Implementing at a distance: How behavioural science can help

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Senior Teaching Fellow

This talk

1. Why behaviour change and implementation?

2. Selecting behaviours

3. Understanding behaviours

4. Developing intervention strategies

5. Bringing it all together

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Implementation as behaviour change

o Practitioners don't always act in line with evidence-based recommendations

  – 30-40% of patients did not receive 'evidence-based' health care[1]

  – 20-25% received care that was unnecessary or even harmful[2] Guidelines don't implement themselves!

o Implementation almost always requires someone to **_behave_** differently

o So how do we achieve that behaviour change?

1. Grol et al. 2001
2. Schuster et al. 2005

Behaviour Change Wheel
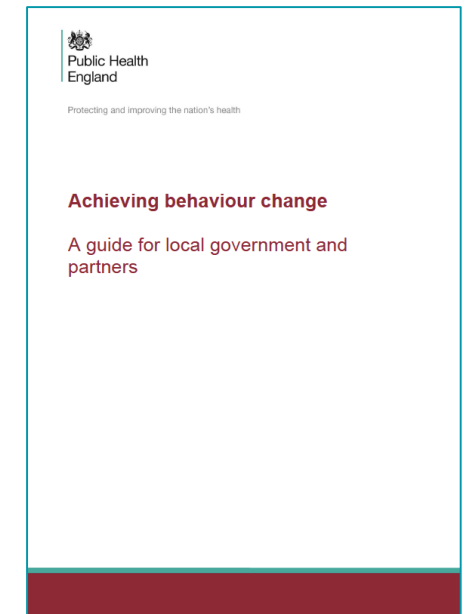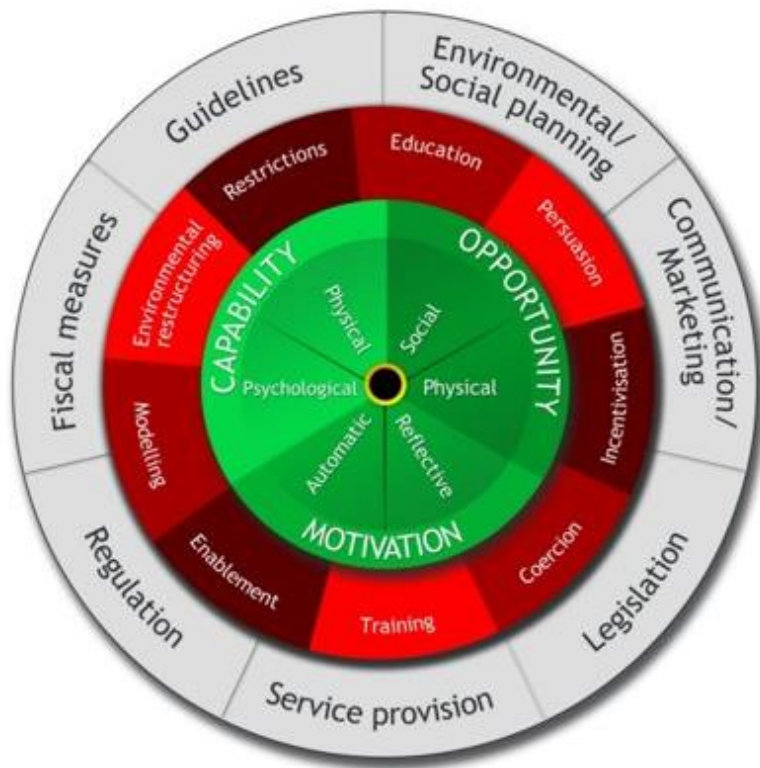
Process

What behaviour are you trying to change?

What will it take to bring about the desired change?

What types of broad intervention approaches might be relevant?

Principles

- Behaviour in context
- Systems thinking
- Less is more
- Systematic, comprehensive approach to intervention design

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A definition of behaviour

o Anything a person does in response to internal or external events
o Actions may be
   ▪ overt and directly measurable
   ▪ covert (voluntary but not viewable) and indirectly measurable
o Behaviours are *physical events* occurring *in the body controlled by the brain*

www.behaviourchangetheories.com

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Different kinds of behaviour change

Initiating a new behaviour
e.g. wearing a mask

Stopping an existing behaviour
e.g. smoking

How a behaviour is performed
e.g. avoiding fatigue in chronic illness by pacing activities

Behaviour is a system and is part of a system of behaviours

o Facilitate and compete with each other

o Within and between individuals

o Influenced by the social world

o Un...

...fluences

...st step in identifying ...e and how to intervene

Developing behavioural systems maps is a whole course – we are just noting it here!!

| Behaviour | | Behaviour |

| Behaviour |

What about when there are many behaviours to address a problem?

