



ONC Medication List Effort: Bringing Interoperable Medication Lists to Consumers

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Medication List Effort in a Nutshell

- Over 75 organizations from the health care industry came together to demonstrate patient access to health information in an interoperable manner.
 - » Demonstrated at the HIMSS 2017 - Federal Health IT Pavilion, Listening Session
- Demonstrated 3rd party apps being able to access patients' medication information using FHIR-based APIs developed by EHR vendors.
- Strong commitment from app developers, EHR vendors and providers to expand access and enhance usability for patients in 2017.

Background

Industry stakeholders committed to three principles of data exchange



Consumer Access



No Information Blocking



**Common, Federally Recognized
Standards**

What we heard from stakeholders:

- **Support** a broad, national use case of importance
- **Empower** individuals
- **Focus** on areas where standards are already strong (e.g., medications)
- **Acknowledge** current stream of work by leveraging existing efforts
- **Coordinate** the administration's activities around information flow



Summary: Empower people to access their current medication lists comprehensively in one place from different providers or health care systems that have provided care to them

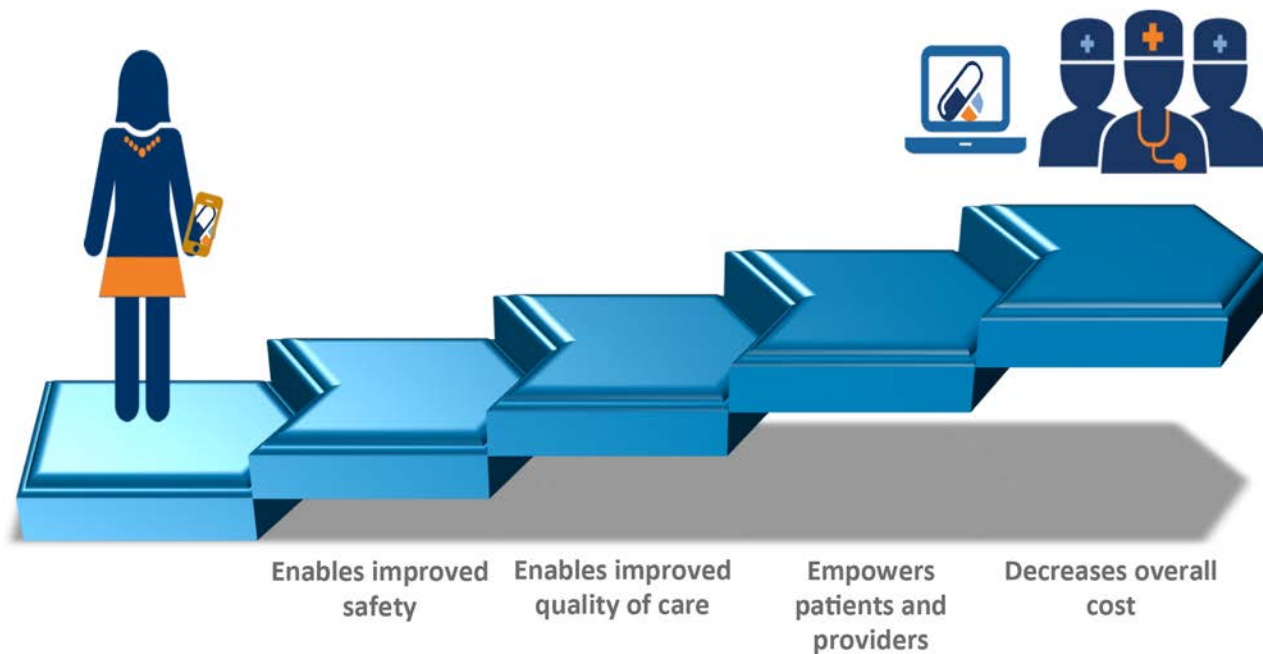
Broad Participation

| | | |
|---|---|---|
| American Association of Nurse Practitioners (AANP) | Dartmouth Hitchcock Health | National Community Pharmacists Association (NCPA) |
| American College of Physicians (ACP) | Duke | National Partnership for Women and Families |
| American Hospital Association (AHA) | Electronic Health Record Association (EHRA) | New York Presbyterian Health System |
| Allscripts | EOP U.S. Digital Service | Oracle |
| American Medical Association (AMA) | Epic | Partners |
| American Medical Informatics Association (AMIA) | First Data Bank | Patients Like Me |
| American Nurses Association | Fresenius | Pharmacy Quality Alliance |
| Apex Data Solutions | GE Healthcare | Physicians EHR Coalition |
| Ascension Health | Geisinger Health System | Polyglot |
| American Society of Health-System Pharmacists (ASHP) | Get My Health Data | Praxify |
| athenahealth | Hackensack Meridian Health | Providence Health & Services |
| CareEvolution | Hospital Corporation of America (HCA) | PSMI Consulting |
| CARIN Alliance | Healthcare Information and Management Systems Society (HIMSS) | Qualcomm |
| Carolinas HealthCare System | Intermountain Healthcare System | Rite Aid |
| Cerner | Kaiser Permanente Managed Care Consortium | RxRevu |
| College of Healthcare Information Management Executives (CHIME) | Marathon Health | Surescripts |
| Centers for Medicare and Medicaid Services (CMS) | Marshfield Clinic | Trinity Health System |
| Clinovations Government + Health | MediSafe | Walgreens |
| CommonWell Health Alliance | MEDITECH | WellSheet |
| CVS Caremark MinuteClinic | National Association of Chain Drug Stores (NACDS) | Wolters Kluwer Lexicomp/Medi-Span |

