

The logo consists of the letters 'VCI' in a bold, sans-serif font. The 'V' is a solid yellow color, while the 'C' and 'I' are a dark blue color.

**Vaccination Credential  
Initiative**

VCI

# An Initiative of U.S. Vaccine Stakeholders

March 2021 General Membership Meeting



## Collaborating Partners

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# Agenda



COVID: The Long(er) View



Vaccine Credential Initiative



Mission and Use Cases



Standards and Technologies



Reference Implementations

# COVID: The Long(er) View



**Eric Topol** ✓  
@EricTopol

The United States, pandemic outlier  
4% of the world population  
20% of the deaths  
30% of vaccine doses administered

8:07 AM · Mar 7, 2021 · Twitter Web App

**403** Retweets   **39** Quote Tweets   **1,480** Likes

## COVID: The Long(er) View

Available COVID-19 vaccines provide a line-of-sight by extinguishing human SARS-Co-2 transmission and stopping the pandemic by achieving and maintaining high vaccine coverage (approximately 75-80%) in populations

Achieving high vaccine coverage is dependent on a complex set of requirements including: vaccine supply, logistics for vaccination, access, and demand for vaccination – and is a global scale challenge, not just a single country

## COVID: The Long(er) View

There are three other largely unknown factors that could affect the difficulty (and the timelines) in achieving and maintaining high (effective) vaccine coverage, and each of these are vaccine-specific uncertainties:

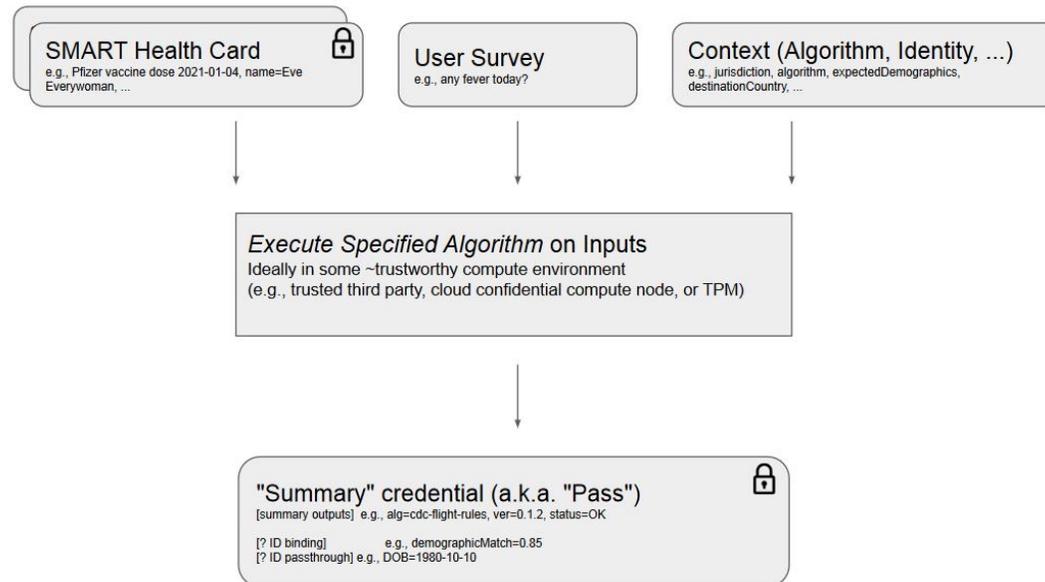
- Uncertain effectiveness of vaccines ability to prevent asymptomatic infection and risk transmission
- Unknown duration of vaccine protection for symptomatic and asymptomatic infections
- Emergence of SARS-CoV-2 viral variants which may “escape” vaccine protection

# The Initiative

The scope of the Vaccine Credentialing Initiative (VCI) is to harmonize the standards and produce the implementation guides needed to support "signed clinical data" bound to an individual identity.

