

**Adviesaanvraag**

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Onderwerp	Barometer

Adviesverstrekking t.a.v. het Overlegcomité

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1. General considerations on the concept of the barometer

- a. The Corona Commissariat was requested after the OCC of 3/12/2021 to “develop a simplified management strategy that anticipates, on the basis of phased, balanced and conditioned measures, how a default safe epidemiological situation can be achieved”.

The risk assessment group (RAG) issued on 15 December 2021 an [updated advice](#) on a simplified risk assessment and classification system, which consists of three pandemic management levels (1, 2, 3) and one ‘baseline situation’ level (0):

- A level 0: corresponds to a complete endemic, seasonal viral circulation of SARS-CAV2 and other respiratory viruses (eg influenza, RSV) with which the health care system capacity can cope without imposing permanent or seasonally adjusted NPI’s.
- Level 1: virus circulates at low level, epidemiological situation is stable with presence of a set of measures, and impact on the healthcare system is limited
- Level 2: increasing viral circulation, with beginning impact on the health care system. Additional measures are needed to reverse the situation
- Level 3: high viral circulation, important risk of overload for the health care system

The criteria to define the level are composed of main indicators for the burden on the health care system, both in hospitals and in general practitioners, as well as auxiliary indicators for infections, the reproduction rate of infections and the positivity rate, which have an early and predictive character for the expected burden in the health care system.

Level	7d incidence hosp	ICU capacity	Number of contacts with GPs for COVID	Positivity rate	Rt infections	14d incidence infections
Level 1	< 4/100.000 (i.e. < 65 nh/d)	<15%	< 50/100.000	0-3%	0-1	<200/100.000
Level 2	4 - 9/100.000 (i.e. 65-149 nh/d)	15-24%	50-99/100.000	5-9%	1-1,2	200 - 499/100.000
Level 3	≥ 10/ 100 000 (i.e. ≥ 150 nh/d)	≥ 25% (i.e. ~500 beds)	≥ 100/100.000	≥ 10%	≥ 1,3	≥ 500/100.000

Main indicators are indicated in grey

As mentioned in the advice dd. 30/6/21, the GEMS would like to highlight the importance of using such epidemiological thresholds. Thresholds are a guideline to foresee when measures need to be taken or can be relaxed with the purpose of (i) avoiding large resurgence and (ii) maintaining the motivation of the population to adhere to certain measures. Thresholds may increase risk awareness (which is a driver for motivation) as they give an indication of what is perceived as ‘high risk’ and ‘lower risk’. It is important to note that crossing the thresholds does not automatically imply a change of alarm level, but rather is the subject of an assessment by the RAG and subsequent political consideration and decision.

Indirectly, these thresholds take also new evolutions (e.g. new VOC and possible impact on the vaccine effectiveness) and seasonal effects into account.

- b. For each of these alarm levels, we propose here a set of (generic) measures (see table in paragraph 3), based on available evidence and epidemiological rationale as displayed in our earlier advice documents.

These generic measures can serve as a base to further develop more operationalized measures per sector or per type of activity.

- c. Ideally, a barometer should be all encompassing, taking the epidemiologic footprint of all measures or activities for a certain management level into account, including personal life, workplace, education system, group activities, events with audiences etc.... However, with this document we respond to the actual political advice request focused on the following sectors/activities: horeca (including nightlife), events with audiences, group activities. The latter two include the sectors of sports, culture, events, religion, youth.
- d. When defining measures for management levels 2 and 3, it is important to realise that early intervention is essential to prevent further deterioration of the situation. It is thus better to apply stricter measures as soon as possible to break the curve of infections and as stated in [GEMS dd. 2021/12/12](#), *“from the early stages of the pandemic, we can learn that typically, countries that implemented non-pharmaceutical interventions in the early stages of the pandemic appear to have better short-term economic outcomes and lower mortality, compared with countries that imposed non-pharmaceutical interventions during the later stages of the pandemic”*.
- e. This barometer should be taken as a living document, as it may evolve over time along new insights or evolutions. Several factors might already influence changes in the measures applied:
 - Seasonal changes with an important impact on peak disease burden and health care usage may require adaptations to the taken measures.
 - The emergence of new VOC with changing virulence and impact on vaccine efficacy of boosters
 - The availability of treatments for medically vulnerable people
 - Changes in measures in neighbouring countries or international measures might influence change in the measures taken in Belgium - although this points out clearly the need for a more EU collaborative approach to pandemic management^{1,2}

2. Specific notes and reflections on measures and sectors

a. **On ventilation and air quality:**

Given the airborne nature of SARS-CoV-transmission, the body of evidence has grown on the importance of adequate ventilation and indoor air quality as one of the most important interventions for a sustainable containment of viral circulation. Therefore, we believe that a very strong emphasis should be placed on investments to improve the air quality in all public indoor settings (including horeca, performance halls, sports infrastructure, shops, public transport, schools,...)³.