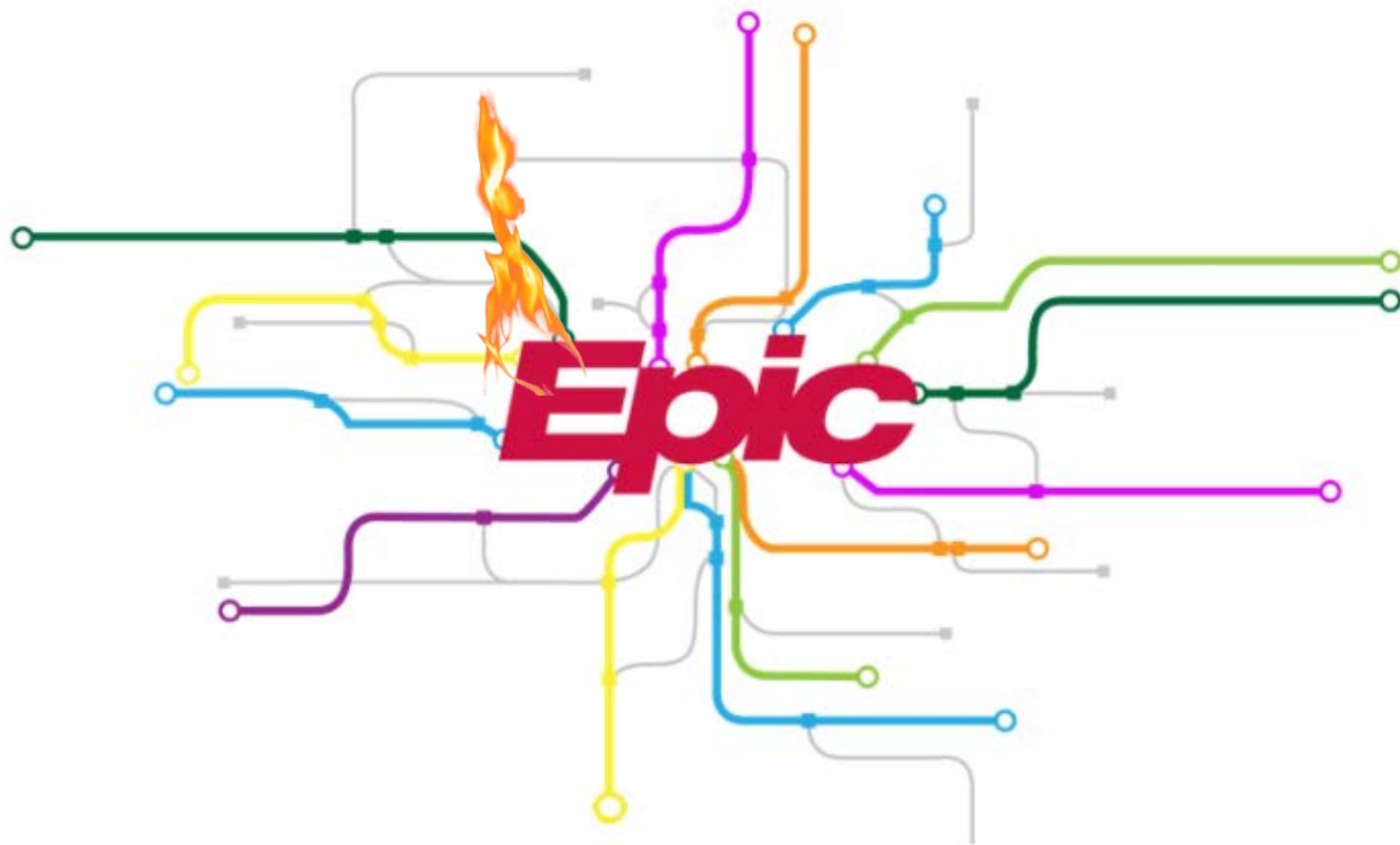
Core Use Case Scope

Addresses the value proposition

Empowers patients to access and manage their medication list collaboratively with their doctors



PLEASE REFER TO
SESSION RECORDING
FOR PRESENTATION
DEMOS






















Industry &
Regulatory Input

FHIR Resource
Maturity

Now available

Patient & provider facing context

- | | |
|---|---|
|  Patient |  Family Member History |
|  Practitioner |  Allergy Intolerance |
|  Condition |  Medication Order |
|  Observation (Vitals) |  Medication Statement |
|  Observation (Smoking Hx) |  Medication |
|  Observation (Lab Results) |  Document Reference |
|  Immunization |  Care Plan |
|  Diagnostic Report |  Goal |
|  Device (Implants) |  Procedure |

Read 

Future FHIR Plans

 (Patient) Lists

 Value Set

 Encounter

 Diagnostic Request

 Location

 Appointment

Read  Write

 Immunization

 Medication Statement

 Allergy Intolerance

 Observation (Vitals)

