Working with stakeholders to translate health psychology research into practice: reflections from evaluations of two national behaviour change programmes

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Summary

This article reports the reflections of a Research Associate (Rhiannon Hawkes) and PhD student/Trainee Health Psychologist (Tamla Evans) working on the multidisciplinary evaluations of two distinct but similar nationally implemented behaviour change programmes: the NHS Diabetes Prevention Programme (NHS-DPP) and the NHS England Low Calorie Diet Programme (NHS-LCD). The two of us met in early 2021 as part of multiple shared learnings meetings between our two independent research teams at the University of Manchester (DIPLOMA evaluation) and Leeds Beckett University (Re:Mission evaluation). Due to our aligned research interests we continued to meet independently to share insights and learnings from the research process with one another, leading to the co-authorship of two journal publications.

This article shares insights into successfully working with programme stakeholders to facilitate these independent evaluations and ensuring research findings are translated into policy and practice. We hope our experiences demonstrate how collaborating with researchers on similar projects facilitates impactful research, as achieved by the DIPLOMA and Re:Mission project teams. We also reflect on the value of health psychology expertise in these programmes, and the opportunities for heath psychologists to be involved in the implementation of large-scale behaviour change programmes.

Background

Tackling Type 2 Diabetes: NHS England's commissioning of diabetes prevention and treatment programmes

Obesity and its associated comorbidities, such as Type 2 Diabetes Mellitus (T2DM), have become a global epidemic (Jaacks et al., 2019). It is now well established that making behaviour changes such as increasing physical activity and improving diet to promote weight loss can contribute to both the self-management (Chatterjee et al., 2018) and prevention of T2DM (e.g., Knowler et al., 2022; Tuomilehto et al., 2001). Such behaviour change interventions are therefore crucial, as treating T2DM and its associated complications currently costs the National Health Service £10 billion each year (Hex et al, 2012).

Based on the underpinning evidence for behaviour change interventions, the National Health Service in England (NHSE) sometimes commissions external providers (e.g., private, state or third sector) to deliver large-scale programmes on their behalf, following central guidance. This commissioning approach allows such programmes to be delivered at scale and with efficiency. Two nationally implemented programmes in England rolled out using this commissioning model are the NHS Diabetes Prevention Programme (NHS-DPP) and the NHS Low Calorie Diet Programme (NHS-LCD).

The NHS-DPP is an intervention for adults in England who have been identified as high risk for developing T2DM, with aims to achieve weight loss through making behavioural changes to prevent progression to T2DM (NHS England, 2021). The programme was launched in 2017 and has been rolled out in waves, gradually reaching national coverage. The NHS-LCD Programme is based on recent evidence from clinical trials finding that a weight loss of 10kg or more can achieve remission status (HbA1c ≤48mmol/mol) for some people living with

excess weight and recently diagnosed T2DM (≤6 years) (e.g., Lean et al., 2018). The NHS-LCD Programme includes three phases: Total Diet Replacement phase (nutritionally complete soups, bars, and shakes ≤900kcal/d), structured Food Reintroduction, and Weight Maintenance (NHS England, 2020). The pilot programme was rolled out across 10 geographical areas in 2020, followed by a second wave in early 2022; procurement for national roll-out is currently underway. Both programmes were procured through a national competitive process by NHSE, in which independent provider organisations were selected to deliver each of the programmes in localities across England.

Independent evaluations of large-scale behaviour change programmes

Since the roll-out of these programmes, the National Institute for Health and Care Research (NIHR) have commissioned independent evaluations of the NHS-DPP and NHS-LCD programmes respectively. The 'DIPLOMA' research project (Diabetes Prevention Long-term Multimethod Assessment) is a mixed-methods study designed to provide a longer-term assessment of the NHS-DPP to ensure it is meeting the aim of reducing T2DM in England in a way that is sustainable and cost-effective (Sutton, 2017). The 'Re-Mission' research project is a co-produced, mixed-methods realist evaluation of the NHS-LCD programme to understand what works, for whom, in what contexts, and why [NIHR132075] (Ells, 2021). These independent programmes of research consisted of various work packages, including evaluating service implementation, service delivery and fidelity, participant experiences, and cost effectiveness.

Intervention fidelity is defined as the extent to which an intervention is implemented as intended (Bellg et al., 2004) and is of paramount importance for health behaviour change research. Assessing fidelity of large-scale programmes is particularly important as often

programmes have been tested in controlled study conditions where fidelity is more readily achieved. When implementing a programme at scale, the risk of dilution in fidelity is increased. One of those reasons is due to the involvement of different stakeholders at each stage of programme implementation; for example, those synthesising the evidence base, commissioners producing a service specification, and independent providers selected to design and deliver programmes.

