



# ONC Objectives, Benchmarks, and Measurements

HITAC Meeting, November 10, 2021

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The Office of the National Coordinator for  
Health Information Technology



# 21<sup>st</sup> Century Cures Act Requirement

**For the purpose of the HITAC Annual Report, Section 4003 of the 21st Century Cures Act states that:**

“ ...the National Coordinator, in collaboration with the Secretary, shall establish, and update as appropriate, objectives and benchmarks for advancing and measuring the advancement of the priority target areas...”

- ONC sets the objectives and benchmarks used in the development of the HITAC Annual Report
- ONC objectives and benchmarks support implementation of the **2020-2025 Federal Health IT Strategic Plan**
- ONC welcomes feedback from HITAC members about the objectives and benchmarks, in particular please share how they advance the priority target areas

# 2020-2025 Federal Health IT Strategic Plan

## Objectives

## Goal



Advance the  
development and  
use of health IT  
capabilities



Establish  
expectations  
for data sharing

**Connect  
Healthcare with  
Health Data**

# Connect Healthcare with Health Data



Establish **equity by design** as a core principle for the development and use of health IT



Modernize **public health data systems** and integrate public health with clinical care systems to effectively respond to public health emergencies



**Standardize health information sharing** by supporting health IT users in FHIR and USCDI implementation



Create simplified **nationwide connectivity** for healthcare providers, health plans, individuals, and public health organizations to allow for universal interoperability across the care continuum

# ONC Activities for Benchmarking Progress



**Standards**



**Certification**



**Exchange**



**Coordination**

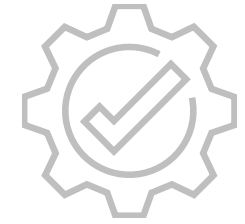
# FY21 ONC Standards Activities



- USCDI**
- Published USCDI Version 2, which includes new data classes and elements

<p><b>Assessment and Plan of Treatment</b></p> <ul style="list-style-type: none"> <li>SDOH Assessment</li> </ul>	<p><b>Care Team Member(s)</b></p> <ul style="list-style-type: none"> <li>Care Team Member Name</li> <li>Care Team Member Identifier</li> <li>Care Team Member Location</li> <li>Care Team Member Telecom</li> <li>Care Team Member Role</li> </ul>	<p><b>New Data Class &amp; Elements</b></p> <p><b>Clinical Tests</b></p> <ul style="list-style-type: none"> <li>Clinical Test</li> <li>Clinical Test Result/Report</li> </ul>
<p><b>New Data Class &amp; Elements</b></p> <p><b>Diagnostic Imaging</b></p> <ul style="list-style-type: none"> <li>Diagnostic Imaging Test</li> <li>Diagnostic Imaging Report</li> </ul>	<p><b>New Data Class &amp; Elements</b></p> <p><b>Encounter Information</b></p> <ul style="list-style-type: none"> <li>Encounter Diagnosis</li> <li>Encounter Disposition</li> <li>Encounter Location</li> <li>Encounter Time</li> <li>Encounter Type</li> </ul>	<p><b>Goals</b></p> <ul style="list-style-type: none"> <li>SDOH Goals</li> </ul>
<p><b>Patient Demographics</b></p> <ul style="list-style-type: none"> <li>Gender Identity</li> <li>Sexual Orientation</li> </ul>	<p><b>Problems</b></p> <ul style="list-style-type: none"> <li>SDOH Problems/Health Concerns</li> <li>Date of Diagnosis</li> <li>Date of Resolution</li> </ul>	<p><b>Procedures</b></p> <ul style="list-style-type: none"> <li>SDOH Interventions</li> </ul>

# FY21 ONC Standards Activities



- SVAP**
  - Completed first cycle of SVAP process
- FHIR**
  - Published HL7 FHIR US Core Implementation Guide STU 3.2.0 and 4.0.0
  - Published FormatCode Implementation Guide
  - Published Mobile Access to Health Documents Implementation Guide
  - Published Patient Identifier Cross-reference for Mobile Implementation Guide
  - Published Patient Demographics Query for Mobile Implementation Guide
- Public Health**
  - Balloted first version of the COVID-19 FHIR Profile Library
  - Standardized over 1,800 lab test order names
  - Developed 75 COVID-19 and public health related LOINC special use codes
  - Launched the Strengthening the Technical Advancement & Readiness of Public Health via Health Information Exchange Program (STAR HIE Program)
  - Published Situation Awareness for Novel Epidemic Response (SANER) Implementation Guide

## FY21 ONC Certification Activities

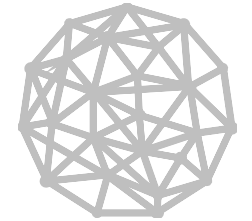
- Published Certification Fact Sheets:
  - Highlighted Regulatory Dates – ONC Health IT Certification Program
  - Application Programming Interfaces (APIs) – Conditions and Maintenance of Certification
  - Standards-based API Certification Criterion
- Compliance requirements went into effect for several Conditions of Certification, including for Information Blocking, Assurances, API, and Communications





## FY21 ONC Exchange Activities

- Information Blocking applicability for Health Care Provider, Health Information Network/Health Information Exchange, and Health IT Developer of Certified Health IT (for data elements in USCDI Version 1)
  - Published 36 Information Blocking Frequently Asked Questions (FAQs) and 5 Fact Sheets
  - Held public webinars on Information Blocking and Healthcare Provider Information Sharing
- TEFCA public engagement webinars, HITAC engagement, and Common Agreement Work Group sessions



# FY22 ONC Standards Plans



**USCDI** • Update versions of USCDI with additional data classes/data elements

**SVAP** • Publish National Coordinator-approved updated versions of health IT standards and implementation specifications via SVAP process

**FHIR**

- Release HL7 FHIR R5
- Update HL7 US FHIR Core Implementation Guide to align with USCDI updates
- Collaborate with Standards Development Organizations (SDOs) to Accelerate FHIR API Standards' Ability to Support Use Cases for Population-Level Query Services
- Publish FHIR-related guidance on Integrating the Healthcare Enterprise® (IHE) profiles

# FY22 ONC Standards Plans

## Public Health

### Standards Development Organizations

- Develop FHIR resources to address disease, chronic conditions, and environmental factors
- Develop and update standards and Implementation Guides related to privacy, security, and consent
- Encourage the adoption of FHIR Bulk Data Access (Flat FHIR) Implementation Guide
- Support HL7 US Realm



### Lab Standards

- Develop COVID-19 and public health-related LOINC special use codes that describe laboratory tests ordered and taken
- Standardize the lab test order names to reduce erroneous lab orders and/or results

