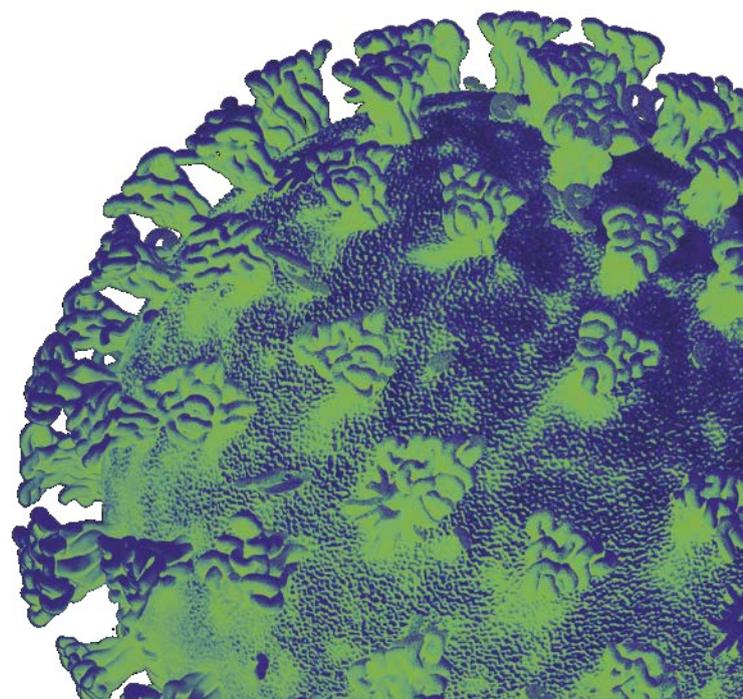
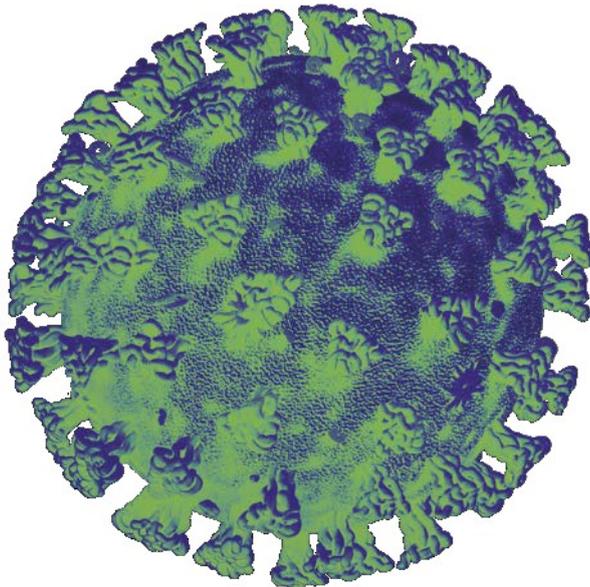
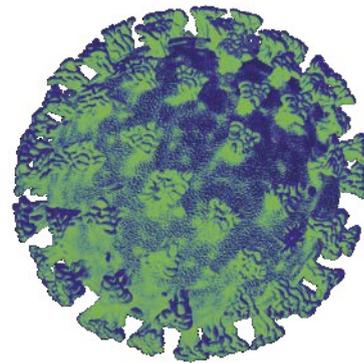




Llywodraeth Cymru  
Welsh Government

# Advice from the Technical Advisory Group and the Chief Scientific Advisor for Health

6 May 2021



### **Advice from the Technical Advisory Group and the Chief Scientific Advisor for Health – 6 May 2021**

This report provides advice on the proposed relaxations considered as part of the 13 May 2021 review, covering:

- Indoor hospitality.
- Rule of four for meeting in regulated premises.
- Remainder of accommodation, including restarting of educational and recreational residential overnight stays in shared accommodation such as tents and dormitory style premises.
- Increasing limits on organised activities (to 30 indoors and 50 outdoors) and mitigations based on relative risks (indoors vs outdoors, seated vs standing).
- Reopening of: Entertainment venues (cinemas, bingo halls, bowling alleys, indoor play centres and areas, casinos, amusement arcades, and theatres); and indoor visitor attractions (including museums, galleries, educational and heritage attractions, and heritage sites such as stately homes)
- Advice on the health implications and risks of larger events and mass gatherings, along with appropriate mitigations.
- Potential mitigations and flexibility around 2m social distancing (dependent on the event and risk assessment).
- International travellers and attendance at events.
- Advice on possible criteria for reversing relaxation of rules for events.

This advice is informed by a range of evidence sources, including from the Scientific Advisory Group for Emergencies (SAGE), the Welsh Government Technical Advisory Group (TAG) and subgroups, Public Health Wales, the Wales COVID-19 Evidence Centre, and the wider academic literature and surveillance data.

