

# Leverage Population Health Data to Improve Patient Adherence in Community Referral

Deliverable 4, Team Final Project Presentation

Team Name: Devs on FHIR

**Team Members:** 

Dhruv Saksena, dsaksena3, <u>dsaksena3@gatech.edu</u> (Dev, Narrator) Elizabeth Coviello, ecoviello3, <u>ecoviello3@gatech.edu</u> (Dev) Venu Shankar, vshankar33, <u>vshankar33@gatech.edu</u> (QA) Xia Lee, xlee6, <u>xlee6@gatech.edu</u> (PM)



## **Project Goals & Objectives**

Our project is a proof-of-concept that will demonstrate the usage of population health data to improve the

lifestyle change program referral process. Devs on FHIR! Leverage Population Health Data To Improve Referral Patient Adherence In Community Referral Lifestyle **Health Outcome** Change Program Follow-Up



#### **Team Member Contributions**

**External Mentor:** Arunkumar Srinivasan **TA:** Jon Bidwell

**Developers:** Dhruv Saksena (dsaksena3), Elizabeth Coviello (ecoviello3)

Project Manager: Xia Lee (xlee6) QA: Venu Shankar (vshankar33)





- Everyone contributed towards deliverables, documentation and development:
  - Project Management: Xia Lee
  - CDS Hooks: Venu Shankar, Xia Lee
  - FHIR: Xia Lee
  - Back-End: Dhruv Saksena
  - Front-End: Elizabeth Coviello
  - Docker: Xia Lee
  - Data Mockup: Dhruv Saksena, Elizabeth Coviello, Xia Lee
- **D1** narrated by Xia Lee, **D2** by Venu Shankar,

D3 by Elizabeth Coviello and D4 by Dhruv Saksena

#### **Project Successes**



- The project and all of its milestones were completed within the estimated time.
- Everything is functioning as designed.
- Our mentor was pleased with the flow of the application.
- Our mentor was pleased with the visualization of the information.
- Our project touches three services. All of them come up with a single docker-compose.

#### **Unique Elements**

"By putting population health data to use in clinical setting, we drive care delivery and coordination into the realm of precision care and reduce the ever rising healthcare cost."

- Arunkumar Srinivasan, PhD (CDC, Project External Mentor)

- Uses patient and population health data
- Mock population health data for various demographics and health programs
- Custom CDS hooks service



