



Public Health  
England

# Behavioural Insights: Changing Behaviours, Not Minds

*Saturday 17<sup>th</sup> October 2015*

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# New approach to behaviour change

**Our key behavioural challenges are resistant to many public health interventions or the resources are not available to implement at full scale – “wicked problems”**

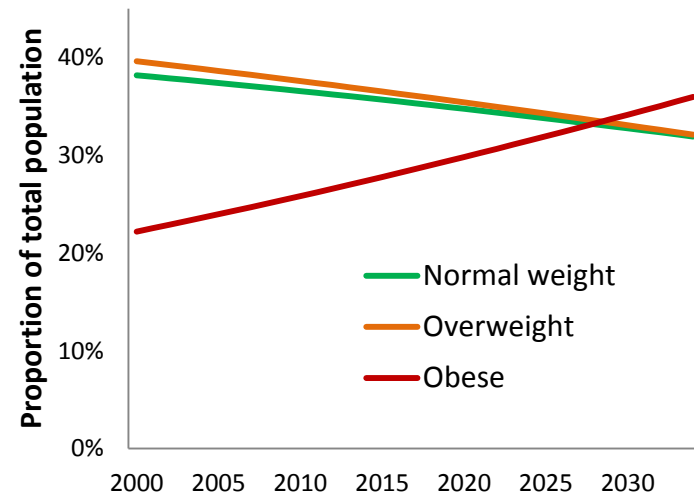
**Traditional interventions may favour the health literate – increase inequalities**

**Often people know what they ‘should’ do but don’t do it**

**Often people want to make changes ‘intention – action gap’**

**High importance of context/place, environmental cues and social influence**

**BMI projections for all adults 18+  
current trends scenario**





# Change behaviours, not minds

“intentional control of behaviour is a great deal more limited than previous meta-analyses of correlational studies have indicated.”

Psychological Bulletin  
2006, Vol. 132, No. 2, 249–268

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0033-2909/06/\$12.00 DOI: 10.1037/0033-2909.132.2.249

## Does Changing Behavioral Intentions Engender Behavior Change? A Meta-Analysis of the Experimental Evidence

Thomas L. Webb  
The University of Manchester

Paschal Sheeran  
The University of Sheffield

Prof. T Marteau “changing behaviour by changing minds is unscaleable, increases inequalities, not very effective”



