

Positive strategies for sustaining adherence to infection control behaviours

Background

- This paper addresses a series of questions posed by CO concerning how to maintain long-term adherence to infection control measures and how to assess adherence
- Promoting adherence to a range of infection control behaviours is addressed in many other SPI-B papers^{1,2,3,4,5}. To avoid overlap, this paper does not consider enforcement, adherence to Test, Trace and Isolate⁶, or basic principles of messaging.
- This paper focuses specifically on current issues relevant to understanding and maintaining adherence to infection control behaviours in the community. In particular, this paper suggests that more positive approaches to sustaining adherence are needed, avoiding blame and focusing on enabling members of the public to better engage with adherence to infection control (rather than enforcement of compliance to rules).

Key points

1. **Promote and support positive alternatives whenever activities that people value must be restricted**
2. **Provide positive feedback about a) the great efforts people are making to control the virus, b) the success of these efforts in helping to reduce infection rates and c) the benefits if everyone can increase these efforts**
3. **Emphasise that everyone has an important part to play in keeping infection levels low and avoid singling out particular activities, settings or people**
4. **Help people change their environments and form new social customs to prompt and sustain habits that will reduce the spread of infection**
5. **Help members of the public to identify situations where they find it difficult to avoid risky behaviour and work with them to create acceptable solutions**
6. **When promoting and assessing adherence to infection control, focus on whether and how people are trying to reduce infection risk, rather than 'compliance' with 'rules'**
7. **Target more intensive information and practical support for adherence to the specific behaviours, settings and populations that need it**

Details

1. Promote and support positive alternatives whenever activities that people value must be restricted

When people are forced to stop or suppress a valued behaviour (e.g. social mixing) this can lead to negative emotions (anger, depression) and sometimes the suppressed behaviour may be replaced by another undesirable behaviour (e.g. conflict with those imposing the behavioural restrictions; social mixing at locations that are less 'covid secure')⁷. Promoting and supporting positive alternative behaviours may help to reduce these problems, by providing an immediate alternative source of enjoyment to reduce emotional distress⁸. When introducing unavoidable restrictions on behaviour to reduce infection transmission it may therefore be helpful to suggest and positively encourage less risky alternative behaviour⁹. For example, whenever announcing that a particular form of social interaction needs to be avoided (e.g. indoor mixing at university, hospitality settings or the home) then actively propose and support less risky forms of mixing. These could include carrying out the activity:

- a) outdoors, socially distanced (e.g. fireworks or doorstep celebrations to replace indoor celebrations);
- b) online (e.g. actively facilitating peer interaction between staff working from home or quarantining students);
- c) in a different way (e.g. greeting with hand over heart gesture to replace embrace);
- d) at a later date (e.g. planning a summer family get together to replace meeting at Christmas).

2. Provide positive feedback about a) the great efforts people are making to control the virus, b) the success of these efforts in helping to reduce infection rates and c) the benefits if everyone can increase these efforts

Focusing on failure leads to reduced self-confidence and lower motivation to try, whereas positive feedback about coping efforts leads to further effort¹⁰, particularly if combined with feedback that further effort is needed to reach the desired goal¹¹. More positive messaging about the positive impact of the many ways in which members of the public are acting safely should help to increase confidence in the value of these efforts and the ability of everyone to make them. There is growing concern among members of the public that their considerable efforts to help control the spread of the virus have had no success. It is important to emphasise that the efforts the public have made have already had success in keeping infection rates much lower than they would have been while going back to work and other activities – but that we need to build on and extend these efforts in order to both save lives and avoid lockdown.

3. Emphasise that everyone has an important part to play in keeping infection levels low in all settings and avoid singling out particular activities, settings or people

Avoid appearing to blame members of the public or particular subgroups for failing to implement infection control sufficiently as this will be perceived as (and may well be) unfair and is likely to lead to loss of cooperation among people with good intentions but imperfect adherence (who form a large proportion of the public)^{12 13}. Drawing attention to non-adherence by a minority of people also undermines the social norms for adherence. If the cause of infection is blamed on particular activities (e.g. partying, protesting), settings (e.g. homes, geographical locations) or people (e.g. students) this causes division, resentment and stigma, and people who do not fit this profile will take less responsibility for infection control.

It is important to remind people of the need for infection control in everyday settings (e.g. the home, or when mixing with people they know well) as people often feel safer and so relax their guard in spaces which are familiar and inhabited by people they are close to. However, focusing attention on particular settings where infections have been shown to occur is problematic because it is easier to track infection spread in some settings (e.g. home, work) which makes it seem as if other settings are less risky than they may really be. Infection patterns rapidly change, and so it is also important not to focus attention only on the populations, settings and activities that seem most relevant at one particular point in time.

