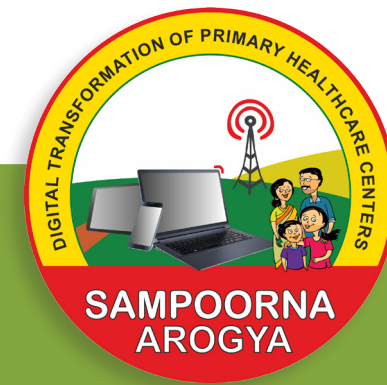**Heat map of diseases using GIS**

Individual and Community Field Level Socio Economic Data and Disease Surveillance Data Integrated into PHC - EMR

Karuna Trust have been consistently through the Public Private Partnership (PPP) model which was initially piloted in collaboration with Government of Karnataka at the Gumballi PHC in Chamarajanagar district of Karnataka in 1996 when the PHC was entrusted to Karuna Trust by the government.

Our Mission
To develop a dedicated service minded team that enables holistic development of marginalized people, through innovative, replicable models with a passion for excellence.

Contact us :   https://www.karunatrust.org/about-us/
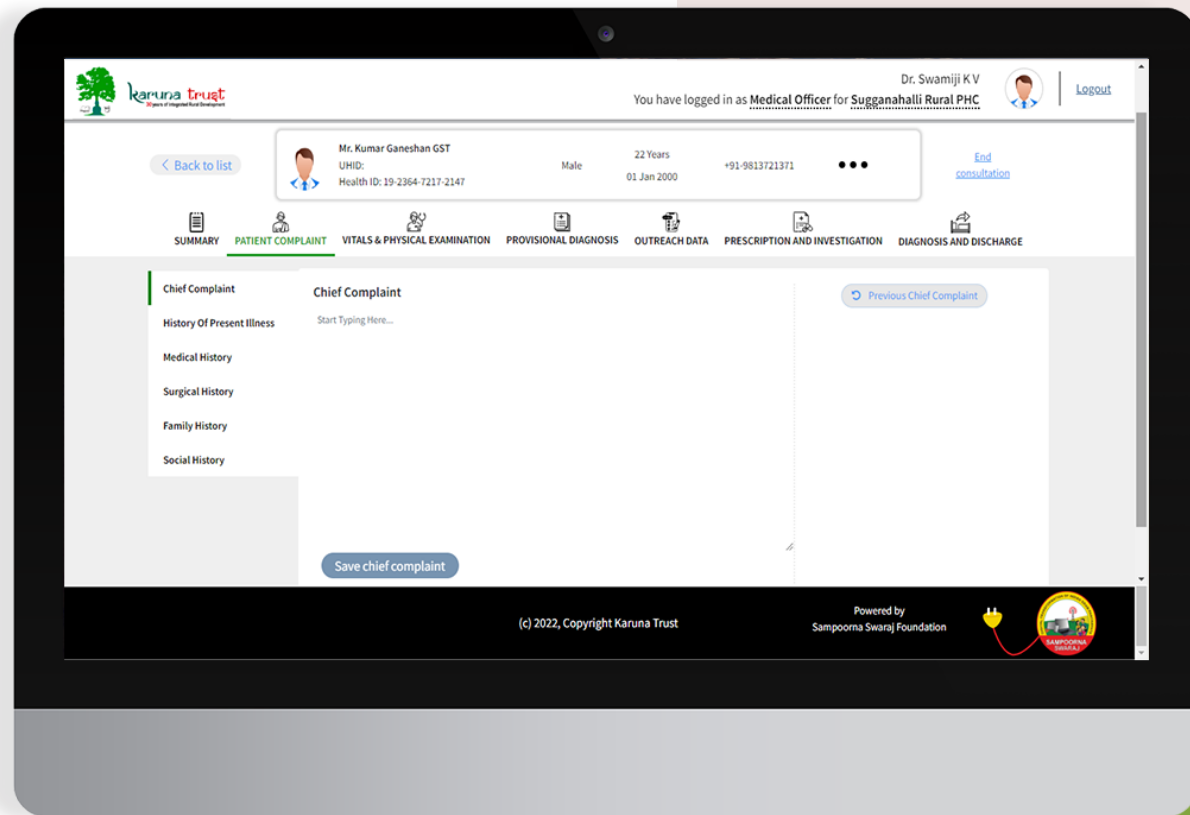karunatrustblr@gmail.com

Sampoorna Swaraj Foundation is working on bringing an integrated technological approach for the villages of India.