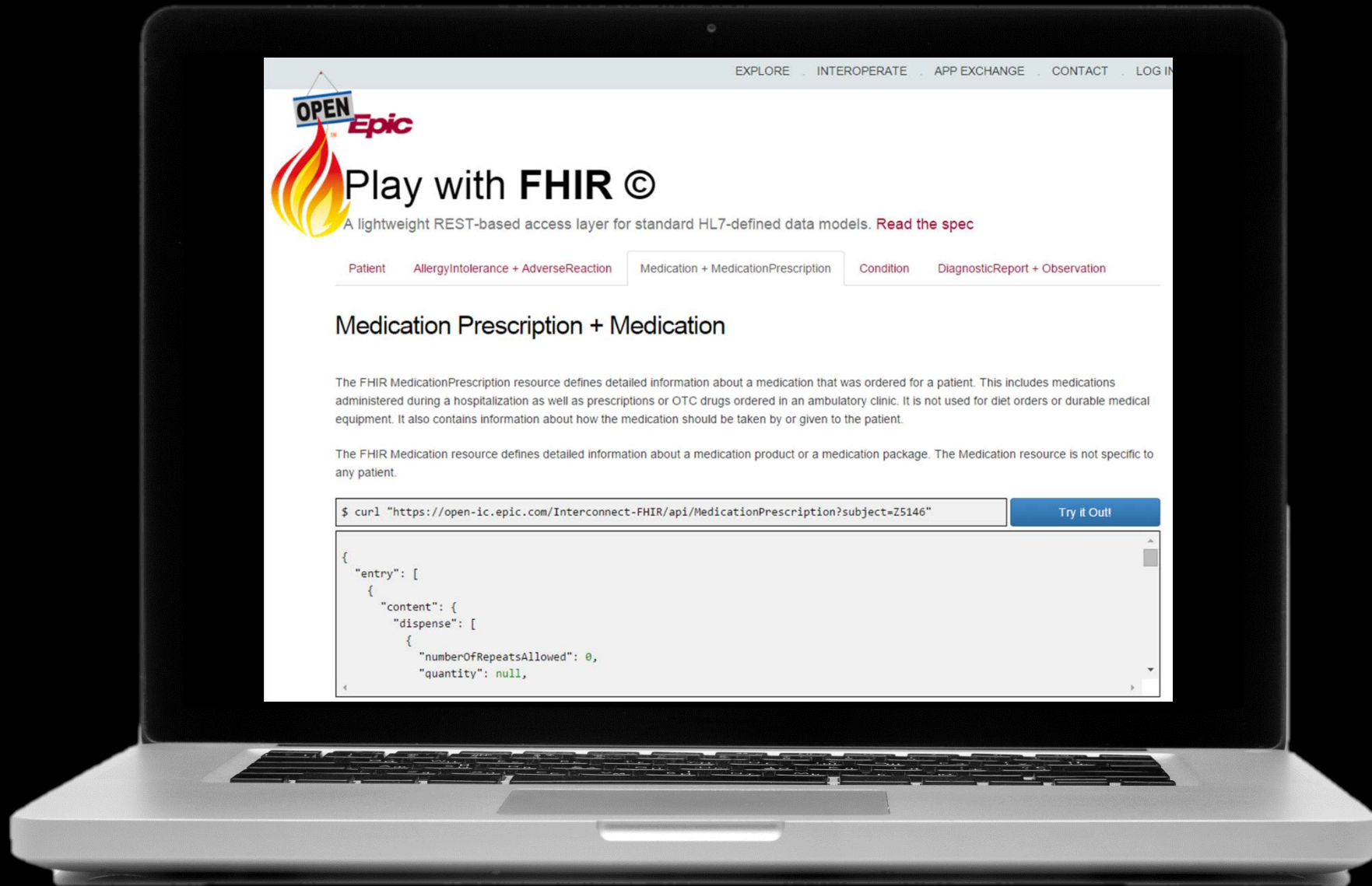
 Appointment

 Practitioner

 Condition

 Family Member History

 Patient



open.epic.com



Coming up next



CEDARS-SINAI®

Hackensack Meridian
HEALTH





Trinity Health

Trinity Health Continuity Environment

Combined Medication Demonstration

March 15, 2017

Trinity Health API “Continuity” Environment