### Standards for Federal Partners

- Facilitate testing, final balloting, and real-world deployment of Situational Awareness for Novel Epidemic Response Implementation Guide for use by Federal partners

## FY22 ONC Certification Plans

- Initial Real-World Testing Plans due (December 15, 2021)
- Initial Attestations to Conditions and Maintenance of Certification due (April 1, 2022)

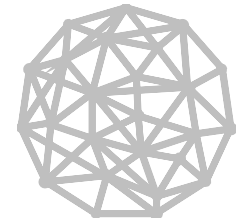


2022

# FY22 ONC Exchange Plans

## Information Blocking

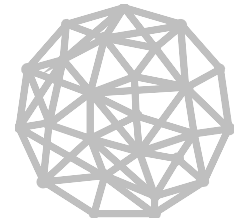
- From April 5, 2021, to October 6, 2022, the definition of information blocking is limited to the EHI that is also represented in the USCDI
- On and after October 6, 2022, the definition of EHI is no longer limited to the elements represented in the USCDI. EHI means **electronic protected health information (ePHI)** to the extent that the ePHI would be included in a **designated record set** as these terms are defined for HIPAA.
  - **Except for** psychotherapy notes (45 CFR 164.501) and information compiled in reasonable anticipation of, or for use in, a civil, criminal, or administrative action or proceeding.



# FY22 ONC Exchange Plans

## Trusted Exchange Framework and Common Agreement

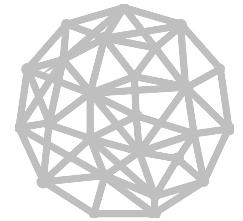
- Final Trusted Exchange Framework, Final Common Agreement (CA) Version 1, and Final Qualified Health Information Network (QHIN) Technical Framework (QTF) QTF Version 1 Published
- QHINs begin signing Common Agreement
- QHINs selection, onboarding, and sharing begins



# FY22 ONC Exchange Plans

## Health Information Exchange Services

- Advance innovative health information exchange services that benefit public health agencies
- Improve the health information exchange services available to support communities disproportionately impacted by the COVID-19 pandemic



# Health Information Technology Advisory Committee

## Target Areas in the Cures Act



### **Use of Technologies that Support Public Health:**

The facilitation of bidirectional information sharing between the clinical and public health communities



### **Privacy and Security:**

The promotion and protection of privacy and security of health information in health IT



### **Interoperability:**

Achieving a health information technology infrastructure that allows for the electronic access, exchange, and use of health information



### **Patient Access:**

The facilitation of secure access by an individual and their caregiver(s) to such individual's protected health information





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# Discussion



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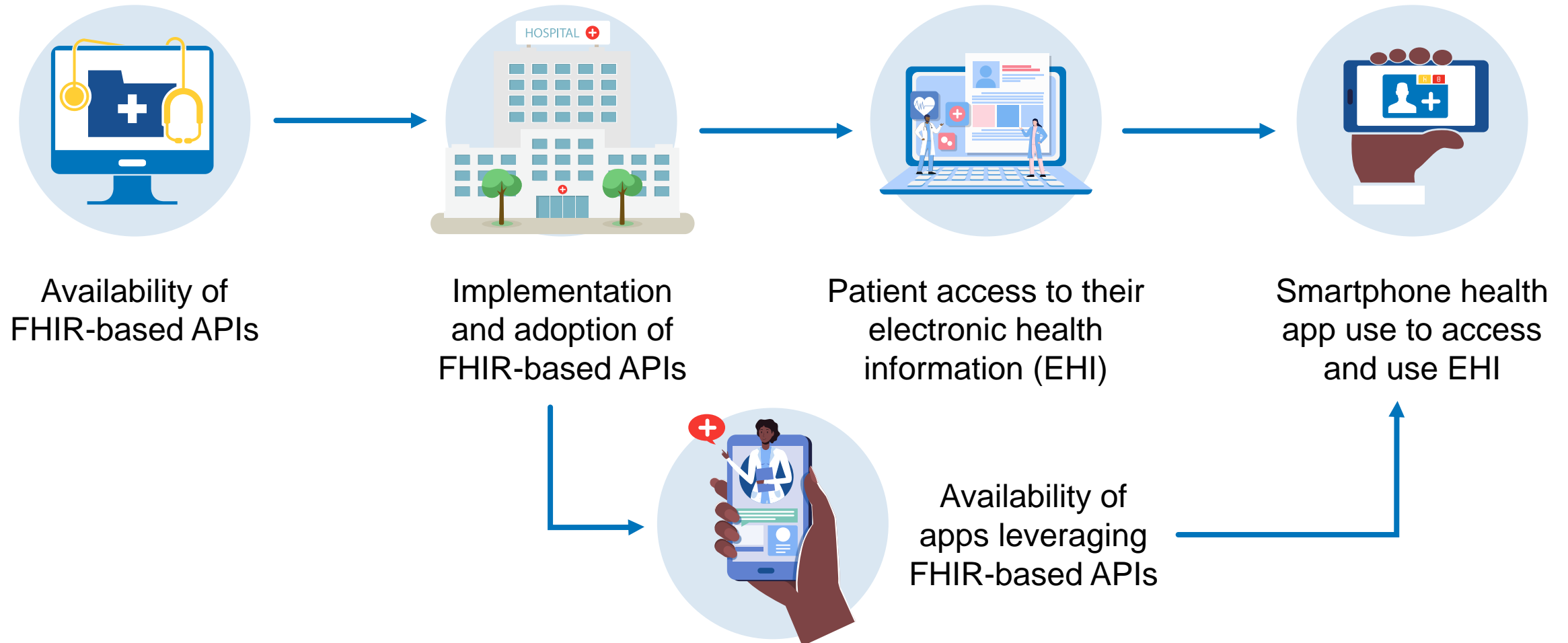


