

# Redefining 'overuse' in medicine to include cost

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Credit: AI-generated image ([disclaimer](#))

As the cost of health care in the United States continues to rise, a new study by Yale researchers offers insight into a key factor influencing increased costs: overuse of medical services.

Overuse has been defined as "the provision of [medical services](#) with no

benefits, or for which harms outweigh benefits," note the authors, led by Dr. Edward Melnick, assistant professor of emergency medicine at Yale School of Medicine. To examine the issue, Melnick and his co-authors conducted an analysis of CAT scans (also called CT scans) in patients with minor head injury.

Using published data, the researchers first identified a "testing threshold"—the point at which the risks and benefits of testing, therapy, and missed diagnosis are equal—for ordering CAT scans for minor head injury. They calculated the testing threshold in two ways: by considering the test's effectiveness alone and by considering its effectiveness in combination with cost. Next, they compared the two thresholds to the standard of care for minor head injuries, which has been validated by studies involving thousands of patients.

The study results suggest that, based solely on the test's effectiveness, the standard of care may not detect all patients for whom the benefits of CAT scans outweigh potential harm (small radiation exposure). When cost is factored into the equation, however, the data supports the standard of care.

"If we don't consider cost, then we should be scanning everyone," says Melnick. But a universal CAT scan standard would run high [costs](#) to individuals and to society without a clear benefit in most cases, he notes, and it would also run counter to high-quality research that has already determined which patients should or should not get scans.

"We believe these findings could spark a public dialogue about the exponentially increasing [costs](#) generated as expensive testing is used on increasingly larger groups of patients at low risk of serious outcomes," says Melnick. "We conclude that the concept of overuse should be redefined to include the provision of [medical services](#) with no benefits or for which harms, including cost, outweigh [benefits](#)."

The study published early online in *The Joint Commission Journal on Quality and Patient Safety*.

Provided by Yale University

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