## 1. Summary of Advice

- The advice from TAG should be read in conjunction with [previous regulation review submissions](#) and considered in the context of the current epidemiological situation. The most recent [TAG Behavioural Summary Advice](#) should also be taken into account. The **risk assessments made are based on an implicit expectation of good adherence to regulations and population public health interventions.**
- Continuing relaxations according to the [Coronavirus Control Plan](#), with the acceleration that has been announced, is likely to result in manageable levels of COVID-19 in Wales (medium confidence). **There is uncertainty as to whether further acceleration will increase epidemic growth beyond manageable levels.** The relationship between vaccination and harm is not yet effectively quantified.
- Lessons from the international update, notably in India, suggest that **continued caution in the coming weeks would be advised** in order to maximise the likelihood of greater freedoms in the long-term.
- **The decreases in cases since January is still likely to have been predominantly driven by public health protection measures rather than the vaccination programme,** which to date has focused largely on those most at risk of poor outcomes but who typically have a smaller impact on population-wide transmission. However, as the programme continues to expand this balance will be shifting as an increasing proportion of the Welsh population are vaccinated, although there will still be gaps in coverage.
- Updated modelling by SPI-M and Swansea University suggests a **third wave of infections is highly likely, although uncertainty remains with regard to the timing, scale and shape** of this wave. The latest findings still suggest it is likely cases, hospitalisations and deaths will increase in the second half of 2021 as restrictions are eased, although at a reduced level to previous waves.
- It remains the case the **main issues that could cause a significant resurgence of COVID-19 harms are: widespread transmission of a vaccine escape and/or immune escape variant; a breakdown in social distancing behaviour;** or to a lesser extent, a change in vaccine supply or significant drop in vaccine uptake.
- As highlighted in [TAG advice for the 22 April review](#), there is evidence that **transmission risk is generally lower outdoors than indoors** due to increased ventilation, effect of sunlight and increased ability to socially distance in outdoor spaces, although personal protective behaviours such as face coverings and hand hygiene will remain important in settings where it is not possible to socially distance at a minimum of 2m, particularly for extended

durations. With the move to relaxing more restrictions in indoor settings and the numbers able to meet outdoors, this risk of transmission will inevitably increase.

- As with previous advice, the **relative risk of transmission in the settings discussed** in this review of relaxations will **vary depending on the likelihood of transmission in that environment and the frequency and duration of people visiting that setting**. **Settings with more risk factors that are visited frequently by many people for long periods, particularly those indoors, may have a greater impact on population level transmission than other less frequently visited settings**. The role of ‘wrap-around’ activities such as transport, entry/exit points and hospitality arrangements should be considered in addition to the setting and specific form of event. This is particularly relevant to the reopening of large events and mass gatherings. Appropriately targeted and behaviourally informed messaging and environmental mitigations will be key to minimising risk.
- **An increase in the number of people permitted to attend organised indoor activities is likely to represent a higher risk of transmission**. As noted previously, the risk of transmission is higher where these activities include exercise, singing, loud speaking etc. and this increases with duration and proximity. Similarly, the increase in those attending across different households has the potential to create wide network clusters should transmission take place, although this risk is closely related to community prevalence, which remains relatively low at this point in time. Advice continues to be that indoor activities should be substituted or moved outdoors wherever possible during the spring and summer period.
- **It is assumed that underpinning risk prevention measures will continue to be adhered to at a population level, including but not limited to the continued promotion of symptom recognition and test seeking behaviour, Test, Trace, Protect (TTP), support for self-isolation, quarantine for those entering the country and encouraging vaccination uptake.**

## 2. Situation summary

- The latest COVID-19 Situation Summary for Wales is available [here](#), while the most recent summary of advice from the Technical Advisory Cell is available [here](#) and supplements this situational summary.

- It should be noted that the full impact of relaxations introduced from 24 April onwards (up to six people from multiple households meeting outside and the re-opening outdoors of hospitality, wedding receptions, outdoor attractions and organised activities for up to 30 people) will not yet be fully represented in the transmission data, as it takes at least three weeks to observe this. Caution should therefore continue to be taken when considering the current rates of transmission based on existing measures.
- Since the impact of previous relaxations cannot yet be reliably estimated, it follows that it is not possible to robustly quantify the further increase in risk that would be associated with additional easements (high confidence).
- As per previous advice, further relaxations that lead to more population level mixing, particularly indoors, are likely to lead to more cases and exponential growth (high confidence). It is important to remember that as more settings reopen and activities resume, there will be network multiplier effects that increase transmission further, so settings and activities cannot be considered in isolation.
- The decrease in cases since January has predominantly been driven by population public health control measures given the vaccination programme has prioritised those most at risk of poor outcomes, rather than groups that play a larger role in population transmission (high confidence).
- There has been a significant recent increase in prevalence of the B.1.617.2 variant, with community transmission in England, initiated and driven by travel to the UK. The risk of new additional variants has not decreased as SARS-CoV-2 continues to evolve antigenically (high confidence). Maintaining control of transmission of any such variants will be more difficult when there are fewer measures in place. The extinction probability of a cluster depends heavily on the size of the cluster when it is identified, and the number of clusters will increase with the rate of importation. A variant which either substantially escapes immunity or is highly transmissible (more so than B.1.1.7) could lead to a very significant wave of infection, potentially larger than that seen in January 2021 if there were no interventions. There is a need for medium and long-term strategies in response to variants (SAGE 88)<sup>1</sup>.
- Recent data from the ONS Covid-19 Infection survey<sup>2</sup> suggests that an estimated 6 in 10 adults in Wales, or 61.0% of the adult population (95% credible interval: 55.9% to 66.5%) would have tested positive for antibodies against SARS-CoV-2 on a blood test in the week ending 11 April 2021,

