



CMED

.com.bd

Preventive Healthcare

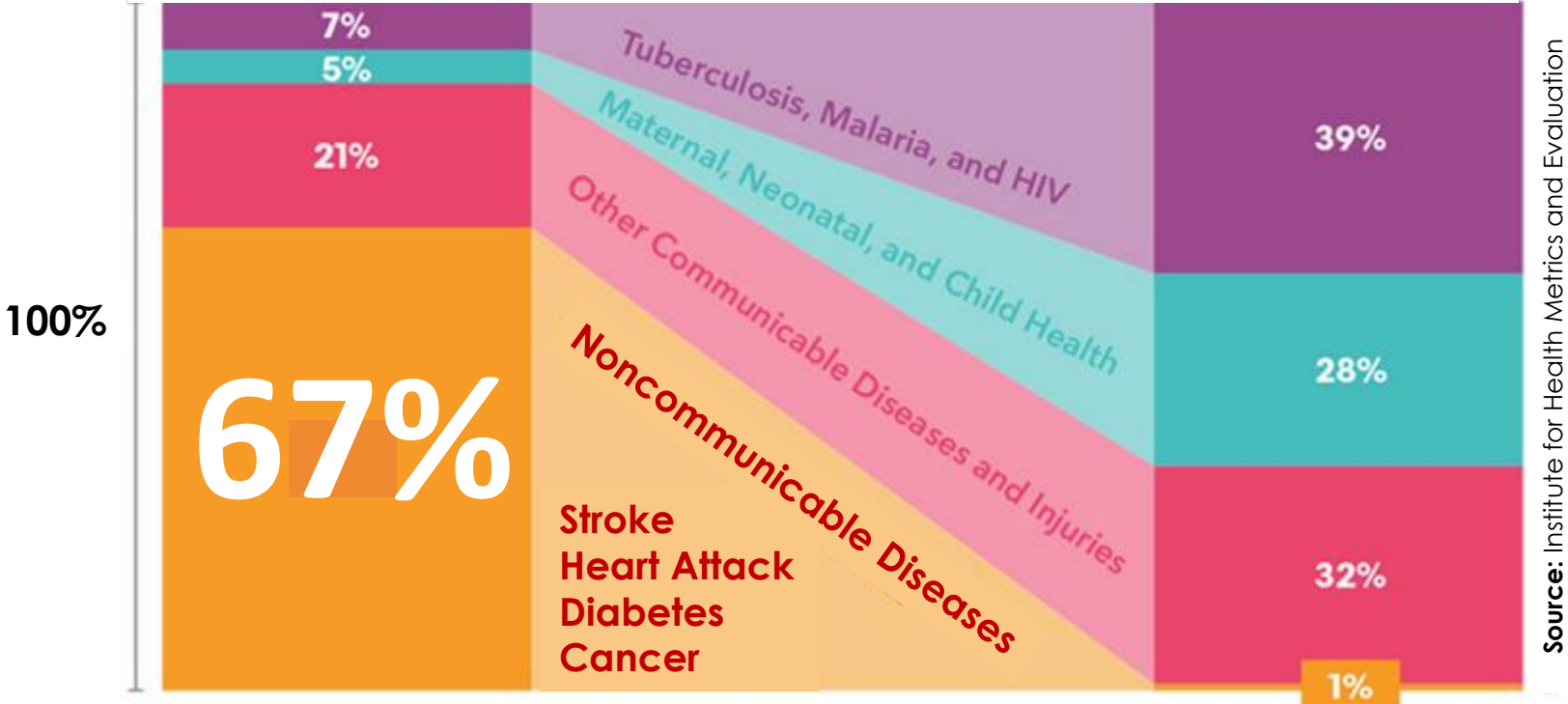


Connecting People, Saving Lives



Prof. Khondaker A. Mamun, PhD, Founder, CMED Health Limited, www.cmed.com.bd, mamun@cmed.com.bd

Non-communicable diseases account for **67% of deaths** in low middle income countries but only **1% of health funding** addresses them



