



module 256

Health checks and diabetes prevention

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Health checks and diabetes prevention

GOALS AND LEARNING OBJECTIVES

This module provides an update on both the NHS Health Check and NHS Diabetes Prevention Programmes with the aim of promoting greater awareness of the benefits of conducting these health checks in pharmacies. The module lists the core elements of each service and encourages pharmacists to develop a plan to encourage more people to have both the health checks.

KEY FACTS

Health conditions identified by NHS Health Checks are the biggest cause of preventable deaths in the UK, affecting around 7 million people

Over the first five years, NHS Health Checks are estimated to have prevented 2,500 heart attacks or strokes

Preventable risk factors were the cause in over 90 per cent of cases of people having their first heart attack

Around 850,000 people live with dementia in the UK. Of these approximately 17 per cent are diagnosed as having vascular dementia

While there are approximately 3 million people diagnosed with type 2 diabetes in England, it is estimated that another 5 million are at risk of developing the condition

The NHS Diabetes Prevention Programme aims to prevent 26 per cent of people at high risk of type 2 diabetes from going on to develop the condition

This evidence-based programme is designed to support people through lifestyle change across a 9-12 month period

Introduction & module overview

With a growing number of older people living for longer in England and tighter constraints on public expenditure, meeting the cost of health and social care is becoming increasingly challenging. It has been projected by the Office for National Statistics that between 2010-2022 the number of people aged 65 years or over will rise by 27 per cent and those aged 85 years or over will rise by 44 per cent. Most will require care as they get older for a variety of long-term conditions.

Rising levels of obesity, reduction in physical activity and health inequalities will only exacerbate the existing challenges. It is estimated that 62 per cent of adults are now overweight or obese, with one in three expected to be obese by 2034. One in 10 will be diagnosed with type 2 diabetes. The need for action is clear.

The focus of the NHS is increasingly on prioritising reducing premature mortality, improving disease prevention and early diagnosis. With NHS Health Checks introduced in 2009 and the National Type 2 Diabetes Prevention Programme in 2016, community pharmacists have the opportunity to reduce these trending predictions from both a health and cost perspective.

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NHS Health Checks

The NHS Health Check is a national risk assessment and management programme for people from 40 to 74 years of age living in England, who do not have an existing vascular disease and who are not currently being treated for certain risk factors. The aim of the health check is to prevent heart disease, stroke, diabetes and kidney disease, and to raise awareness of dementia for those aged 65–74 years. People in the eligible category should be offered a NHS Health Check every five years.

Commissioned by Public Health England (PHE), the programme is designed to identify an estimated 44,000 new cases of hypertension, 10,000 new cases of diabetes and 4,500 new cases of kidney disease in England every year. Economic modelling suggests the programme is clinically and cost-effective, with NHS Health Checks estimated to save the NHS £57m over four years, rising to £176m over a 15-year period, with the programme paying for itself after 20 years.

The programme, which incorporates NICE public health guidance, systematically targets the top seven causes of premature mortality:

- High blood pressure
- Smoking
- Cholesterol
- Obesity and poor diet
- Physical inactivity
- Alcohol consumption.

When added together, these seven health conditions are the biggest cause of preventable deaths in the UK, affecting with around 7 million people.

Since 2013, local authorities have been mandated to provide the NHS Health Check programme for 20 per cent of the eligible population per year using ring-fenced public health money. Anecdotal evidence suggests, however, that commissioning of the service is patchy, especially from pharmacies.

Vascular disease

The largest single cause of long-term ill-health, disability and death is vascular disease, which is estimated to affect over 4 million people in England. Each year over a third of deaths and a fifth of hospital admissions in England are due to vascular disease. The three modifiable risk factors that account for most disease burden are poor diet, tobacco smoking and high blood pressure.



Table 1: Modifiable risk factors for vascular disease

Modifiable risk factors

- Smoking
- Lack of physical activity
- Obesity
- Poor diet (rich in saturated fat)
- Drinking excess alcohol
- Raised cholesterol
- High blood pressure

Manage risk factors to reduce risk and/or delay onset

Vascular disease

- Coronary heart disease
- Stroke
- Transient ischaemic attack
- Chronic kidney disease
- Type 2 diabetes
- Dementia



NHS Health Checks

The NHS Health Check consists of measuring and recording the following:

- Cholesterol – both total and high density lipoprotein
- Blood pressure
- Height, weight, body mass index (BMI) and waist circumference
- Lifestyle questions – smoking, alcohol and physical activity
- Family history
- Calculating cardiovascular disease using QRisk
- Measurement of HbA_{1c} where blood pressure or BMI is raised
- Dementia screening and signposting for those aged 65–74 years.

dementia accounts for about 17 per cent of the 850,000 cases of dementia. In many cases a delay in symptoms can occur if the common risk factors that predispose them are managed.

