Chronic Obstructive Pulmonary Diseases Management App

Cyberlife CS6440

Project Background

Chronic obstructive pulmonary disease is a chronic bronchitis and/or emphysema characterized by airflow obstruction that can further develop into a common chronic disease of pulmonary heart disease and respiratory failure. It is related to the abnormal inflammatory reaction of harmful gases and harmful particles, and the morbidity rate and mortality rate are very high. The incidence rate of over 40 years old in the world has reached 9% to 10%.

Chronic obstructive pulmonary disease (COPD) is a common disease that can be prevented and treated by persistent airflow limitation. The airflow is restricted to develop progressively, and the airway and lung are toxic particles or gases. The chronic inflammatory response is enhanced.

In China's chronic obstructive pulmonary grading diagnosis and treatment technical documents, it is mentioned that the primary layer plays three major roles in the management of chronic obstructive pulmonary disease: firstly, early screening of high-risk groups, ie early screening and early diagnosis of chronic obstructive pulmonary disease; secondly, stability Long-term standardized management of patients with chronic obstructive pulmonary disease; thirdly, if patients with chronic obstructive pulmonary disease have any symptoms, such as poor control, comorbidities and drug intolerance, they should be referred for treatment.

Our Goals

Our team is aiming to build an app to identify symptoms of COPD as it is often misdiagnosed.

The app should also provide management options as well as scheduling and reminders.

Team Roles and Contributions

Zhihua Jin	Project Manager & QA	General Manager, draft reports,test the application
Zhixun Wang	Product & Project Manager	Help to manage the project ,draft reports, presentation and test
Yepeng Ding	Developer	Developing the app and deploy on the server
Hua Chen	QA	Run tests on the app and assure the quality

What's happening now in Industry?

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China's environment, especially air quality becomes worse, more and more people are suffering from COPD. With increasing demands for monitoring and protecting our lungs, there are a lot of companies cooperating with top hospitals to manage COPD better by using Apps.

What's the gap now in Domain?

Major Gaps

- Despite many excellent COPD guidelines or strategy documents, there is evidence that COPD care is still not optimal for many patients, and most patients do not follow the guidelines for treatment and management.

- The Gap from different Aspects
  - From the Aspect of Healthcare Providers
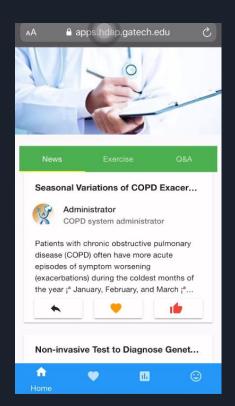 - From the Aspect of Patient
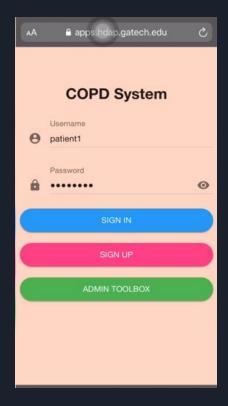
How do users think of such Apps?

- **Perceive significant potential to help manage the condition**
    - Acquire educational knowledge
    - Address feelings of fear and panic
    - Maintain control of the information
    - Encourage to start monitoring

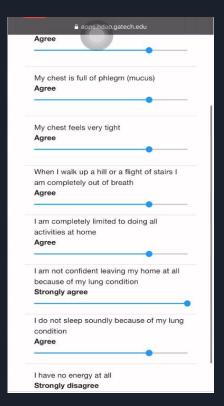- **Concern to the security of Personal Medical Information**

Project Summary

	Project Start:	Sat, 10/19/2019
	Display Week:	1

TASK	ASSIGNED TO	PROGRESS	START	END
Phase 1 Demand Analysis				
Deliverable 1	Zhihua Jin; Zhixun Wang	100%	10/19/19	10/23/19
Deliverable 2	Yepeng Ding; Hua Chen	100%	10/19/19	10/23/19
COPD information collection	Zhihua Jin	100%	10/19/19	10/23/19
Identification of similar patient portals	Zhihua Jin; Yepeng Ding	100%	10/19/19	10/28/19
COPD patient needs research	Zhihua Jin	100%	10/19/19	10/28/19
Phase 2 Prototype Design				
Demand analysis document	Zhihua Jin; Zhixun Wang	100%	10/24/19	10/28/19
UI/UX design: wireframe	Zhihua Jin; Zhixun Wang	100%	10/24/19	10/28/19
Completion of prototype	Zhihua Jin; Zhixun Wang	100%	10/19/19	10/24/19
Phase 3 Software Development				
Front-end function implementa	Zhixun Wang; Yepeng Ding	100%	10/24/19	11/13/19
Database design and input	Zhihua Jin; Zhixun Wang	100%	10/24/19	11/10/19
SMART-on-FHIR skeleton app	Hua Chen	100%	10/21/19	10/30/19
Back-end function implementat	Yepeng Ding; Hua Chen	100%	10/22/19	11/17/19
Aapplication deployment on HA	Yepeng Ding; Hua Chen	100%	10/24/19	11/17/19
Deliverable 3	Zhihua Jin; Zhixun Wang	100%	10/16/19	11/10/19
Phase 4 Test & HDAP deployment				
Unit-test set up	Yepeng Ding; Hua Chen	100%	11/1/19	11/17/19
Testing & Debugging	Yepeng Ding; Hua Chen	100%	11/1/19	11/24/19
Deliverable 4	Zhihua Jin; Zhixun Wang	100%	11/10/19	11/17/19
Overall Evaluation	Zhihua Jin; Zhixun Wang	100%	11/18/19	11/24/19
Deliverable 5	Zhihua Jin; Zhixun Wang; Yepeng Ding; Hua Chen	100%	11/18/19	11/24/19

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Demo Video

Looking Ahead

Community Forums | Patient

Respiratory System
Asthma & COPD
NCLEX Quiz 30
START

Doctor'sOffice