

CT scans for dizziness in the ER: Worth the cost?

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Performing CT scans in the emergency department for patients experiencing dizziness may not be worth the expense – an important finding from Henry Ford Hospital researchers as hospitals across the country look for ways to cut costs without sacrificing patient care.

According to the Henry Ford study, less than 1 percent of the CT scans performed in the [emergency department](#) revealed a more serious underlying cause for dizziness – intracranial bleeding or stroke – that required intervention.

The findings suggest that it may be more cost effective for hospitals to instead implement stricter guidelines for ordering in-emergency department CT scans of the brain and head for patients experiencing dizziness.

"When a patient comes into the emergency department experiencing dizziness, a physician's first line of defense is often to order a CT scan to rule out more serious medical conditions. But in our experience it is extremely rare that brain and head imaging yields significant results," says study author Syed F. Ahsan, M.D., a neuro-otologist in the Department of Otolaryngology-Head & Neck Surgery at Henry Ford.

"It is our hope that our investigation into our own practices will shed light on avenues to run leaner practices within our institution, as well as serve as a model for other health systems."

The study will be presented Jan. 26 in Miami Beach at the annual Triological Society's Combined Sections Meeting.

The Henry Ford study was a retrospective review of 1,681 patients with dizziness or vertigo who came into a Detroit metropolitan emergency department between January 2008 and January 2011.

Of those patients, nearly half (810 patients) received a CT scan of the brain and head, but only 0.74 percent of those scans yielded clinically significant results that required intervention. In all, the total cost for the CT scans during the three-year period was \$988,200.

The analysis also revealed that older patients and those with a lower income were more likely to receive a [CT scan](#) for dizziness when they came into the emergency department.

While dizziness may signal intracranial bleeding or stroke, it is more likely that the cause is due to dehydration, anemia, a drop in blood pressure with standing (orthostatic hypotension), problems or inflammation in the inner ear such as benign paroxysmal positional vertigo, labyrinthitis or meniere's disease, or vestibular neuritis.

And, Dr. Ahsan notes, in previous studies it has been well documented that CT scans are not very effective in detecting stroke or intracranial bleeding in the acute (emergency room) setting.

Ultimately, the study shows that there is potential for cost savings by creating and implementing stronger guidelines to determine when it is medically necessary for [patients](#) with [dizziness](#) to undergo CT imaging in the emergency department.

Provided by Henry Ford Health System

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