Source: Institute for Health Metrics and Evaluation

Up To **90%** of NCDs are Preventable



2.5% of world population
living in 0.03% Area

Healthcare Service into Unknown

\$10 Billion+
Spent on
Healthcare

Need
Referral
System

63.5%
internet
Growth

80% patients
treatable
@LF - WHO

22.5%
Patients
Growth

67% Death
Due to NCD

Infrastructure
of Digital
Bangladesh

15,000+
Paramedic
Jobless

Market Demand

Bridge

Market Supply

- Bangladesh lacked proper patient referral system that results in excessive dependence of the patients on secondary and tertiary hospitals and incurring them unnecessary expenditures.

bdnews24.com

News · Classifieds · Business · Opinion · Sport · Cricket · Tube

Bangladesh can treat 80 percent patients at lower facilities: WHO expert

Senior Correspondent, bdnews24.com

Published: 04 Apr 2019 11:29 PM BdST | Updated: 04 Apr 2019 11:29 PM BdST



- A large portion of health seeking clients in developing countries are seen at the outpatient clinic at secondary facilities which can be looked after at primary health care centers at lower overall cost. - WHO

NEWAGE

HOME · POLITICS · BUSINESS · INTERNATIONAL · NATIONAL · SPORTS

You are here: Home » Inner Pages

Bangladesh lacks proper patient referral system: experts

Pvt hospitals don't refer patients to govt ones

June 10, 2016 12:13 am · 0 comments

Views: 207

Staff Correspondent

Health experts and physicians on Thursday said the health care system of Bangladesh lacked proper patient referral system that results in excessive dependence of the patients on secondary and tertiary hospitals and incurring them unnecessary expenditures.

- According to the WHO, primary health care can cover the majority of a person's health needs throughout their life including prevention, treatment, rehabilitation, and palliative care.
- “As an individual, if you are sick, you should not go directly to the district hospital. We should go through the tiers of health facilities.”-WHO Rep.

1. <http://archive.newagebd.net/234629/bangladesh-lacks-proper-patient-referral-system-experts/>
2. <https://bdnews24.com/health/2019/04/04/bangladesh-can-treat-80-percent-patients-at-lower-facilities-who-expert>
3. <http://dspace.bracu.ac.bd/xmlui/handle/10361/9145>

No Referral System

Healthcare Service into Unknown

Not Affordable

67% out of Pocket Expense

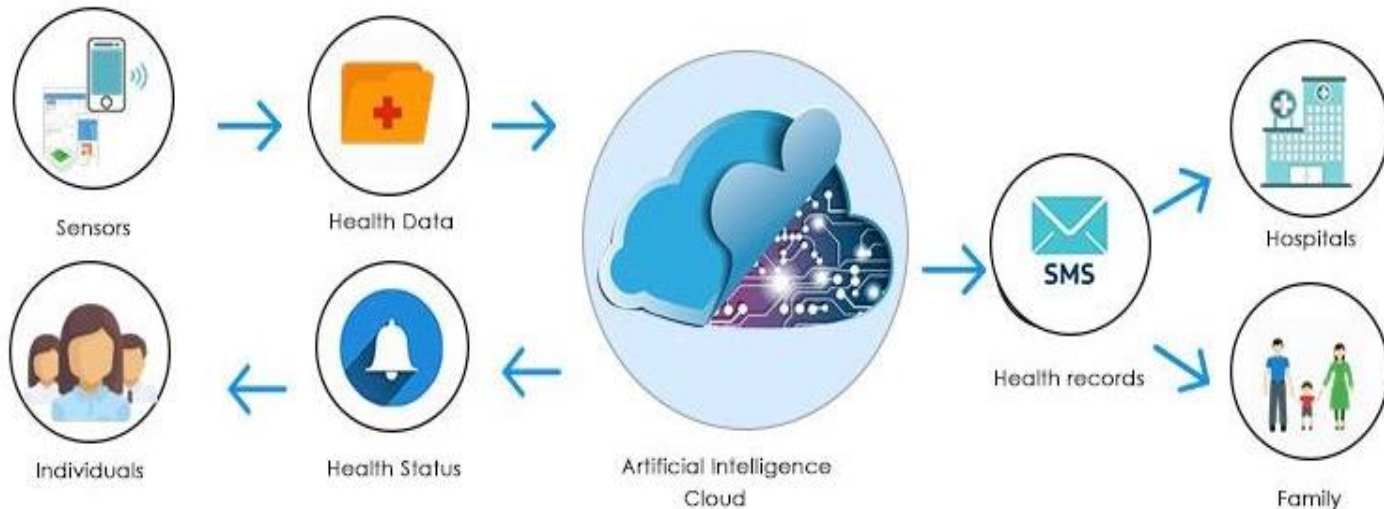
No Health Record

Lack Proper Treatment

67% Deaths

Non-communicable diseases

IoT enabled Artificial Intelligence Driven Cloud based Preventive and Primary Healthcare Platform