By working with stakeholders throughout the entirety of the research cycle, our research teams have developed an understanding of the context in which these nationally commissioned programmes operate. Successful relationship building has enabled our teams to not only translate psychological concepts into useful recommendations for providers and commissioners, but to further translate recommendations into tangible programme developments.

Reflections

Communicating with independent service providers commissioned to design and deliver programmes

Our independent research teams assessed fidelity of the NHS-DPP and NHS-LCD programmes by evaluating three aspects of each provider's programmes: the theoretical underpinnings, service parameters, and behaviour change content. We assessed whether each of these aspects was in line with what was stipulated by NHSE and National Institute for Health and Care Excellence (2012) guidance referenced in the service specifications (NHS England, 2019; NHS England, 2021). We therefore required documentation detailing providers' programme design, training, session plans, and participant resources. From some providers we additionally required "dummy participant" access to digital content such as

smartphone applications and online learning modules. Thus, it was important for members of the research teams to build working relationships with providers early on during the evaluations to ensure they were willing to share their commercially sensitive materials with the research teams. Although providers were contractually required to participate in our evaluations, we recognised that providers' commitment to, and support for the evaluation would optimise the research process.

To achieve this, meetings were set up with key team members from each provider early on during the evaluations. The aims of these meetings were to (1) communicate research plans and what the research teams required from providers (e.g., documentation, setting up session observations, participant recruitment for surveys and interviews, access to apps, etc.), (2) share the purpose of the evaluation (i.e., to understand what is being done well and where improvements can be made, particularly for groups predisposed to inequalities), and (3) agree actions. These meetings provided ample opportunity to listen to and address any concerns held by providers, whilst the face-to-face virtual aspect facilitated the establishment of initial connections. It was during this stage that we established a key contact for each provider to liaise with to facilitate data access going forward.

As providers' documents were commercially sensitive, our research teams set up Information Sharing Agreements outlining how the data would be used, stored, accessed, and how research findings would be reported (e.g., the anonymisation of providers in written reports). We also signed further confidentiality agreements for those providers who requested this. Although the setting up of these agreements took considerable time and involved liaising with the university Information Governance and Contracts teams, this helped to transparently communicate with providers from the outset and manage their expectations

of evaluation requirements. Having these agreements in place meant that providers were aware of the documentation we would request for the evaluations to facilitate the most accurate fidelity analysis as possible.

As DIPLOMA started its evaluation of the NHS-DPP in 2017 and Re:Mission started in 2020, our collaboration between both evaluation teams has enabled the NHS-LCD research team to learn from the experiences of the NHS-DPP evaluation. For example, by ensuring that all documentation describing providers' programme designs were obtained and that sufficient opportunity was given to providers to collate and share all documentation for evaluation purposes.

Communicating with commissioners

From inception of the NHS-LCD evaluation, monthly evaluation catch-up meetings were set up with key members of NHSE's programme management team. The purpose of these meetings was to maintain a communication channel whereby NHSE could share with the research team how programme implementation was progressing, whilst we could report the progress of the evaluation to them. The NHS-DPP research team maintained regular communication with NHSE via email and meetings. There were four key benefits of maintaining communication channels with NHSE:

a) Meetings enriched our understanding of the context of the NHSE commissioning process; research teams learned about commissioning cycles, pressures on providers to meet short timescales, and NHSE's goal and expectations for their programmes.
b) Communications enabled a common goal to be established; this was to understand what works well and drive programme developments that improve accessibility, equitability, and cost.

c) Key contacts at NHSE were able to help with resolving any issues arising during the evaluations, such as obtaining relevant data that was required.

d) Tailoring research to the changing needs of stakeholders ensured the relationship was mutually beneficial. For example, NHSE were able to share real time insights from programme implementation so that researchers could prioritise gathering data on a particular area or issue. Where possible we would embed NHSE priorities into the research; this meant we were able to provide useful, timely and relevant information to NHSE.

As both research teams needed to ensure independence, the involvement of stakeholders in data analysis and/or interpretations was approached cautiously, although where appropriate, we would involve NHSE in this stage to provide further insights. For example, an initial programme theory and logic model was developed for the NHS-LCD programme with input from NHSE (Evans et al., 2022). When undertaking this, all technical terminology (such as constructs reported in behaviour change theory) were explained using non-technical terminology and examples. This can be somewhat challenging when health psychology language is second nature for us, however, for stakeholders to make a meaningful contribution they must understand and not feel alienated by our profession.

Once each analysis was complete, both evaluation teams shared our draft publications with NHSE prior to journal submission to provide them with the opportunity to comment on our findings. The NHS-DPP team also shared draft publications with the providers. Eliciting feedback during this phase has been useful for the framing of evaluation results, and also ensured that NHSE was aware of the research findings that would soon be available in the public domain. Stakeholders were given the opportunity to flag any results that they did not

feel accurately reflected the programmes, or any discussion points that could be added to the write-up of results.

