Challenges faced in Evaluating the National Health Services Diabetes Prevention Programme

Presented at the HSR UK Conference 2020
Rathi Ravindrarajah, University of Manchester
rathi.ravindrarajah@manchester.ac.uk

— DIPLOMA TEAM
AND... Liz Howarth, Adrine Woodham, Elaine Cameron, Judith Gellatly, Kelly Howells, Patrick Burch, Thomas Mason
Clinical lead: Simon Heller
NHS Diabetes Prevention Programme

- Healthier You: NHS Diabetes Prevention Programme (NHS DPP) identifies those at high risk of T2D, (non-diabetic hyperglycaemia{NDH}) and refers them onto a behaviour change programme
- 9 months, 13 sessions, 16 hours, Face to face (and digital pilot)
- Focus on diet, physical activity and weight loss
- Diabetes Prevention – Long term Multimethod Assessment DIPLOMA (NIHR funded)
- Multi-disciplinary team at University of Manchester
- Mixed methods research programme, 2017 to 2021

AIMS OF WORK PACKAGE 5

- To assess whether NHS DPP is more effective than usual care in reducing conversion of NDH to diabetes, eventually reducing diabetes prevalence in England
- The roll-out of the programme makes formal RCT problematic
- WP5 uses routine data and statistical techniques to provide a rigorous estimate of the success of the programme in:
  - reducing conversion of non-diabetic hyperglycaemia (incidence)
  - reducing the overall numbers of cases of diabetes (prevalence)
The Clinical Practice Research Datalink (CPRD)

- Active since the 1980s with high quality data becoming available post 2000 with the introduction of the QOF
- Aurum and GOLD
- Complete data on all aspects of care for ≈500 practices each year, covering approximately 7%(GOLD) 13%(Aurum) of the UK population
- Generally representative of the UK population, especially in terms of practice and patient deprivation
- Can be linked to Hospital Episode Statistics (HES) and ONS data, allowing the construction of a more complete patient journey through primary and secondary care
- Complete data on all aspects of care (diagnoses, referrals, treatments, tests) for hundreds of practices
Analytical Challenges

Identified as at risk of diabetes (NDH) by GP

- Readcodes were used in Electronic Health Records (EHR) to identify NDH and referral to the NHSDPP
- Individuals also referred to programme not through the GP, hence it might be possible that some controls will have attended the programme
- NDH identified by readcodes in EHR, the definition of which is inconsistent and has changed over the years
- Some individuals who were referred to the programme did not have a NDH code
- Individuals identified as referred to the programme also has referred decline code (CPRD Aurum: n=3620; CPRD Gold: n= 327)
- Although the NHS DPP is based on a strong international evidence base, justifying the commissioning of such a large and complex programme requires rigorous scientific evidence that the programme is achieving benefits beyond those delivered by current prevention services.
- The roll-out of the programme makes formal randomised evaluation problematic
- Analysis need to be adapted as needed.
Acknowledgements

- This presentation is funded by the National Institute for Health Research (Health Services and Delivery Research, 16/48/07 – Evaluating the NHS Diabetes Prevention Programme (NHS DPP): the DIPLOMA research programme (Diabetes Prevention – Long Term Multimethod Assessment)). The views and opinions are those of the authors and do not necessarily reflect those of the National Institute for Health Research or the Department of Health and Social Care.

- Thank you for listening
  If you have any questions or comments on this presentation please leave them as a comment below the video- and we will read and respond.

- More information also available at: https://www.arc-gm.nihr.ac.uk/projects/diploma-evaluation-national-nhs-diabetes-prevention-programme/