COVID-19:
Changing Behaviour to Reduce Transmission

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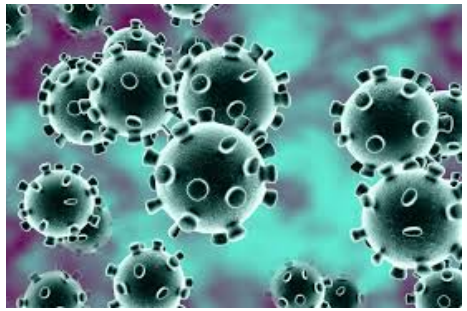


Department of Psychology, University of Santiago, Chile , Jan 2021

COVID-19 Scientific Advisor roles

1. UK Government's behavioural science advisory group to SAGE

2. Independent SAGE
   - set up by previous CSA to complement scientific work of SAGE

3. Served as COVID-19 consultant advisor to WHO Behavioural Insights team

The role of behaviour

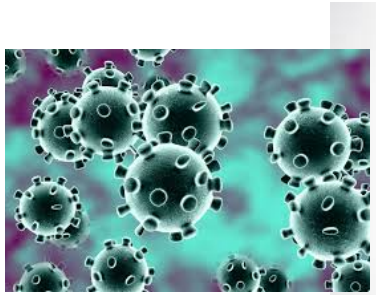
Managing Covid-19 depends on …

… a good understanding of behaviour and behaviour change

… and interventions that reflect that understanding

Human behaviour …

- Is at the heart of causing and transmitting:
  - pandemic infections



- … and at the heart of preventing and getting out of them

Citizens' behaviour and pandemics: key areas

1. **Personal protective behaviours**
   - Distancing, hand and surface hygiene, face coverings, outdoors/ventilation
2. **Test, Trace, Isolate** Systems
   - Having a test, giving contacts, isolating
3. **Restrictions/Circuit breaker/Lockdowns** *(a blunt instrument)*
   - Adherence to rules
4. **Vaccination**
   - Uptake

