# The State of Adult Medical Care

Audience Q&A

#### What is a non-communicable disease?

a] Terminal illness

7%

b] a group of conditions that are not mainly caused by an acute infection

60%

c] a group of conditions that cannot be caught early on

13%

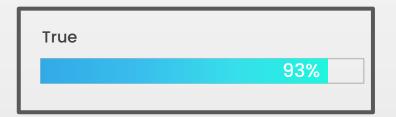
d] a group of conditions that cannot be controlled

20%

#### Fact:

If left unchecked, these diseases result in long-term health consequences and often create a need for long-term treatment and care

## Non-communicable diseases make up 71% of all deaths globally



False

7%

#### Top Causes of death globally<sup>1</sup>

- Ischaemic heart disease
- Stroke
- Chronic obstructive pulmonary disease
- Pulmonary cancers
- Alzheimer's Disease +
- Diabetes
- Kidney Diseases

What is the leading cause of bankruptcy in the US?

93%

b] Auto Loans

a] Home Mortgages

c] Unexpected Life Expenses

7%

D] Medical Expenses

Fact: 66.5% of bankruptcies were due to medical expenses American Journal of Public Health (2019)

Which age group accounts for the majority of persons who decline health care coverage?

13%

b] 40-55

27%

c] 24-38

40%

c] 18-24

20%

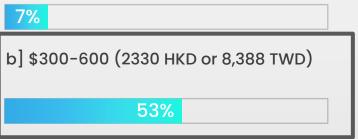
#### Fact:

- ~ 30% of Millennials surveyed are presently uninsured.
- ~80 percent delay seeing a doctor.

GetInsured's 2020 Millennial Health Insurance Survey,

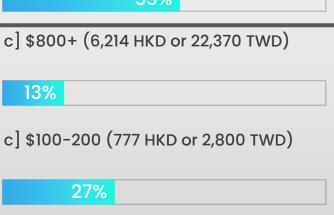
What is the average doctor office visit cost in the US?

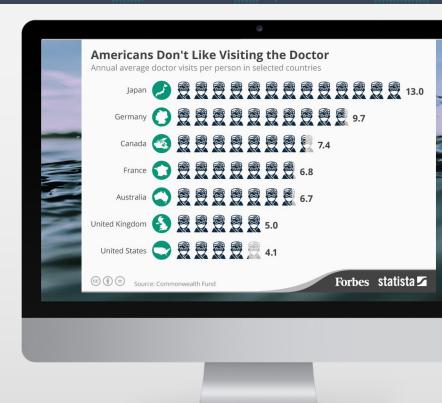
a] \$20-50 (155 HKD or 559 TWD)



13%

c] \$100-200 (777 HKD or 2,800 TWD)





What are two downsides to the near universal health care system in Taiwan & Hong Kong?

a] Expensive cost

33%

b] Full capacity of large medical institutions

67%

c] Incomprehensive population coverage

47%

d] Short consultation times

13%

e] Low coverage rates

7%



 The United States is the only country of the 33 developed countries that doesn't have universal health care

#### What is true about chronic diseases?

a] Over 40% of Americans suffer from at least 1
7%
b] Less than 57% of chronic disease patients receive recommended preventative care
c] Comprises over 75% of all health care costs
d] They cause 7 out of 10 deaths per year
93%

#### Fact:

- U.S. has highest rate of disease burden among comparable countries
- 6 in 10 adults in the US have a chronic disease
- 4 in 10 have 2+

Centers for Disease Control and Prevention

#### **Trivia Champion**



## Health Hero



Adult Working Group



#### Adult Group(s)

- Group with greatest numbers in the labor force
- Largest cargiver population
- Largely autonomous with the ability to manage their health if given the tools



**Lowest earners** 

**Highest uninsured rates** 

The age of preventions!







