

Regional Covid-19 Certificates in Support of Cross-border Travel

Background

The COVID-19 pandemic has hit countries hard across the world. Some of the economies most affected have been those heavily dependent on cross-border travel and tourism services. For example, Pacific countries that have a tourism-dependent economy were hit hard by COVID-19 border closures. As the rollout of vaccines against COVID-19 has been advancing, governments are exploring how documents (primarily digital) could help reopen borders by identifying those who are protected against the virus and eligible for entry, exit and transit.

The idea of adopting certificates to facilitate cross border travel has been supported by the Pacific Island Forum (PIF). At the Fifty First Pacific Island Forum on 6th August 2021, Leaders through their Communique paragraph 14-23 reemphasized the ongoing threats COVID-19 pandemic poses to the Pacific, acknowledged the support provided by partners for preparedness, response, advocating for equitable access to and distribution of vaccines and welcomed Australia's intentions to work with all members to establish robust and practical processes for vaccine certification, including digital vaccination certificates. The provision of these digital certificates will enable travel and tourism within the Pacific region and globally. However, there is a need to develop a mutually agreed set of standards that is fit for purpose within the Pacific and aligns with global standards to ensure that the COVID-19 certificates are ethical and reliable, and eventually universally accepted.

Informing travelers on what tests, vaccines, and other measures they require before travel, details on where they can get tested, and giving them the ability to share their tests and vaccination results in a verifiable, safe, and privacy-protecting manner is the key to providing governments the confidence to open borders. There are several global and regional initiatives developing tools and guidance related to international travel and digital documentation to address this challenge, but there are still standards conformance and tool compliance issues since standards are still evolving. These includes WHO and its advice on COVID-19 digital certificates. ICAO has expanded their initiative on certificates attesting to vaccination status and test outcomes. IATA Travel Pass Initiative and The CommonPass are yet another initiative supported by The International Air Transport Association and the World Economic Forum, respectively.

In the absence of a globally accepted credential for COVID-19 certificates up to this point, some countries have already introduced such systems to restart their economies. There is also a wide range of digital solutions that can be used to document COVID-19 vaccination status, but only a handful of solutions have proven its veracity and market tested. Choices on design and implementation should be guided by balancing various values and contextual considerations, such as the countries' digital health maturity and readiness. Certificates could, in theory, be paper-based or digital, but trials have primarily focused on digital solutions. For example, the EU has recently deployed an electronic COVID certification system enabling swift verification of vaccination status of citizens across all EU countries, enabling safe and nearly seamless movement of people to resume across borders – within the EU. In India, the people have been issued digital certificates through the CoWIN portal.

Although governments often use private companies to help optimize travel security processes, they must extend their engagement and increase collaborative relationships with diverse stakeholders such as the transport sectors and immigration and border services to maximize the transformation of the travel security system. In turn, international organizations that influence travel regulations, as well as airlines, hotels, financial services and technology providers selling services to travelers, must go beyond the typical industry alliances and work with governments and each other. WHO and SPC, in collaboration with PIFS developed this concept note to share information about the recent development, to learn lessons from some practices, and to explore ways of

cooperation for establishing standardized COVID-19 certificate system along with the mutual recognition of these systems by other countries or economic/ regional blocs.

What are COVID-19 certificates?

There are several initiatives for COVID-19 certification, and governments and firms around the world have trialed different "health passes" in recent months. Several countries are using health passports or proof of COVID-19 vaccination certificates to lift some pandemic-induced restrictions, allowing people to travel internationally. The term health passport, COVID-19 health certificate, or health pass generally refers to documents - in paper or digital format - that certifies a person is unlikely to catch or spread disease (i.e., proof of vaccination, COVID-19 laboratory results or medical evidence of past COVID-19 illness).