# Behaviour Change Theories

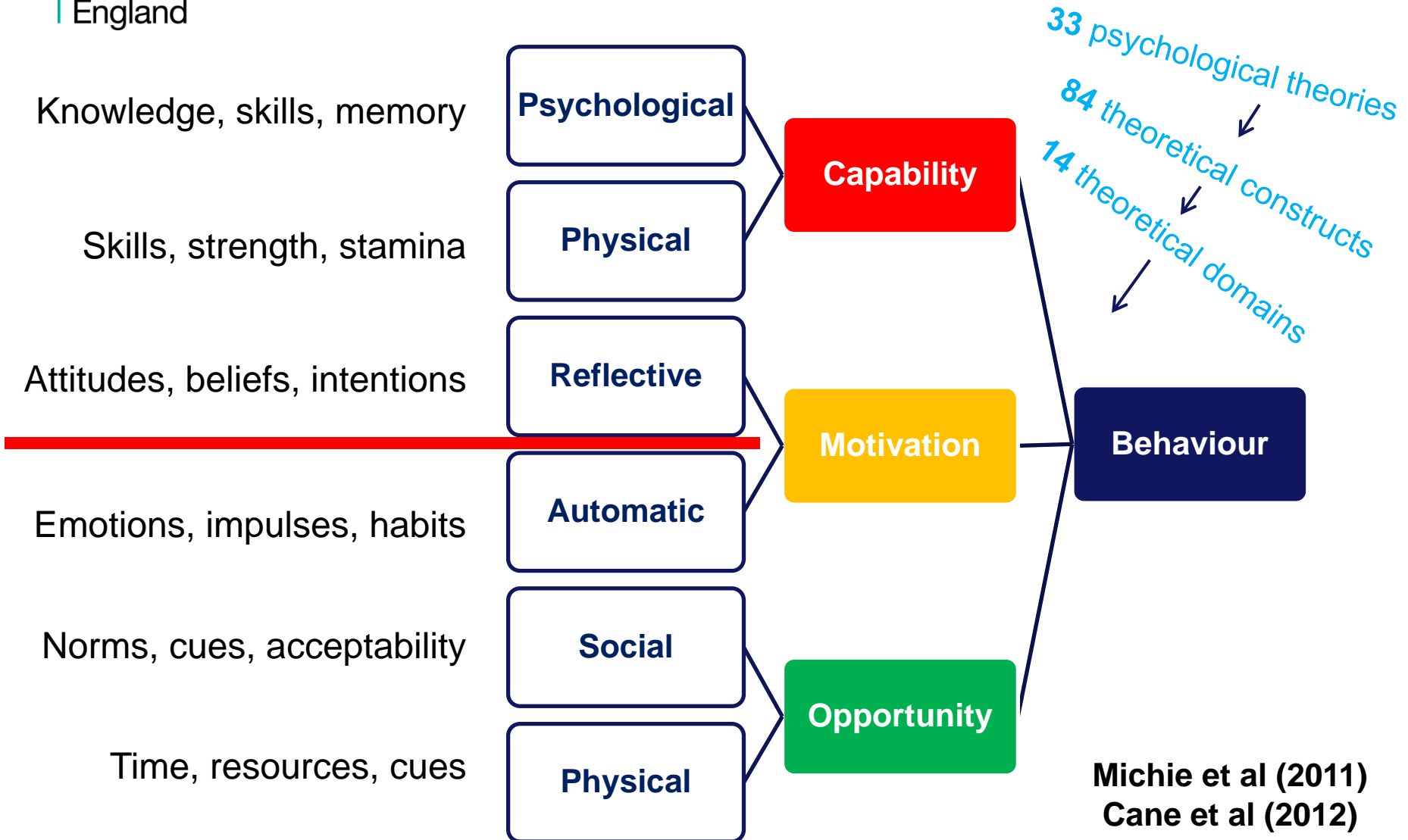
- **The Health Belief Model** – *Becker (1974)* Importance of beliefs, perceived benefits & barriers to action, self-efficacy, stimulus/ cue to action. Limitations; focused on conscious decision making and ignores habits.
- **Social Learning Theory** – *Bandura (1977)* Importance of social environment, modelling and self efficacy
- **Theory of Reasoned Action** *Ajzen & Fishbien (1980)* / **Theory of Planned Behaviour** – *Ajzen (1985)* Limitation; assumption people act in a rational way at all times, not all behaviour is planned.
- **Stages of Change Model / Transtheoretical Model** – *Prochaska and DiClemente (1997)* Assumption behaviour change occurs in a linear fashion, progression through a series of stages.

## Limitations:

- **Effectiveness of predicting behaviour change**
- **Intention-behaviour gap**
- **Not addressing automatic motivation, habits and impulsive behaviour.**



