

A few thoughts on the challenges of measuring exposure

July 15, 2010, Woods Hole, Massachusetts

Dan McGehee
The University of Iowa

As we quickly move forward to the next generation of research tools—naturalistic driving, there are several challenges that need to be addressed to ensure that the data collected are accurate and can be linked to individual drivers. Such integration is critical to understand exposure. Some of these challenges are:

Driver ID is critical as vehicles are frequently shared among family members—matching the data from the driver to the data can be a challenge. New facial recognition software is able to automate this task to minimize the manual coding.

Another challenge in measuring exposure is using common operational definitions. Subtle differences on how each researcher defines a behavior can make for difficulties in comparing results. While this has always been an issue in experimental research, the problem is greater in ND as many believe that behaviors in the ‘real world’ are more intuitive. Since ND data must be filtered and mined as one of the principal steps, comparisons of equivalent data are crucial.

Enhanced sensing is also important to track exposure. By accurately tracking the number, route, distance and duration of each trip, very accurate exposure metrics can be captured.