

Health pass and green zones: how to contain the virus while vaccination progresses

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EXECUTIVE SUMMARY

The development of vaccination campaigns in Europe is entering a new phase in the management of the Covid-19 epidemic. While the numbers are improving quickly and **swift vaccination is the most effective manner to tackle the pandemic, it should not be a single-handed strategy.** In particular, we need to cope with some important unknowns including the extent and the duration of vaccine protection, notably as new variant spread which might partially evade immunity.

European countries should agree on a coordinated public health strategy which provides maximal protection to its population. Implemented as soon as possible, this could be the key to accelerate the economic recovery in Spain and in the other Southern European countries, most dependent on the summer season.

Our proposal is based on two complementary tools:

→ The **health pass** consists of a certificate indicating that a person is vaccinated, immune or has a recent negative test, allowing that person to travel or take part in social interaction where social distancing is not feasible. It is meant to be an inclusive, temporary tool, to avoid closures in case of a new and uncontrolled resurgence.

- The health pass arises many practical and ethical issues regarding discrimination, certification, confidentiality, improper application, and dissent. It should thus be used only when and where it is strictly necessary. Social venues should be classified into three categories: low, medium, and high risk, dependent on the duration and intensity of the interactions. There, the pass should only be used in case of a new wave of infections, and only in venues which are at highest risk.

- Importantly, the health pass should be equally accessible through immunity, vaccination or a negative PCR test, and tests should be accessible and free. Restricting the pass to vaccinated people would be a grave error, especially as most people have not yet been eligible to vaccination.

→ **Green zones** refer to a classification of regions or countries dependent on their epidemiological situation.

- While travelling between European green zones should be unrestricted, travelling from a non-green zone (orange, red, or dark red) to a green zone should give rise to checks and restrictions (tests and quarantines) which ensure its protection against reimportations.

- Common, flexible criteria should be used to define green zones, dependent on the incidence rate, but also on the test-and-trace capacity, the ability to sequence new variants, etc.

Combining an inclusive health pass with an incremental classification of zones is crucial to return to normality as soon as possible, and to avoid new widespread closings. Importantly, these two tools need to be flexible, and remain temporary.

Faced with the prolonged restrictions on our freedoms, and the growing health, economic, social and psychological costs, there is cause for concern – especially since, according to recent studies ([Moore, Hill et al. 2021](#), and [Kiem, Massonnaud et al. 2021](#)), the health crisis will likely extend beyond vaccination campaigns.

Today, the world faces an unprecedented race between vaccination and contagion. Vaccines give a head start to those people who got one, and to countries where they are widespread. On the other hand, unvaccinated people are still exposed to contagion, and vaccination is particularly slow in developing countries. Further, as the number of cases of Covid-19 increases, so does the risk that a new variant emerges which significantly escapes acquired immunity. The efficacy of existing vaccines would then wane, forcing mankind to match the virus with ever-changing medical innovations. This possibility is yet another source of uncertainty, as we are still trying to figure out the extent and the duration of the immunity provided by existing vaccines.

These unprecedented challenges need to be addressed, possibly with new ideas. In this note, we propose two complementary tools: the *health pass* and *green zones*. Advocating for a policy that is both pragmatic and discerning and based solely on epidemiological criteria, the first tool is micro in nature to regain individual freedoms, while the second is a macro or territorial approach. Supported by vaccination programmes, these two tools can be the key to win the immunization race against the virus by limiting the likelihood of new contagion chains. They should be used to accelerate the end to the crisis, both in terms of health, economic growth and civil liberties: three imperatives which, contrary to popular belief, are not in contradiction ([Oliu-Barton, Pradelski, Aghion et al. 2021](#)).

The health pass.

The health pass is micro in nature: all people at lower risk of transmitting the virus could resume social interactions, using a tool to identify them in real time. In the interests of fairness, this tool should be accessible to everyone. As such, the green light or safe health conduct should not be reserved for vaccinated persons, but should be based on all the criteria indicating a lower risk of transmission: vaccination certificate, serological test indicating the immunity of the person, recent negative PCR test, compliance with a quarantine period, etc. Several European countries, including the [United Kingdom](#) and [Greece](#), are considering the implementation of such a tool, which has nevertheless raised [controversy](#), particularly on the subject of the discrimination it could cause among the population.