# API Measurement and the Current State of Patients' Access to their Electronic Health Information

HITAC Data Update

ONC, Data Analysis Branch

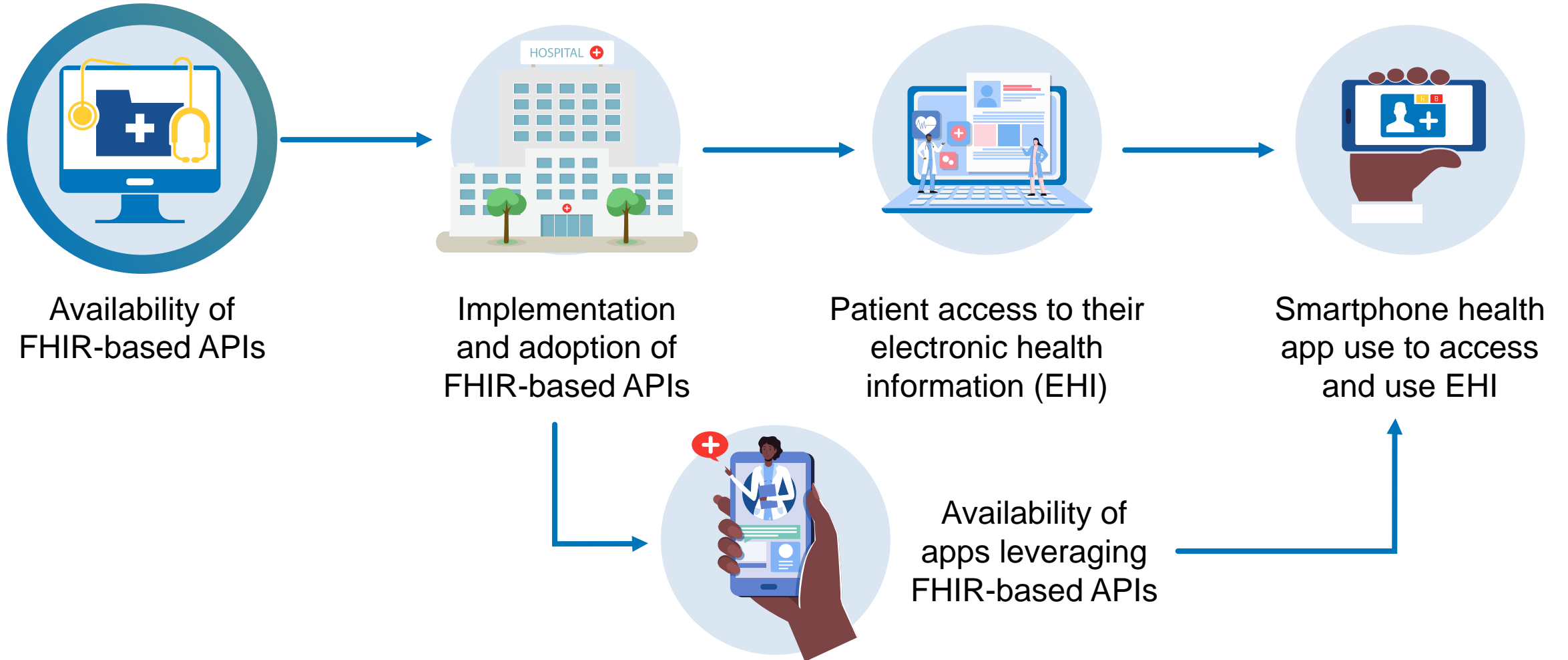
# Measurement of Patient Access to their Electronic Health Information



## Current ONC Measurement Activities

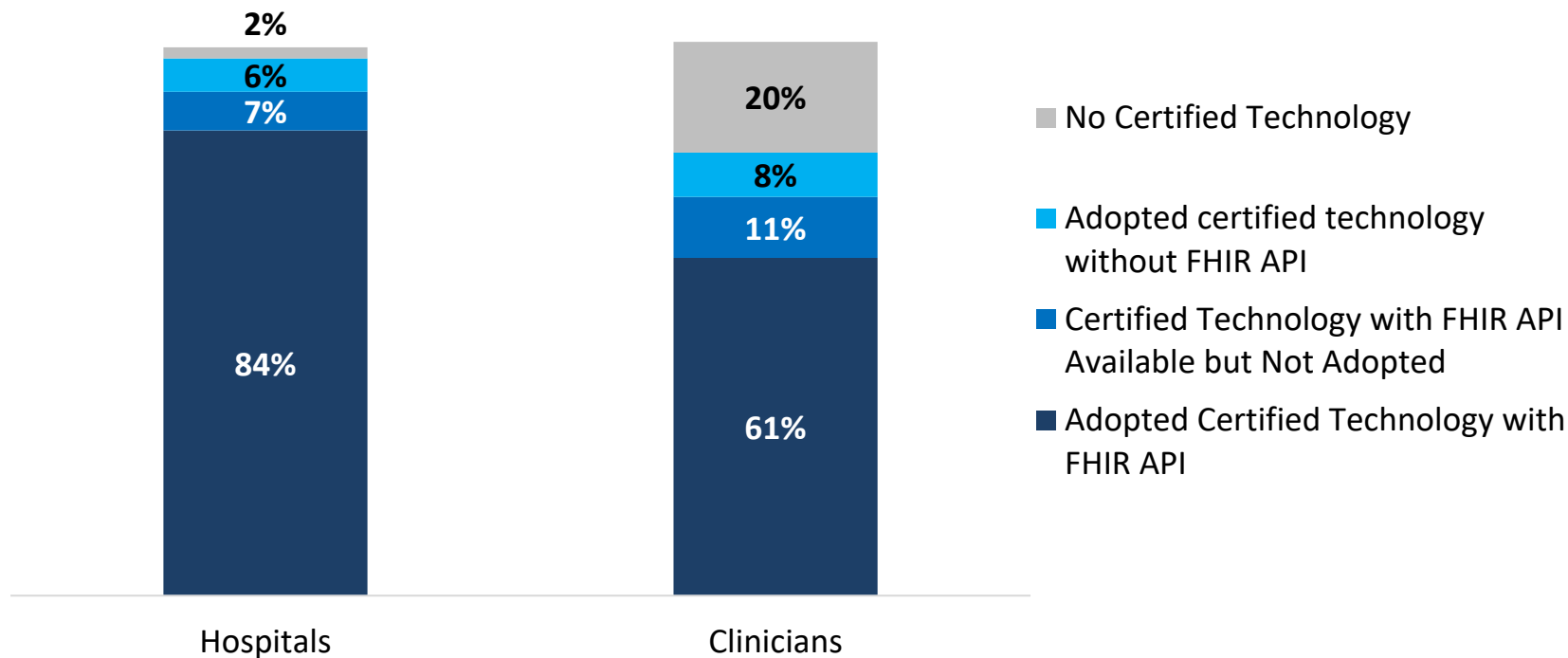
- **Availability of FHIR-based APIs**
  - Programmatic data from the ONC Certified Health IT Product List (CHPL) provide insights on the number of certified API products that support FHIR.
- **Implementation and adoption of FHIR-based APIs among healthcare providers**
  - American Hospital Association IT Supplement Survey of hospital CEOs and CIOs, which ONC uses to track the adoption of EHRs, and their use of technology to exchange electronic health information and provide patients access to their health information.
- **Availability of patient-facing health apps and the use of FHIR-based APIs among health apps**
  - Publicly available app gallery data published by EHR developers and other health IT stakeholders provides information on the number and types of third-party apps that integrate with EHRs.
- **Patient access to their EHI and use of smartphone health apps**
  - Health Information National Trends Survey (HINTS) of U.S. adults, which ONC uses to track consumers' access and use of patient portals and smartphone health apps.