- Health Monitoring

- Risk Assessment & Referral

- Health Record & Ubiquitous Access to data

- Artificial Intelligence Driven Risk Prediction for Stroke, Heart Attack and Diabetes

IoT enabled Artificial Intelligence Driven Cloud based Preventive and Primary Care Platform



What CMED comes with?

- Health **Monitoring**
- Health **Risk Assessment**
- Health **Education and Awareness**

- **Prevent NCDs**
- Ubiquitous **Access to data**
- Create **Referral System**

CMED Objectives - Connecting People, Saving Lives

User App & Dashboard

Personal Dashboard

Type	Date	Result	Status	Remarks
SPO2	15 Jan 18 8:10 PM	99.0%	Normal	Normal Range: 95.0 - 100.0
PULSE	15 Jan 18 8:10 PM	91.0 bpm	Normal	Normal Range: 60.0 - 100.0
PULSE	15 Jan 18 8:13 PM	92.0 bpm	Normal	Normal Range: 60.0 - 100.0
BLOOD PRESSURE	15 Jan 18 8:13 PM	Sys: 116.0 Dia: 79.0	Normal	Normal Range: Syst(90 - 120) Diast(63 - 80)
BMI	15 Jan 18 8:14 PM	BMI: 27.36 Weight: 80.0 KG Height: 5' 9"	Overweight	Normal Range: 18.5 - 24.9
BLOOD SUGAR	15 Jan 18 8:17 PM	10.33 mmol/l	High Random	Normal Range: 3.3 - 7.8