Green zones.

As for green zones, this approach is macro in nature, with a focus on identifying the countries where the virus is under control. In these zones, all economic and social interactions (catering, leisure, culture, sport and events) could resume gradually and normally. But while it is desirable to qualify as a green zone, the challenge is in remaining green, because this is what will enable the population to emerge from the health crisis and regain their freedoms. To do this, it is important to take a two-pronged approach: on the one hand, to act quickly, locally and rigorously to get the virus under control immediately in the event of an outbreak; and on the other hand,

to minimise the risk of reimporting the virus as much as possible, such as by making a “green light” approach mandatory along with health monitoring in green zones. A European health pass was proposed on 17 March 2021 by the European Commission, and the Member States are committed to the rapid adoption of this tool.

The dual role of the health pass.

The health pass would make it possible to regain individual freedoms while remaining cautious (especially as vaccination is not yet widespread) by serving two purposes: ensure a targeted reopening of social and facilitate travel. The potential benefits are therefore considerable, economically, socially, culturally and even psychologically.

Preliminary considerations.

However, the adoption of such a tool raises unavoidable questions. First, the question of safety: how can we be sure that the health pass is reliable from an epidemiological point of view? Safe health conduct could attest to a lower risk of transmission of the virus, but there will nevertheless always be a risk of transmission. The health pass may even encourage overconfidence, which would pose problems. The second question is one of regulation: which authority will issue and certify the pass? Who will have the right to request the presentation of a pass, and under what circumstances? Will passes be required to travel, access public places, attend private events? Finally, the health pass raises ethical questions. By creating two categories of people – those who have safe health conduct and those who do not – this tool could create discrimination between different sections of the population.

Proposal.

In this memo, we propose a reliable and accessible health pass for all, while trying to provide some answers to the questions raised previously. Our method is based on the following observation: on the one hand, during social interactions, the risk of transmitting the virus depends on the “epidemiological status” of participants – are they vaccinated, immune or have a negative test? – and, on the other hand, the “epidemiological status” of the interaction – is it low, medium or high risk? A simple colour code will then make it possible to define reasonable reopening criteria. The epidemiological status of the area – low, medium or high infection rate – would also be taken into account, therefore strengthening the evolving, country-focused aspect of the proposal.

