# In-Hospital Prevention Program Targets the Family

BY BRUCE JANCIN
*Denver Bureau*

COLORADO SPRINGS — A novel in-hospital lifestyle intervention aimed at family members visiting a relative hospitalized with cardiac disease pays dividends in terms of improved heart-healthy dietary habits.

Moreover, the members most likely to improve their diet in response to the hour-long counseling session tended to be those with baseline elevated cardiovascular risk factors and lower self-perceived health status, Dr. Lori Mosca said at a conference sponsored by the American Heart Association.

"When a family member has someone hospitalized for heart disease it's an opportune time to help them learn about their own risk for heart disease and [how] to lower it. It's what we call the motivational moment," Dr. Mosca, professor of medicine and director of preventive cardiology at New York–Presbyterian Hospital, said in an interview. "Interventions will be more effective when timed correctly and targeted to the right audience. The more threatened people feel by a condition, the more likely they are to adhere to preventive therapy."

Dr. Mosca is principal investigator for the ongoing National Institutes of Health–funded Family Intervention Trial for Heart Health (F.I.T. Heart). In an interim analysis reported at the meeting, adherence to the National Cholesterol Education Program's Therapeutic Lifestyle Change diet in 189 family members who went through the intervention rose from 53% at baseline to 79% at follow-up 6 weeks later. Of those who received the intervention 77% showed a significant improvement in their diet score at 6 weeks' follow-up.

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**DR. MOSCA**

In the next phase, Dr. Mosca plans to document whether intervening with family members has a beneficial spillover effect on the cardiac patients. About half of the family members participating in the project are responsible for caring for the patient. "If we teach them about diet, there could potentially be a very important domino effect."

Here's how the F.I.T. Heart intervention works: When patients enter the hospital with an MI or for a coronary revascularization procedure, they're given a pamphlet explaining the program and inviting family members to attend. The prevention counselors, who are dietitians or health educators, go out onto the floors and invite family members to come by the counseling room on the cardiac floor for a cardiovascular risk factor assessment and risk-lowering suggestions. There is no charge for the program, which the hospital has been running for 5 years as a community outreach project. "It's a modest amount of resources, and the downstream effect is going to be very important," she noted.

The study has found that family members who care for a cardiac patient had higher levels of cardiovascular risk factors, higher psychosocial strain scores, less social support, and more depressive symptoms than did noncaregivers. The fact that caregivers may themselves be at increased risk of heart disease is not surprising, since they share lifestyle factors, and often genes, with the patient, Dr. Mosca noted. ■



# Adherence to Process Measures Predicts Acute MI Mortality

BY MIRIAM E. TUCKER
*Senior Writer*

PITTSBURGH — Hospitals with low adherence to acute MI process measures have higher 30-day mortality rates than do other U.S. hospitals, even after adjustment for differences in patient populations.

Recent studies have shown significant improvements in adherence to acute MI process measures—particularly aspirin and β-blockers and ACE inhibitors for left-ventricular systolic dysfunction—but little is known about the hospitals with consistently poor adherence or the relationship between poor adherence and outcomes.

Dr. Ioana Popescu of the department of internal medicine at the University of Iowa, Iowa City, and associates calculated a composite acute MI compliance score for 2,761 hospitals that reported acute MI process measures for at least 25 acute MI cases a year to the Centers for Medicare and Medicaid Services' Hospital Quality Alliance database in 2004-2006. The number of hospitals—2,761—represents 63% of U.S. hospitals treating acute MI patients.

The hospitals were categorized as low-performing (lowest decile for every study year), high-performing (highest decile), and intermediate-performing (all other), Dr. Popescu reported at the annual meeting of the Society of General Internal Medicine.

Risk-adjusted mortality was calculated as the observed or predicted mortality multiplied by the mean overall population mortality rate, using the records of 208,080 Medicare beneficiaries admitted with acute MI in 2005. The 30-day predicted mortality was estimated using models controlling for patient demographics, comorbidity, and patient clustering within hospitals.

Mean compliance for the five widely reported acute MI process measures was 68% for the 105 low-performing hospitals, 92% for the 2,493 intermediate performers, and 99% for the 163 high-performing hospitals.

Compared with high-performers, low performers were significantly less likely to be teaching hospitals or in an urban location. Low performers were more likely "safety net" hospitals and to be for-profit institutions. The proportion of uncompensated care was significantly greater at low-performing hospitals, whereas staffing ratio, acute MI volume, revascularization, and bed count rates were lower.

Patients at low-performing hospitals were slightly older (80 vs. 79 years), and more likely to be black (9% vs. 4%), female (56% vs. 48%), have lower incomes ($33,739 vs. $46,698), and more comorbidities than those at high-performing institutions.

Mean observed 30-day mortality after acute MI was 26% at the low-performers, 19% at intermediate hospitals, and 15% at the high performers. Even after controlling for differences in patient characteristics, the mean 30-day risk-adjusted mortality rate was significantly greater for low performers, at 19%, versus 16% for the intermediate and 15% for the high performers. ■