Translating research findings into useful recommendations for programme implementation

Our research teams have established what behaviour change theory and content providers have included in their programme plans, staff training and programme delivery. This has allowed us to identify where providers demonstrated fidelity to the NHS service specifications and where there was a dilution in fidelity, that is, where key behaviour change theory or content was missing from provider programme designs and delivery. Thus, we have been able to produce clear, understandable, and implementable recommendations for (a) NHSE to include in iterations of their service specifications during future commissioning rounds of each programme, and (b) providers delivering the programme.

We learned early on that less technical language used to communicate with both the commissioners and providers was necessary, rather than using complex psychological terms. When use of psychological terms was necessary, we endeavoured to explain all concepts using lay terminology and examples (e.g., referring to 'self-efficacy' as someone's confidence to perform or maintain the behaviour). Research from the evaluations of both programmes found that there was a lack of clear description of underpinning theory to describe how providers expected their interventions to work in achieving the desired outcomes (Evans et al., 2022; Hawkes et al., 2021). Without this clear explanation, there was limited justification for why providers had selected particular behaviour change techniques (BCTs) for their interventions and why. Thus, when communicating these findings with NHSE it was essential to explain the importance of providers having a coherent programme theory that informed

subsequent decisions about their programme designs (e.g., what BCTs to deliver) and how a lack of this could have consequences for the fidelity and quality of programme delivery.

Our research teams recommended ways to improve the behaviour change content of the programmes that were tailored to the context of programme commissioning and we articulated these recommendations in line with key goals and considerations of NHSE, such as the cost-effectiveness of the programme. For example, although some of our recommendations may incur additional upfront cost (such as employing a behaviour change specialist/health psychologist, additional more in-depth training in behaviour change techniques), such costs would be minor as it is anticipated that they should yield better behaviour change outcomes in the programme if the suggested changes were implemented.

Achieving impact: translating recommendations into tangible programme developments

These ongoing evaluations have resulted in policy changes that have happened in the NHS-DPP and NHS-LCD programmes based on these research findings. For example, members of the DIPLOMA research team have worked with NHSE to re-draft the NHS-DPP service specification for the next roll-out of the programme, whilst the Re:Mission research team have been involved in re-drafting the NHS-LCD service specification for procurement of the national roll-out. Both updated service specifications now require providers to evidence their justification for planned key intervention features (e.g. BCTs) and describe how they expect their programmes to achieve the desired outcomes and why, based on our analyses assessing underpinning theory of the programme (Evans et al., 2022; Hawkes et al., 2021). We suggested that providers included a diagram, logic model or a table in their service bids to NHSE outlining why they had included specific BCTs and how they expected those techniques

to achieve behaviour change. We maintained use of common language throughout such as "determinants of the behaviour" as opposed to "constructs", to ensure clarity.

This has led to further consultancy opportunities whereby NHSE have requested our behaviour change expertise, including (a) the development of an example logic model as a guide for service providers and (b) involvement in a multidisciplinary panel scoring providers' intervention descriptions (including planned behaviour change content and theoretical underpinnings) in their service bids, which informed the selection of providers to deliver the next roll-out of these programmes. Other recommendations and their associated impacts are summarised in Table 1. More information on NHS-DPP impacts and further recommendations for commissioners of large-scale programmes are summarised in a recent publication (Hawkes et al., 2022).

Table 1. Impacts from the NHS-DPP and NHS-LCD evaluations thus far

Research Findings / Recommendations	**Relevant Programme**	**Impacts**
Our studies assessing underpinning theory found that: • Providers of the NHS-DPP did not include a clear rationale (e.g. via a logic model) for their inclusion of key BCTs in their programme designs (Hawkes et al., 2021). • Only one of four providers of the NHS-LCD explicitly described their theoretical underpinnings.	*NHS-DPP* *NHS-LCD*	NHSE now require providers to explicitly describe their programme's hypothesised mechanism of action through inclusion of a logic model or table in their service bids detailing which BCTs they have included in their programme designs, and how they expect these techniques to achieve the desired programme outcomes. An example logic model was developed as guidance for providers and included as an appendix in NHSE programme specifications.

