

# A web-based self-management assessment tool that improves HbA<sub>1c</sub>

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Computerised patient self-management assessment tools have shown promise in office-based diabetes education research, and offer the potential benefit of wide translation (Glasgow and Eakin, 2000).

## Diabetes Self-Care Profile tool

The authors of this study evaluated the online Diabetes Self-Care Profile (DSCP) tool, which briefly assesses diet, exercise, medication and physical activity behaviours. It also identifies one behaviour selected by the person with diabetes for discussion, documents any practical and psychosocial barriers to optimal diabetes self-management, including attitudes and barriers to insulin therapy, and provides visual feedback on blood glucose control through monitoring of HbA<sub>1c</sub> levels.

Fifty-eight people with type 2 diabetes were recruited and took part in the intervention. The mean age of participants was 57.2±10.9 years, and 63.8% were female. The mean diabetes duration was 7.0±6.5 years, with 63.6% of all participants having received diabetes education. Oral agents were used by 84.5%, and 22.4% were receiving insulin therapy. Mean baseline HbA<sub>1c</sub> level was 8.9±1.2% (74±13 mmol/mol).

Participants attended a mean of 3.5±0.8 out of four scheduled intervention sessions over a 6-month period. These sessions were conducted by a certified diabetes educator who used the DSCP summary to guide education sessions.

Research staff entered a set of clinical values needed for the summary report (most recent HbA<sub>1c</sub> level, current medications and doses) and the participant then completed the DSCP assessment questions prior to the first session (with help from research staff if needed). The one-page DSCP summary generated was used in each session (1 hour for the first session and 30 minutes for subsequent sessions). Each discussion began with the participant's selected self-care topic, and specifically addressed any self-identified barriers listed in the summary report (including psychosocial issues such as depression, diabetes distress, or fears of progression to insulin therapy). There was no formal protocol for each visit beyond the requirement that the DSCP summary was to be the focus of the visit.

## Results

Results showed that HbA<sub>1c</sub> levels improved by 1.0±1.3% (10.9±14.2 mmol/mol) during the 6-month intervention ( $P<0.01$ ). Univariate analyses also showed significant improvements in mean values

for BMI, self-care behaviours, diabetes distress, diabetes treatment satisfaction, and social support during the intervention (all  $P<0.01$ ). A final regression model examining mediators of HbA<sub>1c</sub> change included diabetes self-care, diabetes distress and treatment satisfaction, and explained 40% of HbA<sub>1c</sub> variance ( $P=0.0003$ ).

## Conclusion

The DSCP evolved from an earlier CD-ROM version the authors had developed. The authors plan to periodically update the DSCP and its associated website and to continue to gather information on its clinical usefulness and cost-effectiveness. For example, they plan to add a blood pressure control "thermometer" on the DSCP summary report to complement HbA<sub>1c</sub> feedback currently provided.

The authors are currently using the DSCP in a randomised controlled study involving 400 people with poorly controlled type 2 diabetes to evaluate a nurse/dietitian case management team model of care. The DSCP is freely available to any interested clinician or researcher and is accessible online at <http://www.dscpsurvey.com> for those who wish to explore its use in their own clinical practice. ■

Glasgow RE, Eakin EG (2000) Medical office-based interventions. In: Snoek F, Skinner TC (eds). *Psychology in Diabetes Care*. 2nd edn. John Wiley & Sons, New York

## The IMPROVE™ Control Campaign

The Global Task Force on Glycaemic Control is a group of physicians and specialists in the field of diabetes from around the world that is working in collaboration with Novo Nordisk with the ultimate aim of identifying and developing practical solutions to the global problem of poor glycaemic control in people with diabetes. Since early 2008, the *Journal of Diabetes Nursing* has featured articles and submissions under the banner of IMPROVE™ Control – a global public awareness campaign focused on the need for improved control, which forms part of the Task Force's work. Throughout 2009, the journal will continue to bring you articles on the barriers to good glycaemic control, and submissions from *you*, our readers, outlining the strategies you have used to help people with diabetes improve their control.

For example, perhaps you have implemented a new educational session in your area that has helped break down barriers to control, or maybe you have set up a new referral pathway that has helped improve HbA<sub>1c</sub> levels. The *Journal of Diabetes Nursing* would like to help you share your practical solutions for improving control, no matter how big or small, with other nurses working in diabetes. We encourage you to take part in this global initiative by calling 020 7627 1510, or emailing [james@sbcommunicationsgroup.com](mailto:james@sbcommunicationsgroup.com).