Premature mortality rates for CVD are higher in some populations. The Department of Health's 2004 Health Survey for England highlighted that CHD prevalence is highest in Pakistani (8 per cent), Indian (6 per cent) and Irish (6 per cent) men. South Asian people who live in the UK are up to six times more likely to have diabetes than the white population.

According to the 2001 census for England and Wales, Pakistani and Bangladeshi people have the worst health of all the ethnic groups and are 50 per cent more likely than white people to report fair, poor or very poor health. Such health inequalities need to be addressed to ensure good health is seen across the nation.

Components of the Health Check programme

NHS Health Checks are made up of three components:

- **Risk assessment:** This uses standardised tests to measure key risk factors and establish the individual's risk of developing cardiovascular disease
- **Risk awareness:** The outcome of the assessment is then used to raise awareness of cardiovascular risk factors
- **Risk management:** Lifestyle and medical approaches are offered that are best suited to manage an individual's health risk.

The health check provides a personal review of an individual's behavioural factors (e.g. harmful drinking and obesity) that might increase the risk of developing a heart attack or stroke, as well as identifying any new or undiagnosed conditions such as hypertension, diabetes and chronic kidney disease. Professional advice on lifestyle changes and treatment is offered to reduce disease risk.

Eligibility and exclusions

A number of people are eligible for a NHS Health Check. These include those:

- Aged between 40–74 years of age
- Registered with a GP in England
- Who have not had a NHS Health Check in the past five years
- Who are not currently being prescribed statins or being treated for any of the following long-term conditions:
 - High blood pressure
 - Type 2 diabetes
 - Heart disease
 - Kidney disease
 - Stroke.

Evaluation

The first major evaluation of the NHS Health Check scheme in England, led by Queen Mary University London, has found that the programme is effective at identifying people at risk of developing a major cardiovascular incident such as a

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heart attack or stroke. Additionally, the programme is helping diagnose conditions commonly linked to cardiovascular disease, including type 2 diabetes, high blood pressure and chronic kidney disease.

The evaluation found that health checks are a positive step towards tackling health inequalities in England, as those from the most deprived areas and black and minority ethnic groups are more likely to attend. This population has the greatest risk of developing cardiovascular disease.

The study is based on data from 655 GP practices, which equates to 1.7 million eligible people in the nationally representative QResearch database. The latest research shows that, in the first five years of the programme, an estimated 2,500 people avoided a major cardiovascular incident. The research also suggests that:

- For every 27 people having a NHS Health Check, one person is diagnosed with hypertension
- For every 110 people, one person is diagnosed with type 2 diabetes
- For every 265 people, one person is diagnosed with renal disease
- 14 per cent of attendees were referred for lifestyle interventions due to obesity, smoking, alcohol or blood pressure compared to just 6 per cent of those who were referred through standard care.

The evaluation also showed that the number of eligible people having a health check needs to increase as just under 50 per cent of those who are invited to attend actually do so. For the programme to reach its full potential this number needs to increase, but results do show year-on-year improvement. The programme is most effective at targeting those aged over 60 years. Further encouragement is needed to increase uptake among those aged 40 to 60 years of age.

Community pharmacy plays a critical role in this NHS programme by providing patients with easy access to the service in their locality.



Reflection exercise 1

When providing a NHS Health Check, consider the following questions:

- What are the benefits to the individual patient and society as a whole when providing such a service?
- What motivates a patient to change lifestyle to reduce their risk?
- Where a patient has many modifiable risk factors, how could you encourage him/her to make necessary lifestyle changes?

NHS Diabetes Prevention Programme

Type 2 diabetes is a prevalent health condition, which is on the increase due to inactive lifestyles and poor diets. Currently, there are approximately 3 million people diagnosed with type 2 diabetes in England, while a further 5 million people are thought to be at risk of developing the disease. A recent Health Survey for England estimated that 10.7 per cent of the population are at increased risk of type 2 diabetes with a HbA_{1c} reading of between 42-46mmol/mol (6.0-6.4 per cent) – otherwise known as non-diabetic hyperglycaemia.

Historically, type 2 diabetes would usually appear in the middle-aged or older population, but it is now more frequently being diagnosed in younger people. The year 2000 saw the first cases of type 2 diabetes diagnosed in overweight children. By 2034, if these trends continue, one in three people will be obese and one in 10 will have developed type 2 diabetes.

Research has demonstrated that behavioural support to maintain a healthy weight and being more physically active can reduce the risk of people developing the disease.