Our interview study found that service users had a better understanding of some more complex BCTs (e.g., action planning, problem solving) when support was provided (Miles et al., 2022).	*NHS-DPP*	NHSE require providers to explicitly describe how they will support service users with self-regulatory BCTs including support with setting, monitoring, and reviewing of goals.
Based on an assessment of training fidelity of behaviour change content in the NHS-DPP (Hawkes et al., 2021), we recommended that staff delivering the programme should be comprehensively trained in how to deliver important BCT content, and given the opportunity to practice BCT delivery prior to implementation in routine practice.	*NHS-DPP*	NHS England now require providers to state in their service bids how staff training focuses on BCT delivery, and providers should now specify how the training allows front-line staff to practice using these skills and techniques before programme delivery.
Our assessment of design and delivery fidelity found that cultural tailoring (e.g., regarding session content, participant materials and available products) was variable across providers. We shared this with our Public Patient Involvement group, who recommended that providers be required to meet a set of standards (Evans et al., in press).	*NHS-LCD*	NHSE will require providers to clearly demonstrate how their programme is culturally adapted in their service bids.
Our participant interviews and assessment of delivery fidelity have identified client led WhatsApp groups as an effective means of peer support (unpublished data).	*NHS-LCD*	The updated service specification will state that providers should establish WhatsApp groups for clients to encourage peer support, with some coach moderation.

Key takeaways from our involvement in translating recommendations into programme developments have been:

a) Not to expect or aim for gold standard: as researchers with training in health psychology methods, we know the importance of rigorous approaches to intervention development and evaluation. However, recommendations will not be implemented if they are not feasible or acceptable due to time and resource constraints. Within the context of the NHS-DPP and NHS-LCD programmes, providers have a short-time frame

to mobilise their service before rolling them out across England, deeming absolute fidelity an unfeasible goal. Instead, small incremental and low-cost changes that are informed by health psychology theory, research and practice are more feasible for providers to implement.

b) To tailor advice to the needs and contexts of the service providers; this is where the time spent on relationship building and understanding the contexts within which organisations operate was of value. Our teams understood the barriers faced by stakeholders and we therefore tried to avoid making recommendations that were not feasible.

c) To remember that both commissioners and providers are the experts regarding the organisations, systems and cultures that they work within and that although we can use our health psychology expertise to make recommendations, stakeholders are best placed to make decisions about how these are (or are not) implemented (Schein, 1999).

The role of health psychologists in large-scale behaviour change programmes

There is ample potential for health psychologists to get involved with the commissioning and delivery of these national behaviour change programmes. The involvement of a behaviour change specialist during all stages of programme implementation is important, and health psychologists could have a valued role in supporting all steps in developing and evaluating complex behaviour change interventions, as outlines in recent guidance (Skivington et al., 2021). For example, during the commissioning of such programmes, health psychologists could work with commissioners to produce the service specifications and ensure all key behaviour change content and requirements are clearly stipulated. There is also a place for health psychologists to be

involved in assessing the behaviour change content in potential providers' programme bids, prior to programme implementation.

Additionally, health psychologists would be an asset to independent provider organisations who deliver these programmes. For example, they could work during the design of such programmes to ensure key intervention content (e.g., BCTs) is included in programme plans with justification for how these specific techniques are hypothesised to change health behaviours and why. Health psychologists would also be best placed to deliver staff training, to ensure that staff delivering the services are provided with an in-depth understanding of how these BCTs should be delivered in practice, including an understanding of the psychological mechanisms of these BCTs. During programme delivery, health psychologists could provide staff with continued monitoring and feedback to ensure intervention techniques are delivered optimally in routine practice.

Such programmes offer health psychologists the opportunity to help large numbers of people achieve behaviour change at scale (for example, the NHS-DPP received over 500,000 referrals in 2020, in which over 100,000 people had taken part in at least 60% of the programme [McManus et al., 2022]). Thus, there is the potential for health psychology expertise to have wide-reaching impact.

Conclusions

This article has shared our learnings from working in multidisciplinary research teams where we have communicated with stakeholders of the NHS-DPP and NHS-LCD programmes as part of independent research evaluations. We hope it has highlighted the value that health psychologists could provide in the commissioning and delivery of large-scale behaviour

change programmes. In summary, some key learning from involvement in these national evaluations are outlined below:

- Building relationships with stakeholders to establish a common goal is invaluable.
- Maintaining regular communication with stakeholders (ideally through regular online meetings) ensures timelines are being met and develops an enhanced understanding of programme commissioning and mobilisation.
- Information Sharing Agreements and any other required contracts with providers ensures transparency and manages expectations.
- Use of language should be considered when reporting results and recommendations to stakeholders, including avoiding the use of technical psychological terms.
- Articulating recommendations in line with key goals and considerations of the programme commissioners and stakeholders is crucial.
- Low-cost incremental changes to improve an intervention are more feasible to implement on a national scale, rather than aiming for gold standard.
- Health psychologists can play an important role in programme commissioning, design, training, and delivery to improve behaviour change content in national programmes.

To learn more about the evaluations discussed in this article please visit our study websites: https://arc-gm.nihr.ac.uk/projects/diploma-evaluation-national-nhs-diabetes-prevention-programme and https://www.remission.study.

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