ONLINE EXCLUSIVE

Q/ Do group visits improve HbA1c more than individual visits in patients with T2DM?

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EVIDENCE-BASED ANSWER

A/ **Yes.** In patients with type 2 diabetes mellitus (T2DM), group visits led by health professionals or teams improved glycosylated hemoglobin (HbA1c) by 0.3% to 0.9% over usual care (strength of recommendation [SOR]: **B**, meta-analyses of randomized clinical trials [RCTs] with moderate to high risk of bias).

Patients taking oral antidiabetic agents alone appear to benefit more than patients on insulin. Peer-led group visits likely have no effect (SOR: **B**, subgroup analysis within a meta-analysis).

Treatment durations as long as 3 years are associated with larger decreases in HbA_{1c} (by 0.25% per year) than treatment lasting less than a year (SOR: **B**, meta-analysis of RCTs involving patents with type 1 diabetes and T2DM).

Patients with T2DM should be offered group visits for diabetes education when available (SOR: **C**, expert opinion).

Evidence summary

A 2012 systematic review of 21 RCTs examined the effect of group-based diabetes education on HbA1c in 2833 adults with T2DM.[1] Intervention groups participated in at least 1 group session lasting an hour led by a health professional or team (eg, physician, nurse, diabetes educator); controls received usual care. Most trials involved 6 to 20 hours of group-based education delivered over 1 to 10 months, although some trials continued the intervention for as long as 24 months. The mean HbA1c at baseline across all patients was 8.23%.

Professional-led group visits improve HbA1c

Group education resulted in a significant reduction in HbA1c compared with controls at 6 months (13 trials; 1883 patients; mean difference [MD]=–0.44%; 95% confidence interval [CI], –0.69 to –0.19), 12 months (11 studies; 1503 patients; MD=–0.46%; 95% CI, –0.74 to –0.18), and 24 months (3 studies; 397 patients; MD=–0.87%; 95% CI, –1.25 to –0.49). The trials had high heterogeneity, except for the 3 trials with a 24-month endpoint ($I^2 = 0$). Most studies had a moderate or high risk of bias.

A larger 2017 meta-analysis enrolling 8533 adults with T2DM came to similar conclusions, although it included a small number of nonrandomized trials (40 RCTs, 3 cluster RCTs, and 4 controlled clinical trials).[2] Thirteen of the RCTs overlapped with the previously described systematic review.[1] Interventions had to include at least 1 group session with 4 or more adult patients lasting at least 1 hour. In most studies, interventions continued between 4 and 12 months, although some ran 60 months. Controls received usual care. The mean HbA1c at baseline across all patients was 8.3%.

Group-based education compared with controls reduced HbA1c at 6 to 10 months (30 trials, N not given; MD=–0.3%; 95% CI, –0.48 to –0.15), 12 to 14 months (27 trials, N not given; MD=–0.3%; 95% CI, –0.49 to –0.17), and 36 to 48 months (5 trials, N not given; MD=–0.9%; 95% CI, –1.52 to –0.34). In a subgroup analysis, peer-

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led group visits had no effect (5 trials, 1066 patients; MD=–0.02%; 95% CI, –0.12 to 0.16).

Patients on oral agents alone showed a larger benefit than patients using insulin (38 trials, 5871 patients; –0.81 vs –0.19; $P < .0001$). Authors of the meta-analysis classified most studies as having a moderate to high risk of bias, with only 4 having low risk.

Duration of intervention: Longer is better for HbA1c values

Another systematic review analyzed 13 RCTs with 4652 patients 16 years and older with T2DM or type 1 diabetes to assess the effect of group visits on HbA1c.[3] The review excluded studies that didn't include a health care provider who could prescribe, diagnose, assess, and refer patients when appropriate.

Most interventions ran 3 to 12 months, although one lasted 36 months. (Two RCTs overlapped with the 2012 review, and 2 others with the 2017 review.) Group medical visits resulted in a significant decrease in HbA1c at the end of the intervention period (MD=–0.46%; 95% CI, –0.80 to –0.13) compared with controls. A meta-regression analysis suggested that ongoing treatment (for as long as 3 years) decreased HbA1c more than a shorter treatment duration (by 0.25% per year of treatment), whereas the frequency of treatments didn't alter the effect. Overall, the trials were heterogenous and most had a high risk of bias.

Recommendations

The 2015 National Institute for Health and Care Excellence guideline for the management of T2DM in adults calls group education programs "the preferred option" for diabetes education, suggesting that clinicians reserve individual education for patients unable or unwilling to participate in group programs.[4]

The 2017 diabetes self-management education and support policy endorsed by the American Diabetes Association recommends using interprofessional teams and "creative solutions" to increase patient engagement and endorses group meetings as an effective option for patients who choose them.[5]

Editor's takeaway

Moderate-quality evidence demonstrates that group visits can significantly reduce HbA1c levels. We should consider them for our patients with diabetes who are willing to attend group sessions. JFP

References

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