© 2018, CMED Health

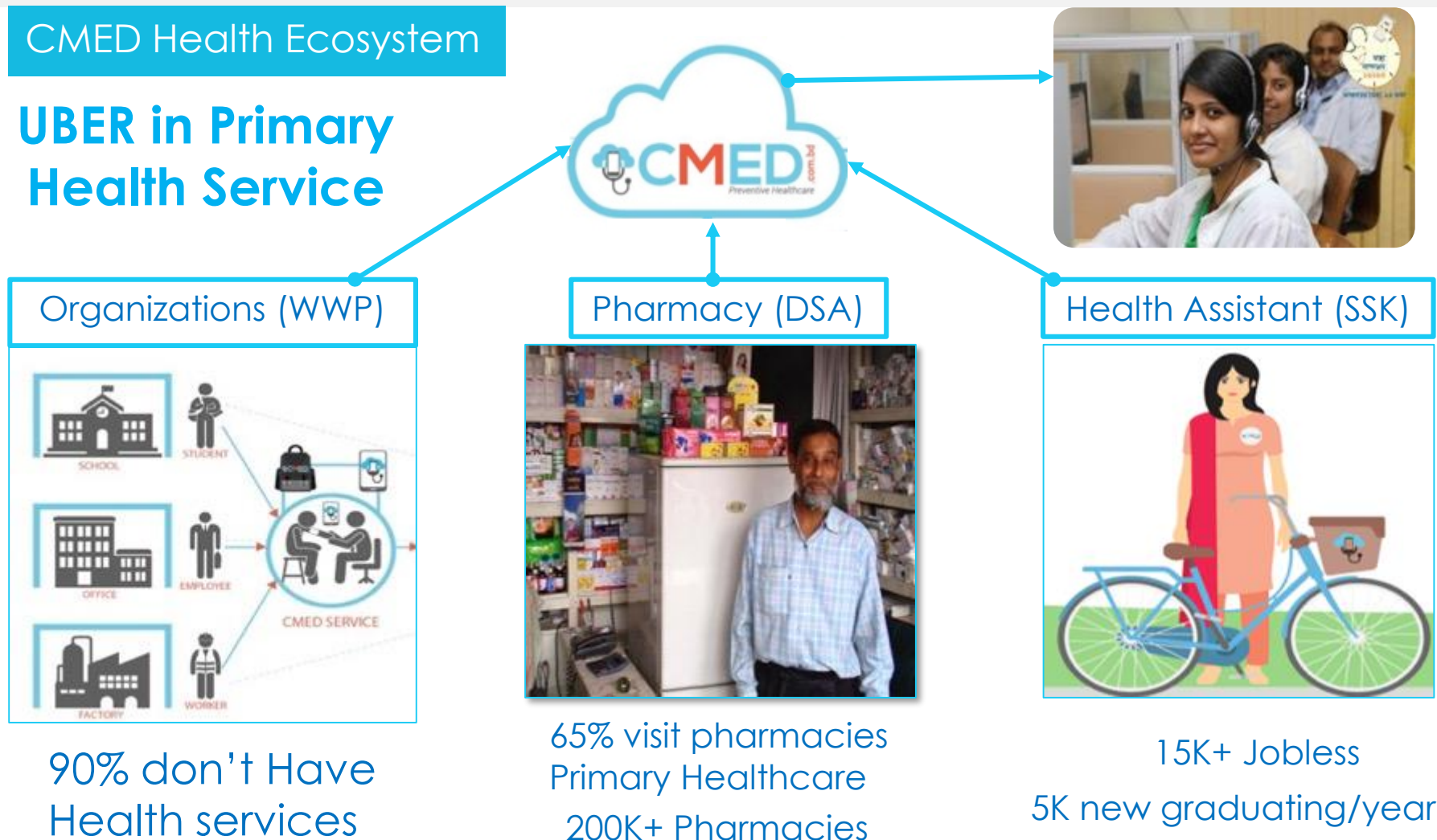
Health Report Sharing

Health Report

Service Model

CMED Health Ecosystem

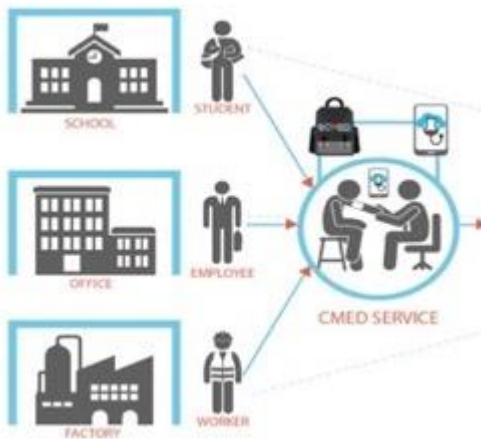
UBER in Primary Health Service



Organizations (WWP)

Pharmacy (DSA)

Health Assistant (SSK)



