Challenges and opportunities in reducing risk of diabetes-related cardiovascular disease: Making Every Contact Count

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Despite recent Government initiatives to reduce rates, the prevalence of type 2 diabetes is expected to continue rising to almost 10% of the population by 2035. Complications of type 2 diabetes, such as cardiovascular disease (CVD), contribute to approximately 22 000 deaths annually in England, indicating a need for population health management through preventative healthcare. The Making Every Contact Count (MECC) initiative recommends the building of preventative strategies into routine primary care appointments to reduce modifiable risk factors associated with both type 2 diabetes and CVD. This article explores the unique opportunities general practice nurses have to promote primary and secondary prevention of CVD.

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Common risk factors for type 2 diabetes are also linked with the development of cardiovascular disease (CVD) (Leon and Maddox, 2015). Such factors include obesity, hyperlipidaemia and hypertension, with a clear correlation between diabetes progression and increased CVD risk (Grant and Cosentino, 2019). Chronic hyperglycaemia is also a precipitating factor for increased CVD risk (Leon and Maddox, 2015). With CVD being the cause of around 50% of deaths in people with concurrent type 2 diabetes, optimal glycaemic control is key (Einarson et al, 2018).

Many cardiovascular events resulting from CVD, such as myocardial infarction (MI) and stroke, could be prevented via methods of behaviour change (Office for Health Improvement & Disparities, 2022). General practice nurses (GPNs) are well placed to deliver such behaviour change interventions during everyday contacts. This article will explore the opportunities available to GPNs when delivering health-promotion strategies to reduce the overall risk of diabetes-related CVD.

Cardiovascular disease risk

NICE (2023a) recommends to assess cardiovascular risk using the QRISK® prediction model, which considers both modifiable and non-modifiable factors such as BMI, smoking status, blood pressure and medical history (*Table 1*).

The third version of the QRISK model, QRISK3, has added several new CVD risk factors as variables, including corticosteroid usage, erectile dysfunction and migraine. These variables highlight opportunities for GPNs to implement preventative healthcare strategies in a variety of scenarios, such as contraception appointments, in which discussions around migraines are already best practice, and in diabetes reviews, where erectile dysfunction status should be determined and explored with male patients.

Table 1. Modifiable and non-modifiable cardiovascular disease risk factors.

Modifiable	Non-modifiable
Smoking status	Age
Hyperlipidaemia	Gender
Lack of physical activity	Family history of cardiovascular disease
Excess alcohol intake	Ethnicity
Obesity/overweight	Personal medical history
Unhealthy diet	Social class

Theoretically, these situations pose opportunities for the QRISK3 score to be calculated and discussed with appropriate counselling; however, time constraints are often a barrier (Keyworth et al, 2019), meaning subsequent follow-up appointments may be required.

It should be noted that CVD risk tools may underestimate risk in certain groups of people. It is, therefore, suggested that GPNs exercise clinical judgement in addition to using a system-generated score (Dueñas-espín et al, 2022).

Consideration of variables such as social determinants of health can also present GPNs with an opportunity to introduce preventative healthcare strategies, as socioeconomic deprivation is linked to increased levels of obesity (NICE, 2023c).

Making Every Contact Count

Public Health England (2016) developed the Making Every Contact Count (MECC) strategy to encourage the use of routine healthcare appointments to implement behaviour change interventions, with the aim of improving outcomes. MECC activities can be used by GPNs to promote health by focusing on behaviour change through brief interventions (BIs) or very brief interventions (VBIs), depending on the severity of the specific health need, such as smoking cessation or weight loss (*Box 1*).

Aveyard et al (2012) suggest that BIs and VBIs can support small but cumulative changes in health behaviour to reduce CVD risk. However, it is thought that many GPNs lack the skills and/or confidence to support people with such interventions, which is a barrier to implementation of MECC (Lawrence et al, 2016). PHE (2016b) reiterates that MECC could potentially have a significant impact on population health and, consequently, should be prioritised when upskilling GPNs.

Whilst BIs and VBIs can facilitate positive discussions, Kessels (2003) suggests that people only retain around 50% of information from a medical consultation, and consequently patient decision aids are useful for the person to take home for future reference. However, it is essential that these should be supplementary to the discussion around options available, rather than replacing it (Scalia et al, 2021). The use of patient decision aids allows a GPN to improve a person's knowledge of their health and to facilitate shared decision making, both of which are known to improve overall outcomes (Madsen and Fraser, 2015).

For fluidity and time efficiency, GPNs can prepare for appointments by printing a selection of patient decision aids and Diabetes UK Information Prescriptions, allowing non-internet-literate people equitable support in CVD risk reduction. In addition, Mills (2023) argues that advice alone is largely inadequate in facilitating behaviour change; therefore, it is essential that GPNs have a working knowledge of local services and offer immediate referrals.