The intention is to bring all stakeholders together, that is, the Primary Health Care Centres and the Gram Panchayats to facilitate data acquisition at the point of data origin, data modeling, and predictive analytics using AI-Data Science - to enable data-driven, evidence based, timely decision making.

Contact us : contact@sampoornaswaraj.org
www.sampoornaswaraj.org

PHOTON

All-In-One Integrated Comprehensive PHC and HWC Management Solution

PHOTON

A platform that seamlessly integrates every function of a PHC including Health & Community Programs on a Common Platform.

Brings together every stakeholder from ASHA workers to Nurse to Lab Technicians to Pharmacist and Medical Officers, Citizens to Gram Panchayat Elected Representatives on a common platform.

PHOTON, India's first all-in-one integrated digital platform, is the most customizable, modular, comprehensive solution for every PHC and Health and Wellness Centre, partnered and tested by leading NGO Karuna Trust in collaboraion with Sampoorna Swaraj Foundation.

Health ID
The National Digital Health Mission has made it mandatory for all citizens to have an ABHA Number. This unique ID will allow a citizen to have access to Health Data at this finger tips. This WebApp allows us to issue ABHA ID to every village citizen and automatically register himself into the PHC EMR database.
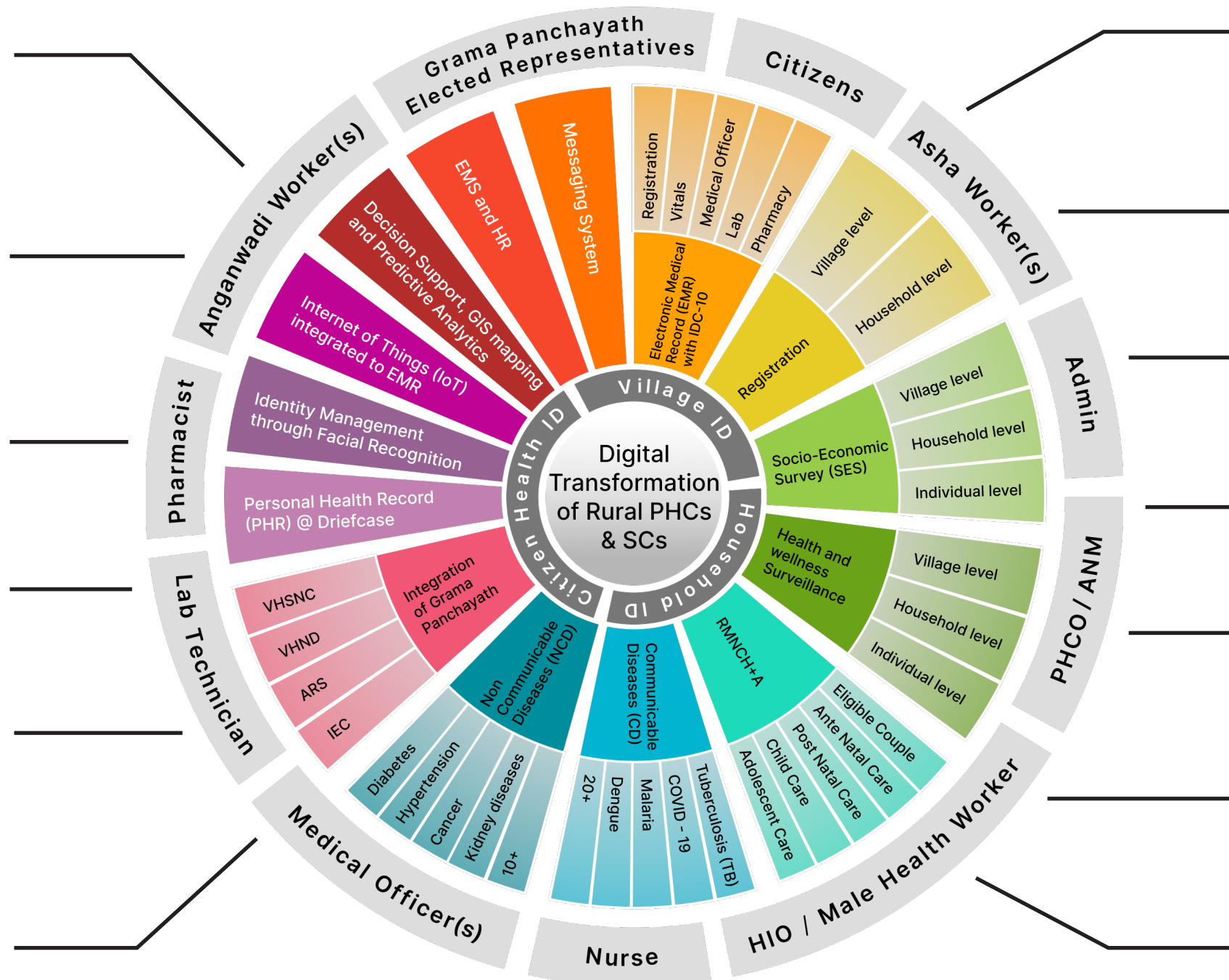
EMR - Electronic Medical Records
This Integrated WebApp allow every stakeholder in a CPHC and HWC to perform his responsibilities on the App. This allows for PHC to register a patient, based on his ABHA ID, perform the vitals, do the medical intervention, perform lab tests and prescribe and issue medication.