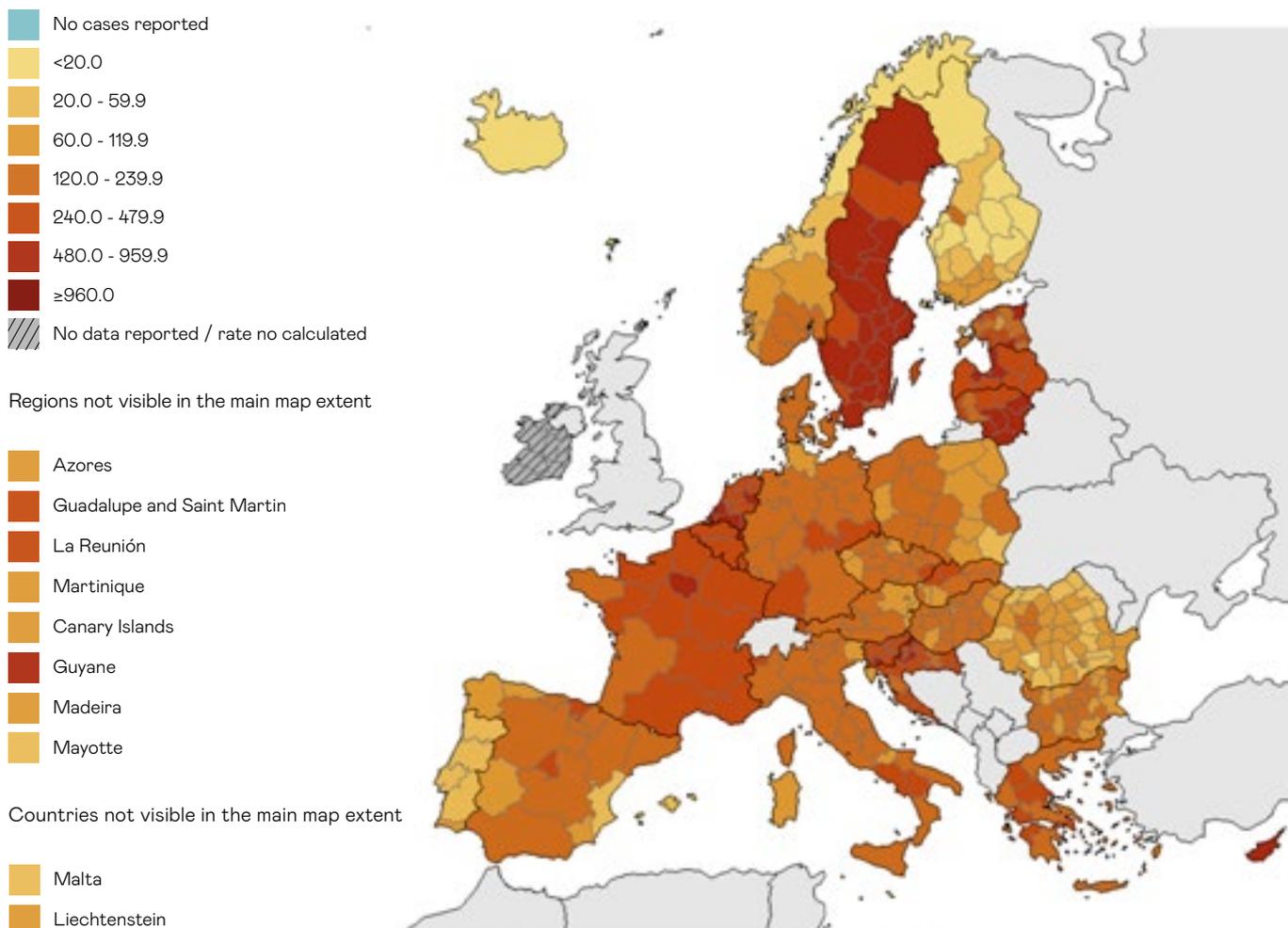
1. European Context

Before addressing the Spanish context and outlining our proposal, we first review the European context.

A common colour code. Since [13 October 2020](#), the European Centre for Disease Prevention and Control (ECDC) [publishes a map each week](#) showing the epidemiological status of the different European regions. Each region is assigned the colour “green”, “orange”, “red” or “scarlet” according to objective, shared criteria: the cumulative incidence rate over 14 days and the rate of positive tests. The colour codes, as well as the criteria that define them, [may soon be changed](#): a more incremental system is being planned in which mortality rate is used instead of the positive test rate. This change is significant because, among other things, it will allow the vaccination rate of each zone to be taken into account.

Figure 1
The epidemiological situation of European regions on May 20, 2021 (ECDC).

14-day COVID-19 case notification rate per 100,000 population. 2021-w18 to 2021-w19

