NHS DIABETES PREVENTION PROGRAMME (NHS DPP)

PRIMARY CARE TOOLKIT TO SUPPORT LOCAL IMPLEMENTATION OF THE NHS DPP

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Date: July 2016

NHS England Publications Gateway Reference 05140

HEALTHIER YOU
NHS DIABETES PREVENTION PROGRAMME

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PURPOSE

This document has been prepared to support local health economies develop and implement their local primary care engagement plans for the NHS Diabetes Prevention Programme.

SUMMARY

Primary care engagement is key to the effective implementation of the NHS Diabetes Prevention Programme (NHS DPP). This is because primary care clinicians will be needed in order to identify individuals at high risk of developing Type 2 diabetes (described as Non-Diabetic Hyperglycaemia or NDH) and refer them into the programme. Their support to individuals will be important to encourage take up. It is crucial that primary care is in turn supported to refer into the programme and that the impact of any additional workload on practices is minimised.

1. BACKGROUND

The NHS Diabetes Prevention Programme (NHS DPP) is a new initiative led by NHS England, Diabetes UK and Public Health England. It is a product of the NHS Five Year Forward View commitment to get serious about prevention. The programme commenced with a phased national roll out in spring 2016 with the capacity for up to 20,000 people to access a behavioural intervention programme. This will roll out to the whole country by 2020 with an expected 100,000 referrals available each year after.

NHS England has commissioned these behavioural interventions nationally. CCGs and local authorities are responsible for supporting identification and referral of people with Non-Diabetic Hyperglycaemia (NDH). The programme will then support these individuals over a period of at least 9 months to increase their physical activity, achieve a healthy weight and improve their nutrition – the key steps in reducing the risk of Type 2 diabetes.

This document may be a useful tool for local health economies to engage with their primary care community.

1. WHY IS THE NHS DPP WORTH DOING?

There are currently 2.8 million in England; this is six per cent of the adult population. By 2030 this will have risen to more than four million people. Type 1 diabetes accounts for one in 10 cases and is not preventable, this is in contrast to the 90% with Type 2 diabetes. The majority of type 2 cases can often be prevented or delayed. The rise in incidence of Type 2 diabetes is being driven substantially by the progressive growth in overweight and obesity: around two thirds of adults are obese

or overweight, as are a third of secondary school children and a quarter of primary school children.

Diabetes treatment currently accounts for around 10 per cent of the annual NHS budget. This is just under £10 billion a year. £8.8 billion of this is spent on managing preventable complications associated with the condition. These complications include premature death and disability because diabetes doubles the risk of heart attack and stroke, and substantially increases the risk of kidney disease, blindness and amputations. Because of these complications and their costs, the projected growth in diabetes incidence threatens to undermine the sustainability of the NHS.

Current NICE guidelines recommend that GPs offer patients with NDH intensive behaviour change support, but for most GPs such a service is not currently available. The NHS DPP will help to plug this gap.

The NHS DPP is underpinned by a strong evidence base. A recent systematic review and meta-analysis published by Public Health England in August 2015 examined the effectiveness of diabetes prevention programmes. The review concluded that behavioural interventions conducted in 'real world' settings are effective in reducing weight and reducing the incidence of diabetes. Overall the incidence of diabetes was reduced by 26% over a period of 12–18 months post-intervention. The learning from this evidence review, alongside an Expert Reference Group and existing NICE guidelines, has been used to inform the structure and content of the NHS DPP intervention. This will ensure that the commissioned providers offer a service that is based on the evidence of what works in reducing risk of diabetes.

Specifically the service will include a series of 13 or more sessions, predominantly group based and face to face, spread over at least 9 months with a minimum of 16 hours contact time. The sessions will be underpinned by behavioural theory and will focus on the core lifestyle goals of weight loss, dietary improvements and increased physical activity. As well as reducing the risk of Type 2 diabetes, it is expected that the programme will deliver wider benefits, as weight loss and increased physical activity have a proven impact on a range of long term conditions including back pain, osteoarthritis, cancer and mental ill health.

