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Pandemic and beyond - using behavioural science to inform policy and practice

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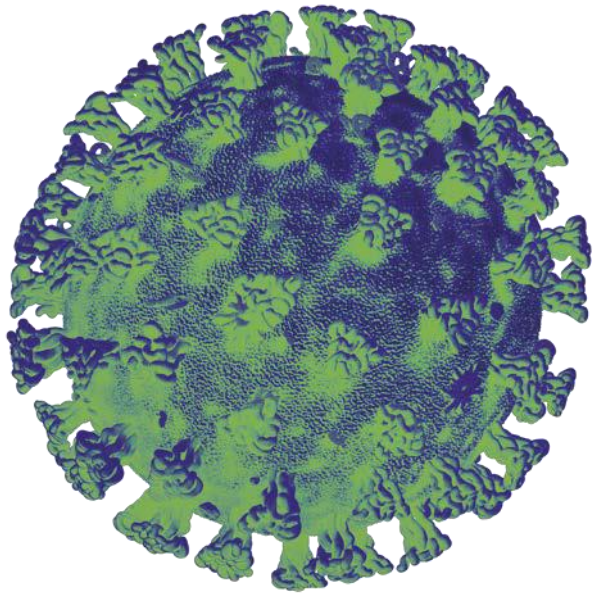