90% don't Have Health services

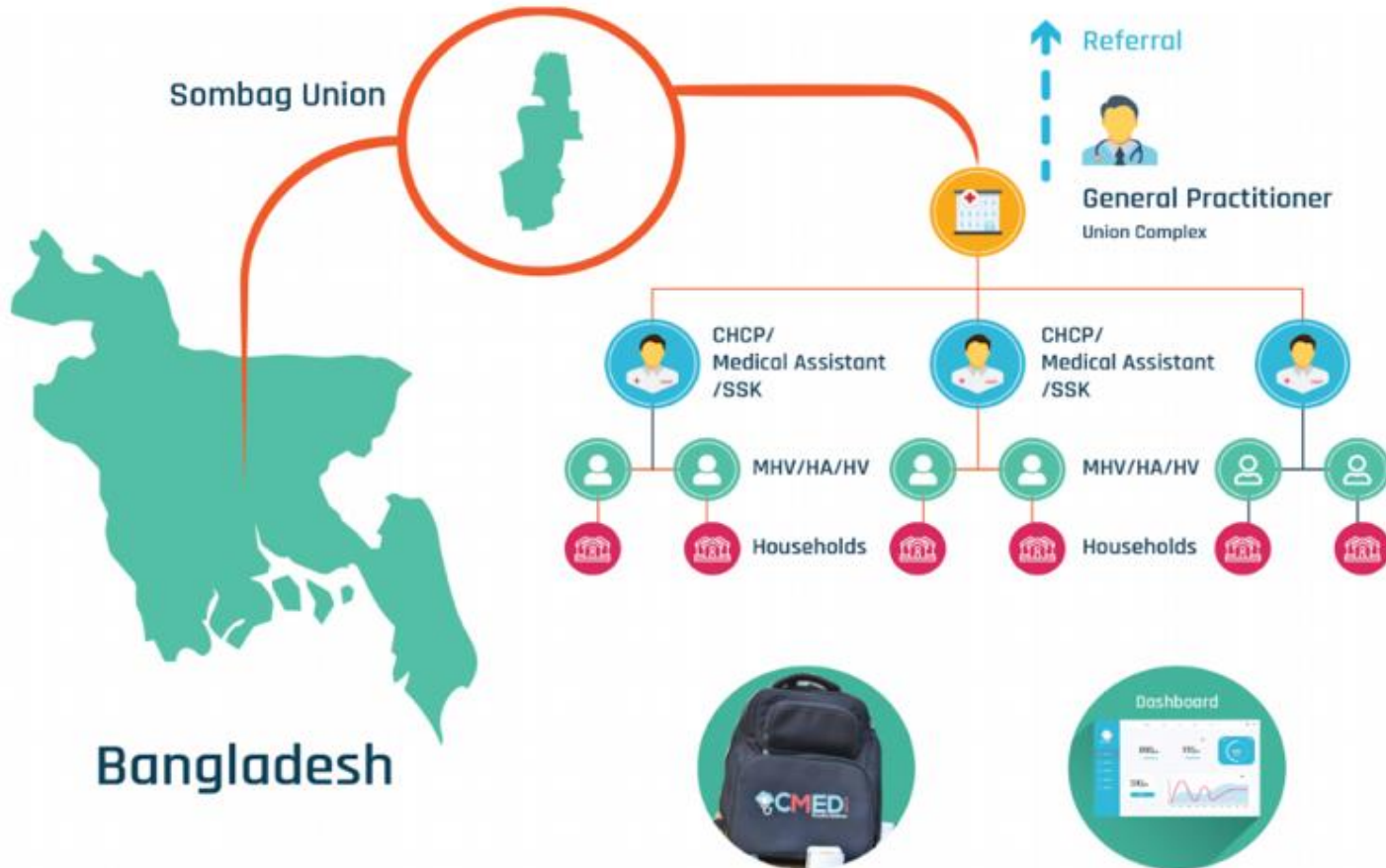
65% visit pharmacies
Primary Healthcare
200K+ Pharmacies

15K+ Jobless
5K new graduating/year

Digital Primary and Preventive Healthcare Service Model



Union based Digital Primary and Preventive Healthcare Service Model/ General Practitioner (GP) Model