The proposed COVID-19 certificates would attest one of three things: the person has been vaccinated, has tested negative for the virus, or has evidence of previous COVID-19 infection. Some people cannot get vaccinated due to health conditions or allergies or are too young to be vaccinated. Therefore, certificates of negative test results for the virus or evidence of previous COVID-19 infection should be also accepted.

According to WHO definitions, a vaccination certificate is a health document that records a vaccination service received by an individual, traditionally as a paper card noting key details about the vaccinated individual, vaccine administered, date administered, and other data in the core data set. Digital vaccination certificates are immunization records in an electronic format accessible by both the vaccinated person and authorized health workers, which can be used in the same way as the paper card: to ensure continuity of care or provide proof of vaccination. The International Certificate of Vaccination or Prophylaxis and a national immunization home-based record are not considered digital documentation of vaccination status because they are not available in a digital format and do not meet the requirements outlined in the WHO technical specifications and implementation guidance document. According to WHO guidance, a digital certificate should never require individuals to have a smartphone or computer. The link between the paper record and the digital record can be established using a one-dimensional (1D) or two-dimensional (2D) barcode (i.e., QR Code), for example, printed on or affixed to the paper vaccination card.

The EU Digital COVID Certificate Regulation entered into application on 01 July 2021. EU citizens and residents will now be able to have their Digital COVID Certificates issued and verified across the EU. Digital COVID Certificate is digital proof that a person has been vaccinated against COVID-19, has recovered from COVID-19, or has a test result. Key features of the certificate: Digital and/or paper format, with QR code, free of charge, in national language and English, safe and secure, valid in all EU countries. The European Commission has built a gateway through which all certificate signatures can be verified across the EU. The personal data of the certificate holder does not pass through the gateway, as this is not necessary to verify the digital signature. EU voluntary network of national authorities set up the interoperability requirements necessary to the release of COVID vaccine certificates, then published in Volume 1-5 of the Guidelines on Technical Specifications for Digital Green Certificates ([Volume 1: formats and trust management](#), [Volume 2: EU Digital COVID Certificate Gateway](#), [Volume 3: Barcode Specifications](#), [Volume 4: EU Digital COVID Certificate Applications](#) and [Volume 5: Public Key Certificate Governance](#)), together with the design template for the [paper version](#). In order to facilitate the roll-out at the national level and ensure standardization, the European Commission has also developed the open source reference implementations for the software and apps for the issuance, storage and verification of vaccine, test results and recovery certificates, and published them on GitHub (<https://github.com/eu-digital-green-certificates>).

The new ICAO Visible Digital Seal (VDS), originally adopted by countries for travel document verification, is now gaining expanded international acceptance as an affordable and efficient solution for COVID-19 certification. ICAO VDS Guidelines and specifications are publicly available to support their efficient global

deployment. The use of certificates attesting to vaccination status and test outcomes and are outlined in the detailed aviation response and recovery guidelines issued by the ICAO Council's Aviation Recovery Task Force (CART). ICAO's COVID-19 Portal provides additional resources to help governments and the industry work together to reconnect the world in the recovery from the pandemic. Australia's approach is based on the International Civil Aviation Organization (ICAO) Visible Digital Seal (VDS). Australia selected VDS on the basis that it is the only solution which offers both: passport-level security against fraud, and global interoperability.

On August 27, 2021 WHO published the "Digital Documentation of COVID-19 Certificates (DDCC)" specification¹. The guidance will be published in a series of three separate documents, which will guide Member States on how to digitally document COVID-19 vaccination status, SARS-CoV-2 test results, and COVID-19 recovery status. Therefore, the guidance document is still under development which means countries/ regions will have to make independent skillful strategic and technical decisions. These guidance documents will include critical components such as the minimum datasets, expected functionality of digital systems, and preferred terminology code systems. They will also include a section on national digital architecture, recognizing that Member States are still expected to decide how they want to implement these systems. The DDCC specifications will include an HL7 FHIR Implementation Guide (IG), including example software implementations. These guidance documents will make no reference to the specific circumstances under which these certificates should be used.