TOWNSVILLE QUEENSLAND
SOLAR CITY

CitySolar Community Capacity Building Program

Townsville Residential Energy Demand Program (TRED Program)

240 separate behaviours!

○ Reducing electricity consumption
  - Hot water **24**
  - Kitchen **53**
  - Entertainment **18**
  - Laundry and bathroom **28**
  - Pools, hot tubs and saunas **7**
  - Heating & cooling **40**
  - Lighting **17**

○ Complimenting energy efficiency behaviours with onsite generation **7**
○ Options for house construction and retrofit **24**
○ Additional behaviours related to housing construction **13**

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Criteria to select a target behaviour

1. **Impact** if undertaken
2. **Likelihood** that such a behaviour will be implemented
   - Ease, cost
   - Preference, acceptability, values
3. **Spillover** to other behaviours and people
   - Unintended consequences which could be positive or negative

Why it's important to specify behaviours

- Influences on behaviours may change according to who is doing them, where or when they are done...the more specific we are about what, where, who etc. the more focused we can be when identifying influences on a behaviour

- It also helps when it comes to evaluating interventions – more tightly specified behaviours are arguably easier to measure

Implementation Science

METHODOLOGY   **Open Access**

Action, actor, context, target, time (AACTT): a framework for specifying behaviour

Check for updates

Justin Presseau[1,2,3*], Nicola McCleary[1,2], Fabiana Lorencatto[4], Andrea M. Patey[1], Jeremy M. Grimshaw[1,2,5] and Jill J. Francis[6]

AACTT domains	Definition	Examples
Action	A discrete observable behaviour	Prescribing antihypertensives, providing a referral to a specialist, washing hands, setting a policy
Actor	The individual or group of individuals who perform (or should/could) the Action	Primary care physician, pharmacist, social worker, resident, administrator, middle manager, head of unit, policymaker
Context	The physical, emotional or social setting in which the Actor performs (or should/could) the Action	Examination room, doctor's office, outside a patient room, in a boardroom, stressful vs. calm situation, when patients' relatives are present or not
Target	The individual or group of individuals for/with/on behalf of whom the Actor performs the Action	Patient with diabetes and blood pressure above 140/80 mmHg, patient wanting to quit smoking
Time	The time period and duration that the Actor performs the Action in the Context with/for the Target	At annual review, next time a patient visits, every week, over the next 6 months

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Selecting behaviours - Options for distance implementation

o Peer-review publication/document review

o Focus group discussion

o Collaborative map generation
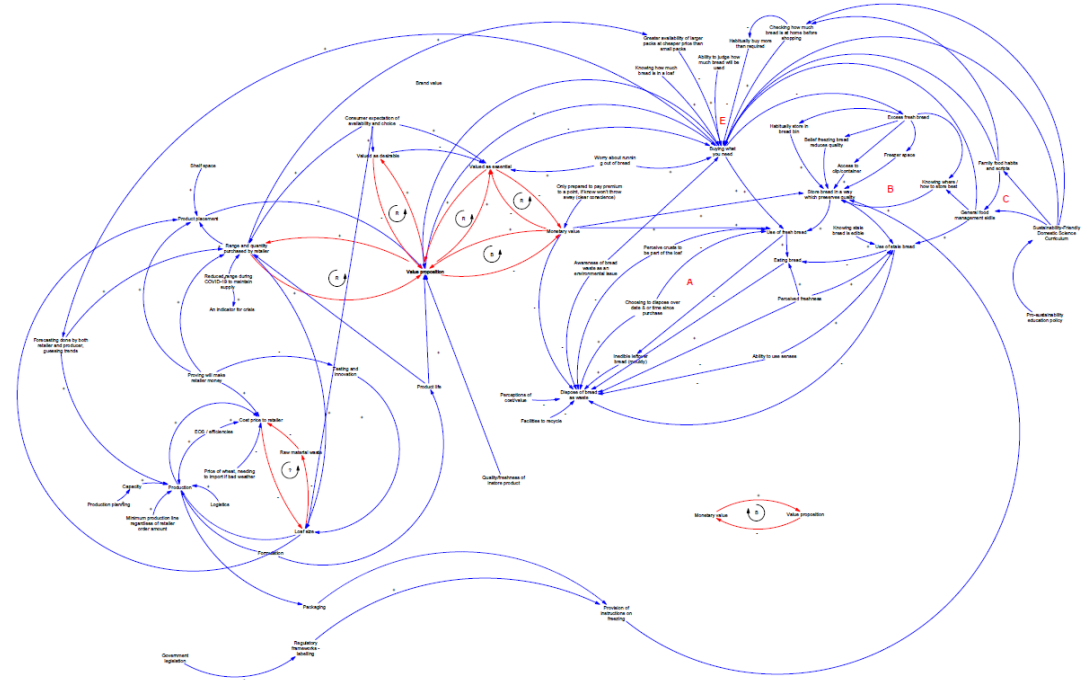
What behaviour are you trying to change?

