

URI pharmacy professor studies the relationship of diabetes, hypoglycemia

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(PhysOrg.com) -- Most people are aware that diabetes is associated with high blood sugar levels. What they might not be aware of is some diabetes patients also run a high risk of developing hypoglycemia, also known as low blood sugar.

Brian Quilliam, University of Rhode Island associate professor of pharmacy, is studying the issue of [hypoglycemia](#) and the cost associated with it. Awarded a one-year, \$127,000 research grant from Takeda Pharmaceuticals North America, a large pharmaceutical company focusing on a wide range of health issues, Quilliam and his team have been analyzing national database information as part of the study.

The goal of the study is to increase physician awareness of hypoglycemic occurrences as a way to improve patient health and care and to lower costs.

One of the serious [side effects](#) of diabetic medication is hypoglycemia.

“Patients are prescribed particular medications to lower blood sugar, but sometimes they can result in levels that are too low, which can result in complications. Physicians have to educate patients to look out for the warning signs of hypoglycemia, but those warnings often aren’t enough, as hypoglycemia can have major impacts on the daily lives of diabetics,” said Quilliam.

Symptoms of hypoglycemia include dizziness, lightheadedness, and

confusion, mainly mild feelings that can be an annoyance in everyday life. While it can be easy to treat by ingesting a piece of candy or other sugary substance to raise blood sugar, hypoglycemia can cause severe problems if left untreated. In some cases, symptoms of hypoglycemia can be mild enough to be confused with routine daily fatigue, which could cause diabetics to lose consciousness, slip into a coma and in extreme circumstances, die.

“Patients need to be aware of hypoglycemia and that it can also be exacerbated by other medications,” said Quilliam. “There are standard blood pressure medications, such as beta blockers, that can mask or disguise the symptoms of hypoglycemia, which requires patients to be more vigilant.”

Quilliam’s study is focused on identifying various characteristics of patients who are predisposed to hypoglycemia and quantifying the associated costs.

Looking at the databases, which provide information regarding pharmacy transactions, outpatient doctor visits and records of inpatient admissions from large insurance companies around the nation, Quilliam and his team have discovered that hypoglycemia is more common among young adults and the elderly population.

“We know how much insurance companies paid in relation to the hypoglycemic episodes and although the human perspective is very important when looking at the issue, people can forget how costly this can be to the health system,” said Quilliam. “Many instances of hypoglycemia can be managed at home by patients having a piece of candy, but when it goes beyond that, they have to go into the health system to see a physician on an out patient basis or be admitted to the hospital, which is associated with high cost.”

By decreasing incidents that lead to hospital admissions, there will be decreases in cost for insurance companies associated with hypoglycemia management.

Along with lowering costs, Quilliam also wants to educate those affected with diabetes and caregivers about hypoglycemia and possible side effects.

“It’s time to start thinking about diabetes and hypoglycemia more thoughtfully and try to decrease occurrences,” he said. “We can do so many wonderful things with medication, but we also have to be aware of side effects and the impact they have on patients’ lives.”

While still advocating that patients take their prescribed medication, Quilliam is also advising physicians and patients to be more educated and aware of the issue to prevent the serious and costly health complications associated with hypoglycemia.

Provided by University of Rhode Island

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