The initial use case is to enable a user to access a signed copy of their clinical data in a standard format that can then be shared with another entity such as an airline, hotel, school, business, or event organizer. That entity can verify that the identity matches their records, and that the data is intact, then they can do whatever they want with it, such as embed within a boarding pass or ID badge.

The attached diagram illustrates the VCI scope - production of the SMART Health Card (the upper right-hand corner of the first slide). Other components such as wallets, verifiers, and identity proofing are out of scope. There is no charge for use of VCI created standards and implementation guides. No one entity holds IP rights to the work or can claim control over its use. Verifiers following these specifications have (by the way the specs are designed) a freely available path to validating signatures, with no pre-arrangement or transactional costs. In other words, verifiers can validate signatures on a Health Card using only publicly available resources (i.e., the openly published, web accessible JWKS files).

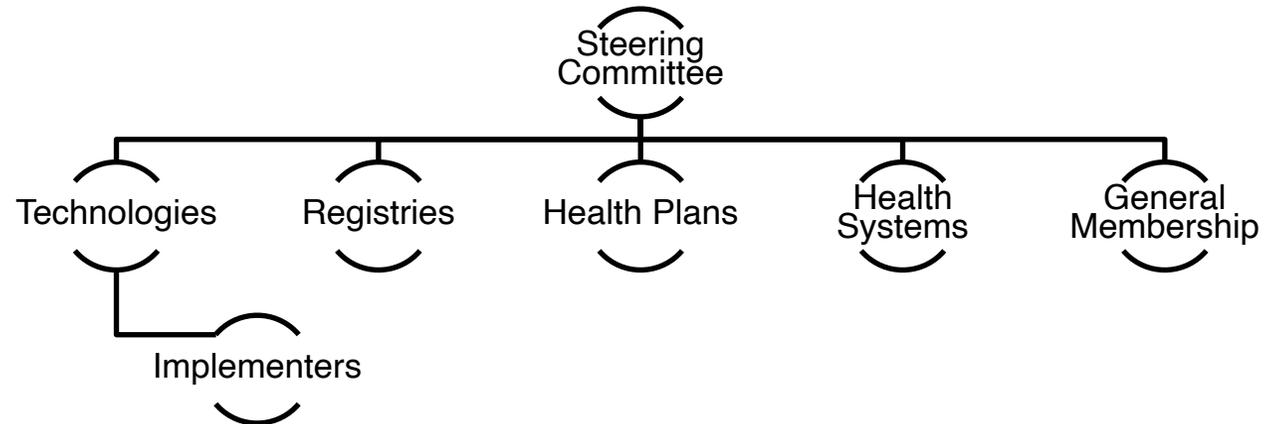


## General Membership

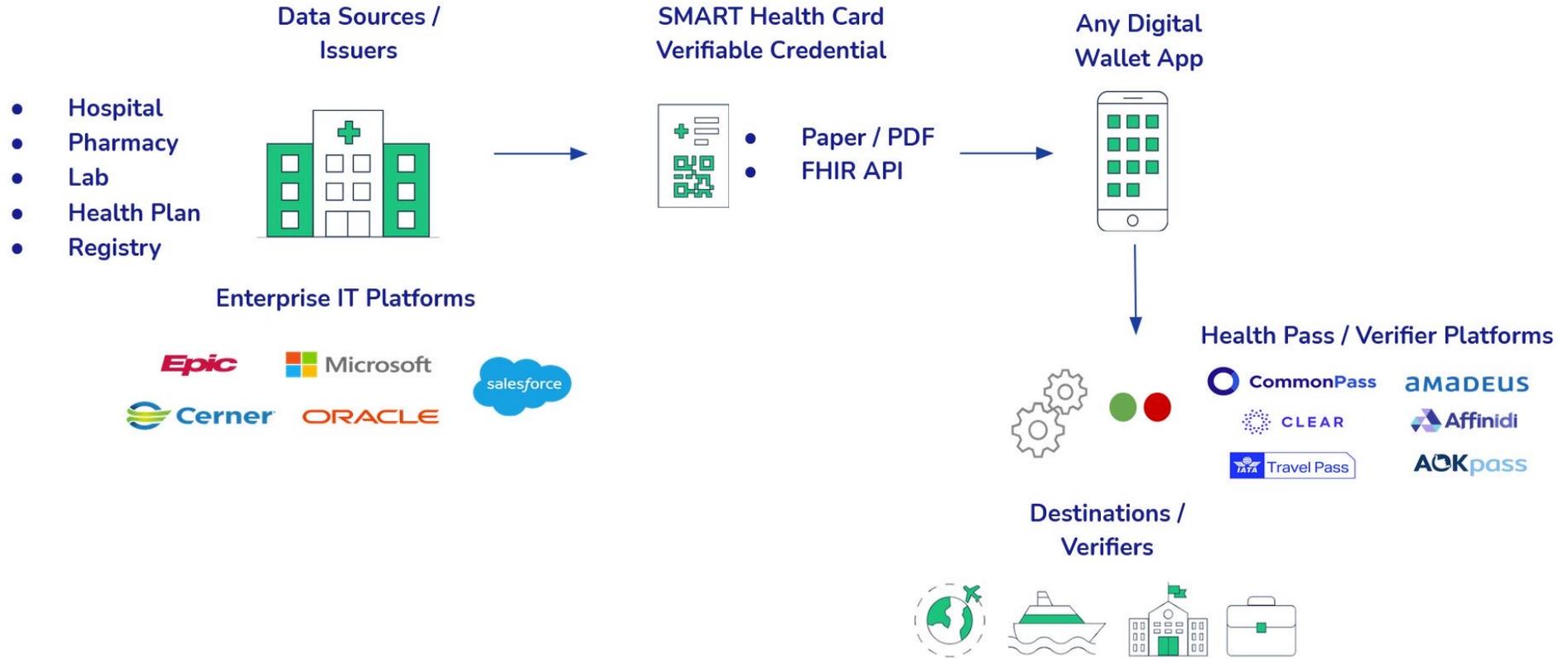
- Added to mailing list
- Eligible to attend monthly general meeting
- Eligible to participate in ad hoc working groups as necessary

## Working Groups

- Provides business and technical resources for reference implementations
- Assigned to and participates in regularly scheduled standing working groups meetings



# Mission and Use Cases



VCI is building two core specifications:

## SMART Health Cards

Enabling individuals with verifiable health data

## SMART Health Cards: Vaccination & Testing

Apply SMART Health Cards to vaccinations and COVID-19

## FHIR Implementation Guide

- Applies SMART Health Cards Framework to COVID-19 vaccination use case

## Data Profiling and Minimization

- Profiles for Patient and Immunization resources
- Only disclose a minimum amount of information to verifier

## Additional Use Cases

- COVID related lab tests

## Cerner's Work with VCI



Participating in development of the SMART Health Card Framework and Vaccination and Testing IG.



SMART Health Cards will be available through Ignite APIs for Millennium

Planning 2H 2021 rollout in US

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## Provider Perspective on VCI

### **William Gordon, MD, MBI**

Director, Solution & Experience, Digital Care Transformation, Mass General Brigham  
Associate Physician, Brigham and Women's Hospital  
Instructor in Medicine, Harvard Medical School

### **Adam Landman, MD, MS, MIS, MHS**

Chief Information Officer and Vice President, Digital Health, Brigham Health  
Associate Professor, Harvard Medical School

# Background

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## Early adopter of patient-facing APIs

