Socioeconomic deprivation is associated with reduced efficacy of an insulin adjustment education program for patients with type 1 diabetes.

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BACKGROUND

The Dose Adjustment For Normal Eating (DAFNE) course is a five day course which teaches carbohydrate counting and insulin adjustment, aiming to improve glycaemic control (lower HbA1c). A key message is that with appropriate insulin adjustment, patients with type 1 diabetes mellitus (T1DM) can eat a normal diet.

In Scotland, geographic areas are divided into five quintiles of deprivation that are postcode-searchable using the Scottish Index of Multiple Deprivation (SIMD) tool.

AIM

To investigate the association between socioeconomic deprivation and reduction in HbA1c after attending DAFNE education.

METHODS

In this retrospective observational study, we identified adults with T1DM who had previously attended DAFNE in NHS Lothian, East Scotland.

We extracted age, sex, postcode-based SIMD quintiles and annual HbA1c measurements four years before and after course attendance.

We calculated mean HbA1c before (baseline) and after attendance at DAFNE course, across four annual measurements. Change in mean HbA1c (mmol/mol) was categorised into three groups: decrease (> -2.5), no change (< ±2.5), increase (> +2.5).

We used multivariable ordinal logistic regression, with baseline mean HbA1c as a covariate, to investigate the association of SIMD quintile with reduction in mean HbA1c.

RESULTS

CONCLUSION

Socioeconomic deprivation was associated higher baseline HbA1c (i.e. worse control) and less reduction in mean HbA1c (i.e reduced efficacy).

Future research could use qualitative/mixed methods to explore causes of this differential benefit, identify barriers, and how best to support patients with T1DM from areas of greater deprivation.

REFERENCES - See QR code (right)