

AI for Healthcare Transformation, Improve Wellbeing and Extend Lives

Prof. Khondaker A. Mamun, PhD.

Academician, Scientist, Innovator, Entrepreneur, Policy Consultant

PhD. (AI and Medical Engineering), University of Southampton, UK

Postdoctoral Research Scientist, IBBME, University of Toronto, Canada

Founder, CMED Health, A Digital Health Inclusion Initiative for SDG

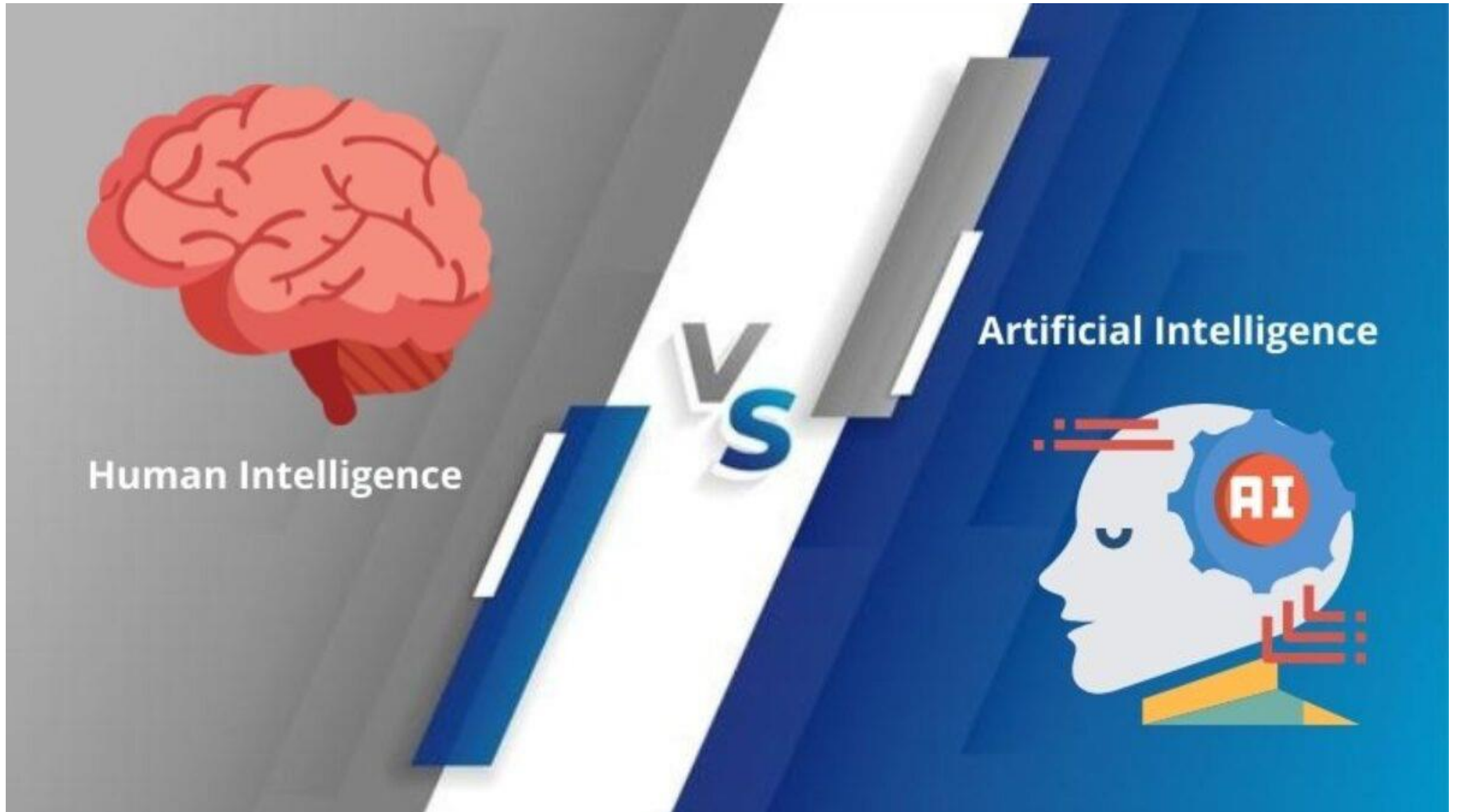
Founder & Director, Institute of Research, Innovation, Incubation & Commercialization (IRIIC)

Professor of Digital Health and Artificial Intelligence (AI), United International University

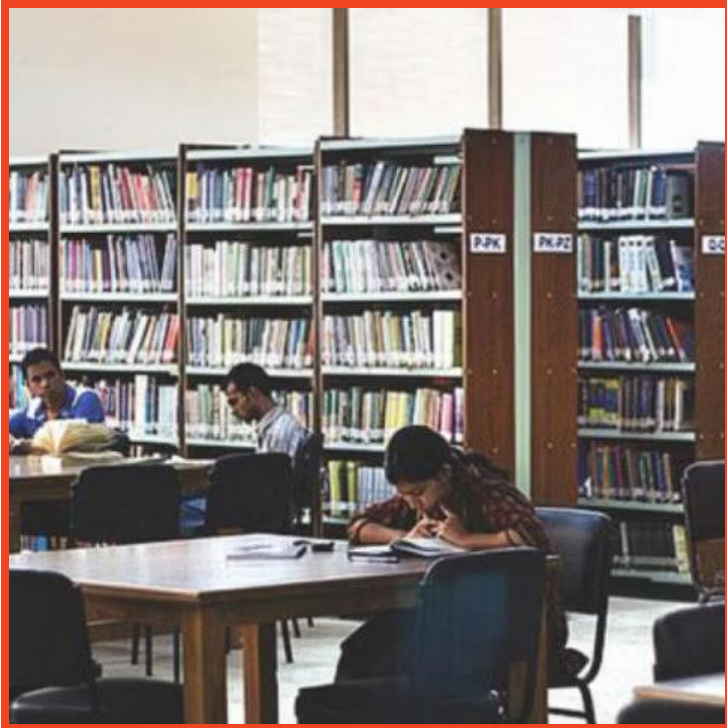


Automatic disease diagnosis uses **artificial intelligence** and **machine learning** to assist in identifying illnesses based on **patient symptoms or medical images**, potentially leading to **more accurate and timely diagnoses**. These systems can analyze vast datasets to predict the likelihood of specific diseases, offering **valuable insights** to healthcare professionals.

Artificial Intelligence (AI)

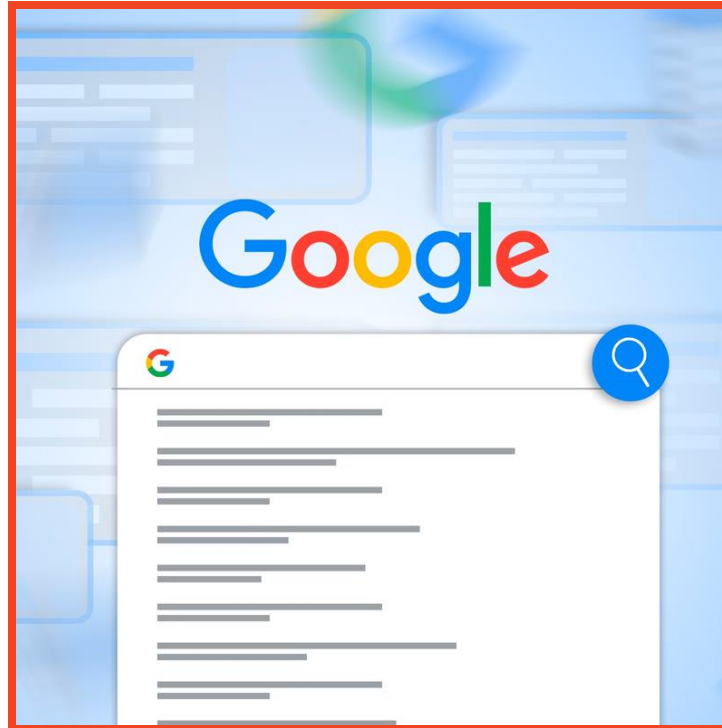


AI TRANSFORMATION



8 Hours

Traditional Library:
Hours spent searching through
books for information.