Systems thinking

Selecting behaviours	Specifying behaviours
Impact	Action
Likelihood	Actor
Spillover	Context
	Target
	Time

Reflection question

o How have you selected behaviours to change?

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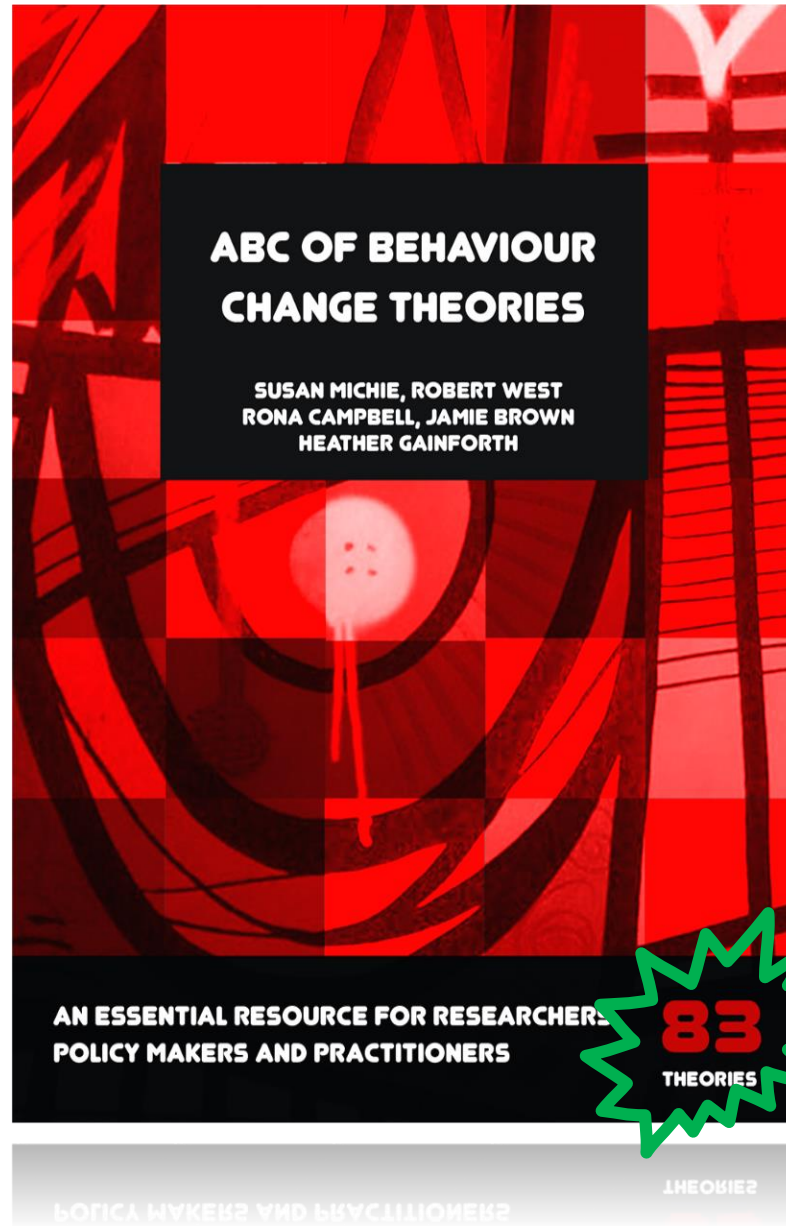
Understand behaviour in context
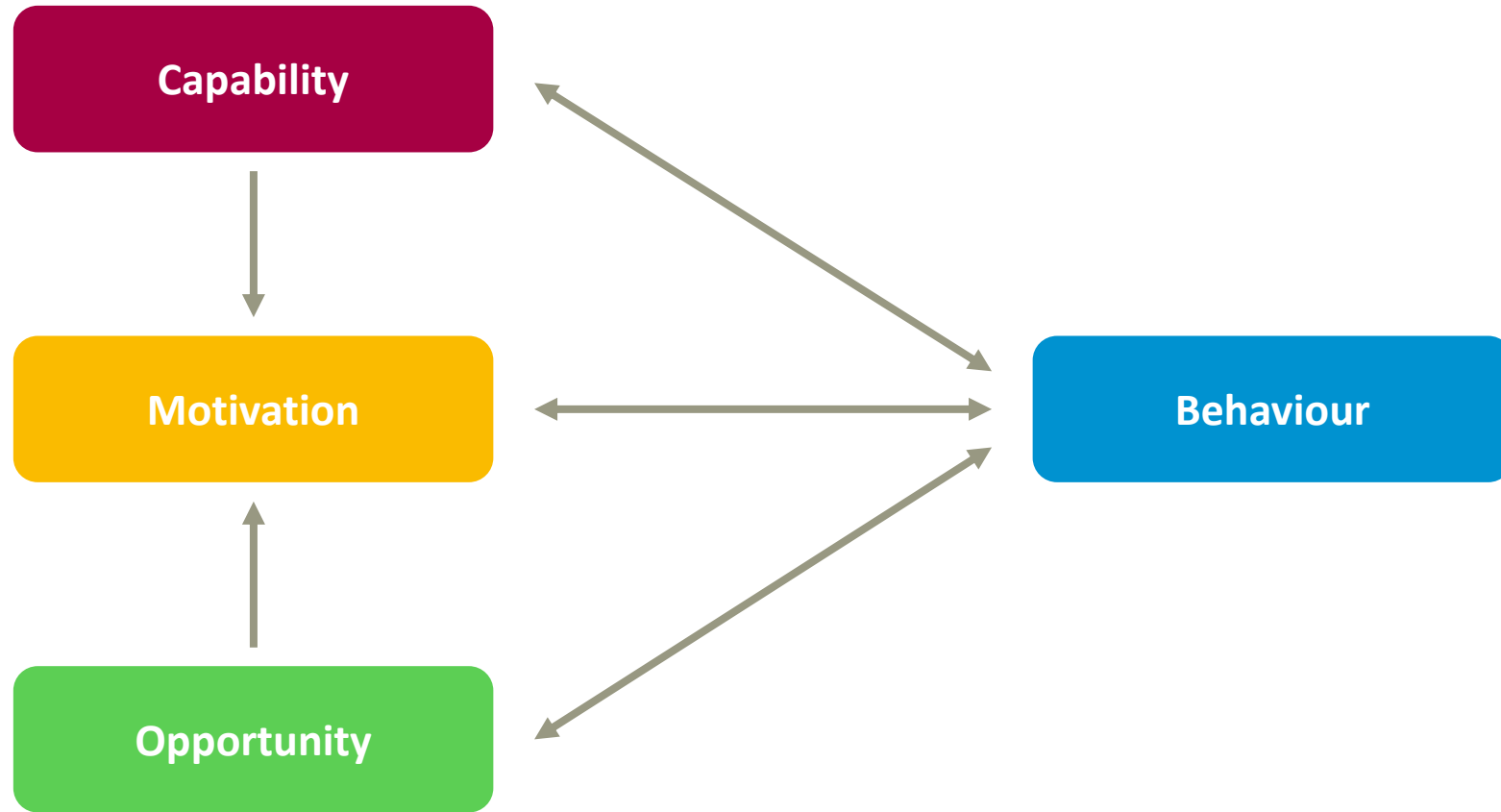
To change behaviour we need to understand it

