Corrigenda and Addenda

Correction: Mobile App-Based Interventions to Support Diabetes Self-Management: A Systematic Review of Randomized Controlled Trials to Identify Functions Associated with Glycemic Efficacy

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In "Mobile App-Based Interventions to Support Diabetes Self-Management: A Systematic Review of Randomized Controlled Trials to Identify Functions Associated with Glycemic Efficacy" (JMIR Mhealth Uhealth 2017;5(3):e35), there was an error in Table 2. The "Mean (SD) HbA_{1c}, %: baseline; end; change" for "Rossi 2013" should read "I: 8.4 (NR); 7.9 (NR); –0.5 (NR); C: 8.5 (NR); 8.1 (NR); –0.5 (NR)" instead of "I: 8.4 (0.1); 7.9 (0.1); –0.5 (0.1); C: 8.5 (0.1); 8.1 (0.1); –0.5 (0.1)".

As a result, data were slightly changed as follows:

1. In the Results subsection of the Abstract, the data were changed in 4 places:
   A. "Across 12 included trials involving 974 participants, using app-based interventions was associated with a clinically significant reduction of HbA_{1c} (MD 0.48%, 95% CI 0.19%-0.78%) without excess adverse events";
   B. "Larger HbA_{1c} reductions were noted among patients with type 2 diabetes than those with type 1 diabetes (MD 0.67%, 95% CI 0.30%-1.03% vs MD 0.37%, 95% CI –0.12%-0.86%)";
   C. "Having a complication prevention module in app-based interventions was associated with a greater HbA_{1c} reduction (with complication prevention: MD 1.31%, 95% CI 0.66%-1.96% vs without: MD 0.38%, 95% CI 0.09%-0.67%; intersubgroup P=.01), as was having a structured display (with structured display: MD 0.69%, 95% CI 0.32%-1.06% vs without: MD 0.17%, 95% CI –0.18%-0.53%; intersubgroup P=.05)."
   D. "However, having a clinical decision-making function was not associated with a larger HbA_{1c} reduction (with clinical decision making: MD 0.19%, 95% CI –0.24%-0.63% vs without: MD 0.61%, 95% CI 0.27%-0.95%; intersubgroup P=.14).

2. In the Effects of Mobile App-Based Interventions on HbA_{1c} subsection of the Results, the data were changed in 4 places:
   A. "The use of mobile app-based interventions was associated with a clinically significant HbA_{1c} reduction of 0.48% (95% CI 0.19%-0.78%, I^2=76%, P<.001);
   B. "The use of app-based interventions did not achieve statistical significance among patients with T1DM (MD 0.37%, 95% CI –0.12%-0.86%, I^2=86%, P<.001)";
   C. Figure 4;
   D. Figure 5.

3. In the Effects of Modules, Risks, and Technologies of App-Based Interventions on HbA_{1c} subsection of the Results, data were corrected in the following 5 places:

   A. "We noted a greater HbA_{1c} reduction when interventions included a complication prevention module (with complication prevention: MD 1.31%, 95% CI 0.66%-1.96%, I^2=0%, P=.84 vs without: MD 0.38%, 95% CI 0.09%-0.68%, I^2=76%, P<.001; test for subgroup difference P=.01)";

   B. "Having a structured display was also associated with a larger HbA_{1c} reduction (with structured display: MD 0.69%, 95% CI 0.32%-1.06%, I^2=63%, P=.008 vs without: MD 0.17%, 95% CI –0.18% to 0.53%, I^2=75%, P=.007; test for subgroup difference P=.05)";

   C. "For high-risk interventions with a clinical decision-making function, the reduction of HbA_{1c} was 0.19% (95% CI –0.24%-0.63%, I^2=82%, P=.004), while the reduction was 0.61% (95% CI 0.27%-0.95%, I^2=64%, P=.005) for potential-risk interventions without clinical decision making (test for subgroup difference P=.14)";

   D. "Interventions using manual entry showed an associated lower HbA_{1c} reduction without statistical significance (wire connection: MD 0.70%, 95% CI 0.33%-1.07% vs wireless connection: MD 0.53% CI 0.15%-0.92%, I^2=46%, P=.10 vs manual entry: MD 0.37%, 95% CI

–0.12%-0.86%, I^2=86%, P<.001; test for subgroup difference P=.56)";

   E. Figure 6.

4. In the Principal Findings subsection of the Discussion, the data were corrected in 4 places:

   A. 1) "The meta-analysis of 12 RCTs demonstrated that app-based interventions were associated with a statistically and clinically significant HbA_{1c} reduction of 0.48% (95% CI 0.19%-0.78%)";

   B. 2) "We noted larger HbA_{1c} reductions for patients with T2DM (MD 0.67%, 95% CI 0.30%-1.03%) than those with T1DM (MD 0.37%, 95% CI –0.12%-0.86%)";

   C. 3) "The exploratory subgroup analyses showed that having a clinical decision-making function in app-based interventions was not associated with a greater HbA_{1c} reduction (with clinical decision making: MD 0.19%, 95% CI –0.24%-0.63% vs without: MD 0.61%, 95% CI 0.27%-0.95%; intersubgroup P=.14)".

