'Improving health and wellbeing: a guide to using behavioural science in policy and practice'

Identifying and Applying Behaviour Change Techniques

Authors:

Dr Alice Cline, Senior Behavioural Science Specialist, Public Health Wales

Dr Nicky Knowles, Principal Behavioural Science Specialist, Public Health Wales

Jonathan West, Head of Behavioural Science, Public Health Wales

Ashley Gould, Programme Director, Behavioural Science Unit, Public Health Wales

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Contact details:

Behavioural Science Unit, Policy and International Health, WHO Collaborating Centre on Investment for Health & Well-being

Public Health Wales.

Email: PHW.behaviourchange@wales.nhs.uk

Website: https://phwwhocc.co.uk/bsu

Twitter: @BSU_PHW

Behavioural Science Unit:

The Public Health Wales Behavioural Science Unit provides specialist expertise on behavioural science, and enables and supports the application of it, to improve health & wellbeing in Wales. The Unit is part of the Policy and Internaional Health Directorate World Health Organisation (WHO) Collaborating Centre on Investment in Health and Wellbeing.

For further information, or support around the application of behavioural science to improve and protect health and wellbeing in Wales please get in touch.

Mae'r ddogfen hon ar gael yn Gymraeg / This document is available in Welsh

Some aspects of this tool have been previously published, and are owned by others. Their content has been translated, with retention of some of the originally published language and design.
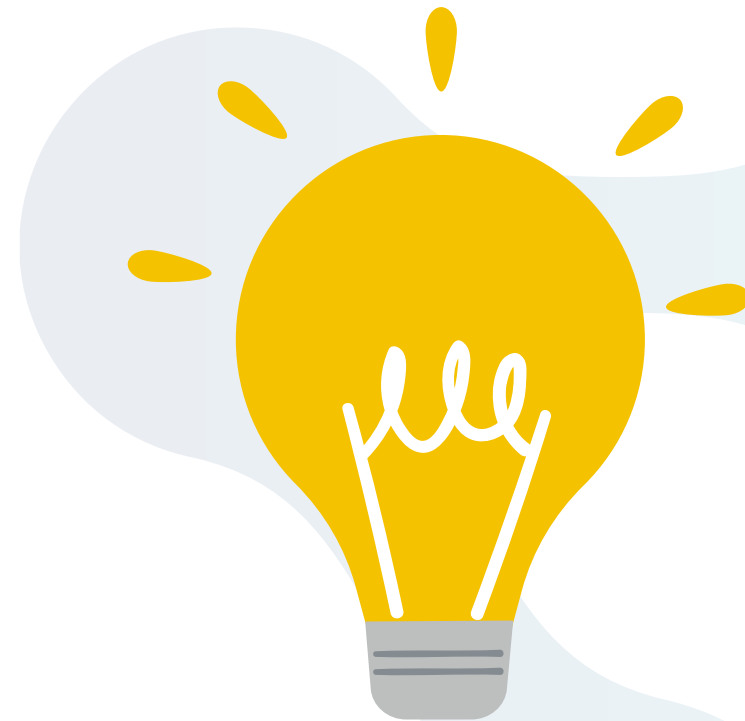
We are really interested to hear about your experience of applying behavioural science – in the spirit of all share – all learn, so please do share your quick reflections on using this tool with us via : **PHW.behaviourchange@wales.nhs.uk**

Purpose of this Tool

Applying behavioural science helps to optimise the impact of our activities, services, policies, and communications. Developing such interventions that account for, or aim to influence, behaviour involves several steps, as shown in Figure 1; these steps are fully described in the 'Improving health and wellbeing: a guide to using behavioural science in policy and practice' which you can find here.

To support each step, we have released a series of deep dive tools. In tool 1, we unpacked how to develop a behavioural specification. In tool 2, we focused on how to collect behavioural insights, something we call a behavioural diagnosis. In tool 3, we outlined how to map your behavioural insights onto the COM-B model, in order to identify and prioritise intervention options. In tool 4, we looked at different implementation options that could be used to deliver an intervention.