4. Help people change their environments and form new social customs to prompt and sustain habits that will reduce the spread of infection

Habit is one of the most powerful influences on behaviour; habitual behaviour is automatically cued by the environments and situations in which it has previously occurred^{14,15}. Behaviour is also strongly influenced by the behaviour of people around us or the social groups we identify with. People need help to replace familiar habits for social interaction (e.g. sitting or standing close together, hugging) with lower risk habits¹⁶. It is important to root these new habits in accepted values and norms since people are generally resistant to attempts to change group culture. For example, it is helpful to explain that we are not showing less care for others by avoiding hugging, but rather that we express our care in a time of pandemic by not endangering the health of loved ones/fellow group members by hugging them¹⁷.

Environmental restructuring such as ground markings to support social distancing is helpful to prompt habitual behaviour but could be used more widely – for example, putting stickers on windows to prompt regular airing of spaces, or providing increased socially distanced seating to replace benches. It is also helpful to encourage people as well as organisations to restructure their own environments to prompt low risk behaviour – for example, providing sanitising facilities at the entrance to their home, organising seating in the home to support social distancing from visitors, or putting masks in all their coats and bags so there will always be one when they go out. Health promotion campaigns can support new social practices for communicating caring and respect (e.g. mask-wearing to protect workers) or sympathy and affection (e.g. the hand over heart gesture).

5. Help members of the public to identify situations where they find it difficult to avoid risky behaviour and work with them to create acceptable solutions

Research into supporting other difficult long-term behavioural restrictions (e.g. dieting, avoiding alcohol) has highlighted the importance of helping people anticipate and manage difficult situations (such as family visits or celebrations, or being asked to quarantine)^{18,19}. An effective way of helping people adhere to good intentions is to encourage them to form 'if-then' plans that will be prompted by a particular context – for example, 'If I meet a friend then I will make a hand over heart gesture right away as a friendly way to remind us both to keep our distance'; 'If I am going to eat a snack using my hands then I will wash my hands first'.

To ensure that a non-intentional 'lapse' in behaviour does not lead to giving up efforts to change behaviour it is vital not to encourage blame, which leads to denial and resistance. Instead, acknowledge that lapses will occur and that as long as they are only occasional or minor they do not undermine the benefits of successfully changing behaviour most of the time, or as much as possible²⁰. For example, if people find it

emotionally or practically impossible to avoid making contact with someone outside their household then they should be encouraged to make meeting that person as safe as possible, for example by self-quarantining before meeting (reducing contact with other people as far as possible for 14 days) and avoiding close and prolonged contact when meeting.

The concept of 'fatigue' employed in the WHO report 'Pandemic Fatigue: Reinvigorating the Public to Prevent COVID-19'²¹ is too general to be helpful as this term groups together many very different reasons for non-adherence, which vary across different behaviours, populations and contexts. However, the elements of the report that address the question of how to 're-invigorate' adherence are mainly appropriate, useful and consistent with previous SPI-B advice and with this paper. These elements include the key strategies (Understand people; Engage people as part of the solution; Allow people to live their lives, but reduce risk; Acknowledge the hardship people experience), the cross-cutting principles (Transparency; Fairness; Consistency; Coordination; Predictability) and the suggested concrete actions.

6. When promoting and assessing adherence to infection control, focus on whether and how people are trying to reduce infection risk, rather than 'compliance' with 'rules'

Autonomous motivation (self-directed engagement with the activity in order to achieve valued goals) is a very important influence on behaviour, and should be harnessed to support 'extrinsic motivation' (obeying rules). This was accomplished effectively by the 'Stay Home, Save Lives, Protect the NHS' message, which links public efforts to control the virus directly to very high value goals shared by everyone. Autonomous motivation is not promoted by telling people to comply with rules, but can be promoted by highlighting the benefits of keeping infection levels low in order to prevent avoidable Covid deaths, maintaining NHS capacity for treating other health problems, and allowing important activities to continue safely (e.g. work, school, small meetings with family and friends).

Evidence from CO and other surveys indicates that most people of all ages report trying to follow the rules, but there is considerable confusion about what they are and the rationale for them. The rules issued by different authorities (e.g. government, workplaces, educational settings) are difficult to follow because they vary across places and times, and may be inconsistent. Shifting the focus from compliance with rules to assessing understanding and implementation of specific risk reduction behaviours can provide a useful indication of engagement with levels and types of behaviour likely to affect transmission.

