FHIR as a vehicle for large scale scientific collaboration:

FLEET HEALTH

NIH National Institutes of Health

The Office of the National Coordinator for Health Information Technology

HARVARD MEDICAL SCHOOL

Patient-Directed Sharing of EHR Data

“With a click of a button, you’ll be able to voluntarily share your health data to help scientists perform groundbreaking research.”

SYNC FOR SCIENCE

All of Us℠ Research Program
THE FUTURE OF HEALTH BEGINS WITH YOU

The Precision Medicine Initiative®

The cornerstone of PMI – led by the NIH

1,000,000+ volunteers reflecting the broad diversity of the U.S.

Opportunities for volunteers to provide data on an ongoing basis

Data shared freely and rapidly to inform many research studies

Direct Volunteer EHR Data Donations – Sync for Science (S4S)

DIRECT VOLUNTEERS

Health IT Buzz

The Latest on Health Information Technology from ONC

EHR/EMR | Health Innovation | From the ONC Desk | ONC Programs

Health IT Buzz > Health Innovation > NIH and ONC Launch the Sync for Science (S4S) Pilot: Enabling Individual Health Data Access and Donation

NIH and ONC Launch the Sync for Science (S4S) Pilot: Enabling Individual Health Data Access and Donation

March 21, 2016, 11:46 am / Jon White, M.D. Deputy National Coordinator, Office of the National Coordinator for Health IT / Deputy National Coordinator,
Josephine Briggs M.D. Interim Director, Precision Medicine Initiative Cohort Program / Interim Director, Precision Medicine Initiative Cohort Program, and
Josh Mandel M.D. Research Scientist, Harvard Medical School Department of Biomedical Informatics Josh

