

'Going the distance': an independent cohort study of engagement and dropout among the first 100 000 referrals into a large-scale diabetes prevention program

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Publication

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Abstract

Introduction

Diabetes prevention programs (DPPs) are effective, in a pre-diabetic population, in reducing weight, lowering glycated hemoglobin and slowing the progression to diabetes. Little is known about the relationship between participation in DPPs and participant characteristics or service delivery. We investigated uptake and retention in England's NHS DPP, reporting on variability among patient subgroups, providers, and sites.

Research design and methods

This prospective cohort study included 99 473 adults with non-diabetic hyperglycemia referred to the English DPP between 2016 and 2017. The program seeks to change health behaviors by offering at least 16 hours of group education and exercise. Multilevel logistic regression models were used to analyze variation in uptake, retention, and completion.

Results

Uptake among 99 473 adults referred to the program was 56% (55 275). Among 55 275 who started the program, 34% (18 562) achieved the required dose and 22% (12 127) completed the full course. After adjustment for variation in case mix, substantial heterogeneity in uptake and retention was seen across four service providers (uptake OR 1.77 (1.33, 2.34), 4.30 (3.01, 6.15), and 1.45 (1.07, 1.97) compared with the reference provider) and between sites (uptake for typical individuals ranged from 0.32 to 0.78 across the middle 95% of sites, intraclass correlation coefficient (ICC) 0.07). Higher levels of retention and completion were seen where some out-of-hours provision was offered (retention OR 1.32 (1.25, 1.39)).

Conclusions

This study provides the first independent assessment of participation in the English DPP and the first study internationally to examine the impact of DPP service delivery on participation. When implementing a large-scale DPP, heterogeneity in service provision between different providers and sites can result in variable participation beyond that attributable to case mix, with potential consequences for effectiveness and health inequalities. Extending out-of-hours provision may improve participation in prevention programs.

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