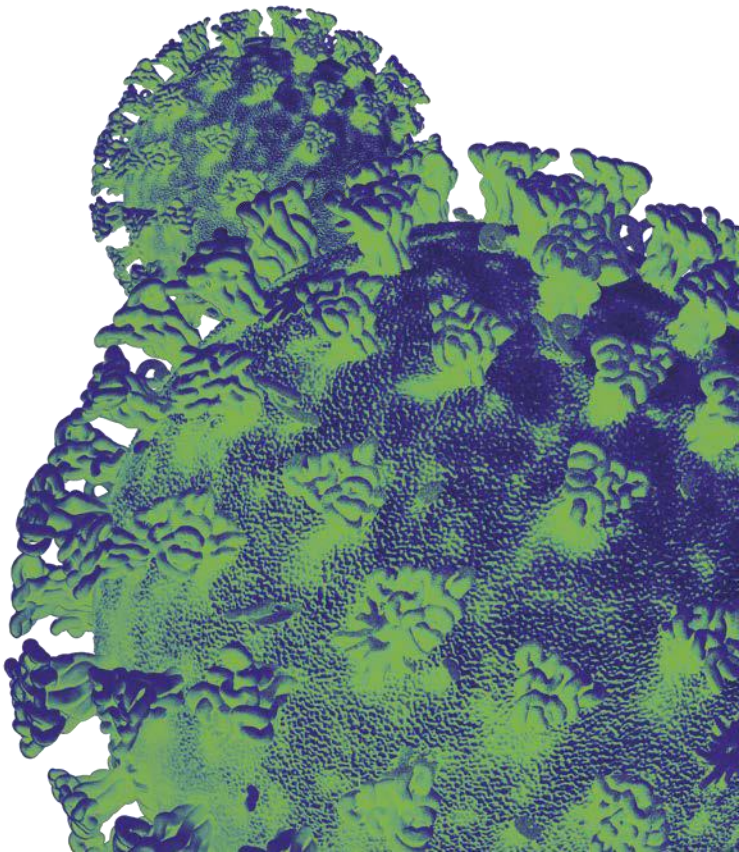

Pandemic and beyond- using behavioural science to inform policy and practice

Risk Communication and Behavioural Insights Sub-Group of TAG, January 2021

Executive Summary

- **REINFORCING PROTECTIVE BEHAVIOURS** - reinforcing the importance of following key personal protective behaviours such as social distancing, hand washing, wearing a face covering when required, respiratory hygiene and household ventilation is critical in reducing the number of COVID-19 infections. Ensuring approaches encouraging these core protective behaviours are underpinned by behavioural science remains key. This requires an acknowledgment that some behaviour is driven by non-conscious processes, limited by social, economic or emotional capabilities and may go against good intentions.
- **LONGER-TERM BENEFITS OF PROTECTIVE BEHAVIOURS** - irrespective of vaccine efficacy, long-term routine adoption of certain core protective behaviours such as handwashing will increase protection for individuals and the population for COVID-19 and other infectious diseases, including influenza.
- **UNDERSTANDING THE INTENTION-ACTION GAP** - as the pandemic has evolved self-reported adherence to guidance has remained broadly high but with some areas of uncertainty and/or concern including a potential gap between intention and action and an over- reporting in the media of where lapses occur in a small number of individuals.
- **SUPPORT TO ENCOURAGE TEST SEEKING, IDENTIFICATION OF CONTACTS AND SELF-ISOLATION IS CRITICAL** - core protective behaviours are a key response to the current pandemic and also offer a long-term sustainable solution to the likely endemic future of COVID-19 but will only do so alongside an effective Test, Trace, Protect system. It is essential that structural inequalities and existing barriers are addressed through the provision of adequate financial, practical and emotional support and information necessary to encourage test-seeking behaviour, identification of contacts and self-isolation.
- **HOUSEHOLDS ARE AN IMPORTANT BUT NOT INEVITABLE SETTING FOR TRANSMISSION** – it is necessary to redress the balance towards policies and messaging focused on transmission within and between households (rather than outdoors), including the practical steps that can be taken to avoid transmission within households.
- **MESSAGING TO REINFORCE THE EVIDENCE THAT THE MAJORITY FOLLOW GUIDANCE** - given the high levels of adherence across the population, positive messaging to reinforce this norm is recommended, as is the use of inspiring stories of adherence. Messaging that highlights non-adherence or that could be perceived as blaming the population for current rates of transmission will likely undermine such efforts.
- **CONSIDER HOW BEST TO COMMUNICATE UNCERTAINTY WITH REGARD TO THE MEDIUM-LONG TERM PICTURE** - acknowledge uncertainty when communicating about the future, including with regards to vaccination, alongside providing information about what is being done to resolve uncertainties.

- **STRATEGIC APPROACH TO RISK COMMUNICATION** - knowledge of how risk is formulated is fundamental to developing approaches and content for communication interventions to support making protective decisions and undertaking protective behaviours. It forms the basis to then design, proof-test messages, communicate and evaluate impact. Such an approach (proactive and evidence informed) requires surge capacity that cannot be easily developed in an emergency. Developing ongoing behavioural science capacity around long-term risk communication and other research and policy support outside of emergencies is necessary. Establishing integrated working arrangements with behavioural scientists, communications, policy and service delivery teams, for example, would be one practical step that could be taken.

1. Purpose of this paper

This paper updates work published in November examining behavioural insights to support policy in Wales following the introduction of the firebreak to reduce levels of COVID-19 infection in Wales[1]. While infection rates declined post-firebreak as anticipated, much has changed since then - from rising rates of infection, thought likely to be linked to the emergence of the more transmissible viral variant VOC-202012/01[2] to the realistic prospect of mass rollout to the population of multiple COVID-19 vaccines. These developments have major implications for the development of policy and communication strategies. For example:

- what do VOC-202012/01 and other potential variants mean for existing protective behaviours and measures?
- what thought needs to be given to phased lifting of restrictions?
- how will the promise of vaccination and rollout itself impact on intentions and behaviours while restrictions are still necessary?
- what can the population expect to see in the coming months given continued uncertainty?
- what behaviours might Government wish to promote as being inherently beneficial for reducing future winter pressures, such as those that could reduce rates of influenza in the community?

It is vital that the responses to these questions are informed by behavioural science, learning lessons from previous waves and from across the international community. The paper sets out some key principles to address these issues, drawing in particular on the evidence available via SAGE and its subgroups, notably SPI-B[3].