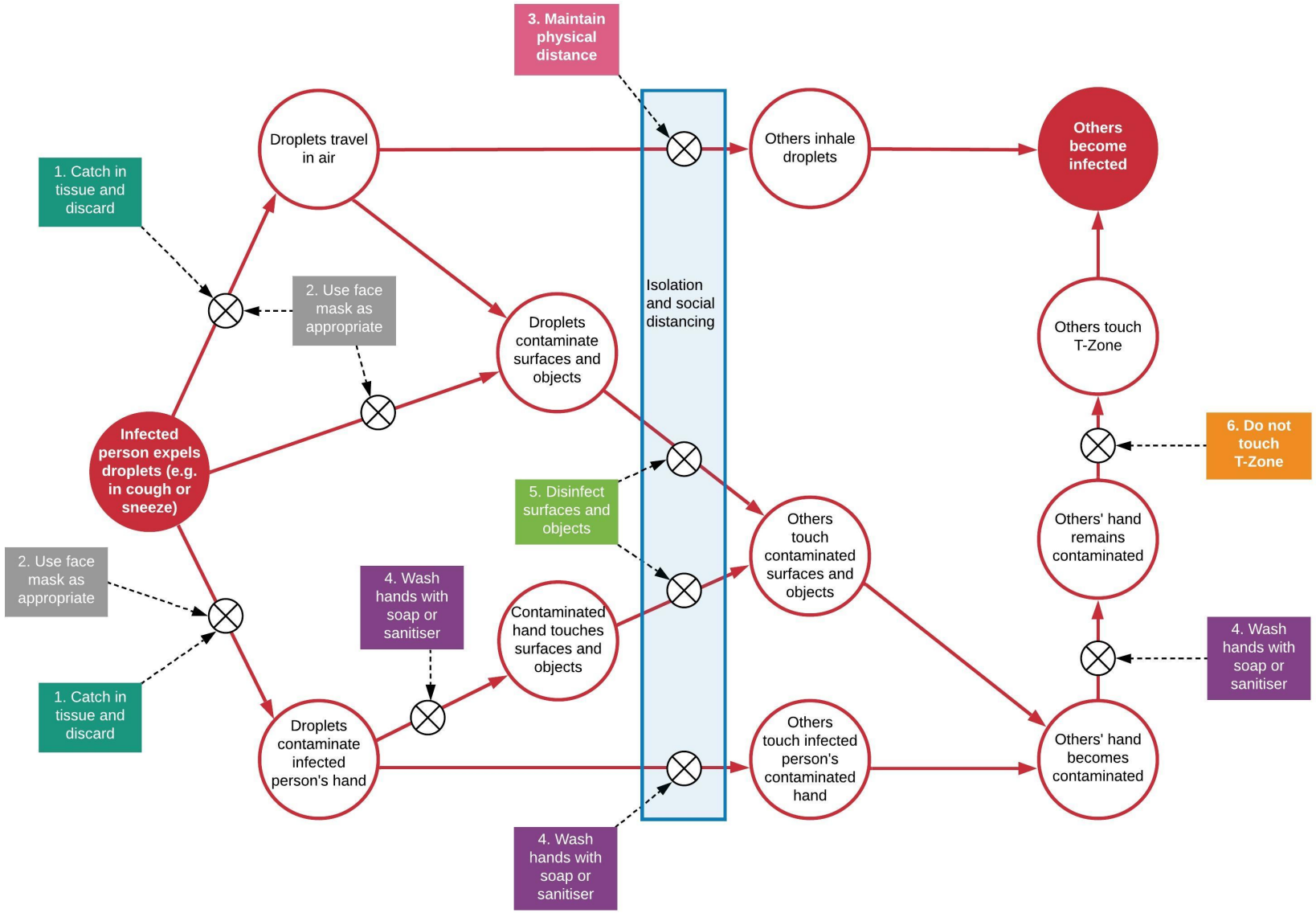
1. Personal Protective Behaviours

- If we can change the following at population level, we would suppress the pandemic:
  1. Disinfecting hands and surfaces
  2. Not touching the T-zone (eyes, nose, mouth)
  3. Using facemasks and tissues appropriately
  4. Social distancing
  5. Ventilating indoor spaces and maximising social interactions outdoors
- We could solve a big problem by changing behaviour at scale
- A diagram of behavioural transmission and behavioural blocks ….

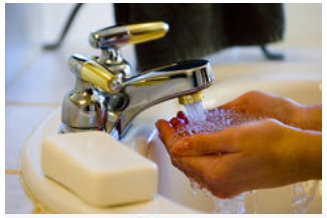
West, Michie, Rubin, Amlot (2020) Applying principles of behaviour change to help limit the spread of COVID-19, *Nature Human Behaviour.* https://www.nature.com/articles/s41562-020-0887-9

Pathways to SARS-CoV-2 transmission: the behaviours and measures to block them

Large circles = stages in the pathway.
Red arrows = routes of transmission.
Crosses in small circles = blocks.
Rectangles = behaviours to block transmission routes (red borders = final transmission route).
Dotted arrows point to the blocking points.



Interventions: different for different personal protective behaviours



1. Washing hands with soap

- Requires access to soap + establishing new rules
- 'If-then' plans to link behaviour with settings e.g. entering buildings, before eating/preparing food

2. Not touching the T-zone (eyes, nose, mouth)

- Requires breaking an automatic habit or responding to urge
- Develop an incompatible behaviour e.g. keep hands below shoulder level or additional behaviour
- If touch, washing hands before and after

3. Use of facemasks and tissues

- Requires accessible facemasks and tissues
- Requires new routines to ensure they are to hand e.g. checking bag/pocket every morning

4. Social distancing

- More complex, depends on other people, neighbourhood and work situations, travel options etc

Motivation or opportunity? Example of getting it wrong 1

- In April in UK, media reports of groups out in the sun: Health Secretary threatened to prevent people going outdoors if crowds continued & some parks were closed
- *Error of understanding*: Did not try to understand nature of the behaviour before suggesting solution
  - Polling data showed despite profile in media, that 99% of population wanted to adhere
- Problem was not one of **motivation**, but of **opportunity**
  - The problem was lack of open spaces
- *Error of intervention*: Threatening to close open spaces was the wrong solution for the wrong problem