2. WHAT IS THE ASK OF PRIMARY CARE?

Primary care clinicians are being asked to identify individuals at high risk of developing Type 2 diabetes. These individuals may have been identified in the past and be on GP registers. They may be picked up as part of routine care or detected through the NHS Health Check. Clearly in the longer term, the reduction in the incidence of diabetes has the potential of reducing clinical workloads arising from the condition and its complications. In the shorter term, finding new patients with NDH may slightly increase practice workload.

Discussions have taken place with the BMA and RCGP to understand how best to mitigate these risks. Drawing on this, a number of features have been incorporated into the referral pathway and the service specification in order to minimise workload impact on practices. These are detailed below.

Appendix A – is a Q&A which addresses core questions relating to the programme and will help support local health economies in their engagement activity.
Appendix B – details the high level identification and referral pathway, which will be subject to local implementation and details the steps necessary at each stage of the pathway.

4. REFERRAL PATHWAY INTO THE NHS DPP

The primary aim of the NHS DPP is to reduce the incidence of Type 2 diabetes in individuals with NDH referred onto the service.

The secondary aims are:

- To reduce blood sugar levels (HbA1c or Fasting Plasma Glucose (FPG) among individuals on the programme and beyond;
- To reduce weight of individuals on the programme and beyond; and
- To maximise completion rates of service users

Work is underway to ensure that a robust data collection processes in place, from providers, and primary care records. This will enable effective evaluation of the service and monitor the impact on long term complications associated with Type 2 diabetes.

Please see Appendix B - which outlines the NHS DPP Pathway/process.

STEP ONE

- Local commissioners will discuss with practices how to standardise and run searches of practice records to identify individuals who have NDH.
- Local commissioners and providers will discuss with practices how to minimise the data entry requirements for referral and to automate the referral process as much as possible.
- Local commissioners and providers will agree a process of direct referral from providers of the NHS Health Check which are outside of general practice.
- Local commissioners will communicate the relevant clinical codes relating to the NHS DPP to referrers. These should be used when coding identification, referral and attendance / completion of the intervention. The relevant codes can be found at APPENDIX C.
- Following any referral from primary care, the provider will make contact with the individual discussing and inviting participation in the programme. It will be

the provider's responsibility to make contact within 5 working days of the referral, inviting them to take part in the programme.

- Where the individual fails to respond to the initial contact the provider will make additional attempts to contact the individual either via another letter, phone call, text message or email.

- The invitation and all follow up contact will contain basic, accessible information about Type 2 diabetes and how individual risk can be reduced, aiming to maximise uptake onto the programme. A template letter and guidance have been developed which draws on behavioural insight evidence. This has been shared with the providers.

- It is the provider's responsibility to ensure that those who decline the opportunity of a place on the programme are provided with supporting information,(via NHS Choices) relating to weight management, physical activity and healthy lifestyles. The provider will also look to create links with and share information about other locally available resources for supporting weight loss, healthy eating and physical activity.

- If an individual declines a place on the programme following contact, the provider will notify the individual's GP of this decision. This will be noted on the patient's record for future data extraction.

STEP TWO

At the individual's first session the provider will carry out an initial assessment to gather baseline data and provide an introduction to the programme.

The Provider must establish a baseline blood glucose reading for:

- all service users whose blood result on referral is dated more than three months prior to attendance at this assessment; and

- all service users recruited directly by the provider via the direct recruitment service.

- If the blood test result confirms that a service user has non-diabetic hyperglycaemia the provider will invite the service user to continue with the programme.

- If the blood test result falls within the diagnostic category for Type 2 diabetes, defined as HbA1c level of 48 mmol/mol (6.5%) or above or an FPG of 7 mmol/l or above, the provider must conduct a confirmatory blood test. If the blood test confirms a diagnosis of Type 2 diabetes, the provider must advise the service user of the result and advise them to see their GP or practice nurse to discuss this result further, as outlined in the WHO diagnostic criteria for Type 2 diabetes. The provider must present the GP with the new blood glucose results as well as the new diagnosis of Type 2 diabetes within 3

operational days. The provider will not invite the individual to continue in the service.