2. Adherence to, and drivers of, key behaviours

It is important to recognise many people have made great efforts to adhere to the restrictions in place and practice personal protective behaviours throughout the course of the pandemic, and that they continue to do so. Data collected throughout the pandemic in Wales indicate the majority of people report social

[1] https://gov.wales/technical-advisory-group-behavioural-insights-support-post-fire-break-wales
[2] https://gov.wales/technical-advisory-group-brief-viral-variant-voc-20201201
[3] https://www.gov.uk/government/collections/scientific-evidence-supporting-the-government-response-to-coronavirus-covid-19

distancing, regular hand washing and use of face coverings where required[4]. Ten months in, the vast majority also largely support the measures in place[5]. Similarly, data at UK level from the UCL COVID-19 Social Survey illustrate that the vast majority of people report adhering to guidelines completely or to a large extent[6]. While there does appear to be a consistent pattern in these data, COVID-19 rates have risen dramatically in recent months, and it is important to recognise the caveats associated with these data, notably their self-reported nature. Furthermore, these data sources also provide evidence that indicates a degree of non-adherence in other areas that needs to be considered, notably in terms of household mixing and non-essential travel[7]. In addition, the UCL COVID-19 Social Survey also indicates low levels of test-seeking behaviour (with around one in three respondents reporting seeking a test when displaying symptoms of COVID-19) and while measuring adherence to self-isolation is influenced by how adherence is defined, self-reported rates are significantly lower than likely necessary for infection control (with two in five reporting self-isolating for less than the required 10 days when they develop symptoms and one in five when told they have come into contact with someone else with COVID-19 symptoms)[8].

In this mixed context, population adherence to the various regulations and guidance in place is coming under increasing scrutiny, particularly in the media, and may have weakened perceptions of the efficacy of behaviourally informed policies to reduce transmission. Socio-behavioural data are showing that in general, people know about COVID-19 and the associated preventive measures necessary to reduce its spread[9]. **However, as noted above, there remains a discrepancy between high levels of reported motivation to adhere to guidelines[10] and some behaviours**. This is often attributed to the concept of 'Pandemic fatigue'[11], which implies people are tiring of living within the restrictions and adhering to advice.

An alternative explanation is that the majority of people want to do what is being asked of them but may be limited in their ability to do so for a variety of reasons[12]. Misrepresenting the true picture with regard to adherence could be perceived as blaming the population for high rates of infection and is likely to have adverse consequences for the effectiveness of policies and messaging[13]. Rather, as far as is practically possible, the focus needs to be on addressing the causes behind any ongoing non-adherence. **There are clearly structural factors preventing adherence**, including: a lack of support (e.g. financial, practical, emotional and provision of information), particularly for those in those in public-facing insecure low

[4] https://gov.wales/survey-public-views-coronavirus-covid-19-4-7-december-2020
[5] https://phw.nhs.wales/news/week-40-report-how-are-we-doing-in-wales-public-engagement-survey-results/
[6] https://www.covidsocialstudy.org/results
[7] https://gov.wales/technical-advisory-group-policy-modelling-december-2020-and-january-2021
[8] https://www.covidsocialstudy.org/results
[9] https://www.who.int/publications/i/item/covid-19-global-risk-communication-and-community-engagement-strategy
[10] https://gov.wales/sites/default/files/publications/2020-12/technical-advisory-group-policy-modelling-december-2020-and-january-2021.pdf
[11] https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/publications-and-technical-guidance/2020/pandemic-fatigue-reinvigorating-the-public-to-prevent-covid-19,-september-2020-produced-by-whoeurope
[12] https://blogs.bmj.com/bmj/2020/10/26/the-concept-of-fatigue-in-tackling-covid-19/
[13] https://blogs.bmj.com/bmj/2021/01/07/pandemic-fatigue-how-adherence-to-covid-19-regulations-has-been-misrepresented-and-why-it-matters/

paid jobs; non-enabling environments; and living in crowed intergenerational households[14]. Data also indicate reported confidence in Government has fallen in recent weeks[15], with evidence suggesting this can have a detrimental impact on adherence[16].

At the same time, while people may have the best of intentions, their actions may differ, determined non-consciously by drivers other than goal-directed intention[17]. The value of the 'behavioural insights' approach was originally recognised in observations that non-conscious behavioural drivers sometimes override intentions (such as social norms, habits or contextual factors including physical architecture). As such, a failure to maintain two metre distance may reflect historical normative influences (i.e. how close people usually stand to have a conversation) even when there is a conscious intention to distance.