2 Hours

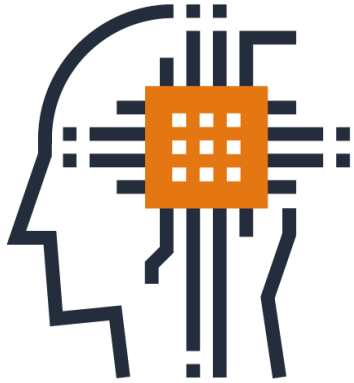
Search Engine Revolution:
Google made information
accessible with a click



Less than 1 minute

AI-Powered Assistant: ChatGPT
delivers instant, context-aware
answers and assignment help.

AI FOR HEALTHCARE



Artificial Intelligence (AI) techniques will be implemented on patients' data to identify health risks



Machine Learning (ML) will enable doctors to use patients' data to make more personalized treatment decisions



Generative AI will empower both patients and providers to get personalized advice for better management of health



Internet of Things (IoT) is interrelated computing devices, people that make human to computer interaction

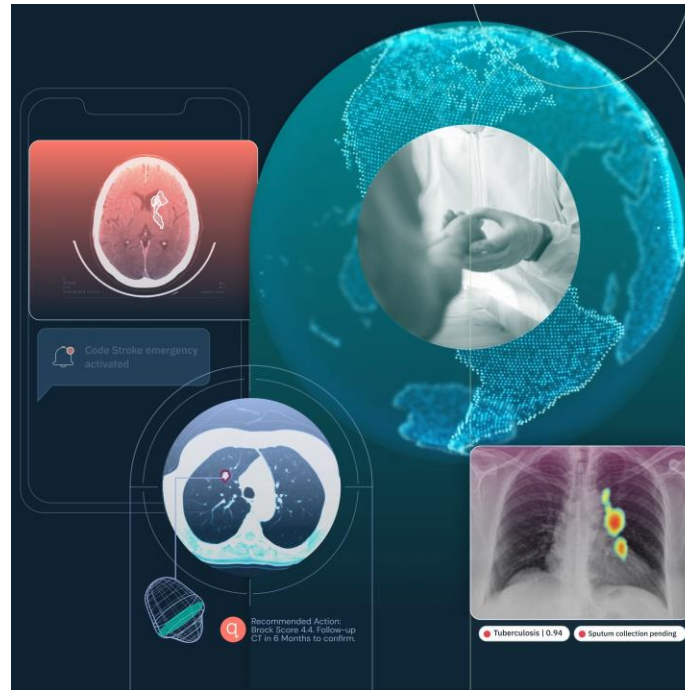
WHAT IS HAPPENING GLOBALLY? HEALTH

Google Health



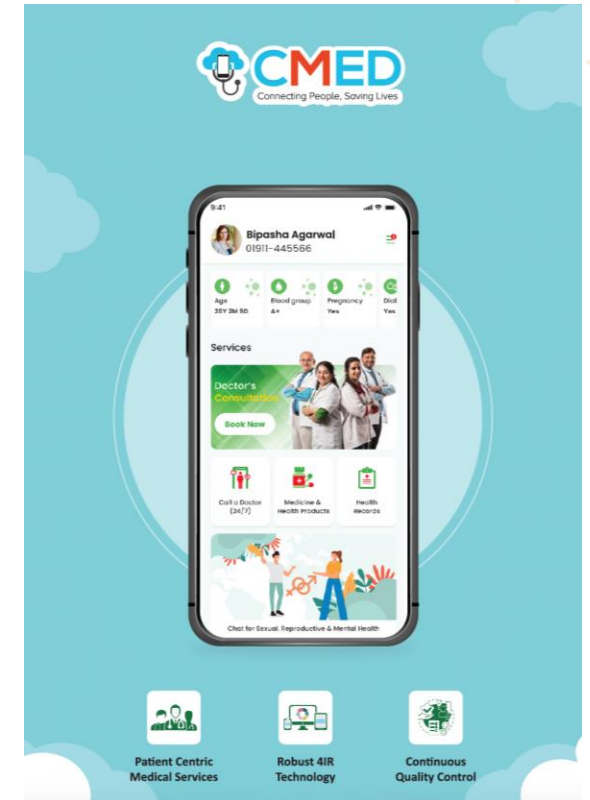
Google Health (USA)
PREDICTING LUNG
CANCER

qure.ai



Qure.ai (India)
Early Detection & Management of
TB, Lung Cancer, Stroke

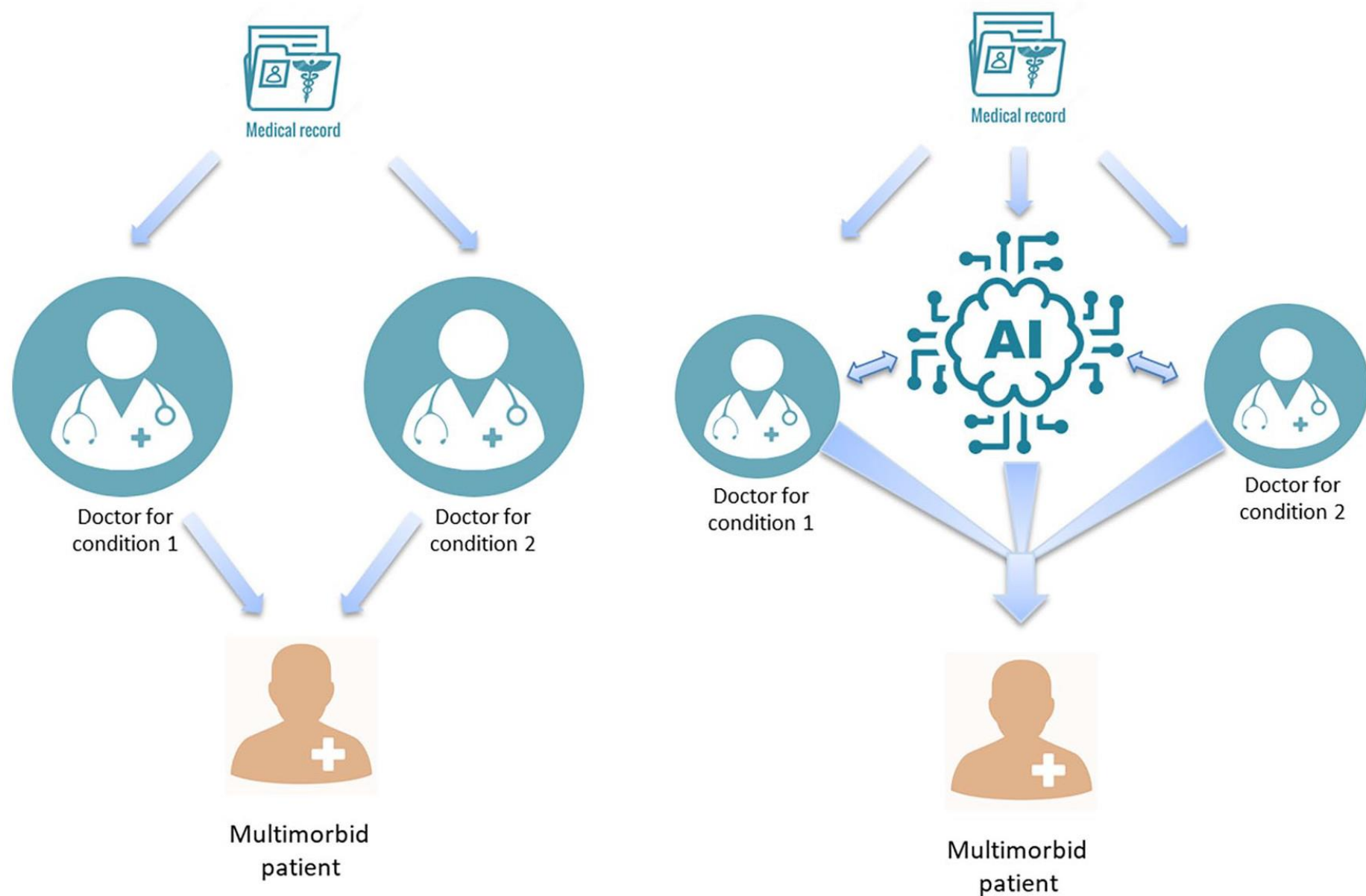
SUSASTHO.AI



Susastho.AI (Bangladesh)
AI-driven personalized
healthcare platform

HEALTH Sector is in the Top 3 AI Investment Globally

Traditional versus AI-supported Integrated Approach



Treating multi-morbid conditions: traditional approach (left) versus AI-supported integrated approach (right)

What Powers AI?