4,554
Unions



Figure: CMED Union based Primary Healthcare service Model

How CMED System Works



Service Delivery



Scaling of CMED Digital Health Service

Impact



SDG

3 GOOD HEALTH AND WELL-BEING



8 DECENT WORK AND ECONOMIC GROWTH



2019

50+

Unions Covered

1.5 Million+

Registered Users by 2019

2,500+

Jobs Created

2020

2,00+

Unions Covered

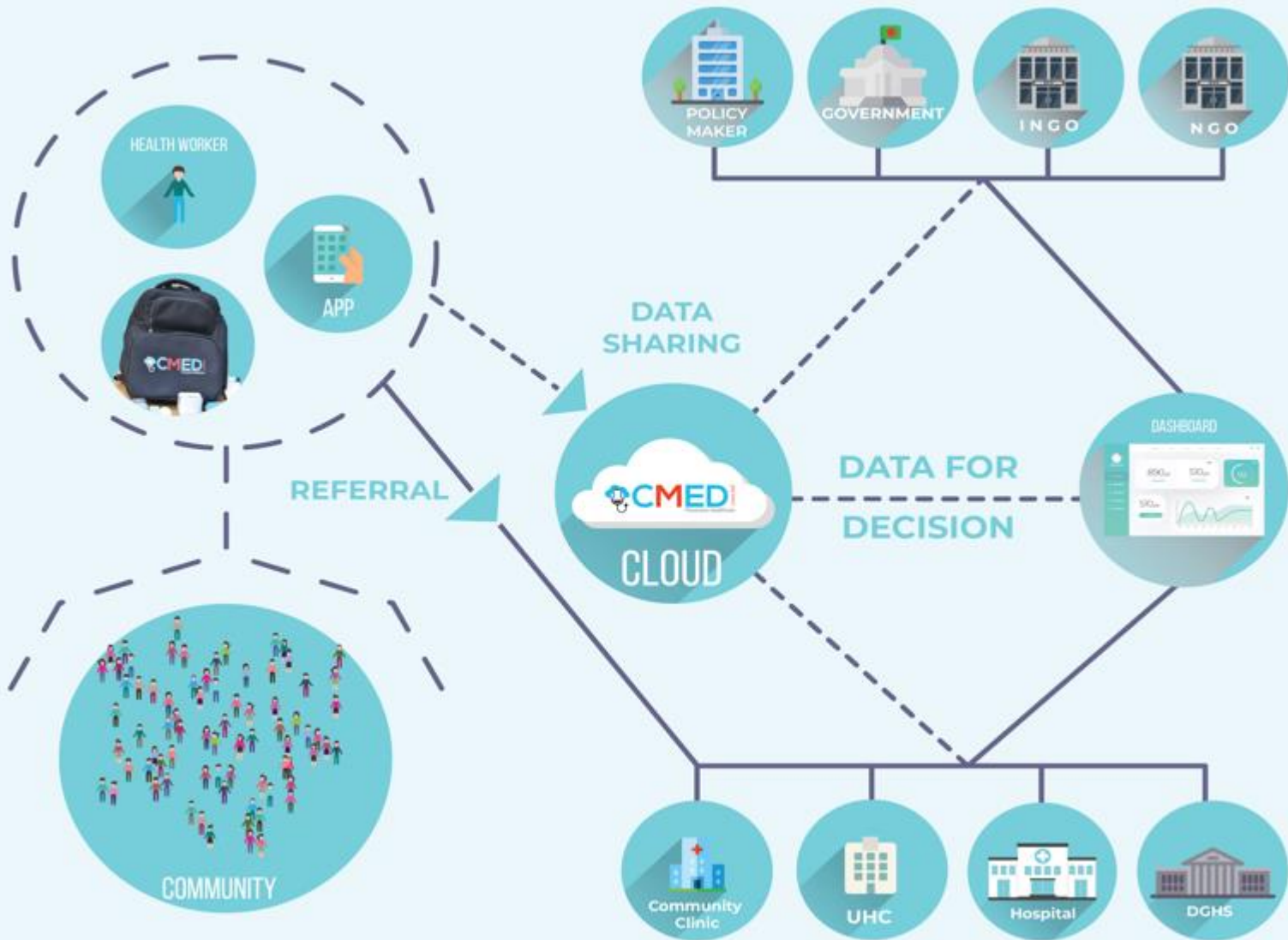
5 Million+

Registered Users by 2020

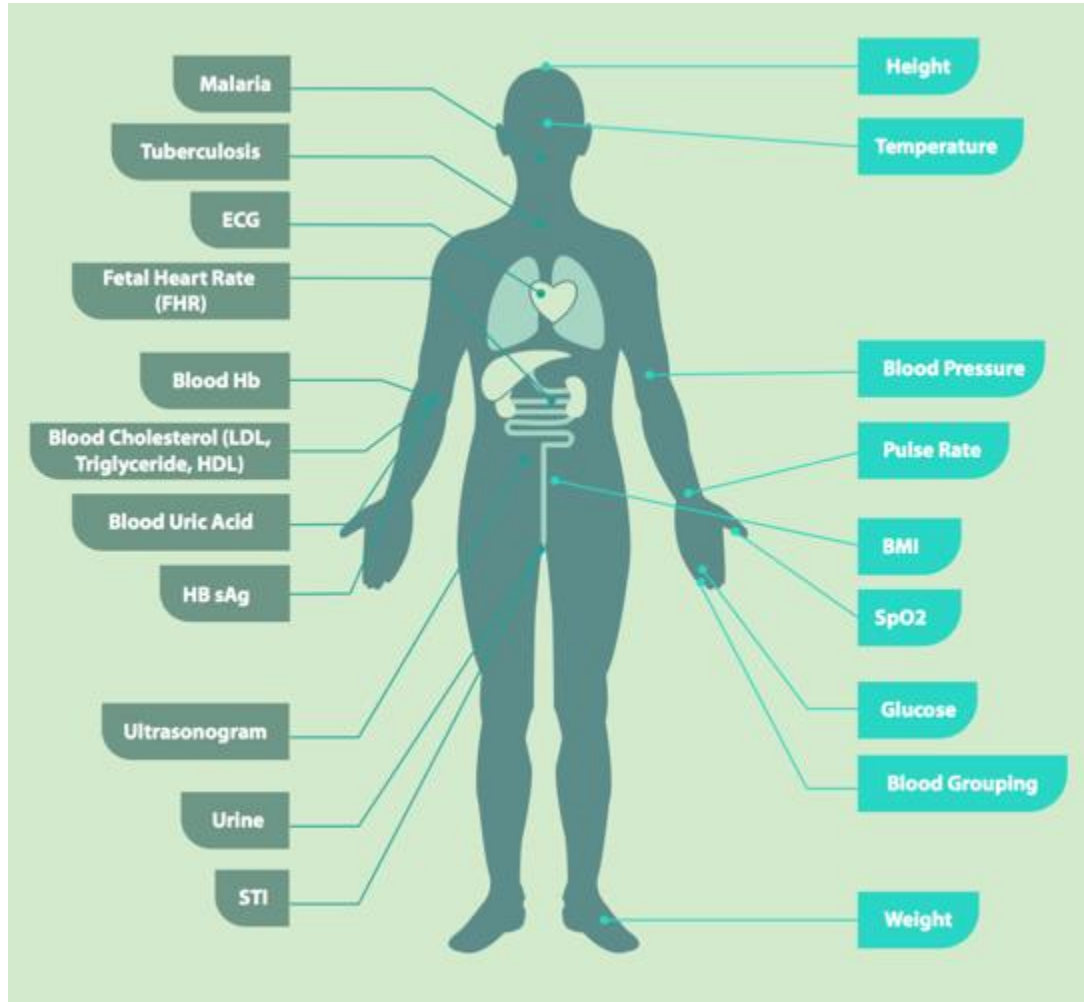
9,500+

Jobs Created

CMED Digital Healthcare Ecosystem (SSK)



Services Under Research & Development



Eye Sight Test

MNCH-ANC/PNC Tracker

Central Cancer Registry

POCT based Blood Tests

OCR for Medical Record

Congregated Health Account

Occupational Health

Parkinson/Cancer/Autism



Dr. Khondaker A. Mamun
Founder & CEO
Scientist & Prof. with 16+ years
experience in IT & Healthcare



Dr. Farhana Sarker
Co-Founder & MD
Data Scientist with 10+
years experience



Md. Ashraf Dawood
Chief Operating Officer
35+ years experience in
Pharma and Telecom



Moinul H. Chowdhury
Co-Founder & Head of Growth
9+ years experience in
Healthcare & Technology



Dr. Mithila Faruque
Co-Founder &
Chief Consultant,
Medical Services
12+ years experience in
Public Health & NCD