Personal Health Record (Driefcase)
The PHR address is given to every village citizen along with his ABHA ID, and this helps us to automatically store his Personal Health Record which can be shared with patient consent.

Internet of Things (IoT)
IoT devices to measure parameters such as SPO2, Blood Pressure and ECG of patients has been piloted and the data can be integrated with the EMR data of a patient

GIS mapping
Data collected using the MobileApps and the Web Apps is stored in a Datalake and algorithms are designed to present complex data in a spatially visual format, using GIS Mapping. Data can be visualized at PHC level, village level or Taluk level which helps in informed decision making.

Facial Recognition for Identity Management
Facial Recognition technology has been incorporated along with ABHA Number into our Database and this helps in easy registration process in the PHC.

Registration
The Mobile App used by an ASHA worker in a village documents the Village LGD Code with the location, the household Unique code and the ABHA Number of the household resident. These Unique IDs provide data reliability and consistency.

Socio Economic Survey
Socio-Economic survey is performed at Individual level, at household level and at village level, which will allow us to use data for informed decision making at individual as well as community level.

Health & Wellness Survey
Health & Wellness survey is performed at Individual, Household and Village level to provide us data which will enable us to analyze the impact of community and the infrastructure on individual wellness.

RMNCH+A
This App helps us monitor in real time the eligible couple status, the Ante-Natal and Post Natal and child care procedures and actions.

Programs
Programs such as Village Health, Nutrition and Sanitation and VHND and Arogya Rakshana Samiti, Pulse Polio etc. are collaboratively performed by Gram Panchayats and CPHCs. The Program Apps helps us conduct and monitor the progress of these programs.

Communicable Diseases
The Surveillance App allows us to collect data on Communicable Diseases -vector borne or water borne and the data is integrated into the EMR at the PHC and is available to the Medical Officer.

Non- Communicable Diseases
The NCD App consisting of 12 diseases, such as Diabetes, Hypertension etc allows us to collect data of citizens and again this data is integrated and made available to the doctor in his EMR during patient consultation.

Central Wheel Diagram labels:

Digital Transformation of Rural PHCs & SCs

Grama Panchayath Elected Representatives, Citizens, Asha Worker(s), Admin, PHCO / ANM, HIO / Male Health Worker, Nurse, Medical Officer(s), Lab Technician, Pharmacist, Anganwadi Worker(s)

Village ID, Health ID, Household ID, Citizen Health ID

EMS and HR, Messaging System, Decision Support, GIS mapping and Predictive Analytics, Internet of Things (IoT) integrated to EMR, Identity Management through Facial Recognition, Personal Health Record (PHR) @ Driefcase, Integration of Grama Panchayath

Registration, Vitals, Medical Officer, Lab, Pharmacy, Electronic Medical Record (EMR) with IDC-10

Village level, Household level, Registration, Socio-Economic Survey (SES), Village level, Household level, Individual level, Health and wellness Surveillance, Village level, Household level, Individual level, RMNCH+A, Eligible Couple, Ante Natal Care, Post Natal Care, Child Care, Adolescent Care

Communicable Diseases (CD), Tuberculosis (TB), COVID - 19, Malaria, Dengue, 20+, 10+, Non Communicable Diseases (NCD), Kidney diseases, Cancer, Hypertension, Diabetes

VHSNC, VHND, ARS, IEC

Future Enhancements in development...

- Navigated Learning Technology
- Natural Language Processing
- Block Chain Technology