# COM-B – dual process model





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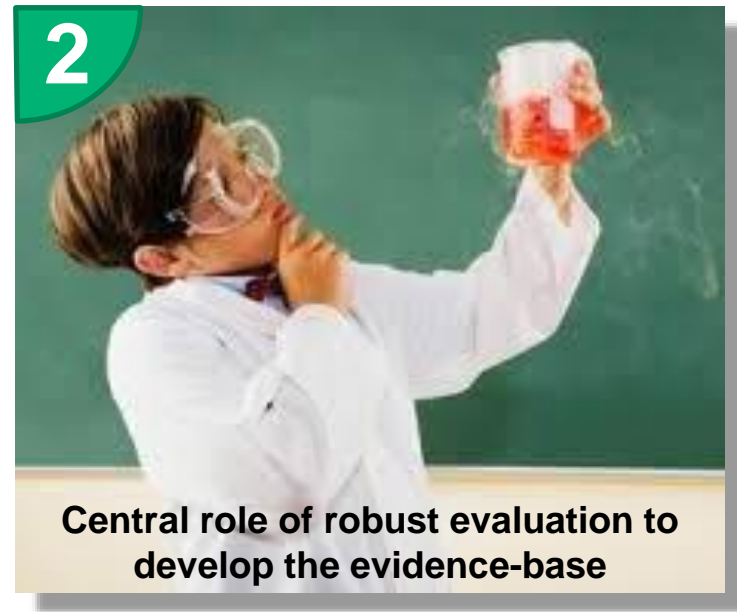
# 1. What are behavioural insights?



# The Behavioural Insights Approach

The application of behavioural science to policy and practice with a focus on (but not exclusively) 'automatic' processes.

*Michael Hallsworth, The Behavioural Insights Team*





# Automatic and reflective

Two interacting systems:

**AUTOMATIC** and **REFLECTIVE**

Fast, effortless vs Slow, conscious

E.g. Stroop Test: **State the colours as fast as you can**



Yellow

Green



Green

Red



Blue

Yellow



Red

Blue







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## 2. Patients

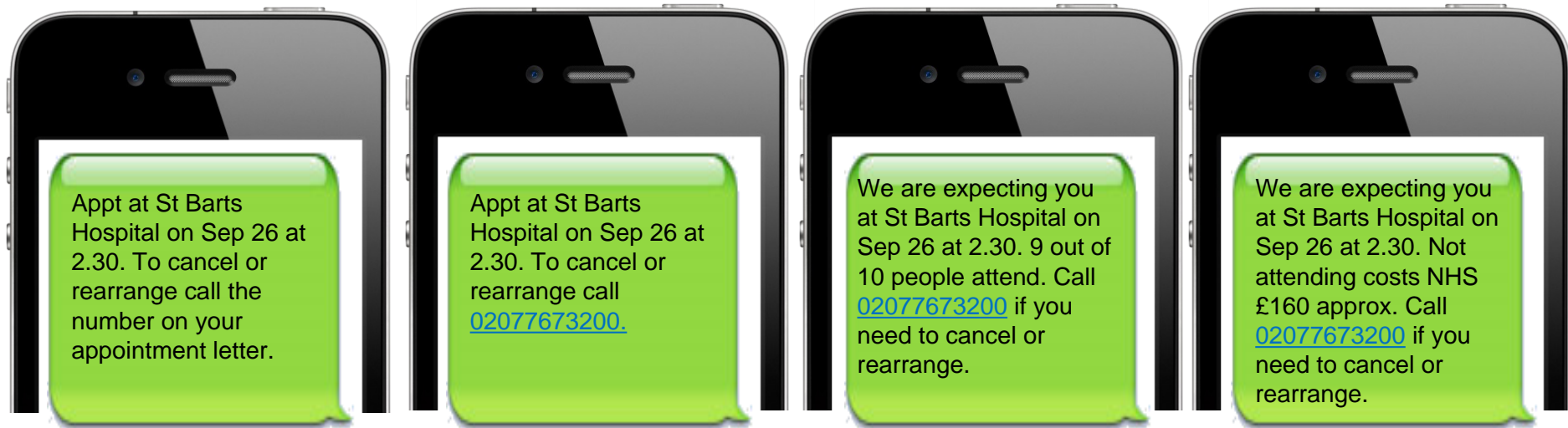
**About 1 in every 10 NHS outpatient appointment is missed**