Dr. Md Badruddozza
Advisor of
Strategy and Partnership
25+ years experience in
NGO and partnership



Saroj Roy
Head of Technology
14+ years experience
in Software
Architecture and
Development



Shahab Uddin
App Lead
8+ years experience in Mobile
APP (Android & iOS)
Development

Award & Recognition



CMED: Cloud based medical system framework for rural health monitoring in developing countries

Kashfia Sailunaz^{a,*}, Musaed Alhussein^b, Md. Shahiduzzaman^c, Farzana Anowar^d, Khondaker Abdullah Al Mamun^e

^a Department of Computer Science and Engineering, Military Institute of Science and Technology, Dhaka, Bangladesh

^b Department of Computer Engineering, College of Computer and Information Sciences, King Saud University, Riyadh 11543, Saudi Arabia

^c Department of Computer Science and Engineering, Bangladesh University of Business and Technology, Dhaka, Bangladesh

^d School of Computer Science, University of Windsor, Ontario, Canada

^e Advanced Intelligent Multidisciplinary Systems Lab (AIMS Lab), Department of Computer Science and Engineering, United International University, Dhaka, Bangladesh



Top 5



Dhaka Winner 2017

Global Innovation Winner 2018



CMED.com.bd
Preventive Healthcare

Connecting People, Saving Lives

