

OVERVIEW OF THE CANADIAN PROOF OF VACCINATION

Monika Kumari

Senior Director, Special Projects

Public Health Agency of Canada

November 2021

Introduction

What is the Canadian Proof of Vaccination Credential Program?

The Canadian Proof of Vaccination Credential Program



- **Canada recognizes that the safe reopening of economies and communities includes international travel.**
- In response to a need to facilitate the restart international travel while recognizing the evolving epidemiological context, the Government of Canada, in collaboration with the Canadian provinces and territories, have launched the **Canadian COVID-19 proof of vaccination credential (PVC)** for international travel.
- The Canadian PVC is:
 - a **standardized and interoperable credential**, based on the SMART Health Card specifications.
 - a **factual statement of the holder's vaccination history** that can be used by border officials to determine what public health measures may be applied to that individual.
 - **client-focused** and **protects privacy**.
- As vaccination data in Canada is held by the provinces and territories, the **Canadian PVC is issued at the provincial/territorial level**, but has a common look and feel with a Canada wordmark to ensure the document is easily recognized by foreign borders as Canadian.
- Eleven provinces and territories have begun to issue the Canadian PVC, with two remaining provinces planning to issue by end of **November 2021**.
- Canada is currently **sharing the Canadian PVC specimen through the diplomatic channel** to seek foreign recognition and acceptance of the Canadian document.

Overview: The Canadian PVC

What people will have in hand when traveling

A Canadian standard for PVC: The SMART Health Card

PHAC has aligned on a Canadian standard **for all Canadian provinces and territories building on SMART Health Cards specifications to create a consistent approach in Canada** and as well as for adoption among international entities

Standard selected – SMART Health Cards

The 2D QR code follows the SMART Health Cards framework from the Vaccine Credential Initiative (VCI):

- Open source QR code specs widely available and recognized
- Speed of execution through libraries and other open-source accelerators – for both issuers and verifiers
- A growing list of trusted issuers on the Common Trust Network
- Portability to native mobile phone health/COVID passes

The QR code holds all the data elements. As such:

- Both personal and vaccination records are included
- The individual owns the digital certificate
- No call backs needed to provincial or territorial registries
- Allows for inclusion of COVID-19 test records as well, future phases

Benefits of working towards a Canadian standard - SMART



Enduring given that it would be a neutral, factual document that would never need to be revoked (and new vaccination events could be added)



Flexible given the ability to set different rules depending on the verifier / foreign border (rich dataset displayed vs. thumbs-up/thumbs-down); can be easily updated as vaccine science evolves



Maximizes accessibility via a paper or electronic format (can be printed home or in any service centre); verification process can occur offline



Readily available & easily verifiable by third parties



The adoption of the standard by all provinces and territories supports **interoperability between them** (e.g., interprovincial travel)



Supports **domestic use cases for provinces and territories who wish to leverage this tool**



SMART Health Card Framework is based on HL7 ® FHIR which is the **industry standard for health records**



Common-look-and-feel makes it **easier for foreign borders to recognize Canadian PVCs** issued by provinces and territories




Detailed dataset **aligned with international travel requirements.**

Canadian PVC – Common Look and Feel

Province and territories issued PVCs standardize health information following the SMART specification. The following figures show the Canadian ‘look-and-feel’ PDF issued by Yukon embedding a SMART Health Card QR code:


COVID-19 Proof of Vaccination / Preuve de vaccination contre la COVID-19

Issuing Province / Territory
Province / Territoire de délivrance



Name / Nom : Doe, Jane Liz
Date of birth / Date de naissance : 02 JUL / JUIL 1985

SMART Health Cards QR Code / Code QR de la carte Santé SMART



Vaccinations administered / Vaccins reçus : 2


Date : 05 FEB / FÉV 2021
Product / Produit : Moderna Spikevax COVID-19
Lot : 818364

Date : 05 JAN / JAN 2021
Product / Produit : Moderna Spikevax COVID-19
Lot : Not available / Non disponible

This document contains confidential information that is intended only for use by the named individual or as authorized by law. Any unauthorized disclosure, copying, or distribution of the contents is strictly prohibited. Issued on 05 JUL 2021. If this document is folded, ensure the QR code is not creased.

Ce document contient des renseignements confidentiels qui sont destinés uniquement à l'usage de la personne nommée ou à l'usage autorisé par la loi. Toute divulgation, copie ou distribution non autorisée de son contenu est strictement interdite. Délivré le 05 JUIL 2021. Si ce document est plié, assurez-vous que le code QR ne l'est pas.