This interactive tool unpacks step 5 'build the intervention' where we explore how to identify and apply Behaviour Change Techniques to our behavioural change interventions (BCTs). BCTs are the theory and evidence-based 'active ingredients' of an intervention. If you've used our previous tools in this series you'll have either a new or revised intervention(s) that has been shaped using models and frameworks from behavioural science. Identifying the right BCTs and building them in to your intervention appropriately is critical to following the behavioural science through to informing the content of our intervention. The final tool, tool 6, covers how to evaluate behaviour change interventions.

Purpose of
this Tool

Principles
of Applying
Behavioural Science

Behaviour Change
Techniques

Identifying Suitable
Behaviour Change
Techniques

How do Behaviour
Change Techniques
bring about behaviour
change?

Delivering
Behaviour Change
Techniques

Next Steps

1

DECIDE

Decide on a target
behaviour(s) and a
target population

2

DIAGNOSE

Conduct a behavioural
diagnosis using the
COM-B model

3

**SELECT
INTERVENTION**

Select from menu
of intervention
options

4

**SELECT
IMPLEMENTATION**

Select from menu of
implementation
options

5

BUILD

Build the
intervention

6

DELIVER

Implement
disseminate, evaluate
the intervention

Figure.1. Six steps to developing an intervention

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Principles of Applying Behavioural Science

When working through this tool, it is helpful to remember the key principles described in the overarching guide. Reviewing previous effective interventions, involving experts, and engaging with key stakeholders are particularly important when identifying Behaviour Change Techniques.

Wherever possible work from an intervention that has already been demonstrated to be effective in a similar context, but do not assume that an intervention that has worked in one context will perform equally well (without adaptation) in a new context.

Involve experts in the behaviour of interest whenever possible.

Pilot test interventions before investing in full-scale implementation and be prepared to revisit the basic premise of an intervention if required.

Start with a review of the scientific literature to identify specific factors potentially influencing the behaviour(s) of interest, in the target-audience and possible intervention approaches.

Do not be blinkered into using a particular implementation option (e.g., a communications campaign or legislation) just because it seems most obvious. Similarly avoid the easily-adopted assumption that increasing knowledge (through instruction or education) will lead to change.

Involve key stakeholders in the development process, including target groups and people who may have to deliver it.

Evaluate interventions and intervention components throughout development and after implementation, using the best methods that are practicable and affordable.

Figure.2. Principles to apply during the development process

Behaviour Change Techniques

Once we've decided on our type of intervention and the way we're going to implement it, it's time to think about the content of our intervention using Behaviour Change Techniques (BCTs). Behaviour Change Techniques are defined as 'an active component of an intervention designed to change behaviour' – They are observable, replicable and an irreducable component which need to be built in to our behaviour change efforts to complete the process of developing behaviourally informed interventions.

Behaviour Change Techniques are the active ingredients within an intervention that bring about behaviour change.

The BCT taxonomy was developed by Michie and colleagues in 2013 and provides a common language and framework for identifying and describing BCTs. There are 93 BCTs included within the Taxonomy, you can view the taxonomy in Appendix 1. Whilst the BCTs identified within the Taxonomy aren't new, some of them such as "goal setting", "self-monitoring" or "information about health consequences" have been used within interventions for a long time, the systematic identification of them and their subsequent application within interventions is far less common. The Taxonomy provides a common language and understanding about the range of techniques used to bring about behaviour change, especially useful for when we are trying to understand more about what works for behaviour change, because the more specifically we describe the BCTs used within an intervention, the more comprehensively we're able to grow the evidence-base.

What does a Behaviour Change Technique look like?

Example 1

Behaviour Change Technique: Behavioural practice/rehearsal

Definition: Prompt practice or rehearsal of the performance of the behaviour one or more times in a context or at a time when the performance may not be necessary, in order to increase habit and skill

Example: Prompt asthma patients to practice measuring their peak flow whilst at their appointment with a healthcare professional

Example 2

Behaviour Change Technique: Social comparison

Definition: Draw attention to others' performance to allow comparison with the person's own performance

Example: Show the doctor the proportion of patients who were prescribed antibiotics for a common cold by other doctors and compare with their own data

Identifying Suitable Behaviour Change Techniques

There are typically two approaches to identifying BCTs:

1) Review the literature to see which BCTs have been effective at changing your target behaviour
2) Following your behavioural diagnosis, selected intervention functions and implementation types, identify appropriate BCTs to use by following the Behaviour Change Wheel framework

These are not mutually exclusive, rather than picking one or the other in practice we usually need to do both, whilst working alongside topic matter experts and key stakeholders.