- If the first blood test result performed or organised by the provider falls within the diagnostic category for Type 2 diabetes, defined as HbA1c level of 48 mmol/mol (6.5%) or above or an FPG of 7 mmol/l or above, there may be occasions when the individual requires urgent or same day assessment by a GP, diabetologist or A&E department. The provider must respond immediately within the same operational day. Examples of such occasions include: young people under the age of 30, symptoms suggesting Type 1 diabetes (any age), short duration diabetes symptoms, patients who are acutely ill, including patients taking medication that may cause rapid glucose rise, e.g. corticosteroids, anti-psychotics, and acute pancreatic damage/pancreatic surgery.

- If the blood test result suggests normal blood glucose levels, defined as HbA1c level of less than 42 mmol/mol (5.9% or less) or FPG level of less than 5.5 mmol/l, the provider will still invite the service user to participate in the service.

The role of the provider is not to offer a diagnosis of non-diabetic hyperglycaemia or Type 2 diabetes, but to deliver a baseline blood glucose reading.

These blood tests will be carried out by the provider with the results being fed back to the individual's practice electronically. Provider blood tests will be expected to meet appropriate quality standards.

APPENDIX A – Q&A ON PRIMARY CARE CONCERNS

Many of the concerns raised nationally have centred on the referral process and how the patient will access the behavioural intervention. To support local health economies in their engagement activity we have set out a range of standard Q&As which we have encountered below. These address some of the core questions relating to the programme.

Challenges	Detail	Responses/mitigations
Questions over evidence	Is the risk really that high in 5m people? What's the magnitude of risk of developing T2DM? Is there a range of risk from high to low?	NCVIN report on NDH prevalence: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/456149/Non_diabetic_hyperglycaemia.pdf Level of risk varies with local demographics.
	How robust is the evidence base for intervention?	Five large-scale and tightly controlled randomised controlled trials, conducted in China, Finland, USA, Japan and India, have documented 30-60% reductions in Type 2 diabetes incidence in adults at high risk of developing Type 2 diabetes through intensive lifestyle change interventions. A large number of studies have since been conducted examining the effectiveness of diabetes prevention programmes in more real world settings. In August 2015 PHE published a systematic review and meta-analysis of this evidence base, concluding on the whole that behavioural interventions are effective in reducing weight and reducing the incidence of diabetes. Sub-group analyses of the pooled data suggested that DPPs were effective regardless of age, gender, and ethnicity. Analyses also suggested that as intervention intensity increases (for example, through meeting more of the NICE guidelines) so does effect size. Links to some of the evidence underpinning the programme are below:

