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Committee on Legal Affairs and Human Rights

Covid passes or certificates: protection of fundamental rights and legal implications

Report*

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A. Draft resolution

1. The socio-economic cost of Covid-19-related restrictions continues to be huge and the political pressure to limit and withdraw them is real and understandable. At the same time, the sanitary situation remains very precarious – Covid-19 is still a disease that could easily run out of control, causing further widespread sickness and death. In this respect, the Assembly recalls its Resolution 2338 (2020) on the impact of the Covid-19 pandemic on human rights and the rule of law, in which it recalled that "the positive obligations under the European Convention on Human Rights (CETS No. 5, the Convention) require States to take measures to protect the life and health of their populations". Furthermore, sustainable socio-economic recovery will only be possible once the disease is durably under control. Vaccination will be an essential public health measure for achieving this, but insufficient by itself.

2. Numerous European states have shown a desire to introduce a system of Covid pass or certificate, which would constitute official documentation of an individual's having been vaccinated against Covid-19, having recovered from Covid-19, and/ or of having tested negative for SARS-CoV-2 infection. Certification of vaccination status has legitimate and valuable medical uses. The use of Covid passes to allow the resumption of enjoyment of certain rights or freedoms, by partially lifting restrictions, is fraught with legal and human rights complications, and above all depends on a high degree of certainty about medical risks.

3. Vaccination and recovery from past infection may well reduce the risk of transmission, but the extent and duration of this effect are currently uncertain. Furthermore, different vaccines and vaccination regimes may vary in their effectiveness at reducing transmission risk, and vary in their effectiveness against SARS-CoV-2 variants. A negative test result is only indicative of a historical situation, which can change at any moment after the sample is taken. These differences are relevant to whether specific use cases of Covid passes are medically justified and non-discriminatory.

4. If Covid passes are used as a basis for preferential treatment, they may have an impact on protected rights and freedoms. Such preferential treatment may amount to unlawful discrimination within the meaning of Article 14 of the Convention if it does not have an objective and reasonable justification. This requires that the relevant measure (i) pursues a legitimate aim, and (ii) is proportionate. Proportionality requires a fair balance between protecting the interests of the community (the legitimate aim) and respect for the rights and freedoms of the individual.

5. Discrimination may be due to either treating people differently on the basis of an irrelevant distinction, or treating in the same way people who are different in relevant ways. Whether or not a Covid pass reflects a relevant distinction depends on the extent to which the specific medical status that it represents implies a

* Draft resolution adopted unanimously by the committee on 17 May 2021.

significant difference in the risk of the holder transmitting the SARS-CoV-2 virus to others. A significantly lower risk of transmission may also imply that restrictions on rights and freedoms are no longer justified for the individual concerned, regardless of the situation of others.

6. The extent to which a justification for differential treatment is objective and reasonable depends on the nature of the right or freedom in question and the severity of the interference. National authorities should carefully distinguish between different use cases for Covid passes on the basis of the rights and freedoms affected, and the duration of the exemption from restrictions that the pass allows. Similarly, should private actors be able (or even obliged by law) to require presentation of a Covid pass before serving customers, careful distinction should be drawn between essential and non-essential goods and services. The duration of differential treatment based on Covid passes may also be relevant to whether it is proportionate.

7. The assessment of the risk of transmission should take account of the specific context to which holders of a Covid pass would be admitted, including whether they will come into contact with people who have no immunity against Covid-19, and whether variants of the virus, especially those that are more easily transmissible or may be vaccine-resistant, are locally present.

8. Until clear and well-established scientific evidence exists, it may be discriminatory to lift restrictions for those who have been vaccinated whilst maintaining them for those who have not. The only ground for distinguishing between the two groups would be the basis on which vaccination had been targeted. But this basis alone – most commonly, vulnerability to Covid-19 – may not be relevant to lifting restrictions intended to halt transmission of the disease.

9. Even should the scientific evidence be sufficient to justify preferential treatment of holders of Covid passes, there may be valid public policy reasons for not using them. Their use may undermine the fundamental link between human rights, responsibility, and solidarity, which is essential in the management of health risks. Expenditure on a Covid pass system may divert scarce resources away from other measures that could reopen society more quickly for everyone. This would be especially harmful if the 'window of opportunity' were relatively short between there being sufficient scientific evidence to justify the use of Covid passports, and the total number of vaccinated being high enough to relax restrictions generally.

10. If the consequences of refusing vaccination – including continuing restrictions on the enjoyment of freedoms, and stigmatisation – are so severe as to remove the element of choice from the decision, vaccination may become tantamount to compulsory. This may lead to a violation of protected rights, and/ or be discriminatory. The Assembly recalls its Resolution 2361 (2020) on "Covid-19 vaccines: ethical, legal and practical considerations", in which it called on member States to "ensure that citizens are informed that the vaccination is not mandatory and that no-one is under political, social or other pressure to be vaccinated if they do not wish to do so". Any indirect undue pressure on people who are unable or unwilling to be vaccinated may be mitigated if Covid passes are available on grounds other than vaccination.

11. A Covid pass would be based on sensitive personal medical information that should be subject to strict data protection standards. These include having a clear basis in law, which is relevant also to the acceptability of measures that may restrict rights or lead to potentially discriminatory treatment.

12. The Assembly recalls the information document on "Protection of human rights and the 'vaccine pass"' issued by the Secretary General of the Council of Europe, the "Statement on human rights considerations relevant to 'vaccine pass' and similar documents" issued by the Council of Europe Committee on Bioethics (DH-BIO) and the "Statement on Covid-19 vaccination, attestations and data protection" issued by the Council of Europe Consultative Committee on the data protection Convention 108 (T-PD).

