‘Going the Distance' – engagement and drop out among the first 100,000 referrals into the NHS Diabetes Prevention Programme

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NHS Diabetes Prevention Programme

- Evidence-based lifestyle behaviour change intervention
- Groups: healthy eating and lifestyle, help to lose weight and physical exercise
- People at high risk for type 2 diabetes referred from primary care
- At least 16 hours of contact over 9 months
- Delivered by four provider organisations
Research Aims

• We use data collected by NHS DPP service providers to investigate:
  • Participation in the NHS DPP intervention
  • How participation varies with patient characteristics and by provider and site.
Sample

• ~388,000 referrals April 2016 to March 2019
• Analysis cohort ~99,000 referred to September 2017
• Of these ~55,000 attended at least once – ‘attenders’
Participation outcomes

- Uptake: (among referred) attended initial assessment or at least one intervention session
- Retention (among attenders): attended at least 60% intervention sessions
- Completion (among attenders): 60% attendance & either
  - Attendance at final session, OR
  - Final health outcome measure recorded
Analysis

• Descriptive & exploratory analysis to investigate:
  • extent of participation in the NHS DPP

• Logistic regression to report variation in participation among patient subgroups and between different providers and sites
  • Multiple models per outcome for appropriate adjustment
  • Linear splines for continuous variables
  • Random effects allow for clustering by site

• Multiple imputation used to impute missing data assuming MAR
• 99,473 people at risk of diabetes were referred
• of whom 55,275 (56%) took up a place
• Median attendance among participants was 31% of the course.
• Of those who took up a place, 34% were retained to 60% attendance (regarded by DPP as completion) and 22% completed the full course.
Uptake:

- **Providers**: substantial heterogeneity (ORs 1.77 (1.33, 2.34), 4.30 (3.01, 6.15) and 1.45 (1.07, 1.97) compared with the reference provider)
- **Sites**: predicted uptake for a typical individual ranged from 32% to 78% for the middle 95% of sites.

Uptake increased with *age* up to 70 (OR 1.17 (1.15 1.20) per five years) and decreased with older age.

Decreased with *deprivation*, OR 0.65 (0.61, 0.68) for the most deprived compared with the least deprived quintile.

Gender and weight had little association with uptake.
Similar associations with age, deprivation, gender as for uptake.

Lower among Asian (OR 0.75 (0.63, 0.91)) and black (OR 0.83 (0.71, 0.99)) compared with white participants

Employed (OR 0.74 (0.69, 0.80)) than retired people.

People with a disability (OR 0.81 (0.77, 0.86)).

Weight and blood glucose were not associated with retention.
Implications

- Heterogeneity in service provision between different providers and sites can result in variable participation beyond that attributable to case mix.
- Extending out-of-hours provision may improve participation.
- Measures to improve uptake from deprived areas may be needed.
- Measures to improve retention may be needed among minority ethnic groups, deprived areas, those with a disability and people in work.
The DIPLOMA Evaluation

- **Diabetes Prevention – Long term Multimethod Assessment** (NIHR funded)
- Mixed methods research programme, 2017 to 2021
Thank you for listening.

If you have any questions or comments, please add them as a comment below the video and we will read and respond.

More information about DIPLOMA available at:


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