The corrected article will appear in the online version of the paper on the JMIR website on January 15, 2018, together with the publication of this correction notice. Because this was made after submission to PubMed or Pubmed Central and other full-text repositories, the corrected article also has been re-submitted to those repositories.

Please see the corrected data and figures here.

Figure 4. Effects of app-based mobile health interventions on hemoglobin A_{1c} (HbA_{1c}). MD: mean difference.

Trial	Weight (%)		MD (95% CI), %
Baron 2017	6.0		-0.56 (-1.41 to 0.29)
Hsu 2016	3.8		-1.20 (-2.44 to 0.04)
Drion 2015	7.4		0.10 (-0.57 to 0.77)
Holmen 2014	9.1		-0.20 (-0.69 to 0.29)
Waki 2014	8.3		-0.50 (-1.08 to 0.08)
Kirwan 2013	8.4		-1.39 (-1.96 to -0.82)
Rossi 2013	11.4		-0.01 (-0.24 to 0.22)
Charpentier 2011	9.7		-0.75 (-1.18 to -0.32)
Rossi 2010	10.5		0.10 (-0.24 to 0.44)
Yoo 2009	10.3		-0.70 (-1.07 to -0.33)
Istepanian 2009	8.4		-0.10 (-0.67 to 0.47)
Quinn 2008	6.6		-1.35 (-2.12 to -0.58)

All trials: pooled MD (heterogeneity I^2=76%, P<.001)   **-0.48 (-0.78 to -0.19)**

-2.5   -2.0   -1.5   -1.0   -0.5   0.0   0.5   1.0

Favors intervention   Favors control
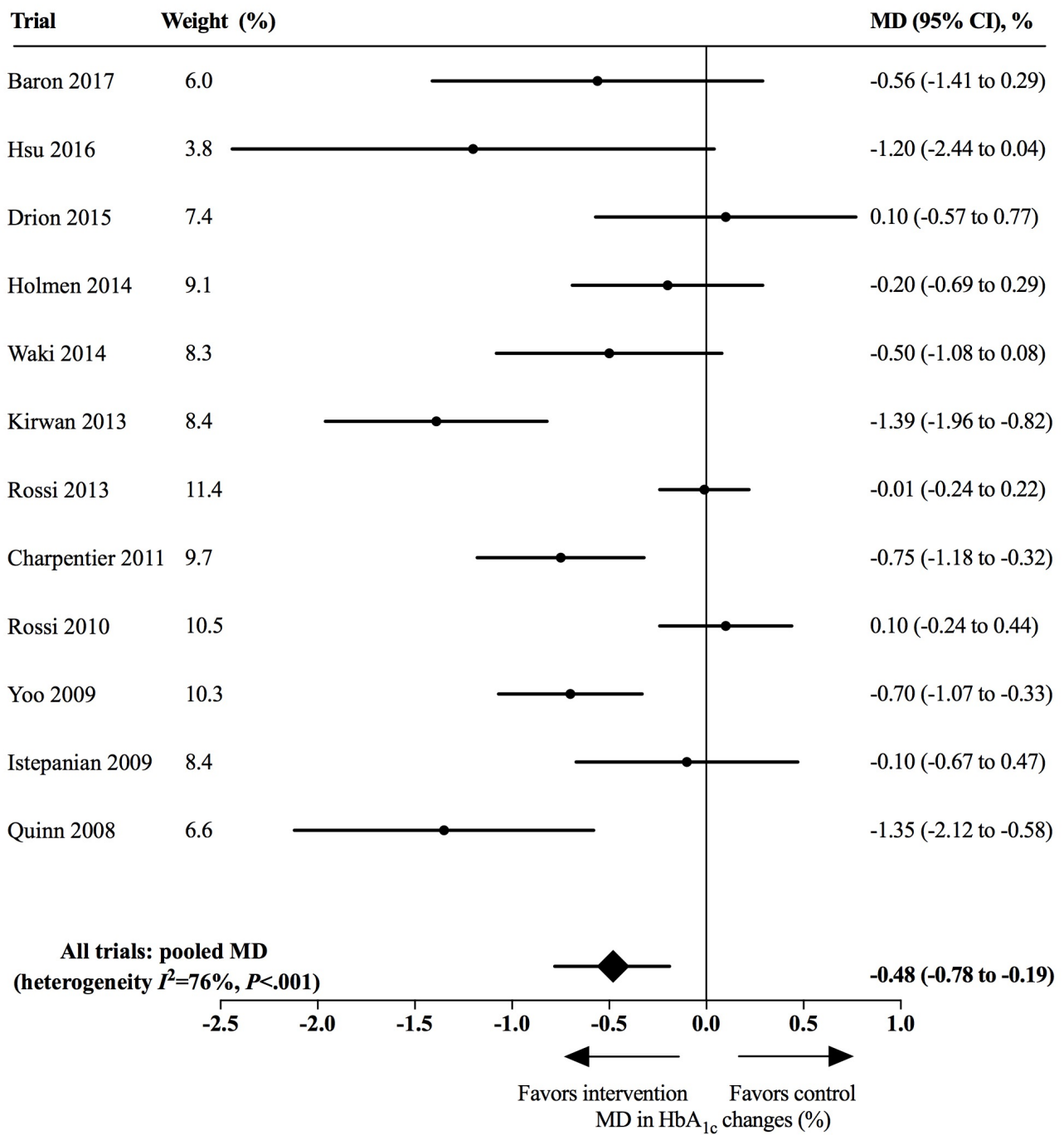MD in HbA_{1c} changes (%)

