Author's response to reviews

Title: Variation in Vitamin D Supplementation Among Adults in a Multi-Race/Ethnic Health Plan Population, 2008

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Author's response to reviews:

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Dear Editor,

We are submitting the revision of our manuscript “Variation in Vitamin D Supplementation among Adults in a Multi-Race/Ethnic Health Plan Population, 2008” for publication in Nutrition Journal.

We think that the reviewers made many excellent suggestions that, when implemented, led to the creation of a better manuscript. We incorporated most of the changes that were requested and have explained below why we did not make other requested changes.

We hope that the editors and reviewers will now find this manuscript acceptable for publication.

Sincerely,

Nancy P. Gordon (corresponding author), Bette J. Caan, and Maryam M. Asgari

Below is a list of the revisions we made to the originally submitted manuscript in response to reviewer comments:

Abstract:

Wording changes to Methods and Conclusion in response to Erin Leblanc comments. Also, we realized the original abstract was 150 words over the 350 word limit. The new abstract is 300 words.

Background:

Paragraph 1:

1) We made changes in the first paragraph to address Erin Leblanc’s comments.
2) We added a reference to the Endocrine Society’s review of evidence summarizing the strength of evidence about the relationship of vitamin D with
non-bone related conditions.

Paragraph 2:
1) We dropped “high risk for vitamin D deficiency” to simplify, per Erin Leblanc’s comment;
2) Erin Leblanc’s recommendation, we also added a reference to the Endocrine Society guidelines about the cut-points to be used to diagnose vitamin D deficiency.

Paragraph 3:
We added what the RDAs were for vitamin D prior to 2010 IOM recommendations, just as a point of reference for the new IOM recommendations.

Paragraph 4:
We corrected the statistics cited about percentages of adults who got adequate vitamin D from food sources based on the older RDA guidelines (we found that the original statistics were percentages that didn’t get above the AI, so the new percentages represent percentages meeting the AI).

Paragraph 6:
We changed the three aims into two specific aims and a secondary aim.

Methods:
Data Source:
1) We changed “very similar” to “highly comparable”;
2) We added that the KPNC adult membership differs from the insured population with regard to percentage with very low levels of education in addition to percentage with very low levels of income.

Study Variables:
1) Changed description of vitamin D intake based on source, per Erin Leblanc comments, so now we just report on number of sources rather than making assumptions about the number of IUs that intake of vitamin D from that number of sources represented;
2) We split up age groups into 25-50, 51-70, and 71-85 rather than collapsing the upper 2 groups for reporting the percentages of women and men getting vitamin D from different sources; we kept the analyses by race-ethnicity to the two original age groups (25-50 and 51-85) due to sample size constraints, but also the differences between race-ethnic groups aged 51-70 and 71-85 were negligible.

Statistical Analysis:
We clarified why we collapsed the upper 2 age groups (510-70, 71-85) for most of analyses
Results:

Paragraph 1:
Marta Induni had requested that all the actual demographic and health condition statistics shown in Table 1 that were mentioned in the text as having significant race-ethnic differences be presented in the text so that the reader didn’t have to keep turning to look at the table. We hope that the table placement in the published article will make it easier for the readers to see the differences. While one of the aims of the paper was to identify race-ethnic differences in supplementation practices, it wasn’t to try to identify factors that might explain why these race-ethnic differences exist. The information in Table 1 was just background information about the population subgroups that we felt readers would want to have.

Paragraph 2:
1) Per Junko Ishihara’s request, we’ve added CIs around the percentages reported in the text. Adding them to the percentages in the tables would have made the tables too cluttered in our opinion.

2) Per Marta Induni’s suggestion, we changed our wording to “getting no vitamin D” rather than “not getting vitamin D” to be more parallel to getting vitamin D from 2+ sources.

Paragraph 4:
1) Similar changes made to those described for paragraph 2.

2) Partly in response to Junko Ishihara’s request, we now include Odds Ratios (ORs) with 95% confidence intervals (CIs) comparing risk of no vitamin D supplementation among women who were obese vs. non-obese and diabetic/hypertensive vs. having neither condition after adjusting for race/ethnicity and age.

Paragraph 5:
Partly in response to Junko Ishihara’s request, we added in ORs comparing risk of no vitamin D supplementation for Blacks and Latina/os vs. WhiteNH within the different health risk groups.

Discussion:

Paragraph 1:
1) We modified the first sentence in this paragraph partly in response to Erin Leblanc’s comments that our original first sentence was in conflict with IOM report.

2) We changed “most people” to “a large percentage” so we weren’t going out on as much of a limb.

3) We took out our hypothesized reason for why women > 50 were more likely to be using calcium with D supplements than men since we didn’t have evidence from this study to support this assertion.
Conclusion:
We changed “the majority” to “a large percentage” and also toned down some of the other statements made in the original manuscript, per Erin Leblanc’s and Marta Induni’s suggestions.

References:
Two references (Endocrine Society reports) were added per Erin Leblanc’s recommendations and one reference that had been used cited as evidence for a higher upper limit for vitamin D intake (5000 vs. 4000) was removed.

Tables 1 and 2
1) We added what the abbreviations Unwtd N and Wtd. % mean to the table notes for Tables 1 and 2, per Junko Ishihara’s recommendations.
2) We added an additional table note for Tables 1 and 2 that at the time of the survey, each of the different sources generally contained 400 IU vitamin D. This is because we took out reference to IUs when we changed to presenting data on number of sources, per Erin Leblanc’s comments.
3) While Junko Ishihara wanted us to present ORs with CIs in these tables rather than percentages, we stuck with percentages because our focus is on differences in prevalence, not differences in odds. We felt that the prevalence statistics would be more meaningful to people concerned with population health and race-ethnic disparities.

Table 2:
We now present the percentages of women and men aged 25-50, 51-70, and 71-85 who used multivitamins, calcium with D, and different numbers of vitamin D sources rather than just presenting this information for two age groups. We did this to show that the vitamin D patterns were similar enough to warrant collapsing the upper two age groups. (We found no statistically significant differences re: number of vitamin D sources or distribution of sources of vitamin D when we compared those two upper age groups). We also felt that readers would want to be able to cite the statistics for the oldest age group since it has a higher RDA for vitamin D than the middle-aged group, and this group likely wouldn’t have been able to achieve even that older RDA without using two supplement sources.

Figure 1B: We corrected some of the percentages that contained typos, as pointed out by Erin Leblanc.