

Putting Academia into Action: Lessons Learned From a Year in Public Health

Lucy Porter

*Public Health England
Behavioural Insights*

This article is the perspective of Lucy Porter and does not necessarily reflect the full range of

work conducted by PHEBI or the opinions of Public Health England.

The brief was simple enough. 'Design an intervention to reduce the amount of food people consume from takeaways'. It said that we could be as creative as we liked, as long as we could prove that it was likely to be effective.

This was going to be easy.

A couple of weeks later, I found myself sitting in front of a panel of impassive faces as I presented my intervention. It was 2017 and I was applying for a three-month internship at Public Health England's Behavioural Insights team (or PHEBI) as part of a scheme for PhD students like me. I had been keen to work with the team since I discovered their existence at the start of my postgraduate life.

We know that behaviour is a significant determinant of some of the biggest causes of mortality and disability-adjusted life-years such as obesity, cancer and cardiovascular disease (Khaw et al., 2008). We also know that the majority of interventions targeting behavioural risk factors still focus on education and information-provision alone, despite evidence that this is not sufficient to support change (Marteau, Hollands, & Fletcher, 2012). However, PHEBI aims to embed evidence from a wide range of behavioural and social sciences in their work and, in collaboration with partners, strengthen its use in health and

wellbeing (PHE, 2018b). Health Psychology is particularly influential to the team's work, which is unsurprising given that two registered Health Psychologists have been part of the core team that has guided PHEBI's approach since its inception. Part of this approach involves taking a dual-process approach to behaviour change, acknowledging the importance of conscious decision-making in behaviour but also the crucial influence of automatic cognitive processes (Hofmann, Friese, & Strack, 2009). The prospect of applying empirical evidence to solve real-life policy issues was hugely appealing to me, and with my own Psychology PhD research focusing on targeting implicit processes in order to encourage healthy eating behaviours, the internship with PHEBI seemed like a natural fit.

For my interview intervention, I took inspiration from some of the team's work - looking at past trials that made smart changes to micro-environments (PHE, 2018a) and communications in order to target implicit (as well as reflective) processes in decision making (Sallis et al., 2016) - and constructed my intervention accordingly. I combined elements of psychology (a marketing campaign based on social norms) and behavioural economics (restructuring the choice architecture of the takeaway environment) to encourage people to purchase smaller portions from their favourite takeaway restaurants. On the day, I distributed sample leaflets from my marketing campaign, which I had printed specially on nice, shiny paper. I was feeling very proud of myself.

And then the questions started.

"So how would you pay for your intervention -

the marketing campaign, the takeaway incentives, the new packaging sizes - if you were working with a restricted budget?"

"Well... How restricted is restricted?" I asked.

"Imagine you had no budget at all actually."

Ah. This wasn't going to be the cinch I'd anticipated - but I did get the placement.

After completing my internship and then successfully applying for an externally advertised position, I have now been with PHEBI for 18 months, and I have learnt a lot more about integrating the promises of behavioural science and health psychology into low-cost, scalable interventions, as well as into the structures and systems within which people carry out their lives. Our team frequently collaborates with others across Public Health England, and we often seek opportunities to embed behavioural science into existing programmes, making incremental changes to improve the services and structures across the public health network. We aim to make healthy behaviours easier for people, whether they are the general public, clients or patients in contact with services, professionals delivering public services or in the private sector, or organisational management and leaders. This means that we are often working across a wide range of work streams on a highly variable set of target behaviours. Some of these will be one-off behaviours, such as attendance at screening appointments, and others will be habitual behaviours, such as sugar intake. Regardless of the specific behaviour under focus, the goal is to improve the health and lives of the nation, but in a way that respects financial feasibility.

For example, some of the projects that I have been involved in focus on simple ways to enhance the content of communications to patients and healthcare professionals so that messages are

conveyed in a clear and attention-grabbing manner. Insights from social, cognitive and health psychology are often core to these enhancements. In a recently published randomised controlled trial, we made a few low-cost changes to a weight feedback letter as part of the National Child Measurement Programme and almost doubled uptake of weight management services by parents of children with overweight and obesity (Sallis, Porter, et al., 2019). Based on evidence that rising obesity rates are shifting parents' perceptions of what a healthy weight looks like (Hansen, Duncan, Tarasenko, Yan, & Zhang, 2014), the enhanced letters aimed to communicate social norms using tailored, descriptive social norms (i.e., X% of children in [local area] are a healthier weight) and providing computer-generated pictorial scales of children across weight categories (Jones et al., 2017). As well as enhancing risk communication in this way, we also made it easier for families to access local services by informing them that they had been reserved a place at the local family lifestyle club and providing a pre-populated booking form for them to use, thus reducing the number of steps required to access support. Although uptake rates remained low, doubling them increased the economic viability of local services for the people who want them and benefit from them.