Sync for Science and Apple Health Records on iPhone

## Implementation site and collaborator for CommonHealth

Now live with both Apple and Android options for patients

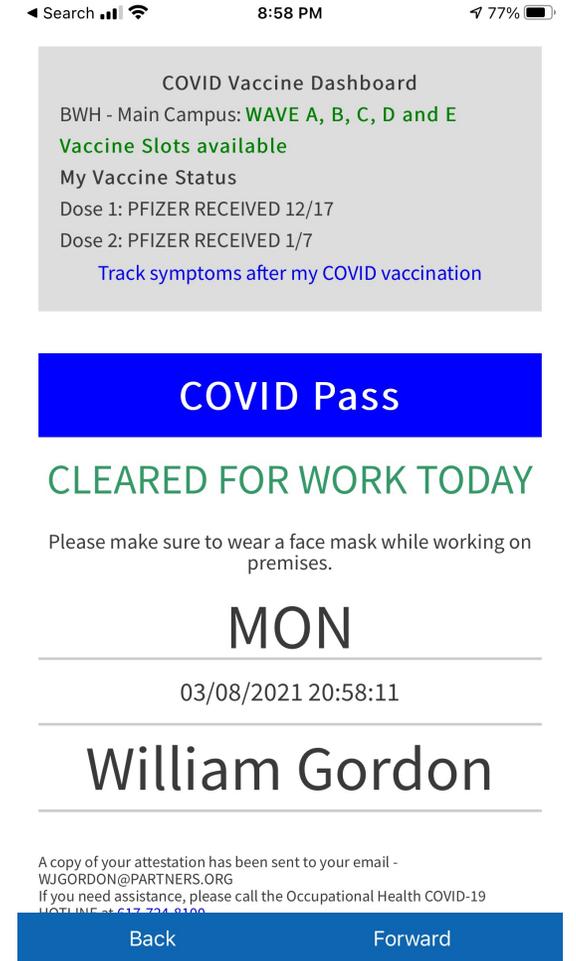
## Early research on patient-facing APIs

Work published in NEJM Catalyst, JAMA Network Open, JMIR

## Epic EHR across the delivery network

## Home-grown “COVID Pass” screening and scheduling app

Used daily by >50,000 employees, integrated with EHR, and vaccine scheduling





## Initial Considerations and Approach

Convened a working group of internal innovators to understand the use-case, including technical, operational, and clinical considerations.

Consideration	Approach
Can we make a patient's immunization record available digitally?	Immunizations are already available via the patient-access API
Equity considerations behind requiring a digital passport for travel, entertainment, etc.	Non-digital options (e.g., PDF of barcode), though does not address fully
Technical build requirements	Will our EHR vendor build this, or will it be custom? Are the standards mature enough to develop against?
State immunizations registries	How would we manage immunizations reported in our EHR, but done elsewhere (either through state exchange or provider report?)
End-users	Should we pilot with a smaller set of patients, like our employees?
Verifiers and holders	What is our relationship with holders and verifiers, and in particular, what is the trust model and our organizational risk?
Potential role in furthering disparities or restricting access to essential services	What will be the impact of enabling this more broadly particularly given health inequities exposed by COVID-19?

## Status

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- Working with the VCI team on advancing the SMART Health Cards standard through regular meetings, email, and [chat.fhir.org](https://chat.fhir.org)
- Many important considerations raised so far – what is the right trust model, how do we deal with state immunization data, is there a potential “write-back” use case, among others
- The multi-stakeholder, not-for-profit, and transparent approach to VCI has been effective at moving towards consensus
- Working towards understanding whether it will make sense for our organization to digitally sign health records data for our patients



## Wrap Up

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- Sign up on the site if you haven't already
  - <https://vaccinationcredential.org/>
- Check out the specs and talk with the team on GitHub
  - <https://smarthealth.cards/>
  - <http://build.fhir.org/ig/dvci/vaccine-credential-ig/branches/main>

# VCI

Website: <https://vaccinationcredential.org>

SMART Health Card Framework and Technical Details: [smarthealth.cards](https://smarthealth.cards)