---

<sup>1</sup> [SAGE 88 minutes: Coronavirus \(COVID-19\) response, 5 May 2021](#)

<sup>2</sup> [Coronavirus \(COVID-19\) Infection Survey, antibody and vaccination data for the UK - Office for National Statistics](#)

suggesting they had the infection in the past or have been vaccinated. While the proportion of cases leading to severe illness and death should continue to decrease (high confidence), as things stand a significant proportion of the population currently remains susceptible to infection even though the majority of those most vulnerable to serious infections have now been vaccinated.

- It is also important to reiterate the potential impact of 'Long Covid' and post COVID-19 conditions, and these should continue to be considered when planning further relaxations. Over the four-week period ending 6 March 2021, the COVID-19 infection survey estimated that 56,000 people in private households Wales were experiencing self-reported Long Covid. Of study participants who tested positive for COVID-19, symptom prevalence at 12 weeks post-infection was higher for female participants (14.7%) than male participants (12.7%) and was highest among those aged 25 to 34 years (18.2%)<sup>3</sup>.
- The importance of ongoing baseline measures and sustained behaviour change in order to control a resurgence in Covid-19 infections has been emphasised<sup>4</sup>. Both SPI-B and SPI-M, as well as nationally representative survey studies<sup>5</sup> have consistently stated that the most impactful baseline measures, with good adherence, is likely to be those which encourage and support self-isolation for individuals with symptoms and/or a positive Covid-19 test.
- It has also been emphasised that a resurgence in Covid-19 is likely to occur over the Autumn/Winter period even if the assumed baseline measures reduce transmission by 25%; however it would be much higher without these<sup>6</sup>.
- There is a significant risk in allowing prevalence to rise, even if hospitalisations and deaths are kept low by vaccination. However maintaining lower transmission will increase the time available to observe and react to increases in transmission, spot outbreaks before they become larger and will improve the performance of TTP systems. Lower transmission will also reduce the non-imported risk of the emergence of variants of concern, slow the spread of Variants of Concern (including imported) and allow rapid comprehensive sequencing of cases to support variant surveillance. Finally, lower prevalence

---

<sup>3</sup> [Prevalence of ongoing symptoms following coronavirus \(COVID-19\) infection in the UK - Office for National Statistics \(ons.gov.uk\)](#)

<sup>4</sup> [Nature Medicine, Sustained behavior change is key to preventing and tackling future pandemics, May 2021](#)

<sup>5</sup> [British Medical Journal, Adherence to the test, trace, and isolate system in the UK: results from 37 nationally representative surveys, March 2021](#)

<sup>6</sup> [SPI-M-O: Consensus statement on COVID-19, 17 February 2021](#)

will reduce the impact of 'Long Covid' and other post-Covid conditions and allow more NHS capacity to be allocated to routine care.

- The primary aim of baseline measures should be to reduce the likelihood that people who are infectious will mix with others in the population, both in social and occupational settings, as well as decreasing the risk of transmission from an infectious person to others in any given environment.

### 3. Policy modelling update

- Latest policy modelling (5 May 2021) can be found in full [here](#). A summary is provided below.
- Swansea University have updated their COVID-19 modelling; most recent modelled scenarios suggest that it is likely cases, hospitalisations and deaths will increase in the second half of 2021 as restrictions are eased but this will be a lot lower than the peak observed in November 2020- February 2021. This chimes with initial results of modelling for England carried out by SPI-M modelling groups. As the vaccine roll out continues, the horizon looks more positive in terms of expecting lower numbers of COVID-19 deaths than were observed in November 2020 – February 2021.
- Evidence is emerging suggesting that vaccines are preventing onward transmission which means the number of cases, based on current variants in circulation in Wales, is likely to be smaller than previously experienced. However, there is still uncertainty about duration of effectiveness of available vaccines and about plans for booster vaccinations.
- It is likely that future outbreaks will occur in children and young people who have more contacts and have not been vaccinated, so in future it may be useful to consider what level of virus transmission is acceptable if vaccinations are keeping hospitalisations and deaths low.
- The current modelled scenarios do not include the impact of antigenic drift or waning immunity; so are likely to be robust for the next few months, but further evidence is likely to be established in advance of Winter 2021/22.
- The main issues that could cause a significant resurgence of COVID-19 harms are: widespread transmission of a vaccine escape and/or immune escape variant; a breakdown in social distancing behaviour; or to a lesser extent, a change in vaccine supply or significant drop in vaccine uptake. New variants also need to be monitored for differential impacts on specific subsets of the population, for instance on children.