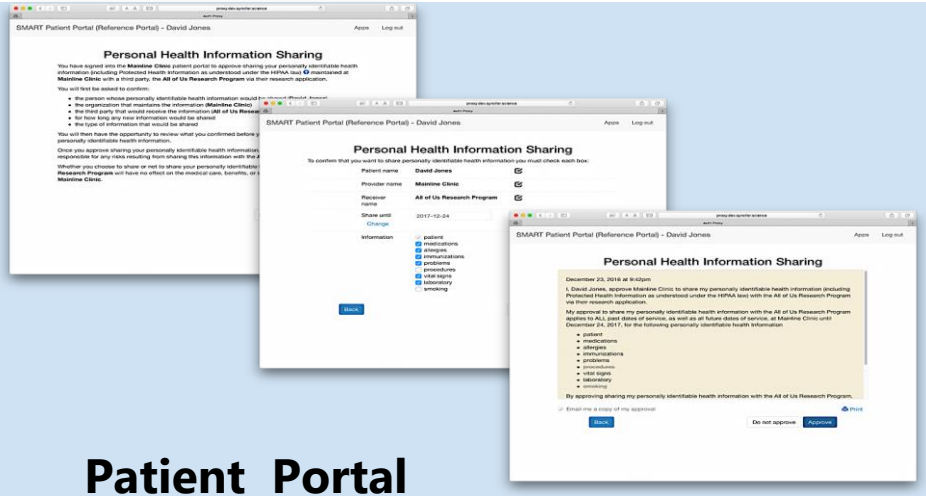
Research App Workflow

Launch Portal

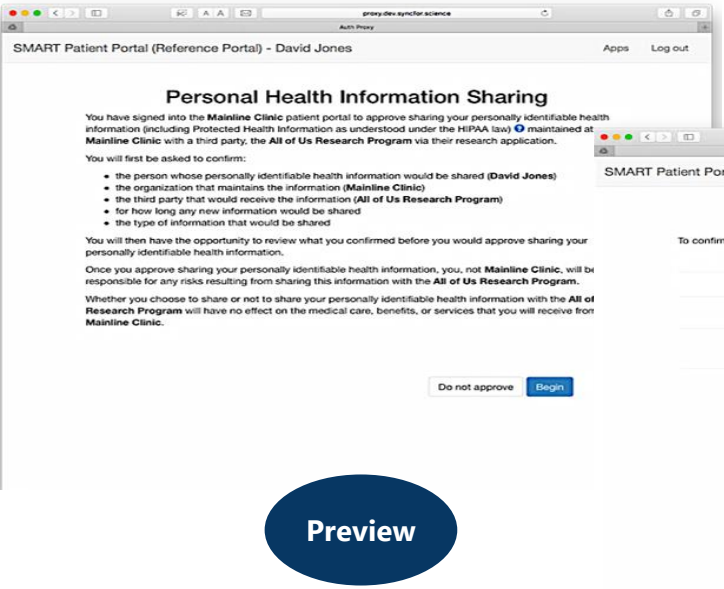
Return to App

Login

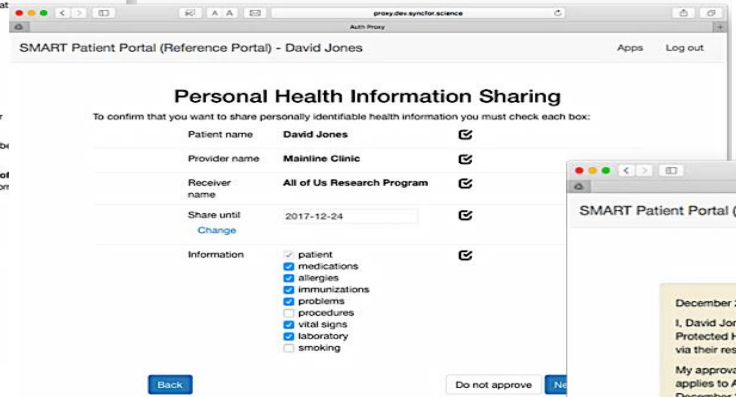
Approve or NOT!