2. Test, Trace & Isolate: Motivation or opportunity?

- Test, Trace and Isolate
  - UK estimate of % symptomatic people required to isolate to effectively reduce transmission: **80%**
  - Reported isolation of symptomatic people (in weekly survey of 2000 people): **30%**
  - Reasons: Caring responsibilities outside of the home, needing provisions, work/income

Smith, Potts, Amlôt, Fear, Michie, Rubin (2020) Adherence to the test, trace and isolate system: results from a time series of 21 nationally representative surveys in the UK (the COVID-19 Rapid Survey of Adherence to Interventions and Responses [CORSAIR] study). MedRxiv preprint doi: https://doi.org/10.1101/2020.09.15.20191957

Motivation or opportunity?: demographic differences

RESULTS

- 87% willing to self-isolate - across all income levels
- Those with the lowest household income
  - 3x less likely to be able to self-isolate
  - 6x less likely to be able to work from home

Nationally representative sample of 2000 UK adults

Perceptions and behavioural responses of the general public during the COVID-19 pandemic: A cross-sectional survey of UK Adults

Atchison CJ, Bowman L, Vrinten C, Redd R, Pristera P, Eaton JW, Ward H

Author information

Preprint from **medRxiv**, 03 Apr 2020

DOI: 10.1101/2020.04.01.20050039 PPR: PPR138702

Test, Trace & Isolate: SAGE's advice

- **Capability**

Information: Improve communication to explaining how and when to self-isolate, and why it helps; provide a help-line or SMS service

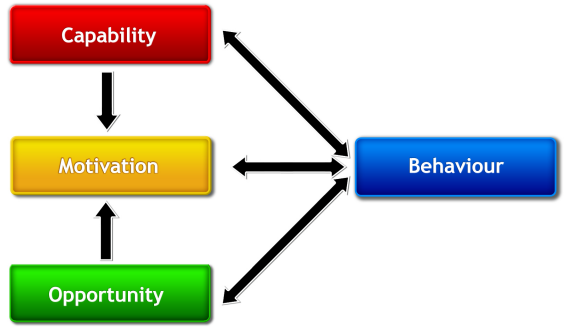
- **Opportunity**

Financial support: to prevent financial hardship

Practical support: e.g. access to food, care for elderly relatives

- **Motivation**

Emotional & social support: digital delivery if needed



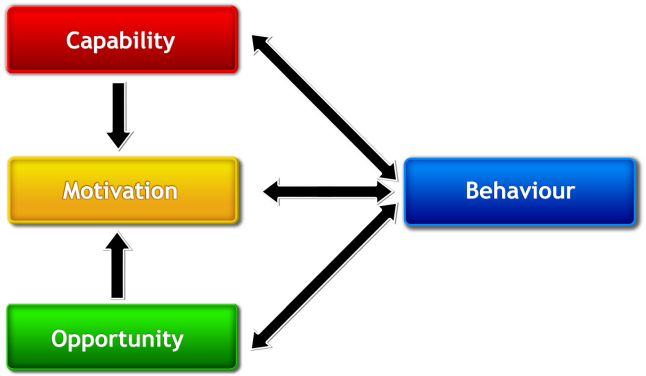
Blueprint published by Independent SAGE https://www.independentsage.org/blueprint-for-rebuilding-find-test-trace-isolate-and-support/

Test, Trace & Isolate: the UK Government response

- If on low income, **£500 for 14 days** (< minimum wage)
- If don't adhere up to **£10,000 fine**
- Unintended consequences?
  - Concern that **fewer people get tested, give contacts and download app**
- **Again,**
  - Analysis of problem is wrong (it is opportunity more than motivation)
  - Solution (even if the problem were motivation) wrong
    - Police: 4 E's – Engage, Explain, Encourage. Enforce only as last resort