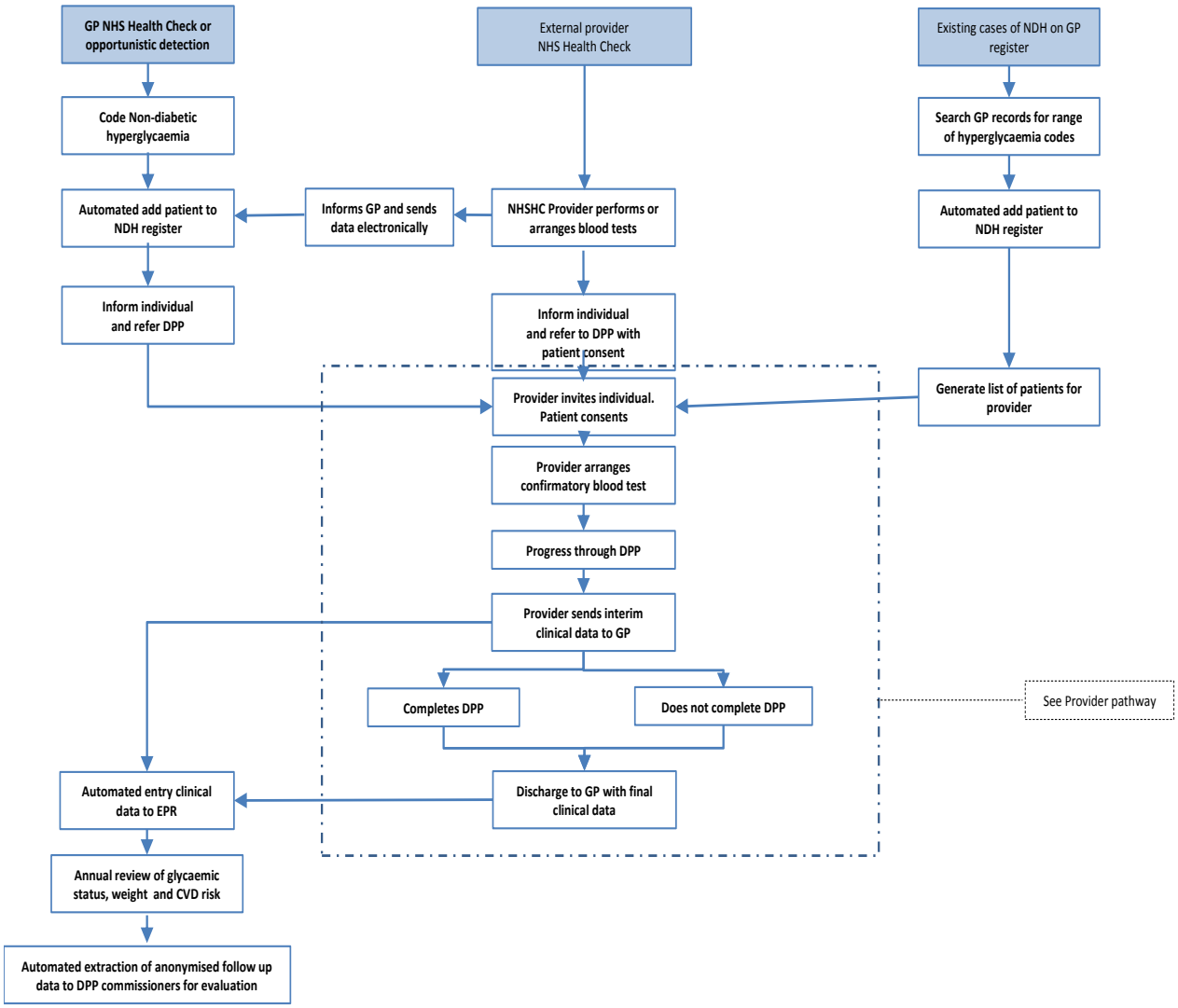
		www.gov.uk/government/uploads/system/uploads/attachment_data/file/456149/Non_diabetic_hyperglycaemia.pdf www.gov.uk/government/uploads/system/uploads/attachment_data/file/456147/PHE_Evidence_Review_of_diabetes_prevention_programmes-_FINAL.pdf NICE guidance also highlights the strong evidence base for diabetes prevention based on systematic review-level evidence. The clinical case for this is therefore well established.
	What is the effect size of the intervention?	As per the evidence reviews, real world studies suggest on average a 26% reduction in incidence of Type 2 diabetes and 1.57kg reduction in weight at 12-18 months following a diabetes prevention intervention, compared with usual care. This was the average effect size, and sub-group analyses suggested that the effect size could be considerably higher
Cost	Is this cost effective? Will this come out of local budgets? Will funding be taken from existing weight management services?	NICE guidance (PH38) - Type 2 diabetes: prevention in people at high risk recommends referral into intensive behaviour change programmes as an effective and cost effective way of reducing incidence of Type 2 diabetes in those who are at high risk. The programme is being nationally funded by NHS England. Many local authorities and CCGs run schemes to help people lead healthier lives and/or manage their weight. Often these are offered to individuals who are overweight or obese. The NHS DPP will not take funding from existing weight management services.