13. The Assembly therefore calls on the member States of the Council of Europe to:

13.1. continue implementing the full range of public health measures needed to bring Covid-19 durably under control, in accordance with their positive obligations under the Convention;

13.2 take full account of the latest evidence and expert advice, in particular from the WHO, when implementing measures such as Covid passes that involve relaxation of restrictions intended to prevent the spread of the SARS-CoV-2 virus;

13.3 ensure that measures such as Covid passes that exempt their holders from certain restrictions on protected rights and freedoms are applied in such a way as to maintain effective protection against the spread of the SARS-CoV-2 virus and avoid discrimination, in particular by ensuring that:

13.3.1. vaccination is available to everyone equally, and if it is not, that there is an objective and reasonable justification, which should not include ability to pay, for prioritising certain groups over others;

13.3.2. different categories of Covid passports are available to groups of people with different characteristics that are proven to reduce their risk of transmitting the SARS-CoV-2 virus, as outlined in paragraph 2 above;

13.3.3. the availability of Covid passports based on recent negative tests is not limited to those with the ability to pay, on account of tests being unduly expensive;

13.3.4. the extent to which the holders of different categories of Covid pass are exempted from restrictions is consistent with the extent to which the risk of their transmitting the SARS-CoV-2 virus is reduced, and due account is taken of the current epidemiological situation in the country concerned;

13.3.5. due account is taken of the fundamental difference in medical status between people who have acquired immunity through vaccination or recovery from infection on the one hand, and people who have recently tested negative for infection on the other, and of the resulting difference in transmission risk between these two groups;

13.3.6. due account is taken of the relative effectiveness of immunity acquired through vaccination or recovery from infection, and the relative effectiveness of different vaccines and vaccination regimes, in preventing transmission of SARS-CoV-2, including variants;

13.3.7. due account is taken of the relative transmission risks involved in different activities that might be permitted for holders of Covid passes, especially where they may come into contact with people who have not acquired immunity through vaccination or prior infection;

13.3.8. due account is taken of the situation of those who for medical reasons cannot, or, for reasons of personal opinion or belief, decline to be vaccinated; as regards the latter group, that any system of Covid pass does not become tantamount to coercion and effectively make vaccination compulsory;

13.3.9. Covid passes are available in both digital format and on paper;

13.4. ensure that any system of Covid pass has a clear basis in law;

13.5. ensure that any Covid pass system complies fully with Council of Europe standards on data protection and privacy, notably those of the European Convention on Human Rights and Conventions 108 and 108+ (CETS No. 223), and give preference to systems involving decentralised data storage;

13.6. ensure that appropriate measures are taken to prevent counterfeiting or other criminal abuse of Covid passes, in accordance with the standards set out in the Council of Europe Convention on the counterfeiting of medical products and similar crimes involving threats to public health (MEDICRIME Convention) and the Council of Europe Convention on Cybercrime (Budapest Convention);

13.7. ensure that any system of Covid passes is strictly limited in application and duration to the needs of the Covid-19 public health emergency, and the infrastructure involved is not repurposed for other aims without prior democratic scrutiny and effective legal oversight.

B. Explanatory memorandum by Mr Cottier, rapporteur

1. Introduction

1. The present report is based on a motion for a resolution that I and a number of other Assembly members tabled on 7 April 2021.[1] The motion was referred to the Committee by the Bureau on 16 April and the Committee appointed me as rapporteur on 19 April 2021.

2. The motion notes that so-called "Covid-19 passes" or certificates may be important in allowing a gradual return to full enjoyment of currently curtailed rights and freedoms, but in themselves may pose major challenges in terms of freedom of movement, discrimination, data protection, and organised crime (notably counterfeiting). Covid passes/ certificates may have various purposes, notably on the international level, to allow travel, and on the national level, to exercise certain freedoms or access certain services. Council of Europe standards must be scrupulously respected, notably those of the European Convention on Human Rights and of the Convention for the Protection of Personal Data. National parliaments must ensure the legality and proportionality of any such measures, whilst also examining the ethical dimension.

3. I take this mandate to mean that, whilst some discussion of medical issues is unavoidable and even necessary, this is not a report about vaccination, post-infection immunity, or testing as such;[2] nor is it a report about the information technology or purely administrative aspects of Covid passes.

4. On 19 April 2021, the Assembly held a current affairs debate under the same title as the present report. I opened the debate and listened to the following speakers with great interest. I have taken their interventions into account when preparing the present report, as requested by the Bureau in its decision of 26 April on follow-up to the current affairs debate.

5. Although this report has been prepared under an intense and abbreviated schedule, I have been able to consult two eminent experts, Professor Siobhan O'Sullivan, Chief Bioethics Officer at the Department of Health in Ireland, Professor of Healthcare Ethics and Law at the Royal College of Surgeons Ireland, Vice-Chair of the European Commission's European Group on Ethics in Science and New Technologies, and Vice-Chair of the Council of Europe Committee on Bioethics (DH-BIO); and Professor Ross Upshur of the Dalla Lana School of Public Health, University of Toronto, Canada, Co-Chair of the World Health Organisation's (WHO) Ethics and COVID-19 Expert Group. I would like to thank them both for their availability at short notice and their invaluable advice. I have also benefitted from the kind advice of Professor Samia Hurst, bioethics expert, Director of the *Institut Éthique Histoire Humanités* of the University of Geneva and Vice-Chair of the Swiss National COVID-19 Task Force. I have also referred to the information document on "Protection of human rights and the 'vaccine pass"' issued by the Secretary General of the Council of Europe on 31 March 2021,[3] as well as to the "Statement on human rights considerations relevant to 'vaccine pass' and assimilated documents" issued by the DH-BIO,[4] and the "Statement on Covid-19 vaccination, attestations and data protection" issued by the Council of Europe Consultative Committee on Convention 108 (T-PD).[5]

6. There are numerous options and descriptions: sanitary or green "pass", vaccination passport, digital health certificate, or digital green certificate. For the purposes of the present report, I have chosen to speak of "certificate" when referring to a document establishing vaccination status for medical purposes. The term "pass" is applied when referring to a document intended to allow the resumption of enjoyment of certain rights or freedoms, by partially lifting restrictions on the domestic or international level. This term, rather than the term "passport", is the one used in the information document published by the Secretary General of the Council of Europe, and in the DH-BIO declaration (see above).

7. The state of scientific knowledge, especially as regards relative risks of SARS-CoV-2 transmission, is a crucial consideration, and it is constantly and rapidly evolving. The present report is based on information available as of 10 May 2021.

[1] Doc. 15257.
[2] Indeed, the Assembly has already taken position on many aspects of this issue in Resolution 2361 (2021) on Covid-19 vaccines: ethical, legal and practical considerations.
[3] Doc. SG/Inf(2021)11.
[4] DH-BIO(2021)7final, 4 May 2021.
[5] T-PD-BUR(2021)6rev2, 3 May 2021.

