1. users = patients (interchangeable names)
   1. ingested from Athena
   need to meet qualifications:
        female, ages 15-54, has the right visit type
   2. after backend ingestion, patient can then log on to mobile app
        A) they're located by their phone number and date of birth, adn then they can create an account
   3. once they're ingested they're sent a welcome email
        A) Integration: SendGrid (Twilio)

   4. also once they're ingested, they're also sent via an API request to Lightbeam
   5. Only patietns have access to the mobile app
        A) patients do not have access to the web portal

2. providers =
   A) invited by admnistrators/care managers
   B) have to be approved before they can interface with patients and the app
   C) able to communicate on the mobile app with users
        1) Integration: Sendbird (frontend) (chat integration)
   D) Interface: Administrate
   E) have appointments with patients, that don't come from teh EHR (aka Athena) but are scheduled in the app
        1) Integration: Acuity Scheduler
            a) webview in the app, patients can schedule an appointment with these providers from the app
   F) Each appointment has a video link, which is another itnegratin
        1) Integration: HNC Video
        2) we populate the appointmentw with this video link
   G) Providers don't access mobile app, but they chat through Sendbird

3. physicians = ingestd from ehr (aka Athena)
   A) name: Athena is the EHR
   B) Physicians are independent entities at their hospital, using their EHR system
   C) We just ingest their data as they create appointments
   D) We can send PDF's to the EHR/patient's chart
        1) we will be sending these PDF's to the actual physicians

4. Admin/Care Managers

   A) these admins access lightbeam to see patient monitoring

1) purpose: place to check progress for patients and see red flags (depression, suicide risk, hypertension, not registered) and notify physicians here

B) notification system: Cron

C) Care Managers can chat with the patients via Sendbird as well

D)

5. Risk Analysis

A) based off of user survey data

1) patients take suveys in the mobile app

2) this is compiled into a pdf

3) holistic overview of the patient's risk for developing illnesses

B) Attached to the patient's model

1) utilizes active record, and AWS S3 buckets

a) S3 user for prod, s3 user for staging, s3 user for dev (more secure)

C) Risk Pdfs are also available in adminstrate

D) Risk Analyst: Morgan Harrell

A) Utilizing API routes to access our codebase

B) Morgan will be an APIUser

1) username, password, generates a token

C) What she will do:

1) create risk_predictions for each user survey

2) when a user finishes a survey, she will decide what the answers mean for risks of disease

D) when she's finished with that, we take her answers and turn them into the PDF

1) depression survey risk_prediction is automated by us , but other surveys are input by her

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Technical

1. Integrations

A) Sendgrid = for email and text server

A.5) Twilio = text server

B) Sendbird = real time messager for providers to users, and care managers to users

C) HNC Video = generates video links

D) Acuity Scheduler = for scheduling appointments with providers (as a user)

1) acuity appointments are populated with an HNC video chat link, in the acuity db, and in our own

E) Athena EHR integration
    1) patient ingestion, physician ingestion, order ingestion, vitals, insurance
F) Administrate = Rails gem for
    1) admin panel
    2) providers panel
G) Sidekiq = scheduling asynchronous jobs
    1) Sidekiq scheduler for cron jobs
H) Redis = Temporary data storage, for job ids, and job queuing,
    1) also utilized for storing the OTP's for user first registration
I) Lightbeam = Care Monitoring for Admins to notify about patient red flags via the cron system mentioned above
    1) Patient ingestion requires HL7 messages, but additional patient attributes are via a normal API
    2) Health Level 7 (HL7) international data encoding standard for healthcare messages
J) Devise = Authentication of Users
    1) Users
    2) Administrators (aka care managers) --> in the db, they're known as Administrators
    3) Providers
    4) APIUsers <--
K) Stax = Essentially Stripe (Credit Card APi) but preferred by the client to strip, because of the better reputation for the user interface
    1) handling of payments
    2) people we're charging are the providers

L) Prawn for PDF Generation

Design Pattern

1. S.O.L.I.D.
A) different than MVC
    MVC favors heavy models with a lot model logic
B) SOLID is different
C) Built on top of MVC, but displaces the logic into interactors instead
D) Files should be small, each method does essentially one thing
E) preparing for unit testing,

Acronym:
    A) Single responsibiltiy principle

1) every file does as close to one as possible

2) every method does as close to one thing as possible

B) Open-Close principle

1) when you code it once, you essentially dont' really have to touch it again, because if everything is separate, the changes to another file don't affect this one

C)

Single responsibility principle
Open/closed principle
Liskov substitution principle
Interface segregation principle
Dependency inversion principle

2. RuboCop Linter

A) this enforces standards of S.O.L.I.D. in an automated way