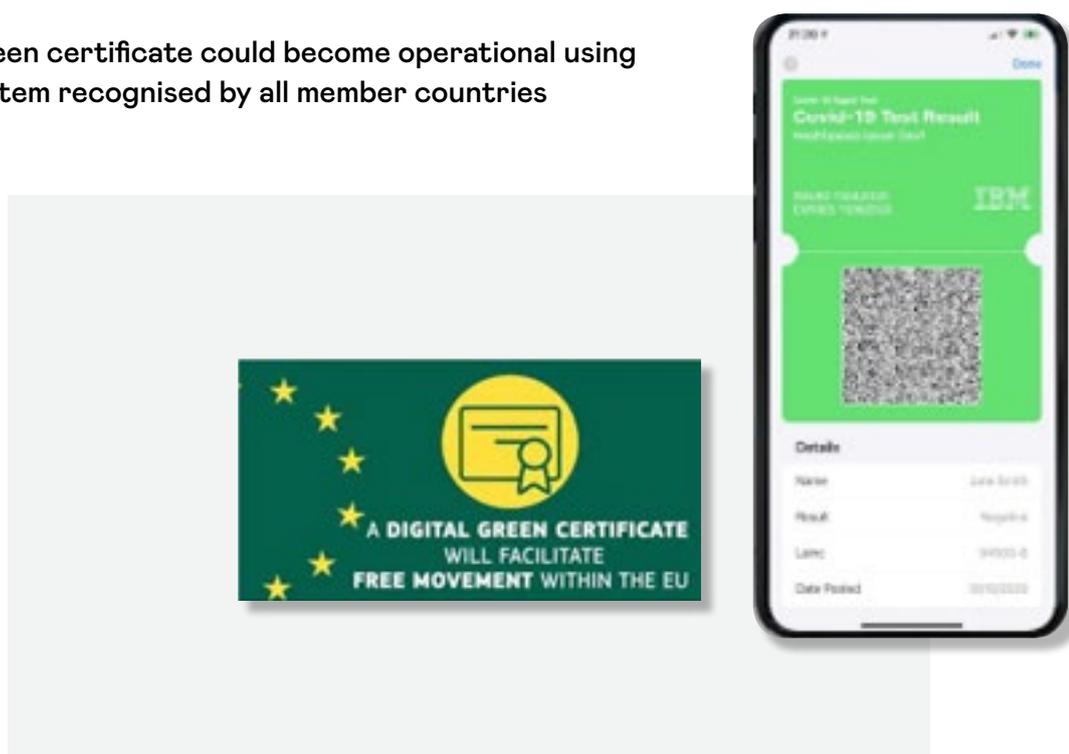


Vaccination campaigns. Vaccination programmes have been slower than expected. As of the 21st of May, around one third of the population of the European Union have received one dose and more than 12% are fully vaccinated (source: ECDC). The WHO has gone so far as to denounce the [unacceptably slow rate](#) of vaccinations. The comparison with our English neighbours (55% and 31% respectively) and the United States (48% and 38% respectively) is particularly striking given the similarity of these contexts. In addition, the proliferation of variants worsens the situation: re-infections, loss of efficacy of vaccines, increased contagiousness, severity of the virus, etc.

Proliferation of health passes. Faced with the ongoing crisis, there has been a surge in different types of health passes in Europe. Greece and Israel have already signed a bilateral agreement to set up a safe travel pass. Denmark has set up a national [“coronapas”](#) to facilitate the reopening of social spaces. Mediterranean countries (Italy and Spain, Greece and Croatia) have pushed the European Union to adopt a European pass in order to save their summer season, which is crucial to their economies. Finally, in the United Kingdom and France, the implementation of a health pass is currently under discussion.

Digital green certificate. Scheduled to be operational from mid-June, the [European health pass](#) would allow free travel within the European Union to all people who have been vaccinated or who have immunity certificate or negative PCR test taken within 72 hours. However, the adoption of the pass raises many questions ethically (discrimination of people, protection of personal data), technically (interoperability between systems) and scientifically (duration of immunity, vaccine protection rate, number and type of tests required). In addition, some countries could use the pass for other purposes: it could be compatible with a local health pass, giving access to social spaces reserved for people at the lowest risk of transmitting Covid-19.

Figure 2
The digital green certificate could become operational using a QR code system recognised by all member countries



Conclusion. The epidemiological situation remains serious, particularly in view of the challenges posed by the variants. Restrictions, including on non-essential travel, should therefore be maintained for the time being, while taking into account the specific situation of cross-border communities. The unhindered movement of goods and services within the single market must continue to be ensured, including through the use of dedicated lanes at border crossing points. However, preliminary work on a shared approach to gradually lifting restrictions is needed in order to ensure that efforts are coordinated when the epidemiological situation allows for current measures to be relaxed. There is an urgent need to advance legislative and technical work on interoperable, non-discriminatory digital certificates related to Covid-19, based on the Commission proposal.

2. A national health pass

In Spain, except for specific private experiments on certain controlled mass events there is no major ongoing conversation on the possibility of implementing a national health pass. The debate has instead focused on its cross-border dimension. Nevertheless, we see its adoption as a worthy policy debate, especially under the light of nascent experiences in countries around Europe that have been able to apply some form of it: for instance, Israel has set up a general health pass, while France has already approved implementing it for big events, i.e. gather more than a thousand people.

Why implement a health pass? As with lockdown or curfew, the closure of places that bring together members of the public (such as theatres, cinemas, bars, cafés, event venues, non-essential shops, restaurants, fitness centres, ski resorts and schools) is intended to reduce social interactions as much as possible, since these are the source of transmission of the virus. These general measures have an effect, but they weigh on all citizens beyond their risk and potential contribution to the spread of the virus.