## **Future Opportunities**



Combining our app with a lifestyle-change-recommending app

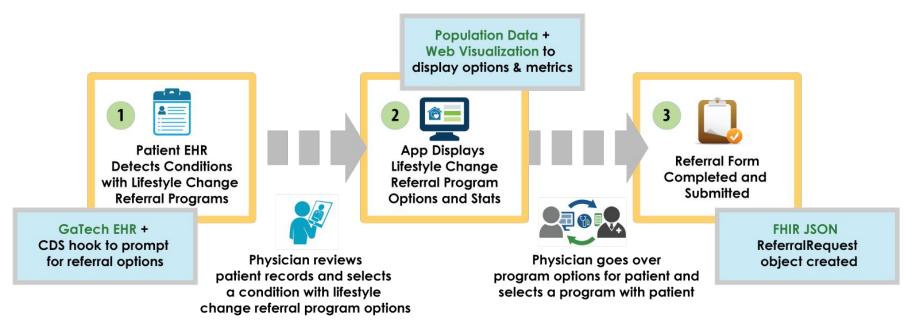
Population data ingestor and updater

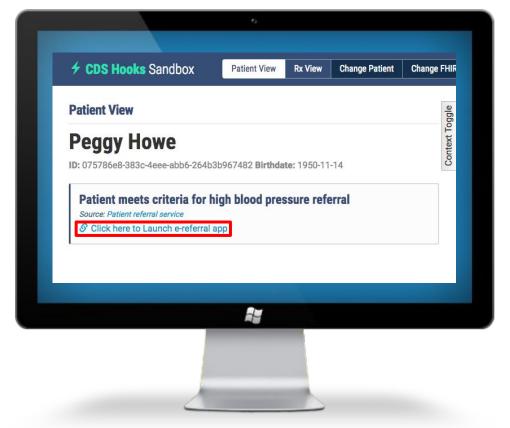
Persist ReferralRequest JSON in FHIR

Patient-facing app

#### **Project Workflow**



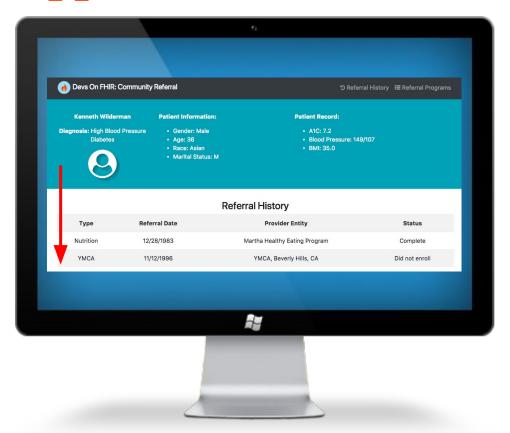




#### Sample EHR with CDS Hooks

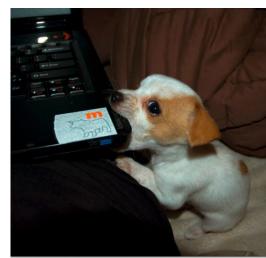
(based on the CDS Hooks Sandbox project at https://github.com/cds-hooks/sandbox)





#### **Community Referral Application (1)**

- Patient information
- Patient referral history



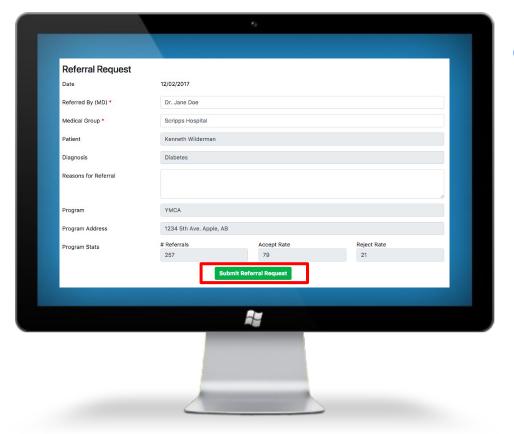


#### **Community Referral Application (2)**

- Referral program information
- Population health data results



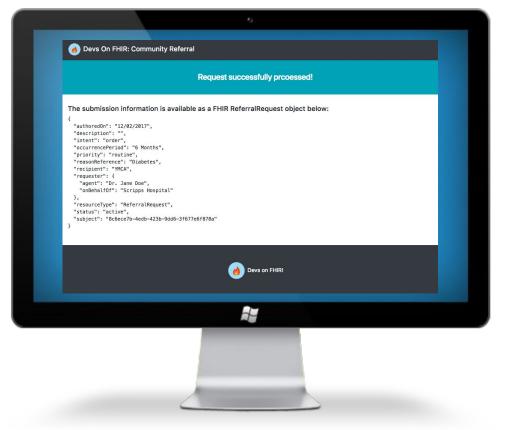




#### **Community Referral Application (5)**

- Referral request form





#### **Community Referral Application (6)**

- FHIR ReferralRequest JSON Object



#### Demo

#### **End of Demo**

## **Deployment Plan**

- Two GitHub repos need to be cloned: Our app's repo, and our modified version of the CDS Hooks Sandbox repo
- The user will need to set some environment variables
- A single docker-compose command deploys all the services



#### **Further Research Done**













#### **Project Plan: Gantt Chart**



https://drive.google.com/file/d/1HyY324PfAWxrWPN3zhC2tT3Q-ZhsTWr3/view?usp=sharing

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## **Outstanding Elements**

Check-in the code to CDC GitHub Repo, ETA: 12/7/2017



## Thanks!

