Identifying resistance from hard to reach, non-compliant and vulnerable populations

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Non-diabetic hyperglycaemia

- 5-10% people with non-diabetic hyperglycaemia go on to develop type 2 diabetes every year
  - Type 2 diabetes is a significant cost to the NHS (£10bn) ~9% NHS budget

- RCTs found programmes aiming to reduce weight via diet and physical exercise reduce transition to type 2 diabetes (Nuzhat et al, 2015)

- Asymptomatic nature means non-diabetic hyperglycaemia can go unnoticed (Phillips et al, 2014)

NHS DPP

- Programme delivering an evidence-based behavioural change intervention to patients at risk of developing diabetes
- Providers: 4 providers procured through NHS England
- Treated: Identification of non-diabetic hyperglycaemia via NHS Health Checks and primary care
- Intervention: Group-based model delivered across a minimum of 9 months
  - Focus on diet, physical activity and weight loss
  - Outcome: non-transition to type 2 diabetes

DIPLOMA

- **Evaluating the NHS Diabetes Prevention Programme (NHS DPP): the DIPLOMA research programme**
  - **Di**abetes **P**revention – **Lo**ng term **M**ultimethod **A**ssessment
  - NIHR HS&DR programme grant (16/48/07)
    - feedback regularly to NHS DPP stakeholders on delivery and outcomes to support ongoing development and quality improvement
    - rigorous long-term assessment of effectiveness in reducing diabetes in a way that is cost-effective and sustainable

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Expertise

- Extensive experience and expertise in
  - Quasi-experimental evaluations of population health initiatives
  - Use of routine datasets to evaluate policy
  - Mixed methods evaluation of regional and national policy
  - Design and evaluation of behaviour change interventions
  - Implementation science
  - Economic evaluation
  - Evaluation of local diabetes prevention schemes

Work packages

- WP 1 Access and equity
- WP 2 Implementation
- WP 3 Service Delivery and Fidelity
- WP 4 Outcomes
- WP 5 Comparative Effectiveness
- WP 6 Validation sample
- WP 7 Comparative Long Term Cost Effectiveness
- WP 8 Programme management

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Qualitative analysis: Caroline Sanders

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WP 1 Access and equity

- Aim: to assess whether sociodemographic factors influence access to the NHS DPP, and to explore the experience of patients and professionals in accessing the NHS DPP
  - Sociodemographic factors
    - Quantitative analysis
  - Experience evaluation
    - Qualitative interviews and consultation observations

- Objectives
  - Ascertain patient groups with poor access to the NHS DPP
  - Pinpoint patient groups that are less willing to participate or maintain their participation
  - Identify approaches to improve access for vulnerable communities and target non-compliance

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Why is access important?

- NHS has to abide by the Equality Act 2010:
  - Public Sector Equality Duty:
    - …must advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it...

- Protected characteristics:
  - Age; Disability; Gender reassignment; Pregnancy and maternity; Race; Religion or belief; Sex; Sexual orientation

- NHS constitution adheres to the Equality Act (2010) but also aims to provide access to health care
  - On the basis of the need for health care and not the ability to pay

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Evidence on health inequalities in the UK

- Several key reports have highlighted inequalities in health
  - Black (1980): inequalities had widened rather than narrowed following the introduction of the NHS
  - Acheson (1998): reiterated findings of the Black Report
    - led to a sustained assault on reducing inequity
    - widening inequalities followed as whilst health improved, this was greatest for the wealthy
  - Marmot (2010): also confirmed inequalities remain

- Not all inequalities in health can be removed
  - Inequity is where differences are avoidable and unjust
  - Access that isn't needs-based (hence inequitable) results in inequity in health

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What is ‘access’?

- Good access: empowerment of the patient to seek and obtain care when needed (McIntyre et al, 2009)

- Access to health care depends on:
  - Availability (geographic, queueing, opening times)
  - Acceptability (patient’s willingness to accept treatment and provider’s willingness to provide treatment)
  - Awareness (knowledge of service availability and effects of treatment)
  - Affordability (cost of using services: time off work, transport etc)

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NHS DPP and access

- Access to health care depends on:
  - Availability (NHS DPP in area?)
  - Acceptability (of service by patients and professionals)
  - Awareness (knowledge of service among patients and professionals)
  - Affordability (cost of using service: time off work, transport etc)

- Each may be correlated with protected characteristics and social class

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Access in the context of the DPP

Identification	Referral	Completion	Effectiveness
	→	→	♥
	⊘	⊘	✖
2m -> 1m	1m -> 700k	700k -> 300k	300k

Note: imaginary figures for illustration purposes only

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WP 1 Access and equity

- Do inequalities in protected characteristics exist for:

1. Identification of eligible patients:
   - compare prevalence of population ‘at risk’ of diabetes from representative surveys (ELSA, Understanding Society/UKHLS, and HSE) with patients identified as ‘at risk’ in Clinical Practice Research Datalink (CPRD)
   - Survey datasets contain comparable protected characteristics measures and HbA1c blood tests results
   - CPRD contains Read code for non-diabetic hyperglycaemia
   - Test for differences in types of survey respondents identified as having non-diabetic hyperglycaemia

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WP 1 Access and equity

- Do inequalities in protected characteristics exist for:

2. Referrals: patient and/or practitioner choice
   - compare referred and not referred (in CPRD using Read codes for non-hyperglycaemia and referral to NHS DPP and referral declined)

3. Completers: patient uptake and adherence
   - compare completion rates (in CPRD using Read codes for referral to NHS DPP; intervention started; declined; completed)

4. Effectiveness:
   - compare outcomes (in CPRD, linked to WP5 on effectiveness)

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WP 1 Access and equity

- Informing approaches to improve access for vulnerable communities and target non-compliance

- Quantitative analyses
  - Highlight populations with poor access to inform targeted approach to improve access

- Qualitative analyses
  - What is the experience of patients and professionals in accessing the NHS DPP?
    - Observation of consultations between staff and ‘NHS DPP eligible’ patients to investigate risk factor discussion
    - Interviews with professionals and patients after consultations to explore understanding of risk and decisions about referral
    - Interview ‘NHS DPP eligible’ patients who have not been referred, and people where referral offered but declined

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Questions?

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