

# Depression Hits One in Five MI Patients, Evidence Shows

BY BETSY BATES  
Los Angeles Bureau

**D**epression strikes one in five patients hospitalized for myocardial infarction, with severe consequences, including a threefold increased risk of cardiac mortality and significantly elevated mortality from all causes, a comprehensive evidence review has concluded.

The review, conducted by the federal Agency for Healthcare Research and Quality at the behest of the American Academy of Family Physicians, is destined to become the framework for evidence-based clinical practice guidelines, according to the AAFP.

Highlights of the review coordinated by the Johns Hopkins Evidence-Based Practice Center in Baltimore include:

► Evidence from 25 trials pointing to a prevalence of depression in one in five patients hospitalized for an MI.

► Data from three studies that depression during the initial MI hospitalization persists from 1-4 months in 60%-70% of patients.

► "Strikingly consistent" evidence that post-MI depression puts patients at an increased risk for death by cardiac causes (a threefold increased risk) and other causes.

► Conclusions from three studies showing that depressed post-MI patients are less likely than are others to take their prescribed medications or to comply with lifestyle modification.

► Findings that suggest psychosocial intervention and selective serotonin reuptake inhibitors (SSRIs) improve depression in post-MI patients, but not necessarily other outcomes.

The lengthy analysis pointed out a number of important gaps in scientific knowledge about depression and MI, such as the best way to measure depression in hospitalized MI patients and the true impact of interventions.

For example, SSRIs were found to improve some surrogate markers of cardiac risk, "but no studies of sufficient power address the question of whether this

treatment improves survival," the analysis said.

The Johns Hopkins team, led by David E. Bush, M.D., and Roy C. Ziegelstein, M.D., included clinicians and researchers from cardiology, psychiatry, general internal medicine, and cardiac rehabilitation, as well as representatives from the AAFP, the nursing community, and private and government payers.

Six key questions were compiled, several with important subcategories. A literature review was conducted electronically and by hand of 16 specific journals and the electronic databases Medline, Cochrane Central Register of Controlled Trials, the Cochrane Database of Methodology Reviews, the Cumulative Index to Nursing and Allied Health Literature, the Psychological Abstracts, and Embase.

The intensive review unveiled the magnitude of evidence pointing to depression as an important impediment to a full recovery and a return to productive life in many MI patients.

Its conclusions suggest a pivotal role for family physicians, who may be in the best position to oversee "the whole patient" as he or she embarks on the long course of recovery, Lee A. Green, M.D., the AAFP representative to the review panel and a member of the family medicine faculty at the University of Michigan in Ann Arbor, said in a telephone interview.

Patients can survive heart attacks and their hearts can be fine, but they can be disabled by their depression, he said.

The severity of an MI may overshadow less evident aspects of health that should be identified early and managed with the best tools available.

Although the literature review shows that more research is needed to illuminate the best approaches to post-MI depression, it provides ample evidence of the worth of such research.

In the immediate future, the stark findings about the importance of depression following MI may lead to more communication among specialists, including family physicians, cardiologists, and psychiatrists, said Dr. Green. ■

## Depressive Symptoms Predict 3-Year Change in Blood-Vessel Thickness

VANCOUVER, B.C. — Symptoms of depression predict increases in intima-media thickness, Jesse C. Stewart, Ph.D., reported at the annual meeting of the American Psychosomatic Society.

Intima-media thickness (IMT), a measure of the thickness of the intima and medial layers of the carotid artery wall, is a marker of subclinical atherosclerosis and has been shown to predict future coronary events, said Dr. Stewart, of the department of psychiatry, University of Pittsburgh.

Data from 357 healthy adult (mean age 60 years) participants in the Pittsburgh Healthy Heart Project suggest that the somatic-vegetative symptoms—such as loss of pleasure, crying, agitation, and changes in appetite—significantly predict 3-year changes in IMT, whereas cognitive-affective symptoms such as sadness, pessimism, and guilty feelings do not, Dr. Stewart said.

Ultrasound images were obtained of the right and left carotid arteries at baseline and again at 3 years. The average 3-year change in IMT—computed as the mean of the sum of the far wall measurements from the common carotid, internal carotid, and bulb regions—was 0.09 mm for the group as a whole.

After adjustment for age, sex, and race, higher scores on the Beck Depression Index-II (BDI-II) at baseline were significantly associated with greater increases in carotid IMT. Average changes were 0.11 mm for participants in the highest BDI-II quartile, compared with 0.06 mm among those in the lowest quartile, he reported.

In contrast, 3-year changes in IMT were not predicted by scores on the Cook-Medley Hostility Scale or the Beck Anxiety Inventory.

When specific items on the BDI-II were examined, the somatic-vegetative or physical symptoms of depression explained nearly all of the differences in IMT scores, whereas the cognitive-affective factors alone were not predictive of early heart disease.

Previous prospective studies have demonstrated that depression, hostility, and anxiety all increase the risk for cardiovascular disease (CVD), but few have simultaneously examined the influence of all three factors, Dr. Stewart said.

—Miriam E. Tucker

# Sudden Cardiac Death Found to Be Poverty-Related Health Risk

BY BRUCE JANCIN  
Denver Bureau

NEW ORLEANS — The incidence of sudden cardiac death is markedly greater in low-income neighborhoods, according to new data from the Oregon Sudden Unexplained Death Study.

Socioeconomic status is known to be an important predictor of many aspects of health, cardiovascular and otherwise.

But the Oregon Sudden Unexplained Death Study (Ore-SUDS) is the first formal look at its impact on sudden cardiac death (SCD) on a community-wide basis, Kynaron Reinier, Ph.D., noted at the annual meeting of the Heart Rhythm Society.

Ore-SUDS is an ongoing Centers for Disease Control and Prevention-sponsored prospective, population-based study of SCD in Portland and surrounding Multnomah County. Dr. Reinier presented data on the 714 confirmed cases in 2002-2004. The annual incidence was 54 per a population of 100,000.

Each case was matched to the appropriate county census tract, of which there are 170, each containing 3,000-4,000 people. Ore-SUDS investigators ranked the tracts in quartiles of socioeconomic status as reflected in four measures: median income, percent of the population below the official poverty level, median home value,

and the percentage of residents having a bachelor's degree. They also calculated the SCD incidence for each quartile, determining that the incidence among individuals residing in the lowest quartile for each of the four socioeconomic status indicators was 30%-

80% higher than for those in the top quartile.

For example, the annual SCD incidence among residents of census tracts in the bottom quartile in terms of median home value was 62 per 100,000, compared with 36 per 100,000 in the top quartile.

This represented a 70% increase in relative risk, said Dr. Reinier of Oregon Health and Science University, Portland.

The inverse relationship observed between socioeconomic status and SCD was much stronger among individuals who experienced SCD before age 65. (See box.)

The prevalence of coronary artery disease as reflected in medical records and autopsy reports did not differ between SCD victims in the various quartiles. Neither did body mass index or rates of attempted resuscitation, said Dr. Reinier.

Median home value and the other measures of socioeconomic status used in the study are really just proxies for some as-yet unidentified factor related to poverty that raises SCD risk, she added. ■

