Public Health England | Department of Health

NHS Diabetes Prevention Programme: An opportunity to partner with the Behavioural Insight Team to improve outcomes

Public Health England and NHS England Behaviour Insight Team

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Purpose:

This document outlines what behavioural insights are and how the Behavioural Insights Teams within Public Health England (PHE) and the Department of Health (DH) can support commissioners and providers of the NHS DPP.

What are Behavioural Insights?
Behavioural insights refer to an approach that uses knowledge of how and why people behave to encourage positive behaviour change within populations or sub-populations. It is often implemented by making low cost changes to the physical and social environment, including digital and communications, rather than through training, marketing or guidelines. Behavioural insights considers all aspects of behaviour drawing on psychology, social anthropology and behavioural economics, and fully acknowledges the importance of the fast and intuitive automatic system in driving behaviour.

Behavioural insights work best where individuals want to make positive behaviour changes but struggle to do so. For example, individuals booking for an NHS Health Check or registering for a diabetes prevention programme have demonstrated a motivation to change yet may still find it difficult to make the necessary behavioural changes. We have partnered with local areas to deliver a programme of projects to test innovative ways to increase the uptake of NHS Health Checks (example in box below).

Southwark Council worked with DH to optimise the letters and text messages used to invite most patients to an NHS Health Check. The most successful combination of letter and text messages resulted in a 12% absolute increase in uptake – at negligible cost. For more details see Southwark Council low cost ways of increasing NHS Health Check.

A key strength of the behavioural insights approach is the robust testing of ideas. Where possible we measure actual behaviour change rather than people's beliefs, attitudes and intentions. We ideally use a 'control' to determine the independent effect of an intervention and its probable return-on-investment.

What can we offer?

- Creative and innovative but also theory and evidence-informed interventions to encourage positive behaviour change. We offer a new and low cost perspective and approach.
- A multi-disciplinary approach drawing on psychology, behavioural economics and epidemiology.
- Expertise in the design and delivery of behavioural trials and robust statistical analyses.
- Limited funding for project costs and enhanced monitoring for evaluation.
- National profile and dissemination of our joint findings to spread health improvements.

Broad programme areas where we can provide support:

- Increasing the uptake of DPP: e.g. the use of scarcity and commitment devices.
- Increasing retention to DPP. e.g. the use of SMS prompts and incentives
- Increasing adherence to behaviour change outside of the programme sessions. e.g. behavioural instruction on how to reduce mindless eating.

Next steps:

- Contact tim.chadborn@phe.gov.uk with your aims and context.
- We will follow up to request details of the current processes and data available for evaluation.
- We will discuss with you whether we can partner on a project or simply provide advice.
- If we partner on a project, we will form a small joint project steering group to manage it.

Behavioural Insights and the NHS DPP

Background

We asked Behavioural insight to develop some supporting guidance for providers and commissioners on achieving and improving uptake, retention and behaviour change with the application of behavioural insights.

Purpose

- To ensure that the Programme Management Group is aware of this guidance;
- To provide an opportunity for the PMG to request any changes;
- To decide where and when to share and publish this guidance.

Guidance for Commissioners

Behavioural Insights: what is it and how can it be applied to the NHS Diabetes Prevention Programme?

Behavioural insights work best where individuals want to make positive behaviour changes but struggle to do so. For example, individuals who have registered for a diabetes prevention programme have demonstrated a motivation to change yet may still find it difficult to make the necessary behavioural changes.

There are three key aspects of the NHS Diabetes Prevention Programme (NHS DPP) that would benefit from the application of behavioural insights. These are:

- Uptake of diabetes prevention programmes
- Retention to diabetes prevention programmes
- Health behaviour change

What do commissioners need to do?