ICAO and the European Union are currently working together to ensure compatibility between the ICAO VDS and European Digital COVID Certificates and looking alignment with WHO guidance. Other regions and countries are conducting their own assessments as they continue to leverage the positive health outcomes being realized through vaccination. In the absence of these newly created guidance from WHO, some countries or regions have already started the development and implementation of their own COVID-19 cross border travel solution such as India and the United States.

What are the main challenges and success factors?

Vaccination certificates are already regulated by international law (International Health Regulations), allowing countries to require from travelers' proof of vaccination for yellow fever as a condition of entry. However, the January 15 meeting of the WHO's Emergency Committee on COVID-19 did not recommend requiring proof of vaccination or immunity for international travel at that time, noting still-limited vaccine availability as well as several unknowns on the pandemic itself. Currently there are no global standard available, but several initiatives are underway globally with mixed results. Implementation requires political consensus on the objectives and reciprocity with countries, technical decisions on accepted tests and vaccines, regulatory changes, and technical implementation capabilities - all that takes time and finance. There are several variables in play that exacerbate the complexity even further. For example, countries need to decide which vaccines they will approve under their certificates. Another example is that some countries might only recognize COVID-19 certificate on a reciprocal

¹ Digital Documentation of COVID-19 certificates: Vaccination status — Technical specifications and implementation guidance, 27 August 2021 (main document)

<https://apps.who.int/iris/bitstream/handle/10665/343361/WHO-2019-nCoV-Digital-certificates-vaccination-2021.1-eng.pdf>

- Web annex A. DDCC:VS core data dictionary
<https://apps.who.int/iris/bitstream/handle/10665/343264/WHO-2019-nCoV-Digital-certificates-vaccination-data-dictionary-2021.1-eng.xlsx>
- Web annex B. Technical briefing
https://apps.who.int/iris/bitstream/handle/10665/344456/WHO-2019-nCoV-Digital_certificates-vaccination-technical_briefing-2021.1-eng.pdf

basis.

The EU COVID-19 certification system has so far been a success story despite several implementation challenges. Success has been based on strong political will, clear objectives, teamwork, reciprocity, early implementation of EU DCC Gateway and availability of funding. Specifically, for vaccination certificates EU Member States are obligated to accept vaccination certificates issued for COVID-19 vaccine that has been centrally authorized by the EU. The European Commission helped Member States develop their national software and apps to issue, store and verify certificates. The European Commission also supported the members to on-board the EU COVID-19 gateway which included project management, defining the requirements, testing the system and change management. Challenges on the other hand has been related to time constraints, heterogeneity of EU member states health care systems, initial agreement on purpose, data protection and public expectations. However, as compared to the Pacific region, the EU has one advantage in that border control amongst EU citizens in the Schengen area have limited restrictions in cross border movement of people and goods reducing some degree of complexity.

The digital health maturity levels are low among all the Pacific countries, and health information systems are still developing. In addition, many countries still have unreliable connectivity and ICT infrastructure, variable electricity issues, and a workforce with limited digital health skills. Thus, there are concerns over the feasibility and legality of countries issuing digitally enhanced certificates. Furthermore, unlike EU states which have a critical mass of management and technical skills, Pacific countries will need technical assistance and field support to implement the certificates in their respective countries (i.e. develop national registries, paper forms and software and apps to issue, store and verify certificates).

Apps and other digital solutions ("digital-only approach") and digital identification could exclude countries that cannot manage digital certificates. One alternative is to issue a simple paper certificate ("paper-first approach") or together with a QR code ("offline digital"). Countries with higher digital maturity could also issue certificates via a smartphone, or otherwise downloadable from the website citing a control number for the paper card or other relevant data (such as name, date, ID number, and location of vaccination) (i.e., "online digital solution"). These matters will need to be discussed amongst Member States and their multi-sectoral representatives as part of the preparatory and standard setting to develop a common vision of how COVID-19 certificates will be introduced regionally and at the country level.

