

## Blood thinner, antidiabetic drug mix increases hospitalizations

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A blood thinner known for serious drug interactions is linked to increased hospitalizations for falls, altered mental state and insulin shock for Medicare patients who also take some diabetes drugs, according to a new study.

Forty percent of the estimated 100,000 older Americans hospitalized each year due to [adverse drug events](#) are for reactions to the common blood thinner warfarin and to anti-diabetic drugs, including glipizide or glimepiride, also known as 'sulfonylureas.'

Clinical references warn doctors of a potential interaction between these drugs, but evidence of it has been thin, said the study's lead author John Romley, an associate professor at the USC Schaeffer Center for Health Policy and Economics and USC Price School of Public Policy.

"Until now, no one had really studied the interactions between them," he said.

When taken with one of those anti-diabetic drugs, warfarin can intensify their effects and send [blood sugar levels](#) crashing. Patients experiencing hypoglycemia may seem drunk, lightheaded and confused, and are at risk of falling.

Hospital admission or emergency-room visits are nearly 22 percent higher for Medicare patients taking warfarin with glipizide, or with glimepiride, the researchers found. (That figure has been adjusted to

account for factors such as patient health status.)

The study published in *The BMJ* on Dec. 7 showed hospitalizations for hypoglycemia were rare but more common for falls. The researchers said evidence of the drug-to-drug interaction was clear.

"The take-home message is simply that an interaction can occur that has clinical significance, so providers need to be aware in order to prevent a [low blood sugar](#) issue from occurring," said co-author Anne Peters, a professor at the Keck School of Medicine of USC.

"Sometimes this means having the patient monitor their [blood sugar](#) levels more often," said Peters, who directs the Comprehensive Diabetes Center at Roybal Community Medical Center and directs the Westside Center for Diabetes. "There are many ways to deal with the issue if one is forewarned."

Doctors aware of the [drug interactions](#) could save lives, reduce harm—and save the health care system millions of dollars. Hospital visits for hypoglycemia average out to about \$20,500 per stay, according to the study. Treatment of fall-related medical conditions also cost an estimated \$12,300 per stay.

## Study details

Within a random sample of 465,918 Medicare beneficiaries, researchers found that 2,111 patients taking warfarin and one of the anti-diabetic drugs were hospitalized or visited the emergency room for hypoglycemia. Seventy-eight of those patients ended up at the hospital multiple times.

The trend was more pronounced among men 65 to 74 years old, the researchers said.

The study had some limitations: Researchers did not directly measure drug use; they used prescription fills as a proxy. In addition, their findings could be confounded by some unmeasured characteristics in patients that may be connected to warfarin use or a risk for hypoglycemia.

## **Extra precaution**

Pharmacists don't need to change patient instructions, said Bradley Williams, a study co-author and professor of clinical pharmacy and clinical gerontology at the USC School of Pharmacy and USC Davis School of Gerontology.

"What it does require is for pharmacists and other clinicians to be more vigilant when a sulfonylurea is added to a regiment that includes warfarin, as well as when a patient who is taking both has a change in their medical status," Williams said.

He added: "I think additional research into the potential interactions between medications for diabetes and warfarin, as well as other drugs that affect blood clotting, is warranted because of the potential consequences of excessive bleeding."

Provided by University of Southern California

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