



RESPONSE TO COMMENT ON FISCHER ET AL.

# Text Message Support for Weight Loss in Patients With Prediabetes: A Randomized Clinical Trial.

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We thank Afarideh et al. (1) for their thoughtful discussion of our study of text message support for weight loss in patients with prediabetes (2). We agree that the differential impact by language of the text message intervention was striking and merits further exploration. In a separate article, we will analyze in detail our end-study focus groups and survey data as well as comorbidities and characteristics across our cohorts to further evaluate our study findings, including the greater weight loss observed among participants in the Spanish group.

Afarideh et al. question whether some of the differences between the English- and Spanish-speaking groups in baseline demographics (more women in Spanish intervention group), clinical metrics (mean HbA<sub>1c</sub> of 6.0% vs. 5.8% and mean systolic blood pressure of 118.7 vs. 127.3 mmHg in Spanish vs. English groups, respectively), and other unidentified patient-level factors (personality type, educational level, type of cell phone) or differences in comorbidities could be contributing to the observed findings by language.

These are valid questions, and preliminary analysis suggests differences between the two groups, such as in the baseline burden of chronic illness. Given that a large proportion of our patients were on Medicaid or underinsured, the Chronic Illness and Disability Payment

System (CDPS) is an appropriate measure of baseline chronic disease and risk of medical complications (3). The English cohort scored higher than the Spanish cohort on the CDPS (1.95 vs. 0.96,  $P < 0.01$ ), suggesting a larger burden of chronic illness at baseline. Though we will be limited by a relatively small subgroup sample size, we will explore this and other patient-level factors in the context of the end-study focus groups and surveys to better understand the differential impact by language.

The text message content was developed through focus groups with Spanish- and English-speaking patients, with the English version translated to Spanish through a certified interpreter. Our team will share our text message library, SMS4PreDM, with other investigators (contact H.H.F. at henry.fischer@dhha.org). We welcome replication of our intervention and recommend tailoring the content to the participant population.

Afarideh et al. cite several articles detailing Spanish-specific efficacy and posit that there is a “systematic, not incidental, contribution of language to the text message supportive care” (1). Two of the articles cited offer hints of greater efficacy by Spanish language, with limitations as one is a study of automated phone calls, a mobile health modality distinct from text messaging (4), and

the other is a small pilot study of 12 patients that does not provide quantitative results broken down by language (5). A third study of a 6-month educational text message support intervention following an emergency department visit for patients with an HbA<sub>1c</sub> >8% shows larger effects in Spanish versus English speakers for HbA<sub>1c</sub> improvement and medication adherence, albeit through a self-reported measure (6).

The variable efficacy of text message support by primary language deserves further exploration. We look forward to examining this issue more closely when we share the qualitative findings of our intervention, and we anticipate and welcome future analyses in the mobile health literature.

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**Duality of Interest.** No potential conflicts of interest relevant to this article were reported.

### References

1. Afarideh M, Ghajar A, Noshad S, Esteghamati A. Comment on Fischer et al. Text message support for weight loss in patients with prediabetes: a randomized clinical trial. *Diabetes Care*

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- 2016;39:1364–1370 (Letter). *Diabetes Care* 2016;39:e206. DOI: 10.2337/dc16-1210
2. Fischer HH, Fischer IP, Pereira RI, et al. Text message support for weight loss in patients with prediabetes: a randomized clinical trial. *Diabetes Care* 2016;39:1364–1370
3. Kronick R, Gilmer T, Dreyfus T, Lee L. Improving health-based payment for Medicaid beneficiaries: CDPS. *Health Care Financ Rev* 2000;21:29–64
4. Piette JD. Patient education via automated calls: a study of English and Spanish speakers with diabetes. *Am J Prev Med* 1999;17:138–141
5. Aguilera A, Muñoz RF. Text messaging as an adjunct to CBT in low-income populations: a usability and feasibility pilot study. *Prof Psychol Res Pr* 2011;42:472–478
6. Arora S, Peters AL, Burner E, Lam CN, Menchine M. Trial to examine text message-based mHealth in emergency department patients with diabetes (TEXT-MED): a randomized controlled trial. *Ann Emerg Med* 2014;63:745–754.e6