Page 1 / 2

**Yukon** Territory / Territoire


For more information, visit yukon.ca

Pour en savoir plus, rendez-vous au yukon.ca

PVC – Canadian Look and Feel specifications



Public Health
Agence de la santé
publique du Canada




PVC Format and Technical Specifications

Pan-Canadian Vaccination Credentials

v1.4.2 (October 1, 2021)

PROTECTING AND EMPOWERING CANADIANS
TO IMPROVE THEIR HEALTH

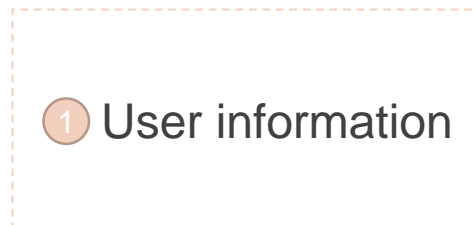


PVC – Tech specs

» 7

What goes in the PVC?

FHIR Resource
VaccinationCredentialPatient



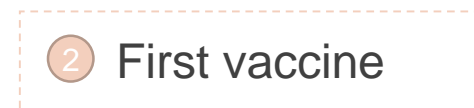
Data Elements

Given Name(s)

Family Name

Birthdate

FHIR Resource
VaccinationCredentialImmunization



FHIR Resource
VaccinationCredentialImmunization



Data Elements (x2)

Security

Vaccine Code

Occurrence Date

Lot Number

Performer Name

Vaccination Status

Vaccine Manufacturer


COVID-19 Proof of Vaccination / Preuve de vaccination contre la COVID-19

Issuing Province / Territory
Province / Territoire de délivrance
Yukon

Country of issuance /
Pays d'émission
Canada

1 Name / Nom : **Doe, Jane Liz**
Date of birth / Date de naissance : **02 JUL / JUIL 1985**

SMART Health Cards QR Code / Code QR de la carte Santé SMART



2 Vaccinations administered / Vaccins reçus : 2

Date : **05 FEB / FÉV 2021**
Product / Produit : **Moderna Spikevax COVID-19**
Lot : **818364**

3 Date : **05 JAN / JAN 2021**
Product / Produit : **Moderna Spikevax COVID-19**
Lot : **Not available / Non disponible**

This document contains confidential information that is intended only for use by the named individual or as authorized by law. Any unauthorized disclosure, copying, or distribution of the contents is strictly prohibited. Issued on 05 JUL 2021. If this document is folded, ensure the QR code is not creased.

Ce document contient des renseignements confidentiels qui sont destinés uniquement à l'usage de la personne nommée ou à l'usage autorisé par la loi. Toute divulgation, copie ou distribution non autorisée de son contenu est strictement interdite. Délivré le 05 JUIL 2021. Si ce document est plié, assurez-vous que le code QR ne l'est pas.

Page 1 / 2

- PVCs are designed to embed vaccination events in priority. Based on the current design **more than five vaccination events** have been confirmed to fit in a single SMART Health Card QR code.
 - However, if the province or territory at their discretion **includes additional non-vaccination information** in the QR code, it is possible that more than one QR code may be required.
- Human readable content related to non-vaccination information e.g. tests, **can be printed on a second page (optional Province/Territory-specific page)**, if required. Provinces and Territories have been instructed to ensure the QR code(s) remains fully compatible with the SMART Health Cards specifications.
- Provinces and territories have been producing PVC **samples for compliance testing** to ensure functionality and alignment with the specifications.

Verifying the Canadian PVC

(1) Authenticity

To confirm if the PVC was issued by recognized provinces and territories or federal agencies of Canada:

- Verifiers can use the VCI Directory/Common Trust Network to confirm registered issuers
 - At present, Canada is still in the process of onboarding its provinces and territories to the VCI Directory or Common Trust Network (which will be merging into one trust entity shortly).
- Alternatively, the verifier will need to know Canada's white-listed public URLs from trusted Canadian issuers (federal, provincial or territorial governments).

(2) SMART Health Card Compliant

- A complete PVC should include all mandatory SMART Health Card data elements and align with the Canadian common look-and-feel.
- PVCs are designed to embed vaccination events in priority, with most recent at top.
- Human readable content related to non-vaccination information can be printed on an optional second page by the province/territory of issuance

(3) Vaccine Codes

- Canadian PVCs will include vaccination information using the CVX code. In some cases, a SNOMED code may also follow the CVX code.