Diabetes and lifestyle – the scale of the problem

In England alone:

- 22,000 people with diabetes die early every year
- Type 2 diabetes is a leading cause of preventable sight loss in people of working age
- Type 2 diabetes is a major contributor to kidney failure, heart attack and stroke
- Type 2 diabetes treatment accounts for just under 9 per cent of the annual NHS drug budget (around £8.8bn a year)

Developing the NHS DPP

Public Health England conducted a systematic review and meta-analysis to assess the effectiveness of pragmatic lifestyle interventions in routine practice for the prevention of type 2 diabetes. This built on a previous review published in 2012 (Dunkley *et al*) that had assessed the effectiveness of 'real world' interventions in high-risk populations. This review identified the lifestyle interventions that increased effectiveness, which was necessary to develop a national diabetes prevention programme that would be both efficient and cost-effective.

The Five Year Forward View into Action planning guidance highlighted areas that had made much progress in developing preventative diabetes programmes. Some of these sites were selected in 2015 as part of the seven innovative 'demonstrator' sites to help co-design and implement the national programme. This included learning practical lessons from the delivery of diabetes prevention programmes in the English healthcare system.

A joint commitment from NHS England, Public Health England and Diabetes UK was made to develop and support 'Healthier You', the NHS Diabetes Prevention Programme (NHS DPP). The aim of the programme is to identify those at high risk of the disease and refer them onto a behavioural change programme. It is thought that the NHS DPP should be successful in preventing the 26 per cent of people at high risk of type 2 diabetes from going on to develop the condition.

Aims of the programme

The NHS DPP's behavioural interventions aim to enable people to achieve a healthy weight, change their diet and achieve the chief medical officer's physical activity recommendations. Through these interventions the long-term aims of the NHS DPP can be achieved, namely to reduce:

- The incidence of type 2 diabetes



Next month's CPD module...

From mild cognitive impairment to dementia – how pharmacists can help

Learning scenario 1

Carol Jones, one of your regular patients, is worried and upset. Her husband, who has just turned 40, has been asked to attend for a NHS Health Check but he has thrown the letter away, saying he hasn't got time to go and there's nothing wrong with him. Carol is concerned because his family has a history of type 2 diabetes, he has a sedentary lifestyle and has gained weight over the past few years. How can you help ease Carol's anxiety?

a. Tell her that he will be invited to have a health check again and to wait until then to attend

b. Suggest that he comes into the pharmacy for a chat and has his weight measured and blood pressure checked

c. Suggest he waits until he has an appointment with his GP

d. Explain the benefits of a NHS Health Check and that appointments can be made in the evenings or weekends at your pharmacy

- The incidence of complications associated with diabetes, such as heart, stroke, kidney, eye and foot problems related to diabetes
- Health inequalities over time associated with the incidence of type 2 diabetes.

Programme components

The evidence-based programme is designed to support people through lifestyle change across a 9-12 month period, helping them to take control of their lifestyles and diets and better manage their health.

The exact model of the programme will vary depending on the local provider but the service specification stipulates that it must contain 13 sessions, with at least 16 hours of face-to-face contact time, spread across a minimum of nine months, with each session lasting between one and two hours.

Those referred will receive tailored, personalised help to reduce their risk of type 2 diabetes, including education on healthy eating and lifestyle, help to lose weight and bespoke physical exercise programmes.

This behavioural support programme will be a combination of group and one-to-one sessions on weight loss, physical activity and diet. Goals will be set with support based on achieving those goals to make positive changes to an individual's lifestyle.

“Community pharmacies' expertise in health screening services and their accessibility in local communities make them suitable for participating in the NHS DPP”



▶ Answers on page vi

Learning scenario 2

Ayesha Patel, 38 years old and overweight, has been referred to your pharmacy as part of the 'Healthier You' programme. Ayesha has a busy life with three young children and a part-time job. She knows about type 2 diabetes as some of her family members have already been diagnosed with it but feels that, since it will probably happen to her too, it is best to enjoy life and try not to worry about it. At the appointment her fasting plasma glucose is 6.3mmol/L. What advice would you offer this lady?

a. Tell her she doesn't qualify for the programme as her fasting plasma glucose is slightly high but losing weight should rectify the situation

b. Tell her to go and enjoy life, but cut down on calories and increase physical exercise where she can and perhaps join a gym or a slimming club

c. Provide advice on the 'Healthier You' programme and explain that it will support her through sustainable lifestyle changes with realistic goals

d. Tell her the 'Healthier You' programme is not evidence based and adopting a very low calorie diet will work just as well

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Eligibility and exclusions

The programme is available to those aged over 18 years of age:

- Identified as having non-diabetic hyperglycaemia, defined as having a HbA_{1c} reading of 42-47mmol/mol, or a fasting plasma glucose (FPG) of 5.5-6.9mmol/L as well as modifiable risk factors
- Referred onto the programme by a GP or another healthcare professional via the NHS Health Check scheme. A HbA_{1c} or a FPG test must have been undertaken within 12 months prior to referral.