The most important thing that commissioners need to do is ensure providers explicitly specify how they expect their programmes to work (the psychological and social mechanism of action) in each of the areas above. The NDPP service specification is clear that providers should explicitly reference behaviour change frameworks and techniques, which include (but are not limited to):

- Behaviour Change Wheel
- COM-B
- Behaviour Change Taxonomy v1

Furthermore, commissioners should seek to ensure that providers use behavioural insights (and wider behavioural science) to maximise outcomes in each of the three areas above. Two relatively simple frameworks that can guide both commissioners and providers to do this are:

- MINDSPACE
- EAST

Specific behaviour change techniques recommended by the National Institute for Health and Care Excellence (NICE, 2014, (PH49)) include:

- Goal-setting and planning
- Self-monitoring
- Relapse prevention
- Engaging social support

The PHE and DH Behavioural Insights Teams have produced guidance for providers of NHS DPP programmes on how and where to include behavioural insights in programmes. Commissioners can use this resource to frame discussions with providers in planning stages and to ensure that the service specification requirements have been sufficiently met.

Commissioners will also need to consider how they want providers to evaluate any behavioural insights approaches included in the NHS DPP for effectiveness (as part of wider service evaluation). The best way to clearly determine the effect of a new intervention independent of other influences is to use a randomised controlled trial (RCT). The Behavioural Insights Team has written a useful guide on how to do RCTs called ‘Test, Learn, Adapt: Developing Public Policy with Randomized Controlled Trials’ (http://www.behaviouralinsights.co.uk/publications). If this approach is not appropriate, there are other evaluation approaches available which can help determine whether an intervention worked or how it worked (process evaluation).

Support available for NHS DPP commissioners

The PHE and DH Behavioural Insights Teams are able to support NHS DPP programmes. The support offered includes:

- Creative and innovative but also theory and evidence informed interventions to encourage positive behaviour change. We offer a new and low cost perspective and approach.
- A multi-disciplinary approach drawing on psychology, behavioural economics and epidemiology
- Expertise in the design and delivery of behavioural trials and robust statistical analyses.
- Limited funding for project costs and enhanced monitoring for evaluation.
- National profile and dissemination of our joint findings to spread health improvements.

Guidance for Providers

Behavioural Insights; what is it and how can it be applied to the NHS Diabetes Prevention Programme?

Behavioural insight (BI) provides an understanding of why and how people behave utilising knowledge from behavioural sciences and has the potential to positively impact on numerous areas of public health and health services. For example, there is evidence that it can improve health service usage by patients, various areas of clinical practice by healthcare professionals, and increase healthier behaviours among the general population.

There are three key aspects of the NHS Diabetes Prevention Programme (NHS DPP) that would benefit from the application of BI. These are:

- Uptake of diabetes prevention programmes
- Retention to diabetes prevention programmes
- Lifestyle change

A framework for thinking about behaviour change: The EAST framework:

The EAST framework was developed by the Behavioural Insights Team. Its advice encourage a behaviour, is for it to be:

- Easy
- Attractive
- Social
- Timely

This simple framework can be applied to the three key NHS DPP areas identified above and examples of how these four principles can be applied are explored below. Some of these are firmly based on evidence and some represent examples or suggestions of how the BI concepts can be adapted and included in DPPs. The final section of the paper describes the importance of robust evaluation of what you do. This is particularly important when the evidence base behind an intervention is less well developed.

The PHE and DH Behavioural Insights Teams are available to support DPP providers with intervention design, implementation and evaluation and the appendix to this document outlines their offer to local NDPP programmes.

Uptake of the diabetes prevention programme

Make it Easy:

Shorten and simplify invitation letters, highlighting key actions required. This reduces the cognitive effort required to process information, making it less of an effort for the individual to identify what action is required of them. This approach has been successful in increasing uptake of NHS Health Checks in Medway and Southwark (DH, 2013). Medway is also now testing a similar invitation letter for its local DPP programme ‘Let’s Talk Weight’.

