COMMENTS AND RESPONSES

Comment on: Polonsky et al. Structured Self-Monitoring of Blood Glucose Significantly Reduces A1C Levels in Poorly Controlled, Noninsulin-Treated Type 2 Diabetes: Results From the Structured Testing Program Study. Diabetes Care 2011;34:262–267

We read with interest the article by Polonsky et al. (1) reporting that self-monitoring of blood glucose (SMBG) improves glycemic control in noninsulin-treated type 2 diabetes. In the U.K., SMBG is recommended for insulin-treated diabetes (2), and controversy exists in relation to treatment with lifestyle advice or oral hypoglycemic agents (OHAs). A Cochrane review concluded that there is insufficient evidence to support the use of SMBG in noninsulin-treated type 2 diabetes (3). Furthermore, a health technology assessment review suggests that SMBG has limited clinical effectiveness in improving glycemic control in noninsulin-treated type 2 diabetes (4). In view of the widespread use of SMBG, cost implications, and the fact that U.K. management algorithms are based on HbA_{1c} targets (2), clarity is required on the role of SMBG.

We used the SAIL (Secure Anonymised Information Linkage) databank (5) to examine glucose strip prescribing in relation to HbA_{1c} in groups treated with diet, OHAs, and insulin. SAIL contains patient data from 35 primary care systems for the Swansea area ($n = 250,086$). We examined the diabetes population aged 18–70 years with an HbA_{1c} performed between January 2006 and January 2008 ($n = 6,223$) who were prescribed testing strips within the previous 6 months ($n = 1,674$ with 4,608 prescriptions). The number of glucose strips issued per patient in the past 6 months were grouped by diabetes therapy (insulin, OHAs, diet) and HbA_{1c} (<6%, 6.0–7.9%, 8.0–9.9%, ≥10.0%). Median and interquartile ranges are described.

We observed that strip prescribing for the diet and OHAs groups was similar, and as expected, insulin was associated with greater prescribing. Of the 1,674 patients, 25% (414) were treated with insulin, 58% (970) with oral agents, and 17% (286) with diet alone. For the insulin group, there was a reverse association between the HbA_{1c} group (<6%, 6.0–7.9%, 8.0–9.9%, ≥10.0%) and strip use (300 [50–350], 250 [100–400], 200 [100–400], 100 [51–204]), $P = 0.01$. In the OHAs group, the respective values were 50 (50–150), 100 (50–100), 100 (50–200), 100 (50–177), $P < 0.01$. No clear pattern was seen in the diet group.

In those treated with insulin, better HbA_{1c} was associated with greater strip prescribing. Conversely, for those treated with OHAs, greater strip prescribing was associated with a worse HbA_{1c}. There are limitations in our study that need to be highlighted. Firstly, this is an observational study; however, it is reflective of current local practice. Secondly, we examined strip prescribing over a 6-month period, and this does not equate to actual SMBG. Nevertheless, our study in routine clinical care is in line with previous prospective studies and clinical trials (3,4) and different to that described by Polonsky et al. (1).

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