One year after the start of the pandemic, a targeted approach is possible. Firstly, vaccines, serological tests and PCR tests are now widely available, effective and relatively inexpensive. Secondly, we have constant, localised monitoring of epidemiological data and scientific studies detailing the factors that increase the risk of transmission of the virus. Together, these tools help identify social interactions with very low epidemiological risk: for example, a gathering where all people are vaccinated, immune or have tested negatively.

Finally, the adoption of a European pass must be consolidated within the framework of the already ongoing implementation of such pass by the 1st of July. Many tourists will travel around Europe this summer with a digital certificate attesting to their lower risk of transmission based on the criteria mentioned above: vaccine immunity, natural immunity or a negative PCR test taken within 72 hours. The implementation of a national health pass, compatible with the European pass, would allow tourists to safely visit social spaces.

2.1 How the pass works

Our proposal is based on 5 simple principles:

- (1) Identifying establishments that would need a pass to reopen, using a digital platform, for example.
- (2) Including the health pass on this platform so that it is accessible to anyone who wishes to use it. (The TousAntiCovid app could be used, for example).

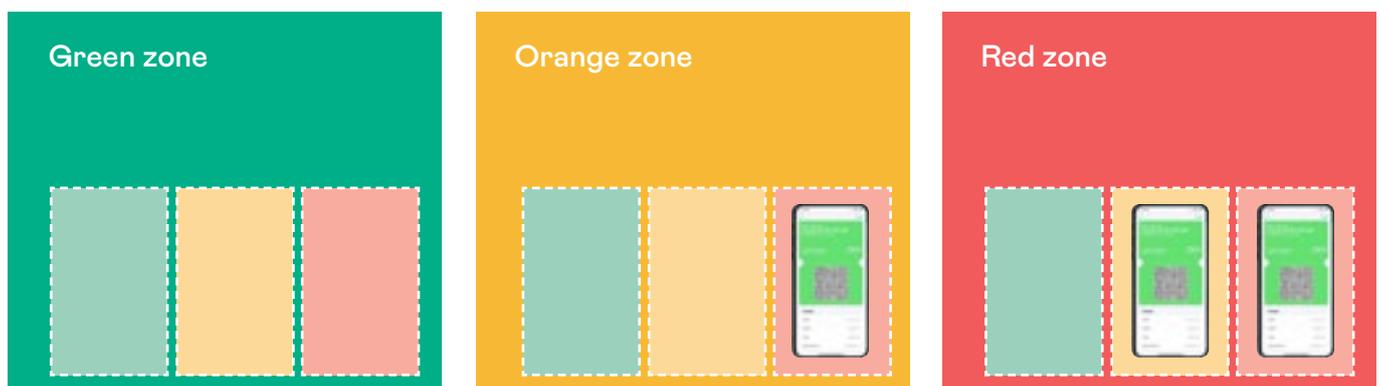
- (3) Determining the level of epidemiological risk for each establishment using a simple colour code: “green”, “orange” or “red” depending on the nature of the interaction.
- “Green” if the interaction presents a low risk of transmission ;
 - “Orange” if the interaction presents a medium risk of transmission ;
 - “Red” in all other cases.

The place, duration and conditions of the interaction should be taken into account when determining these codes: this task will be the responsibility of the relevant health authorities.

- (4) Assigning a health pass to people who have been vaccinated, are immune or have a negative PCR test taken within 72 hours. In a way, this pass is a green light, attesting to a lower risk of transmission of the virus.
- (5) Reopening establishments in a prudent manner. Places classified as “orange “ or “red” may reopen using the health pass, depending on the epidemiological status of the region in which they are located (as published weekly by ECDC, for example).
- In the red zone, the reopening of establishments classified as “orange “ or “red” requires the adoption of a health pass.
 - In the orange zone, only the reopening of establishments classified as “red” requires the adoption of a health pass. “Orange “ establishments can remain open even without a health pass.
 - In the green zone, all establishments can reopen, even without a health pass.

Figure 3

The following diagram gives an example of opening measures for social spaces. In the green zone, social spaces are open to everyone, while in the orange or red zone some places require the health pass to reopen.



The adoption of a health pass raises many questions of a practical and ethical nature, which must absolutely be answered. The following list is by no means exhaustive and may be added to later.