1   Reviewing the literature to see which BCTs have been effective at changing your target behaviour

The first step is to review the literature to see if there is any evidence of effective BCTs relating to our target behaviour and target population. If our target behaviour has been widely researched, it's likely that there will be literature identifying effective (or ineffective!) BCTs. There is increasing reference to BCTs in the guidance developed for addressing public health challenges such as obesity, smoking, and alcohol use. With the literature often recommending BCTs for addressing specific behaviours in specific target populations. For example, this guide written by Public Health England identifies BCTs to use when exploring weight management journeys with families who have primary-school aged children.

It's important to keep your behavioural specification (i.e., your target behaviour, target population) in mind when you're reviewing the literature. We know that behaviours are context specific, so finding literature that closely matches your behavioural specification is important.

Whilst there is a growing body of research explicitly specifying BCTs since the publication of the BCT Taxonomy, there is still a lot of research which doesn't yet use the Taxonomy and requires the reader to code the BCT from the description given within the paper. Many papers do not provide full descriptions of the intervention content, and so whilst this is an important step to complete there is often not enough research to rely on this step alone.

2   Identifying appropriate BCTs to use by following the Behaviour Change Wheel framework

Once we've reviewed the literature, and extracted any BCTs shown to be effective, the next step is to develop that further by undertaking the second process. There are several tools and guides that support the identification of appropriate BCTs depending on the barriers we are seeking to address, our selected intervention and our implementation type.

• The Behaviour Change Wheel Book: This book, written by Michie and colleagues, outlines the different Behaviour Change Techniques to use depending on which type of intervention function you're implementing. The book is also supported by an interactive app, which you can find here.

• Improving Health and Wellbeing: A guide to using behavioural science in policy and practice: This guide, written by the Behavioural Science Unit, describes Behaviour Change Techniques in a slightly different way, which can be useful if you're wanting examples of what BCTs may look like in practice.

• The Theory and Techniques Tool: This tool, developed by the Human Behaviour Change Project, highlights the BCTs most likely to be effective in relation to the barrier being addressed.

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Below, we've used the Behaviour Change Wheel Book to outline which BCTs are most likely to be effective based on the intervention functions you're planning on implementing:

Education

Informing, explaining, and showing in order to increase knowledge and understanding

Most frequently used BCTs:

• Information about social and environmental consequences
Provide information (e.g., written, verbal, visual) about social and environmental consequences of performing the behaviour

• Information about health consequences
Provide information (e.g., written, verbal, visual) about health consequences of performing the behaviour

• Feedback on behaviour
Monitor and provide informative or evaluative feedback on performance of the behaviour (e.g., form, frequency, duration, intensity)

• Feedback on outcome(s) of the behaviour
Monitor and provide feedback on the outcome of performance of the behaviour

• Prompts/cues
Introduce or define environmental or social stimulus with the purpose of prompting or cueing the behaviour. The prompt or cue would normally occur at the time or place of performance.

• Self-monitoring of the behaviour
Establish a method for the person to monitor and record their behaviour(s) as part of a behaviour change strategy

Persuasion

Highlighting, arguing, discussing, proposing, requesting, pleading or helping to imagine in order to influence attractiveness

Most frequently used BCTs:

• Credible source
Present verbal or visual communication from a credible source in favour of or against the behaviour

• Information about social and environmental consequences
Provide information (e.g., written, verbal, visual) about social and environmental consequences of performing the behaviour

• Information about health consequences
Provide information (e.g., written, verbal, visual) about health consequences of performing the behaviour

• Feedback on behaviour
Monitor and provide informative or evaluative feedback on performance of the behaviour (e.g., form, frequency, duration, intensity)

• Feedback on outcome(s) of the behaviour
Monitor and provide feedback on the outcome of performance of the behaviour

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Incentivisation

Introducing payment, some other extrinsic reward, or an expectation of a desired outcome, for a behaviour.