- Continued surveillance of infections, and understanding supply, uptake and effectiveness of vaccines, and impact and spread of variants is crucial in helping to understand what trajectory Wales is following in terms of the pandemic and in fine-tuning future policy formulations to deal with the pandemic while reducing other health, educational and socioeconomic harms and inequalities.

#### 4. Alignment across the UK nations

- As noted in previous TAG advice<sup>7</sup>, it is important to consider ‘alert fatigue’, the confusion associated with the volume and complexity of regulations and guidance in place. The need to maintain consistent messaging and transparency regarding any uncertainty is essential with clear rationales given for decision making. Where possible, it remains the case that alignment across UK nations is preferable<sup>8</sup>.

#### 5. Indoor Hospitality

- It has previously been advised that, generally, transmission risk is lower outdoors when compared to indoors<sup>9</sup>, although baseline protective behaviours such as distancing and wearing of face coverings when this is not possible will still likely be required in many settings. It remains difficult to reliably quantify the level of transmission associated with fully reopening the hospitality sector indoors given it has been operating under differing levels of restrictions for most of the last year. A recently published synthesis of evidence from SAGE (EMG Transmission Group)<sup>10</sup>, building on previous SAGE work, also highlights the difficulties in estimating the risk of transmission in specific sectors as distinct from related social, household or transport exposures. The risk of transmission is also likely to be a function of both environmental and behavioural factors, while there will be variation in the extent, quality and level of adherence to COVID secure measures.
- However, the synthesis of available evidence sources suggests transmission is strongly associated with proximity, duration, frequency of contact and community prevalence, with the risks of transmission greatest in poorly

---

<sup>7</sup> [Technical Advisory Group: advice for 22 April restriction review | GOV.WALES](#)

<sup>8</sup> [The public aren't complacent, they're confused—how the UK government created “alert fatigue” - The BMJ](#)

<sup>9</sup> [Technical Advisory Group: advice for 22 April restriction review | GOV.WALES](#)

<sup>10</sup> [EMG Transmission Group: Insights on transmission of COVID-19 with a focus on the hospitality, retail and leisure sector, 8 April 2021 - GOV.UK \(www.gov.uk\)](#)

ventilated and crowded indoor settings (high confidence). Furthermore, settings seen as higher risk and visited frequently by many people are likely to have a bigger impact on population level transmission than those that may have a higher risk but visited infrequently by smaller numbers of people (high confidence). Overall, the available data suggest the hospitality sector carries a higher risk of transmission (when compared with retail and leisure) but that the overall impact on  $R_t$  is relatively low<sup>11</sup>. This higher risk is likely associated with, for example, bars and pubs typically having people in close proximity, a relatively long duration of exposure, inability for customers to wear face coverings, increased aerosols due to raised voices and potentially extensive contact networks, although as noted above, risk will vary on a case by case basis.

- For indoor hospitality, many of the principles around risk for outdoor hospitality will also apply, albeit with a critical emphasis on rigour of implementation of protective policies to prevent over-occupancy, ensure adequate ventilation, enforce the use of face coverings for staff at all times, ensure wearing of face coverings by customers when not at their table, provide managed table service and collection information to facilitate tracing and testing of contacts in the event of positive cases being identified<sup>12</sup>. Good hygiene practice is also important when the removal and re-application of face coverings is necessary, such as before and after eating or drinking. Evidence from one UK study, using semi-structured observation in licensed premises, demonstrated that despite best efforts to implement COVID-secure measures, risks of transmission persisted in a large minority of bars, particularly when customers were intoxicated<sup>13</sup>. Evidence around transmission in outdoors semi-enclosed spaces is still not fully understood and requires further investigation<sup>14</sup>, particularly in places with longer exposure durations at close proximity.

## **6. Shared accommodation, including educational and recreational overnight stays**

- While the route of infection remains unclear, there is evidence to suggest transmission can occur where accommodation is shared, despite recognised

---

<sup>11</sup> [EMG Transmission Group: Insights on transmission of COVID-19 with a focus on the hospitality, retail and leisure sector, 8 April 2021](#)

<sup>12</sup> [medRxiv, Indicators for Risk of Airborne Transmission in Shared Indoor Environments and their application to COVID-19 Outbreaks, April 2021](#)

<sup>13</sup> [Journal of Studies on Alcohol and Drugs, Managing COVID-19 Transmission Risks in Bars: An Interview and Observation Study, February 2021](#)

<sup>14</sup> 'Rapid Evidence Summary' on semi-enclosed spaces from the [Wales COVID-19 Evidence Centre](#), May 2021 (in press, available on request).

mitigations being in place. For example, between during July and August 2020 an outbreak of COVID-19 occurred at an overnight summer school retreat for boys in the US<sup>15</sup>. Preventative mitigations in place included: outdoor classes of 20 people positioned 2m apart; teachers wearing face coverings; negative test  $\leq 7$  days before travel required; self-quarantine within the household for 7 days before travel; and use of face coverings during travel. However, the 127 students travelled in three buses together and resided in dormitories (four to six per room) and yurts (eight per room), that were tightly spaced with three to four sets of bunks each, shared bathrooms and shared common areas.