More systematic consideration of behavioural determinants, and development of the interventions, policies and communication that shapes them, can help address these challenges and support population health protection as society recalibrates to changing circumstances. The required response clearly goes beyond messaging alone, for example an increased emphasis on workplace settings, prioritisation of vaccine deployment for those in public facing roles and enhanced action to support those self-isolating. In terms of self-isolation, for example, emerging evidence suggests awareness is not high and many who apply for the £500 financial support are refused it, not meeting eligibility criteria[18]. This recalibration will also need to include changes in normative defaults for everyday behaviours around hygiene and protection, such as use of face coverings as seen in Asian countries. It took around 200 years to eradicate smallpox with vaccination[19], and whilst medical science has greater power to address COVID-19, **there will be a likely continued need to establish more effective hygiene behavioural norms for the foreseeable years to come**.

3. Changing context

While there are some early encouraging signs with regard to infections in Wales[20], current rates remain high. The population will inevitably be anxious with news of VOC-202012/01 and other variants under investigation (VUIs) that are emerging. Whilst the advice on behaviours to reduce transmission of the new variant remains as for the 'wild-type'[21], the uptake/adherence to that advice is what will make the difference. Consideration of the impact of cumulative, and new/independent, barriers and enablers to adopting/maintaining risk-reduction behaviours remains critical and will need to be highlighted given the increased transmissibility. Minor lapses are now more likely to increase infections in the community. This enhances the need to continue to

[14] https://www.gov.uk/government/publications/emgspi-bspi-m-reducing-within-and-between-household-transmission-in-light-of-new-variant-sars-cov-2-14-january-2021
[15] https://gov.wales/survey-public-views-coronavirus-covid-19
[16] https://www.medrxiv.org/content/10.1101/2020.10.19.20215376v1
[17] https://www.health.org.uk/sites/default/files/BehaviouralInsightsInHealthCare.pdf
[18] https://www.cipd.co.uk/about/media/press/150121postcode-lottery-self-isolation-payments
[19] https://www.who.int/health-topics/smallpox#tab=tab_1
[20] https://gov.wales/technical-advisory-cell-summary-advice-15-january-2021
[21] https://gov.wales/technical-advisory-group-brief-viral-variant-voc-20201201

practice current protective behaviours and will need to underpin all interventions and messaging in the coming months.

Alert Level 4 restrictions[22] clearly focus on 'stay home' behaviour. This message may appear to be a clear instruction requiring a straightforward behavioural response. However, insight from multiple sources into the barriers and facilitators of following this will help increase compliance. From a behavioural lens, there may be an unconscious tendency for biased beliefs where individuals consider that their family and friends ("ingroup") are less likely to be a risk for contagion compared to strangers ("outgroup"). This may be the driver of indoor mixing[23].

Media attention has also focused on adherence outdoors, notable examples being driving to exercise and behaviour in supermarkets. This may simply reflect that behaviours within and between households are largely hidden. However, recently published SAGE (SPI-B/EMG/SPI-M) advice reinforces the importance of transmission within and between households and how to mitigate this[24], building on other recent advice relating specifically to VOC-202012/01[25]. This advice suggests, for example, whole population communications to increase awareness of the necessity, feasibility and effectiveness of implementing household measures to reduce transmission and the importance of information and support, particularly in disadvantaged households and that is accessible by people in a range of household circumstances. It is suggested within-household transmission could be reduced by 25% if the measures outlined were followed. Unanticipated consequences of focusing on restrictions outdoors also need to be taken into account. For example, for those who find not socialising more difficult, this could provide a cue to meet indoors instead, with the greater risk of infection this carries.

In terms of messaging, **emphasis should continue to be placed on the importance of both 'stay in your home', and to stay-away from friends' houses/town/school, but recognising people are still (legitimately and otherwise) leaving home, with a corresponding need for further consideration in terms of risk minimisation** e.g. currently legitimate reasons for household mixing such as childcare between friends and relatives for a working parent should be minimised where possible, recognising enforcement would be difficult. Such advice would need to be balanced with other harms, including impact on household income. The impact of the move out of Alert Level 4, on ongoing adherence to risk-reducing behaviours, should attract further diagnostic and intervention design activity.