Most frequently used BCTs:

• Feedback on behaviour
Monitor and provide informative or evaluative feedback on performance of the behaviour (e.g., form, frequency, duration, intensity)

• Feedback on outcome(s) of the behaviour
Monitor and provide feedback on the outcome of performance of the behaviour

• Monitoring of behaviour by others without evidence of feedback
Observe or record behaviour with the person's knowledge as part of a behaviour change strategy

• Monitoring outcome of behaviour by others without evidence of feedback
Observe or record outcomes of behaviour with the person's knowledge as part of a behaviour change strategy

• Self-monitoring of the behaviour
Establish a method for the person to monitor and record their behaviour(s) as part of a behaviour change strategy

Coercion

Introducing a cost or expected negative outcome to prevent a behaviour or to induce someone to enact a behaviour

Most frequently used BCTs:

• Feedback on behaviour
Monitor and provide informative or evaluative feedback on performance of the behaviour (e.g., form, frequency, duration, intensity)

• Feedback on outcome(s) of the behaviour
Monitor and provide feedback on the outcome of performance of the behaviour

• Monitoring of behaviour by others without evidence of feedback
Observe or record behaviour with the person's knowledge as part of a behaviour change strategy

• Monitoring outcome of behaviour by others without evidence of feedback
Observe or record outcomes of behaviour with the person's knowledge as part of a behaviour change strategy

• Self-monitoring of the behaviour
Establish a method for the person to monitor and record their behaviour(s) as part of a behaviour change strategy

Training

Demonstrating, supervising, providing feedback and supporting practice in order to improve mental or physical skills, or build habits

Most frequently used BCTs:

• **Demonstration of behaviour**
Provide an observable sample of the performance of the behaviour, directly in person or indirectly e.g., via film, pictures, for the person to aspire to or imitate

• **Instruction on how to perform a behaviour**
Advise or agree on how to perform the behaviour

• **Feedback on behaviour**
Monitor and provide informative or evaluative feedback on performance of the behaviour (e.g., form, frequency, duration, intensity)

• **Feedback on outcome(s) of the behaviour**
Monitor and provide feedback on the outcome of performance of the behaviour

• **Self-monitoring of the behaviour**
Establish a method for the person to monitor and record their behaviour(s) as part of a behaviour change strategy

• **Behavioural practice/rehearsal**
Prompt practice or rehearsal of the performance of the behaviour one or more times in a context or at a time when the performance may not be necessary, in order to increase habit and skill

Restriction

Creating boundaries around what behaviours are and are not acceptable by setting rules.

Most frequently used BCTs:

The literature to date hasn't identified any BCTs linked with restriction. That's not say there aren't any... If your work has indicated that restriction may be a useful intervention function, we advise seeking the support of behavioural scientists to progress further.

Environmental Restructuring

Introducing, removing or altering objects in the physical environment or shaping the social environment to prompt, facilitate or prevent behaviours.

Most frequently used BCTs:

• **Adding objects to the environment**
Add objects to the environment in order to facilitate performance of the behaviour

• **Prompts/cues**
Introduce or define environmental or social stimulus with the purpose of prompting or cueing the behaviour. The prompt or cue would normally occur at the time or place of performance.

• **Restructuring the physical environment**
Change, or advise to change the environment in order to facilitate performance of the wanted behaviour or create barriers to the unwanted behaviour (other than prompts/cues, rewards and punishments)

Enablement

Providing or improving psychological, social or physical resources or treatments to support enactment of a behaviour.

Most frequently used BCTs:

• **Social support (unspecified)**
Advise on, arrange or provide social support (e.g., from friends, relatives, colleagues,' buddies' or staff) or non-contingent praise or reward for performance of the behaviour. It includes encouragement and counselling, but only when it is directed at the behaviour

• **Social support (practical)**
Advise on, arrange, or provide practical help (e.g., from friends, relatives, colleagues, 'buddies' or staff) for performance of the behaviour

• **Goal setting (outcome)**
Set or agree on a goal defined in terms of a positive outcome of wanted behaviour

• **Adding objects to the environment**
Add objects to the environment in order to facilitate performance of the behaviour

• **Problem solving**
Analyse, or prompt the person to analyse, factors influencing the behaviour and generate or select strategies that include overcoming barriers and/or increasing facilitators