2.2 Practical considerations

Regulation. First, it will be necessary to identify a credible central authority capable of issuing, managing and certifying the health pass. Next, it will be necessary to define the places and activities authorised to use the pass. Priority could be given to places currently closed in order to allow them to reopen, which could be done incrementally. For example, this right could initially be reserved for education (schools and universities), later extending to cultural places, and finally to the food service industry (cafés and restaurants), fitness centres and event venues. Free tests should be rolled out to accompany the reopening of venues to facilitate access to the health pass for people who are not vaccinated. The vaccination programme could also take into account the reopening schedule, for example by prioritising children, students and teachers. Finally, any national pass will need to be compatible with the European pass: this will avoid discrimination within the European Union and broaden the number of eligible people.

Definition and evolution of criteria. Criteria for the health pass, as well as the colour codes for social spaces and the applicable health protocols, should be determined by the relevant health and legal authorities. Using objective and consistent data, provided by a health authority. (In France, for instance, this has been done by the [ComCor studies](#) at Pasteur Institute). Measures could include capacity limitations, as well as strengthened protocols or test-and-trace policies. They should respect the principles of proportionality and non-discrimination (the same rules apply to the same colour codes) and should be communicated transparently, especially since epidemiological statuses are of a changing nature. For people, immunity levels may decline or vaccination may be ineffective against a new variant, and PCR tests may come back positive at any time. For establishments, opening conditions depend on the extent of the spread of the virus in the area (department or region), which is also of a changing nature.

Flexibility of the tool. In addition, our understanding of the virus is evolving over time: new scientific studies along with the presence of new, more contagious variants have already changed the situation in the past and could do so again. The criteria for assigning colour codes should therefore remain flexible. For example, greater reliability of antigen tests and self-tests, or the possibility of certifying compliance with a quarantine, could lead to modifications to the system so that these can be integrated into the health pass.

Epidemiological risk. The risk of transmitting the virus during a gathering depends on a wide range of factors. The proposed colour code makes it possible to predict and control this risk. It is important to note, however, that there is no consensus to date in terms of quantifying this risk. The rate and duration of vaccine protection and immunity determined by serological tests should be considered with caution. In addition, we should remember that the health pass only attests to a lower risk of transmission: vaccines, serological tests and PCR tests do not offer certain or permanent protection. Real-life vaccination data, in particular from [Israel](#), attest that being vaccinated provides protection from severe forms of the disease but also from asymptomatic infection, which means that people who are vaccinated are low carriers and are therefore not very contagious. However, for the moment, this data mainly concerns mRNA vaccines, and even in this

case, the proportion of vaccinated people who remain susceptible to infection could remain non-negligible (around 10 to 20%). Clearer knowledge on this point for all types of vaccine remains crucial in the development and modification of the health pass.

In this sense, adopting the pass is currently not about eliminating risk, but about opting for a risk control solution that is credible enough to tip the scales in favour of the incremental normalisation of social interactions.

Travel restrictions. Categorising zones according to infection rates makes it possible to adapt conditions for reopening various social spaces to the epidemiological risk. However, this approach has its limits: in the absence of travel restrictions, the reopening of at-risk locations without a health pass could encourage people to travel to green zones to socialise there, so increasing the risk of reimporting the virus - unless a health pass is always required in green zones. Targeted travel restrictions may be facilitated with the health pass: travel (inter-departmental or interregional) between red and green zones would be lower risk provided that all travellers have a health pass. Although difficult to implement, the protection of green zones would not only allow for the reopening of social spaces without a health pass, but also, and more importantly, it would accelerate the end of the crisis, or at least prevent us from going backwards. Because unfortunately, as it stands, we are still a long way from getting the virus under control in our country and our continent.

Encouraging good behaviour. As soon as vaccines and tests give access to social spaces, an important incentive should be created for these two options which are influential factors in ending the crisis. However, there is also the opposite risk of overconfidence which could be counter-productive: the health pass could lead to a relaxation of safety measures and social distancing, essentially having a rebound effect and slowing down the end to the crisis.

Tracing and alerts in case of infection. The health pass should allow be designed to alert contacts in the event of a new case of Covid-19 being detected while respecting individuals' privacy. Its use in at-risk places is an effective way of controlling the virus in the event of a resurgence, therefore strengthening the test-trace-alert strategy already in place.