# Measurement of Patient Access to their Electronic Health Information



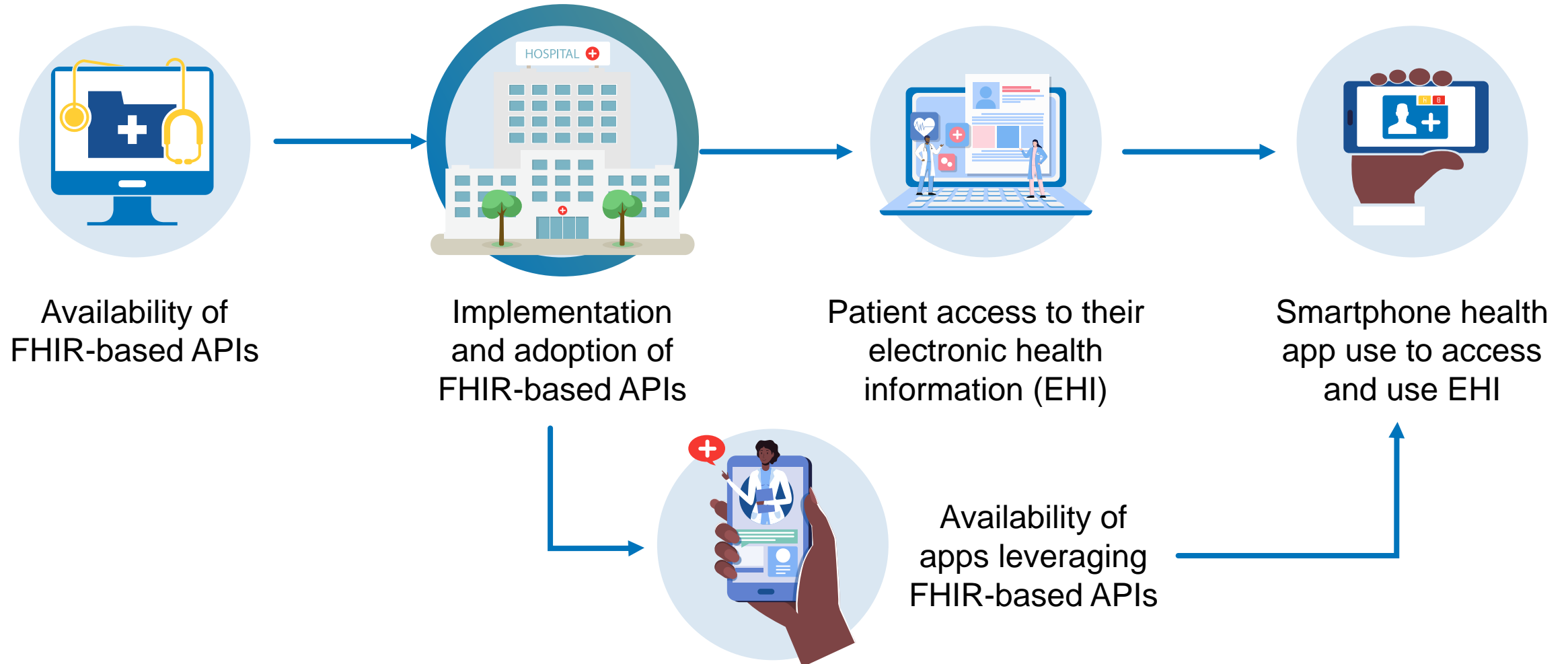
# 91% of hospitals and 72% of clinicians have adopted or could adopt 2015 Edition certified technology enabled with FHIR.

Percent of hospitals and clinicians that adopted or could adopt (but did not) 2015 Edition certified API technology enabled with FHIR, 2019



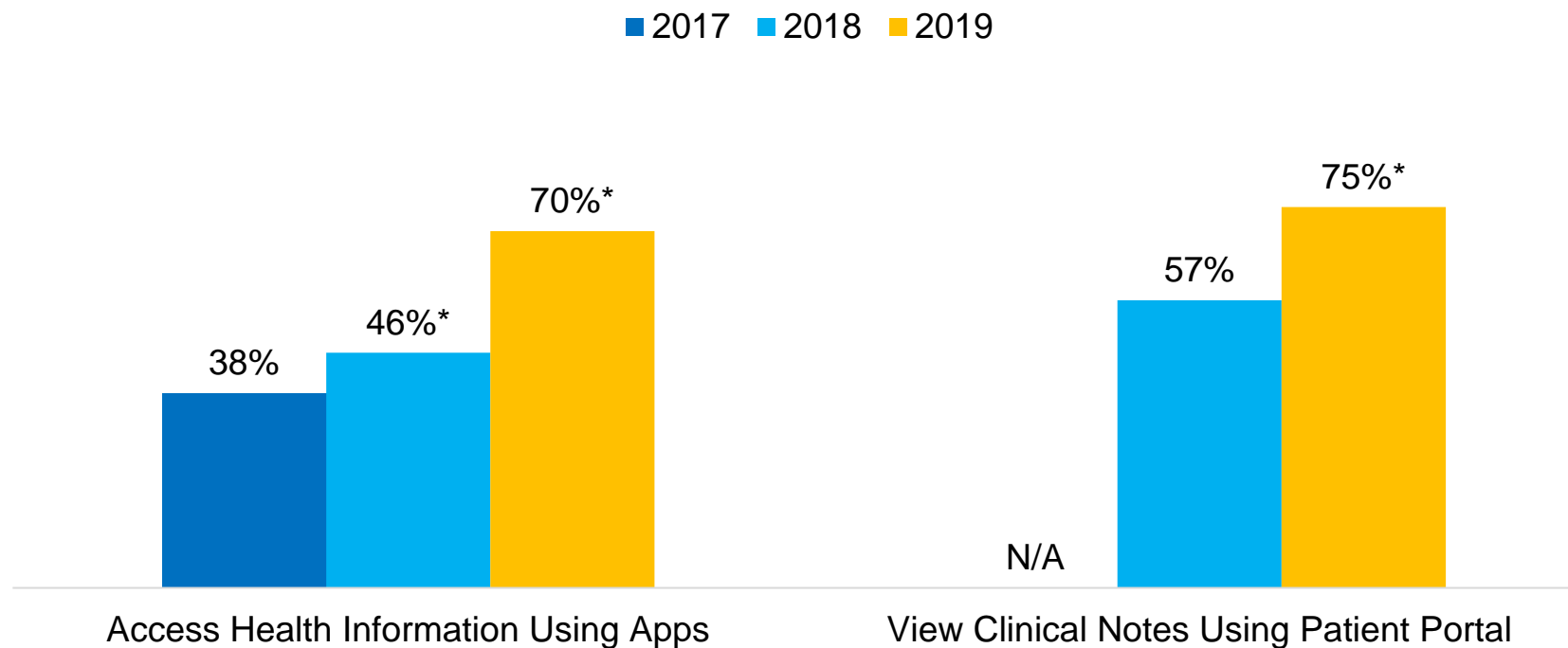
Notes: (1) All U.S. non-federal acute care hospitals. (2) All Merit-based Incentive Payment System (MIPS) eligible clinician types. (3) Could adopt represents the percentage of hospitals and clinicians who have not adopted 2015 Edition technology but possess certified technology with a 2015 Edition version enabled with FHIR.