Referral routes into the programme vary, depending on the local case finding pathways. As well as the routes already mentioned, others include those individuals identified with non-diabetic hyperglycaemia through opportunistic assessment as part of routine clinical care.

There are several exclusions from the programme, including individuals:

- With blood results confirming a diagnosis of type 2 diabetes
- With a normal blood glucose reading on referral to the service
- Aged under 18 years
- Who are pregnant
- Receiving palliative care.

Community pharmacy and the DPP

Community pharmacies' expertise in health screening services and their accessibility in local communities make them suitable for participating in the NHS DPP. Some community pharmacies have been partnered to provide blood testing services (HbA_{1c} and fasting plasma glucose) and other health tests such as measurement of body mass index (BMI). The extent to which community pharmacy can work in the NHS DPP is dependent on local clinical pathways and how the four service providers are delivering their objectives.

One of the four providers, Reed Momenta, is partnering with a number of businesses, including LloydsPharmacy and other affiliated local pharmacies, Slimming World, UKactive and the Royal Society for Public Health, to deliver the programme. Individuals are referred for a 20-minute assessment, which includes:

- Measurement of height, weight and BMI calculation
- Recording of the Warwick-Edinburgh mental wellbeing scale score
- Measurement of baseline blood glucose reading (HbA_{1c}/FPG) where there are no results available in the past three months

- Where appropriate, very brief advice on smoking cessation.

Blood tests and other appropriate measurements are then repeated on two further occasions at week 26 and week 40. The results are recorded and reported back in the form of read-codes.

Launching the programme

The NHS DPP was launched in 2016 with the first wave of 27 areas covering 26 million people having 20,000 places for referral available. The programme is due to be rolled out across the whole country by 2020 with approximately 100,000 referrals per year available. A full evaluation of the programme will be supported by the National Institute for Health Research.

Pharmacists and health checks: summary

Community pharmacists and their healthcare teams are appropriately skilled to play a crucial role in the provision of health checks to these targeted populations. With footfall exceeding 1.5 million people every day in England and extended opening hours, community pharmacies provide a unique environment to ensure patients are able to access these services.

Commissioners and service providers must be persuaded to see the value of community pharmacy in providing health checks and addressing issues of accessibility and health inequalities in order to help tackle the escalating costs and health needs of society today.



Reflection exercise 2

Working more collaboratively to provide services could benefit community pharmacy and public health, and reduce unnecessary costs. Consider the following:

- Do you know all the parties that have a role to play in the provision of NHS Health Checks in your area?
- How could community pharmacy be better integrated into service pathways?



Answers: learning scenario 1

- Tell her that he will be invited to have a health check again and to wait until then to attend**
INCORRECT. Mr Jones should take the opportunity now. He will probably be sent a reminder, but should take action as soon as he can. He will then be invited to attend if he meets the inclusion criteria every five years.
- Suggest that he comes into the pharmacy for a chat and has his weight measured and his blood pressure checked**
INCORRECT. The results from these measurements will not show the risk of getting cardiovascular disease over the next 10 years.
- Suggest he waits until he has an appointment with his GP**
INCORRECT. The health check needs to be booked at a specific time when the tests can be carried out. It can take between 20-30 minutes and may not be conducted by the GP.
- Explain the benefits of the NHS Health Check and that appointments can be made in the evenings or weekends at your pharmacy**
CORRECT. Your pharmacy offers health checks at times which may be more convenient to the patient. The tests can all be carried out in the pharmacy and the results given to the patient immediately.



Answers: learning scenario 2

- Tell her she doesn't qualify for the programme as her fasting plasma glucose is slightly high but losing weight should rectify the situation**
INCORRECT. She does qualify as her fasting blood glucose levels are between 5.5-6.9mmol/L.
- Tell her to go and enjoy life, but cut down on calories and increase physical exercise where she can and perhaps join a gym or a slimming club**
INCORRECT. She needs to assess her whole life and go through the programme to set realistic goals to reduce the chances of getting type 2 diabetes.
- Provide advice on the 'Healthier You' programme and explain that it will support her through sustainable lifestyle changes with realistic goals**
CORRECT. The programme will provide tailored, personalised help to reduce the risk of type 2 diabetes, including education on healthy eating and lifestyle, help to lose weight and bespoke physical exercise programmes.
- Tell her the 'Healthier You' programme is not evidence based and adopting a very low calorie diet will work just as well**
INCORRECT. Public Health England has conducted a systematic review to assess lifestyle interventions for the prevention of type 2 diabetes, with positive results.



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