Consider offering a single taster session before asking people to commit to the full programme:

The NHS DPP requires a big commitment from people both in terms of attending the sessions and changing their lifestyles. Durham was one of the initial seven demonstrator sites to develop and test approaches for the NHS DPP. It tested an approach where it offered a tester session prior to the individual deciding to take up the course, allowing the time to commit. This made the decision to commit to the programme less daunting as they knew what to expect and would be more likely to continue.

Default referrals:

Individuals will tend to avoid making decisions and will generally stick with the status quo. As such, defaults have significant power to change behaviour. To increase uptake of diabetes prevention services, those identified as being at high risk of diabetes should receive an automatic referral to the programme. For example, this could involve requesting that they go directly to the provider once they have received their initial letter rather that going back to the referrer to confirm acceptance.

Make it Attractive:

Consider offering incentives for attendance and/or maintenance on the programme:

Incentives are often effective in encouraging people to perform clearly defined, time-limited, simple behavioural tasks, particularly participation in programmes to bring about healthier lifestyles (Kings Fund, 2007). However, they do not appear to be as effective at establishing long-term maintenance of the healthier behaviour. This is because they do not engender intrinsic motivation for the overall outcome targeted but rather extrinsic motivation for the incentive offered to them. Therefore although they can help individuals achieve their goals initially, once the incentive is removed, people tend to relapse into previous behaviour patterns, it is recommended that any incentive(s) are offered for attendance and maintenance on the programme itself rather than for achieving health behaviour change goals or weight loss/HbA1c decrease etc.

Incentives received on the basis of group performance have been found to be more effective than individual based incentives. Insights on reciprocity would also recommend peer based interventions whereby an

individual's performance dictates the incentives received by peers. Such group-based incentives could be offered to encourage uptake and retention of the diabetes programme, for example couple or family based incentives might be offered.

A mixture of positive and negative incentives might also be useful. Positive incentives pay for success. Negative incentives penalise for failure. Individuals could make an initial monetary deposit when they initiate participation. This can be earned back and exceeded if they remain in the programme and can be lost if they withdraw.

The Bradford Beating Diabetes programme is offering participants a one year membership of Clubactive, which includes free access to gyms, swimming pools, Pilates/Yoga classes as well as park and water centre access. Participants are offered the membership as an incentive to join the programme and they are required to attend until at least the third session to receive the membership card. The activities offered were chosen to help participants achieve their lifestyle behaviour changes.

Think carefully about the messages in invitation letters and promotional materials:

As well as making text as easy and simple to follow as possible, consider how you communicate why the programme is an attractive offer. For example, we know that positively framed messages can often have more impact than negatively framed ones, so highlight the benefits of attending rather than the potential costs of not attending.

Make it Social:

Normalise the behaviour of attending the programme:

If people believe that a behaviour is the most common one among other people, particularly people similar to them, then they are more likely to take this course of action themselves. You may be able to present figures in invitation letters and promotional materials showing that the majority of people accept their invitation or complete the course of sessions (these should always be true statements). Any images of people in the sessions, testimonies used etc. should allow people to visualise themselves attending so ensure you use a range of people in terms of ethnicity, age, sex and language spoken (consider consent for any personalised material used).

Use commitment devices for attending:

Making a commitment, even to oneself, can increase the likelihood a behaviour will occur. These have been tested in Health Check invitation letters which included a tear off slip at the bottom of the page for people to write in the date and time of an appointment. This acts to reduce the intention behaviour gap (Glowitzer and Sheeran, 2006) and provides a regular reminder if placed in a visible location.

Make it Timely:

Provide a deadline for signing up to your programme:

This will help create the impression of scarcity of the opportunity and people place increased value on resources that they believe to be scarce (Cialdini, 2007). It doesn't need to be a specific date, a month would be sufficient. Scarcity can also be inferred by stating that, e.g. there are only two courses running per year or that places are limited.

Prime people to respond positively to their invitation:

Priming is exposing a person to some information or a situation so they are prepared to act in a certain way when a subsequent situation arises. For example, sending a text message stating that a letter will soon follow can prime people to be expecting the letter and to respond positively to it. Reminder text messages after a letter has been sent can also prompt a response in some people who may have forgotten or delayed taking action initially. In a trial in the Southwark Health Checks programme, sending a primer and reminder text message either side of a full invitation letter increased response rate from 21% to 30%.