2. Current and proposed examples of Covid passes or certificates

8. Numerous European countries have shown a desire either to introduce Covid pass systems, or to waive restrictions for visitors, or people in general, who hold such documents. In December 2020, Cyprus said that it would waive the requirement for Covid-19 testing on arrival for vaccinated people. Greece has lifted quarantine requirements for visitors who have been vaccinated or have recent negative PCR test results. In early April 2021, Denmark introduced the 'Corona Pass', which will be required to visit hairdressers, restaurants and bars, and other businesses, as they are gradually reopened in the following weeks, and will be available to those who have been vaccinated, recovered from infection, or recently tested negative. At the end of April 2021, France extended its 'TousAntiCovid' mobile app to store vaccination and negative test results, and Estonia introduced a 'VaccineGuard' digital certificate as proof that a holder has been vaccinated; in both cases, these are intended to integrate with the European Union's (EU) expected 'digital green certificate' system (see below). The Swiss government plans to issue by this summer Covid certificates on either smartphones or paper to anyone who has been vaccinated, recovered from infection, or recently tested negative, with a decentralised data storage system, compatible with the EU's 'digital green certificate'.

9. Some private travel companies and bodies have taken initiatives in this area. The International Air Transport Association (IATA) has produced a "Travel Pass" app that allows travellers to show their vaccination status. The Travel Pass is now used by a number of international airlines, including European ones.[6] Numerous cruise ship companies now require passengers to be fully vaccinated at least 14 days before travelling; some additionally or alternatively require proof of a negative PCR test, or also administer antigen tests before boarding.[7]

10. The European Commission has proposed a 'digital green certificate' (DGC) that is expected to be introduced this summer. A DGC would be issued to anyone who had been either vaccinated, recovered from infection, or received a negative test result. According to the European Commission, the use of these three different statuses would avoid any risk of discrimination against unvaccinated people. It would allow the lifting of restrictions on freedom of movement within the European Union (EU) for EU nationals or legally resident third-country nationals in possession of this certificate. It would not be a precondition for exercising the right to freedom of movement under EU law, but rather a basis for exemption from restrictions such as testing or quarantine on arrival. Minimal essential medical data would be recorded in the certificate itself.

11. Israel, which has one of the world's highest per capita vaccination rates, introduced a 'green pass' system in February 2021. A green pass is issued to anyone who has been vaccinated, has recovered from Covid-19, or, for those under 16 years of age, have tested negative. It is issued by the national health ministry and is required for entry into gyms, swimming pools, restaurants and cafes, hotels, sports venues, cultural venues, and other social spaces.[8]

12. The WHO has also been working on a "Smart Vaccination Certificate". The aim of this work, however, is medical, focusing on "establishing key specifications, standards and a trust framework for a digital vaccination certificate to facilitate implementation of effective and interoperable digital solutions that support COVID-19 vaccine delivery and monitoring, with intended applicability to other vaccines".[9]

3. The medical significance of Covid passes or certificates

13. Numerous different expressions have been used to describe "Covid passes or certificates". More important than the title, however, is what such a document would represent. A Covid pass or certificate would constitute official documentation of an individual's having been vaccinated against Covid-19; of an individual having recovered from Covid-19; and/ or of an individual having tested negative for infection.

14. These three things – vaccination, past infection, and negative test results – are not identical either in themselves or in their medical implications. Vaccination and recovery from past infection may confer lasting protection against transmission, but the extent and duration of that protection are currently uncertain. Furthermore, different vaccines may vary in their effectiveness at preventing transmission, and different vaccines may offer different amounts of protection against different variants of the SARS-CoV-2 virus. Clearly a negative test result is only indicative of a historical situation, which can change at any moment after the sample is taken. In other words, it would be a gross over-simplification to treat all three things as identical, or even as fundamentally similar.

[6] See https://www.iata.org/en/programs/passenger/travel-pass/.
[7] See "Which Cruise Lines Require a COVID-19 Vaccine?", Cruise Critic, 28 April 2021.
[8] See https://corona.health.gov.il/en/directives/green-pass-info/ for further details (consulted on 1 May 2021).
[9] See further at www.who.int/groups/smart-vaccination-certificate-working-group.

15. The vaccines currently in use were developed and tested primarily for their effectiveness in preventing a person from developing a serious case of Covid-19. They were not tested for their effectiveness in preventing a person from becoming infected with the SARS-CoV-2 virus, or from transmitting infection to another person. Unlike the yellow fever vaccine, they do not 'sterilise' against infection. So someone who has been vaccinated against Covid-19 may still become infected, even if they do not show symptoms; and once infected, they can then transmit the disease to others. It should also be borne in mind that Covid-19 vaccines are still being used under WHO 'emergency use authorisation', rather than full 'market authorisation'.

16. Recent evidence suggests that the effect of vaccination on transmission risk may be significant. According to a study published by Public Health England on 28 April 2021, "the likelihood of household transmission is 40-50% lower for households in which the index cases are vaccinated 21 days or more prior to testing positive (compared to no vaccination)", with similar effects for both the Astra-Zeneca and Pfizer vaccines; interestingly, most of the vaccinated cases in this study had received only one dose.[10] This study does not cover all the different vaccines and vaccination regimes, however, nor does it examine any difference in effect on different variants of SARS-COV-2. An analysis published on-line on 6 May by the Robert Koch Institute in Germany sought to summarise the various studies on this issue of which it was then aware. It concluded that "The studies (analysed) allow one to conclude that, according to current data, vaccination against Covid-19 leads to a significant reduction in infections by SARS-CoV-2, whatever type of vaccine is used [emphasis added]. This figure falls within the range of 80-90% after the full sequence of vaccinations in the studies available to date, and is thus similar to the effectiveness of the vaccines in preventing severe Covid-19. Other data shows that even amongst people who become positive according to a PCR test or are asymptomatically infected despite vaccination, the viral charge is significantly reduced, and viral shedding is shortened. Overall, the data suggests that vaccination significantly reduces the probability of transmission." The study underlines, however, that the scientific resources are still few in number, coming from a small number of countries (mainly the USA, the United Kingdom and Israel) and relating mainly to the BioNTech/Pfizer vaccine, that most of the studies have not been subject to peer review, that for now they provide little or no information on variants of the virus, other than the so-called British variant, and that they do not yet say anything about the duration of this protection.[11] In other words, at the time of writing, the science is still far from conclusive and the degree of certainty about the effect of vaccination of transmission risk is insufficient to make reliable policy decisions on issues of public health. The situation is, however, fast evolving, and the latest studies suggest that sufficient proof may soon be available.