Data management. Data must remain private and anonymous. Only the status assigned by the platform should be public, and not the underlying criterion. In particular, social spaces will not be able to distinguish those who have been vaccinated from those with immunity or those who have recently been tested.

Covid app. The health pass should be compatible, if not integrated, to a smartphone application through which new clusters could be efficiently traced, and the people concerned alerted. Yet, the effectiveness of the app depends on its uptake rate. A clear and transparent communication is thus of major importance.

2.3 Ethical considerations

The adoption of a health pass should imperatively be in accordance with our democratic principles, which is why we must also take into account ethical considerations.

Fairness. The pass would allow some people to attend cultural events, restaurants or fitness centres, while others would not be eligible. However, it is important to point out that the pass is accessible to everyone, since PCR tests are free and widely available. Moreover, this same obstacle has previously arisen in regional measures. These objections are to be taken seriously and deserve careful consideration by authorities. We can however suggest that, despite the potential inequalities created by such a tool, it remains a legitimate approach for at least two reasons. The first is that the collective benefits are a priori much greater than the disadvantages and it would not be fair for the majority of people to renounce their freedoms while not everyone is immune. The second reason is that these inequalities are intended to be temporary and access to the vaccine should become widespread in the coming quarters.

The risk of being kept on file and unfair controls. First, it is reminded that individuals are free to request a pass or not. In a situation where the virus is becoming endemic, the whole of society will have to follow protocols around social distancing and safety measures. Everyone will need to choose how to live with the virus: following the restrictions imposed in their region without a pass, or enjoying the mobility and access to certain activities offered by the pass. But the requirement of a pass for access to activities or establishments risks making controls widespread that could lead to improper use or discrimination. The use of a QR code, as proposed above, would facilitate automated controls, which are less subject to arbitrariness and disputes. In addition, the pass technology should not require the storage of individual personal data connected to the use of the pass.

Generational discrimination and inequalities. The implementation of a health pass could amplify discrimination: some people have access to the pass as a result of being vaccinated, while others need to be systematically tested in order to access it. In addition, the vaccination policy is mainly based on age criteria: of the 30 million people who should be vaccinated by the end of June 2021, if timescales are met, the vast majority will be over 50 years old. What should be done, then, about those who are under 30, who generally have greater demand for socialisation, or about the social life of families with young children? This imbalance may be compensated by facilitating access to tests for the youngest members of the population, for example (dedicated laboratory, provision of salivary PCRs, etc.). In addition, it is important to stress that these differences will gradually fade as the vaccination programme progresses, including for children.

Vulnerable people. The pass should be accessible to everyone. To achieve this, it is important to identify the people who may be penalised by such a tool and adopt specific policies in order to account for their needs. For example, an in-person pass assignment system could be set up to allow those who have difficulty using digital tools to obtain a certificate of their status.

In view of all these considerations, it would be desirable for the implementation of a health pass to be pilot tested in certain departments or areas, and for its implementation to be subject to public consultations, for example through surveys. It is important that the pilot and consultation phase starts as soon as possible. Universities that need to prepare for the 2021-2022 start could serve as pilot cases and provide feedback quickly.

4. Conclusion

With the imminent arrival of the European Union's "digital green certificate", the issue of a Spanish pass is becoming increasingly urgent. The adoption of such a tool should be subject of debate within the executive as soon as possible. This is important, partly because such a seems to undermine the principle of equality to which our democracy is committed: not everyone has access to the vaccine, and we must protect individual data because the vaccine is not compulsory. Hence the need to include testing, since testing also indicates a lower risk of transmitting the virus. Our near future relies on these tests and our ability to use them in order to ensure the safe reopening of venues.

Today, since the targeted reopening of meeting places is possible at a lower cost, the general closure of all social meeting spaces is difficult to justify. This is why, as soon as it becomes possible, we must reclaim our freedoms which have been sacrificed to such a great extent. Getting back to normal is not a privilege but a right that each and every one of us is eager to regain. And for this, we need a reliable, temporary health pass that is accessible to all. Because the health pass raises important questions, its implementation requires a pilot phase and immediate consultations.

NOTE. A French version of this memo was first published by Terra Nova.

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