The Behaviour Change Wheel

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LGA Conference
27 February 2020
UCL Centre for Behaviour Change (CBC)

WHO
• Core team of researchers, trainers & practitioners in behaviour change
• A cross-disciplinary community of academic experts at UCL & beyond
• Global network of over 4,000 contacts

WHY
• To harness the breadth and depth of academic expertise in behaviour change to
  o increase the quantity and quality of behaviour change research
  o translate that expertise to policy-makers, practitioners, industry, NGOs and researchers
  to address **key challenges facing society**

HOW
• Teaching, training, research, consultancy and events
• Resources: Behaviour Change Wheel, Behaviour Change Techniques Taxonomy (BCTTv1)
What people think behavioural science is...

- Science of decision-making, not behaviour
- Locates the issue largely within the psychology of the person, rather than interplay between person and environment

**Nurse**

Wash hands with sanitiser

Forgetting to wash

Not knowing how to wash
Need to consider….
1. Whose behaviour we need to change?
2. What behaviours are important?
3. What are the influences on that behaviour?
4. How do they interact?

Key:
- Actor
- Behaviour
- Influence

Understanding behaviour in complex systems
Translating expertise: bridging the gap

Still work to do to make frameworks accessible and usable

Behavioural Scientists

Frameworks

Policy Makers
New guide to behaviour change for local government

To address the increased interest in use of behavioural science in policy-making we have created targeted guides for local government.

Achieving behaviour change: a guide for local government and partners

(13 February 2020, Public Health England)


or go to www.gov.uk and search ‘behaviour change’.
Guide is based on the Behaviour Change Wheel Framework

A step-by-step, transparent, systematic approach to intervention design

Michie et al (2011)
Influences on behaviour: COM-B model

- **Physical Capability**
  - Physical skill, strength, stamina

- **Psychological Capability**
  - Knowledge, cognition, interpersonal skills, self-regulation

- **Reflective Motivation**
  - Plans, intentions, beliefs, identity

- **Automatic Motivation**
  - Emotions, desires, impulses, habits

- **Physical Opportunity**
  - Triggers/prompts, space/time, location/services

- **Social Opportunity**
  - Peer pressure, social norms, culture, credible models

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The COM-B model: Michie et al., 2011
9 intervention functions
- each includes one or more behaviour change techniques

7 policy categories
- that could enable or support these interventions to occur
## BCW approach: key steps for intervention design

<table>
<thead>
<tr>
<th>Step</th>
<th>Question</th>
<th>Key Steps</th>
<th>Tool</th>
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</table>
| 1    | What behaviour(s) are you trying to change? | • Define ‘problem’ in behavioural terms  
• Map system of behaviours | Who does what, when, where? |
| 2    | What will it take to bring about change? | • Understand behaviour in context and identify change barriers/enablers | COM-B |
| 3    | What interventions might work? | • Consider range of intervention strategies, matched to COM-B | Behaviour Change Wheel |
| 4    | Which specific components should your intervention involve? | • Design your intervention, selecting appropriate behaviour change technique(s) and the mode(s) of delivery | Behaviour Change Wheel & Taxonomy of BCTs |
Reducing risk of falls across Gloucestershire

Initial Systems Mapping

- Falls Physiotherapists
- CCG Representatives
- Strength & Balance Instructors
- Care Home Managers
- Older Adults

Share provisional diagnosis with adults attending Lunch Clubs

Initial Target: Increase attendance to Specialist Strength and Balance Service Provision

Revised Target: Increase participation in self-directed strength and balance exercises across population of 50+ residents

- Falls Physiotherapists
- CCG Representatives
- Strength & Balance Instructors
- Care Home Managers
- Older Adults
Outcome: Reducing morbidity associated with falls in older adults in Gloucestershire

Target Behaviour: Older adults engaging in self-directed strength and balance exercises to maintain functioning

C
Not knowing that they are at risk of a fall, or the consequences of a fall

O
No prompts for OA’s to engage in SB exercises
OA’s often pressed for time and believe that they do not have time to do SB exercises

M
Fear of losing independence is a strong motivator for behaviour in this age group
Many SB exercises can be made habitual and so take up less time
Many OA don’t see themselves as being physically vulnerable and so recommendations currently don’t connect with identity