3. Restrictions/Circuit breaker/Lockdowns

- Adherence depends on:
  - **Capability**
    - Knowledge of what to do – (frequent changes, inconsistencies)
  - **Opportunity**
    - Ensure sufficient practical and financial support so people aren't driven out of the home to get money
    - Consider unintended consequences e.g. 10pm pub/restaurant curfew
    - Maximise low-risk opportunities e.g. outdoor education & fitness classes
  - **Motivation**
    - Trust in Government and feeling of collective solidarity – don't blame or punish; provide equitable support; role models
    - Understanding rationale for restrictions – clear, concise, consistent explanations, accessible to all



4. Vaccinations

World Health Organization

BEHAVIOURAL CONSIDERATIONS FOR

ACCEPTANCE AND UPTAKE OF COVID-19 VACCINES

WHO TECHNICAL ADVISORY GROUP ON BEHAVIOURAL INSIGHTS AND SCIENCES FOR HEALTH

THE ROYAL SOCIETY

The British Academy

21 OCTOBER 2020

COVID-19 vaccine deployment:
Behaviour, ethics, misinformation and policy strategies

This rapid review of science of the behavioural aspects of vaccine uptake and misinformation is from the Royal Society and the British Academy to assist in the understanding of COVID-19.

Behavioural problems

1. Low uptake esp in some groups e.g. black and ethnic minority groups

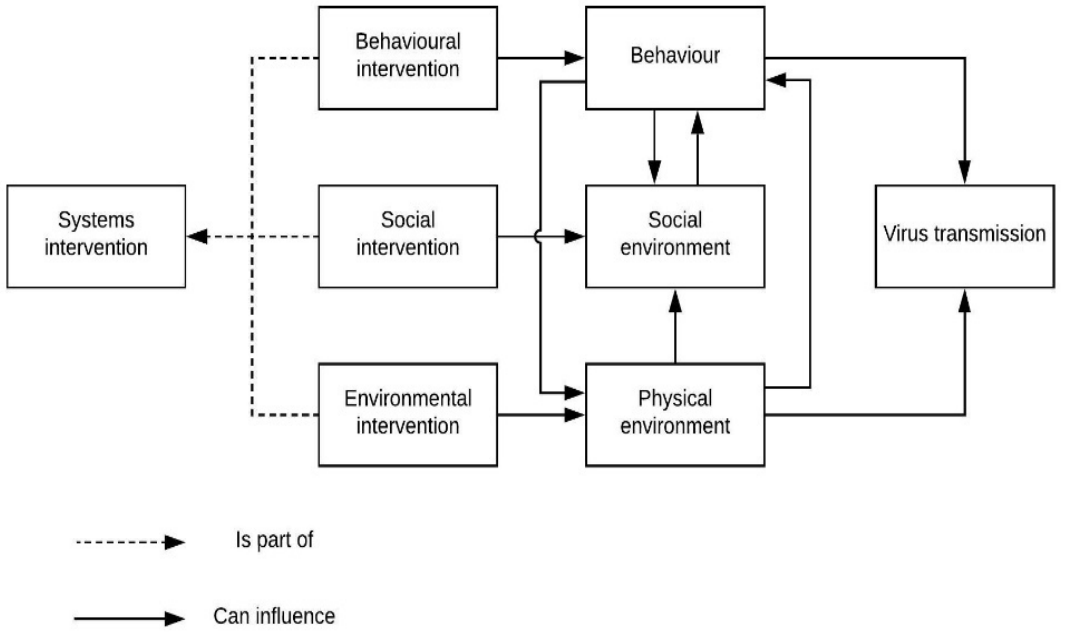
2. Reduced adherence to rules and guidance about personal protective behaviours
    1. SAGE/SPI-B report
    - SPI-B: Possible impact of the COVID-19 vaccination programme on adherence to rules and guidance about personal protective behaviours aimed at preventing spread of the virus - 17 December 2020

Interventions needed are ….

Editorials

Behavioural, environmental, social, and systems interventions against covid-19

BMJ 2020 ; 370 doi: https://doi.org/10.1136/bmj.m2982 (Published 28 July 2020)
Cite this as: *BMJ* 2020;370:m2982



The importance of BESSIs….