Some of our other recent work has found that simplifying the content of NHS Health Check invitation letters, adding a planning prompt (a space for patients to jot down their appointment details) and sending reminder SMS messages can significantly improve uptake of the programme (Sallis, Sherlock, et al., 2019), while in the context of tackling antimicrobial resistance, we found that providing GPs with feedback on how their antibiotic prescribing rates compare to others can significantly reduce the number of unnecessary prescriptions (Hallsworth et al., 2016). These trials show that when budgets are restricted, it's possible to harness the opportunities available in routine

practice to promote tangible change.

Many of the enhancements listed above may appear simplistic. It seems obvious that letters to patients should be written clearly or that removing some of the steps in appointment booking processes will improve programme uptake. However, in practice, these details can often get lost within complex health systems that are already striving to balance a multitude of priorities. Furthermore, the very fact of this simplicity makes these findings even more exciting – they prove that interventions do not always need to be prolonged and intense to effect significant change. We are already seeing more academics take up these approaches of incremental innovation that can deliver valuable impact when implemented at scale.

For more complex interventions, the team use scientifically validated approaches that integrate behavioural science with systems thinking, which will be familiar to many academics. As noted earlier, the range of behaviours that we consider in our interventions can be highly variable, and so tailoring our approach based on theory and evidence is crucial. The first stage involves whole systems mapping and the tracing of behavioural pathways to identify priorities for change. Next, a comprehensive assessment of our target behaviour and the barriers and facilitators associated with it is conducted with a systematic review. These barriers and facilitators are then grouped and categorised so that we can understand which overarching influences should be targeted in an intervention. From here, we can identify which behaviour change techniques and intervention functions are most appropriate for targeting these influences, and we compare this against the current offering of national behaviour change interventions for the target behaviour to identify which opportunities are currently being missed in practice. This Strategic Behavioural Analysis procedure can also be used to evaluate and identify opportunities for policy, as well as helping us to assess gaps where behavioural science could be

better embedded within wider systems. The frameworks we most commonly use for this are the Behaviour Change Wheel (Michie, Van Stralen, & West, 2011), the Theoretical Domains Framework (Cane, O'Connor, & Michie, 2012) and the Behaviour Change Techniques Taxonomy version 1 (Michie et al., 2013). The benefits of using these models are that they encourage you to assess all aspects of the behaviour with their fairly comprehensive scopes, while also being accessible and intuitive for those who are not familiar with psychological theory. We are also interested to learn more about the frameworks and models being developed by other academic teams for use in this area.

Having recognised that there is huge demand for behavioural science to improve health and wellbeing outcomes and that many partner organisations also work to this shared aim, the team led the collaborative and participatory development of a national strategy for behavioural and social science (PHE, 2018b). This brings national organisations together in a coordinated way to better enable regional and local stakeholders to use the behavioural and social sciences across the entire public health system. This Strategy is the first in the world of its kind and is already delivering enhanced resources for practitioners and communities of practice to build capacity and capability. One small part of this work that I have contributed to involves building capacity in other teams by delivering masterclasses across England on behavioural insights, both to local authority staff working behind the scenes and those working with patients. These classes are often oversubscribed by interested stakeholders. Here there is a great opportunity for Health Psychology to impact upon public health practice directly, as we introduce healthcare professionals and commissioners to models and theories from the discipline. Through these classes, we aim to increase awareness of the importance of embedding the behavioural and social sciences into systems, service design and everyday practice, whilst also

enabling the workforce to implement and evaluate interventions informed by behavioural science.

All of this work involves us working with academics, practitioners, managers and policy-makers to conduct research and translate the subsequent knowledge into practice. There are challenges, but also immense rewards, associated with this translational work due to differences in how research operates in universities versus the public sector. For example, we often need to work rapidly in order to catch small windows of opportunity that open within the existing timescales of larger programmes, which can be a challenge when the timeframes imposed on academics and practitioners are very different. We also need to focus on making the best of the resources available and delivering an intervention that is likely to have immediate impacts upon behaviour, meaning that exploring the contributions of individual behaviour change techniques in complex factorial designs is often not feasible. In addition, assessing the psychological mechanisms behind any change can be close to impossible as our interventions often fit within the bounds of programme improvement and our outcomes are assessed using routinely-collected data; the “participants” in our studies do not necessarily engage with the research team directly and while we can send out questionnaires probing the underlying psychological processes at work, we all know how infamously low return rates can be.