AI = Data + Models + Compute

•Data

The raw material — clean, diverse, and context-specific datasets

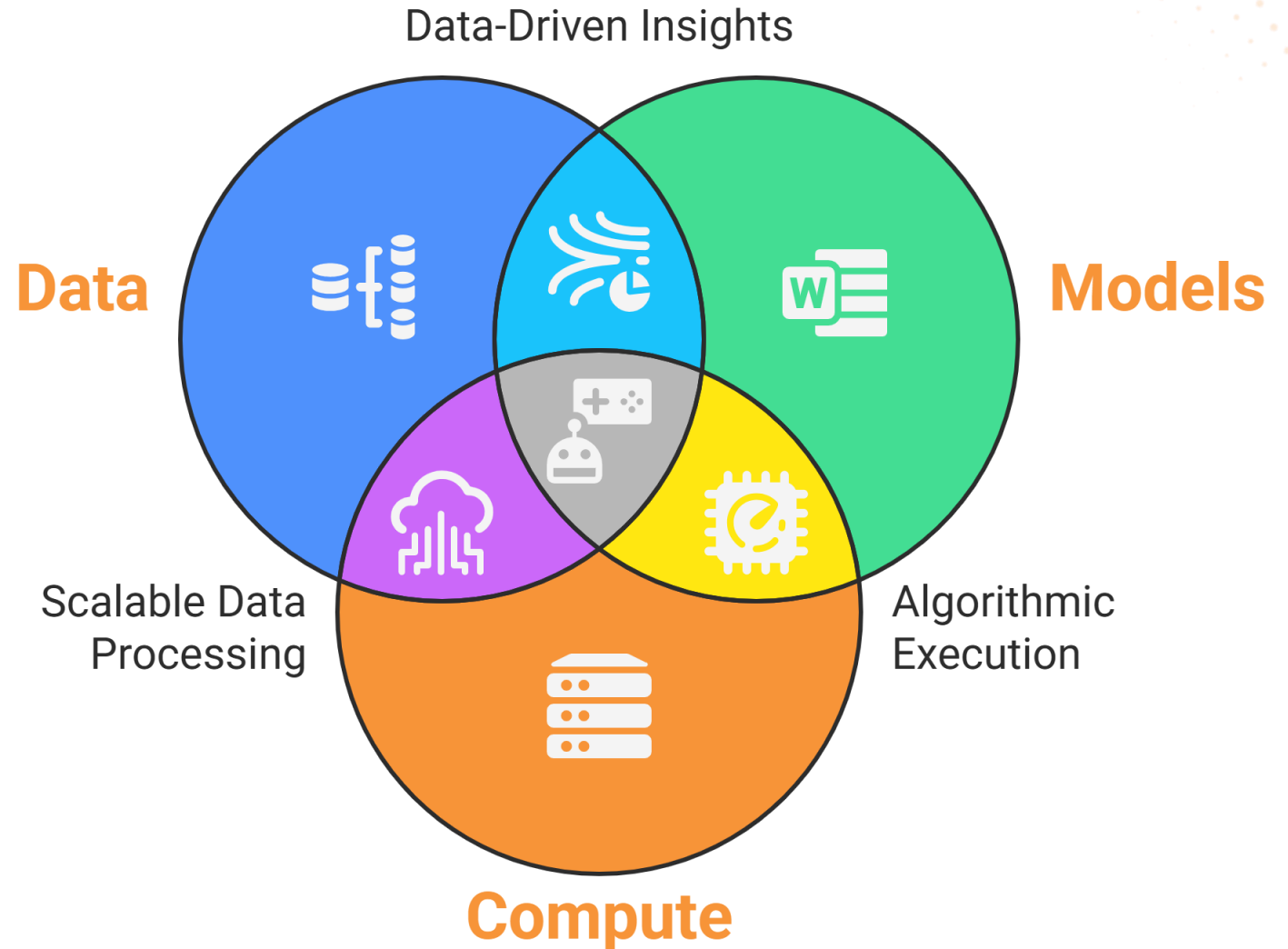
•Models

Algorithms and foundational AI models that learn from data and solve problems

•Compute

High-performance infrastructure (GPUs, TPUs, cloud) to train and run AI models

AI's Core Components



Do We Want to be User or Creator of AI?

- Be AI consumer only or global AI innovator?
- Use AI models, or build our own?
- Rely on foreign tech — or develop homegrown AI for local problems and export?

Emerging
Economies have
the potential to
lead in AI for
Development

প্রথম আলো



সাক্ষাৎকার

এআই প্রযুক্তি গার্মেন্টসের চেয়ে বড় রপ্তানি খাত হতে পারে



কৃত্রিম বুদ্ধিমত্তা (এআই) নিয়ে কয়েক বছর ধরে কাজ করছেন ঢাকার ইউনাইটেড ইন্টারন্যাশনাল ইউনিভার্সিটির (ইউআইইউ) অধ্যাপক খন্দকার আবদুল্লাহ আল মামুন। গবেষণার জন্যই ইউআইইউতে প্রতিষ্ঠা করেছেন অ্যাডভান্সড ইন্টেলিজেন্স মাল্টিডিসিপ্লিনারি সিস্টেমস ল্যাব (এইমস ল্যাব) এবং ইনস্টিটিউট অব রিসার্চ, ইনোভেশন, ইনকিউবেশন অ্যান্ড কমার্শিয়ালাইজেশন (আইআরআইআইসি)। সাক্ষাৎকার নিয়েছেন মো. সাইফুল্লাহ

প্রকাশ: ২৪ জানুয়ারি ২০২৫, ১১: ০০



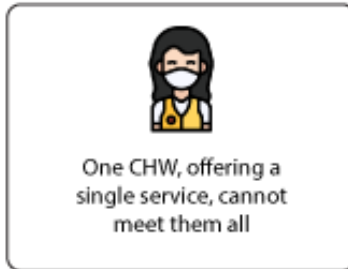
Intelligent General Practitioner (iGP), an AI-powered, HWs Driven, Patient-Centered Model to Revolutionize Primary Healthcare Delivery in Bangladesh and LMICs for UHC



Healthcare Challenges in Bangladesh & LMICs



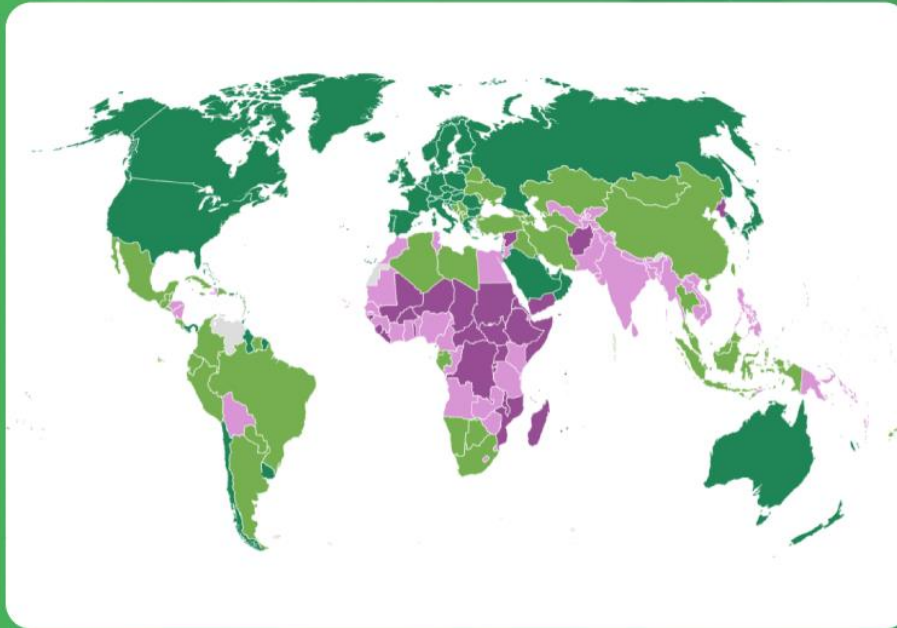
Re-thinking Community Health in LMIC



	Low UHC Index of 52%		6.1 M people are pushed into poverty due to 74% OOPe health expenditures
	9.9 doctors, nurses & mid-wives/10 000 people, lower than global median of 48.6 (WHO Standard 1:3:5, while in Bangladesh 1:0.7:0.7)		NCDs accounts for 67% of all deaths
	50.7% deliveries through C-sections		MMR (136/100,000-live births) & IMR (24/1,000-live births)
	Limited access to quality healthcare & absence of health records		Fragmented health systems with overburdened higher-tier healthcare facilities
	Lack of attention on preventive & primary management		CHWs remain under-supported lacking screening tools, structured triage systems & proper training