17. On 19 April, the World Health Organisation (WHO) issued the following very clear guidance to states: "Do **not** require proof of vaccination as a condition of entry, given the limited (although growing) evidence about the performance of vaccines in reducing transmission and the persistent inequity in the global vaccine distribution. States Parties are strongly encouraged to acknowledge the potential for requirements of proof of vaccination to deepen inequities and promote differential freedom of movement."[12]

18. On 21 April 2021, the European Centre for Disease Prevention and Control (ECDC) noted that: "the risk of developing severe COVID-19 disease for an unvaccinated adult who has been in contact with a fully vaccinated person expose to SARS-CoV-2 infection is very low to low in younger adults and middle-aged adults with no risk factors for severe COVID-19, and moderate in older adults or persons with underlying risk factors (limited evidence so far)." The ECDC also advised that testing and quarantine requirements for travellers, and regular testing at workplaces, can be waived or modified for fully vaccinated individuals so long as there is no or very low level circulation of immune escape variants (emphasis added). Also, "in the current epidemiological context in the EU/EEA, in public spaces and large gatherings, including during travel, NPIs *[non-pharmaceutical interventions, such as masks and social distancing]* should be maintained irrespective of the vaccination status of the individuals" (emphasis added). The ECDC report took into account a study from Scotland that "vaccination of a household member reduced the risk of infection in household members by at least 30%", and evidence that "vaccination significantly reduces viral load, duration of shedding and symptomatic/asymptomatic infections in vaccinated individuals, which could translate into reduced transmission, although it can vary by vaccine product, target group, and SARS-CoV-2 variant" (emphasis added).[13]

[10] Impact of vaccination on household transmission of SARS-COV-2 in England, Harris et al

[11] *Wie gut schützt die COVID-19-Impfung vor SARS-CoV-2-Infektionen und -Transmission?*, Harder T, Koch J, et al, Systematischer Review und Evidenzsynthese.

[12] "Statement on the seventh meeting of the International Health Regulations (2005) Emergency Committee regarding the coronavirus disease (COVID-19) pandemic", World Health Organisation, 19 April 2021.

[13] "Interim guidance on the benefits of full vaccination against COVID-19 for transmission and implications for non-pharmaceutical interventions", European Centre for Disease Prevention and Control, 21 April 2021.

19. The state of scientific knowledge concerning immunity to Covid-19 acquired through past infection, and the potential for such acquired immunity to prevent an individual from acting as a transmission vector, is also uncertain. As to negative test results, some tests are more reliable than others. PCR tests are considered the 'gold standard', with very high accuracy. Indeed, they have even been criticised for being too sensitive, notably during the later period of infection when the individual is less infectious for others.[14] Rapid antigen tests, on the other hand, have been said to produce between 30-40% false negative results, depending on whether the patient is symptomatic or not.[15]

20. It seems that the European Commission, in its proposal for a 'Digital Green Certificate' (DGC), has not considered the potential significance of the differences between those who have been vaccinated, recovered from infection, or tested negative, or assessed the impact of these three statuses on transmission risk. The DGC thus does not address many of the fundamental legal and human rights issues involved. Indeed, it may be intended primarily as a tool for administrative harmonisation and technical inter-operability. Nevertheless, a document issued under the authority and aegis of the European Union would presumably be perceived as credible and trustworthy by much of the population, who may give it greater significance than was intended. This could lead to an unwitting increase in risky behaviour by holders of Covid passes, providers of, for example, tourism-related services, and public authorities in travel-destination countries, with potentially devastating consequences for the campaign to suppress Covid-19 and avoid the spread of new variants. Whilst vaccinated or recovered people enjoy considerable protection, this is not the case for those who have tested negative. If these latter people take part in an event where, despite everything, one or more contagious people could be found, they would be the ones most at risk of being infected. Any statement about Covid passes must be clear on this point, because people must know that they are exposing themselves to a residual risk despite the pass, which aims not at zero risk for individuals, but rather at reducing the collective risk of new outbreaks. Both the European Commission and national authorities should take appropriate measures to address these points.

21. The European Parliament's recent amendments to the European Commission's draft regulation on 'digital green certificates', however, seem to draw conclusions on the scientific evidence. One amendment proposal states that people who have been vaccinated, have recently tested negative, or who have tested positive for specific antibodies, "have a significant reduced risk of infecting people with SARS-CoV-2, according to current medical knowledge". The next one, however, states that "it is still unclear whether vaccines prevent transmission of COVID-19. Similarly, there is insufficient evidence on the duration of effective protection against COVID-19 following recovery from prior infection." It is difficult to reconcile these two statements, which underline the need to be prudent before drawing legal or political conclusions.[16]

4. Possible uses of the document

22. There are essentially three possible purposes for a 'Covid pass/ certificate'. First, as an authoritative record of an individual's vaccination status, including information on the date of vaccination and the type and batch of the vaccine that was administered. This information could be used for medical purposes, for example to assist with study of the effectiveness of difference vaccines and vaccination regimes, or of possible side effects. This use would better correspond to the description of a 'vaccine certificate'. The second purpose would be to certify that an individual is protected from illness, and so can continue with certain activities with a significantly reduced risk of falling ill. The third purpose would be to certify that an individual represents a significantly reduced risk of transmitting SARS-CoV-2 to others. These latter two purposes could lead to certain individuals being exempted from restrictions on rights and freedoms intended to prevent the spread of the disease, and thereby permitted to resume certain activities (such as being able to enter certain places, meet others in groups, do certain jobs, travel, etc.)

23. Whilst the former, medical use of a 'vaccine certificate' is clearly legitimate and, indeed, valuable for research purposes, other uses of 'Covid passes' raise complex and difficult legal, ethical, and human rights issues. I will explore these in more detail below.

[14] See e.g. Mina et al, Rethinking Covid-19 Test Sensitivity – A Strategy for Containment, N Engl J Med 2020; 383:e120.
[15] How accurate are rapid tests for diagnosing COVID-19, Dinnes J. et al, Cochrane Database of Systematic Reviews 2021, Issue 3. Art. No.: CD013705.
[16] "Amendments adopted by the European Parliament on 29 April 2021 on the proposal for a regulation of the European Parliament and of the Council on a framework for the issuance, verification and acceptance of interoperable certificates on vaccination, testing and recovery to facilitate free movement during the COVID-19 pandemic (Digital Green Certificate) (COM(2021)0130 – C9-0104/2021 – 2021/0068(COD))", P9_TA(2021)0145.

