eHealth Network

Guidelines on

COVID-19 citizen recovery interoperable certificates - minimum dataset

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eHealth Network

The eHealth Network is a voluntary network, set up under article 14 of Directive 2011/24/EU. It provides a platform of Member States' competent authorities dealing with eHealth.

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The periods of infectiousness and protection mentioned in this guideline follow the ECDC Guidance and might undergo changes as new scientific evidence arises.

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1 Introduction

To date, the results of COVID-19 testing have been the principal factor to decide on implementation of measures, e.g. isolation/quarantine, cross-border movement, etc. Despite efforts for a common approach on free movement across the EU/EEA, citizens are still facing problems when trying to present test certificates issued by one Member States in another (issues include language used or lack of trust in the authenticity of the document). To facilitate free movement within EU/EEA Member States, a common certificate for COVID-19 testing is needed. With the rollout of the first COVID-19 vaccines on the EU market, there is also a desire from some Member States to introduce vaccination certificates for the purposes of free movement across borders. Under the proposal for a Digital Green Pass, a framework for interoperable certificates on COVID-19 vaccination, testing and recovery should be established.

The periods of infectiousness and protection mentioned in this guideline follow the ECDC Guidance[1].

2 Use case – COVID-19 citizen recovery

According to the current evidence, individuals who recover from COVID-19 can continue to test positive for SARS-CoV-2 for some time after no longer being infectious. In those cases, the virus being shed is no longer viable and there is therefore limited risk of transmission to others. However, for the purposes of free movement, those individuals are unable to present a negative test result, and would thus be prevented from crossing borders. Therefore, a better option to define the validity period of a recovery certificate is to start from the first day a person is considered not infectious (e.g. 20 days after the first positive test or after the onset of symptoms if information is available), to the date where protection from previous infection may start declining (i.e. 6 months after the first positive test or after the onset of symptoms if information is available).

It is commonly accepted that infectiousness of a person with COVID-19 decreases after one week following a positive test or onset of symptoms, and that following 14-20 days the possibility of transmission is very low / null. The ECDC guidance reports that, in mild-moderate disease, no viable virus has been recovered after 10 days. Isolation of replication-competent virus between 10 and 20 days after symptom onset has been reported only in some adults with severe COVID-19 or from immunocompromised individuals.

Despite some uncertainties (described in the following chapter), on balance the evidence suggests that those who have recovered from COVID-19 have a reduced risk of infection. A previous infection would confer protection for approximately six months, allowing for variations across age groups and disease severity.

[1] https://www.ecdc.europa.eu/en/publications-data/covid-19-guidance-discharge-and-ending-isolation

2.1 Scientific unknowns

Some scientific unknowns remain regarding the infectiousness of a person infected with COVID-19. The following two aspects are of particular relevance:

- there is insufficient information on levels of immunity conferred by previous infection. It is widely accepted that previous infection provides in general some reduced risk of subsequent infection, but there is a lack of consensus on how much reduced risk of infection, the length of the protection and the extent of variation between individuals.

- although relatively uncommon, reinfection in persons recently recovered from COVID-19 has been documented. It has been reported that up to 9% of PCR positive cases do not mount an antibody response and may be susceptible for reinfection and further transmitting disease. More recently, possible reinfections with emerging variant strains such as B.1.351 and P.1 are of special concern.

- the exact duration of the protection conferred by a previous infection, in particular in view of the increased transmission in EU/EA MSs of the new variants of concern, should be revised as new evidence is collected.

Due to the current unknowns, the validity of certificates might undergo changes according to new scientific evidence. Considering the emergence of SARS-CoV-2 variants, this epidemiological evidence may change and ECDC, the Commission and Member States should take all the measures to update all the relevant guidance, legal acts and IT systems.

3 Minimum dataset

A minimum dataset, including a unique identifier, enables minimum information to be generated according to a common agreed structure, facilitating cross-border sharing and use.

Table 1 – COVID-19 citizen recovery minimum dataset

Section	Data element	Description	Preferred Code System

Person identification	Person name	The legal name of the person recovered from the infection surname(s) and forename(s) in that order	
	Person date of birth	Recovered person's date of birth.	Complete date, without time, following the ISO 8601.
	Person identifier (optional)	The type of identifier and identifier of the person, according to the policies applicable in each country. Examples: citizen ID and/or document number (ID-card/passport)	

Information about past infection	Disease or agent	Disease or agent the citizen has recovered from	ICD-10, SNOMED CT GPS
	Date of first positive test result	Date when the sample for the test was collected that led to positive test result (NAAT[2] or RADT[3]) obtained through a procedure established by a public health authority in the MS	Complete date, without time, following the ISO 8601.
	Country of test	Country in which the first positive test was performed	ISO 3166 Country Codes
Certificate metadata	Certificate issuer	Entity that has issued the certificate (allowing to check the certificate)	
	Certificate Identifier	Unique identifier of the certificate to be printed into the certificate; the way of defining it should be similar to the vaccination guidelines[4]	
	Certificate valid from	Certificate valid from [at least 20 days after the first positive test result] *Subject to change as new evidence arises*	ISO 8601 or other international stated format
	Certificate valid until	Certificate valid until, [not more than, 180 days after the first positive test result date] *Subject to change as new evidence arises*	ISO 8601 or other international stated format

All fields that contain non-enumeration/numeric data should be encoded in UTF-8 must be fully canonicalised and normalised according to http://unicode.org/reports/tr15/

[2] "NAAT" is a molecular nucleic acid amplification test (NAAT) used to used detect the presence of the SARS-CoV-2 ribonucleic acid (RNA). Examples of NAAT techniques are RT-PCR (reverse transcription polymerase chain reaction), LAMP (loop-mediated isothermal amplification) and TMA (transcription-mediated amplification).

[3] Listed in the guidance of the Health Security Committee on test results + https://ec.europa.eu/health/sites/health/files/preparedness_response/docs/covid-19_rat_common-list_en.pdf

link

[4] https://ec.europa.eu/health/sites/health/files/ehealth/docs/vaccination-proof_interoperability-guidelines_en.pdf

4 Further steps towards cross-border interoperability

The guidelines on *COVID-19 Citizen Recovery interoperable certificates - minimum dataset* will be followed by further steps towards cross-border interoperability of COVID-19 certificates.

In close cooperation with ECDC and WHO and supported by the European Commission, the eHealth Network and the Health Security Committee will continue working towards the design and implementation of interoperable solutions that work across borders and world regions.

In addition, the European Commission is invited to support the development of toolboxes and trust frameworks to facilitate the deployment of interoperable solutions.