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**Target Behaviour:** Older adults engaging in self-directed strength and balance exercises to maintain functioning

**C** Not knowing that they are at risk of a fall or the consequences of a fall

**Education**
1. Simple, easy to understand information on:
   a. How to assess their own risk and vulnerability to a fall
   b. How to do strength and balance exercises in such a way as to reduce their risk
   c. What to do (reps, sets, etc.)
   d. Benefits of doing such exercises
Creation of tool to self-asses future risk of falls

**Barrier:**
Not knowing that they are at risk of a fall or the consequences of a fall

**Barrier**
Vulnerability to falls can only be carried out by specialist physiotherapist using standardised tools. No use in public health settings.

**Education**
Simple, easy to understand information on how to assess their own risk and vulnerability to a fall.
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Persuasion
1. Communications about the behaviour should appeal to the emotions generated by:
   a. Fears associated with loss of independence
   b. Hopes about what might be gained from maintaining independence for longer
   c. Fears associated with performing behaviour (e.g. feeling stupid if can’t do it)
Fall Proof campaign

https://www.activegloucestershire.org/events-and-campaigns/fall-proof/

Persuasion:
Appeal to desire to be useful and a part of family life

Persuasion:
Appeal to desire!
Outcome: Reducing morbidity associated with falls in older adults in Gloucestershire

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Environmental Restructure
Physical: need to be more prompts to make people think about their strength and balance aspects of their wellbeing/fitness, as well as prompts to perform the actual behaviours.
Social: need to change the public understanding of the role of strength and balance in healthy aging, including (a) changing the norm that this is only something that really old people need to think about, and (b) challenging the notion that lives of older adults should be as physically unchallenging as possible.
Fall Proof campaign: Prompt cards

**BARRIER:**
No physical prompts to engage in strength and balance exercises

**Environmental Restructure:**
Prompt Cards

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Training
1. Equip people with the skills to perform strength and balance behaviours in ways that lead to risk reduction
2. Ensure that instructions to do the exercises incorporate principles of self-management so that they are more likely to be adopted and become habitual

Modelling
1. Ensure that models of people doing the entire range of behaviours are highly visible and appropriate to the age group. E.g. ensuring that models for doing habitual SB exercises include people in their 50’s, not just frail older adults

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BCW Tools for Changing Behaviour: BCT’s

Behaviour Change Techniques
the proposed ‘active ingredients’ in any behaviour change intervention
(i.e. what exactly should we do to change behaviour?)

The Behavior Change Technique Taxonomy (v1)
of 93 Hierarchically Clustered Techniques: Building an International Consensus for the Reporting of Behavior Change Interventions

Susan Michie, DPhil, CPsychol • Michelle Richardson, PhD • Marie Johnston, PhD, CPsychol • Charles Abenhaim, DPhil, CPsychol • Jill Francis, PhD, CPsychol • Wendy Hardeman, PhD • Martin E. Eccles, MD • James Cane, PhD • Caroline E. Wood, PhD
BCT’s in the Fall-Proof Campaign

2.1 Self-Monitoring of behaviour

8.3 Habit formation

6.1 Demonstration of the behaviour

4.1 Instruction on how to perform the behaviour

12.5 Adding objects to the environment
BCW toolkit: other flexible applications for policy-makers

Understanding policy-relevant behaviours

Identifying behavioural influences on policy objectives

Making context-based decisions

Designing policies in ways that change behaviour

Understanding how and why behaviour change interventions work
Some examples given in the guides

1. **Behavioural systems mapping** for identifying behavioural influences on policy objectives

2. Application of the **APEASE criteria** for assessment and decision making at every level of intervention design, taking account of local context

3. Identifying opportunities to **enhance existing policies using the BCW**
1. Identifying behavioural influences on policy objectives

- Behavioural Systems Mapping is a method for identifying the actors (people, organisations), influences and behaviours involved in a policy objective, and describing the relationships between them.

- The outcome is a map that visually represents the relationships between different actors, behaviours and influences for a given policy area.
Relevance to local government

• Often tackling so-called wicked problems that are nested within complex systems.

• Challenging to identify the behavioural influences and select target behaviour to change.

• Systems map is likely to generate additional actors and behaviours, increasing likelihood of selecting a behaviour that will have a clear impact on the overarching policy objective.