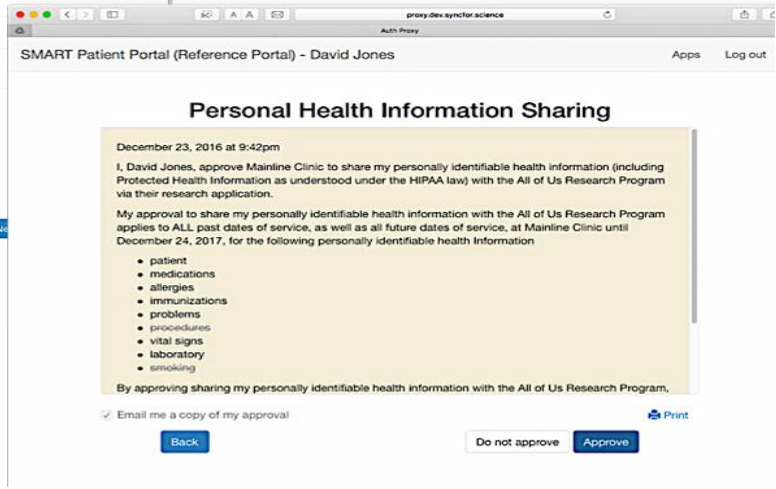
Patient Portal



Preview

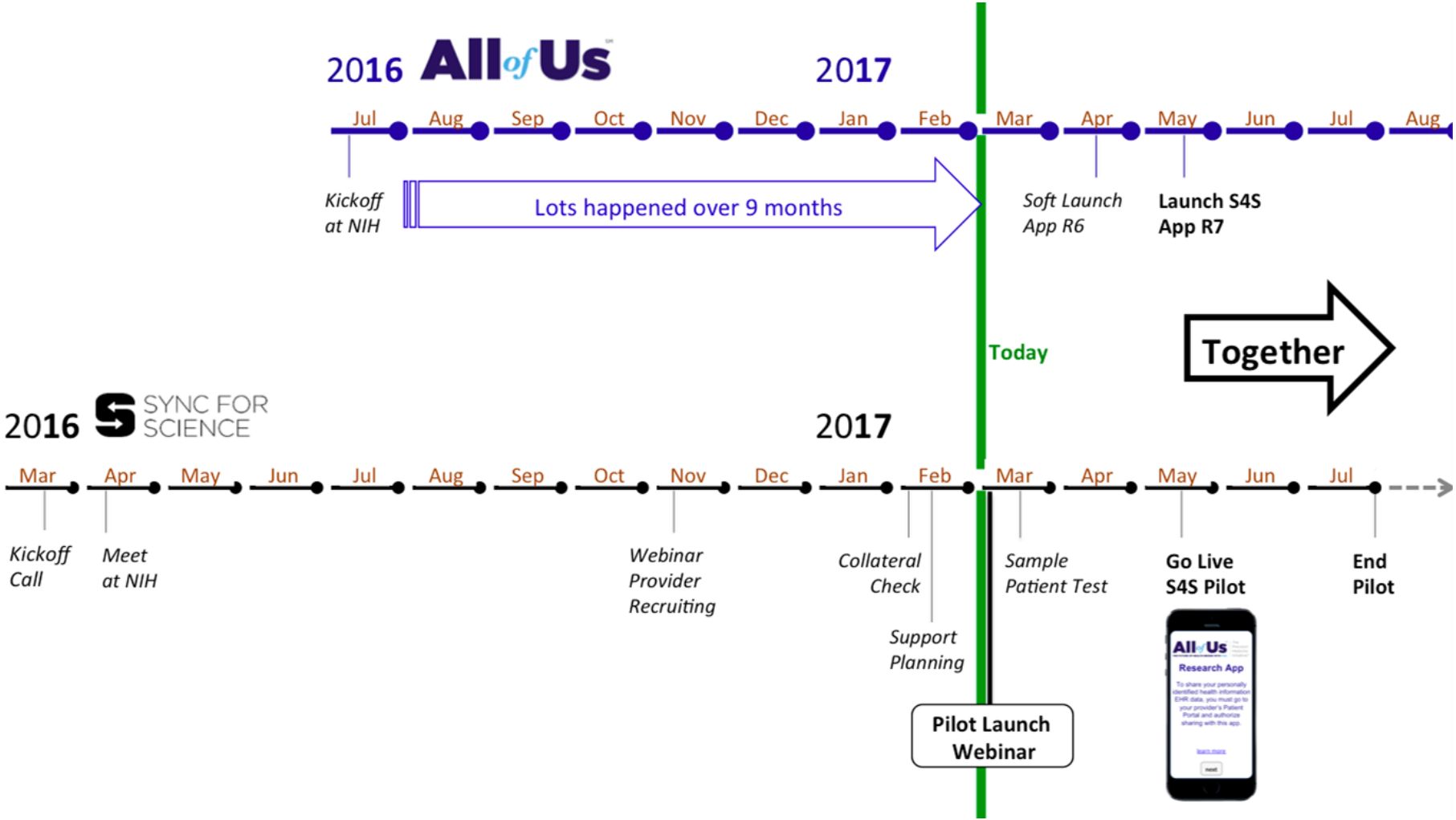


Confirm



Approve

See Demo at: app.demo.syncfor.science/share-my-data


2016 All of Us
2017
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Kickoff at NIH
Lots happened over 9 months
Soft Launch App R6
Launch S4S App R7
Today
Together
2016 SYNC FOR SCIENCE
2017
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Kickoff Call
Meet at NIH
Webinar Provider Recruiting
Collateral Check
Support Planning
Sample Patient Test
Go Live S4S Pilot
End Pilot
Pilot Launch Webinar
All of Us
Research App

S4S in the Data Science Landscape

S4S leverages Meaningful Use **Stage 3 2015 EHR Certification**

Patient application access *for patients to share their data via apps*

Common Clinical Data Set *covers a core set of summary elements*

S4S builds on **open standards** for healthcare data + security

OAuth 2.0

Fleet Health's S4S audit system verifies EHR implementations with an

automated test suite

S4S Test Suite ✔

Vendor

SMART

Run tests | Show more options

Allergies and intolerances
P P F S S S S

Immunizations
P P F S S S S

Lab results
P P P P P P P P

Medication administrations
P P F S S S

Medication dispensations
P P P P P P

Medication orders
P P P P P P W

Medication statements
P P F S S S S

Patient documents
P P F S S S S

Patient demographics
P P P P P P

Problems
P P P P P P W

Procedures
P F P P P P W

Smoking status

Tests Complete!

Show report

Feature: Allergies and intolerances ✖

allergies-and-intolerances

Scenario: Correct resourceType

Given I have a Allergies and intolerances response ✔
Then the resourceType field will be Bundle ✔
Then the type field will be searchset ✔

Scenario: Resources are valid FHIR content

Given I have a Allergies and intolerances response ✔
Then the resource parses as valid FHIR DSTU2 content ✔

Scenario: Results exist

Given I have a Allergies and intolerances response ✔
Then there should be at least 1 entry ✖

```
Assertion Failed: Found 0 entries.

Request
-------
GET https://portal.demo.syncfor.science/api/fhir/AllergyIntolerance?patient=smart-1288992
Accept-Encoding: deflate,sdch
Connection: keep-alive
User-Agent: python-requests/2.10.0
Accept: application/json
Authorization: Bearer nsCxROXbEoMnsmgIy36Bz9FnIUJZ6f

Response
--------
```

S4S Test Suite ✔

Vendor

SMART

Run tests Show more options

Allergies and intolerances
P P F S S S S

Immunizations
P P F S S S S

Lab results
P P P P P P P P

Medication administrations
P P F S S S

Medication dispensations
P P P P P P

Medication orders
P P P P P P W

Medication statements
P P F S S S S

Tests complete!