Retention to the diabetes prevention programmes

Make it Easy:

Make it easy to access sessions:

If you want people to attend the sessions, they should be offered at convenient times and it needs to be simple for them to travel to the venue and access the building/rooms when they arrive. Clear instructions on timings and travel options are key. For example, Leventhal et al. (1965) showed that simply providing a map of the relevant health service increased vaccination uptake.

Remember barriers can be perceived but not necessarily real. This means it is important to ask people about the barriers they think they are facing to attend sessions rather than assuming you can work them out for yourself. There may also be certain points along the patient pathway where drop-out is most likely. For example, once people miss one session, they may be less likely to return due to feeling awkward or worrying about being behind and having to catch-up. If these points are identified then measures can be put in place to try and reduce drop-out risk, such as phoning someone who has missed a class to encourage them to attend the next one or emailing them a summary of the missed session.

Make it Attractive:

Make it a ‘game’:

Adding an element of competition into a programme can increase retention. This is called gamification and inherently involves reward incentives. Behavioural insights can capitalise on the motivation to achieve gaming rewards by positioning continued engagement with the diabetes programme as a ‘goal’ to be achieved in order to gain incentives. In one study, a game-based smartphone app was used to encourage consistent use of a pain diary. Incentives to complete the diary twice a day included moving up through team ranks and receiving acknowledgements. Participants endorsed the game-based nature of the app and compliance with the diary was high (mean 81%). Such principles could similarly be applied to adherence to a diabetes prevention programme. For example, periodically rewarding the achievement of goals such as attendance at individual consultations and group sessions.

Make it Social:

Deliver your programme in group sessions:

There has been lots of research into the effect of group vs. individual interventions with a general consensus that group interventions are more effective (e.g. Heshka et al., 2003). It is, therefore, recommended that the NHS DPP adopts a group-based approach and/or apply a social dimension to the programme, in order to increase programme retention.

Use commitment contracts:

Taking up the programme with a spouse/relative/friend could improve retention because the individual is:

- required to publically commit and
- will feel committed to participate alongside their partner
- social comparison with their partner will provide a motivational norm.

A study by Murphy et al. (1982) investigated the effect of spouse involvement on weight loss programmes. Ninety-seven couples were randomly assigned to either attend weight management sessions alone or with their spouse. They also signed attendance ‘contracts’ either individually or jointly. Individuals attending weight management sessions with their partners lost significantly more weight than those attending individually. The same principle could be applied to the NHS diabetes prevention programme.

Make it Timely:

Remind people when they are due to attend a session:

Text messages can be used to remind people shortly before they are due to attend a session although providers should get consent to use this form of communication. The message in the text can also be designed to attract the biggest response. For example, a trial of text message reminders for outpatient appointments at St Bart’s hospital found that including the cost of not attending or a social norm message reduced missed appointments by approximately a quarter (Hallsworth et al., 2015).

PHE’s behavioural insights team is working with Southwark Council to increase engagement in the Walk Away From Diabetes programme. Text message prompts for continued engagement have been used and are based on principles that;

- reminder messages increase salience
- social comparisons provide a motivational norm
- feelings of being observed increase compliance.

Lifestyle change

Make it Easy:

Set challenging but realistic goals:

Goal setting is a strongly evidence based behaviour change technique and is recommended by NICE guidelines (NICE, 2014). The goals should be challenging enough to motivate individuals to make behaviour changes but not so challenging that they are unattainable and therefore decrease motivation due to failure to meet them. Self-monitoring of progress towards goals is also a key component of successful behaviour change programmes (Greaves, 2011) and your programme should aim to make setting goals and monitoring progress as easy as possible for participants.