# Measurement of Patient Access to their Electronic Health Information



## Hospitals' enabling patient access to their health information using an app nearly doubled between 2017 and 2019.

Percent of non-federal acute care hospitals that enabled patients to access health information using apps and view clinical notes in their portal, 2017-2019.



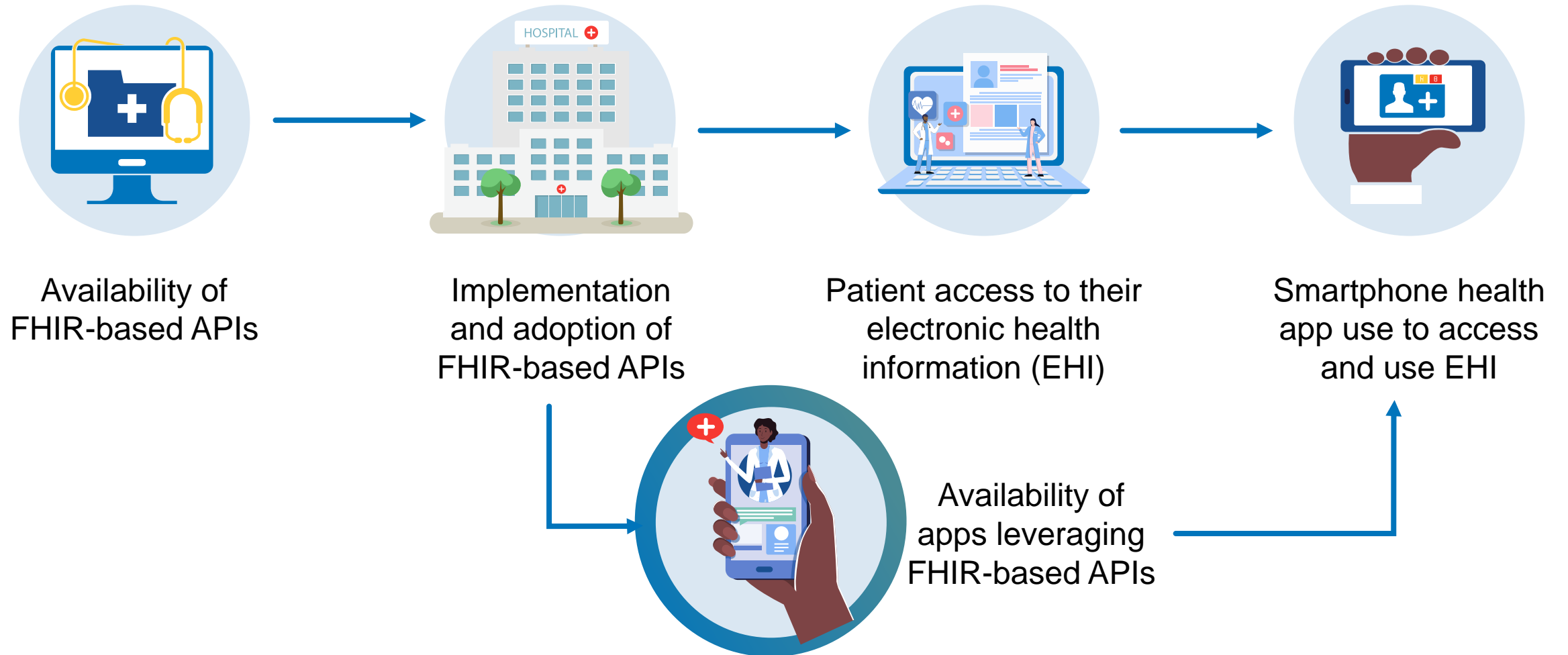
Source: 2017-2019 AHA Annual Survey Information Technology Supplement.

Note: Denominator represents all non-federal acute care hospitals that provide inpatient care.

\*Significantly different from previous year ( $p < 0.05$ ).