Chronic disease symptoms can become more severe

U.S. Bureau of Labor Statistics (2019)

<sup>2.</sup> United States Census Bureau (2020)

Sahdea Prasad et al. in Prev. Med (2012)

#### **Barriers to Healthcare**

#### **Pandemic Situation**

Access to healthcare has diminished largely due to the increased worry about community infection

#### Culturally Competent Care

It's critical to have providers that are understanding of cultural considerations when providing care

#### Time

In 2014, around 16% of adults avoided medical care due to

time-related reasons

#### Geograph

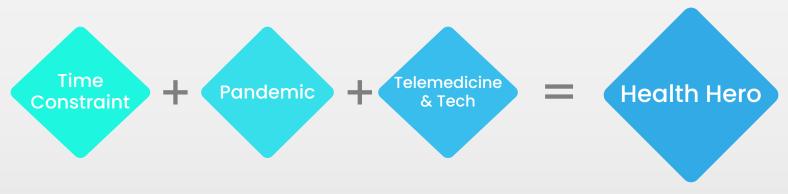
Lack of services nearby and/or challenges with transportation

#### Cost

Inadequate or Lack of Health Insurance

Deters people from seeking out routine care and screening as well as care for ailments Cost of doctor's office visits, prescription medication etc.

#### **Potential**



- Use of technology can help provide adults with more access to healthcare
- 66% willing to use telemedicine
- 70% feels comfortable with it
- Middle-aged adults are most willing to use it for urgent care

- S. Prasad et al. in Prev. Med (2012)
- Telehealth Index Consumer Survey (2019) American Hospital Association (2015)

#### **Health Hero in Action**

To Offer Non-emergency health care options





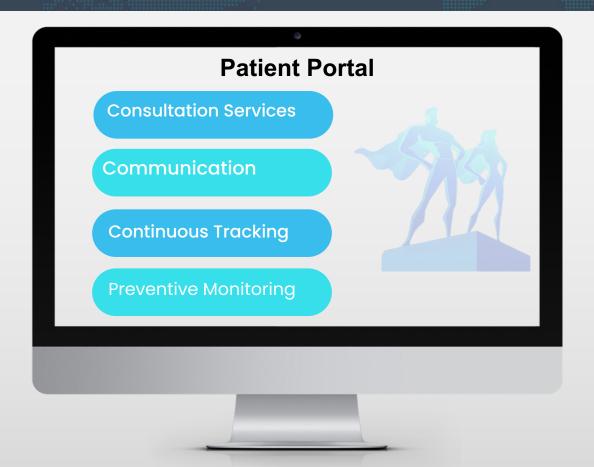
#### **Health Hero In Action**

#### **Main Function:**

- Put power into the patient's hand while supporting them
- Submit details regarding non emergency medical condition
- Receive a consultation summary report with findings from 2-5 independent medical doctors