• **Action planning**
Prompt detailed planning of performance of the behaviour (must include at least one of context, frequency, duration and intensity). Context may be environmental (physical or social) or internal (physical, emotional or cognitive)

• **Self-monitoring of behaviour**
Establish a method for the person to monitor and record their behaviour(s) as part of a behaviour change strategy

• **Restructuring the physical environment**
Change, or advise to change the physical environment in order to facilitate performance of the wanted behaviour or create barriers to the unwanted behaviour (other than prompts/cues, rewards and punishments)

• **Review behaviour goal(s)**
Review behaviour goal(s) jointly with the person and consider modifying goal(s) or behaviour change strategy in light of achievement. This may lead to re-setting the same goal, a small change in that goal or setting a new goal instead of (or in addition to) the first, or no change

• **Review outcome goal(s)**
Review outcome goal(s) jointly with the person and consider modifying goal(s) in light of achievement. This may lead to resetting the same goal, a small change in that goal or setting a new goal instead of, or in addition to the first

Modelling

Providing examples of behaviour for people to aspire to or imitate.

Most frequently used BCTs:

• Demonstration of behaviour
Provide an observable sample of the performance of the behaviour, directly in person or indirectly e.g., via film, pictures, for the person to aspire to or imitate

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It's important to note that we've only included the most frequently used BCTs in the information above. There are also less frequently used BCTs, which are outlined within the Behaviour Change Wheel Book here.

The BCTs listed above are for guidance only and all BCTs can be considered for any intervention type. Deciding which BCTs to include should be informed by a number of factors including:
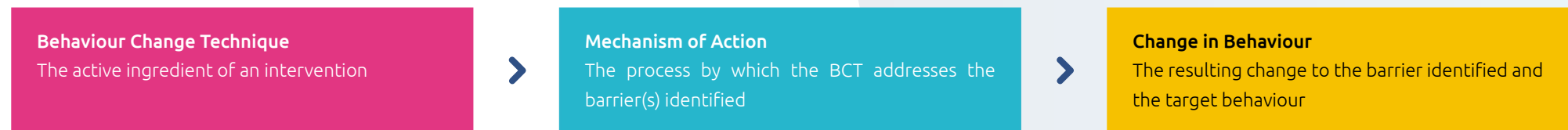
• The facilitator(s) and/or barrier(s) to your target behaviour, your intervention function(s) and implemetation type(s)
• Any evidence indicating which BCTs have shown to be effective in influencing your target behaviour in your target population
• Any evidence about which BCTs have shown to be effective at influencing the barriers your intervention is targeting

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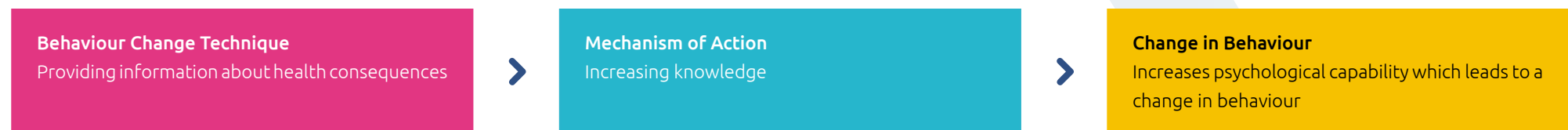Behaviour Change
Techniques

Next Steps

How do Behaviour Change Techniques bring about behaviour change?

To develop effective interventions, we need to understand how BCTs bring about change, this process is referred to as the Mechanisms of Action (MoA). Knowing how BCTs link with MoAs is important for intervention development and evaluation because it helps us to understand the process through which behaviour change occurs. The questions we use during your behavioural diagnosis tool 2 are related to the behavioural MoAs. For example, asking 'how far is the target behaviour considered within the target population's social environment?' relates to the MoA of 'subjective norms'. Evidence shows that each MoA can be influenced by a range of different BCTs.
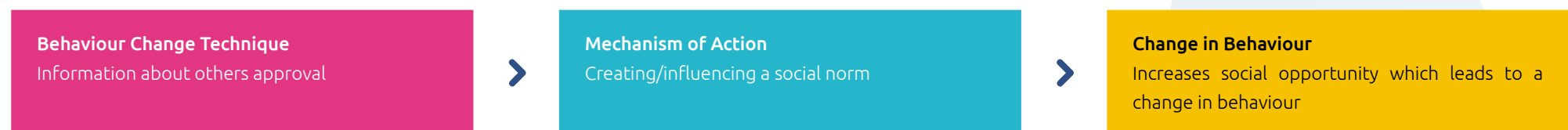
You can see all of the MoAs, mapped onto the COM-B model with BCTs in Appendix 2.