Rethinking Community Health in LMICs

Government, Donors & NGOs focused on specific health issues (e.g., maternal health, nutrition, communicable diseases)



30+ Years of Progress in LMIC Healthcare

Improvements achieved in focused areas, broader health needs of communities were not addressed



One household, many health needs



One CHW, offering a single service, cannot meet them all

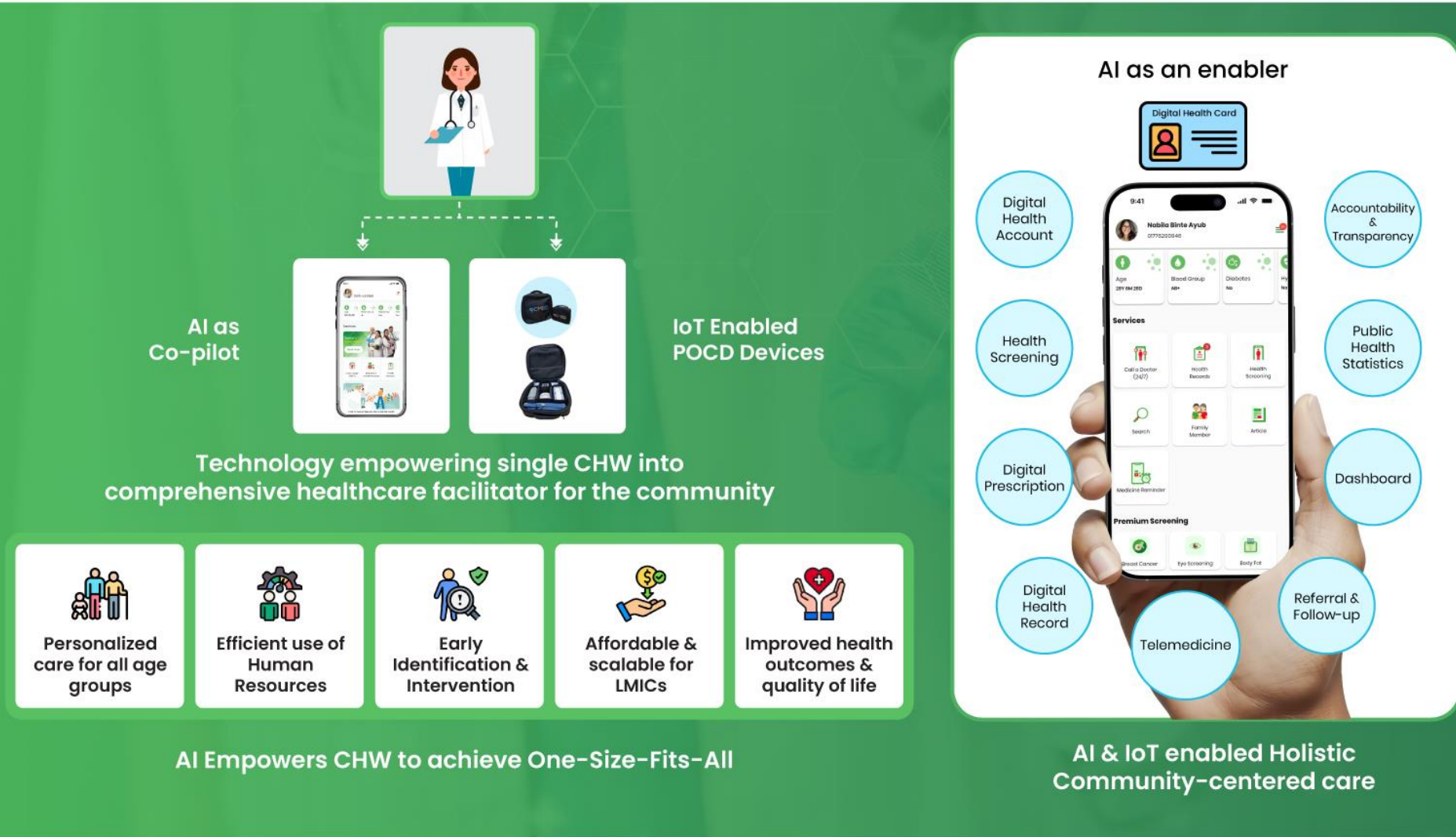


Solving one health issues, other emerges



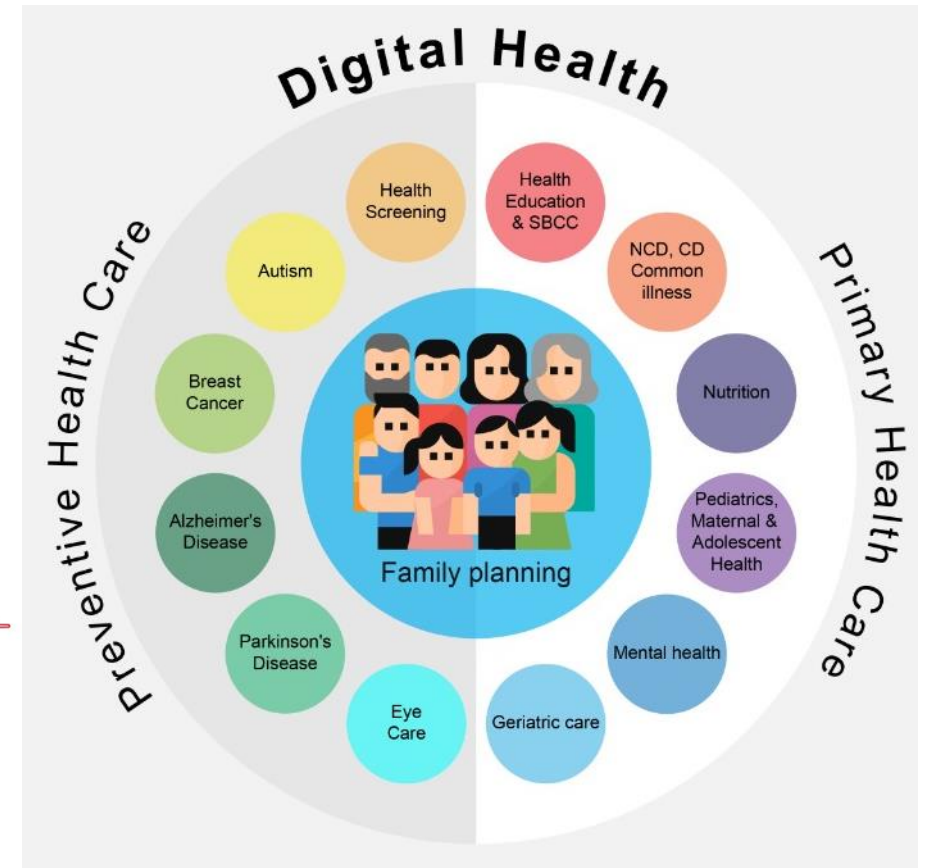
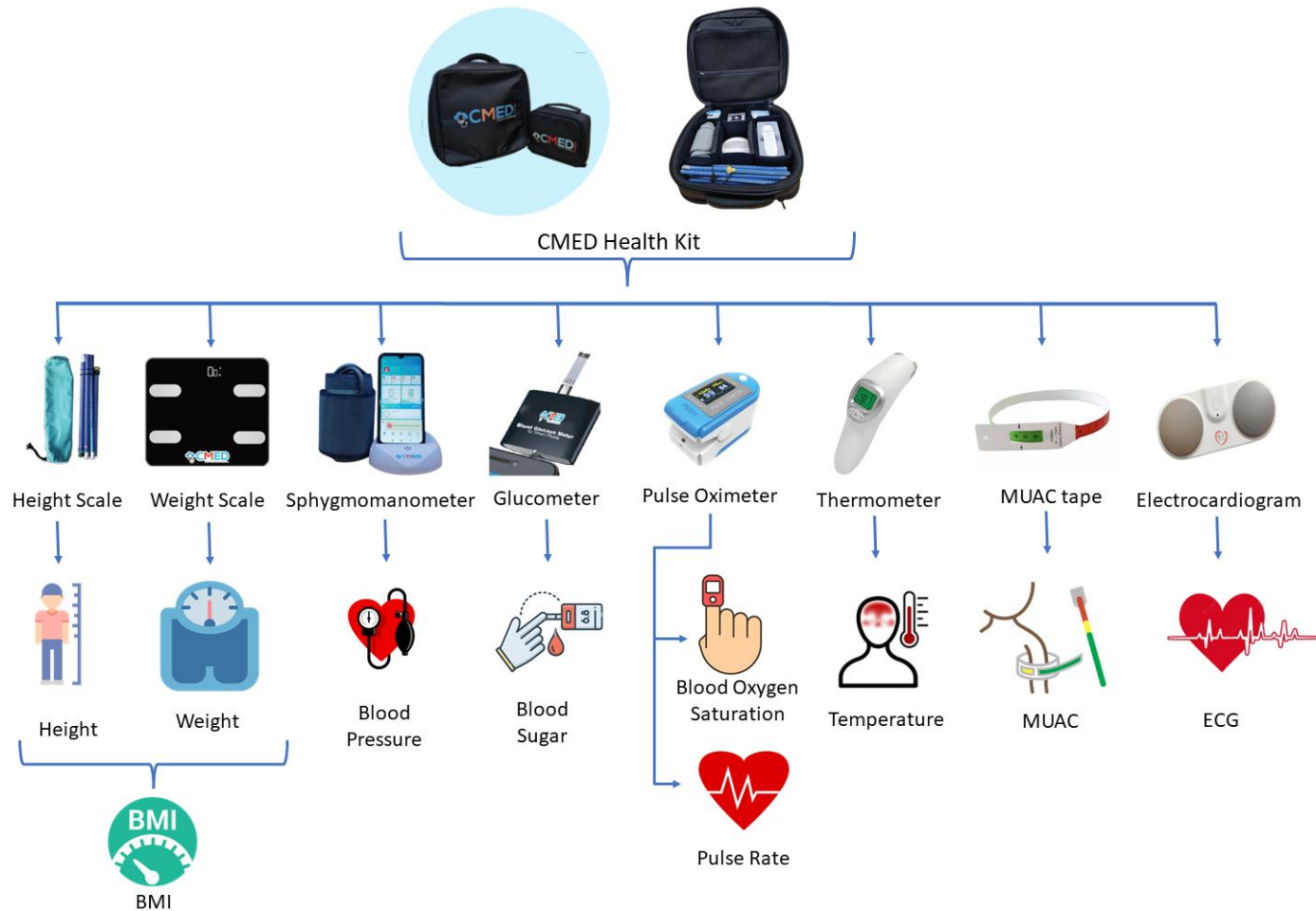
One-Size-Fits-All doesn't work