**This leads to poor patient care**

**It wastes NHS resources:  
one estimate put this at £225 million**

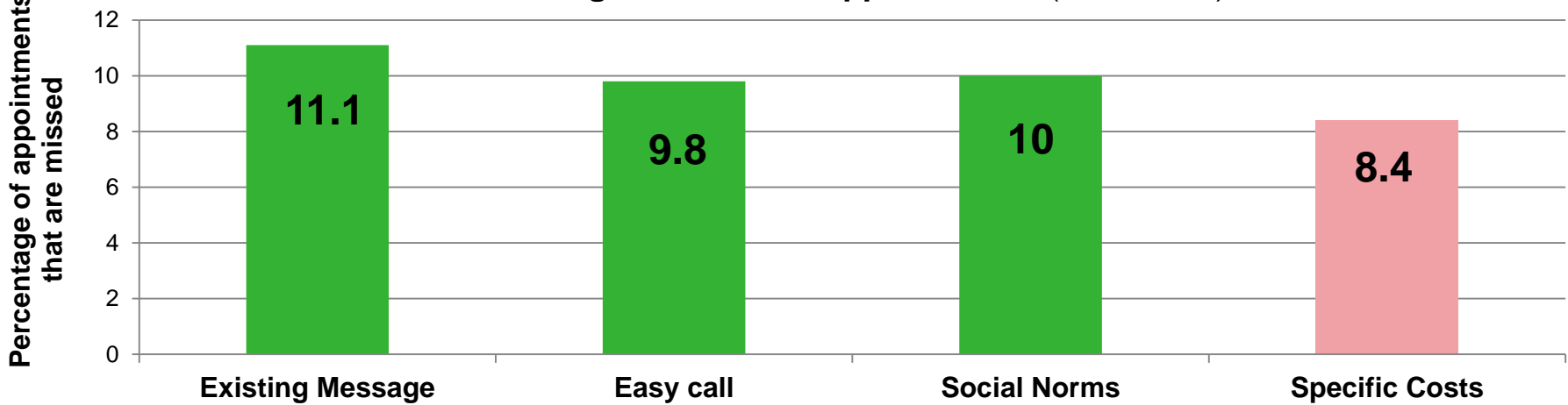
**Your challenge is to reduce missed hospital appointments by a quarter**

- *without* spending any money
- *without* retraining staff or introducing complex system changes
- *without* penalising patients



Existing message      Easy Call      Social Norms      Specific Costs

Effect of messages on missed appointments (N = 10,111)