The SMART Health Card Ecosystem

Where are SMART Health Cards used?

A growing ecosystem has developed around the SMART Health Cards standard

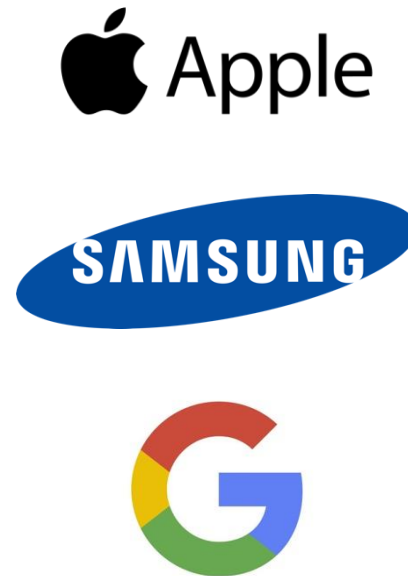
Issuers



US states

(California, New York, Hawai'i, Louisiana, Utah, New Jersey, etc.); Walmart; 8 Canadian provinces and territories (Quebec, Yukon, Saskatchewan etc.) with more US States and Canadian provinces coming online in the next few months

Holders



Apple (iOS 15), Samsung Pay
US, Google

Verifiers



Microsoft, CommonsPass, PathCheck,
Airlines (JetBlue, Hawaiian Airlines,
Swiss International Airlines, Virgin
Atlantic, United Airlines, Lufthansa)

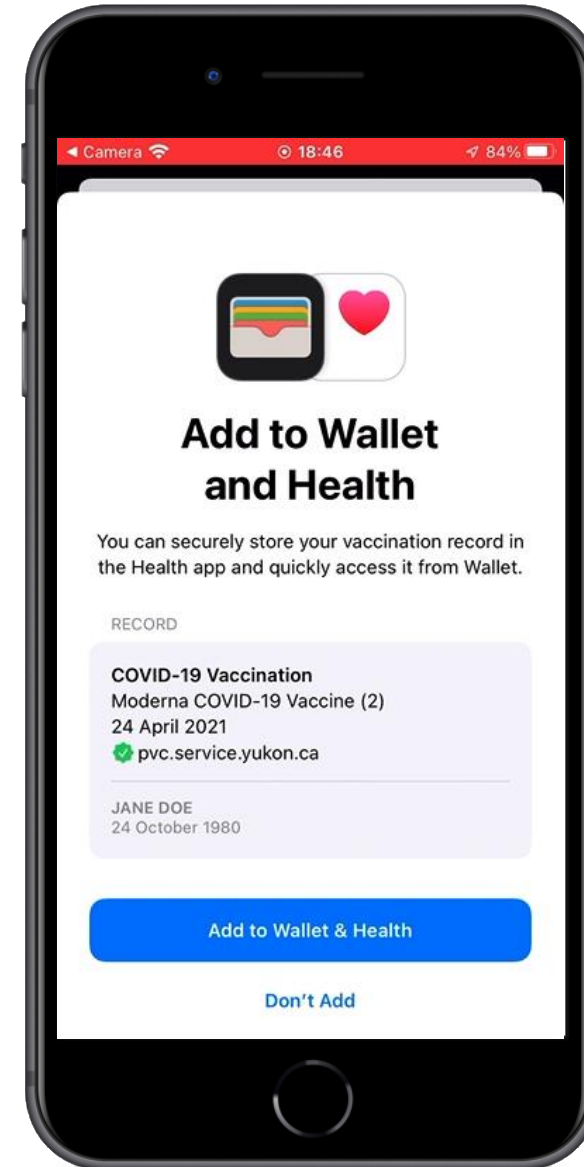
Update on the iOS ecosystem

Apple has adopted SMART Health Cards to allow iPhone user to store their COVID-19 vaccination record in Apple Health.

How do you share your SMART Health Card?

- Verification can be done in person by scanning the SMART Health Card in the Apple Wallet (iOS 15.1 beta)
- Verification can be done remotely using the new “verifiable health record” feature of Apple HealthKit

Canadian PVCs are compatible with iOS 15 and can be scanned with the Camera app.