#### **Health Hero**



**Consultation Services** 

Communication

Continuous Tracking

**Preventive Monitoring** 

1

2

4

5

Health Screening Patient Profile

Intake Questionnaire

- Videos
- Images
- Voice Recordings

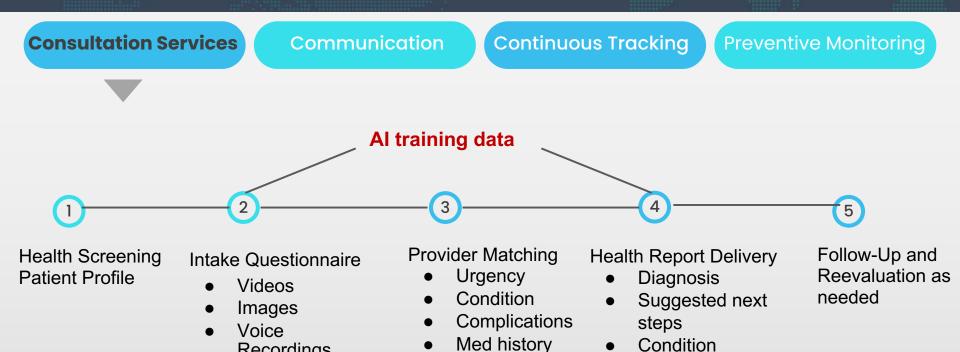
**Provider Matching** 

- Urgency
- Condition
- Complications
- Med history
- Culturally competent

Health Report Delivery

- Diagnosis
- Suggested next steps
- Condition information

Follow-Up and Reevaluation as needed



Culturally

competent

information

Recordings

#### **Target Providers**

**Consultation Services** 

Communication

**Continuous Tracking** 

**Preventive Monitoring** 

General and Family Practice





**Internal Medicine** 

Dermatology







Women's and Men's Health

**Mental Health** 





Nutrition and Lifestyle

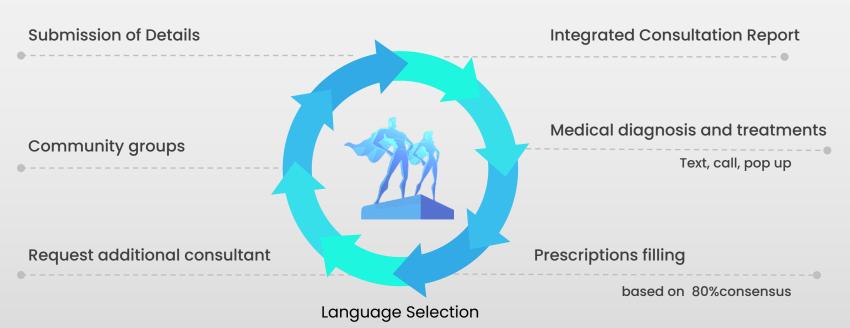
**Consultation Services** 

Communication

**Continuous Tracking** 

**Preventive Monitoring** 



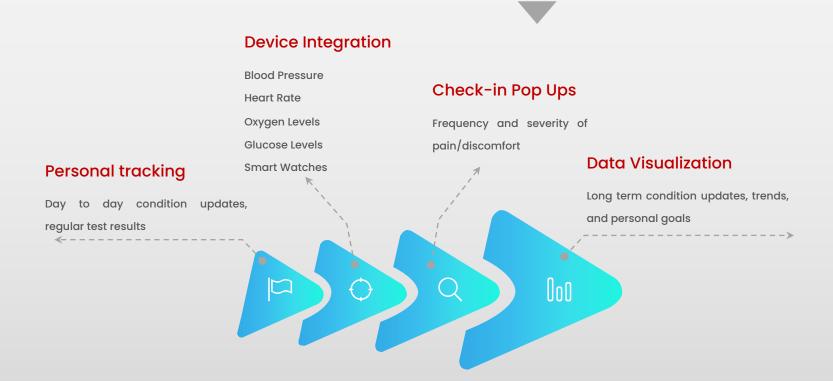


Consultation Services

Communication

**Continuous Tracking** 

Preventive Monitoring



**Consultation Services** 

Communication

**Continuous Tracking** 

**Preventive Monitoring** 

**Artificial Intelligence Tracking for:** 

Primary Preventive Monitoring

- "Intervention" health screening
- Suggestions for altering risky behaviors

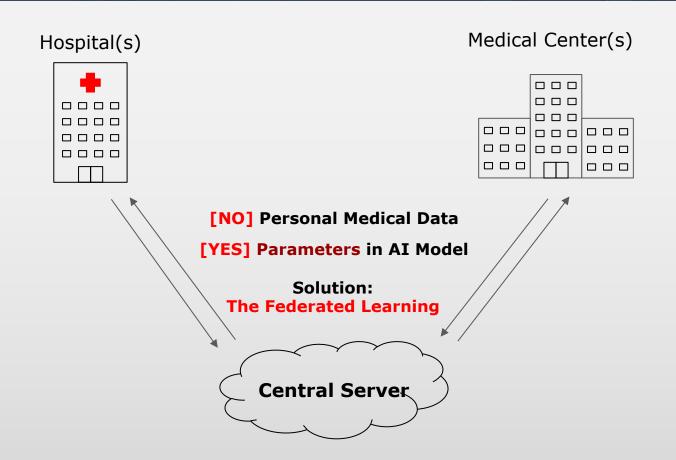
Secondary Preventive Monitoring

 Health screening for initial development of disease or illness Tertiary Preventive Monitoring