92 scenarios passed, 7 failed, 19 skipped, 5 warnings

360 steps passed, 12 failed, 71 skipped

Coding systems

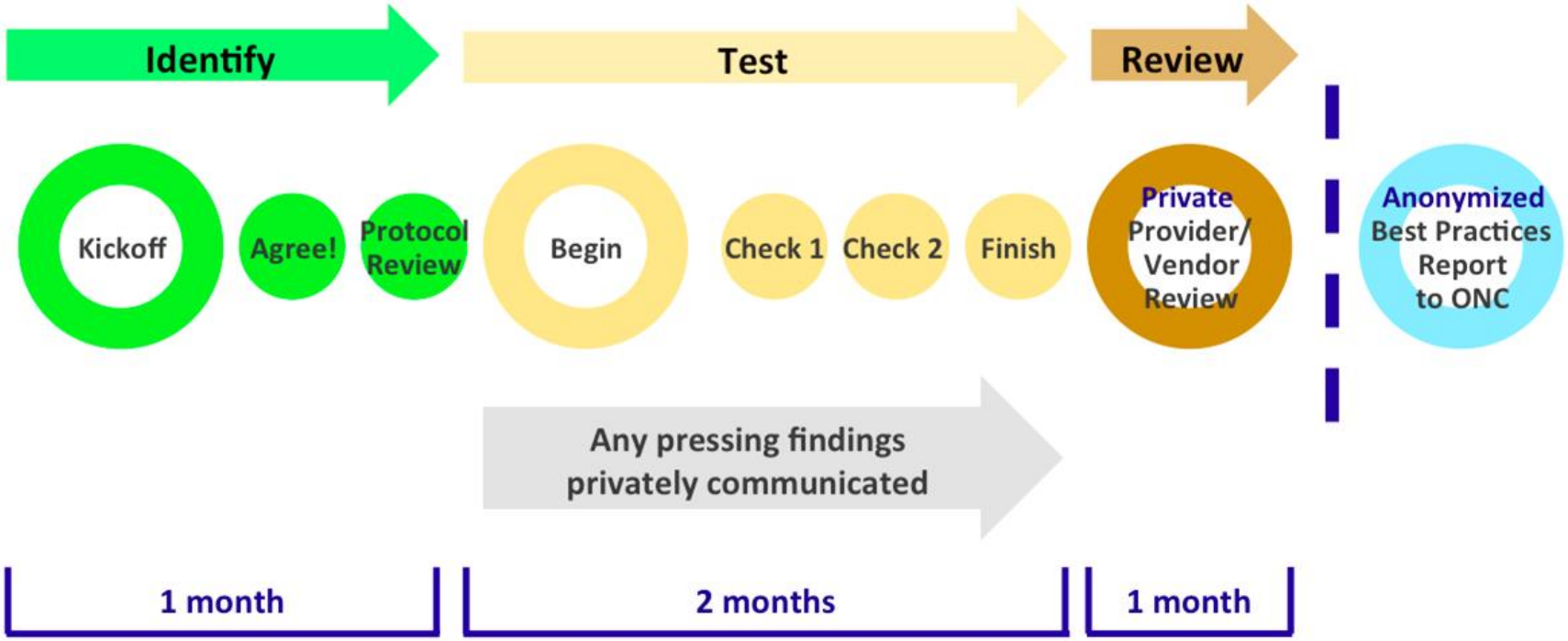
System	Count	Errors	Recognized
http://loinc.org	23	0	✔
http://hl7.org/fhir/observation-category	21	0	✔
http://www.nlm.nih.gov/research/umls/rxnorm	15	0	✔
http://snomed.info/sct	13	0	✔
http://hl7.org/fhir/referencerange-meaning	9	0	✔
http://hl7.org/fhir/v2/0203	1	0	✔

You can restore this report by clicking the "show report" button.

Link to this test run.

One Simple Trick To...

S4S Privacy & Security Assessment Timeline



Launch and Beyond

Mar 2017 | Apr 2017 | **May 2017** | **Jun 2017** | **Jul 2017**

In mid-May, *All of Us* **launches with S4S** features

Patients participate by:

1. **Signing up** via app
2. Completing **informed consent**
3. Using S4S to **share their EHR** data with *All of Us*

dl@fleethealth.net