxicosis), and less obviously, perhaps, heart failure (CHF). It has been previously noted in a small, prospective study of CHF patients that substantial weight loss (SWL) is associated with adverse effect upon survival, independent of other risk factors.

By analyzing the data from patients in a large treatment trial of CHF using ACE inhibitors (the SOLVD trial, n = 2569), Anker and colleagues investigated weight changes, the relationship of weight change to mortality, and the effect of ACE inhibitor treatment upon weight loss in a subgroup of the SOLVD trial (n = 1929).

In this data set, weight loss was independently related to reduced survival, independent of age, sex, New York Heart Association Class, ejection fraction, and even treatment allocation. In crude adjusted analysis, a weight loss of 6% or greater was the strongest predictor of reduced survival.

Anker et al comment that weight loss in CHF is not abrupt, but rather gradual, and represents diverse tissue compartment loss-

es, including muscle, fat, bone, and the heart itself. They suggest that a 6% or greater weight loss be considered definitional for cardiac cachexia. ■

## Impaired Fasting Glucose vs Impaired Glucose Tolerance

**Source:** Schianca GPC, et al. *Diabetes Care*. 2003;26:1333-1337.

IN THE ABSENCE OF POSTGLUCOSE load measurements, most clinicians diagnose diabetes mellitus (DM) on the basis of an elevated fasting blood glucose (FBG), most recently defined as diabetic if > 125 mg/dL. Because glucose derangement typical of incipient diabetes is heralded by modest perturbations of FBG, the category of impaired fasting glucose (IFG = 110-125 mg/dL) designates a population at substantially increased risk for development of frank DM. Whereas IFG is often the first measurable glucose homeostatic defect in those ultimately destined to develop DM, impaired glucose tolerance (IGT = 2-hour post 75-g oral glucose load 140-199 mg/dL) becomes evident earlier in some persons.

This study examined the concordance

between FBS and IGT, by selecting patients (n = 279) whose clinical circumstances suggested screening for metabolic abnormalities (exclusive of those already known to have DM). By including measurement of insulin resistance, Schianca and colleagues were also able to define the relationship between insulin resistance and the presence of IFG, IGT, or both.

Schianca et al found that persons with IFG were characterized by a presence of insulin secretory deficiency, whereas IGT was generally accompanied by insulin resistance. The combination of both tests disclosed an additional 17% of persons with disturbed glucose metabolism compared to relying on FBS alone. Since IFG and IGT reflect different pathogenetic underpinning, using both tests not only discovers a larger group of persons with disturbed glucose homeostasis, it may also help direct which therapeutic tool best matches the associated metabolic defect. ■

## Risk Stratification in Long-QT Syndrome

**Source:** Priori SG, et al. *N Eng J Med*. 2003;348:1866-1874.

ON EKG, PROLONGATION OF THE QT interval (QTI) may be a marker for increased susceptibility to life-threatening arrhythmias. With normal heart rates (60-100), the QTI (from the beginning of the QRS complex to the return of the T wave to baseline) generally ranges from 0.30-0.40 seconds, and the duration is typically 10% longer in females. Since the QTI is heart rate dependent, a calculation is made using Bazett's formula to give a "corrected" QTI. Factors that can cause QTI prolongation include myocardial ischemia, myocarditis, antiarrhythmics, psychotropic agents, hypokalemia, hypomagnesemia, hypocalcemia, and cerebral events like subarachnoid hemorrhage. Additionally, there is a genetic long-QT syndrome (Romano Ward Variant), in which risk stratification for arrhythmia has been poorly defined, which is the subject matter of this investigation.

Priori and colleagues studied 647 patients from 193 families for 3 different genotypes associated with long QTI. In untreated individuals during a 28-year mean observation period, 13% of long-QTI individuals had a cardiac arrest or died suddenly before age 40. Beta-blocker therapy is believed to be efficacious in this population. Because different

genetic varieties of long-QT syndrome, varying degrees of corrected QTI, and gender all impact the predictive model, clinicians should refer such patients to facilities where appropriate genetic testing can be accomplished. ■

## EBCT, Motivation, Behavioral Change, and Cardiovascular Risk Profile

**Source:** O' Malley PG, et al. *JAMA*. 2003;289:2215-2223.

IT HAS BEEN SUGGESTED THAT AS MUCH AS 75% of clinical CHD can be predicted on the basis of traditionally recognized risk factors (eg, lipids, BP, smoking). Because of the ponderous effect of cardiovascular disease upon mortality, heightened awareness and motivation of the at-risk population is a shared clinician-patient goal.

EBCT (Electron Beam Coronary Tomography) is a recent technology, which allows noninvasive imaging of the coronary vasculature calcification, a substantiated marker for cardiovascular risk. This study investigated whether providing patients an EBCT photograph would enhance their motivation to alter their cardiovascular risk factors.

Study subjects (n = 559) comprised ostensibly healthy US Army Personnel aged 39-45 who were scheduled for mandated periodic physical examination. After EBCT, one group of subjects received intensive case management (ICM) including counseling on diet, smoking cessation, lipids, and exercise. Impact of intervention was measured by change in Framingham Risk Score (FRS).

After 1 year of follow-up, providing EBCT results to study subjects resulted in no statistically significant effect upon FRS. On the other hand, subjects who received intensive case management showed a significant decline in FRS. This study calls into question the belief that dramatization and concretization of potential or real target organ damage is a strong motivator. Encouragingly, favorable effect of intensive counseling about cardiovascular risk factors did result in measurable risk reduction. ■

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