



## The Behaviour Change Wheel: a system for designing effective interventions

Susan Michie

Professor of Health Psychology,  
University College London

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### Purposes of communication: the example of pandemic flu

- In terms of public health, the ultimate purpose of communication is to change behaviour
- Increase **knowledge** and **understanding** for its own sake?
  - *Purpose: social and political*
- Increase knowledge and understanding in order to change health-related **behaviour**
  - *Purpose: reduce disease transmission and severity*

## Behaviours



- After vaccines, changing behaviour is the most important factor in reducing harm caused by influenza
- Vaccines, themselves, depend on behaviour
  - Health professional offers
  - **Attendance** at clinic
- Respiratory and social distancing behaviours
- Social distancing behaviours

These are all very different kinds of behaviour, with different influences/ determinants



## Communicating to change behaviour

- Health Education model *X not sufficient*
  - Give information
    - About risk and what to do
    - Increase worry
- Other influences on behaviour
  - **Skills and confidence**
    - That people can conduct the recommended behaviours
    - That the recommended behaviours will be beneficial
  - **Mental models**
    - about illness, risk, behaviours
  - **Context**
    - Social influences and environment

**NHS** **UCL**

**If you could see flu germs, you'd see how quickly they spread.**  
 Cold and flu germs can live on some surfaces for hours. To protect yourself and others this winter, always carry tissues with you and use them to catch your cough or sneeze. Bin the tissue, and to kill the germs, wash your hands with soap and water, or use a sanitiser gel. This is the best way to help slow the spread of flu. For more information visit [www.nhs.uk](http://www.nhs.uk)  
**Catch it. Bin it. Kill it.**

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## A system for designing effective interventions

1. Start with the target behaviour
  - Precise description
  - Understanding of its determinants
2. Consider full range of possible interventions and policies
3. Identify specific behaviour change techniques
4. Design communication strategy to support the above

## Effective communication requires ...

- An **analysis of the target behaviour**
  - Who needs to do what, when and how
  - understanding as to **why** desired behaviour is not occurring
- A **method for selecting** types of intervention and specific behaviour change techniques
- **Modes of delivery** of behaviour change techniques
  - Media, messages, images, source

## An analysis of the target behaviour: Why are desired behaviours not happening?

- Use theories of behaviour change
- We have many relevant psychological theories and models of behaviour change
- Not generally used in communications design and delivery
- Need to integrate and simplify to make useable

## Behaviour change theories: 3 groups

- **Motivational:** explain behaviour of people who have not yet established intention
  - e.g. Theory of Planned Behaviour, Operant Learning Theory
- **Action:** explain behaviour of people who have identified a need to change
  - e.g. Control Theory/Self-regulation Theory
- **Organisational:** explain 'institution' level change
  - e.g. Diffusion of Innovation

## Integrating and simplifying behaviour change theory: A consensus study

- Participants
  - 32 international researchers in health psychology and implementation science
- 33 theories and 128 constructs generated
- Simplified into 12 domains
- Interview questions associated with each domain

Michie et al (2005) Making psychological theory useful for implementing evidence based practice: a consensus approach, *Quality and Safety in Health Care*, 14, 26-33

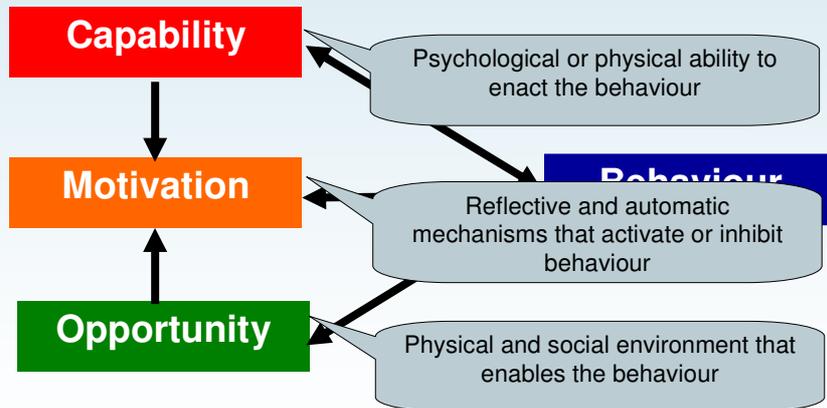
### Results: Theoretical domains

1. Knowledge
2. Skills
3. Professional role and identity
4. Beliefs about capabilities
5. Beliefs about consequences
6. Motivation and goals
7. Memory, attention and decision making
8. Environmental context and resources
9. Social influences
10. Emotion
11. Action plans
12. Nature of the behaviour

What is the purpose of the guidelines?  
 What do they think about the credibility of the source?  
 Do they think guidelines should determine their behaviour?  
 Is doing x compatible or in conflict with professional standards/identity?