Figure 5. Effects of app-based mobile health interventions on hemoglobin A_{1c} (HbA_{1c}) for patients with type 1 diabetes (T1DM) and type 2 diabetes (T2DM). MD: mean difference.

Trial or subgroup	Weight (%)		MD (95% CI), %
Drion 2015	8.8		0.10 (-0.57 to 0.77)
Kirwan 2013	9.9		-1.39 (-1.96 to -0.82)
Rossi 2013	13.0		-0.01 (-0.24 to 0.22)
Charpentier 2011	11.3		-0.75 (-1.18 to -0.32)
Rossi 2010	12.1		0.10 (-0.24 to 0.44)
Subgroup of T1DM: pooled MD (heterogeneity I^2=86%, P<.001)			**-0.37 (-0.86 to 0.12)**
Hsu 2016	4.8		-1.20 (-2.44 to 0.04)
Holmen 2014	10.7		-0.20 (-0.69 to 0.29)
Waki 2014	9.8		-0.50 (-1.08 to 0.08)
Yoo 2009	11.8		-0.70 (-1.07 to -0.33)
Quinn 2008	8.0		-1.35 (-2.12 to -0.58)
Subgroup of T2DM: pooled MD (heterogeneity I^2=47%, P=.11)			**-0.67 (-1.03 to -0.30)**
All trials: pooled MD (intersubgroup P=.34)			**-0.52 (-0.85 to -0.19)**