		The NHS DPP is targeting those at high risk of developing Type 2 diabetes and is funded centrally? Not everyone who is at risk for diabetes would be eligible for a weight management service, and likewise a large proportion of people who are overweight and obese will not have NDH. This programme will deliver an approach to diabetes prevention at scale across England for individuals at high risk.
Medicalisation	Aren't we just medicalising a lifestyle issue?	The opposite - we are supporting behaviour modification while monitoring risk of developing Type 2 diabetes. The focus is on behavioural support, not medication. Potentially everyone is at risk of developing Type 2 diabetes with some being at greater risk than others – for instance we know that people from deprived communities are more likely to develop Type 2 diabetes. The NHS DPP will allow us to identify those at high risk and offer evidence based support through an evidence-based programme which can help them to reduce their risk of going on to develop the disease.
	Shouldn't we focus on population interventions and the environment?	The NHS DPP is one element of an overall strategy which includes population level and individually focused interventions. It is important we continue our work to tackle the obesogenic environment, food formulation etc. The NHS also has responsibility to identify risk in individuals and support them to manage that risk.

Screening	Isn't this a screening programme and is there evidence that screening for NDH is effective and cost effective?	This is not a screening programme. The NHS DPP will provide evidence based behavioural interventions to people who have already been found to have Non Diabetic hyperglycaemia either during routine primary care or an NHS Health Check.
Health inequalities	Won't the service just attract the worried well?	Providers are required to support access to the programme for vulnerable groups, and to demonstrate how they are reaching populations which are less likely to access care and to ensure that sessions are delivered in a manner that is feasible and acceptable to a wide range of groups. Everyone is at risk developing Type 2 diabetes with some being at greater risk than others – for instance we know that people from deprived communities are significantly more likely to develop Type 2 diabetes. The NHS DPP will allow us to identify those at risk and offer evidence based support through the programme that will help them reduce their risk of going on to developing the disease.
What will be impact on workload	Referral process	Streamlined referral from HC provider direct to DPP provider. Opportunistic detection by GP - will ensure electronic streamlined referral form. NICE guidance recommends referral for intensive lifestyle intervention as yet services not available to all GPs.
	Identifying existing cases NDH on registers	Local DPP commissioners encouraged to support practices to use standard electronic search tools to identify patients.

		Practices will only need to provide contact details to providers who will manage the invitation process. Letters to patients from providers can be issued under the GP header with wording agreed with practices. Data transfer to providers will be in accordance with local IG standards.
	Will it generate extra blood tests and assessments?	The current expectation is that blood tests are done routinely on NDH.
	Managing new cases of diabetes identified as part of programme	Prompt management of people with diabetes will reduce health care utilisation in long term.
	Maintain NDH register and provide annual follow up	NICE guidance recommends annual review to manage risk to optimise outcomes.
	Process data sent by providers	Providers encouraged to ensure electronic data transfer to practices.
	Provide anonymised evaluation data to commissioners	Commissioners will work with practices to automate process and ensure adherence to IG standards.
	What numbers can the average practice expect	Numbers will vary based on local areas and populations.
What about other health risks?	Many people with NDH will have other health risks that need to be addressed	The DPP will specifically address weight, physical activity and diet. The DPP provider will routinely offer brief interventions and signposting to smokers. Over time, the additional risk factors will be identified and managed in the annual practice follow up for people with NDH

APPENDIX B - NHS DPP REFERRAL PATHWAY



APPENDIX C – CLINICAL CODES FOR THE NHS DPP

RSP No	V2	V3	SNOMED CT
19516	38VZ. Leicester Diabetic Risk Score	XaeDt Leicester Diabetic Risk Score	1025571000000101 Leicester Diabetic Risk Score (assessment scale)
19910	C317. | Non-diabetic hyperglycaemia	XaaeP | Non-diabetic hyperglycaemia	700449008 | Non-diabetic hyperglycemia (disorder)
19517	679m4 Referred to NHS Diabetes Prevention Programme	XaeDH Referred to NHS Diabetes Prevention Programme	1025321000000109 Referred to National Health Service Diabetes Prevention Programme (procedure)
19518	679m3 Referral to NHS Diabetes Prevention Programme declined	XaeDG Referral to NHS Diabetes Prevention Programme declined	1025301000000100 Referral to National Health Service Diabetes Prevention Programme declined (situation)
19519	679m2 NHS Diabetes Prevention Programme started	XaeD0 NHS Diabetes Prevention Programme started	1025271000000103 National Health Service Diabetes Prevention Programme started (situation)
19520	679m1 NHS Diabetes Prevention Programme completed	XaeCz NHS Diabetes Prevention Programme completed	1025251000000107 National Health Service Diabetes Prevention Programme completed (situation)
19521	679m0 National Health Service Diabetes Prevention Programme not completed	XaeCw NHS Diabetes Prevention Programme not completed	1025211000000108 National Health Service Diabetes Prevention Programme not completed (situation)