| Behaviour Change Technique
The active ingredient of an intervention | > | Mechanism of Action
The process by which the BCT addresses the barrier(s) identified | > | Change in Behaviour
The resulting change to the barrier identified and the target behaviour |

BCTs, MoAs and the COM-B model can be mapped onto one another. For example, if your behaviour change technique is 'providing information about health consequences' that will help to increase knowledge, which influences psychological capability.

| Behaviour Change Technique
Providing information about health consequences | > | Mechanism of Action
Increasing knowledge | > | Change in Behaviour
Increases psychological capability which leads to a change in behaviour |

Alternatively, we may select 'information about others approval' as our behaviour change technique, which will help to create a social norm, which influences social opportunity.

| Behaviour Change Technique
Information about others approval | > | Mechanism of Action
Creating/influencing a social norm | > | Change in Behaviour
Increases social opportunity which leads to a change in behaviour |

Recap...

Before choosing your Behaviour Change Techniques, it can be useful to summarise your progress so far by answering the questions below...

EDITABLE TEXT BOX

Behavioural Specification:

• Who is your target population?

• What do they need to do differently?

• When do they need to do it?

• Where do they need to it?

Behavioural Diagnosis:

Which key barriers and/or facilitators have you decided to target?

•

•

•

•

•

Intervention Functions:

Which intervention function(s) have you chosen to address your barriers and/or enhance your facilitators?

-

-

-

-

Implementation Types:

Which implementation type(s) have you chosen to deliver your intervention?

-

-

-

-

Identifying Behaviour Change Techniques in Practice

Using the list of BCTs provided, and the information you've provided above, can you identify a list of BCTs that may be appropriate for you to use within your intervention?

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-

The APEASE criteria (acceptability, practicability, effectiveness, affordability, spill over effects, equity) can be used to help support your decision-making processes here. We cover the APEASE criteria in more detail here.

Delivering Behaviour Change Techniques

Once we have identified appropriate BCTs, we now need to tailor them so that they are specific to the behavioural challenge we are trying to address and can be integrated into our selected intervention type. The below table provides some examples of BCTs and how they have been tailored and integrated into different interventions; it can be helpful to gain support from behavioural scientists when considering how to tailor and integrate your chosen BCTs.

Behavioural Challenge	Barrier/Facilitator	COM-B Domain	Intervention Function	Behaviour Change Technique	Mechanism of Action
Children brushing their teeth once in the morning and again in the evening for 2 mins each time	Children forget during the morning rush before school	Automatic Motivation	Environmental Restructuring eg. making changes to the physical space in which children bush their teeth	Prompts/cues e.g. adding a sticker to the bathroom mirror reminding children to brush their teeth	Behavioural Cueing Behaviour triggered by external environment
Males aged between 18-25 intervening when they witness sexual harassment during a night out	Not knowing how or when to intervene	Psychological Capability	Training e.g. delivering an online training session for males aged 18-25	Instruction on how to perform the behaviour e.g. during the online training, providing step by step guidance on how to intervene safely	Knowledge: Increasing awareness
Families cooking 6 out of 7 meals at home each week	Family members asking for take aways/wanting to eat out	Social Opportunity	Enablement e.g. increasing means/reducing barriers to increase capability or opportunity	Social reward e.g., as part of the intervention, the family are encouraged to plan in a meaningful social activity together (e.g., the afternoon out together) as a reward for meeting their goal	Social Influences Increasing interpersonal processes that change thoughts, feelings or behaviours
Midwives refer pregnant women who smoke for specialist smoking cessation support	Midwives are motivated by hearing the outcomes of the referrals they make	Automatic and Reflective Motivation	Incentivisation e.g. creating a reward/incentive for midwives for making referrals	Non specific incentive e.g. provide feedback to midwives on the outcomes of referrals and any engagement with the specialist service	Reinforcement Processes by which the frequency or probability of a response is increased through a dependent relationship or contingency with a stimulus or circumstance
Car owners replace local car journeys within 1 mile of their home with walking or cycling	Beliefs about the positive consequences of active travel	Reflective and Automatic Motivation	Persuasion e.g. using words to change the way people think and feel about active travel	Information about health consequences e.g. providing information about the health consequences of active travel	Attitude towards the behaviour The general evaluations of the behaviour on a scale ranging from negative to positive
Adults wash their hands for 30 seconds after using public transport or coming back from a public place	Handwashing believed to be a civic duty to protect yourself and others	Social Opportunity	Modelling e.g. providing an example of how to wash hands effectively	Demonstration of the behaviour e.g. show a video demonstrating how to wash hands effectively	Social learning/imitation A process by which thoughts, feelings and motivational states observed in others are internalised and replicated without the need for conscious awareness