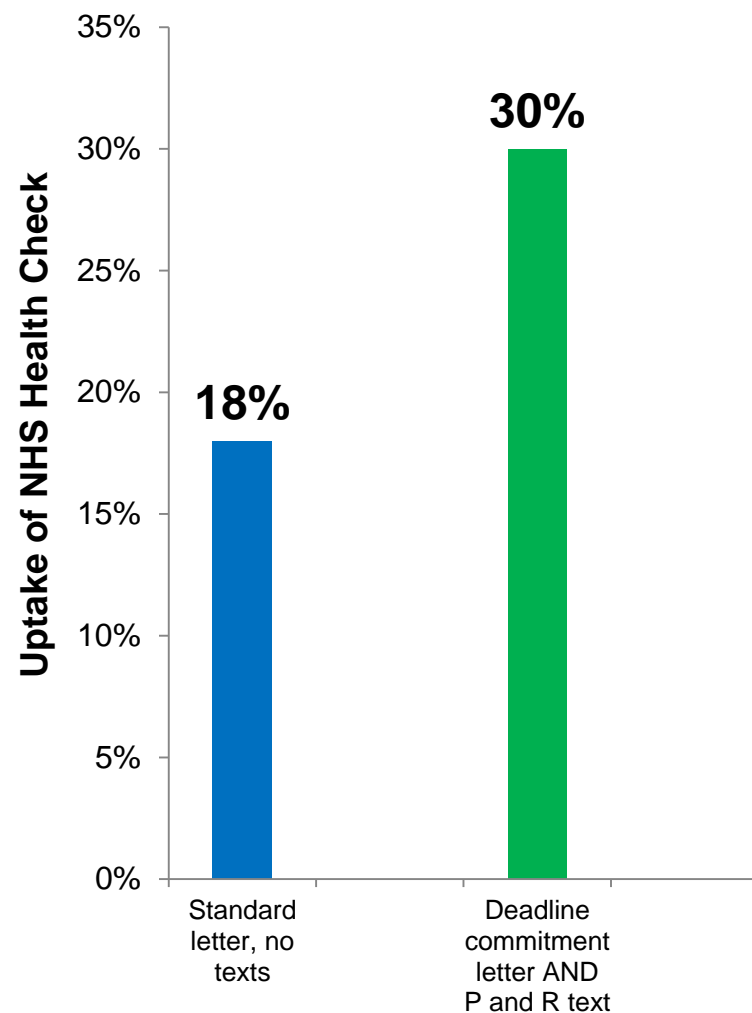
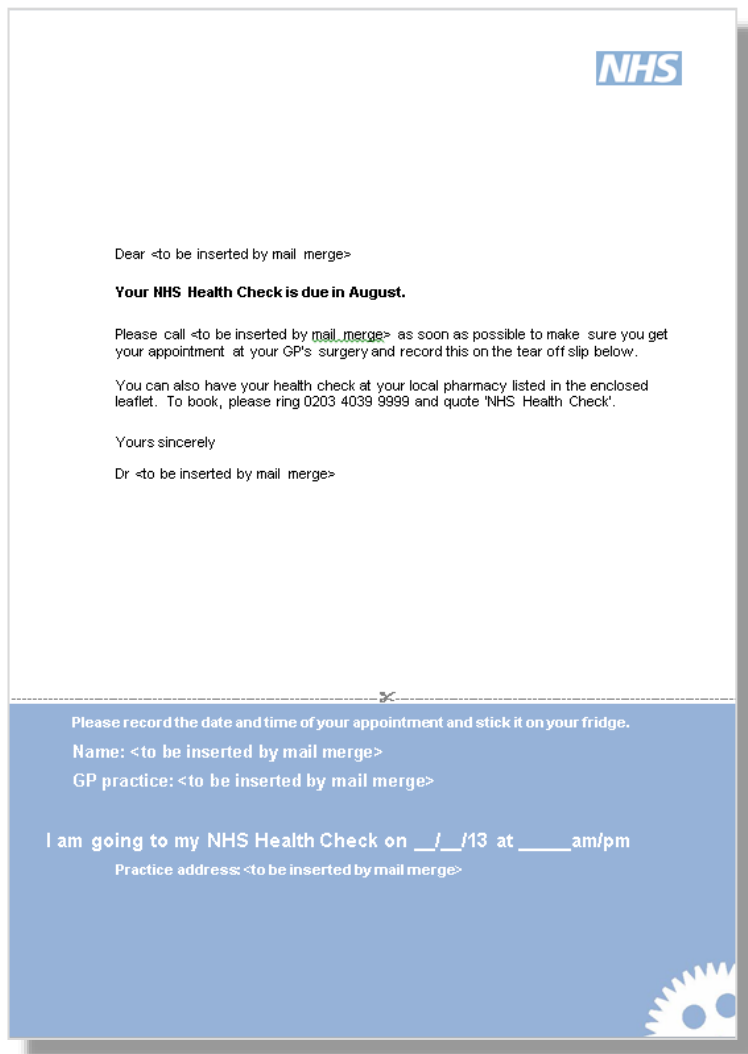


Hallsworth M, Berry D, et al: Stating appointment costs in SMS reminders reduces missed hospital appointments. (2015: publication pending)

# Uptake of NHS Health Checks: DH trial with Southwark Council



Letter →





# Southwark - engagement and effectiveness of lifestyle referral services

## An individually randomised controlled trial of:

- Reminders via SMS
- Instruction on how to use the smart pedometer
- Monitoring and feedback from smart pedometer
- Social norms via personalised motivational SMS
- Monitoring by blood test of cardiovascular risk (HbA1c)