Asking about specific behaviours also reduces the risk of eliciting 'socially desirable' responses that overestimate adherence. For example, research by several teams shows that when people are asked if they followed government advice to stay at home they often reply that they did, but if asked if they left the home for reasons they believe to be socially acceptable (e.g. essential shopping) they reveal that they did so¹¹. By focusing on risk reduction, it is possible to appreciate, support and build on the efforts people may make to reduce risk when following the rules precisely may not seem appropriate or feasible to them. For example, although younger age is much the strongest predictor of reporting not fully following government advice, 80% of young adults report mainly following the advice²², suggesting that levels of intentional

substantial non-adherence are low even in this age group.

7. Target more intensive information and practical support for adherence to the specific behaviours, settings and populations that need it

Research on non-adherence in many contexts has shown that it is often unintentional or partial, and is frequently due to lack of information or emotional or practical barriers rather than lack of motivation²³. Broad self-report measures of adherence (e.g. using face-masks, complying with government recommendations or 'Covid-secure' organisational policy) can only assess intentional, self-disclosed and comprehensive non-engagement with behaviour. Observational, qualitative and participatory studies can provide more objective or fine-grained detail about risky departures from full implementation (e.g. contexts in which masks are not worn, elements of implementing 'Covid-secure' guidance that workplaces may have been overlooked) and the reasons for non-adherence to particular measures in particular contexts.

Once the specific knowledge gaps and barriers have been identified, participatory co-design can be used to develop acceptable and feasible solutions, effective support for them and persuasive new messages. For example, many people do not realise that aerosol virus can collect through prolonged sharing of indoor spaces; conveying this knowledge would help people to understand the reason for restricting household mixing as well as the importance of ventilation. There is also evidence of infection transmission within the home; advice on how to improve adherence to infection control in the home is given in a previous paper²⁴.

Appendix: Supporting positive alternative activities

General principles

When suggesting or supporting alternative activities:

1. Suggest activities likely to be enjoyable and to benefit mental health. These include activities involving physical activity, social interaction, outdoor activity, creativity, and helping others. These activities will be especially important to allow when restriction of other activity is prolonged and extensive, unless there is evidence that they are not being carried out safely.
2. Provide a range of options suitable for people in different circumstances and with different preferences
3. Use co-design with diverse people and communities to ensure that options suggested are acceptable, accessible, affordable and feasible for them
4. Ensure that activities suggested can be done safely without increasing infection risk. For example, to ensure that outdoor activities do not attract crowds and that all social interactions are distanced they should be small scale and advertised only through local community networks.

Example activity suggestions

- Organise volunteer activities, such as providing enhanced social and practical support for people self-isolating, quarantining or shielding (e.g. daily online/phone/doorstep contact, shopping, dog walking, gardening)
- Support local organisation of regular distanced, non-contact small group outdoor physical activity, such as walks, fun runs, throwing competitions (e.g. frisbee), Tai Chi, gym sessions
- Encourage small-scale, socially distanced commercial and non-commercial outdoor hospitality, such as doorstep coffee hour, pop up food and hot drink stalls or tables
- Engage local artists in providing outdoor exhibitions, performances, classes or attractions
- Sponsor and support engagement with online groups, such as the WhatsApp street groups formed in the lockdown; online quiz nights or bingo; music, photography, reading, film or theatre clubs, online physical activity classes
- Challenge the community to create weekly themed window displays (e.g. animals, space ships) for children to find and photograph
- Organise or encourage online buddy systems for isolating people to keep in contact and share experiences daily
- Consider opportunities for drive-in events at car parks, as these will be suitable for families and people with disabilities, e.g. drive-in movies, concerts, or screened sports events
- Encourage communities and organisations to organise small scale outdoor entertainments, e.g. cookery competitions, fun dog shows, skate boarding or aerial drone displays, fireworks

¹ Michie S, West R, Rogers MB, Bonell C, Rubin GJ, Amlôt R. [Reducing SARS-CoV-2 transmission in the UK: A behavioural science approach to identifying options for increasing adherence to social distancing and shielding vulnerable people](#). *British Journal of Health Psychology* 2020; doi: 10.1111/bjhp.12428