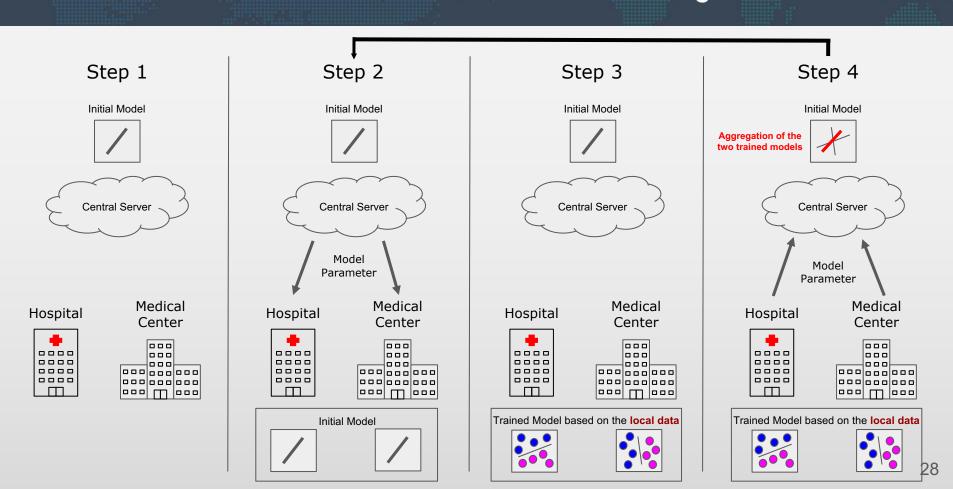
 Health screening for prevention of disease progression



#### **Security Issue for AI Training**



#### Introduction to the Federated Learning



## Federated Learning for solving the Security Issue



and/or Medical Center(s)

personal medical data

without

accessing

train the model locally



#### **Startup Costs**

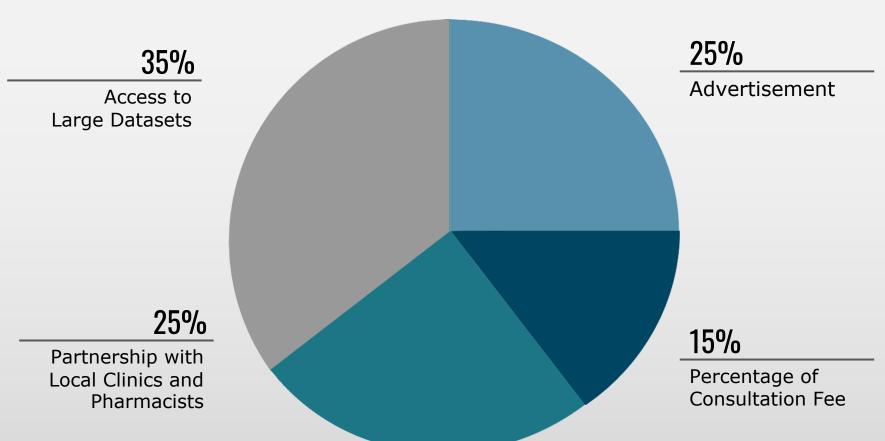
To kick start the project...