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Once we have identified BCTs and placed them within the context of our intervention, we then need to create the specific activities/content that will deliver the BCT in practice. To do this, we can use frameworks such as MINDSPACE and EAST to help shape the activities:

1 MINDSPACE

MINDSPACE provides a checklist of key influences on our behaviour (messenger, incentives, norms, defaults, salience, priming, affect, commitments, ego) for consideration when developing behaviour change policies, services, and communications.

2 EAST

The EAST framework, a shorter and simplified version of MINDSPACE, highlights four key principles to consider when seeking to influence behaviours; make it EASY, make it ATTRACTIVE, make it SOCIAL, and make it TIMELY. It is helpful to think about these principles in the development and delivery of your interventions alongside evidence-based behaviour change models and frameworks.

Next Steps:

The final step 'Evaluating Behaviour Change Interventions' is outlined in our final deep dive tool, which you can find here. In order for our efforts to change behaviour to be effective, it's critical that we thoroughly evaluate our work and share our learnings with others, building the evidence base in which we can all draw from. Written in collaboration with the evaluation team and Public Health Wales, the tool outlines the different types of evaluation that are available and provides considerations to take into account when you're planning how to evaluate your intervention.

References and Resources

BSU Repository - Access all the resources you need from our repository page; curated by us, featuring behavioural science resources from across the globe, including our own.
Taxonomy of Behaviour Change Techniques
Michie S, Atkins L, West R. (2014) The Behaviour Change Wheel: A Guide to Designing Interventions. London: Silverback Publishing. www.behaviourchangewheel.com

Appendix 1 – Behaviour Change Techniques Taxonomy (BCTT)

Download here

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Appendix 2 – BCTs, MoAs and the COM-B Model

COM-B Domain	MOAs		BCTs
Physical Capability	Skill	An ability of proficiency acquired through practice	Instruction on how to perform the behaviour · Behavioural practice/rehearsal · Graded tasks
Psychological Capability	Knowledge	An awareness of the existence of something	Information about health consequences · Information about social and environmental consequences · Instruction on how to perform the behaviour · Information about the antecedents · Biofeedback
	Memory, attention and decision processes	Ability to retain information, focus on aspects of the environment and choose between two or more alternatives	Prompts/cues · Conserving mental resources
	Behavioural regulation	Behavioural, cognitive and/or emotional skills for managing or changing behaviour	Problem solving · Self-monitoring of behaviour · Inormation about antecedents · Behaviour substitution · Reduce negative emotions · Conserving mental resources
Physical Opportunity	Environmental context and resources	Aspects of a person's situation or environment that discourage or encourage the behaviour	Social support (practical) · Prompts/cues · Remove aversive stiumlus · Restructuring the physical environment · Restructuring the social environment · Adding objects to the environment · Graded tasks
	Behavioural cueing	Processes by which behaviour is triggered from either the external environment, the performance of another behaviour, or from ideas appearing in consciousness	Action planning · Prompts/cues · Habit formation · Restructuring the physical environment · Avoidance/reducing exposure to cues for the behaviour · Adding objects to the environment

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Appendix 2 – BCTs, MoAs and the COM-B Model