- During the outbreak, COVID-19 was confirmed among three in four (76%) of the 152 attendees, the outbreak investigation reporting rapid spread of SARS-CoV-2, likely from a single student. While the route of transmission is unknown, the outbreak demonstrates the potential for the virus to spread quickly within close quarters and shared accommodation. This is especially pertinent given the increased transmissibility of emerging Variants of Concern, including the B.1.1.7 variant (first identified in the UK).
- There is some evidence to suggest it takes approximately two days from infection to showing symptoms and also becoming infectious<sup>16</sup>. For shorter single night trips, this presents a risk to those outside the original group such as family members as infection will have occurred and secondary attacks may then follow. This is relevant in the context of the higher secondary attack rate of the B.1.1.7 variant.
- While in a different population and setting, a previous SAGE paper<sup>17</sup> presented evidence from an outbreak in a homeless shelter in Boston. Among 408 individuals residing at a large homeless shelter, one in three (36%) of those tested returned a positive result. A key feature of outbreaks in such settings is shared airspace as a consequence of dormitory style accommodation and communal areas<sup>18</sup>. The closure of facilities in England, with homeless people moved into accommodation with their own room and bathroom in self-contained accommodation is thought to have prevented similar outbreaks earlier in the pandemic in England<sup>19</sup>.

---

<sup>15</sup> [CDC, COVID-19 Outbreak at an Overnight Summer School Retreat — Wisconsin, July–August 2020](#)

<sup>16</sup> [Clinical Infectious Diseases, Severe Acute Respiratory Syndrome Coronavirus 2 \(SARS-CoV-2\) Transmission Dynamics Should Inform Policy, September 2020](#)

<sup>17</sup> [EMG and NERVTAG, SARS-COV-2: Transmission Routes and Environments, 22 October 2020](#)

<sup>18</sup> [JAMA Network, Prevalence of SARS-CoV-2 Infection in Residents of a Large Homeless Shelter in Boston, April 2020](#)

<sup>19</sup> [The Lancet, COVID-19 among people experiencing homelessness in England: a modelling study, September 2020](#)

- Although lower rates of community transmission will reduce the probability of infection, as highlighted above, a single infected individual can result in a super-spreader event in the confines of shared accommodation. Such accommodation is likely to pose a greater level of risk given that levels of aerosol transmission are a function of duration and proximity. Far-field aerosol transmission depends on the interaction of multiple factors including viral emission rate, ventilation rate, the duration of exposure, environmental conditions and the number of occupants<sup>20</sup>. Where multiple people share a room overnight, there is potential for build-up of infectious aerosol particles that may reach other people in the room and outside, should the door be opened, as was highlighted in the recent case of a quarantine hotel in New Zealand<sup>21</sup>.
- A range of interventions have been shown to be effective in preventing SARS-CoV-2 transmission at overnight camps<sup>22</sup>. Effective measures include: pre-arrival quarantine; pre and post-arrival screening and testing; cohorting; symptom monitoring; the ability to isolate and quarantine; physical distancing; face covering use; enhanced hygiene measures; enhanced cleaning and disinfection; outdoor activities and programming; and early identification of infections and isolation. In addition, rooms should be ventilated as much as possible in line with SAGE recommendations<sup>23</sup> and the numbers sharing rooms/toilets/other facilities minimised as far as practically possible whilst effective contact tracing measures should be implemented.
- Whilst the primary transmission risk lies within the shared accommodation, subsequent activities should also be taken into consideration to provide a holistic view of risk. Activities such as transport to and from the area<sup>24</sup>, the activities that will be undertaken once there and other activities such as toilet sharing and shared facilities are important to consider.
- As with many specific scenarios, a major element of risk is down to individual and group behaviours and whether the mitigations set out following risk assessments are followed.