## Outcome measures

- Average daily steps/usage of smart pedometer
- Change in cardiovascular risk (HbA1c test)



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# 3. Professionals







# Improving antibiotic prescribing

- Interventions:
  1. Personalised social norms letter to GPs from CMO with performance feedback and easy actions.
  2. Campaign leaflets and poster for waiting room; modified Target leaflet for GP/patients, covering letter for practice manager
- Target: top 20% of GP antibiotic prescribers in each LAT
- Methodology: 2x2 factorial RCT in 1,600 practices
- Outcome: rates of AB prescribing per 1,000 weighted population



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# CMO social norms feedback letter + TARGET leaflet



Department  
of Health

From the Chief Medical Officer,  
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30<sup>th</sup> March 2015

**NOTE TO PRACTICE MANAGERS: PLEASE FORWARD IMMEDIATELY TO GP ADDRESSED**

Dear Mr Sample

## Antibiotic usage in your practice

Antimicrobial resistance is a serious and growing threat to our health. Reducing unnecessary prescriptions in primary care may help prevent a public health catastrophe.

**The great majority (80%) of practices in Birmingham & the Black Country prescribe fewer antibiotics per head than yours.\***

Many practices are already taking action to reduce antibiotic prescriptions while safeguarding patients' health. Please join them by taking three simple actions:

1. Give patients advice on self-care instead – you can use the leaflet enclosed or search online for the "TARGET antibiotics toolkit".
2. Consider offering a back-up (delayed) prescription instead – this could be post-dated or collected by the patient a few days later if still necessary.
3. Talk to other prescribers in your practice to ensure they are also acting – data on prescribing is recorded at practice level.

I know that prescribers are aware of this problem and that prescribing is not a simple issue. But there are small changes we can all make that will have a big effect on everyone's health.

Please join us in reducing antibiotic use.

Yours,

**PROFESSOR DAME SALLY C DAVIES  
CHIEF MEDICAL OFFICER**

\* Your practice's prescribing data are available online. Data were taken from <http://www.hscic.gov.uk/gpprescribingdata> and adjusted to take into account patient load and demographics. The 80% figure excludes outliers judged to be created by measurement error and does not include out-of-hours services. For more information on the consequences of antimicrobial resistance, see the UK 5 Year Antimicrobial Resistance Strategy.

## Guide to treat your infection

Patient's name  No antibiotic prescription given

Back-up antibiotic prescription given today  but it should only be collected after  days if needed from: surgery reception  GP  pharmacy

### Why did you not get antibiotics today?

- Colds and most coughs, sinusitis, otitis media, sore throats, ear and other infections often get better without antibiotics, as your body can usually fight these infections on its own.
- The table below shows you how long these illnesses normally last, what you can do to ease your symptoms and when you should go back to your GP or contact NHS services.

Please tick	Illness	Usual length of illness	What you can do to ease the symptoms	When should you (or your child) go back to your GP practice or contact NHS 111, NHS 24, or NHS Direct Wales (dial 0845 46477)?
<input type="checkbox"/>	Middle ear infection	4 days	• Have plenty of rest.	• The first eight of these are potentially signs of serious illness and should be assessed urgently. • Telephone for advice if you are uncertain about the urgency.
<input type="checkbox"/>	Sore throat	7 days	• Drink enough fluids to avoid feeling thirsty.	1. If you develop a severe headache and are vomiting. 2. If your skin is very cold or has a strange colour, or you develop an unusual rash. 3. If you feel confused or have slurred speech or are very drowsy.
<input type="checkbox"/>	Common cold	10 days	• Ask your local pharmacist to recommend medicines to help your pain or other symptoms (or both).	4. If you have difficulty breathing. Signs that suggest breathing problems can include: o breathing quickly o turning blue around the lips and the skin below the mouth o skin between or above the ribs getting sucked or pulled in with every breath.
<input type="checkbox"/>	Sinusitis	18 days	• Fever is a sign the body is fighting the infection and usually gets better by itself in most cases. You can use paracetamol (or ibuprofen) if you or your child is uncomfortable as a result of a fever.	5. If you develop chest pain. 6. If you have difficulty swallowing or are drooling. 7. If you cough up blood. 8. If you are feeling a lot worse.
<input type="checkbox"/>	Cough or bronchitis	21 days	• Other things you can do suggested by GP or nurse.	Less serious signs that can usually wait until the next available GP appointment: 9. If you are not improving by the time given in the 'Usual length of illness' column. 10. Children with middle ear infection: if fluid coming out of their ears or new hearing problems. 11. Other .....
<input type="checkbox"/>	Other infection	.....	.....	.....