5. The principle ethical and human rights issues

5.1. Differential treatment and discrimination

24. If they are used for non-medical purposes, Covid passes – whether based on vaccination status, recovery from infection, or recent negative test – will necessarily create differences in treatment between those who have them and those who do not. Indeed, that would be their very aim. These differences would have an impact on protected rights and freedoms. This means that they must have a clear basis in law.

25. Under the European Convention on Human Rights, differential treatment may amount to discrimination if it does not have an objective and reasonable justification. This requires that the measure that gives rise to the differential treatment (i) pursues a legitimate aim, and (ii) is proportionate. Proportionality requires a fair balance between protecting the interests of the community (the legitimate aim) and respect for the rights and freedoms of the individual.

26. Discrimination may be due to either treating people differently on the basis of an irrelevant distinction, or treating in the same way people who are different in relevant ways.

27. In the case of Covid passes given to those who have been vaccinated, differential treatment has already taken place. In most European countries, at least until now (and probably also for the near future), vaccines have not been made available to everyone without distinction; instead the most medically vulnerable groups have been prioritised. In practice, there may be groups who could or should have been prioritised but for some reason have not been vaccinated. This may include inappropriate definition of the priority groups, or vaccination centres being too distant or otherwise inaccessible for some medically vulnerable people. Failure to vaccinate these groups may be discriminatory. It is therefore crucial that prioritisation is based on objective criteria, taking full account of scientific expertise and WHO recommendations.

28. For the purposes of this analysis, however, I will assume (without prejudice to the actual situation in any member State) that targeted vaccination has pursued a legitimate aim and been proportionate, and so does not amount to discrimination. This working assumption is valid even though a vaccination-based Covid pass would create a double advantage: not only would certain people benefit from increased protection of their health, as compared to others; they would also be able to resume certain activities that those others would not. I will return to this 'double advantage' issue further below.

29. This does not completely resolve the situation of those who could not be vaccinated for medical reasons, or those who refuse or are reluctant to be vaccinated, notably for reasons relating to their freedom of thought, conscience and belief. I will examine the situation of these people further below.

30. Assuming that targeted vaccination is not discriminatory, the question is whether or not vaccination status (or recovery from previous infection, or a recent negative test) is a relevant difference that requires differential treatment when it comes to restrictions intended to prevent the spread of Covid-19. Vaccination status (or recovery from previous infection, or a recent negative test) is only relevant if it serves the same purpose as the restrictions, namely preventing the spread of the disease. This can only be determined on the basis of clear and well-established scientific evidence. As noted above, this evidence does not yet exist.

31. Furthermore, the effect of vaccination on the risk of transmission is likely to depend on the type of vaccine administered and the vaccination regime, including whether only one or both of a recommended two shots have been administered. In fact, should the differences in effect between different vaccines/ vaccination regimes turn out to be significant, it may be necessary to distinguish not only between those who have been vaccinated and those who have not, but between different vaccines and vaccination regimes. It may even be necessary to differentiate the validity of a Covid pass depending on the SARS-CoV-2 variants that are prevalent in the area in which it would be used, and the effectiveness of the specific vaccine (or immunity acquired following infection) in relation to those variants.

32. Indeed, until this evidence does exist, it may well be discriminatory to lift restrictions for those who have been vaccinated whilst maintaining them for those who have not. The only ground for distinguishing between the two groups would then be the basis on which vaccination had been targeted. But this basis alone – vulnerability to serious illness with Covid-19 – would not be relevant to lifting restrictions intended to halt the spread of the disease. In effect, the second part of the 'double advantage' would no longer have its own, separate justification, and could thus become discriminatory.

33. When considering whether differential treatment is proportionate, one should also consider whether the same aim might be achieved through other means involving treatment that is less differential. This relates also

to the degree of effectiveness of the measure underlying the differential treatment, as part of the 'fair balancing' act between achieving the aim that the measure pursues and interfering with individual rights. National authorities should ask themselves, for example, whether vaccination is sufficiently effective at reducing transmission to justify a significant difference in treatment between vaccinated and unvaccinated people. On the other hand, if recent negative testing is significantly less effective at reducing transmission, then they should ask themselves whether it might be insufficient as a justification for the same difference in treatment. It may thus be discriminatory to treat people with a test-based Covid pass significantly differently from those without any Covid pass.

34. As noted above, some people have not been vaccinated because they are unable or unwilling to be vaccinated, rather than because they do not fall within a priority group. Any risk of discrimination might be mitigated by including safeguards, notably alternative means by which these people may also enjoy restoration of certain rights. This is the main reason why discussion of 'vaccine passes has broadened to include Covid passes based also on recovery from infection, and/ or on negative test results. Even if the extent to which it is prudent to lift restrictions may differ between these three groups, it is important that national authorities minimise differences in treatment between those who have had access to vaccination and those who have not, in order to reduce the risk of discrimination.

35. For these three categories to be treated in the same way, and differently from others, they must be sufficiently similar to each other in relevant ways, and sufficiently different from others. If relative differences in transmission risk are not sufficient to justify the same, significant differences in treatment, this may result in unjustified discrimination between those with a test-based Covid pass and those without any Covid pass.

36. It may be argued that Covid-19 testing is so widely and, in many countries, cheaply available that in practice, some form of Covid pass is available to everyone, whether vaccinated or recovered from infection, or not. The extent to which this is true depends on whether people must pay for a test, and if so how much; and whether it is acceptable to require people to undergo a procedure that is somewhat physically invasive in order to have fuller enjoyment of their rights and freedoms. Even if accepting negative test results does mean that (almost) everyone may receive a Covid pass, that does not mean that every type of pass should bring the same benefits – as noted above, vaccination or recovery from infection may confer lasting protection against transmission in a way that a negative test cannot.

37. The extent to which a justification for differential treatment is objective and reasonable – in particular, proportionate – depends on the nature of the right or freedom in question and the severity of the interference. On this basis, one should perhaps distinguish between travel for family reasons and travel for recreational reasons. Similarly, should private actors, such as hairdressers, shops, museums, or sporting venues, be able to require proof of vaccination status (or recovery from previous infection, or a recent negative test) before providing goods or services, a distinction should be drawn between essential and non-essential goods and services. (Although in practice, that might be a rather subjective and controversial exercise, and may depend on specific circumstances – a workplace canteen, for example, may be the only source of a mid-day meal available to someone who lives far from their place of work.) Access to certain services provided by, or on behalf of, the state – such as healthcare, social services, or public transport – should not be limited to Covid pass-holders; neither should the exercise of, for example, the right to vote. Requirements for employees to have been vaccinated in order to perform certain jobs have proved particularly controversial; whether or not they are justifiable may depend on whether alternative work can be offered to those who cannot or will not be vaccinated. The essential point is that any application of Covid passes should take account of the relative significance of different use cases, which is relevant to assessing proportionality.

