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### **Star ratings upgrade leaves NCAP missing the mark on consumer tests**

There's much to like about revisions to the federal New Car Assessment Program (NCAP) that provides consumers with vehicle crash test information. The National Highway Traffic Safety Administration will update the dummies and injury criteria and expand NCAP ratings to indicate vehicles with crash avoidance features like electronic stability control and lane departure and forward collision warning. Published in July, the changes take effect starting with 2016 models. What's still lacking is a new frontal test to drive future crashworthiness improvements the way that NCAP's original frontal test did. When the 35 mph front-into-rigid barrier test was introduced nearly 30 years ago, it forced automakers for the first time to compete on crash protection. Now most passenger vehicles earn 4 or 5 stars out of the maximum 5. The revised NCAP frontal test will produce a wider range of ratings, but it won't drive radically improved crash protection designs. Automakers will only have to adjust their restraint systems to better accommodate a new small female dummy in the passenger seat and revised injury criteria.

"Regulators worked on the new frontal NCAP test for years, but the outcome amounts to mere tweaks of the current program, not a paradigm shift — and a major shift is what's needed," Institute president Adrian Lund says. "Nearly 14,000 front-seat occupants still die in frontal crashes every year, many of them in cars that earn top frontal NCAP ratings. This means the current test isn't addressing the range of hazards in frontal crashes."

Regulators rejected the Institute's request to consider NCAP tests that simulate other types of frontal crashes, such as impacts with trees or poles and crashes with small overlap of the vehicle

front end. Such crashes account for a third to half of serious and fatal injuries in frontal crashes, while the current flat-barrier test represents very few of these injuries.

The agency retained NCAP's current side test, updating the dummies and injury measures but keeping the barrier, which is designed to represent a typical 1970s car front end. The Institute's deformable barrier is high and contoured like the front of a pickup or SUV, the types of vehicles most likely to cause serious injuries in cars they strike (see *Status Report* special issue: side impact crashworthiness, June 28, 2015).

The agency got some things right, including a new side pole test. Lund welcomes this as a "good addition, because it may drive manufacturers to improve the designs of crash sensors and side airbags that protect the head. This is the kind of change we wish regulators had considered for frontal NCAP." The Institute also endorses the regulators' decision to include advanced vehicle technologies, especially electronic stability control, in NCAP assessments. This will make it easier for consumers to identify vehicles with the latest technology to help avoid crashes. The availability of such gear will be noted separately from a vehicle's overall NCAP score.

The new overall safety score will combine the star ratings from the front, side, and rollover tests. It's intended to help buyers select vehicles with good scores in all tests, but the ratings scheme isn't totally transparent, Lund notes. Because individual ratings in each test will be weighted differently, poor performance in one test could be partially masked by good performance in others. Consumers will need to review individual test ratings.

"A combined score shouldn't encourage consumers to trade off protection or fail to reward auto manufacturers that do well across the board," Lund says. "A good consumer rating program should drive the automakers to build vehicles that protect occupants in all kinds of crashes. It remains to be seen whether these tweaks to NCAP will push manufacturers to improve their vehicle safety designs in the dramatic way the original NCAP did. Probably not."