Intelligent General Practitioner (iGP) Model: AI & IoT enabled Solution for Holistic Community Health



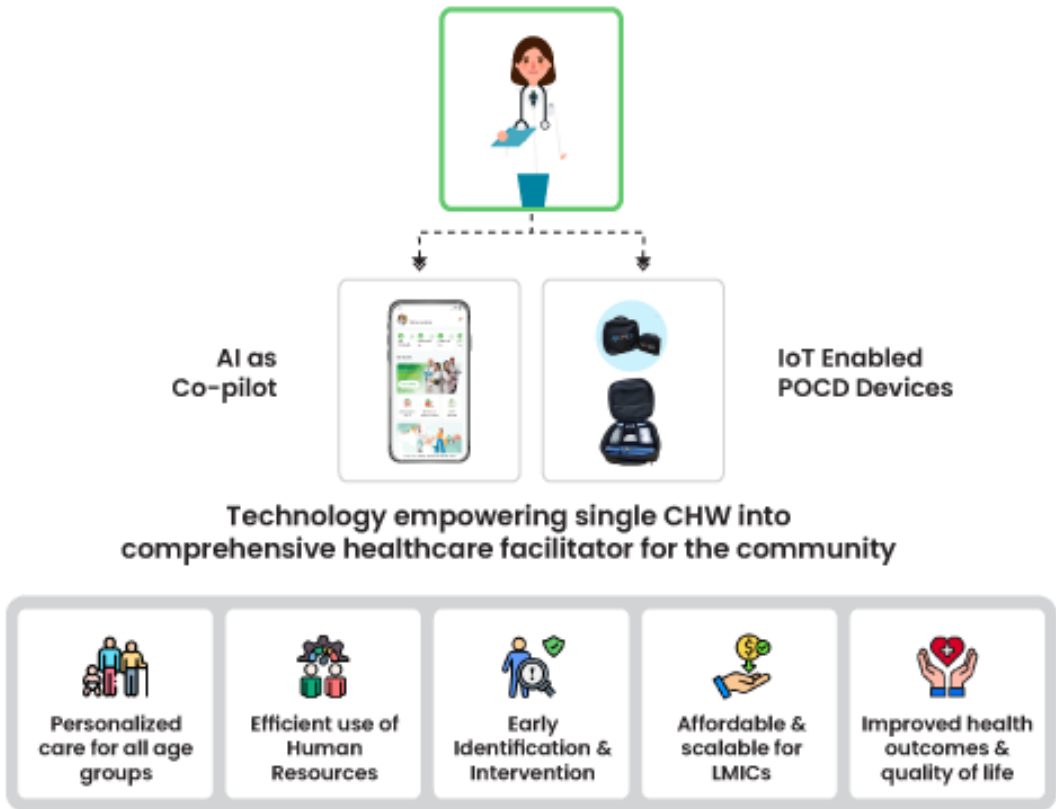
iGP: IoT enabled Artificial Intelligence Driven Cloud based Platform

Local Community Care using Technology, Point of Care Device (POCD)

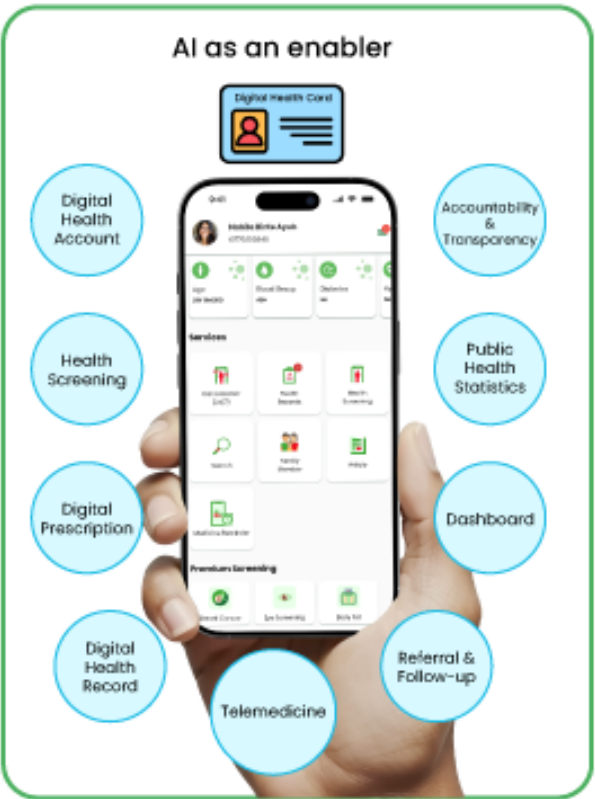


Digital Health Inclusion with Comprehensive Preventive & Primary Health and Referrals for Secondary & Tertiary Care with Follow-up to Ensure Patient Centric Service Delivery

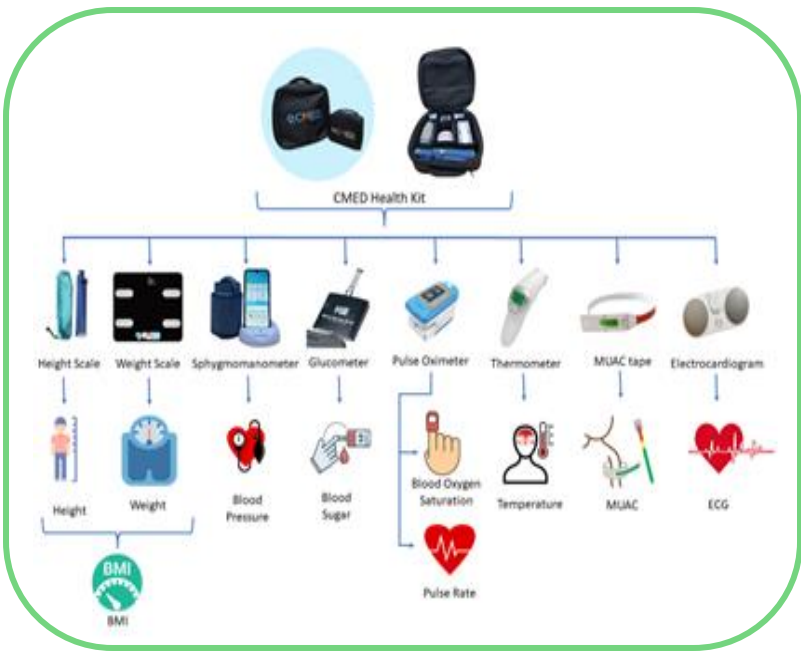
AI-powered, HWs-driven Patient-Centered Healthcare at Doorstep