38. In the same way, the validity of Covid passes issued on different bases should also take account of the context in which they are used. A test-based Covid pass might be considered sufficient to admit the holder to a place where only other Covid pass holders are present and for a relatively short period of time, such as a concert – in other words, where the risk of contagion or transmission may be very low. On the other hand, it may be considered insufficient for a context where the holder would mix with people who have not been vaccinated or previously infected, and do not have recent negative tests either, such as a foreign holiday – where the risks of contagion and transmission would be much higher. This would be especially true if new variants of Covid-19 are prevalent there.

39. The duration of validity of Israel's 'green pass' varies according to the health status on which it is based. A green pass is valid for six months for fully vaccinated individuals or those who have recovered from infection and received a single vaccine dose (of a two-dose vaccine); until 30 June 2021 for serologically-confirmed recovered individuals; and for 72 hours for individuals who have a negative PCR test.[17]

[17] See https://corona.health.gov.il/en/directives/green-pass-info/ for further details (consulted on 1 May 2021).

40. If Covid passes are introduced, care must be taken to avoid indirect discrimination. A Covid pass that is only available on smartphones, for example, may indirectly discriminate against older persons and members of socio-economically disadvantaged groups, who may be less likely to use a smartphone. National authorities should therefore ensure that Covid passes are available also in paper form, with appropriate technical safeguards against counterfeiting and misuse.

5.2. Failure to lift restrictions as an interference with protected rights

41. The European Law Institute (ELI) has analysed the legal situation from the perspective of limitations on individual rights rather than discrimination, which for some people is the most important consideration – lifting restrictions and reopening society and the economy as soon as possible. The ELI begins by stating that general restrictions should not be imposed on individuals "beyond what is necessary and proportionate", and that they may have to lifted if "the epidemiological risk posed by the individual is low". 'Low epidemiological risk' exists "where there is, in the light of the facts of the individual case and scientific evidence, sufficient reason to believe that the individual will not spread any variants of the virus currently in circulation" (emphasis added). Whilst the legal analysis may be slightly different, the essential conclusion is the same – lifting restrictions, whether considered for an individual in isolation or as differential treatment between groups, depends on scientific evidence regarding transmission risk.

42. The ELI also argues that limitations on rights should be lifted if there are no "compelling reasons of public interest to apply the restrictions to all individuals in an equal manner irrespective of the actual risk". Compelling reasons "may include, in particular, practical difficulties in checking any relevant certificates in the circumstances, a possible demoralising or disturbing effect on other individuals, or a particularly high need for safety."[18] I will expand on this consideration in the following section.

5.3. Public policy considerations that may weigh against the introduction of Covid passes

43. There are also a number of potentially valid public policy reasons that may argue against introducing Covid passes, even should the scientific evidence become sufficient to justify them as non-discriminatory. In other words, there are additional factors that could tip the overall balance back in the other direction.

44. Until now, the pandemic has been largely indiscriminate and the restrictions have been general, giving rise to a broad sense that 'everyone is in this together' – despite the fact that pre-existing social inequalities mean that not everyone has suffered equally. Even targeted vaccination has not fundamentally undermined this social pact, since it is generally considered justifiable for those most at risk to be vaccinated first – especially since they are also the ones who had been obliged to take the greatest and most limiting precautions.

45. The Council of Europe Committee on Bioethics (DH-BIO) explains the importance of solidarity to public health policy against Covid-19 as follows: "Vaccination can be considered as illustrating the indissociable link between human rights, in this case to health protection, responsibility i.e. to protect those who cannot benefit from such vaccination, and solidarity as an intervention carried out also for the benefit of public health. The use of "passes" for non-medical purposes has the potential to undermine this fundamental link between human rights, responsibility and solidarity, so essential in the management of the health risks with which all of our societies are confronted. Public health and the collective approach taken in understanding and managing health risks could be greatly affected by an individual approach. Such an approach would potentially increase the inequalities already exacerbated by the pandemic."[19]

46. Once restrictions are lifted on the basis of some individual status not equally available to all, then solidarity starts to be replaced by individualism. Willingness to accept restrictions may decline if other people are no longer bound by them. People may perceive a binary certainty: vaccinated people are safe, unvaccinated people are risky. This could create a false sense of security amongst vaccinated people and unvaccinated people who are in contact with them, leading to inappropriately risky behaviour. So long as herd immunity has not been achieved and non-pharmaceutical interventions are still necessary to keep the pandemic under control, this could seriously undermine the public health advantages of the vaccination programme.

[18] "ELI Principles for the COVID-19 crisis: 2021 Supplement", European Law Institute.
[19] "Statement on human rights considerations relevant to 'vaccine pass' and assimilated documents", DH-BIO, 4 May 2021.

47. The lifting of restrictions for holders of Covid passes, especially if based on vaccination status, would create a socially significant difference that could contribute to stigmatisation of the unvaccinated. The WHO defines social stigma as "the negative association between a person or group of people who share certain characteristics and a specific disease. In an outbreak, this may mean people are labelled, stereotyped, discriminated against, treated separately, and/or experience loss of status because of a perceived link with a disease." It has noted the possibility of stigma due to Covid-19 being a new disease, with many unknowns, since people are afraid of the unknown and could easily associate that fear with 'others'. The WHO noted that "Stigma can undermine social cohesion and prompt possible social isolation of groups, which might contribute to a situation where the virus is more, not less, likely to spread. This can result in more severe health problems and difficulties controlling a disease outbreak".[20]

48. Another consideration is the cost of a Covid pass system. Public authorities have finite resources for spending on public health – especially following the impact of the pandemic on economies, tax revenues, and public spending. Expenditure on a Covid pass system may divert specialised resources away from other Covid-19-prevention measures. As the Ada Lovelace Institute says, Covid passes may "crowd out more important policies to reopen society more quickly for everyone, such as by vaccine rollout and test, trace and isolate schemes, and other public health measures" (emphasis added).[21] If a Covid pass system were to be disproportionately expensive, with a negative impact on other public health measures, this too may be relevant when considering whether there is sufficient justification for treating differently those with Covid passes from those without.