### Why you should only take antibiotics when they are needed

- Bacteria can adapt and find ways to survive the effects of an antibiotic. They become 'antibiotic resistant' so that the antibiotic no longer works.
- The more we use antibiotics, the greater the chance that bacteria will become resistant to them so that they no longer work. If we all try to reduce their usage, antibiotics will be more likely to work when we really need them.
- Antibiotic-resistant bacteria don't just infect you, they can spread to other people in close contact with you.
- Some antibiotics can cause reactions such as: rashes, thrush, stomach pains, diarrhoea, or being sick if you drink alcohol and reactions to sunlight.

**Always return any unused antibiotics to a pharmacy for destruction.**




“The great majority (80%) of practices in [NHS Area team] prescribe fewer antibiotics per head than yours”



# Patient-focussed materials + modified TARGET



Leaflets and poster



## Treating your infection

Patients Name .....

Your doctor or nurse recommends that you self-care

Back-up antibiotic prescription issued

**The table below shows you how long these illnesses normally last, what you can do to ease your symptoms.**

Your infection	Usually lasts	How to treat yourself better for these infections, now and next time
<input type="checkbox"/> Middle-ear infection	4 days	<ul style="list-style-type: none"> <li>• Have plenty of rest.</li> <li>• Drink enough fluids to avoid feeling thirsty.</li> <li>• Ask your local pharmacist to recommend medicines to help your symptoms or pain (or both).</li> <li>• Fever is a sign the body is fighting the infection and usually gets better by itself in most cases. You can use paracetamol (or ibuprofen) if you or your child are uncomfortable as a result of a fever.</li> <li>• Other things you can do suggested by GP or nurse:</li> </ul>
<input type="checkbox"/> Sore throat	7 days	
<input type="checkbox"/> Common cold	10 days	
<input type="checkbox"/> Sinusitis	18 days	
<input type="checkbox"/> Cough or bronchitis	21 days	
<input type="checkbox"/> Other infection		

### When should you get help:

Contact your GP practice or contact NHS 111 (England). 1. to 8. are possible signs of serious illness and should be assessed urgently. Phone for advice if you are not sure how urgent the symptoms are.

- If you develop a severe headache and are sick.
- If your skin is very cold or has a strange colour, or you develop an unusual rash.
- If you feel confused or have slurred speech or are very drowsy.
- If you have difficulty breathing. Signs that suggest breathing problems can include:
  - breathing quickly
  - turning blue around the lips and the skin below the mouth
  - skin between or above the ribs getting sucked or pulled in with every breath.
- If you develop chest pain.
- If you have difficulty swallowing or are drooling.
- If you cough up blood.
- If you are feeling a lot worse.

**Less serious signs that can usually wait until the next available GP appointment.**

- If you are not improving by the time given in the 'Usually lasts' column.
- In children with middle-ear infection: if fluid is coming out of their ears or if they have new deafness.
- Other





Back-up antibiotic prescription to be collected after ..... days only if you do not feel better or you feel worse.