---

<sup>20</sup> [EMG: Role of ventilation in controlling SARS-CoV-2 transmission, 30 September 2020](#)

<sup>21</sup> [CDC, Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 during Border Quarantine and Air Travel, New Zealand \(Aotearoa\), May 2021](#)

<sup>22</sup> [CDC, Preventing and Mitigating SARS-CoV-2 Transmission — Four Overnight Camps, Maine, June–August 2020](#)

<sup>23</sup> [EMG: Simple summary of ventilation actions to mitigate the risk of COVID-19, 1 October 2020](#)

<sup>24</sup> [EMG: Transmission and Control of SARS-CoV-2 on Public Transport, 18 May 2020](#)

## 7. Organised activities indoors and outdoors, including entertainment venues, visitor attractions and larger events/mass gatherings

- It is not possible to provide detailed scientific advice that captures the diversity and complexity of the settings that fall under the heading 'organised activities'. Rather, the advice below seeks to convey the general principles governing risk in large events and the ways in which specific risks may vary between events. SAGE (SPI-M) published factors to be taken into account when determining the risk of different types of event in summer 2020 when various pilots were being considered in England<sup>25</sup>. These include: the frequency with which such events happen; the number of attendees; likelihood of attendance by mildly unwell participants; risk of transmission if one person is infected; ability to trace and isolate contacts; whether the elderly and vulnerable would be in attendance; and what the most risky aspect of an event would be if managed well. The more common the event is, the greater the likely impact on R, even if each particular event is low risk.
- More recently, SAGE (SPI-M) considered the impact on the reproduction number of gatherings of different sizes using information from the 2009 Social Contact Survey, although their conclusions were uncertain<sup>26</sup>. Overall, the SPI-M analysis suggests large gatherings have a relatively small epidemiological impact, due in large part to their low frequency when compared with small and medium sized gatherings of 10-50 people. However, it was also noted many large events are effectively many clusters of small gatherings coming together to participate in a shared activity, which has the potential to increase the risk. In addition, such events may create the conditions to facilitate super-spreading events, largely reduced for much of the pandemic by restrictions in place on these settings. In general, the greater the number of people who mix together, the greater the probability of super-spreader events and any changes to restrictions in place should consider wider population-level trends as well as individual risks.

Group Size	100+ people	50+ people	20+ people	10+ people
Population attributable fraction (PAF)/ Impact on Rt (95% CI)	0.6% (0.4 to 0.8%)	5.4% (1.4 to 11.5%)	18.9% (12.7 to 25.7%)	25.2% (19.4 to 31.4%)

<sup>25</sup> [SPI-M-O: Consensus statement on events and gatherings, 19 August 2020](#)

<sup>26</sup> [JUNIPER and LSHTM: The population attributable fraction \(PAF\) of cases due to gatherings with relevance to COVID-19 mitigation strategies, 22 April 2021](#)

- A pre-print paper from Restart-19 suggests that, with effective hygiene protocols and good ventilation indoor, mass gathering effects can have only minimal effects on the overall number of infections at a national population level. Settings with poor ventilation can lead to a considerably higher rate of aerosol exposures and can thereby result in a high number of infections, although it is noted face coverings (used effectively) can mitigate this risk and many observed super-spreader events are also characterised by poor adherence around mask-wearing. The scenarios considered also suggest an important factor at mass gathering events is ensuring adequate spacing between participants through use of seating plans in order to reduce close-proximity contacts<sup>27</sup>.
- SAGE (SPI-B)<sup>28</sup> also published a consensus statement last year on the reopening of large events and venues, with an accompanying extended paper on behavioural considerations. While the risk of transmission in different settings was recognised as being context specific, considerations around reopening organised activities, such as entertainment venues and indoor visitor attractions, should include levels of community infection, the environment in which the activities will take place and the nature of the event and audience, including the anticipated behaviours and social norms of attendees which may facilitate or prevent transmission. There may be activities where the risk of transmission before or after the event is as high (or higher) than the event itself (e.g. socialisation and travel). As stated by SAGE<sup>29</sup> early in the pandemic, in addition to the risks of large gatherings, consideration of the risks of these events not taking place and the substitution activities that may occur is important. For example, preventing attendance at outdoor activities such as sporting events may lead to increased congregation in indoor hospitality and households, which may have a relatively greater risk of transmission.
- Building on this SPI-B work noted above, a recent paper examines behavioural risks and potential mitigations associated with reopening live events and large venues when infection rates and hospitalisations begin to decline<sup>30</sup>. Drawing on empirical evidence and relevant theory, notably group identities, a number of mitigations are suggested that address the nature of crowds and the physical environment in which they interact. Key behaviours

---

<sup>27</sup> [The Risk of Indoor Sports and Culture Events for the Transmission of COVID-19 \(Restart-19\) \(medrxiv.org\)](#)

<sup>28</sup> See [SPI-B: Consensus statement on the reopening of large events and venues, 19 August 2020](#) and [SPI-B: Extended paper on behavioural evidence on the reopening of large events and venues, 21 August 2020](#)

<sup>29</sup> [SPI-M-O: Consensus view on public gatherings, 11 February 2020](#)

<sup>30</sup> [Safety Science, Re-opening live events and large venues after Covid-19 'lockdown': Behavioural risks and their mitigations, 2021](#)

to deliver COVID-19 mitigated events are physical distancing, use of face coverings, and regular hand-washing. Furthermore, specific behaviours such as singing, shouting and hugging may need to be limited or substituted. These behaviours can easily be moderated by the venue environment, such as flow of people in and around the venue, hand-hygiene stations and minimising shared surfaces. In addition, adequate ventilation will be key and other modifications may be possible (e.g. refreshments provided at-seat). While no consensus was reached on the sale of alcohol, a nuanced approach may be possible, with at-seat service possibly helping with staggered flows and less crowding around entry points and concourses, while minimising the risk of gatherings in pubs beforehand. Communications would also be important, promoting COVID-mitigated behaviours as a means to protect public health, keep those we care about safe and contribute to the greater good.