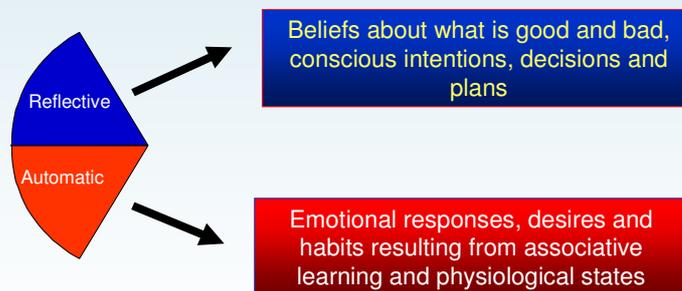
How much do they want to do x?  
 How much do they feel they need to do x?  
 Are there other things they want to do or achieve that might interfere with x?  
 Does the guideline conflict with others?  
 Are there incentives to do x?

**Behaviour emerges from interactions between three necessary conditions ...**



**“COM-B system”**

**Motivation: reflective and automatic**



*Reflective-Impulsive Model, Strack & Deutsch, 2004*

*PRIME Theory of Motivation, West, 2006*

**Need a framework for designing interventions with following criteria:**

1. Comprehensive coverage
2. Coherence
3. Clear link to a model of behaviour

Useable by, and useful to, policy makers, service planners and intervention designers

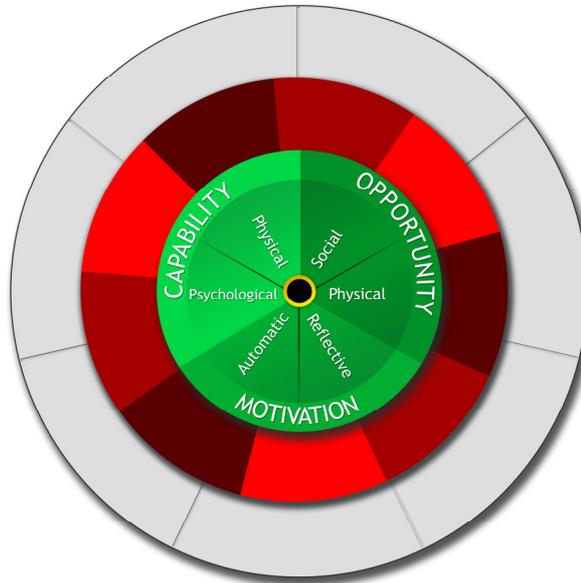
**Behaviour at the hub .... COM-B**

Sources of behaviour



## Interventions and policies

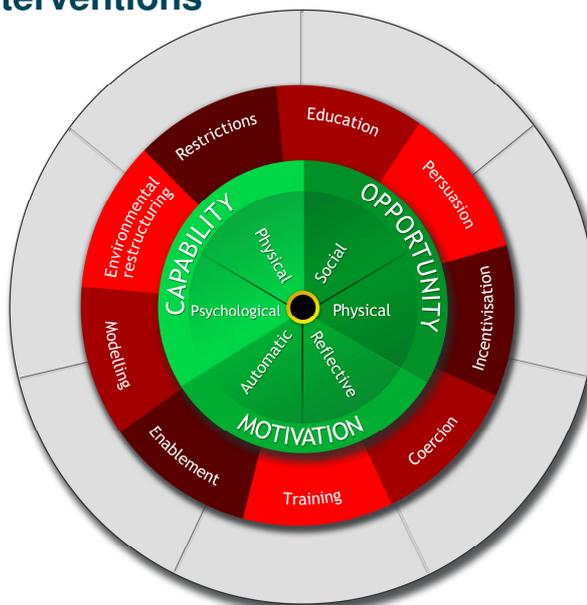
- Sources of behaviour
- Intervention functions
- Policy categories