Closely related to this, density reductions may be needed to maintain indoor air quality levels, and safe distance and mask wearing have additive importance in the ‘Swiss cheese’ approach (no single intervention is 100% perfect, hence several interventions need to be combined in high viral circulation situations).

Efforts to develop an accreditation/certification for ventilation systems and economic incentives (such as 0% loans) should be provided to help businesses install and utilise appropriate ventilation systems at their venues. This will not only ensure safety for the current pandemic but will prepare for future

¹ <https://www.sciencedirect.com/science/article/pii/S2666776221001988>

² [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)01808-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01808-0/fulltext)

³ <https://www.rehva.eu/activities/covid-19-guidance/rehva-covid-19-guidance>

pandemics and ensure a more hygienic environment in general. We refer to the work and recommendations of the Task Force Ventilation.

b. **On the use of the covid-safe-ticket (CST) or 1G/2G/3G:**

The CST, a composite certificate of status on vaccination/recent infection/negative test was originally implemented as a transitory measure during the first vaccination campaign. In our [GEMS-advice dd. 19/5/2021](#), we recommended its use for high risk large scale gatherings where NPIs are not likely to be respected at all times (e.g. large festivals), in order to select audiences with the lowest infection risk. In a [subsequent advice dd. 18/8/21](#), we suggested broadening its use for at-risk activities such as mid-sized events, night life, student life, fitness/sports clubs, ..., where the motivation should be to reduce the risk and install a risk reduction culture.

The CST was applied for nightlife on October 1, then extended to horeca and all kinds of events on October 15 in Brussels and on November 1 elsewhere in Belgium. Unfortunately, its use was often interpreted by the organisers and participants as a 'proof of 100% safety' and was associated with excessive confidence in vaccination and the abandonment of all other measures (e.g. mask wearing, distance keeping,...) in Flanders. This has led to a societal false sense of security, and subsequent numerous infections following events, gatherings and group activities. In addition, implementing the CST did not have a significant effect on the vaccination rate e.g. in Brussels and the negative impact on social cohesion is evident. In addition, the CST represents a real difficulty for the 40% of Belgians who have low digital skills, people who do not have a suitable phone (the Covidsafe app requires advanced software) and people who, for financial reasons, have very limited access to the internet (and 3G or 4G). The effects on the local economy in neighbourhoods where the vaccination rate is low (horeca for eg.) would benefit from being documented.

It is therefore once again necessary to emphasize that : (i) there is no single 'magic bullet' when significant virus circulation is a challenge, neither testing, nor recovery nor vaccination ; (ii) depending on the activity, multiple lines of defence are needed; (iii) any measure that reduces personal freedom should be stopped whenever concerns about health impact and health system functioning allow for it. Finally, this is not a 'Belgian epidemic'. It is therefore natural to be consistent with European rules in terms of the definition and duration of covid passes. They also will need to be at least technically maintained to enable both leisure and business travel continuity, likely at least throughout 2022.

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It is therefore important to revise the possible use and positioning of such a certificate, while keeping the current CST measures in place until a new solution has been found. We have the following considerations:

1. It is not opportune to lump together 3 medical settings which are epidemiologically not equal: vaccination status (solid protection against severe disease, but much less so against infection and transmission), recent infection (e.g. recent infection with Delta does not protect sufficiently from Omicron infection) and negative test (only information on possible contagiousness, with limitations of false negative/positive tests). Vaccination status gives information on the individual and health care impact of a possible infection, but much less so for contagiousness.
2. It is therefore better and more transparent to evolve towards (1) a proof of vaccination ('1G'), as a proxy for personal protection against severe disease and (2) a proof of a negative test (RAT) as a proxy of low/no contagiousness.
3. Nevertheless, the use of a vaccination certificate with or without a negative Rapid Antigen Test (RAT) could have a role to reduce the risks of superspreading events and subsequently

accelerated spread of virus with a disproportionately large impact on disease burden with particularly high epidemiological risk (e.g. nightlife, mass gatherings, horeca, culture, other activities incompatible with good ventilation and/or mask wearing) and could be of use in future 'transition' periods between adjustments of vaccination programmes (e.g. adapted to a new VOC). Their application however can only be a complement and not a substitute for other preventive interventions such as adequate ventilation and/or the use of masks until the epidemic subsides, and affordability of the tests remains an important incentive for their use