AI empowers CHW to achieve One-Size-Fits-All

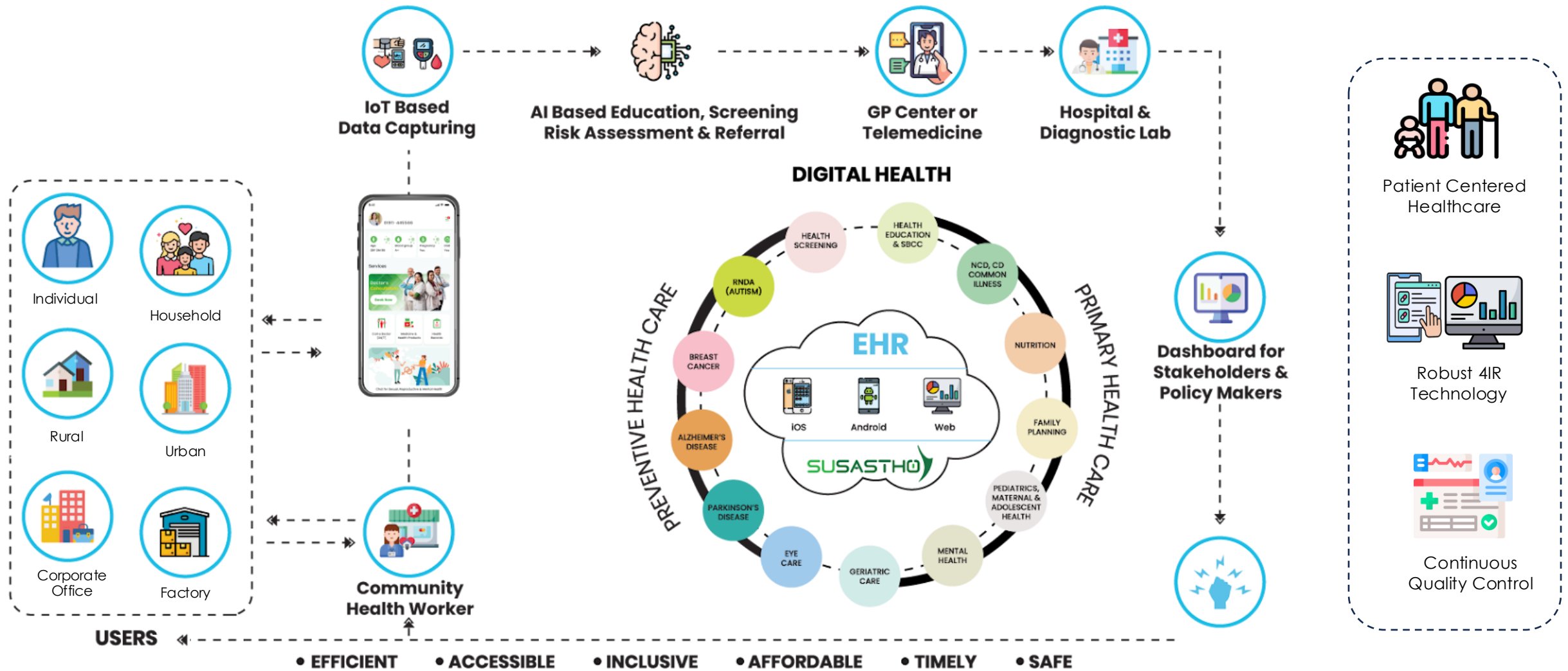


AI & IoT enabled Holistic Community-centered care



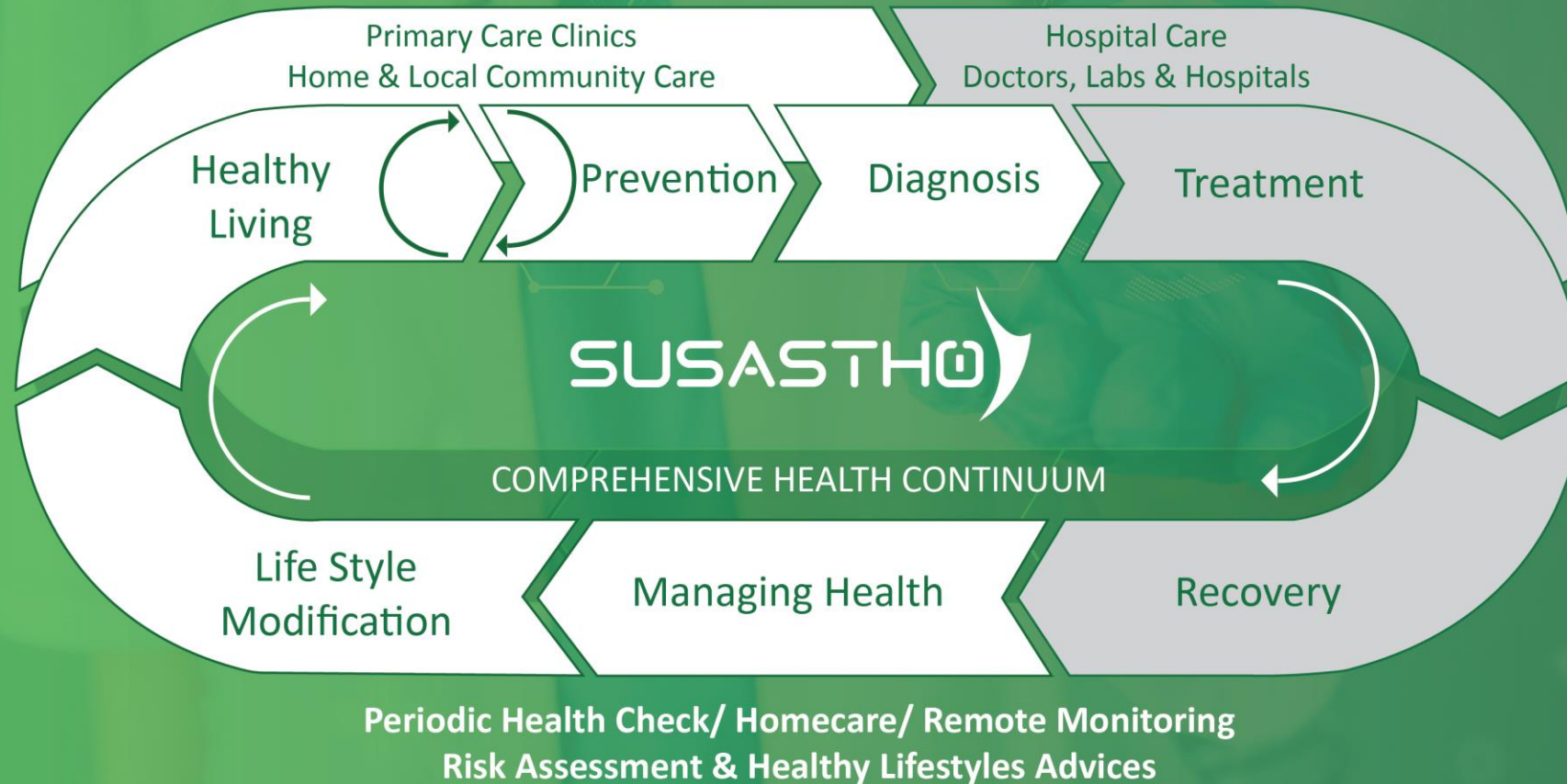
AI-driven Clinical Decision Support System & IoT-Enabled POCD Devices for Delivering Health Education, Screenings, Risk Assessment, Triage & Referrals with Follow-ups

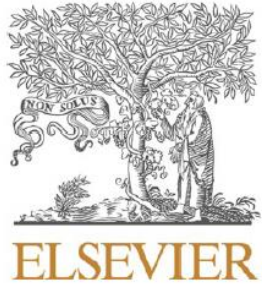
Intelligent General Practitioner (iGP) Model: IoT-enabled AI-driven Comprehensive Preventive & Primary Healthcare Ecosystem





Susastho Collaborative Digital Healthcare Platform





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Digital health inclusion towards achieving universal health coverage for Bangladesh utilizing general practitioner model