-
- ² Bonell C, Michie S, Reicher S, West R, Bear L, Yardley L, Curtis V, Amlôt R, Rubin GJ. [Harnessing behavioural science in public health campaigns to maintain 'social distancing' in response to the COVID-19 pandemic: key principles](#). *Journal of Epidemiology and Community Health* 2020; doi: 10.1136/jech-2020-214290
- ³ SPI-B. [Theory and evidence base for initial SPI-B recommendations for phased changes in activity restrictions](#). April 2020.
- ⁴ SPI-B. [Public Health Messaging for Communities from Different Cultural Backgrounds](#). July 2020.
- ⁵ SPI-B. Principles for co-production of guidance relating to the control of COVID-19. July 2020. Available from the SPI-B secretariat.
- ⁶ SPI-B. [The impact of financial and other targeted support on rates of self-isolation or quarantine](#). September 2020.
- ⁷ Polivy J. [The Effects of Behavioral Inhibition: Integrating Internal Cues, Cognition, Behavior, and Affect](#). *Psychological Inquiry*, vol. 9, no. 3, 1998.
- ⁸ Kwasnicka D, Dombrowski SU, White M, Sniehotta F. [Theoretical explanations for maintenance of behaviour change: a systematic review of behaviour theories](#), *Health Psychology Review*, 10:3, 2016; doi: 10.1080/17437199.2016.1151372
- ⁹ Patey AM, Hurt CS, Grimshaw JM, Francis JJ. [Changing behaviour 'more or less'—do theories of behaviour inform strategies for implementation and de-implementation? A critical interpretive synthesis](#). *Implementation Sci* 13, 134, 2018; doi: 10.1186/s13012-018-0826-6
- ¹⁰ Strecher VJ, Vellis BM, Becker MH, and Rosenstock IM. [The Role of Self-Efficacy in Achieving Health Behavior Change](#), *Health Education Quarterly* 13, no. 1, 1986; doi: 10.1177/109019818601300108
- ¹¹ Fishbach A, Eyal T, Finkelstein SR. [How positive and negative feedback motivate goal pursuit](#). *Social and Personality Psychology Compass*, 4(8), 2010; doi: 10.1111/j.1751-9004.2010.00285.x
- ¹² Bonell, C., et al., "Dark logic" – theorising the harmful consequences of public health interventions. *Journal of Epidemiology and Community Health*, 2015. 69(1): p. 95-8.
- ¹³ L.E. Smith, R. Amlôt, H. Lambert, I. Oliver, C. Robin, L. Yardley, G.J. Rubin, [Factors associated with adherence to self-isolation and lockdown measures in the UK: a cross-sectional survey](#), *Public Health*, Volume 187, 2020, Pages 41-52, ISSN 0033-3506, <https://doi.org/10.1016/j.puhe.2020.07.024>.
- ¹⁴ Hagger MS. [Habit and physical activity: Theoretical advances, practical implications, and agenda for future research](#). *Psychology of Sport and Exercise* 42, 2019; doi: 10.1016/j.psychsport.2018.12.007
- ¹⁵ Gardner B, Lally P, Wardle J. [Making health habitual: the psychology of 'habit-formation' and general practice](#), *British Journal of General Practice* vol. 62,605, 2012; doi: 10.3399/bjgp12X659466
- ¹⁶ Bargh JA, Williams EL. [The Automaticity of Social Life](#). *Current directions in psychological science* vol. 15,1, 2006; doi:10.1111/j.0963-7214.2006.00395.x
- ¹⁷ Turner, J.C. (1990) *Social Influence*. Milton Keynes: Open University Press
- ¹⁸ Lawlor ER, Hughes CA, Duschinsky R, Pountain GD, Hill AJ, Griffin SJ, Ahern AL. [Cognitive and behavioural strategies employed to overcome "lapses" and prevent "relapse" among weight-loss maintainers and regainers: A qualitative study](#). *Clinical Obesity* 10:e12395, 2020; doi: 10.1111/cob.12395
- ¹⁹ Mason F, Farley A, Pallan M, Sitch A, Easter C, Daley AJ. [Effectiveness of a brief behavioural intervention to prevent weight gain over the Christmas holiday period: randomised controlled trial](#) *BMJ* 363 :k4867, 2018; doi: 10.1136/bmj.k4867
- ²⁰ Larimer ME, Palmer RS, Marlatt GA. [Relapse prevention. An overview of Marlatt's cognitive-behavioral model](#). *Alcohol Res Health*, 23(2), 1999.

²¹ [Pandemic fatigue – reinvigorating the public to prevent COVID-19. Policy framework for supporting pandemic prevention and management](#). Copenhagen: WHO Regional Office for Europe; 2020. Licence: CC BY-NC-SA 3.0 IGO

²² Fancourt D, Bu F, WanMak H, Steptoe A. [Covid-19 Social Study: Results Release 22](#), UCL, October 2020.

²³ DiMatteo MR, Haskard-Zolnierok KB, Martin LR. [Improving patient adherence: a three-factor model to guide practice](#), *Health Psychology Review*, 6:1, 2012; doi: 10.1080/17437199.2010.537592

²⁴ SPI-B/EMG: [COVID-19 housing impacts – evidence review](#), September 2020.