4. The use of a vaccination certificate versus a broader vaccination mandate is the subject of a societal and political debate and goes beyond the mandate of this advice.

c. On the use of masks

- We refer to Superior Health Council and Risk Assessment Group (RAG) subsequent advices [on masks](#). Recent evidence confirm the effectiveness of mask wearing as a (partial) protection for viral transmission, with even higher protection capacity for FFP2-masks⁴.
- Given the easier spread of Omicron, the limited vaccine-induced protection of medically vulnerable persons, and the significantly higher protection of FFP2-masks in protecting both the influx and outflux of aerosols, we would recommend their use as an additional layer of protection for medically vulnerable persons, health care professionals, teachers and people who are have frequent interactions with a lot of individuals, especially where large groups gather or where ventilation is limited (e.g. staff in public transport, events, horeca,..). That would however require sufficient availability with low or no financial barrier.
- The availability and affordability of the masks (FFP2, surgical for adults and for children) is an important incentive for their use.

⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8670465/pdf/pnas.202110117.pdf>



3. Barometer

As per explicit request of the policy makers for whom this advice is intended, we have focused on the requested field (i.e. horeca, events with audience, group activities) and have excluded any specific considerations related to education, work, private life, high contact professions from this advice.

Suggested barometer 10/01/2022					
		Level 1	Level 2 (all measures on top of level 1 measures)	Level 3 (all measures on top of level 2 measures)	Rationale, evidence and references
Basic set of measures (applicable to all citizens)	Ventilation	Indoor air quality in public buildings according to standards (CO2 below 900-1200 ppm) preferably accredited by public authorities. Stimulate also adequate ventilation in private homes/settings	Guarantee of sufficient ventilation and/or air purification minimum 40m3 (or 900ppm)	Idem	see references 1, 2, 3
	Hygiene	Hand and cough hygiene	Idem + Keep a safe distance from persons outside household Reduce and stabilize number of close contacts	Idem + Limit number of close contacts to a strict minimum	
	Testing & Quarantine	Testing and self-isolation when ill, if no specific procedures; otherwise testing, isolation and quarantine according to procedures	Testing, isolation and quarantine according to procedures	Idem	
	Masks	<ul style="list-style-type: none"> - For all from ages 12 y old in: - Health care settings; - Public transport; - Other crowded indoor settings; - FFP2-masks recommended for medically vulnerable people and other high risk settings (see above). 	<ul style="list-style-type: none"> - For all from ages 6 y old in: - All public indoor spaces; - Crowded outdoor; - FFP2-masks recommended for medically vulnerable people. 	Idem	see references 4, 5, 6, 7
	Vaccination	Maximal motivation of complete vaccination for entire eligible population (= 5 y onwards).	Idem In high-risk settings, CST (or vaccination proof + RAT) may be applied	Idem In high-risk settings, CST (or vaccination proof + RAT) may be applied	
Horeca (general)	Ventilation	Indoor air quality according to standards (CO2 below 900-1200 ppm)	Guarantee of sufficient ventilation and/or air purification minimum 40m3 (or 900ppm)	Idem	Evidence of increased risk (esp. bars) see reference 4 Eating & drinking are not compatible with mask wearing, which should lead to higher priority of adequate ventilation
	Protocols	Horeca protocol should be respected	Idem	Idem	