-2.5   -2.0   -1.5   -1.0   -0.5   0.0   0.5   1.0

Favors intervention   Favors control
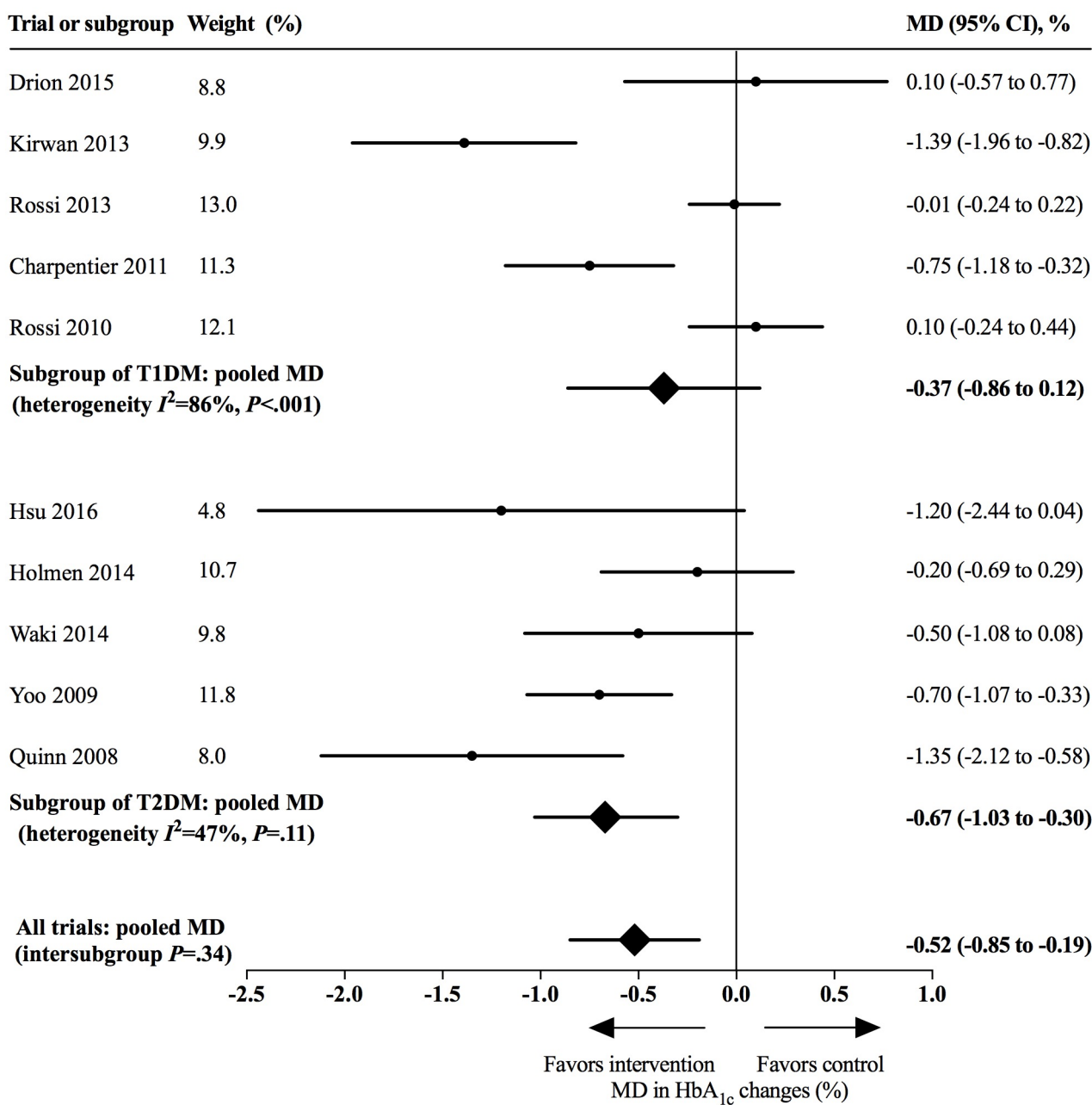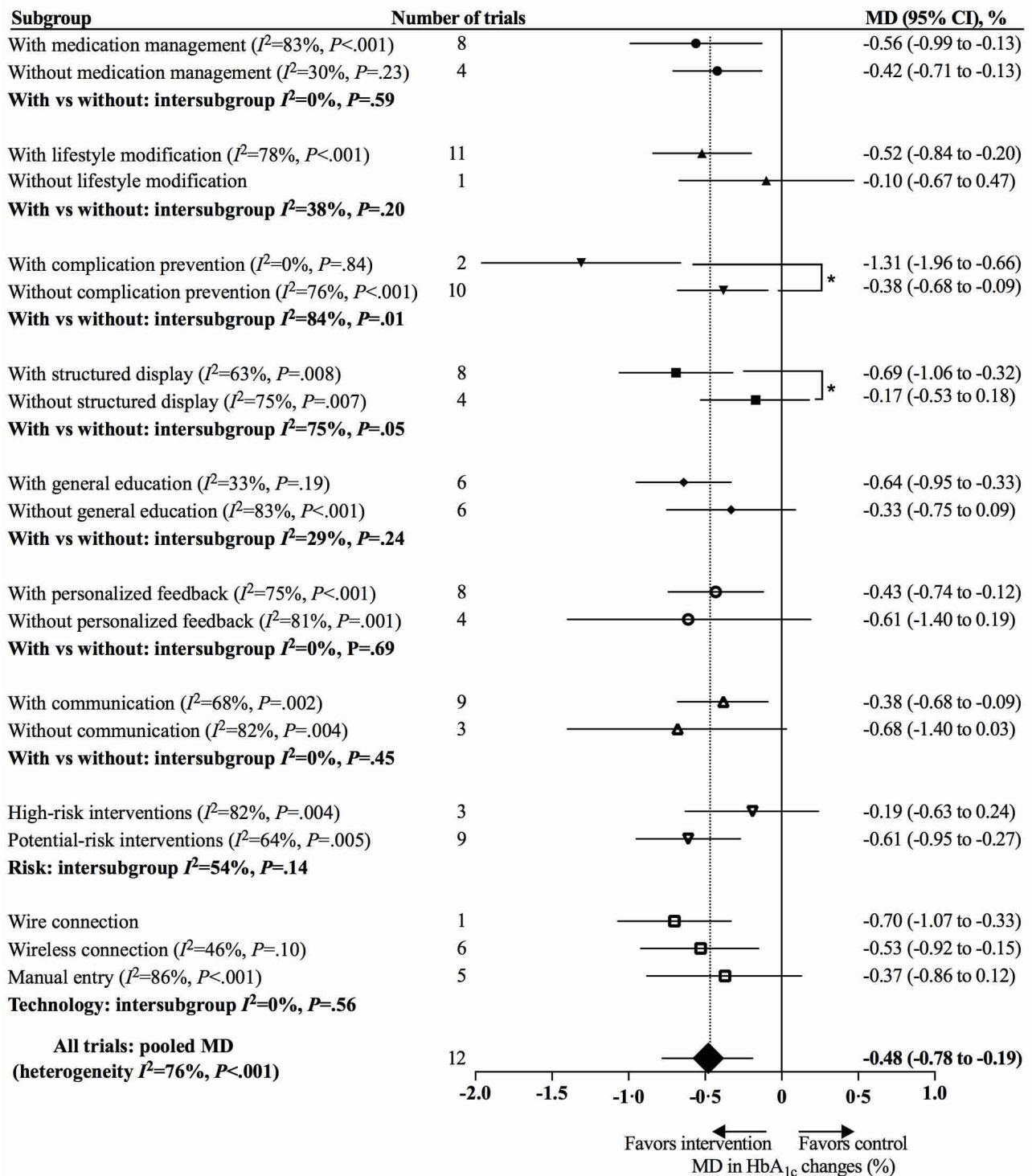MD in HbA_{1c} changes (%)