Collect from:  GP reception  GP or nurse  Pharmacy

- Colds, most coughs, sinusitis, ear infections, sore throats, and other infections often get better without antibiotics, as your body can usually fight these infections on its own.
- The more we use antibiotics, the greater the chance that bacteria will become resistant to them so that they no longer work on our infections.
- Antibiotics can cause side effects such as rashes, thrush, stomach pains, diarrhoea, reactions to sunlight, other symptoms, or being sick if you drink alcohol with metronidazole.

**Never share antibiotics and always return any unused antibiotics to a pharmacy for safe disposal**

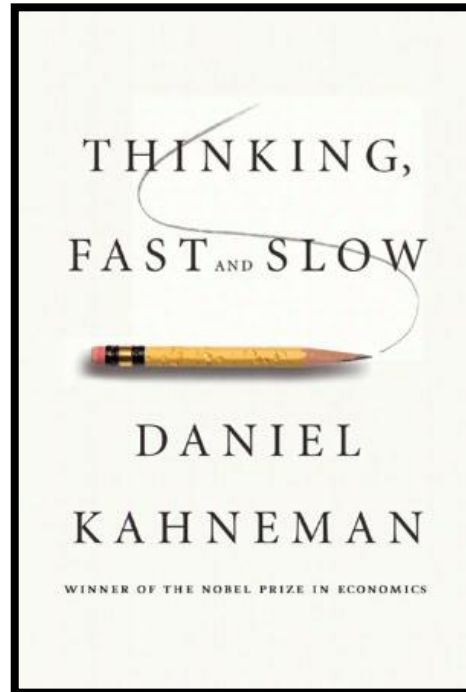
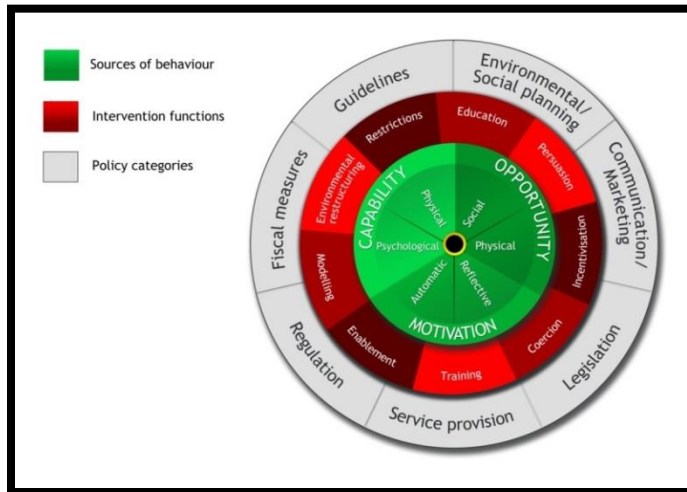
Leaflet developed in collaboration with these professional societies.

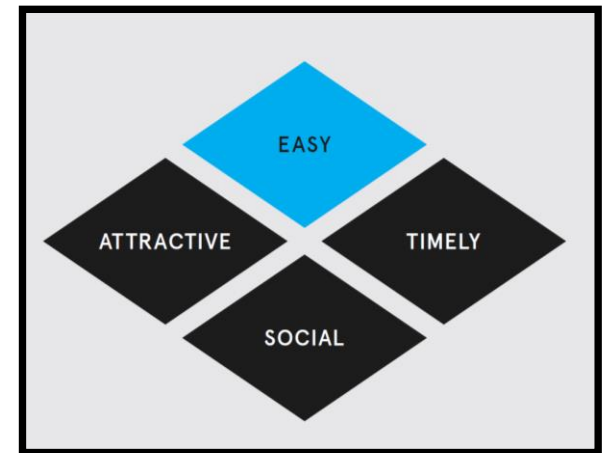





# Want to know more?

Susan Michie et al.: *The Behaviour Change Wheel; Theoretical Domains Framework; BCTv1; COM-B*



Behavioural Insights Team, Cabinet Office, NESTA: *EAST. Four simple ways to apply behavioural insights*



**Comprehensive behavioural analysis & intervention design**

**Excellent summary text**

**Guide on intervention design for policy-makers**