

## Concern Still Warranted: Medication Burden and Persistence with Lipid-Lowering Drugs

### TO THE EDITOR:

In light of the recently published JUPITER trial, which found that patients with elevated high-sensitivity C-reactive protein levels but without hyperlipidemia can reduce their risk of cardiovascular outcomes by nearly half with rosuvastatin treatment,<sup>1</sup> the study by Robertson and colleagues is germane and we commend the authors for their attempt to add to the debate on medication burden as a predictor of medication persistence.<sup>2</sup> The authors conclude that medication burden does not reduce persistence with newly added lipid-lowering (LL) medications.

The results of this study should be interpreted and acted upon with caution. First, the authors exclude all patients who filled only 1 LL drug prescription during the study period without justification for this decision. Patients who do not fill more than 1 LL drug prescription may be those who are least persistent. Therefore, the study cohort consists of only those patients who already show some persistence with their LL therapy by having filled at least 2 prescriptions.

Another concern is the definition of *medication burden*. For a medication to count toward a patient's cumulative medication burden, the patient must have filled prescriptions for that medication totaling at least a 90-day supply. Generally, this translates to filling at least 3 prescriptions. Thus, medication burden is defined in terms of persistence, so a patient's persistence is likely a better predictor of medication burden rather than the reverse, which the authors were attempting to determine.

The authors find that patients who are most persistent on chronic medications continue to be persistent on a new LL drug. Among such a select group, these findings are hardly surprising, yet the authors fail to acknowledge the questionable generalizability of such results. For the clinician treating patients in the general population, the addition of an LL drug is much less straightforward. Unlike researchers with automated databases, who can view LL treatment history retrospectively, clinicians do not have the benefit of knowing which patients will fill at least 2 LL drug prescriptions at the time of treatment initiation. Furthermore, to determine persistence with other chronic medications, most clinicians can only rely on patients' self-reports, which can be inaccurate. Therefore, we implore clinicians to use great caution in acting upon the authors' advice that they "need not be concerned" with medication burden when adding LL therapy. Quite the contrary, the debate about the relationship between medica-

*“. . . the debate about the relationship between medication burden and persistence with new medications remains unresolved among the general patient population.”*



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## References

1. **Ridker PM, Danielson E, Fonseca FA, et al; JUPITER Study Group.** Rosuvastatin to prevent vascular events in men and women with elevated C-reactive protein. *N Engl J Med.* 2008;359(21):2195-2207.
2. **Robertson TA, Cooke CE, Wang J, Shaya FT, Lee HY.** Effect of medication burden on persistent use of lipid-lowering drugs among patients with hypertension. *Am J Manag Care.* 2008;14(11):710-716.