

Patient and Health Insurance Management System

With the advancement in technology and popularity of the internet a lot of people use the web for a variety of purposes. One such system can be used to keep track of the health insurance and patient information. This system should have multiple views i.e. the patient's, doctor's and insurance provider's view. The patient should be able to update their health information and their insurance plans. The insurance providers should be able to view all the patient's information and provide the best insurance deal to the patients. The doctor's view should provide the doctor with access to his patient's medical history. The patient should be able to book appointments with the doctors and select the doctors based on their symptoms. The insurance providers should be able to provide a quote to the patients depending on their health record. The doctors need to have a restricted access to only their patients. The system could also be used as a platform for doctors to keep track of number of COVID-19 patients that have been admitted along with the number of beds allocated/ available for a COVID-19 patient(s) or provide virtual assistance to COVID-19 patients through automated assessments of the symptoms.

Views:

There should be three different views:

1. Insurance providers
2. Doctors
3. Patients


Core Features

1. Login and Registration

- a. Password Reset/Recovery Feature
- a. OAuth: <https://en.wikipedia.org/wiki/OAuth>
- b. Unique ID for each user
- c. Encrypting password and save it to the database
- d. Duo-Authentication like Canvas for security.
- e. Themes for users, i.e. option to choose from different layout and colors for the view.
- f. All the users can login from the same page, hence there should be an option to choose their role (Doctor, Insurance provider or patient).
- g. After login the each should have a different view based on their role.
- h. Have a home page or landing page before login and after logout.
- i. After login each user should have the option to see their own profile and update their details as per their choice.
- j. Captcha for login



Two-Step Login



[What is this?](#) [Need help?](#)

Powered by Duo Security

Device:

Choose an authentication method

Enter a Passcode

☐ Remember me for 24 hours

Central Authentication Service

Username

Passphrase

LOGIN

Sign In or [Create an Account](#) to see your current balance, ask questions, and manage your medical bills with My IU Health. To pay your medical bill without an account, use Quick Pay.

Quick Pay

Username

Password

[Create Account](#) | [Forgot Username?](#) | [Forgot Password?](#)

Sign In

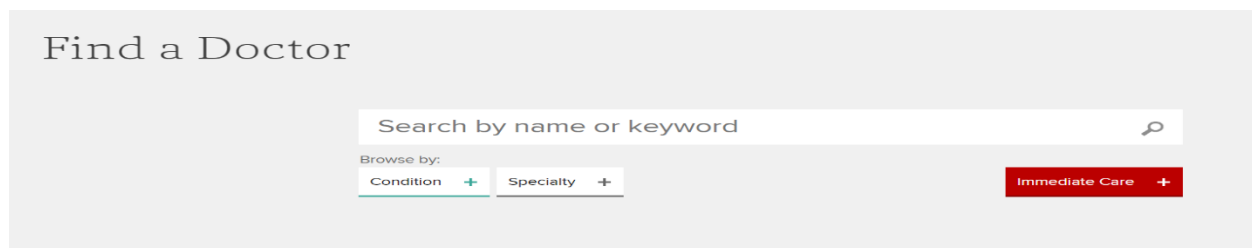
REQUEST AN APPOINTMENT

If you are not yet an IU Health patient, please request your first appointment or call 1.888.IUHEALTH to request an appointment.

Request An Appointment

2. Search and Filter

- Patients should be able to search the doctors based on their name and specialization.
- Patients should be able to search the doctors that support COVID-19 patient care.
- The user should be able to see the available appointment times for the doctors and book a time for them.
- Once the registration is confirmed an email should be sent out to the patient and the doctor.
- User's can have profile pictures which can be displayed along with their profile when searched.



The image shows a web interface for finding a doctor. At the top, it says "Find a Doctor". Below this is a search bar with the placeholder text "Search by name or keyword" and a magnifying glass icon. Under the search bar, there is a section labeled "Browse by:" with two buttons: "Condition" and "Specialty", each with a plus sign. To the right of these buttons is a red button labeled "Immediate Care" with a plus sign.


Would you like to schedule online?

New and existing IU Health patients may view available appointment times and schedule with select providers.