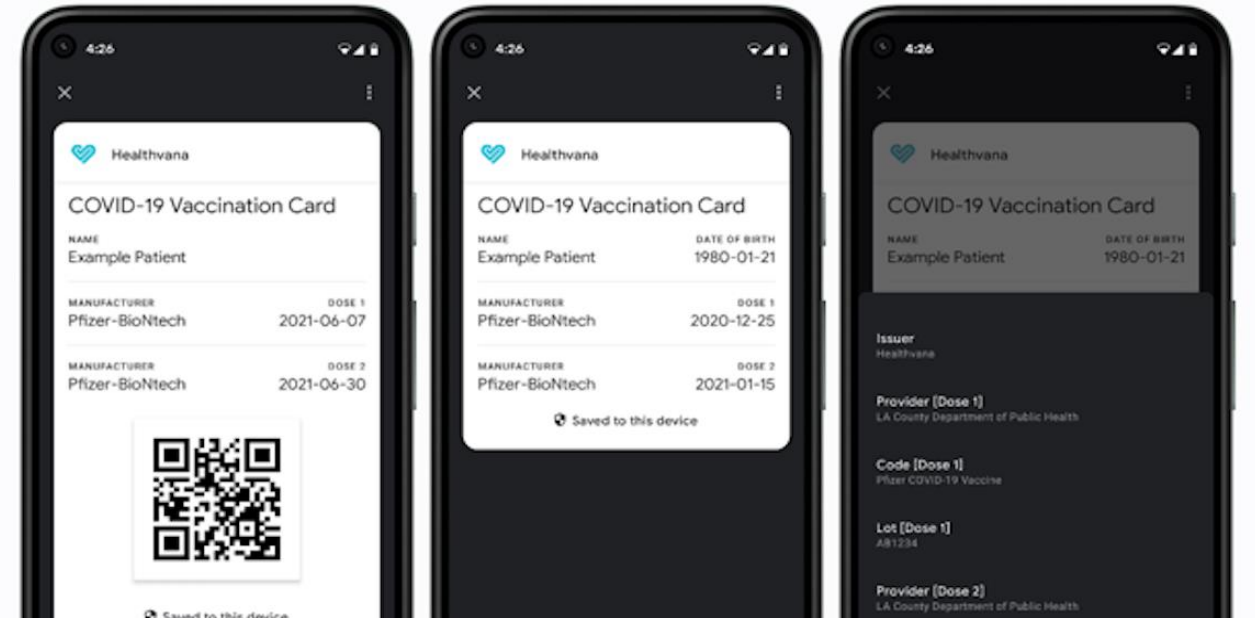


Update on the Android ecosystem



On Android, multiple solutions have emerged to manage verifiable COVID-19 vaccination records:

- Google's Covid Cards allow the Google Pay wallet to store and display SMART Health Cards just like Apple Wallet
- Some of the US State implementations, including California are natively supporting Google Pay. Google's Covid Cards also supports a much wider variety of credentials beyond SHCs but are currently only available in US and Australia.
- The CommonHealth app available for Android can also play the same role as Apple Health to hold vaccination records



Resources and References

Being based on the SMART Health Cards standard, the proof of vaccine certificate is supported by a growing open source ecosystem with a number of resources that can be used to issue and validate SMART Health Cards. The following lists publicly available resources:

- **Landing page of the SMART Health Cards specifications:** <https://spec.smarthealth.cards/>
- **Vaccination Credential Bundle Specification:** Refer to <http://build.fhir.org/ig/dvci/vaccine-credential-ig/branches/main/StructureDefinition-vaccination-credential-bundle.html> for VCI spec when building the issuance of the vaccine certificate
- **Reference implementation:** <https://github.com/smart-on-fhir/health-cards/>
- **VCI Testing appliance:** [Verifier Portal \(smarthealth.cards\)](#)
- **SMART Health Cards validation SDK (from Microsoft):** <https://github.com/microsoft/health-cards-validation-SDK>
- **Libraries for SMART Health Cards:** <https://github.com/smart-on-fhir/health-cards/wiki/Libraries-for-SMART-Health-Cards>
- **COVID-19 CVX Vaccine Codes:** <https://www.cdc.gov/vaccines/programs/iis/COVID-19-related-codes.html>

Contacts

For more general information about the Canadian Proof of Vaccination, please contact: IRCC.CANPVC-PVCAN.IRCC@cic.gc.ca

For more technical information about the Canadian Proof of Vaccination, please contact: PHAC.PVCTechnicalSupport-ASPC.SoutienTechniquePV@phac-aspc.gc.ca