Moinul H. Chowdhury^a, Rony Chowdhury Ripan^a, A.K.M. Nazmul Islam^a, Rubaiyat Alim Hridhee^a, Farhana Sarker^{a,b}, Sheikh Mohammed Shariful Islam^c, Khondaker A. Mamun^{a,d,*}

^a CMED Health (A Digital Health Inclusion Initiatives for UHC), Dhaka, Bangladesh

^b Department of CSE, University of Liberal Arts Bangladesh, Dhaka, Bangladesh

^c Institute for Physical Activity and Nutrition, Faculty of Health, Deakin University, Melbourne, Australia

^d AIMS Lab, Department of CSE, United International University, Dhaka, Bangladesh

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Digital health system

Digital health referral system

ABSTRACT

Objective: Bangladesh's health care system, particularly in rural areas, experiences enormous obstacles in providing complete preventive and primary healthcare services due to the lack of adequate healthcare facilities, resource constraints, and a non-functional referral system. To alleviate these problems, in this study, we introduce the digital general practitioner (GP) model for rural Bangladesh digital platforms and present a statistical

RESEARCH

Open Access



Efficacy of using a digital health intervention model using community health workers for primary health services in Bangladesh: a repeated cross-sectional observational study

Marzia Zaman^{1,2}, Rubaiyat Alim Hridhee², Refat Ahmed Bhuiyan², Charles Aunkan Gomes³, Md. Mashiar Rahman⁴, Sheikh Mohammed Shariful Islam⁵, Farhana Sarker^{1,6} and Khondaker A. Mamun^{2,3*}

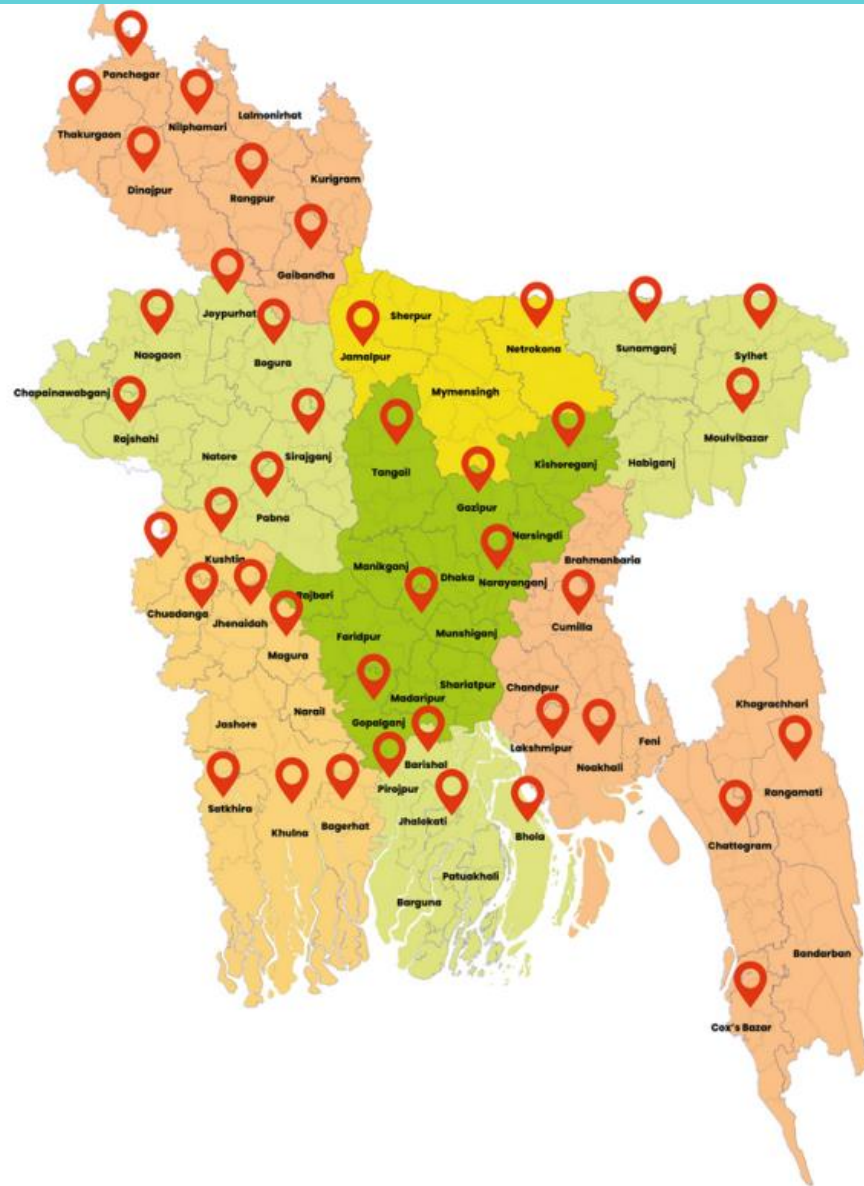
Abstract

Objective This study aims to evaluate the effectiveness of a digital health intervention model by observing people's health conditions in a rural area of Bangladesh. Through a repeated cross-sectional design, health outcomes were assessed at six-month intervals over 18 months.

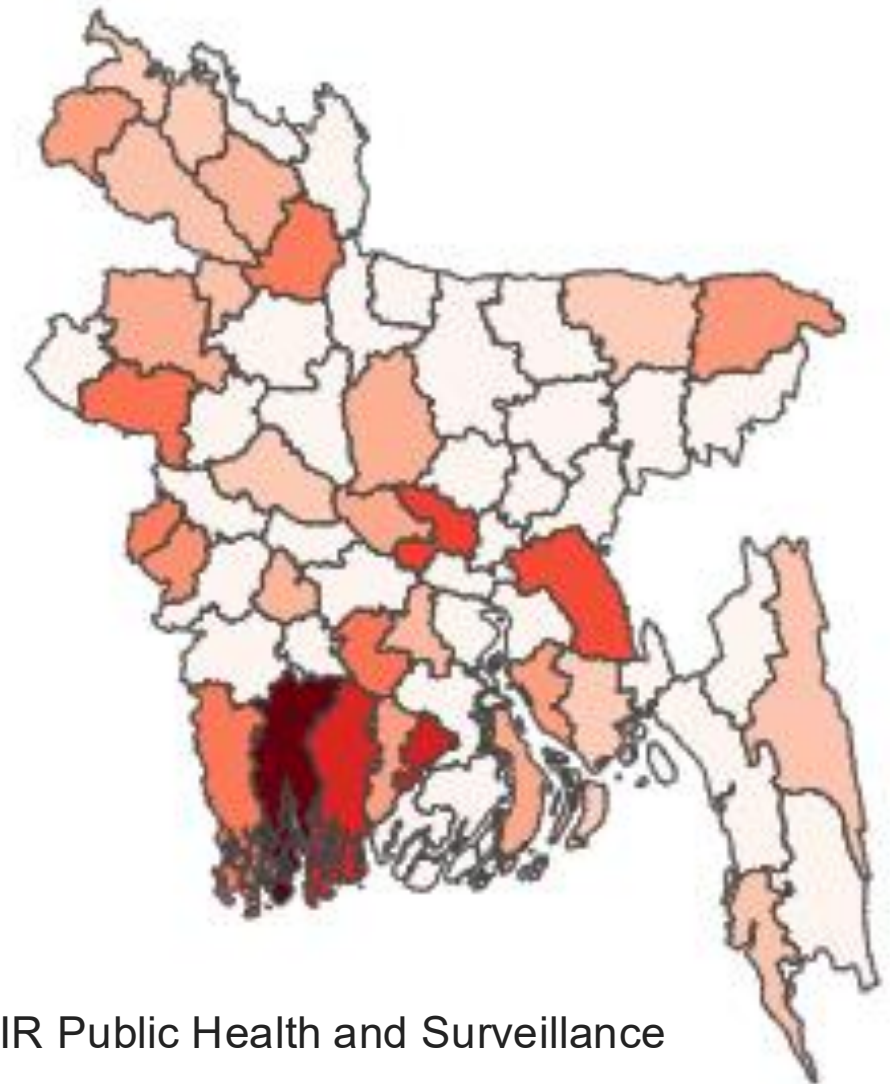
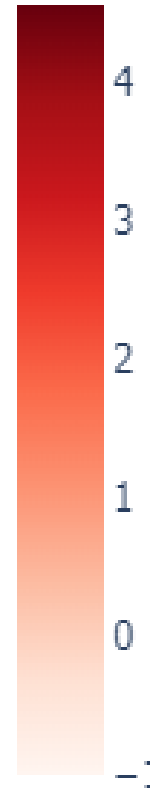
Methods The data presented in this paper are obtained from the model's pilot implementation in one catchment area in Bangladesh. The model involved community health workers (CHWs) using a smart health kit and Artificial Intelligence(AI)-based mobile application to provide monthly doorstep health education, screenings, risk assessments, and digital referrals. Socio-demographic and health measurement data are presented as proportions with 95% confi-