- This is our only way out of the pandemic, with or without a vaccine
- QUESTION 1: How much of $3.3B global funding for COVID research spent on BESSIs vs pharmacological interventions?

- ANSWER: **3-4%** (Research Investments in Global Health study; https://www.the-ciru.com/resin

- QUESTION 2: How many *registered* BESSI vs pharmacological trials, and how many *conducted* BESSI vs pharmacological trials?

Behavioural, Environmental, Social and Systems Interventions (for pandemic preparedness)

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Email: Contact us

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Suppression of epidemics cannot rely solely on the hope of effective vaccines and/or medical treatment: we need a "Plan B" of effective behavioural, environmental, social and systems interventions (BESSI) to reduce transmission.

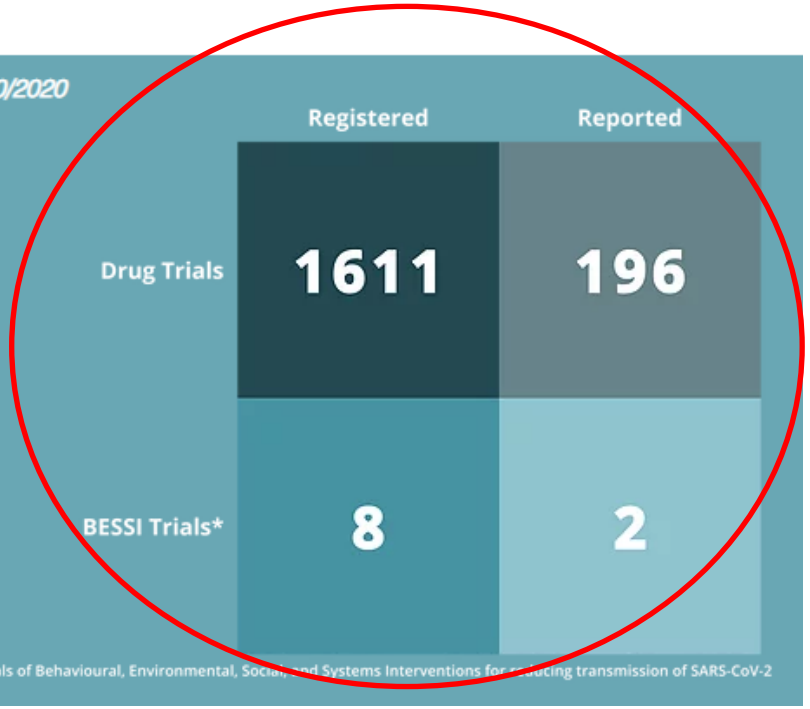
The BESSI Collaboration aim to provide information about planned and completed research into reducing SARS-CoV-2 transmission, and facilitate both novel and replication research.

Weekly score card of controlled trials*

es of research are needed; the scorecard below
n trials as one snapshot of current research.
ved from **Epistomonikas LOVE website** using the
e, education and social distancing question
COVID-19 population filter.

https://www.bessi-collab.net/

Updated: 16/10/2020



BESSI collaboration: www.bessi-collab.net

BESSI Webinar Series 1

Our fifth webinar in Series 1 will focus on the international success during COVID. The session will be made up of short presentations with time for discussion.

Webinar 5: Learning from international success during COVID
Date: Thursday, 26 November 2020
Time: 11am-12pm UK

Follow us on twitter:
@Bessi_Collab

SPEAKERS : WEBINAR 5

Prof Ricardo Bernardi
Psychiatrist, PhD (Psychology) MasterDegree in Psychoanalysis; Emeritus Professor of the National (Udelar) School of Medicine.

Ricardo is also a Member of the Uruguayan National Academy of Medicine, Honorary Member of the Uruguayan Psychoanalytical Association, Honorary Member of the Uruguayan Society of Psychiatry; Member of the Honorary Scientific Advisory Group (GACH) appointed by the Uruguayan President to address the Covid-19 pandemic.

Prof Dr Henry Cohen
Health Coordinator of the Scientific Advisory Group (GACH) appointed by the Uruguayan President to address the Covid-19 pandemic

Henry is also Professor of Gastroenterology, Director ECHO Project Uruguay, Former President of the World Gastroenterology Organisation and of the National Academy of Medicine.