COM-B Domain	MOAs		BCTs			
Social Opportunity	Social influences	Those interpersonal processes that can cause oneself to change one's thoughts, feelings or behaviours	Social support (unspecified)	Social support (practical)	Social reward	Information about others approval
	Norms	The attitudes held and behaviours exhibited by other people within a social group	Social comparison	Information about others' approval		
	Subjective norms	One's perceptions of what most other people within a social group believe and do	Social comparison	Information about others' approval		
	Social learning/ imitation	A process by which thoughts, feelings and motivational states observed in others are internalised and replicated without the need for conscious awareness	Demonstration of the behaviour			
Reflective Motivation	Attitudes towards the behaviour	The general evaluations of the behaviour on a scale ranging from negative to positive	Information about health consequences	Information about social and environmental consequences	Credible source	Pros and cons / Framing/ reframing
	Beliefs about capabilities	Beliefs about one's ability to successfully carry out a behaviour	Problem solving	Instruction on how to perform the behaviour	Demonstration of the behaviour	Behavioural practice/ rehearsal / Graded tasks / Verbal persuasion about capabilities / Focus on past successes / Self-talk

Appendix 2 – BCTs, MoAs and the COM-B Model

COM-B Domain

MOAs

BCTs

MOA	Description	BCTs							
Beliefs about consequences	Beliefs about the consequences of a behaviour (i.e. perceptions about what will be achieved and/or lost by undertaking a behaviour), as well as the probability that a behaviour will lead to a specific outcome	Information about health consequences	Salience of consequences	Anticipated regret	Information about social and environmental consequences	Information about emotional consequences	Comparative imagining of future outcomes	Material incentive (behaviour)	Incentive (outcome)
Feedback processes	Processes through which current behaviour is compared against a particular standard	Discrepancy between current behaviour and goal	Feedback on behaviour	Self-monitoring of behaviour	Feedback on outcome(s) of behaviour	Social comparison			
Goals	Mental representations of outcomes or end states that an individual wants to achieve	Goal setting (behaviour)	Goal setting (outcome)	Review behavioural goals	Discrepancy between current behaviour and goal	Review outcome goals			
Intention	A conscious decision to perform a behaviour or a resolve to act in a certain way	Incentive (outcome)	Information about health consequences	Goal setting (behaviour)					
Motivation	A conscious decision to perform a behaviour or a resolve to act in a certain way	Goal setting (outcome)	Feedback on behaviour	Pros and cons	Incentive (outcome)	Reward (outcome)	Self-talk		
Values	Moral, social or aesthetic principles accepted by an individual or society as a guide to what is good, desirable or important	Commitment							

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Appendix 2 – BCTs, MoAs and the COM-B Model

COM-B Domain	MOAs		BCTs	
	Needs	Deficit of something required for survival, wellbeing or personal fulfilment	Monitoring of behaviour by others without feedback	Avoidance/ reducing exposure to cues for the behaviour
	Self-image	One's conception and evaluation of oneself, including psychological and physical characteristics, qualities and skills	Framing/ reframing	Identification of self as role model
	Perceived susceptibility/ vulnerability	Perceptions of the likelihood that one is vulnerable to a threatcharacteristics, qualities and skills	Information about health consequences	Salience of consequences
	General attitudes/ beliefs	Evaluations of an object, person, group, issue or concept on a scale ranging from negative to positive Pthreatcharacteristics, qualities and skills	Credible source	Pros and cons
	Social/ professional role and identity	A coherent set of behaviours and displayed personal qualities of an individual in a social or work setting	Credible source	Social support (unspecified)
	Optimism	The confidence that things will happen for the best or that desired goals will be attained		

Appendix 2 – BCTs, MoAs and the COM-B Model

COM-B Domain	MOAs		BCTs								
Automatic Motivation	Emotion	A complex reaction pattern involving experiential, behavioural, and physiological elements	Reduce negative emotions								
	Reinforcement	Processes by which the frequency or probability of a response is increased through a dependent relationship or contingency with a stimulus or circumstance	Punishment	Reward (outcome)	Incentive (outcome)	Non-specific incentive	Social reward	Non-specific reward	Material reward (behaviour)	Material incentive (behaviour)