Why are behaviours as they are?

What needs to change for the desired behaviour to occur?

Behaviour occurs as an interaction between three conditions

Capability

o The ability to enact the behaviour

o Can be psychological or physical

Motivation

o Mechanisms that activate or inhibit behaviour

o Can be reflective or automatic

Opportunity

o Environment that enables behaviour

o Can be physical or social

clean your hands© campaign **2004-2011**

Opportunity

Alcohol hand rub beside every bed

Motivation

Persuasive posters

Encouraging patients to ask

? **Capability**

No intervention

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Capability

- Nurses have the capability to clean their hands but not to
  - pay attention to this behaviour over other competing behaviours
  - develop routines for noticing when they don't clean their hands and plans for acting in future

- Train English NHS staff to set goals, observe their behaviour, develop action plans on the basis of feedback

- Developed at UCL, based on behavioural theory

Findings from 60 wards in 16 hospitals

Use of soap and alcohol hand rub tripled from 21.8 to 59.8 ml per patient bed day[1]

Rates of MRSA bacteraemia and C difficile infection decreased[1]

Giving 1-1 feedback led to staff being 13-18% more likely to clean their hands[2]

1. Stone et al. *BMJ*, 2012. 2. Fuller et al. *PLoS One*, 2012

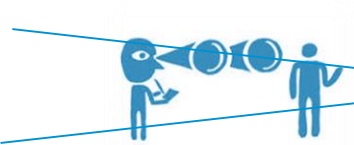# Understanding behaviours - Options for distance implementation