Digital Rural iGP Model Results and Outcomes

Prevalence and Risk Factors of Stroke in Rural Bangladesh: A Population-Based Study on 1-3 million people



Prevalence per 1000



Accepted in JMIR Public Health and Surveillance

Enhancing Urban Primary Health Care through the Digital General Practitioner Model: A Step towards Universal Health Coverage in Bangladesh

Khondaker A. Mamun^{a,b}, Syed Abdul Hamid^c, Md. Abdullah^c, Nasrin Sultana^c,
Mohammad Ihtesham Hassan^a, Moinul H. Chowdhury^d, Margub Aref Jahangir^e,
Chandrasagar Soloman^e, Mohammad Zahirul Islam^f, Maya Vandenant^e, Farhana
Sarkar^{d,g}

Abstract

Background Bangladesh's primary healthcare policies have historically prioritized rural areas, leading to an inequitable urban healthcare system due to inadequate attention amid rapid urbanization. To address this issue, the study introduces a novel approach – a digital General Practitioner(GP) model – for delivering primary care in urban Bangladesh. The study aims to assess its acceptability, feasibility, and

Bangla Medical GPT

SUSASTHO.AI



Education &
Screening

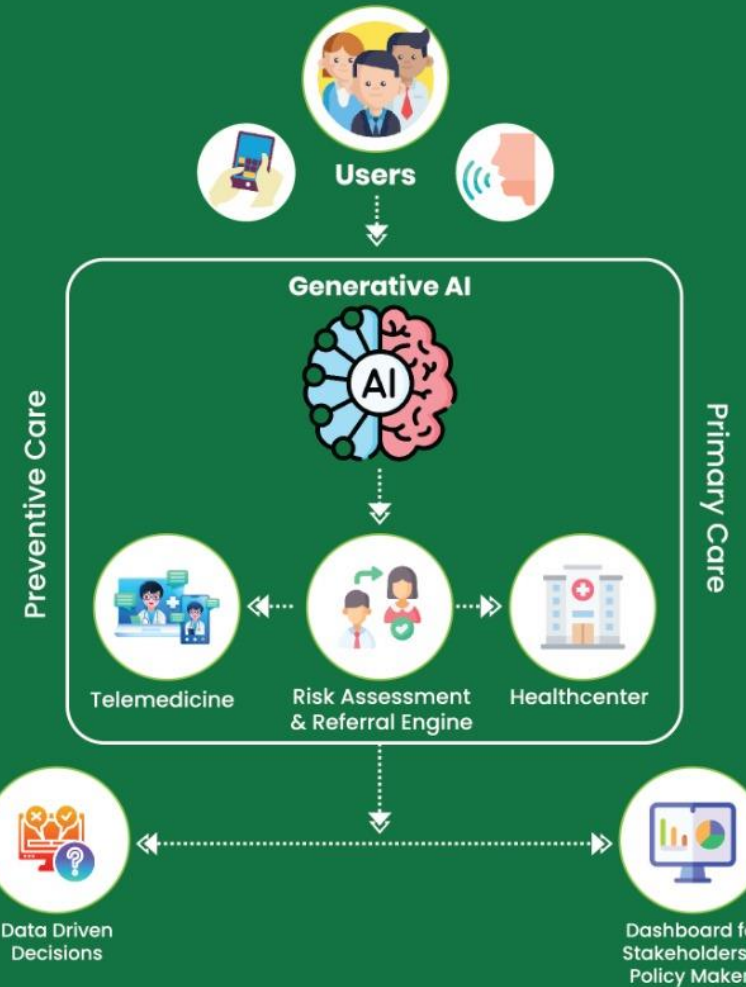


Risk Assessment
& Referral



Text & Voice
Enabled Chat

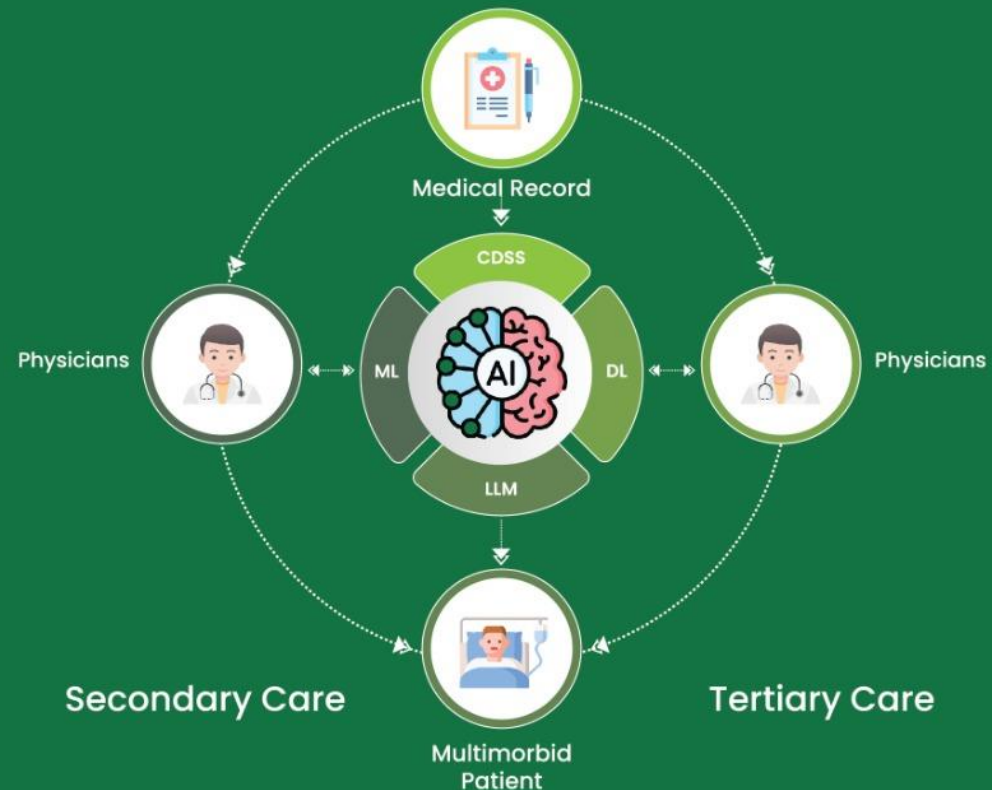
AI Co-Pilot to answer medical queries, provide clinical information, perform triage and risk assessment for appropriate referral and management of health concerns at any time.



AI Co-Pilot for physicians

- * Clinical Notes Summarisation
- * Prescription Review and Auditing
- * Medical Scribing for Automatic Prescription and Clinical Notes
- * Clinical Data Analysis to Provide Precise Diagnosis, Treatment and Management

AI-Based Second Opinion System



Validation & Traction



2.5M+

Rural Populace Served



0.58M+

Urban Populace Served



4 M+

Digital Health Accounts



3000+

Female Health Workers



99.5%

Service Satisfaction Rating



Cost & Plan



Cost of Health Service Model



**USD 1/Family/Month(Rural)
USD 3/Family/Month(Urban)**

Join us for the Mission to Establish Accessible, Affordable & Quality Healthcare for All



Scale iGP in BD & LMICs



**Reduction of NCD
Burden**



**Alleviate Poverty by
Reducing Out-of-Pocket
Health Expenditure**



**Prove Effectiveness
of iGP Model in LMICs**



**Reduction of MMR &
IMR**



Achieve UHC by 2030



Call to Action



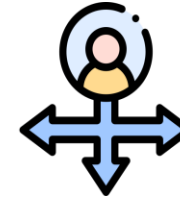
Collaboration



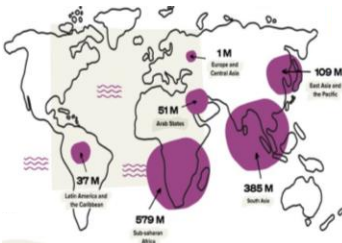
Partnership



Support



Strategic Action for Co-creation & Scale-Up



Implementation of iGP Model for
**Accessible, Affordable
& Quality Healthcare** for
7 Billion People in LMICs



Achieve Primary
Healthcare led **UHC**
By 2030



Establish **AI-Powered**
Social Health
Protection



Thank you