APPENDIX D - APPLYING BEHAVIOURAL INSIGHTS TO THE NHS DPP INVITATION LETTER

Applying Behavioural Insights to the NHS DPP Invitation Letter

Many examples of where behavioural insights (BI) have been applied across the health and care sector have involved messages communicated through letters to patients and clinicians. Studies have clearly demonstrated that application of BI to letters can impact on the response achieved; hence there is scope to achieve a greater uptake of invitations to participate in the National Diabetes Prevention Programme (NHS DPP).

BI approaches used in letters have included (but are not limited to):

- Simplification and highlighting of key actions required.
    - Reduces cognitive effort required to process information, and therefore, less effortful for an individual to identify the action required of them.
- Commitment devices
    - Usually a tear off slip for date and time of appointment.[i] This acts to reduce the intention behavior gap[ii] and provides a regular reminder if placed in a visible location.
- Social norm messaging
    - Inferring that the desired behaviour is the most common behaviour.
    - Using a respected messenger, e.g. a clinician rather than an administrator. The NHS brand is generally very powerful.
- Personalisation
    - Addressing the letter to individual names and ensuring relevance to the particular age or ethnic group etc.
- Scarcity
    - Providing deadlines to make appointments, thus increasing perceived scarcity of the appointment and therefore increasing its perceived value and helping to tackle procrastination[iii]. By stating that an action is ‘due’ this also implicitly suggests the default action is to book an appointment.
- Giving repercussions of inaction
    - For example, a reminder letter or wasted NHS resources.
- Defaults
    - Communicating that a place on the NDPP programme has been reserved for the individual provides a default behaviour of uptake.

The Evidence

Health Checks invite letters

Several NHS Health Checks invite letters which used a number of the approaches described above were trialled in Medway and Southwark.[iv] The best performing letter was simpler, shorter and more direct than the existing letter and included a tear-off slip at the bottom for recording details of the appointment. It also gave an approximate deadline by stating that "your health check is due in August" which gives the impression of a time limited offer.

In Medway the changes resulted in a 13% increase in uptake from 29% to 33% compared to the original letter while in Southwark, a lower baseline uptake was increased by 17% from 18% to 21%. Over 13,800 people participated in the Southwark trial and the letter was effective at increasing attendance across all ages, ethnicities and both genders; and also across all GP practices (Sallis et al., in press).

Appointment reminder text messages

The messages trialled in a reminder text message to decrease missed outpatient appointments at St Bart's hospital are also relevant to informing invite letters to the National Diabetes Programme. In this trial, compared to the standard reminder text message, including the cost to the NHS of non-attendance reduced missed appointments by approximately 3%. Including a social norm message that "9 out of 10 people attend" also had a small positive effect.[v]

HMRC tax letter

A letter sent out by HMRC encouraging people to pay their tax on time used a social norm message stating that "9 out of 10 people pay their tax on time". Adding this message to the standard letter achieved a five percentage point increase in payments.[vi]

Organ donation register

A large RCT in 2013 tested the impact of seven new messages on the DVLA website, against the standard prompt message to join the organ donation register.[vii] The most effective message used the sense of reciprocity people tend to feel by asking "if you needed an organ transplant, would you have one? If so please help others" and achieved almost a 1 percentage point increase. However, one of the messages trialled, a social norm based message that "every day thousands of people who see this page decide to register" alongside a picture of a group of people, had a negative impact, reducing the number of people that registered.

This is important as it shows that the impact of any messages may vary depending on the setting or behaviour involved and therefore the best way to determine the best approaches to take is to trial various options as part of a randomised controlled trial.