49. It may be that the 'window of opportunity' for Covid passes to be useful is relatively small: between when there is sufficient certainty about the effectiveness of vaccination (or immunity following infection) to justify differential restrictions, and when so many people have been vaccinated that restrictions in general can be significantly relaxed. As much of the cost involved in a Covid pass system is initial fixed cost (infrastructure, training etc.), it may prove disproportionately expensive given the length of time for which it would be in use.

50. As the ELI noted, the preceding considerations may amount to "compelling reasons" for maintaining general restrictions, even if some people no longer represent the same risk of transmission that the restrictions are intended to prevent. Governments should take this into account when deciding whether or not to introduce a Covid pass system.

5.4. Differential treatment and compulsory vaccination

51. Whilst some grounds for refusing to be vaccinated may be more reasonable than others, it is nevertheless the case that vaccination against Covid-19 is not compulsory. The Assembly has already expressed opposition to compulsory Covid-19 vaccination in Resolution 2361 (2021). In human rights terms, the argument against compulsory vaccination is that it interferes with the right to private life (under article 8 of the Convention) and the freedom of thought, conscience and religion (under article 9). Neither of these rights is absolute, however, and both may be limited in the interests of protecting public health. Indeed, in the case of *Vavřička v. Czech Republic*, the European Court of Human Rights found that the requirement that children be vaccinated against a range of diseases in order to attend nursery school did not violate the Convention, as it was not a disproportionate interference with the rights involved – the children were only unable to attend pre-school, and the penalties imposed on parents were not excessive.[22]

52. The Court's analysis in *Vavřička* is relevant also to the possibility of 'indirect compulsion'. The consequences of refusing vaccination, including continuing restrictions on the enjoyment of freedoms and stigmatisation, may be so severe as to remove the element of free choice from the decision. Vaccination may then become tantamount to compulsory, or be perceived as such (which is effectively the same thing when it comes to compulsion). This may create an interference with a protected right. If this interference is disproportionate, it could be seen either as a violation of the right in question, or discrimination in relation to enjoyment of that right, or both. Also, as the Ada Lovelace Institute has said, vaccination-based Covid passes "could reduce trust and increase vaccine hesitancy if the scheme is seen as introducing mandatory vaccination by the back door. This may be particularly acute amongst marginalised groups who may already have greater levels of mistrust".[23]

53. Should test-based Covid passes be excluded on the basis that testing offers insufficient relative protection against transmission to justify differential treatment, this would leave only vaccination and recovery

[20] "Social Stigma associated with COVID-19", WHO, IFRC & UNICEF, 24 February 2020.
[21] "What place should COVID-19 vaccine passports have in society?", Ada Lovelace Institute, 17 February 2021.
[22] App. No. 47621/13, Grand Chamber judgment of 8 April 2021.
[23] "What place should COVID-19 vaccine passports have in society?", Ada Lovelace Institute, 17 February 2021.

from infection as bases for acquiring a Covid pass. For so long as vaccination is not available to the whole population, other people would only be able to acquire a Covid pass if they had recovered from infection. If the advantages of a Covid pass were sufficiently great, might some people even take them as an incentive to become infected? Although probably unlikely, at most a very marginal phenomenon, and certainly dangerous, this cannot be absolutely excluded – one need only consider the number of people who refuse to wear face-masks or observe proper social distancing to realise how people's appreciation of risk can differ enormously.[24]

54. In mid-February 2021, a poll in Israel showed that 31% of those who had not previously intended to get vaccinated said that the imminent introduction of the 'green pass' system would possible or definitely persuade them to do so.[25]

5.5. National case-law

55. On 1 April 2021, the French *Conseil d'Etat* ruled that even if it seemed true that vaccination provided effective protection, vaccinated people could nevertheless still carry the virus and thereby contribute to its spread to an extent that was at present difficult to quantify, meaning that it could not be said that non-pharmaceutical interventions would sufficiently limit the risk. As a result, the interference with individual freedoms resulting from the curfew and restrictions on movement currently in place could not, in the circumstances, given the aims they pursued, be considered disproportionate insofar as they applied to vaccinated persons.[26] The reasoning behind this judgment would clearly be applicable to vaccination-based Covid passes; clearly, it is based on the evidence available at the time, and a different conclusion might be reached as scientific knowledge evolves.

6. Data protection and privacy issues

56. Whether it be information on vaccination status, previous infection, antibody status, or test results, a Covid pass or certificate would contain sensitive personal data. Processing of such data is subject to strict and well-established international standards, notably those of Council of Europe Convention 108 and Convention 108+.

57. The Consultative Committee on Convention 108 (T-PD) has issued helpful, authoritative guidance on these issues, which I set out here in summary form.

- Data processing, especially processing of data as sensitive as personal medical information, must be provided for by law.
- The legitimate purpose for which the data is processed, in this case to restore freedom of movement, must be clearly defined.
- The law should specify the circumstances in which presentation of the Covid pass can be required.
- The range of persons, authorities, and public and private bodies that may be allowed to access the data must be clearly specified, as well as the scope of access authorised to each of them.
- An impact assessment should be carried out prior to the start of the processing.
- Privacy by design should be ensured and appropriate measures adopted to ensure data security.
- Processing must be necessary and proportionate to the aim pursued, and only the strictly necessary minimum of data should be processed.
- Data subjects – the Covid pass holders – should be informed of the processing of personal data related to them.
- Personal data should not be retained for longer than the period for which the use of attestations to facilitate the exercise of the freedom of movement is authorised.
- Data subjects should be able to exercise their rights effectively.
- Data protection authorities should monitor the adherence to data protection requirements.
- The steady increase in knowledge about Covid-19, the effects of vaccination and the duration of immunity following infection require great care in ensuring that any data collected are accurate and regularly updated.

[24] So-called 'Covid parties', at which (especially young) people were reported to gather with the intention of catching SARS-CoV-2, may have turned out to be an urban myth, but the fact that these reports were taken seriously is ai indication of what many people consider to be possible.
[25] Wilf-Miron et al, Incentivizing Vaccination Uptake: The "Green Pass" Proposal in Israel. *JAMA.* 2021;325(15):1503–1504.
[26] Case no. 450956, 1 April 2021.

58. The aim of data protection is to protect a person's privacy, as guaranteed by Article 8 of the European Convention on Human Rights. As the European Court of Human Rights has noted, "The mere storing of data relating to the private life of an individual amounts to an interference within the meaning of Article 8 ... The subsequent use of the stored information has no bearing on that finding".[27] The Court has also noted that "Respecting the confidentiality of health data is a vital principle in the legal systems of all the Contracting Parties to the Convention. It is crucial not only to respect the sense of privacy of a patient but also to preserve his or her confidence in the medical profession and in the health services in general."