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Figure 6. Effects of modules, risks, and technologies of app-based mobile health interventions on hemoglobin A_{1c} (HbA_{1c}). MD: mean difference.

Subgroup	Number of trials	MD (95% CI), %
With medication management (I^2=83%, P<.001)	8	-0.56 (-0.99 to -0.13)
Without medication management (I^2=30%, P=.23)	4	-0.42 (-0.71 to -0.13)
With vs without: intersubgroup I^2=0%, P=.59		
With lifestyle modification (I^2=78%, P<.001)	11	-0.52 (-0.84 to -0.20)
Without lifestyle modification	1	-0.10 (-0.67 to 0.47)
With vs without: intersubgroup I^2=38%, P=.20		
With complication prevention (I^2=0%, P=.84)	2	-1.31 (-1.96 to -0.66)
Without complication prevention (I^2=76%, P<.001)	10	-0.38 (-0.68 to -0.09)
With vs without: intersubgroup I^2=84%, P=.01		
With structured display (I^2=63%, P=.008)	8	-0.69 (-1.06 to -0.32)
Without structured display (I^2=75%, P=.007)	4	-0.17 (-0.53 to 0.18)
With vs without: intersubgroup I^2=75%, P=.05		
With general education (I^2=33%, P=.19)	6	-0.64 (-0.95 to -0.33)
Without general education (I^2=83%, P<.001)	6	-0.33 (-0.75 to 0.09)
With vs without: intersubgroup I^2=29%, P=.24		
With personalized feedback (I^2=75%, P<.001)	8	-0.43 (-0.74 to -0.12)
Without personalized feedback (I^2=81%, P=.001)	4	-0.61 (-1.40 to 0.19)
With vs without: intersubgroup I^2=0%, P=.69		
With communication (I^2=68%, P=.002)	9	-0.38 (-0.68 to -0.09)
Without communication (I^2=82%, P=.004)	3	-0.68 (-1.40 to 0.03)
With vs without: intersubgroup I^2=0%, P=.45		
High-risk interventions (I^2=82%, P=.004)	3	-0.19 (-0.63 to 0.24)
Potential-risk interventions (I^2=64%, P=.005)	9	-0.61 (-0.95 to -0.27)
Risk: intersubgroup I^2=54%, P=.14		
Wire connection	1	-0.70 (-1.07 to -0.33)
Wireless connection (I^2=46%, P=.10)	6	-0.53 (-0.92 to -0.15)
Manual entry (I^2=86%, P<.001)	5	-0.37 (-0.86 to 0.12)
Technology: intersubgroup I^2=0%, P=.56		
All trials: pooled MD (heterogeneity I^2=76%, P<.001)	12	**-0.48 (-0.78 to -0.19)**

Favors intervention ← → Favors control
MD in HbA_{1c} changes (%)