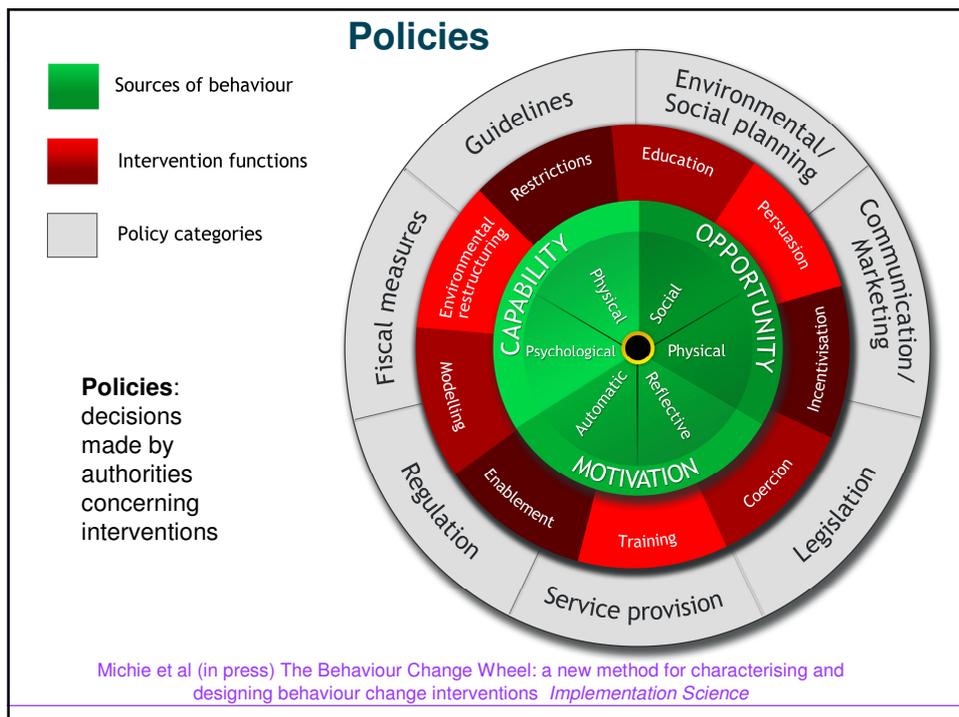


## Interventions

- Sources of behaviour
- Intervention functions
- Policy categories

**Interventions:**  
activities  
designed to  
change  
behaviours





## Applying this system to designing behaviour change interventions

### Steps

1. Analyse behaviour using COM-B
2. Link to possible intervention functions
3. Select intervention functions
  - Feasibility, acceptability, cost effectiveness
4. Choose specific behaviour change techniques
5. Select supportive policies

## Behaviour Change Techniques (BCTs)

- “Active ingredients” within the intervention designed to change behaviour. They are observable, replicable and irreducible components of an intervention. Can be used alone or in combination with other BCTs.

### Behaviour change techniques: reliable taxonomy

to change physical activity and healthy eating

1. General information
2. Information on consequences
3. Information about appropriate contexts
4. Prompt intention formation
5. Specific goal setting
6. Graded tasks
7. Barrier identification
8. Behavioral contract
9. Review goals
10. Provide instruction
11. Model/ demonstrate
12. Prompt practice
13. Prompt monitoring
14. Provide feedback

Involves detailed planning of what the person will do including, at least, a very specific definition of the behaviour e.g., frequency (such as how many times a day/week), intensity (e.g., speed) or duration (e.g., for how long for). In addition, at least one of the following contexts i.e., where, when, how or with whom must be specified. This could include identification of sub-goals or preparatory behaviours and/or specific contexts in which the behaviour will be performed.

19. Social comparison
20. Social support/ change
21. Role model
22. Prompt self talk
23. Relapse prevention

The person is asked to keep a record of specified behaviour/s. This could e.g. take the form of a diary or completing a questionnaire about their behaviour.

Abraham & Michie (2008). A taxonomy of behavior change techniques used in interventions. *Health Psychology*.

## Conclusion: a system for designing effective interventions

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## For more information

Susan Michie

[s.michie@ucl.ac.uk](mailto:s.michie@ucl.ac.uk)

[www.ucl.ac.uk/health-psychology/people/michie](http://www.ucl.ac.uk/health-psychology/people/michie)