[Book Online →](#)

3. Custom Dashboards:

- The patients should have access to the doctor's profile and feedback that the doctor has received from other patients, so they can make an informed decision.
- Before booking an appointment, the patients should be required to answer a questionnaire related to COVID-19 symptoms and if they want to get a COVID-19 test done.
- Feedback can be rated in terms of stars or numbers and personal opinions i.e. written reviews.
- Users should have the option to provide feedback to the doctors whom they visited.
- Doctors should be able to see the details of their patients which includes the patient's COVID symptom details, test results, medical history and insurance details.
- Doctors that work in hospitals supporting COVID-19 patient care should have the provision to see if there are beds available to admit a patient who has tested positive for COVID-19 and is in a critical condition.



Indiana University Health

powered by **Zocdoc**

Can't find your doctor? Search additional IU Health providers

Search by: **Specialty or Doctor Name**
Primary Care Doctor (PCP)

Location (Zip, City, State)
Indianapolis, IN

Insurance
I'll choose my insurance later

Search


Visit Reason: **Illness**

Any Day
Today
Next 3 Days

Any Gender
Male
Female

More Filters

Doctors in Indianapolis, IN



Tara Bouton NP
Nurse Practitioner
Primary Care - IU Health
University Hospital Outpa
550 University Blvd
Indianapolis, IN 46202
Within 1.5 miles

Check in was easy, minimal paperwork, waited less than 10 minutes to be seen. Tara was ...

★★★★★

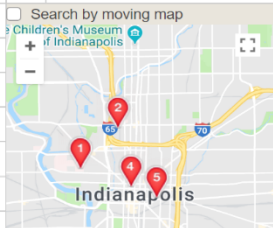
Enter your insurance and plan at the top of this page.


Book Online

View Profile

	Sat 09-08-18	Sun 09-09-18	Mon 09-10-18
			10:20 am
			1:40 pm
			2:20 pm

☐ Search by moving map



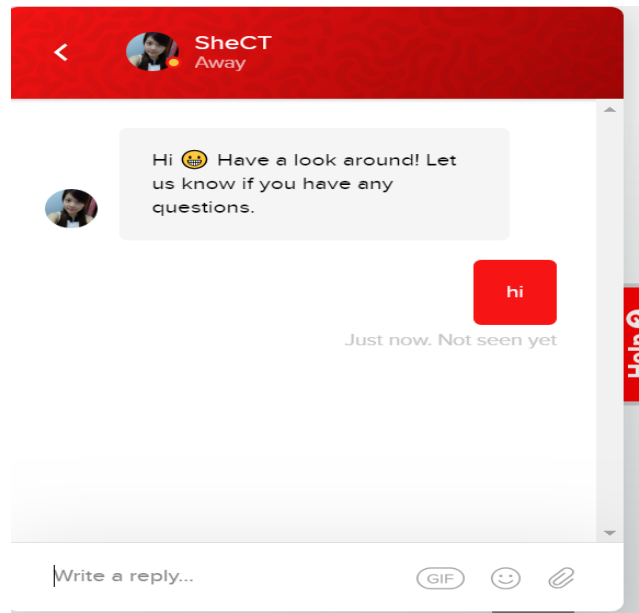


Dr. Jerome B Sneed MD
Primary Care Doctor
★★★★★

	Sat 09-08-18	Sun 09-09-18	Mon 09-10-18
			3:15 pm
			6:45 pm

4. Chat

- The patients can chat with any insurance provider to get details about the insurance plan.
- There should be an option for group chat between all doctors.
- Patients can also chat with the doctors whom they had an appointment with or have an active appointment.
- Patients should not see other patients in their chat list.
- The chat should have the following features:
 - Private chat feature
 - Online/offline status.
 - Message status, delivered/undelivered.
 - Display “typing” when the other user is typing.



5. Recommendation and Statistics:

- The insurance providers should have the option to provide various insurance packages to the patients.
- A default package for general patients. More advanced packages for patients spending more than usual on medical expenses.
- Machine learning can be used to provide recommendations to the users based on their past data.
- Patients should be able to subscribe to an insurance provider that would inform the patient about new/discounted insurance packages as the insurance provider publishes.
- COVID-19 related articles regarding updates, patient care tips etc could be suggested.
- Statistics of amount paid by patients and insurance providers.
- Total amount of paid and unpaid bills.

Additional Features:

- Questionnaire and Bed availability – to assess COVID-19 symptoms before scheduling an appointment and allocate a bed if the patient has COVID-19.
- Integrate maps – to show the location of the doctor and the insurance providers (recommendation)
- Billing – Processing the bill