- Where pilot events are planned, research is suggested that combines self-report and observational data to enhance learning. Such evidence will be available from the ongoing Events Research Programme (ERP) in England<sup>31</sup> and should be factored into test events in Wales.

## **8. Possible criteria for reversing relaxation of rules for events**

- The risk of COVID-19 transmission taking place at an event or gathering will be dependent on the prevalence of infection at that time. Although it is relatively low at the moment, as more of society is reopened and prevalence of infection rises as a result of R increasing above 1, it is likely that the transmission risk posed by gatherings will also increase.
- The major risk of events where large numbers of people attend is super-spreading events. The level of risk is mainly dependent upon prevalence levels and environmental (such as indoors/outdoors) and behavioural factors (social distancing/face covering/duration etc.).
- Transmission in outdoor settings where people are distanced is likely to still be very low risk. However, it remains the case that if people are in close proximity for extended periods in an outdoor setting, there is a potential risk of transmission from the higher concentrations of respiratory particles near to an infected person. It is possible that this close-range risk is greater with the B.1.1.7 variant (low confidence). If it is not possible to maintain distances of

---

<sup>31</sup> [Gov.uk, Information on the Events Research Programme](#)

2m, then additional mitigations will be required that reduce direct exposure to respiratory particles (high confidence)<sup>32</sup>.

## 9. Rule of four indoors in regulated environments

- The relative risk of an indoor collection of six households instead of four is significant (a factor of 15 versus a factor of 6), but the absolute increase in risk when prevalence is low is minimal.

## 10. Possible flexibility around 2m

- SAGE have previously published advice<sup>33</sup> that transmission of SARS-CoV-2 is strongly associated with proximity/duration of contact in indoor environments (high confidence) and that transmission is possible at distances in excess of 2m (medium confidence). However SAGE have highlighted transmission risk is likely to increase substantially at distances below 2m both indoors and outdoors, especially if interactions happen over longer periods of time. Additional mitigations will be required at distances below 2m that reduce direct exposure to respiratory particles (high confidence)<sup>34</sup>.
- Furthermore, transmission is most likely when an infectious person is present in the environment or very shortly afterwards. Physical distancing remains important in keeping transmission rates low and contact tracing data suggests the risk of direct contact (under 1m) is double that at 1-2m<sup>35</sup>. Physical distancing also limits the number of people in settings, reducing transmission risk. Some recent data suggests where people are passive and face coverings are worn, risk at 1m is not significantly higher than 2m but that it may be higher risk in settings where people are active, loud or not wearing face coverings given the ability to produce aerosols that also have the ability to travel further<sup>36</sup>. Clearly the specific context and setting will be critical factors in assessing risk level. Given some events will contain crowds that need 'atmosphere' there will likely be some form of increased vocalisation whether that is signing/chanting or raising of voice to be heard over noise which will

---

<sup>32</sup> [EMG: Application of physical distancing and fabric face coverings in mitigating the B117 variant SARS-CoV-2 virus in public, workplace and community, 13 January 2021](#)

<sup>33</sup> [EMG, SARS-COV-2: Transmission Routes and Environments, 22 October 2020](#)

<sup>34</sup> [EMG: Application of physical distancing and fabric face coverings in mitigating the B117 variant SARS-CoV-2 virus in public, workplace and community, 13 January 2021](#)

<sup>35</sup> [EMG: Application of physical distancing and fabric face coverings in mitigating the B117 variant SARS-CoV-2 virus in public, workplace and community, 13 January 2021](#)

<sup>36</sup> [Clinical Infectious Diseases, Effectiveness of 3 Versus 6 ft of Physical Distancing for Controlling Spread of Coronavirus Disease 2019 Among Primary and Secondary Students and Staff: A Retrospective, Statewide Cohort Study, March 2021](#)

mean an increase in aerosols. The smaller aerosols will still be dispersed and pose a risk to those with lower social distancing even if face coverings are worn.

- If Social distancing was to be reduced below 2m, other mitigations should be in place such as: face coverings are worn effectively by all alongside other general other protective behaviours such as hand washing; minimising opportunities to raise voices; minimising mixing in other unregulated places beforehand; and reporting of any symptoms.