Future priorities for public health include developing predictive, personalised behaviour change interventions at scale, and using a whole systems approach to tackle the wider determinants of health and wellbeing. For these, the role of Health Psychology within transdisciplinary approaches is becoming ever more crucial. There is still a huge scope for further translation of approaches between academia, policy and practice to drive innovation and improvement. PHEBI's strategy aims to start filling this gap by encouraging the use of behavioural and social

sciences such as Health Psychology across the public health system. As the importance of behavioural science is increasingly recognised across the public sector, academics and public health professionals hold the potential to facilitate change and collaboratively improve the lives of people across the nation. It's an exciting time to be a part of both sides.

References

- Cane, J., O'Connor, D., & Michie, S. (2012). Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implementation science*, 7(1), 37.
- Hallsworth, M., Chadborn, T., Sallis, A., Sanders, M., Berry, D., Greaves, F., . . . Davies, S. C. (2016). Provision of social norm feedback to high prescribers of antibiotics in general practice: a pragmatic national randomised controlled trial. *The Lancet*, 387(10029), 1743-1752. doi:10.1016/s0140-6736(16)00215-4
- Hansen, A. R., Duncan, D. T., Tarasenko, Y. N., Yan, F., & Zhang, J. (2014). Generational shift in parental perceptions of overweight among school-aged children. *Pediatrics*, 134(3), 481-488. doi:10.1542/peds.2014-0012
- Hofmann, W., Friese, M., & Strack, F. J. P. o. p. s. (2009). Impulse and self-control from a dual-systems perspective. 4(2), 162-176.
- Jones, A. R., Tovee, M. J., Cutler, L. R., Parkinson, K. N., Ells, L. J., Araujo-Soares, V., . . . Adamson, A. J. (2017). Development of the MapMe intervention body image scales of known weight status for 4-5 and 10-11 year old children. *J Public Health (Oxf)*, 1-9. doi:10.1093/pubmed/idx129
- Khaw, K.-T., Wareham, N., Bingham, S., Welch, A., Luben, R., & Day, N. J. P. m. (2008). Combined impact of health behaviours and mortality in men and women: the EPIC-Norfolk prospective population study. 5(1), e12.

- Marteau, T. M., Hollands, G. J., & Fletcher, P. C. (2012). Changing human behavior to prevent disease: The importance of targeting automatic processes. *Science*, 337(6101), 1492-1495. doi: 10.1126/science.1226918
- Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., . . . Wood, C. E. (2013). The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Annals of Behavioral Medicine*, 46(1), 81-95.
- Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation science*, 6(1), 42.
- PHE. (2018a). Hospital vending machines: helping people make healthier choices. Retrieved from <https://www.gov.uk/government/publications/hospital-vending-machines-helping-people-make-healthier-choices>
- PHE. (2018b). Improving people's health: applying behavioural and social sciences. Retrieved from <https://www.gov.uk/government/publications/improving-peoples-health-applying-behavioural-and-social-sciences>
- Sallis, A., Bunten, A., Bonus, A., James, A., Chadborn, T., & Berry, D. (2016). The effectiveness of an enhanced invitation letter on uptake of National Health Service Health Checks in primary care: a pragmatic quasi-randomised controlled trial. *BMC Fam Pract*, 17, 35. doi:10.1186/s12875-016-0426-y
- Sallis, A., Porter, L., Tan, K. S., Howard, R., Brown, L. J., Jones, A. R., . . . Chadborn, T. (2019). Improving child weight management uptake through enhanced National Child Measurement Programmed parental feedback letters: a Cluster Randomised Controlled Trial. *Prev Med*, 121, 128-135.
- Sallis, A., Sherlock, J., Bonus, A., Saei, A., Gold, N., Vlaev, I., & Chadborn, T. (2019). Pre-notification and reminder SMS text messages with behaviourally informed invitation letters to improve uptake of NHS Health Checks: a factorial randomised controlled trial. *BMC public health*, 19(1), 1162. doi:10.1186/s12889-019-7476-8



Lucy Porter

Behavioural Insights Advisor, Public Health England Behavioural Insights, UK

Lucy.Porter@phe.gov.uk