Trinity Health **Health APIx**

APIs BLOGS COMMUNITY EVENTS APP GALLERY CONTACT US REGISTER LOGIN

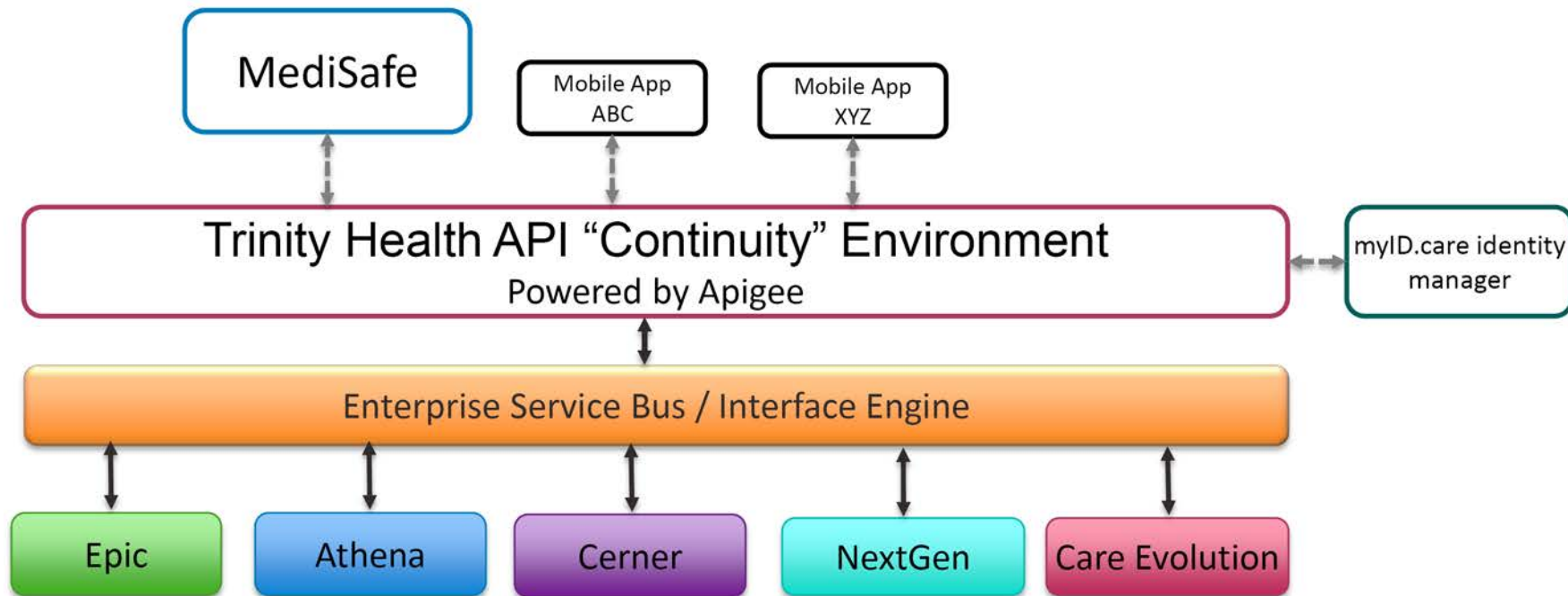
Welcome to Continuity!
Trinity Health's API Accelerator
to deliver Patient Centric digital services

GETTING STARTED
Get started with Digital Health API to create or enhance mobile apps