	Masks	All staff must wear a mask when moving around and working closely together.	Idem + all staff and clients from 6 years of age must wear a mask when not eating/drinking.	Idem	
	Capacity		Tables of max 4-6 persons with 1,5 m between persons at different tables, only seated	Idem	see reference 8
	Closing hour			Earlier closing hour to limit risks in bars and busy restaurants (e.g. 10-11pm)	
	Closing activity			Indoor horeca may need to close if sanitary situation is not under control Outdoor horeca requires strict non-crowding interventions	
Horeca (nightlife/discos/dancing)	Ventilation	Indoor air quality according to standards (CO2 below 900-1200 ppm)	Guarantee of sufficient ventilation and/or air purification minimum 40m3 (or 900ppm)	Close activity	Multiple epidemiological defence lines can or are often not well maintained (keeping distance, wearing masks, adequate ventilation). Early intervention (i.e. very strict measures or closure) is essential as this activity can fuel viral resurgence see reference 4
	Protocols	Horeca/sector protocol should be respected	Idem		
	Masks	All staff must wear a mask when moving around	Idem		
	Test/CC		1-2G + negative RAT		
	Capacity		Reduced max capacity (e.g. 50% , related to ventilation capacity)		
Group activities (e.g. cultural and sportive societies, youth societies, leisure...)	Ventilation	Indoor air quality according to standards (CO2 below 900-1200 ppm)	Guarantee of sufficient ventilation and/or air purification minimum 40m3 (or CO2 < 900ppm)	On top of general measures, only outdoor activities in small groups (e.g. max 10-20 p) where distance can be kept and/or masks can be worn Exceptions may be described for specific vulnerable small groups (youth with psychosocial health problems, people with sensory impairment or disabilities, etc.) and for non-contact or non-team sports (e.g. tennis, climbing,...)	These activities are often organized on a voluntary, non-professional basis, which has implications for accountability for implementation of ventilation, protocols,... Local authorities or the venue owners should be responsabilized for the implementation, monitoring and necessary interventions see reference 9, 10 Group activities bring people from many different households, ages and medical conditions together. Adjacent (non-core) activities (e.g. canteens, competitions, dressing rooms) create a particular risk for transmission due to crowding or non-mask wearing
	Protocols	Pre-existing (sector)-protocols should be implemented	Pre-existing (sector)-protocols should be implemented		
	Masks		Masks for all participants (except when incompatible with activity e.g. sports, acting,...)		
	Groups		Keep groups small (e.g. max 50 p), avoid mixing of groups Avoid high risk additional group gatherings which are not the core activity (ex. indoor cafeteria, changing/shower rooms, additional events,...)		

	Activities		Organize activities preferentially outdoor Avoid overnight activities Consider using selftests/RAT for high transmission risk activities		The range of groups activities is very broad (cultural, sportive, youth, leisure,...). Some group activities are incompatible with mask wearing (e.g. close contact sports, dancing, acting) and have a higher intrinsic transmission risk. Overnight activities are associated with much longer and more intense exposure to other people, mostly in an indoor setting
Audiences (culture, sports, cinema, religious gatherings,...)	Ventilation	Indoor air quality according to standards (CO2 below 800-1200 ppm) and/or air purification system if effective ventilation is not possible	Guarantee of sufficient ventilation and/or air purification minimum 40m3 (or 900ppm).	Idem	Given the large number of persons gathering, Swiss cheese approach is needed in level 2 and 3: adequate ventilation + mask wearing + safe distance.
	Protocols	Pre-existing sector protocols should be enforced + risk assessments and action plans	Idem	Idem	see reference 9
	Masks	Masks for indoors events for everybody in audience from age 12 y old	Masks for everybody in audience from age 6 y old for indoor and crowded outdoor events	Idem	
	Crowding		Anti-crowding management compulsory with compartmentation option	Idem, without compartmentation option	Mass gatherings with potential impact on public transport and public domain need to be suspended in level 3
	Capacity	Investment in adequate ventilation is essential. However, if in the meantime ventilation standards cannot be met, capacities should be reduced accordingly, e.g. max 100% CIRM at 25m3 (or 1200ppm) or 75% CIRM if neither standard is met.	Further capacity reduction in function of reaching ventilation levels Absolute maximum cap may be needed to avoid mass events	Further capacity reduction in function of reaching ventilation levels Absolute maximum cap may be needed to avoid mass events	Capacity is correlated to the ventilation capacity and distance between seated groups Absolute maximum cap may be needed to avoid crowding within and around event (including public transport - this implies suspension of mass events which can act as superspreading events see advice GEMS 31 (pg 15)
			1,5m distance between households/groups in audiences to be guaranteed (this implies 50-75% capacity reduction)	Idem	
			Indoor: Combination of maximum proportion of occupied seats (e.g. 50%) and maximum capacity audience of 500-1000 (plafond)	Indoor: only passive, seated events in small audiences (e.g. 200 p). Higher capacities could be maintained in venues reaching ventilation standards	Safeguarding certain activities even for small audiences is highly important for mental health (both audience and performers)
			Outdoor: Maximum capacity audience of 1000-2000 (plafond) and a capacity reduction (e.g. 50%) if the event is not static	Outdoor: only seated/static events in small audiences (e.g. 500 p) or active events with respect of > 1,5 m distance at all times (e.g. 1 p/10m2)	
	Catering	Catering according to horeca rules	Idem	No catering	Horeca activities connected to e.g. performances could lead to more intense mixing of groups and lack of adherence to mask wearing and distance rules

1. References for barometer table

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