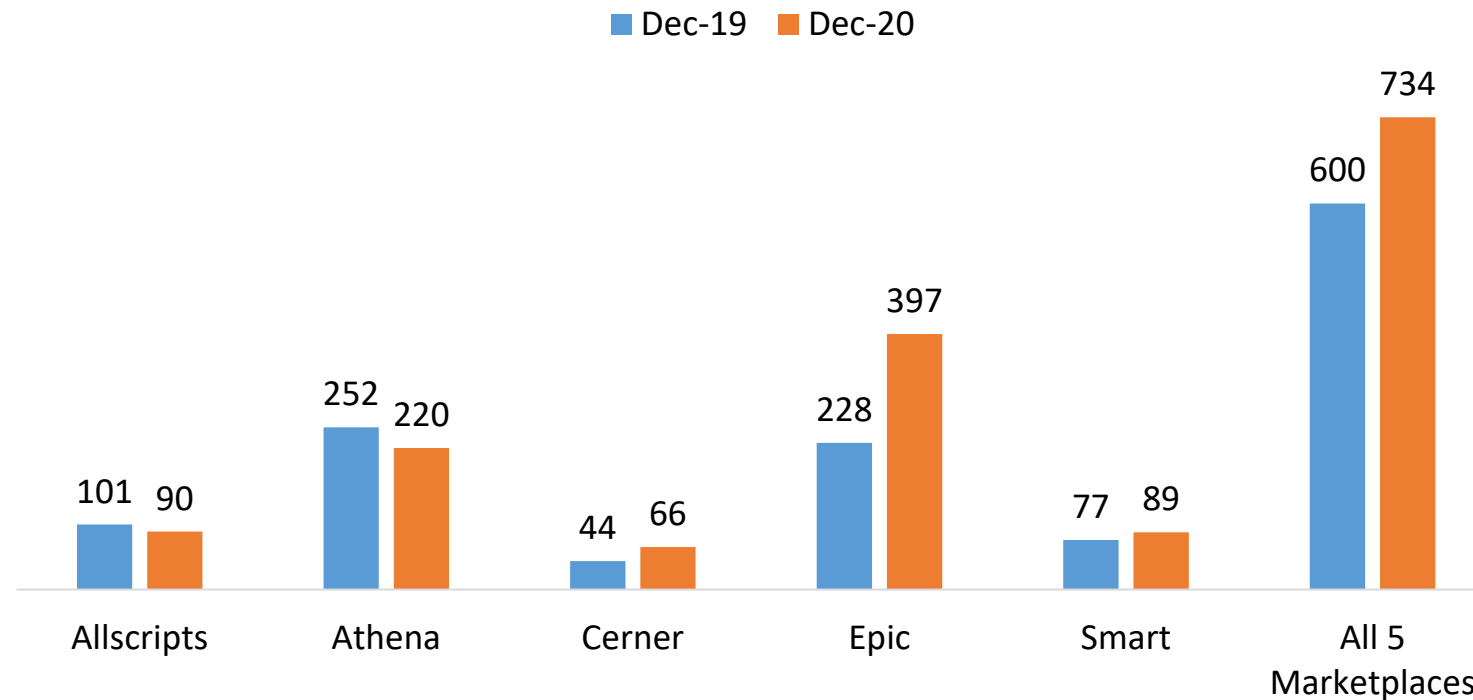


# Measurement of Patient Access to their Electronic Health Information



## As of the end of 2020, more than 700 apps were listed in EHR app galleries, this represented a 20% increase from 2019.

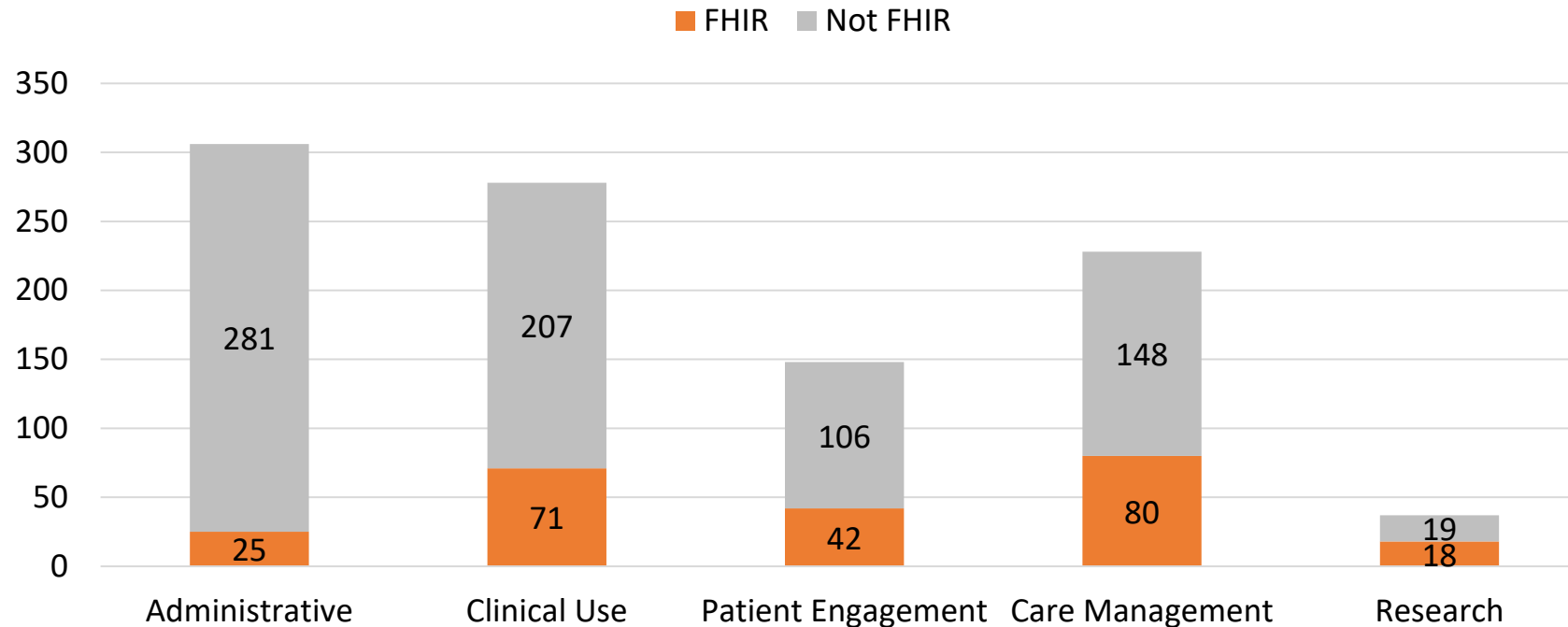
The number of apps added and removed across publicly available marketplaces between 2019 and 2020.



Notes: (1) Figure represents the number of apps discovered in the online app marketplaces hosted by Allscripts, Athenahealth, Cerner, Epic, and SMART from December 30, 2019 to December 15, 2020. (2) The "All 5 Marketplaces" group reflects unique apps.