FHIR APIs & SANDBOX
Explore FHIR APIs documentation and test your APIs

APP GALLERY
Browse the gallery for the possibilities

API Management



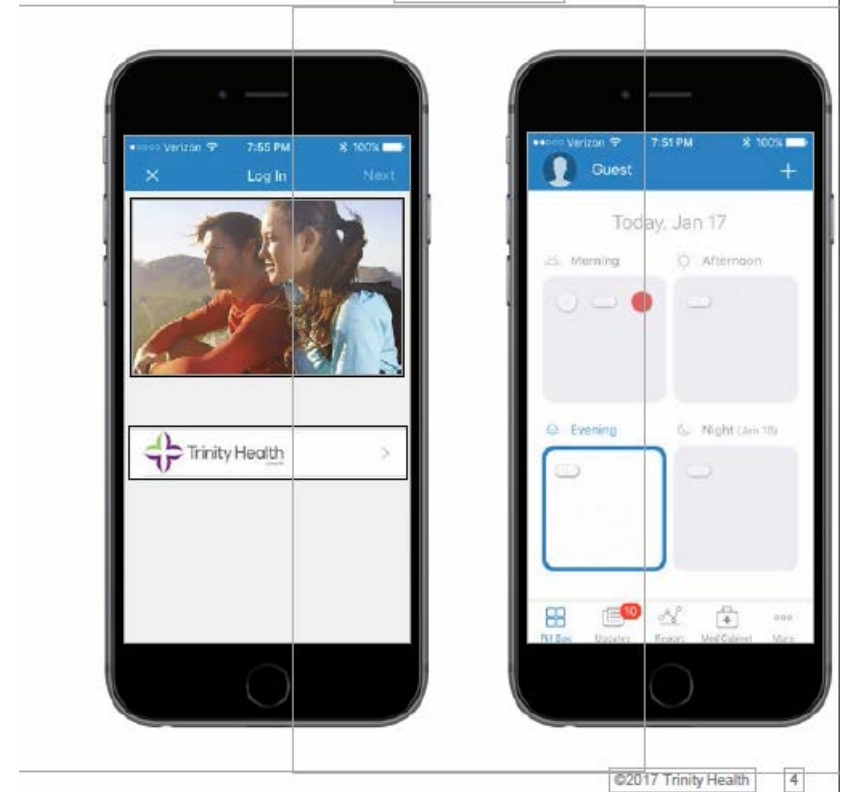
Provider View

Cerner mPages

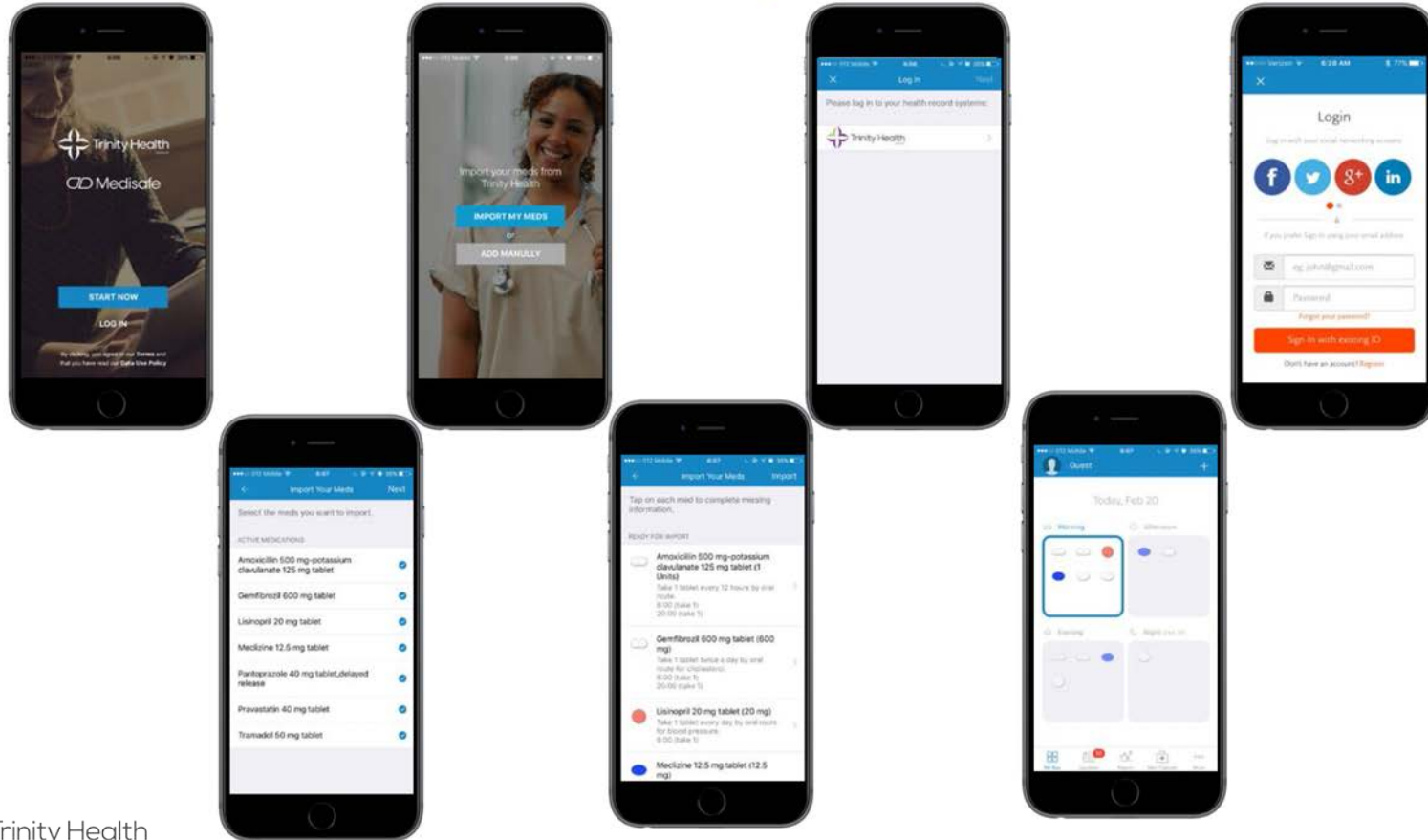
| Active | Source |
|--|--------|
| acetaminophen-HYDROcodone (Norco 5 mg/325 mg) 1 Tab PO Q4h PRN Pain/Discomfort | C |
| allopurinol (Zyloprim) 300 mg PO Daily | C |
| ALLOPURINOL 300 MG TABLET (ALLOPURINOL) take 1 tablet by mouth once daily | NG |
| allopurinol 300 mg tablet take 1 tablet by mouth once daily, prescribed 11/07/2016 - 3 refills | A |
| Klor-Con 10 mEq tablet,extended release (POTASSIUM CHLORIDE) take 2 tablet by oral route every day with food | NG |
| losartan (Cozaar) 25 mg PO Daily | C |
| losartan 25 mg tablet (LOSARTAN POTASSIUM) take 1 tablet by oral route every day | NG |
| losartan 25 mg tablet 1TPO QD, prescribed 11/07/2016 - 4 refills | A |
| Macrobid 100 mg capsule Take 1 capsule every 12 hours by oral route for 7 days., prescribed 11/17/2016 - 0 refill | A |
| mupirocin 2 % topical ointment APPLY A SMALL AMOUNT TO each nosis twice a day 5 days prior to your knee surgery., prescribed 11/03/2016 - 0 refill | A |
| Page 1 of 2 | |
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Consumer View