If countries start issuing international standard vaccination certificates to their citizens, those vaccinated against COVID-19 must have non-repudiable proof. The scope and method of verification of travelers need to be specified and agreed upfront amongst countries.

Conclusions

The COVID-19 certificate initiative, although complex and inevitably needs to be undertaken, will be a difficult challenge not only for international cooperation, but because it will need to be implemented across countries with very different health information management, undeveloped identification systems, inadequate security infrastructure and varying degrees of data quality of population immunization data. In other words, it is a constantly evolving landscape which will require a multi-sectoral approach and regional cooperation.

For the Pacific, it is essential to reach initial agreement on purpose, shared objectives, principles and standards and build consensus among countries from the outset. The regional agreement will prevent duplication of effort and fragmentation of systems that will be difficult to harmonize in the future. As noted, several global and regional initiatives are ongoing, and countries have adopted different ways to issue certificates. Governments need to determine the intended uses for the digital vaccination certificate system and establish policies and a legal framework to support the intended uses of the certificates. Due to the broad and complex nature of this

undertaking, this initiative will require a multi-sectoral approach involving various government agencies with regulatory responsibilities such as health and medical services, immigration and customs, civil and maritime transport authorities, police and border services, labour, tourism, foreign affairs, trade and industry, and economic development. Public stakeholders include, but are not limited to the general public and concerned interest groups, members of the national chamber of commerce, overseas labour agencies, and the tourism and travel associations.

The PICs will need to develop a common vision to determine which standard and technical specifications to adopt. PICs will then need to take resolute action to implement the certificate system, and equally important, be ready to mutually recognize certificates issued by other countries. Regardless of the approach adopted, the vaccination certificate needs to be based on sound principles and standards to ensure that it is globally accepted. There is also a need to conduct an impact assessment to understand the potential risks, benefits, and costs of establishing a certificate.

Also, data requirements will depend on the scenario of use and agreed format of the COVID-19 certificates. Countries will need to agree on minimum data elements, adopt the most appropriate standards, be accepting of local contexts, and establish mutual trust with other countries.

From a technology standpoint, there is no “one size fits all” or “one solution” for all countries. Digital certificates in the Pacific should be inclusive and simple enough with their design and governance to ensure that it is feasible to implement. The selected design format, or formats, of the certificates, will have implications on how they are issued and how the content of the certificates is stored and verified.

Suggested high-level implementation steps are as follows:

Phase 1: Building consensus and reaching regional agreement:

- Initial discussion on the purpose and scope, and high-level consultations facilitated by Heads of Health (meeting in October 6-7)
- Regional and multi-sectoral dialogue to discuss the introduction of COVID-19 certificates for cross border travel
- Establish regional agreement and technical conditions and the Pacific Island Forum meeting in February 2022
- Proposal announcement of the COVID-19 certificates including a regional vision, key principles, minimum data requirements, architecture, interoperability standards and implementation plans.
- Regional adoption of the position and agreement

Phase 2: Country Assessment and Readiness Strengthening

- Country health check (feasibility assessments and national strategies and plans) and country readiness and maturity assessment for the implementation of COVID-19 certificates
- Address legal and policy gaps on data privacy
- Conduct data audit and implement remediation
- Address country specific gaps to strengthen country participation
- Guide Pacific countries to setup a foundational mechanism that will be applicable for use with other vaccinations in the future
- Analysis, design and development of solution architecture

Phase 3: Go live and Implementation

- Select qualified suppliers
- COVID-19 certificate development, configuration, pilot and production



- Entry into force: regulation (question if countries can go live without regulations in place?)
- Training and onboarding
- End of transition period of countries adopting the certificates
- Third countries granted equivalence to enter into the certification process on a reciprocal basis

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