#### **Avenues of Income**



#### **Doctor Recruitment**

68%

Of all physicians in 2019 fely burned out



Work from remotely



Work on their own time

40%

Of female doctors stop practicing or start working part time



Impact broader population

#### **Price & Payout**

Basic	Advanced	Premium	Family Plan		
\$0	\$60 per review	\$420 per year	\$420 per year with 8 visits total 2 family members		
<ul> <li>→ Medical record</li> <li>→ AI Tracking device</li> </ul>	<ul> <li>→ Medical record</li> <li>→ AI Tracking device</li> <li>→ Online consultation</li> <li>→ Online prescription</li> <li>→ Optional follow-up appointment</li> </ul>	<ul> <li>→ Medical record</li> <li>→ AI Tracking device</li> <li>→ Online consultation</li> <li>→ Online prescription</li> <li>→ Optional follow-up appointment</li> <li>→ Immediate consultation</li> <li>→ AI disease prediction</li> <li>→ Preventative monitoring</li> </ul>	<ul> <li>→ Medical record</li> <li>→ AI Tracking device</li> <li>→ Online consultation</li> <li>→ Online prescription</li> <li>→ Optional follow-up appointment</li> <li>→ Immediate consultation</li> <li>→ AI disease prediction</li> <li>→ Preventative monitoring</li> </ul>		

- → Flat rate of \$25/review to one doctor
  - ◆ Average doctor's get paid \$100 per hour
  - ◆ Average Doctor consultation is about 15 minutes has be given with 24 hrs of notification

#### Competition

	Health Hero	<b>Docosan</b>	hioscar OSCOI	eDoctor eDoctor Know Your Health	GoForward  #FORWARD	Telehealth  • Telehealth	MyChart  MyChart
Multiple doctor perspectives	v	X	X	X	X	х	X
preventative monitoring	v	х	X	х	V	X	x
medical record	v	v	V	v	X	X	v
online appointment	v	v	v	v	v	X	v
tracking device	v	X	X	X	v	X	X
online consultation	v	v	V	V	V	v	v
immediate consultation	v	v	X	X	X	X	x
online prescription	v	v	X	v	X	х	v
AI disease prediction	v	х	Х	X	X	X	x
emergency consultation	x	X	X	X	X	x	х
price flexibility	v	V	X	v	X	X	v
Avg price	\$50/month	Case by case	\$4500/year	Case by case	\$149/month	Free	Free for app



#### **Heroic Expansion**

#### Phase 3: Integrate Health System

- Daily health processing integration
- Disease prediction and prevention for most common chronic diseases

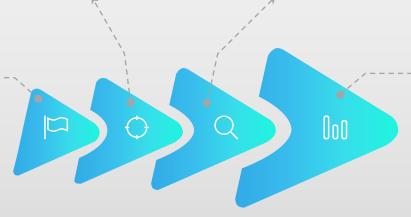
#### Phase 4: Intellectual Property

- Research assistance to stakeholders(students, doctors, researchers)
- Creation of unique, innovative questionnaires to assess and predict medical conditions

#### Phase 5: Systemic and Regional Interaction

- Provide constant registered status of medical resources
- Patients and doctors utilize information to allocate these resources

## Phase 2: Broader Fields Al improvement and diagnosis Interactive medication delivery



#### **Summary Analysis**

### **Strengths Portable Health care**

Accessible to medical attention in 24-hour
Multiple medical opinions
Time and journey saving
Constantly monitoring health status
Disease prevention and prediction
Research and technical assistance

### Weaknesses Resource allocation

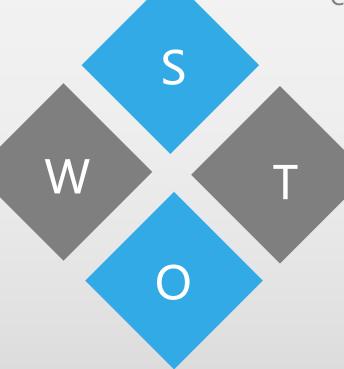
The structure of physician The current accuracy of AI diagnosis

## Threats Competition and consensus

Peer competition
Traditional view of health care

## Opportunities High demand and socialization

- High demand of medical service
- Revolution in diagnosis and treatment
- Cooperation with regional medical institutions



#### **Health Hero**



An App to Save Your Day!

#### **Questions?**



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