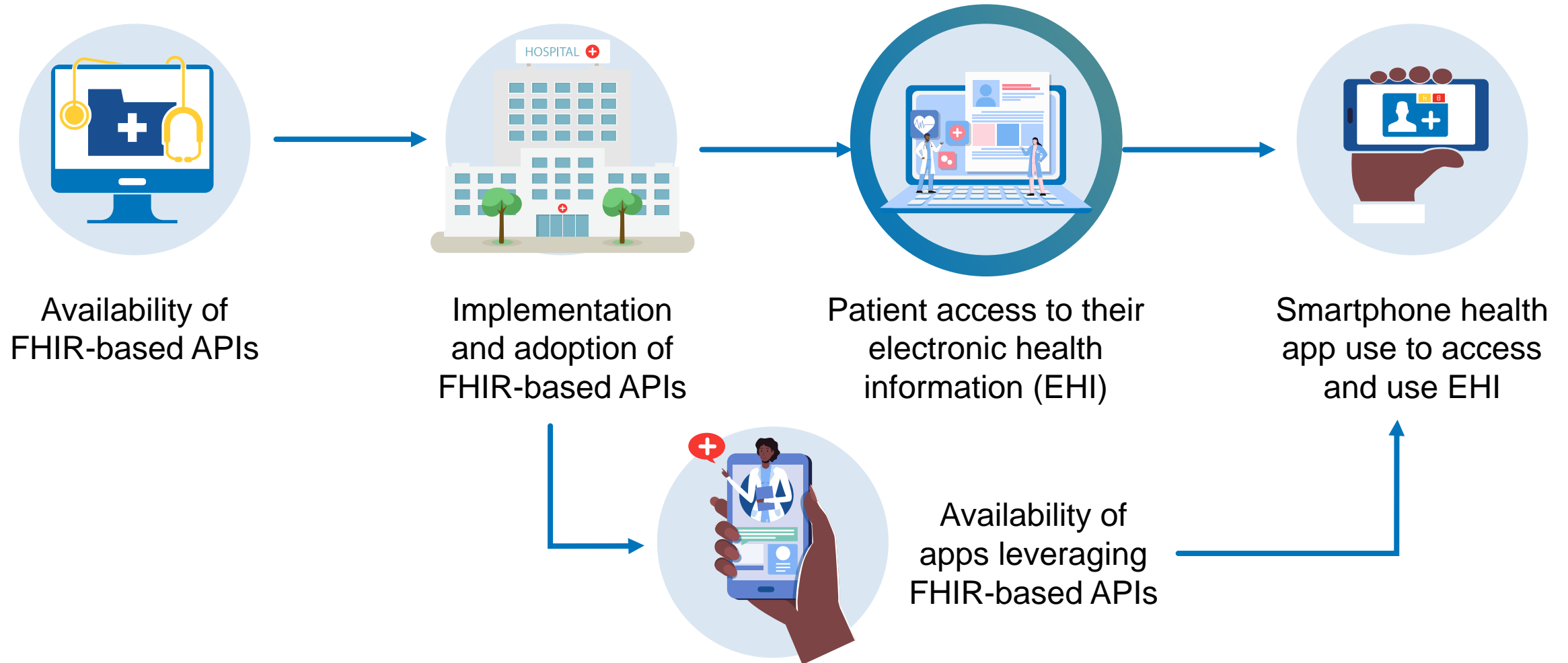
## Overall, 1 in 5 apps support FHIR, however, this varies by functional category.

Number of apps that use the FHIR standard by functional category.



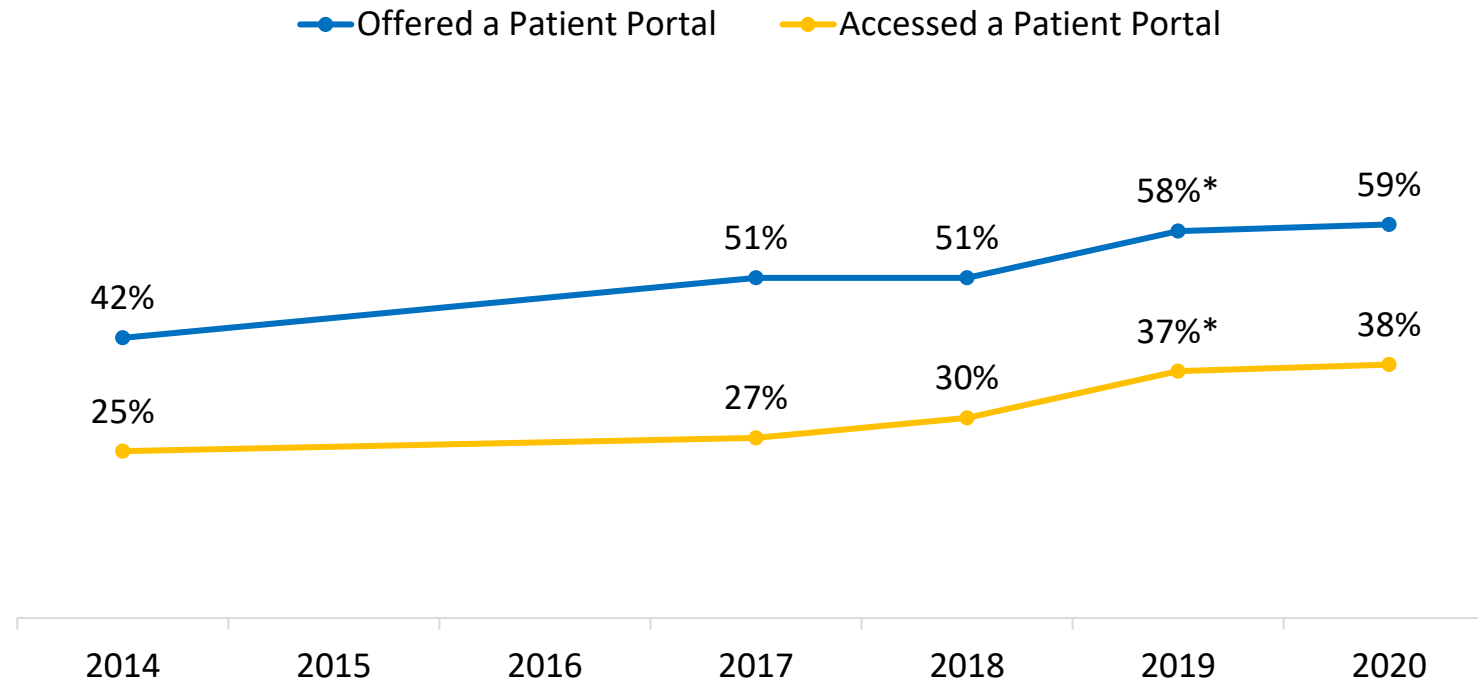
Notes: (1) Functional categories are not mutually exclusive. (2) Figure represents the number of apps discovered in the online app marketplaces hosted by Allscripts, Athenahealth, Cerner, Epic, and SMART from December 30, 2019 to December 15, 2020.

# Measurement of Patient Access to their Electronic Health Information



## About six in 10 individuals nationwide were offered a patient portal in 2020 – this represents a 17-percentage point increase since 2014.

