Conventional trials can't detect heterogeneity in BP Tx effects

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(HealthDay)—Conventional clinical trials are unable to detect clinically

important heterogeneity in intensive blood pressure (BP) treatment effects, according to a modeling study published online Jan. 3 in the *Annals of Internal Medicine*.

Sanjay Basu, M.D., Ph.D., from Stanford University in Palo Alto, Calif., and colleagues performed a theoretical modeling study in a population of U.S. adults to identify whether large, clinically important differences in benefit and harm can be hidden among patients (heterogeneous treatment effects [HTEs]) in BP trials. The authors used data from two trials comparing standard with intensive BP treatment and from the National Health and Nutrition Examination Survey 2013 to 2014.

The researchers found that in base-case analysis, clinically important HTEs could explain the differences in outcomes between two trials of intensive BP treatment, with decreasing benefit with each additional agent (adding a second agent reduces cardiovascular disease risk, but adding a fourth agent had no benefit) and increasing harm at low BP. In sensitivity analyses, despite large samples, conventional treat-to-target trial designs had poor power to detect HTEs (