NHS Health Checks

Obesity is well documented as a modifiable risk factor both for developing type 2 diabetes and for increased CVD risk. Similarly, weight gain in early adulthood is associated with increased risk of type 2 diabetes after midlife, suggesting that early intervention with diabetes prevention strategies would be beneficial to people at higher risk of type 2 diabetes (Sun et al, 2016). Ultimately, prevention of diabetes is key to reducing diabetes-related CVD risk, and GPNs are in a unique position to offer interventions intended to reduce such risks.

Currently, people at risk of developing type 2 diabetes can be identified during NHS Health Checks, developed to reduce national rates of heart disease, cerebrovascular events, type 2 diabetes and kidney disease (NICE, 2015). All UK residents aged 40–74 years who are registered with a GP

and who have not already been diagnosed with one of these conditions are eligible for NHS Health Checks. However, despite the well documented benefits, including detection of risk factors such as hypertension and prediabetes, just 38.9% of eligible people attend for these checks (Tanner et al, 2022). GPNs are thus recommended to offer NHS Health Checks opportunistically during routine appointments to increase uptake and begin open conversations around CVD risk and the benefits of behaviour change.

Health Checks provide a unique opportunity to implement BIs or VBIs; however, these checks are often performed by unregistered healthcare professionals who may lack the confidence to instigate such strategies. Thus, in addition to GPNs, it is essential that training opportunities are offered to unregistered professionals such as healthcare assistants if they routinely perform NHS Health Checks. A simple training package in healthy conversation skills has been demonstrated to markedly increase use of person-centred skills which, in turn, support behaviour change (Lawrence et al, 2016). The relatively low cost of this training led to a disproportionately positive impact, which suggests a solution to the barrier of inadequate training.

National diabetes prevention programmes

To combat the increasing rate of type 2 diabetes diagnoses in the UK, NHS England designed a quality-assured intensive lifestyle-change programme for people diagnosed with non-diabetic hyperglycaemia (NDH). Although blood tests undertaken during NHS Health Checks identify a number of people eligible to attend the *Healthier You* NHS Diabetes Prevention Programme (*Box 2*), their success relies on attendance, which remains low.

A systematic review of lifestyle-based diabetes prevention interventions demonstrated a 28% reduction in risk of progression from NDH to type 2 diabetes over a mean follow-up of 7.2 years, suggesting overall health benefits and reduction of associated CVD risk (Haw et al, 2017). However, a cost–utility analysis by Frempong et al (2022) confirmed that a large proportion of people referred to the *Healthier You*

Box 2. Eligibility criteria for the Healthier You NHS Diabetes Prevention Programme.

Any person registered with a GP and ≥18 years old, with non-diabetic hyperglycaemia confirmed in the preceding 12 months by either:

- HbA_{1c} 42–47 mmol/mol
- Fasting plasma glucose 5.5–6.9 mmol/L

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programme decline to attend, with the referral process identified as an influencing factor. Specifically, lack of communication of the risks associated with NDH and type 2 diabetes, and of the benefits of the programme, at referral was documented to affect uptake. Action by GPNs could negate these influencing factors by reviewing processes in practice to ensure that people diagnosed with NDH are counselled on the associated risks and the potential positive impact of attending a prevention programme.

Although some patients' non-attendance is recorded as "declined", not all of them may have actually done so. Qualitative data by Stokes et al (2019) found some people missed their initial *Healthier You* appointment in error or were simply unaware of being invited, with a 15% uptake when repeat invites were offered to those people who initially "declined" (Frempong et al, 2022). GPNs can influence attendance rates by facilitating searches to identify people who have not yet been invited or are recorded to have declined the prevention programme, then sending direct invitations via post, email or text message. Attendance to the programme should also be encouraged opportunistically by GPNs during routine consultations where preventative health VBIs or BIs are utilised.

Conclusion

Many interventions can reduce diabetes-related CVD through preventative healthcare strategies such as behaviour change interventions. Although GPNs are well placed to facilitate such interventions, the rates of success vary, with the main barriers to implementation identified as inadequate training and time constraints. A key finding from the literature is that adequate training in delivering interventions correlates directly with positive behaviour change

(Lawrence et al 2016). This hypothesis extends to NHS Health Check appointments, which are often performed by untrained healthcare professionals who may lack the knowledge and/or confidence to broach behaviour-change topics using BIs or VBIs. Therefore, restructuring of staff responsibilities may be beneficial, with adequate training also proven to improve the quality of appointments.