Questionnaires for larger samples

Interviews/focus groups for in-depth qualitative data

Structured discussion if resource poor

~~**Observation**~~

Documentary analysis, e.g. protocols

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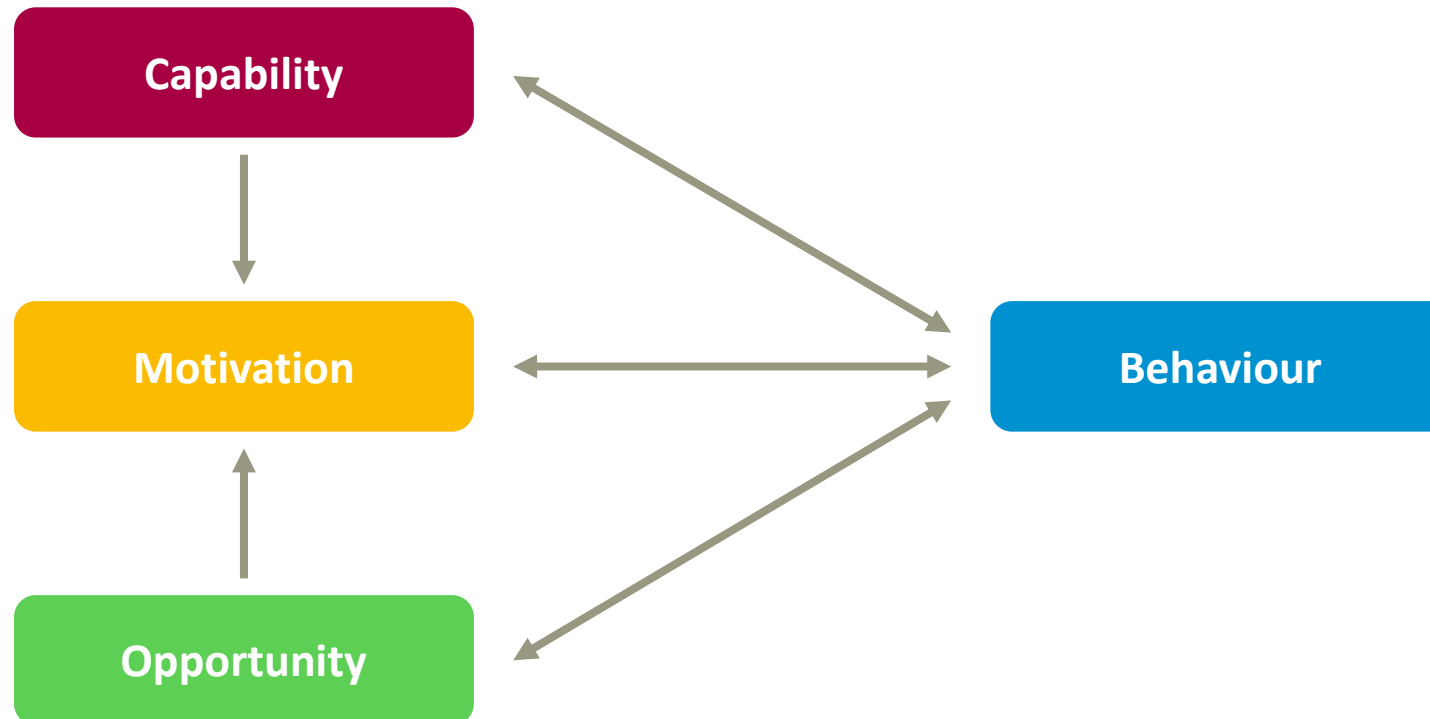
Reflection question

- ○ (How) have you approached understanding behaviours you are trying to change?

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Behaviour Change Wheel (BCW)