As increasing numbers of (vulnerable) individuals are protected through vaccination, the impact of this on complacency towards other risk-reducing behaviours will need consideration, both in those vaccinated and other population groups. This will be particularly important as it will need to form part of wider discussions around the timing and behavioural implications of easing current restrictions, learning from the

[22] https://gov.wales/alert-level-4-guide

[23] Tajfel H., Turner J.C. (1979). An integrative theory of intergroup conflict". In Austin W. G.; Worchel S. (eds.). *The Social Psychology of Intergroup Relations*. Brooks-Cole. pp. 33–47.

[24] https://www.gov.uk/government/publications/emgspi-bspi-m-reducing-within-and-between-household-transmission-in-light-of-new-variant-sars-cov-2-14-january-2021

[25] https://www.gov.uk/government/publications/emgspi-btweg-mitigations-to-reduce-transmission-of-the-new-variant-sars-cov-2-virus-22-december-2020

experience of the firebreak in Wales. Following vaccination, there is a likelihood of over-confidence in relation to acquisition (and onward transmission) that will shape risk-reducing behaviours – with increasing numbers in the population potentially not wearing face coverings, not socially distancing and mixing households, for example[26]. The level of risk literacy (the understanding of how to calculate risk and make decisions accordingly) in the population may require consideration with focused messaging or interventions to improve literacy. Whilst disease risk in (the majority of) those individuals vaccinated will be greatly reduced, the appropriateness and influence of the above behaviours needs further consideration. There is also a likelihood of increasing over-confidence in non-vaccinated segments because of visibility of the above behaviours. Coupled with increasing perceptions that all vulnerable individuals are 'safe', there is potential some may believe the need for risk-reduction behaviours has decreased. This will be of particular importance for many of those at greatest risk of disease and mortality, including those in ethnic and socio-economically deprived communities where rates of uptake are anticipated to be lower[27].

Evidence noted above suggests some variation in adherence to risk-reducing behaviours with explanations that are far from straightforward. However, examples of overt disregard for advice on reducing risk tends to attract media attention and as a consequence increases perceptions of their frequency. These circumstances are likely fuelling, in part at least, the likely much more frequent phenomenon of subjective rule interpretation. Rules may also be interpreted subjectively[28], for example as justification for acting against advice such as recent examples of travelling up to 5 miles from home to exercise (in a beauty spot), even though this 'rule' is not a feature of alert level 4 restrictions. This phenomenon is an illustration of a minority 'working-up-to' what they 'can do' and not what they 'should do', but also highlights the need for simplicity and stability in essential risk-reduction behaviours, and increased efforts to build on current communications, using a wider range of appropriate messengers, channels and public relations activity. These behavioural phenomena may be understood with reference to key psychological constructs such as the fundamental attribution error and optimism bias. This raises the question of how best to empower individuals to make appropriate decisions themselves, and in particular whether the focus should be on core protective behaviours (such as washing hands, use of face coverings, social distancing and ventilation) rather than on increasingly complex rules and guidelines. Care should be taken not to further emphasise examples of contravening guidance and rules.

The occurrence, and possibility, of more passive lapses in compliance should also be further considered. At periods of higher cognitive load such as when working from home, home schooling or dealing with job/financial security concerns, the likelihood of overlooking a necessary action (e.g. to take a face covering when leaving home) will increase. This is a clear example of the 'Intention-Action gap' wherein motivation is satisfactory, but other factors 'intervene'. This reinforces the importance or supporting individuals in establishing new habits and routines, as well as developing new social norms to automatically trigger protective behaviours.

[26] https://www.gov.uk/government/publications/spi-b-possible-impact-of-the-covid-19-vaccination-programme-on-adherence-to-rules-and-guidance-about-personal-protective-behaviours-aimed-at-preventi
[27] https://www.medrxiv.org/content/10.1101/2020.12.27.20248899v1
[28] https://www.medrxiv.org/content/10.1101/2020.11.17.20233486v1

The knowledge of how risk is formulated is fundamental to developing approaches for communication content (i.e. what people need to know or be supported to do) to make protective decisions, undertake protective behaviours, then to design, proof-test messages, communicate and evaluate impact. Such an approach cannot be easily developed from nothing in an emergency, so ongoing capacity around long-term risk communication, behavioural science and other research and policy support outside of emergencies is necessary. In government, for example, the communications response has been influenced by behavioural insights through existing guidance[29] and ad hoc advice but developing ongoing capacity around long-term risk communication through behavioural insights and other research and policy support outside of emergencies is necessary.