Medisafe



Combined Medication Experience



Continuity - HL7 FHIR Library

- Enabling the FHIR Draft Standard for Trial Use (DSTU)v2 within our current sandboxes.
- Trinity Health Consumer OAuth Identity Management Solution
- Developer Portal inviting others

The screenshot displays the Trinity Health APIx interface for the HL7 FHIR Library. The top navigation bar includes links for APIS, BLOGS, COMMUNITY, EVENTS, APP GALLERY, CONTACT US, REGISTER, and LOGIN. The main content area is titled "Patients Search" and includes a description: "Returns Patient based on filter criteria OR Provides provision for pagination (stateid, page, page_size, _pretty & _bundletype are query parameters used for Paging). FHIR documentation for Patient." Below this is an "OAuth 2.0 Set..." button and "Send" and "Reset" buttons. A tabbed interface shows "Request" and "Response" tabs. The "Response" tab is active, displaying a table with "Resource URL", "Header Parameters", and "Query Parameters". The table has two rows: "Environment" and "URL". The "Environment" row shows "Live" and the "URL" row shows "https://th-innovation-prod.apigee.net/fhir/v1/Patient". On the right side, there is a sidebar titled "HL7 FHIR Resources" with a list of resources: Patient, Observation, Med Admin, Med Dispense, Med Order, Med Statement, Care Plan, Practitioner, Condition, Coverage, Diagnostic Order, Diagnostic Report, Document Reference, Encounters, Immunizations, Allergy Intolerance, Procedures, and Scheduling.

Trinity Health APIx

APIS BLOGS COMMUNITY EVENTS APP GALLERY CONTACT US REGISTER LOGIN

GET Patients Search

Returns Patient based on filter criteria OR Provides provision for pagination (stateid, page, page_size, _pretty & _bundletype are query parameters used for Paging).
FHIR documentation for Patient.