7. Organised crime: counterfeiting and corruption

59. For several months now, various expert sources have been warning against the risks of organised crime in relation to vaccines, vaccination certificates and Covid passes. In early February 2021, Europol warned that "The detection of fake COVID-19 negative test certificates confirms that criminals – be it organised crime groups or individual opportunistic scammers – seize profitable opportunities once they arise. As long as travel restrictions remain in place due to the COVID-19 situation, it is highly likely that production and sales of fake test certificates will prevail. Given the widespread technological means available, in the form of high quality printers and different software, fraudsters are able to produce high-quality counterfeit, forged or fake documents."[28]

60. Fake vaccination certificates are reportedly being sold by anonymous traders on 'dark web' sites for as little as €125,[29] and arrests have already been made in France, Spain and the UK.[30] Cybersecurity firm Check Point has argued that it is only a matter of time before hackers find a way to produce counterfeit Covid passes. It has also been suggested that if the introduction of vaccine passes makes people feel that they are being forced to get vaccinated, those who are reluctant may have a greater propensity to falsify information, thereby fuelling the market for counterfeit documents. Indeed, this is reflected in online advertising.[31]

61. As noted in the paper of the Secretary General of the Council of Europe, "The measures laid down in the Council of Europe Convention on counterfeiting of medical products and similar crimes threatening public health (MEDICRIME Convention), as well as in the Convention on Cybercrime (Budapest Convention), aim in particular at preventing and combating such activities."[32]

8. Risks for the future

62. The Ada Lovelace Institute report has also considered possible future risks arising from the introduction of Covid passes. It concentrates in particular on the risk of normalising health status surveillance by creating long-term infrastructure in response to a time-limited crisis, expressing "pessimism about the likelihood of vaccine-passport technologies being 'switched off' once the crisis has past." Observing that "Once a road is built, good luck not using it", the institute goes on to suggest that "Building these roads could lead to path dependency: once an infrastructure exists, it will make certain future choices more favourable and block others… This might be a particular issue if the status of other health conditions were to be added."[33]

63. Another possible risk relates to data protection and how the information that is gathered and made available to a wide variety of actors, both public and private, might be "repurposed". This underlines the importance, mentioned above, of ensuring that the scope of access of each data user is strictly defined and controlled, and that personal data is not detained for longer than any Covid pass system is in use (i.e. is deleted when the system comes to an end).

9. Conclusions and recommendations

64. The socio-economic cost of Covid-19-related restrictions is undeniable and the political pressure to reduce and withdraw them is understandable. At the same time, Covid-19 is still very much with us. In Europe, the situation may now be improving in many places, but this has happened before and the situation remains very precarious – Covid-19 is still a disease that can easily run out of control leading to serious illness or death for many more people. In the long run, vaccinations seem for now to be the best hope for bringing the disease

[27] S & Marper v. United Kingdom, App. nos. 30562/04 & 30566/04, Grand Chamber judgment of 4 December 2008.
[28] "Early Warning Notification: The illicit sales of false negative COVID-19 test certificates", Europol, 1 February 2021.
[29] "Covid-19 : Vaccines and vaccine passports being sold on darknet", BBC News, 23 March 2021.
[30] "Europol warns fake negative Covid certificates being sold across Europe", The Guardian, 1 February 2021.
[31] "Increased use of vaccine passports could lead to scams", ABC News, 30 March 2021.
[32] "Protection of human rights and the 'vaccine pass'", Secretary General of the Council of Europe, 31 March 2021.
[33] "What place should COVID-19 vaccine passports have in society?", Ada Lovelace Institute, 17 February 2021.

durably under control, but not enough people have been vaccinated yet, there is uncertainty about the duration of immunity following vaccination, and there is always the risk that new variants may be vaccine-resistant.

65. It is also clear that vaccination alone is not enough to protect communities against Covid-19, at least not until there is strong, global herd immunity. Chile saw record numbers of cases in mid-April 2021, despite it having one of the highest per capita rates of vaccination in the world, with 40% of the population having received at least one does. An infection disease specialist at the University of Chile commented that "At the beginning of the vaccine campaign there was a message from government that 'vaccines are on their way so the pandemic will end soon.' Everyone stopped taking care, stopped wearing masks, and joined big crowds during the holiday season".[34]

66. The legal and human rights issues surrounding Covid passes are deceptively complicated, especially those relating to differential treatment and the risk of unlawful discrimination. Neither myself as rapporteur nor the Assembly as a whole are in a position to tell member States how to act in this area, as each state's domestic epidemiological, social, economic, and political situations are different and best understood by the local authorities.

67. The purpose of this report is rather to identify the various factors that states should address if their policy on Covid passes is to be compatible with basic human rights standards of the Council of Europe. These require a clear, complete and specific legal basis for measures such as this that would have a human rights impact, and legal and institutional safeguards against misuse or unintended consequences. There is also a need for careful assessment and balancing if the final result is to represent a fair balance between competing interests, whilst at the same time – and perhaps most importantly – protecting public health against what remains a challenge unprecedented in living memory.

68. This means that nothing that might affect public health measures should be done without a sufficiently certain basis in scientific evidence. This certainty is only now emerging for the effects on transmission risk of either vaccination or recovery from infection. Only once there is certainty about the effects of vaccination, recovery from infection, and negative test results on transmission risk (including in particular information on the effectiveness of different vaccines, the duration of protection and the situation in respect of different variants) will it be possible to evaluate the relevance of introducing Covid passports for non-medical purposes, and define the limits on their use. Even then, the possible negative effects of Covid passes should be taken into account when deciding whether the advantages of Covid passports would outweigh any disadvantages to the wider public health response, and if they do, what limits must be imposed on their use. If Covid passes are introduced, it must be possible to change rapidly their duration and the use cases for which they are valid in the light of developments in scientific knowledge, and it will be important to include from the outset a sunset clause for the use of such a system.

[34] Taylor L., Covid-19: Spike in cases in Chile is blamed on people mixing after first vaccine shot, *BMJ* 2021;373:n1023. The fact that most of those vaccinated in Chile had received only one does of the Sinovac vaccine, a regime believed to have very limited effectiveness, does not negate this observation but rather underlines the need for policy measures based on clear and specific scientific evidence.