4. Recommended actions

i. Clear understanding of the evolving context

A clear understanding of the evolving context over the short, medium (next autumn) and long-term is required. This includes not just levels of vaccination uptake and the epidemiology of infection and hospital admissions but also the impacts on protective behaviours. Collaboration across disciplines to assess the developing context to inform policy, interventions and communications, needs to be strengthened and continued.

ii. Strategies to promote adherence to desired infection control behaviours

Various strategies to promote adherence should continue to be considered, the suggestions below being consistent with previously published SPI-B advice[30]:

What can I do?: Promote and support positive alternatives whenever activities that people value must be restricted.

Why am I doing this?: 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'.

Celebrate positive behaviour: 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.

We're all in it together: Emphasise that everyone has an important part to play in keeping infection levels low and avoid singling out particular activities, settings or people (as has already been seen with the Keep Wales Safe campaign[31]).

Creatures of Habit: Help people change their environments and form new social

[29] See https://gcs.civilservice.gov.uk/publications/strategic-communications-a-behavioural-approach/ and https://gcs.civilservice.gov.uk/guidance/

[30] https://www.gov.uk/government/publications/spi-b-positive-strategies-for-sustaining-adherence-to-infection-control-behaviours-22-october-2020

[31] https://gov.wales/safe-help

customs to prompt and sustain habits that will reduce the spread of infection.

Planning ahead: 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. Planning ahead reduces the likelihood of emotional, impulsive or habitual actions leading to risky behaviour.

Structure a supportive environment: Target more intensive information and practical support for adherence to the specific behaviours, settings and populations that need it.

What is common sense?: Teach 'risk perception literacy' – unpack 'common sense' – understand how people are making individual decisions about risk (fundamental attribution error, optimistic bias, norms of those around) and empower people to act safely.

ii. Strategic approach to health risk communication

The pandemic has highlighted the complexity of the task of those involved in communicating with the public, at national and local level. Whilst recognising the constraints that people work under, an integrated approach to risk communication is needed as we go forward[32]. This requires informed knowledge of recipient's (multiple publics) existing understanding of risks, as well as, the drivers of gaps and misunderstandings. Recipients understanding of risks will be dynamic alongside evolving circumstances. Good practice in risk communication also emphasises the importance of openness to maintain trust – and this will require, by as far as is possible, acknowledging key scientific and other uncertainties which bear upon to people's protective decisions[33] alongside what is being done (research, monitoring, evaluation etc.) to resolve such uncertainty. It should be recognised that uncertainty has multiple forms, which may also need to be considered when designing communication content[34].

Such an approach cannot be easily developed from nothing in an emergency, so ongoing capacity around long-term risk communication and other research and policy support outside of emergencies is necessary. This would include subject matter experts (health in the current circumstances), decision scientists, risk communication and behavioural specialists and programme designers. This approach has been advocated for other areas where risk communication is complex (e.g. climate change[35]).

iii. Principles for communication interventions

Communicating during an emergency is a challenging but highly important task, albeit one part of the wider response necessary. Key recommendations to underpin

[32] https://www.pnas.org/content/110/Supplement_3/14033
[33] https://www.ncbi.nlm.nih.gov/books/NBK218578/
[34] https://royalsocietypublishing.org/doi/10.1098/rsos.181870
[35] https://www.nature.com/articles/nclimate1080

communications activity have been published during the pandemic and updated as necessary. Revisiting these and checking against existing practice on a regular basis would be good practice and likely to prevent drift. For example, SAGE have recently recommend encouraging adherence to such interventions through a combination of recognising population efforts to date, providing a clear rationale for actions thought necessary, creating acceptable solutions where risk is hard to avoid, provision of support and culturally appropriate communications[36].