The most effective approach to reducing diabetes-associated CVD is prevention of type 2 diabetes itself, with lifestyle-based prevention interventions resulting in a 28% reduction in risk of progression from NDH to type 2 diabetes (Haw et al, 2017). However, success relies on the at-risk individuals attending the programmes; therefore, GPNs have a role in encouraging attendance, either opportunistically or via targeted invitation (Frempong et al, 2022). Where prevention of type 2 diabetes is not possible, MECC can greatly improve clinical outcomes and, consequently, should be prioritised by GPNs. ■

Aveyard P, Begh R, Parsons A, West R (2012) Brief opportunistic smoking cessation interventions: A systematic review and meta-analysis to compare advice to quit and offer of assistance. *Addiction* **107**: 1066–73

Dueñas-espín I, Jimbo-Sotomayor R, Armijos-Acurio L et al (2022). Lack of social health determinants on risk prediction tools for cardiovascular disease: A systematic review of systematic reviews. *Int J Integr Care* **22**: 4

Einarson TR, Acs A, Ludwig C, Panton UH (2018) Prevalence of cardiovascular disease in type 2 diabetes: A systematic literature review of scientific evidence from across the world in 2007–2017. *Cardiovasc Diabetol* **17**: 83

Frempong SN, Shinkins B, Howdon D et al (2022) Early economic evaluation of an intervention to improve uptake of the NHS England Diabetes Prevention Programme. *Expert Rev Pharmacoecon Outcomes Res* **22**: 417–27

Grant PJ, Cosentino F (2019) The 2019 ESC Guidelines on diabetes, pre-diabetes, and cardiovascular diseases developed in collaboration with the EASD: New features and the "Ten Commandments" of the 2019 Guidelines are discussed by Professor Peter J. Grant and Professor Francesco Cosentino, the Task Force chairmen. *Eur Heart J* **40**: 3215–17

Haw JS, Galaviz KI, Straus AN et al (2017) Long-term sustainability of diabetes prevention approaches: A systematic review and meta-analysis of randomized clinical trials. *JAMA Intern Med* **177**: 1808–17

Kessels RP (2003) Patients' memory for medical information. *J R Soc Med* **96**: 219–22

Keyworth C, Epton T, Goldthorpe J et al (2019) "It's difficult, I think it's complicated": Health care professionals' barriers and enablers to providing opportunistic behaviour change interventions during routine medical consultations. *Br J Health Psychol* **24**: 571–92

Lawrence W, Black C, Tinati T et al (2016) "Making every contact count": Evaluation of the impact of an intervention to train health and social care practitioners in skills to support health behaviour change. *J Health Psychol* **21**: 138–51

Leon BM, Maddox TM (2015) Diabetes and cardiovascular disease: Epidemiology, biological mechanisms, treatment recommendations and future research. *World J Diabetes* **6**: 1246–58

Madsen C, Fraser A (2015) Supporting patients in shared decision making in clinical practice. *Nursing Standard* **29**: 50–7

Mills A (2023) Promoting health through nurse-led healthy conversations. *Nursing Standard*. https://doi.org/10.7748/ns.2023.e11912

NICE (2015) *Physical activity: for NHS staff, patients and carers* [QS84]. Available at: https://www.nice.org.uk/guidance/qs84

NICE (2023a) *Cardiovascular disease: risk assessment and reduction, including lipid modification* [NG238]. Available at: https://www.nice.org.uk/guidance/ng238

NICE (2023b) *CVD risk assessment and management* [Clinical Knowledge Summary]. Available at: https://cks.nice.org.uk/topics/cvd-risk-assessment-management/

NICE (2023c) *Health inequalities briefing: Obesity and weight management: a briefing for NICE guideline developers and committee members*. Available at: https://bit.ly/3xOBls6

Office for Health Improvement & Disparities (2022) *Cardiovascular disease prevention: Applying All Our Health*. Available at: https://bit.ly/3zw3JQm

Public Health England (2016) *Making Every Contact Count (MECC): Consensus statement*. Available at: https://bit.ly/3VTmrck

Scalia P, Saunders CH, Dannenberg M et al (2021) Processes for evidence summarization for patient decision aids: A Delphi consensus study. *Health Expect* **24**: 1178–86

Stokes J, Gellatly J, Bower P et al (2019) Implementing a national diabetes prevention programme in England: Lessons learned. *BMC Health Serv Res* **19**: 991

Sun W, Shi L, Ye Z et al; REACTION Study Group (2016) Association between the change in body mass index from early adulthood to midlife and subsequent type 2 diabetes mellitus. *Obesity (Silver Spring)* **24**: 703–9

Tanner L, Kenny R, Still M et al (2022) NHS Health Check programme: A rapid review update. *BMJ Open* **12**: e052832