**Percent of individuals nationwide who were offered and accessed a patient portal, 2014-2020.**

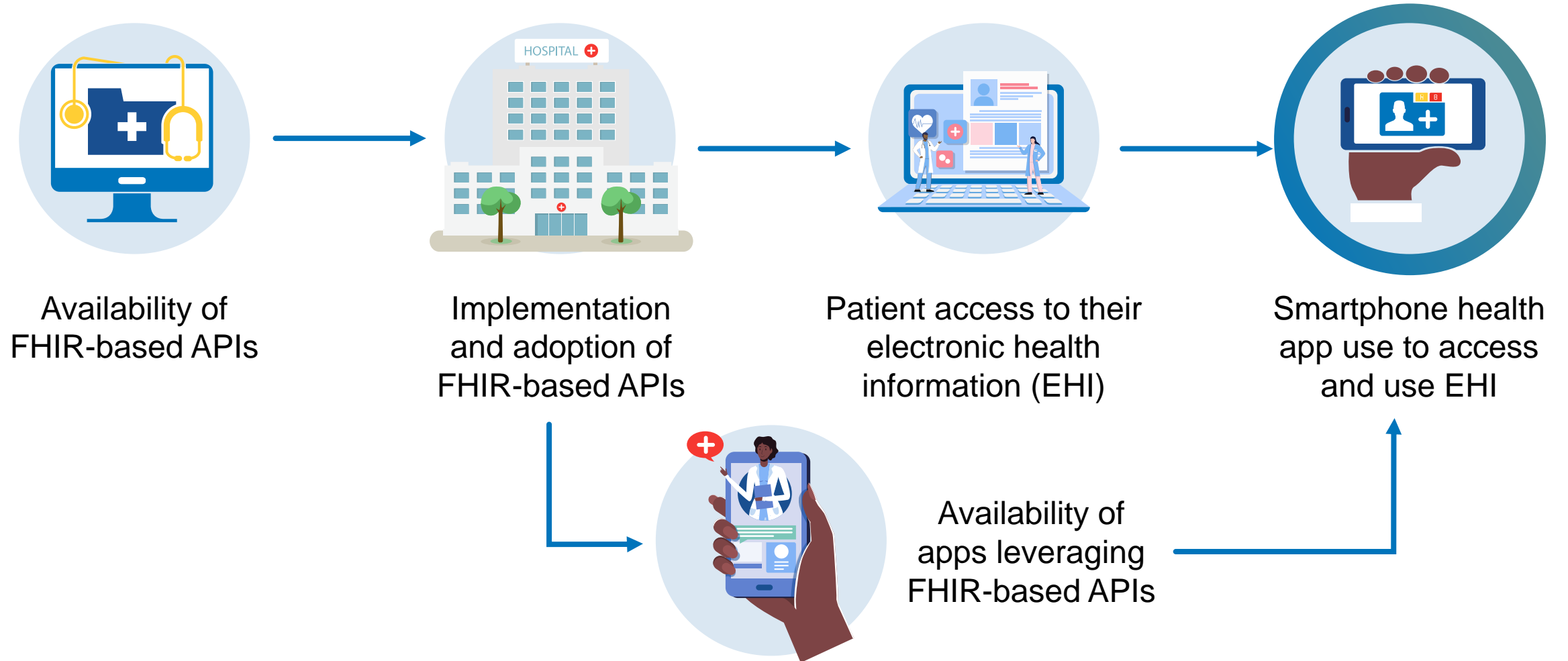


Source: HINTS 4 Cycle 4 (2014); HINTS 5, Cycles 1-4 (2017-2020)

Note: \*Significantly different from previous year ( $p < 0.05$ ). Denominator represents all individuals.

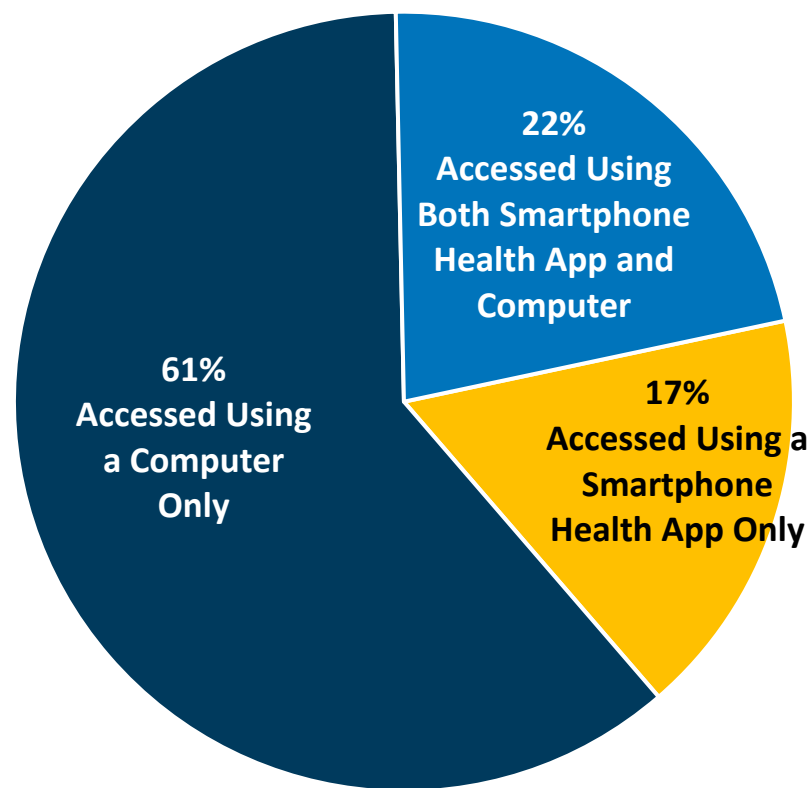
Percentage reflects weighted national estimate for individuals offered a patient portal by a health care provider or insurer. The HINTS survey was not fielded in 2015 and 2016.

# Measurement of Patient Access to their Electronic Health Information



## Nearly four in 10 patient portal users accessed their health information using a smartphone health app in 2020.

### Methods individuals use to access their patient portal, 2020



Source: HINTS 5, Cycle 4 (2020)

Notes: Denominator represents individuals who accessed their patient portal at least once within the past year. Individuals who access their portal at least once in the past year are referred to as “patient portal users”.



# Future Measurement



# Implementation of FHIR-based APIs

- **Current program/survey data provide limited insight on:**
  - Capabilities and characteristics of FHIR APIs, including whether they have been “turned on”
  - The number and types of organizations that have turned on their FHIR based APIs

## Lantern Project (Website: [lantern.healthit.gov](https://lantern.healthit.gov))

- The ONC Cures Final Rule requires Certified API Developers (by December 2022) to publish service base URLs (endpoints) for all health IT modules certified to the *Standardized API* criterion that can be used by patients to access their electronic health information.
- Lantern Project is designed to monitor FHIR API endpoints to identify the locations and capabilities of nationwide FHIR deployments.

## Third-party apps & their usage

- **Current program/survey data provide limited insight on:**
  - Usage of third-party apps to access EHI
  - Availability and characteristics of apps to support patient access and use of EHI is limited to app galleries

### EHR Reporting Program

- Proposed measures by the HITAC for the EHR Reporting Program can provide insights into patient access and use of EHI.
  - Examples of Potential Measures:
    - Percentage of patients who access their electronic health information using different methods
    - The availability of apps using certified API technology (170.315(g)(10)) using SMART on FHIR

A large, abstract graphic composed of numerous overlapping triangles and polygons in various shades of blue, green, yellow, and orange, creating a complex, multi-dimensional geometric pattern.

# Discussion



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# Contact ONC

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