Ricardo and Henry will address Uruguay's strategy during the Covid-19 pandemic.

Melinda Frost
Technical Officer: Risk Communication and Community High Impact Events Preparedness - Global Infectious Hazards Preparedness
Health Emergencies, World Health Organization – Geneva

Melinda Frost is currently the 'Translate Science' team lead - Infodemics Pillar for the World Health Organization's response to COVID-19. Prior to COVID-19, Melinda led risk communication and community engagement capacity building for WHO under the Pandemic Influenza Preparedness Framework. She directly supported more than 40 countries in building their emergency RCCE preparedness and response capabilities under the International Health Regulations.

Her talk: COVID-19 continues to test the public health response at global, national and community levels. As countries see second waves of the disease and reinitiate protective social measures and physical restrictions, individual behaviors will be more critical than ever. Novel and more nuanced approaches are needed. Hear how WHO is integrating social and behavioral science to support individuals, families and communities to manage personal risk in their daily lives.

Register at www.bessi-collab.net/videos

Selection of articles re. COVID-19 and behaviour

- West, Michie, Rubin, Amlot (2020) Applying principles of behaviour change to help limit the spread of COVID-19, *Nature Human Behaviour.* https://www.nature.com/articles/s41562-020-0887-9
- Michie S and West R (2020) Behavioural, environmental, social, and systems interventions against covid-19. *BMJ* Editorials 2020; 370 doi: https://doi.org/10.1136/bmj.m2982. https://www.bmj.com/content/370/bmj.m2982.full
- Smith, Potts, Amlôt, Fear, Michie, Rubin (2020) Adherence to the test, trace and isolate system: results from a time series of 21 nationally representative surveys in the UK (the COVID-19 Rapid Survey of Adherence to Interventions and Responses [CORSAIR] study). MedRxiv preprint doi: https://doi.org/10.1101/2020.09.15.20191957
- Michie S, West R and Harvey N. (2020) The concept of "fatigue" in tackling covid-19. *BMJ Opinion,* October. https://blogs.bmj.com/bmj/2020/10/26/the-concept-of-fatigue-in-tackling-covid-19/
- West R, Michie S, Amlot R, Rubin R (2020) Don't touch the T-Zone—how to block a key pathway to infection with SARS-CoV-2.*BMJ Opinion*, April 3rd. https://blogs.bmj.com/bmj/2020/04/03/dont-touch-the-t-zone-how-to-block-a-key-pathway-to-infection-with-sars-cov-2/
- Yardley L, Amlot R, Rice C, Robin C, Michie S (2020) How can we involve communities in managing the covid-19 pandemic? *BMJ Opinion*, March 17th. https://blogs.bmj.com/bmj/2020/03/17/how-can-we-involve-communities-in-managing-the-covid-19-pandemic/
- Michie S, West R, Amlot R, Rubin J. (2020) Slowing down the covid-19 outbreak: changing behaviour by understanding it. *BMJ Opinion*, March 11th. https://blogs.bmj.com/bmj/2020/03/11/slowing-down-the-covid-19-outbreak-changing-behaviour-by-understanding-it/
- Smith LE, Yardley L, Michie S, Rubin J. (2020) Should we wave goodbye to the handshake? *BMJ Opinion*, March 10th. https://blogs.bmj.com/bmj/2020/03/10/should-we-wave-goodbye-to-the-handshake/
- Michie S, West R & Amlot R (2020). Behavioural strategies for reducing covid-19 transmission in the general population. *BMJ Opinion*, March 3rd. https://blogs.bmj.com/bmj/2020/03/03/behavioural-strategies-for-reducing-covid-19-transmission-in-the-general-population/
- Michie S, Rubin GJ & Amlot R (2020). Behavioural science must be at the heart of the public health response to covid-19. *BMJ Opinion, February 28th.* https://blogs.bmj.com/bmj/2020/02/28/behavioural-science-must-be-at-the-heart-of-the-public-health-response-to-covid-19/