o A synthesis of 19 frameworks of behaviour change

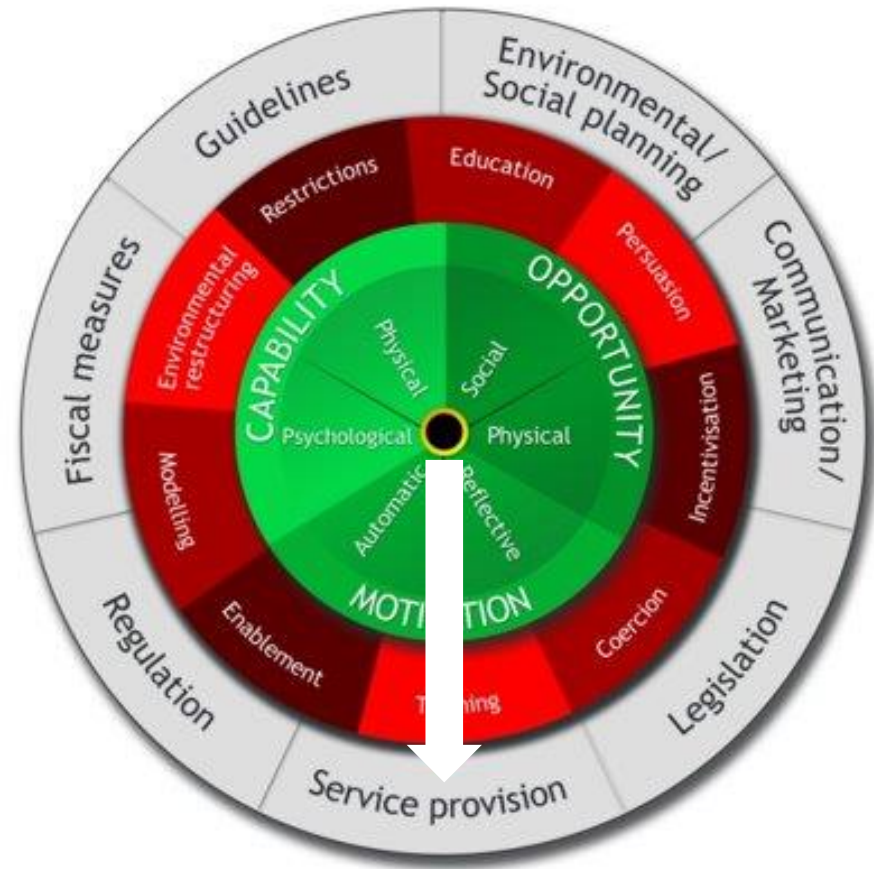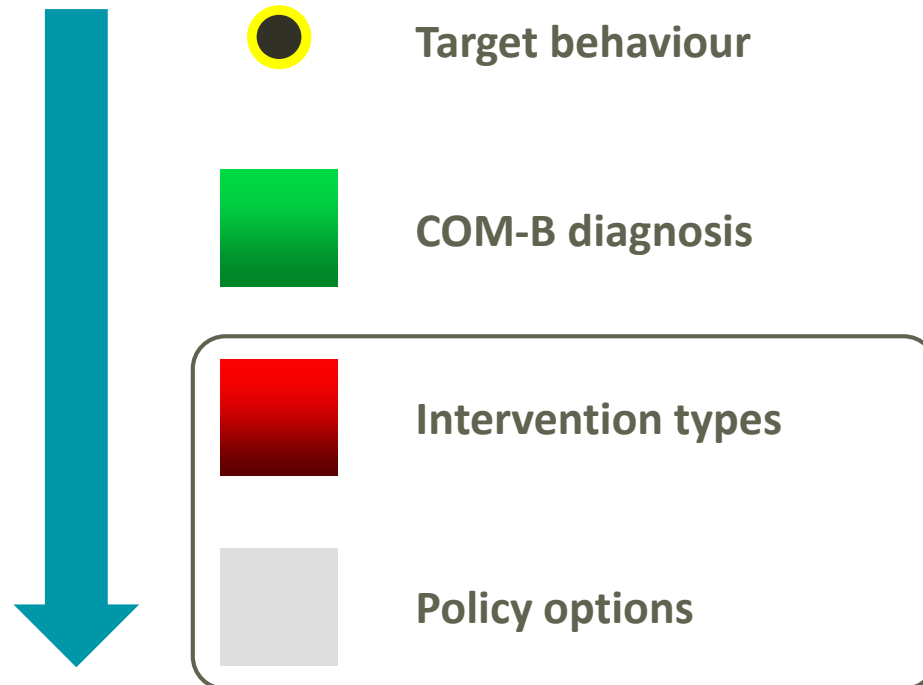o Theoretical basis for linking barriers/facilitators to intervention strategies

o Guides decision-making through a transparent, systematic approach to intervention design

Intervention types – after COM-B

Use rules to reduce the opportunity to engage in the behaviour

Increase knowledge or understanding

Use communication to induce positive or negative feelings to stimulate action

Change the physical or social context

Create an expectation of reward

Provide an example for people to aspire to or emulate

Create an expectation of punishment or cost

Increase means or reduce barriers to increase capability (beyond education or training) or opportunity (beyond environmental restructuring)

