

Phone Intervention Reduced Diabetes Admissions

BY DOUG BRUNK

FROM THE ANNUAL MEETING OF THE
ENDOCRINE SOCIETY

SAN DIEGO — Elderly patients with type 2 diabetes and coronary artery disease who participated in a telephone-based disease management intervention had significant reductions in hospital inpatient admissions and total health care costs after 1 year, compared with those who did not receive the intervention.

"The results show that you can get short-term results by focusing on a few key indicators that include cardiac risk," Dr. James L. Rosenzweig said during a press briefing.

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Major Finding: Inpatient hospital admission among high-risk patients randomized to a telephone-based diabetes care management program for 1 year decreased significantly from 1.029 per member per year to 0.774 per member per year.

Data Source: A study of 526 members enrolled in a Medicare Advantage plan with Health Net of Arizona.

Disclosures: The study was funded by Alere, an Atlanta-based health management company. Dr. Rosenzweig is a member of the company's scientific advisory board.

The researchers conducted a prospective controlled repeated-measures study of 526 patients enrolled in a Medicare Advantage health plan with Health Net of Arizona who were identified as having diabetes and coronary artery disease. Of the 526 patients, 462 received the disease management program (intervention) and 64 received usual care (controls) for 1 year.

The goal of the intervention was to provide patients with access to nurse care managers via telephone so they could "address gaps of care with respect to both diabetes and its associated cardiovascular risk factors," including blood pressure, lipids, and cholesterol management, said Dr. Rosenzweig, associate professor of medicine at Boston University, who carried out the study with Michael Taitel, Ph.D., vice president of the Alere Center for Health Intelligence, Atlanta.

"Diabetes education was delivered by the care managers in the course of their telephonic interactions with patients [and] there was close communication between the nurse care managers and the

physicians' offices," Dr. Rosenzweig explained.

"In addition, a subpopulation of these patients had home glucose monitoring data which they downloaded into the disease management system. This was



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DR. ROSENZWEIG

uploaded to the care managers who would also evaluate the patients. They would send reports to [the patients'] physicians on a regular basis," Dr. Rosenzweig added.

After 1 year, the number of all-cause inpatient hospital admissions among patients in the intervention group decreased from 1.029 per member per year to 0.774 per member per year, a difference that was statistically significant.

The slight decline among controls during the same time period—from 1.165 all-cause inpatient hospital admissions

per member per year to 1.110—was not significant.

The number of diabetes-specific hospital admissions decreased from 0.717 per member per year to 0.445 among patients in the intervention group, but there were no significant differences among patients in the control group.

Dr. Rosenzweig also reported that annual medical costs dropped by about \$1,000 for each patient in the intervention group but were nearly \$5,000 higher for each patient in the control group, "suggesting that this kind of intervention could potentially involve savings of perhaps \$6,000 per year per patient."

Compared with patients in the control group, he added, those in the intervention group "reported having better monitoring of blood glucose levels. They also had more frequent cholesterol tests done by the physicians, more frequent eye examinations, more frequent screenings for kidney disease, hemoglobin A_{1c} tests, and foot examinations."

Dr. Rosenzweig said that he did not know what the administrative costs were to run the intervention component.

The study is expected to appear in the July 2010 issue of the American Journal of Managed Care.

Dangerous Drug Combinations Common Among Elderly

BY MICHELE G. SULLIVAN

FROM THE WORLD CONFERENCE OF FAMILY DOCTORS

CANCÚN, MEXICO — Potentially dangerous drug interactions are almost unavoidable in elderly patients who regularly take 12 or more medications, a chart review study suggests.

Alpha and beta receptor blockers, statins, warfarin, and proton pump inhibitors are some of the drugs most commonly involved in these interactions, which can cause problems ranging from orthostatic hypotension to potentiated blood thinning, and even death, Dr. Heinrich Ilan said at the World Conference of Family Physicians.

"Elderly patients are at an increased risk of drug interactions because they have multiple caregivers, including family doctors, specialists—with or without gatekeeping by primary care—private consultants, and what I call 'physicians in the family'—trusted family members who offer medical advice with or without the benefit of a medical degree, said Dr. Ilan of the Rav Kook Primary Care Clinic in Kiryat Motzkin, Haifa, Israel. "The huge polypharmacy burden in geriatric care

is a direct pathway to harm for these fragile patients."

Dr. Ilan and his associates investigated drug interactions in a group of 1,124 patients aged 75 years or older. Of those, they identified 52 patients who took at least 12 different medications over a 3-month period; these could have been prescription drugs, over-the-counter preparations, or herbal preparations.

The team used the Lexi-Comp online database to determine unsafe drug combinations. The software identifies three types of possible interactions:

► **C:** A combination that requires monitoring, and of which the physician should be aware and weigh the risks and benefits.

► **D:** A combination that carries a high probability of a serious interaction; the physician should avoid the combination if possible, or consider lowering the dosages. If used, drug levels should be monitored.

► **X:** Potentially fatal interaction that should be avoided at all cost.

Only a single patient had no interactions, Dr. Ilan said.

Two patients had type X combinations. One patient was taking escitalopram and the monoamine oxidase inhibitor selegiline. This combination can cause serotonin syndrome; possible symptoms include hyperthermia, rigidity, myoclonus, autonomic instability with rapid vital sign fluctuation, and extreme agitation progressing to delirium or coma.

The second X-type combination was found in a patient taking clarithromycin and salbutamol (known as albuterol in the United States). Possible reactions to this combination include prolongation of the QT interval and ventricular arrhythmias.

Fifty-seven D-type combinations involving 37 drugs were identified. The most commonly observed included 14 combinations of a beta-blocker and an alpha-1 receptor blocker, which can cause orthostatic hypotension and falls; and 5 combinations of a beta-blocker and alpha-2 receptor blocker, which can cause rebound hypertension if the drugs are suddenly stopped. There also

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Major Finding: Among 52 elderly patients taking 12 or more drugs, 51 had drug combinations that could be dangerous.

Data Source: A retrospective chart study.

Disclosures: Dr. Ilan said he had no relevant disclosures for this study.

were five cases of warfarin combined with levothyroxine and five cases of warfarin combined with amiodarone. Both of these combinations can potentiate the effects of warfarin, Dr. Ilan explained.

Other type D combinations included five cases of patients taking simvastatin along with a calcium channel blocker, which increases the risk of rhabdomyolysis. There were 23 other different type D combinations.

Nineteen patients were free of D-type combinations. Eighteen patients had one type D combination, 11 patients had two type D combinations, 1 patient each had three, four, and five type D combinations.

There were 328 C-type combinations involving 144 drugs. Thirty-four of those involved a statin and a proton pump inhibitor, which can lead to an increased risk of rhabdomyolysis. "The most common offenders in type C reactions were doxazosin, oxazepam, and statins," Dr. Ilan said.

Most patients had multiple type C combinations, Dr. Ilan said. Two patients each had 12, while some patients had as many as 18.

In an interview, he suggested avoiding unnecessary polypharmacy may contribute to longevity. "From my clinical impression, it seems that '10th decade' patients—the late survivors—consume less medications, compared to their fellow 9th- and 8th-decade elderly. Therefore, it seems they are the fittest and the healthier, just to survive the very late elderly years, or that their relative lack of multidrug consumption offers some kind of [survival] advantage."



"The huge polypharmacy burden in geriatric care is a direct pathway to harm," said Dr. Heinrich Ilan.

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