• Map creates a shared understanding and can link back to the map at later stages of BCW process (e.g. as part of behavioural diagnosis).
Example: De-carbonising housing stock in Wales

Place behaviour at the heart of understanding complex systems
2. Using APEASE criteria to make context-based decisions

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
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<tbody>
<tr>
<td>Acceptability</td>
<td>How far is it acceptable to key stakeholders? This includes the target group, potential funders, practitioners delivering the interventions and relevant community and commercial groups.</td>
</tr>
<tr>
<td>Practicability</td>
<td>Can it be implemented at scale within the intended context, material and human resources? What would need to be done to ensure that the resources and personnel were in place, and is the intervention sustainable?</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>How effective is the intervention in achieving the policy objective(s)? How far will it reach the intended target group and how large an effect will it have on those who are reached?</td>
</tr>
<tr>
<td>Affordability</td>
<td>How far can it be afforded when delivered at the scale intended? Can the necessary budget be found for it? Will it provide a good return on investment?</td>
</tr>
<tr>
<td>Side-effects</td>
<td>What are the chances that it will lead to unintended adverse or beneficial outcomes?</td>
</tr>
<tr>
<td>Equity</td>
<td>How far will it increase or decrease differences between advantaged and disadvantaged sectors of society?</td>
</tr>
</tbody>
</table>
• Using the APEASE criteria increases the likelihood that any decisions made will be informed by local need and context (as evidenced by “data”).

• By using the criteria flexibly we can adapt the process depending on which aspects we have control over (i.e. where do decisions need to be made?).
Example: London Smoking Cessation Transformation Programme

First year focused on use of communications and marketing campaigns to promote an online portal to stop-smoking support that was available together with a bespoke telephone helpline for smokers who were not eligible for, or did not wish to access, specialist face-to-face support.

Review commissioned to decide on priorities for improving programme – options considered by experts

6 experts rated 23 options on all 6 APEASE criteria, then discussed agreed on 3 options:

1. Maintaining an up-to-date database of facilities offered by specialist stop-smoking services in each locality
2. Creating stronger direct referral to specialist stop-smoking services from the online portal
3. Adding app-like functionality to the portal to support smokers who did not wish to access specialist services.

Important to note that these were not the options that were judged to have the greatest potential effect but they were judged to have **some effects and were both practicable and affordable.**
3. Identifying opportunities to enhance existing policies using BCW tools

**COM-B Model**

**BCW**

**BCW Matrices**
Relevance to local government

• Often not in a position to develop intervention(s) from scratch due to time and resource constraints.

• May only have control over some aspects of intervention(s).

• Can use BCW to refine and optimise existing interventions with small changes.

• Small refinements to existing interventions could make a big contribution to achieving a policy objective.
### Example: Catheter Acquired Urinary Tract Infections (CAUTI)

<table>
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<tr>
<th>COM-B</th>
<th>Example</th>
<th>Intervention functions</th>
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<tr>
<td></td>
<td>Education</td>
<td>Persuasion</td>
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<tr>
<td>Physical Capability</td>
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<tr>
<td>Psychological Capability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Opportunity</td>
<td>Pre-emptive catheterisation</td>
<td></td>
</tr>
<tr>
<td>Social Opportunity</td>
<td>Lack of time to perform alternatives to catheterisation</td>
<td></td>
</tr>
<tr>
<td>Automatic Motivation</td>
<td>Requests from patients and carers to have catheter inserted</td>
<td></td>
</tr>
<tr>
<td>Reflective Motivation</td>
<td>Perception of CAUTI as common and benign</td>
<td></td>
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</table>

**Implications for policy guidance:**
incorporate interventions that address physical environment (e.g. lack of documentation)
Translating expertise: bridging the gap

Achieving behaviour change
A guide for local government and partners

Behavioural Scientists

Policy Makers
New guide to behaviour change for local government

Reminder of where you can find the new guide:

Achieving behaviour change: a guide for local government and partners
(13 February 2020, Public Health England)

or go to www.gov.uk and search ‘behaviour change’.
Questions and acknowledgements

Do email me on jeremy.oliver@ucl.ac.uk

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With thanks to the CBC team, including Professor Susan Michie, Assistant Professor Paul Chadwick and Dr Lou Atkins, for contributions to slide content.