



RESPONSE TO COMMENT ON KIM ET AL.

The Effect of a Smartphone-Based, Patient-Centered Diabetes Care System in Patients With Type 2 Diabetes: A Randomized, Controlled Trial for 24 Weeks. *Diabetes Care* 2019;42:3–9

Diabetes Care 2019;42:e126 | <https://doi.org/10.2337/dci19-0021>

Eun Ky Kim¹ and Young Min Cho²

We thank Huo et al. (1) for their interest in our study (2) on the effect of a smartphone-based, patient-centered diabetes care system (mDiabetes) in patients with type 2 diabetes. In our study, the efficacy of mDiabetes was examined in the full analysis set, which excluded participants who failed to meet inclusion/exclusion criteria or lacked any postrandomization data to evaluate the effect of mDiabetes on glucose control. With respect to the comment, we additionally analyzed the primary outcome in the classical intention-to-treat population using the last observation carried forward method. Among 191 randomly assigned patients, two patients withdrew their consent before the baseline laboratory test. Consequently, 189 patients (95 patients in the mDiabetes group and 94 patients in the control group) were included to the intention-to-treat set. The difference of the adjusted mean changes in HbA_{1c}

level was 0.39% (95% CI 0.16–0.62, $P = 0.0002$), which showed similar results with the full analysis set.

As Huo et al. (1) mentioned, the medication dose titration algorithm in our study was designed only for insulin. The comment is valuable, but we think that it would be very difficult to adjust the dose of oral drugs because we have to consider renal and hepatic function, drug–drug interaction, risk of hypoglycemia, and many other factors. It is conceivable that dose adjustment for sulfonylurea might be possible. However, the dose response is neither linear nor limitless with sulfonylurea when compared with insulin. Consequently, the automatic dose adjustment of oral antidiabetic medication would not be easy to implement with mDiabetes or other measures using smartphone applications.

We agree with the commenters' concern about imprudent overestimation of

the effect of mobile health technology. However, based on the results of well-designed studies, we think the future of this new therapeutic option is still viable.

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References

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¹International Healthcare Center, Seoul National University Hospital, Seoul, Korea

²Department of Internal Medicine, Seoul National University College of Medicine, Seoul, Korea

Corresponding author: Young Min Cho, ymchomd@snu.ac.kr

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