Impart skills

Restrictions

Education

Persuasion

Environmental restructuring

CAPABILITY

OPPORTUNITY

Physical

Social

Psychological

Physical

Incentivisation

Modelling

Automatic

Reflective

Enablement

MOTIVATION

Coercion

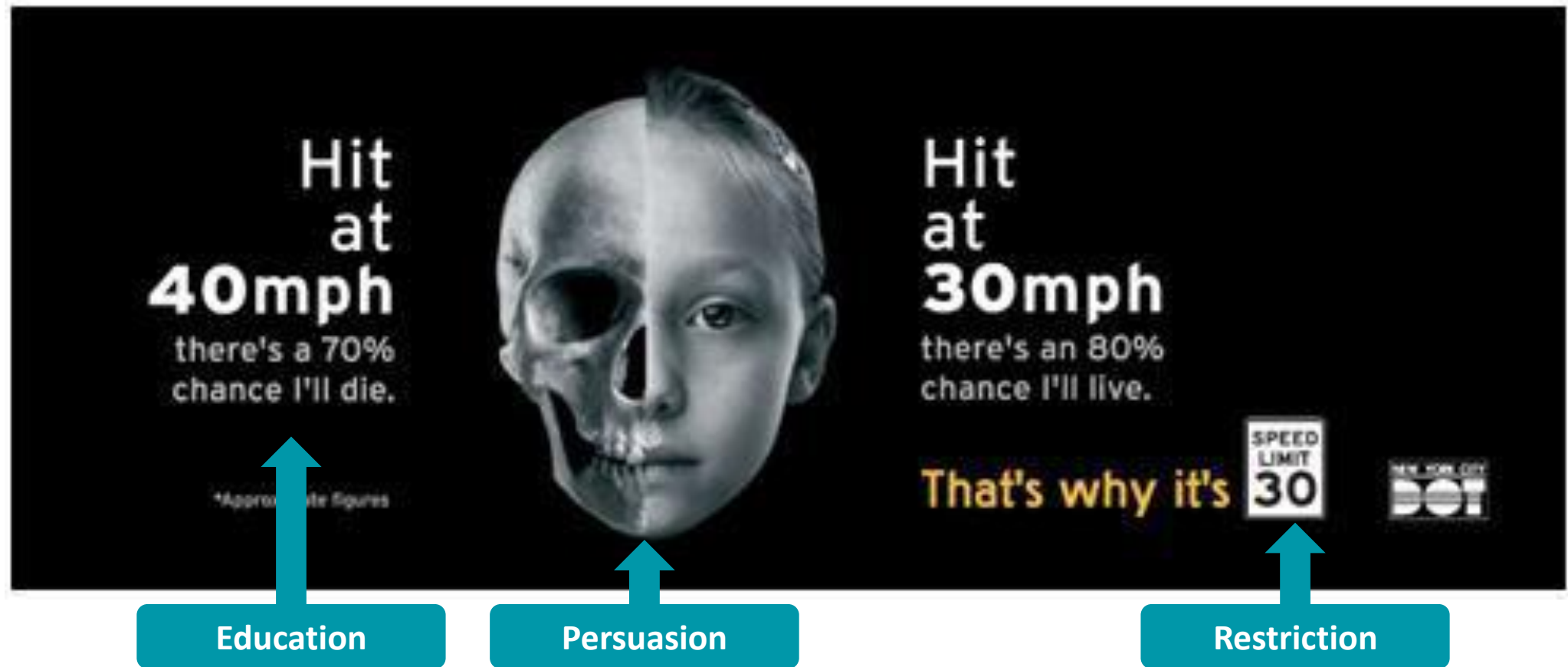Training

Identifying intervention types

One intervention can include multiple intervention types simultaneously

Match intervention types to behavioural diagnosis

COM-B	Intervention types								
	Education	Persuasion	Incentivisation	Coercion	Training	Restriction	Environmental restructuring	Modelling	Enablement
Physical capability					■				■
Psychological capability	■				■				■
Physical opportunity					■	■	■		■
Social opportunity						■	■	■	■
Automatic motivation		■	■	■	■		■	■	■
Reflective motivation	■	■	■	■				■	

Sounds obvious but doesn't always happen

o In April, UK Health Secretary threatened to prevent people going outdoors if reports of groups out in the sun continued

Coercion

o Error 1: Polling data show despite profile in media, this represented 2% of people and 99% of population wanted to adhere

Motivation ☑

o Error 2: The reason that many people were not keeping 2 metres apart was due to crowded open spaces –problem was opportunity rather than motivation

Opportunity ☒

o Error 3: Threatened action was the wrong solution for the wrong problem

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Example of the grid in action

Sexual Harassment in Public Vehicles

- Who performs the behaviour to reduce the problem: **Bus Conductor**

- What need to do differently (target behaviour): **Follow the regulations of public transport**

- When do they need to do it: **Every time when they are on duty**

- Where do they need to do it: **In the public bus**

- How often: **Whenever the incident occurs**

- With whom they do need to do it: **With transportation committee, police, local government (social development department), safe city volunteers**