Independent SAGE have suggested following five principles of effective messaging[37]: **Messaging never just provides factual information**, be aware of subtexts and indirect meanings and be consistent across communication channels and modalities; **Messaging should be precise** and easy to understand and adhere to; **Messaging should be evidence informed.** Focus on the collective 'we' and 'us', avoid 'pandemic fatigue'. Avoid 'individualising' words and phrases that pathologise people's responses to the pandemic (e.g., "anxious"), or dividing them into 'ingroups' and 'outgroups'. Address 'injunctive norms' (what group members should do) and 'descriptive norms' (what groups are typically doing). Don't highlight those not adhering to rules, rather focus on those who are adhering; **Clarity and precision should always come before branding or sloganeering** – people didn't understand or comply with "rule of six" or "hands face space", messages should work in context (e.g. cannot get a test or a vaccine, or, buildings one way system impossible to use without breaking other rules), positive messaging should enable more people to do more things safely, such as "Be indoors with your family bubble" or "Live life at two metres". It is also important not to 'over promise', given the potential for disillusionment and mistrust in government with the subsequent implications for adherence; **Messaging should be irony-resistant** – it is important to make sure messaging and speeches by official cannot be amplified for negative reasons. Ways to achieve this include reducing hyperbole, focusing on producing clarity rather than soundbites, and being open and honest by recognising the costs and benefits of strategies.

iv. Facilitating self-isolation and test seeking

The Test, Trace and Protect process (and associated initiatives) is fundamental to 'getting ahead' of COVID and reducing population transmission. Continue to support and invest in a world-leading approach to supporting testing and isolation. Use the growing evidence base (e.g. many barriers to self-isolation are structural not motivational: financial, wage replacement, job insecurity, crowded housing) to target interventions.

v. Vaccination

Vaccine deployment raises numerous behavioural questions and will require attention in the coming months. Of particular immediate importance is the need for communications to impress upon the population the need for continued adherence to

[36] https://www.gov.uk/government/publications/emgspi-btweg-mitigations-to-reduce-transmission-of-the-new-variant-sars-cov-2-virus-22-december-2020

[37] https://www.independentsage.org/uk-government-messaging-and-its-association-with-public-understanding-and-adherence-to-covid-19-mitigations-five-principles-and-recommendations-for-a-covid-communication-reset/

the key personal protective behaviours. While this information is routinely available[38], a wider communications effort is necessary to ensure this message is fully understood. Research, both quantitative and qualitative, should be used to assess understanding on an ongoing basis.

vi. Building capacity in government

Investment in **building capacity** in behavioural science in government (and partners) is vital in order to facilitate the routine development of policies, interventions and communications campaigns that are behaviourally informed at an early stage. This will help to address the intention-action gap that is often found. This will also involve working more closely with the expertise available externally and across disciplines as appropriate. Linking effectively with stakeholders is also an important part of this process, maximising the potential for co-production. The network currently being developed by Public Health Wales may offer learning to be applied more widely.

Building capacity will also need to be accompanied by effective **implementation** of these behavioural insights as widely as possible within government (and partners), which in itself should be behaviourally informed, identifying current facilitators and barriers, for example. Toolkits are available to facilitate this process, with the Behaviour Change Wheel (incorporating COM-B)[39], EAST[40] and MIndspace[41] previously being highlighted. Recent advice for national government from Public Health England[42] may be helpful, suggesting the Behaviour Change Wheel as an overarching framework. Applying the APEASE criteria in this advice (acceptability, practicability, effectiveness, affordability, side-effects and equity) would provide a means of giving early thought to behavioural considerations when developing policies.

[38] https://phw.nhs.wales/topics/immunisation-and-vaccines/covid-19-vaccination-information/resources-for-health-and-social-care-professionals/covid-19-vaccination-leaflets/dl-leaflet-covid-19-vaccination-a-guide-for-adults-bilingual/

[39] https://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-6-42

[40] https://www.bi.team/publications/east-four-simple-ways-to-apply-behavioural-insights/

[41] https://www.instituteforgovernment.org.uk/publications/mindspace

[42] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/933328/UFG_National_Guide_v04.00__1___1_.pdf