

## Reviewer's report

**Title:** Determinants of Racial/Ethnic Differences in Blood Pressure Management Among Hypertensive Patients

**Version:** 1 **Date:** 22 March 2005

**Reviewer:** Michel Joffres

### Reviewer's report:

General

This study outlines some key aspects of hypertension management and patient/provider characteristics that have received relatively little attention and could explain some of the ethnic differences seen in drug intensification.

The paper is well written, clear and concise, and raises important points and limitations that will be important to explore in the future.

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Minor and discretionary Revisions:

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A few points to consider:

1. Some minor editing ones: Prevalence is misspelled in the abstract and in the conclusion.
2. Conceptual: the term mediator/mediation is used (abstract and page#8). If the issue here is whether a third variable –number of visits- (or other variables –diabetes-) can explain the association between ethnicity and drug intensification, then shouldn't this be called a potential confounder? The term mediator is synonymous of "intermediary variable" or other terms in the literature that imply the variable is in the path to the outcome variable/dependant variable. In that case ethnicity would "cause" an increase in the number of visits that would in turn "cause" drug intensification. While we classically adjust for a potential confounder, we do not adjust for an intermediary variable since it leads to over adjustment. Table 3 shows adjusted OR, and therefore assumes that these variables were treated as potential confounders and not as intermediary variables. Interaction terms were also tested (effect modification-moderators in the sociological field).

In other words, I would suggest changing the word mediator/mediation to (potential) confounder/confounding.

Methods:

3. I assume that for diabetes/renal failure, the threshold used was the same as in the previous Hypertension paper (JNC VI criterion) of 130/85. If the JNC VII criterion is used shouldn't it be 130/80? This clarification could be added to the methods' section.
4. Forward selection for a -stepwise I assume- logistic regression was used. What was the rationale for this? Stepwise models can create problems by eliminating clinically important associated variables that may no be as well measured. Since only a few variables were both associated with race and the dependant variable, was it necessary to use a stepwise model?

Discussion:

5. If the ethnic/racial differences in intensification can be explained by the number of visits, diabetes and other potential confounders, what does this mean? Is it because of some disease severity (diabetes) or non-adherence to treatment that Hispanics have fewer visits and less drug intensification? As pointed out in the discussion, there are still some ethnic/racial differences that need to be taken into account (and understood) during the therapeutic encounter even though these differences can be explained by other variables.

“We found that Hispanic patients in our cohort were also less likely to have their anti-hypertensive medications intensified at least once in response to repeatedly uncontrolled BP than were other racial/ethnic groups and our findings also expand beyond documenting racial/ethnic disparities in aggressiveness of therapy by determining the roles racial/ethnic differences in clinic utilization among patients and racial/ethnic differences in the prevalence of diabetes play in mediating differences in providers’ aggressiveness in treating hypertension”

And also stated in the limitations:

“Providers may not want to intensify therapy at the same rate for patients they know are less compliant with therapy, although it is hard to identify these patients.”

In their previous paper (Hypertension. 2004;44:429-434.) the authors found that JNC adherence was higher among Hispanics, but that they had a lower level of control. On the other hand, there was no difference by ethnic group in the association between drug intensification and subsequent BP control.

6. How is this possible and how does this fit with the current findings?

7. The fact that these ethnic/racial differences can be explained by other variables still points to a problem within an ethnic/racial group, mainly the Hispanic group. This may be an important clinical issue that could be brought up in the abstract and in the conclusion.

**What next?:** Accept after minor essential revisions

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**

Presentation of epidemiological data sponsored by different drug companies