A diabetes care passport has been introduced by Bradford Beating Diabetes which gives patients a simple to use passport which is stamped by the GP each time they attend for one of nine required care checks. This is a good example of making monitoring progress towards a goal easier and this could be adapted to help participants track progress towards their own lifestyle goals.

Keep your sessions simple and written materials short and understandable:

Changing a lifestyle can be difficult, so ensure the information presented to participants is simple and easy to follow. Also avoid overcomplicating the actions you want people to take and focus on a few simple actions at a time. Breaking goals down into smaller ‘chunks’ of action can make it easier to manage.

Tell people how to eat and exercise rather than what to do:

Traditional health improvement approaches have focused on telling people what they should be doing to be healthy without always helping them with how to do it. For example, giving people a copy of the Eatwell plate would be telling them what to eat, combining this with suggestions about how to store and display foods in the home to help people eat more fresh fruits and vegetables would be helping them with how to do it. Slim by Design by Brian Wansink provides a useful guide to using behavioural insights to create a healthy food environment in the home and other common areas (Wansink, 2013).

Make it Attractive:

Emphasise immediate risks and benefits rather than long-term ones:

People value benefits that are realised immediately more than they do ones that are realised in the future and the same is true for risks. This is because people assume they can make different choices later on (O'Donoghue and Rabin, 2000). The immediacy of risk of developing diabetes could be emphasised and benefits of increased energy from eating healthily and exercising today could be more motivating than the thought of reducing risk of serious illness in the future.

Consider your audience:

Different groups within the population are motivated to change health behaviours by different things so try to design programmes to include approaches to behaviour change that will be attractive to everyone. For example, men are a traditionally hard to engage group in health improvement programmes but have been successful in improving health behaviours when engaged in activities such as football sessions (e.g. White et al., 2012).

Make it Social:

Include social support in behaviour change:

A systematic review by Greaves et al. (2011) found high quality evidence that by adding social support to interventions (usually from family members) provided an additional weight loss of 3.0kg at up to 12 months follow up. By involving another person in lifestyle changes, people are making a public commitment to change, which can be a powerful motivator.

In a regular DPP group there is potential to develop a good social support network for participants and this can be encouraged by the group working together on various activities, setting group based goals and mixing together during breaks etc.

Consider your messengers:

Evidence shows that behaviour change interventions can be successfully delivered by a wide range of people including doctors, nurses, dietitians and lay people (Greaves et al., 2011). However, we also know that messages delivered from people ‘like me’ can be particularly effective and you might be able to incorporate a talk or

written feedback from previous group members who have had a positive experience and been successful in achieving their goals.

Make it Timely:

Plan for behaviour changes:

Plans and goals should include an element of time in them. This introduces a form of deadline, helping to tackle procrastination (Cialdini, 2007). Writing these time scales down will help keep them in mind and provide an additional commitment to achieve them.

Choose the best time for behaviour change:

There are some times when behaviours are more likely to be successfully changed than others. NICE guidelines state that behaviour change programmes should use times when people are more likely to be open to change (NICE, 2007). This could include aiming to change behaviours after starting a new job, moving house or following important religious or cultural festivals or important social/family events rather than before.

Evaluation of behaviour change approaches

Evaluation is an important element of any health improvement programme and can provide evidence of effectiveness and return-on-investment. Many of the recommendations above are based on good evidence from the health, psychology and behavioural science literature. However, the effectiveness of these approaches can vary according to setting, target group or disease. This means it is important to evaluate impact in your DPP whenever possible.

The best way is to trial changing a single or multiple elements of your approach using a randomised controlled trial (RCT) where participants are randomly assigned to receive the intervention or not. This should allow you to clearly determine the effect of the intervention independent of other influences such as social media. An example of this was the Health Checks letters where a number of different options were tried and compared. 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 do a formal RCT then ethical approval may be required and local arrangements will be in place which you will need to follow.

If you are not able to go down this route, it is worth considering other evaluation approaches which can help you determine the success of your intervention as robustly as possible.

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