OAuth 2.0 Set... Send Reset

Request Response

Make a request and see the response.

| Resource URL | Header Parameters | Query Parameters |
|--------------|-------------------|---|
| Environment | | URL |
| Live | | https://th-innovation-prod.apigee.net/fhir/v1/Patient |

HL7 FHIR Resources

- Patient
- Observation
- Med Admin
- Med Dispense
- Med Order
- Med Statement
- Care Plan
- Practitioner
- Condition
- Coverage
- Diagnostic Order
- Diagnostic Report
- Document Reference
- Encounters
- Immunizations
- Allergy Intolerance
- Procedures
- Scheduling

Guiding Principles

Digital Health Guiding Principles

- An interoperable and integrated suite of best of breed Electronic Health Record (EHR) systems or components
- One Operation Management Platform consisting of one resource allocation, financial, supply chain, and human resources system that are integrated seamlessly with the EHR
- One Customer Relationship Management system
- One Call Center
- One Analytics system
- **One open Application Programming Interface (API) framework, based on open standards that facilitate interoperability and data exchange among different products or services, that provides seamless integration with internal and external systems**

API Management Guiding Principles

- All vendors will need to support API Management as their primary communication between applications
- All API Management needs to be bi-directional
- FHIR API's will be recommend as first connectivity
- API will need to adhere to the OAuth Auth / Grant workflow security requirements

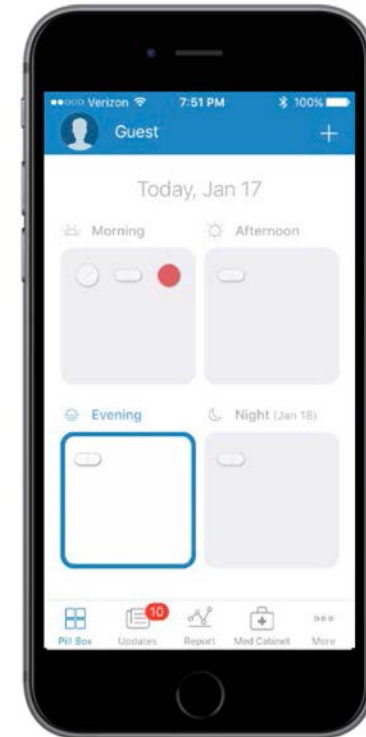
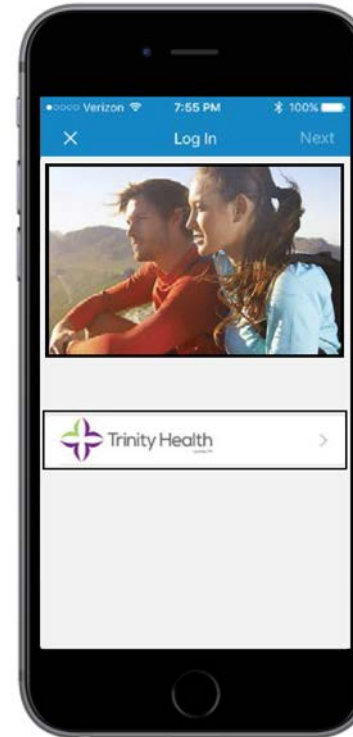
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Consumer View

Medisafe



Experimenting with Patient Centered Medication Reconciliation in New York City

Our ONC Med-Rec Experience

- Watched
 - As EHR and App vendors proved sandbox connectivity and providers began to experiment.
- Experimented
 - Worked with CSC's med rec app with sandboxes and then our own instance of Allscripts SCM
- Noticed Key Success Ingredient
 - Standards

HL7 FHIR "Argonaut" specification

We Formed a New Hypothesis

Assuming standards are used:

1. We *should* be able to pick an app we never ever tried before.
2. With *multiple* EHRs.
3. At *multiple* sites.
4. It *should* work.
5. It *should* be easy.

Experiment

- Chose app: MyFHR by CareEvolution.
- Choose Weill Cornell Medicine – they have Epic.
- And NewYork-Presbyterian - has Allscripts.
- Involved collaboration between 3 vendors and 2 provider organizations!



Conclusion

- **It was easy.**
- In only 4 days and minimal work:
 - MyFHR integrated patient information from our two distinct healthcare sites pulling information from our two distinct EHRs.
 - And created a single med list
- We see the potential.

Connect your FHIR app with Allscripts

- Go to:
<https://developer.allscripts.com>
- Sign up for a free account
- Start building
 - Documentation
 - Sandboxes
 - Technical support
- Questions:
AllscriptsDeveloperProgram@allscripts.com