NCMP

In a recent trial, the PHE Behavioural Insights Team used default appointments (amongst other approaches) to encourage the uptake of weight management services by very overweight children. Preliminary results indicate this approach has been successful.

Approaches to the NHS DPP invite letter
Letter option 1

The original letter has been shortened substantially and a key message highlighted in bold. This letter assumes people are able to turn up at their first session without booking.

As so much of the detail has been removed, it might be necessary to include a leaflet or info sheet of some sort along with the letter. A professionally designed leaflet with behavioural insights input would offer further opportunity to influence attendance.

Letter option 2

A social norm message has also been included that across the country thousands of people like you have now attended and been successful at the DPP. This message could be amended to use real local evaluation findings.

Letter option 3

This letter contains a deadline and line that there are limited numbers of the courses running which aims to imply scarcity and therefore value of the place available. The number of courses would need to be amended according to the local area.

Also includes a commitment slip to facilitate attendance at the first group session.

Letter option 1

Dear (Address, Post Code)

Our record and/or your recent NHS Health Check show that you are at high risk of diabetes.

We would therefore like to offer you a place in the new NHS Diabetes Prevention Programme. Your first session will take place at (Date, venue and time of session), simply turn up on the day to get started. Alternatively call 0xxx xxxx xxx if you are unable to attend or require further information.

Yours sincerely

(Name of health care professional to go here)

Letter option 2

Dear (Address, Post Code)

Our record and/or your recent NHS Health Check show that you are at high risk of diabetes.

We would therefore like to offer you a place in the new NHS Diabetes Prevention Programme. Across the country thousands of people like you have now attended local Diabetes Prevention Programmes and successfully reduced their risk of diabetes. Evaluation has shown that people find them effective and enjoyable. Call us on 08xxx xxx xxxx to book.

Yours sincerely

(Name of health care professional to go here)

Letter option 3

Dear (Address, Post Code)

Our record and/or your recent NHS Health Check show that you are at high risk of diabetes.

We would therefore like to offer you a place in the new NHS Diabetes Prevention Programme. There will be two programmes running per year in [ADD AREA] and the next one begins in [AUGUST] so it is important that you book onto the first session promptly to ensure you don't miss out. Call us on 08xxx xxx xxxx to book.

Yours sincerely

(Name of health care professional to go here)

Please record the date and time of your first session here and place it in an obvious place in your home.

I am going to my first NHS Diabetes Prevention Programme session

on: _____/_____/_____ at _____am/pm

Date Time

venue: _____

Trialling and Evaluation

The recommendations for letter writing above are based on evidence from the scientific literature and each of the techniques has been tested in previous health service trials. However, the effectiveness of these approaches can vary according to setting, target group or disease and this means it is important to assess their impact in your DPP whenever possible.

The best way is to trial different versions of letters using a randomised controlled trial (RCT) where participants are randomly assigned to receive the intervention or not. The behavioural insights based letters should be compared to your original letter to ensure it is an improvement in terms of response. This was the approach taken with the health checks letter trial described above.

The Behavioural Insights Team has written a useful guide on how to do an RCT called 'Test, Learn, Adapt: Developing Public Policy with Randomised Controlled Trials' and can be found on their website at http://www.behaviouralinsights.co.uk/publications

If you want to organise a trial of invite letters or any other aspect of your programme, you may need to get ethical approval before commencing.

Support and advice

The PHE Behavioural Insights Team is available to support local programmes with BI trials and support.

Contact tim.chadborn@phe.gov.uk

References

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[v] Hallsworth M, Berry D, Sanders M, Sallis A, King D et al. (2015) Stating Appointment Costs in SMS Reminders Reduced Missed Hospital Appointments: Findings from Two Randomised Controlled Trials. PLoS ONE 10(10): e0141461. Doi:10.1371/journal.pone.0141461

[vi] Behavioural Insights Team (2012) Applying Behavioural Insights to Reduce Fraud, Error and Debt

[vii] Behavioural Insights Team (2013) Applying Behavioural Insights to Organ Donation: Preliminary Results from a Randomised Control Trial