## 11. International travellers and attendance at events

- As in wave 1 and 2, International travel and importing new infections into Wales from overseas or elsewhere remains a significant risk for the seeding and generation of future waves of SARS-CoV2 in Wales. Measures to reduce importations are most important when domestic prevalence (either overall or of particular VoCs) is low and when importation could result in exponential growth<sup>37</sup>.
- Advice is already available on international travel<sup>38</sup>, although it should be noted that without complete closure of borders or mandatory quarantine for all travellers it is unlikely that the risk of importation of cases or new variants can be fully eliminated.
- While the UK Vaccination programme proceeds at pace, this is not the case elsewhere in Europe and beyond, such that significant proportions of the population are not vaccinated. Furthermore, many countries may not have the testing or sequencing ability and/or capacity available in the UK. This raises the increased likelihood of visitors from other countries carrying the virus and different variants of concern of them and greater mixing within lower areas of prevalence in Wales. This rationale will become stronger as new variants emerge that show strong evidence of immune escape potential.
- Analysis by COG-UK of the impact of travel restrictions on importations to England suggested that age had a significant effect on the number of contacts, with the 16-20 year old age group representing the greatest number of travel related cases, seeing a 40% decrease in contacts as a result of travel restrictions<sup>39</sup>.

---

<sup>37</sup> [DfT and FCDO: International importation, border and travel measures, 21 January 2021](#)

<sup>38</sup> [Travel advice: coronavirus \(COVID-19\) - GOV.UK \(www.gov.uk\)](#)

<sup>39</sup> [COG-UK: Impact of travel restrictions on importations to England from May to September 2020, 16 March 2021](#)

- The effectiveness of strategies to reduce the risk of importation of infection will be highly dependent on the level of adherence to health protection protocols. In light of this, it will be imperative that all travellers, including those attending events, strictly adhere to rules for quarantine, self-isolation and testing. They must be in receipt of negative Covid-19 test results and must be asymptomatic if they attend events.

## **12. International Update**

- The situation in India continues to deteriorate very rapidly with the total number of recorded deaths from coronavirus (reported on 28 April) exceeding 200,000. The true figure is thought to be higher than this because numbers of deaths in domestic settings are not being reported. The daily number of recorded deaths is approximately 2800 although this figure is thought to be higher for the same reason mentioned previously. The daily number of recorded infections has risen very rapidly and has exceeded 350,000 but there are very early signs that the rate rise may be slowing (as of 28 April) although it will be some days before this can be verified. Although the situation in India is dire, the infection rate has only now equalled the current average infection rate in Europe (7-day rolling average measured as number of infections per million people) and the death rate equalled the world average (7-day rolling average deaths per million) which suggests that the situation could get considerably worse before it gets better. Oxygen demand has risen very sharply and India is now the largest consumer of oxygen for health care purposes of any country with published data.
- The cause of this rapid rise is blamed on the relaxation of NPI controls, even basic precautions such as face mask wearing, hand washing, social distancing and ventilation. Super-spreading events and mass gatherings could have contributed to this current wave. New variants are also thought to be contributing to the rise, including the variant first identified in the UK and new variants identified in India. These variants are characterised by having similar mutations which make them more transmissible and potentially less vaccine responsive.
- Although the vaccine rollout has been good in India, they have achieved only about 8.5% of the population with at least one dose. The reason for this is the huge number of people they have to vaccinate and it will be many months before they get to a level which will start to have a significant population-wide protective effect. The official advice from the Government is as it has always been: wear face masks, good hand hygiene, avoid crowded areas and ventilate enclosed spaces. Temporary local lock downs are being introduced in many areas because the most effective means of controlling the virus remains the imposition and maintenance of NPI controls, as it does in all countries that have not had a major proportion of people fully vaccinated.

- In general, the recent rises in **Europe** have been brought under control and the situation has been stabilised with a number of countries showing declining rates of infections. However, there are still one or two exceptions, notably the Netherlands which is still experiencing a rise in infections as is Sweden. In many countries varying degrees of national and local controls have been introduced to bring the virus under control but the overall pattern has become so fragmented and the second (or third or fourth) waves so incoherent that there are no simple patterns of overall control measures, other than those derived from: wear face masks, wash hands, avoid crowds and ventilate enclosed spaces.
- Most countries in **South America** have managed to arrest their increases in cases and several have started to reduce numbers, although there are exceptions but generally the picture is more promising. The Brazil new variant is widespread although there are some of the others in some countries.

### 13. Disclaimer

- It is important to note that due to limited evidence relevant to specific environments, it has been necessary to refer to a smaller numbers of studies conducted outside of the UK and under varying levels of restrictions. Therefore the studies may not be directly comparable to each other, or generalisable to Wales.
- Some of these studies are also published 'preprints' from sites such as MedrXiv and therefore have not been subject to the same level of independent peer-review as evidence published in scientific journals. These preprints are identified in the text.
- Moreover, outside of controlled laboratory or experimental conditions, it is very difficult to identify exactly how, where and when an individual has been infected and therefore these studies should be treated with caution. However, due to the dynamic nature of the pandemic and timelines involved, evidence is often emerging and is revisited as more substantive peer reviewed scientific papers and studies are published.