Example of the grid in action
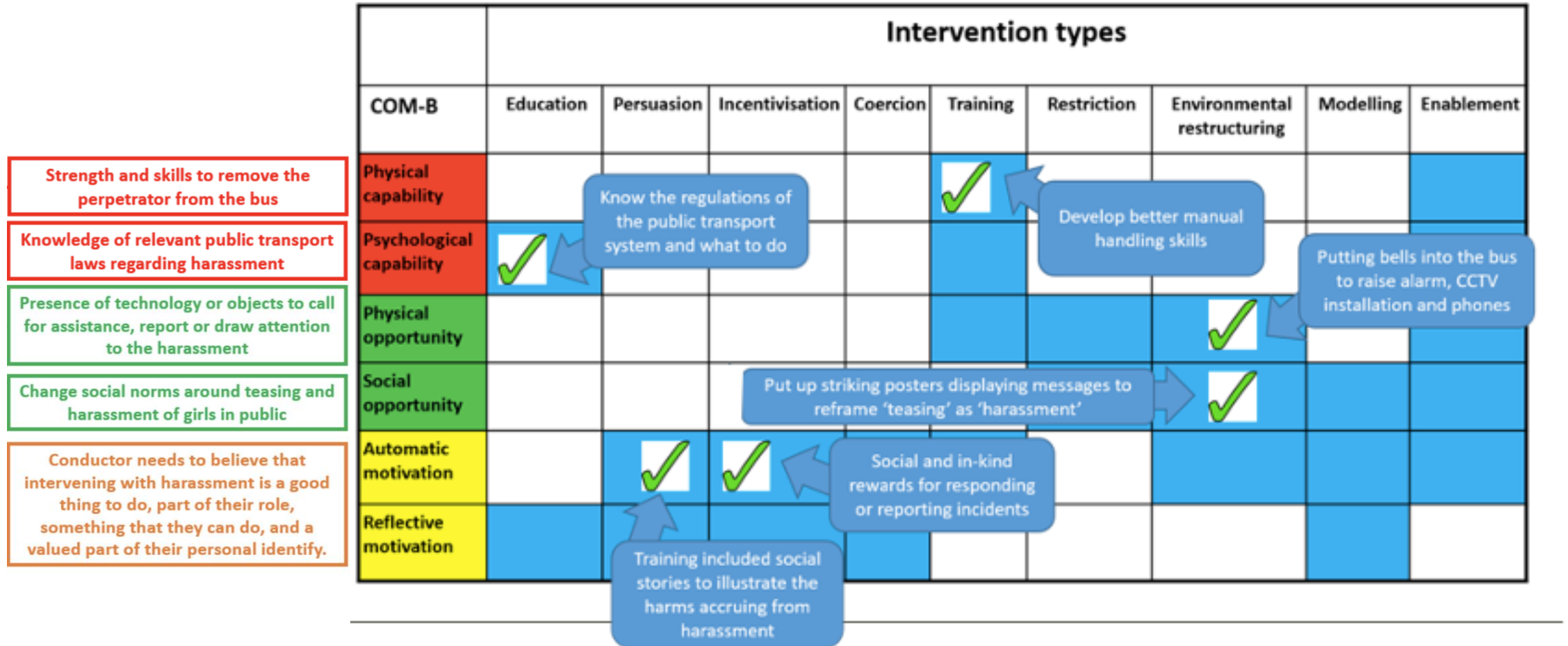
Too many intervention types?

If you want your intervention to change all three COM-B domains – Capability, Opportunity and Motivation – you might get a long list of potential intervention types.

Two strategies to help you be more specific in your choices:

- Prioritise the behavioural influences to focus on

- Use APEASE criteria to decide which intervention types are most pragmatic/viable

Prioritising influences

No hard and fast rule for selecting which behavioural influences to address in an intervention. But some areas to guide discussion:

o **Strong influences** – do some influences have more direct influence on target behaviour than others?

o **Target group** – are some influences particularly relevant to the majority of people who do/will do target behaviour?

o **Stakeholders** – are some influences particularly important or relevant to stakeholders (e.g., those funding intervention?)

APEASE

Criteria for making context-based decisions

Affordability	**P**racticability	**E**ffectiveness	**A**cceptability	**S**ide-effects /safety	**E**quity
Is there the budget?	Can it be delivered to scale?	Is it likely to be effective?	Is it acceptable to those who deliver, receive or commission it?	Are there any unintended consequences?	Will it disadvantage any groups or individuals?

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Developing intervention strategies - Options for distance implementation

- Peer-review publication/document review

- Online focus groups

- Video/phone interviews

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What types of broad intervention approaches might be relevant?

Consider all options and select based on influences and your context

COM-B	Intervention types								
	Education	Persuasion	Incentivisation	Coercion	Training	Restriction	Environmental restructuring	Modelling	Enablement
Physical capability					■				■
Psychological capability	■				■				■
Physical opportunity						■	■		■
Social opportunity							■	■	■
Automatic motivation		■	■	■			■	■	■
Reflective motivation	■	■	■	■				■	

Affordability — Is there the budget?

Practicability — Can it be delivered to scale?

Effectiveness — Is it likely to be effective?

Acceptability — Is it acceptable to those who deliver, receive or commission it?

Side-effects /safety — Are there any unintended consequences?

Equity — Will it disadvantage any groups or individuals?

Reflection question

- o What needs to be in place to use these tools and methods in your area?

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Take home messages

o Implementation almost always requires behaviour to change

o Behavioural science tools and methods support

    o Comprehensive considerations

    o Systematic selections

o These tools and methods are intended to be adapted for your context – *they work for you, not the other way round!*

Thank you!