



GPMS -RNTCP-ACF ONLINE NEW MODULE DEVELOPED AND INTEGRATED GPMS TB Transportal



Indian Centre For



Social Transformation
A Public Charitable Trust (Regd.)



GPMS TB Transportal



GPMS Universal Health Care Information Therapy Transportal Common Integrated Dashboard



About Indian CST:

Indian Centre For



Social Transformation
A Public Charitable Trust (Regd.)

Indian Centre for Social Transformation (Indian CST) is a registered Public Charitable Trust (Registration No. HLS-4-002282009-10 dated 26/12/2009) whose mission is to work towards realization of a national vision set out in Article 51A (j) of the Indian Constitution- which prescribes the Fundamental Duty for Indian Citizens and exhorts them "to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement."

The goal of Indian CST is to promote through this one stop portal, a number of projects that will deliver cost effective computing, best practices, knowledge management systems and critical applications at affordable costs to masses across India. Indian CST truly believes in 'IT for Social Change'.

www.indiancst.in & www.indiancst.com

Initiative by the Ministry of Health and Family Welfare, Govt. of India, NITI AAYOG, Govt. of Karnataka Powered by Indian CST.





GPMS TB Transportal

Integrated Health care for Better Karnataka

Indian Centre For



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- Sustainable Action for Transforming Human Capital (**SATH**) is an initiative through which NITI Aayog will partner with three states to transform the health sector of the Indian state.
- NITI Aayog (Premier think tank of the government of India) has selected Karnataka to improve health care delivery and key outcomes along with Uttar Pradesh and Assam.
(<https://www.karnataka.gov.in/hfw/pages/home.aspx>)
- Indian CST inked the MOU with Department of Health & Family Welfare, Government of Karnataka for an integrated GPMS Transportal for Universal Health care

(<https://indiancst.com/India/universalhealthcare/?module=main&action=SignIn>)

<https://tbindia.indiancst.com/GPMSTBTransportal/>

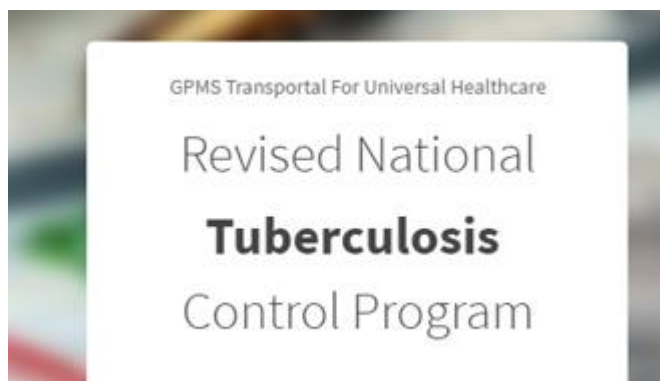


RNTCP – GPMS TB Transportal Digital ACF survey July 2019

How to access RNTCP- ACF Online

Step 1: Click On the below URL to login to
GPMS Transportal for universal Health care

<https://tbindia.indiancst.com/GPMSTBTransportal/>





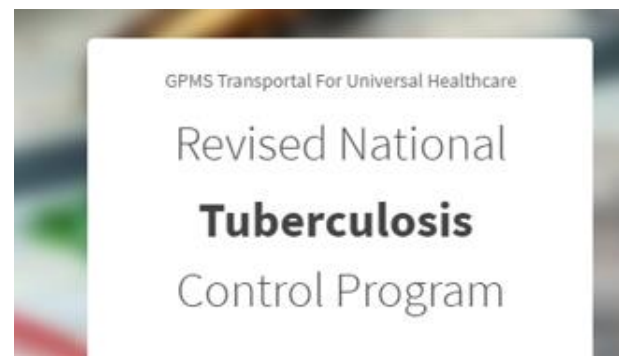
Revised National Tuberculosis Control Program

GPMS TB Transportal

Digital ACF Survey For High Risk Taluks (Bengaluru Urban, BBMP, Tumakuru, Chikkaballapura, Kolar) conducted in 4 Districts of Karnataka using GPMS TB Transportal For Universal Healthcare . **Direct intervention of ICT for ACF using GPMS ACF Online will drastically reduce cost and improve accuracy of data (scalable and low cost model).**

Services Provided through the Portal

Capacity building and Training program for the utilization of the Mobile/Tab based App were provided for the ASHA Mentors, STElectronic patient registration cloud computing platform provides a integrated solution for eliminating the need for manual entry of data in the health sector as a whole. Treatment Compliance, Availability of Patient digital medical records,, STLS and Lab Technicians of the selected districts.



<https://tbindia.indiancst.com/GPMSTBTransportal/>

GPMS TB Transportal Digital ACF survey

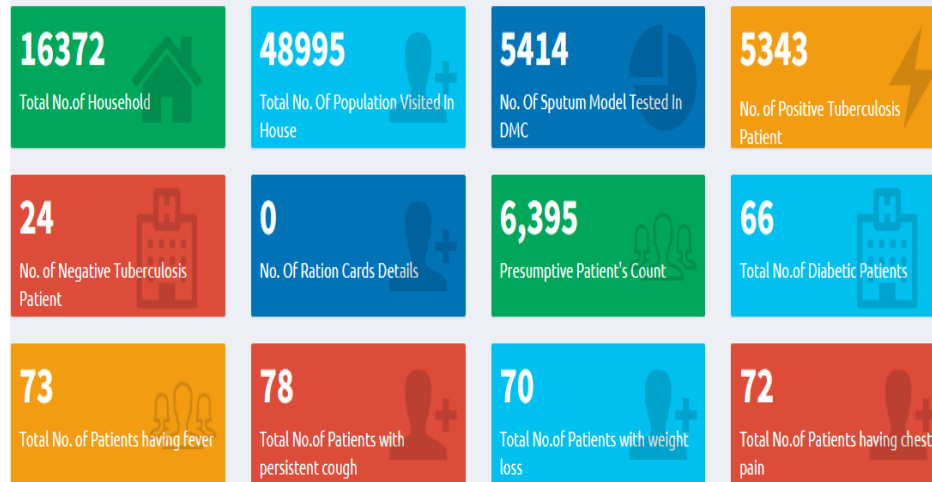
Direct intervention of ICT for ACF using GPMS ACF Online will drastically reduce cost and improve accuracy of data (scalable and low cost model).

Real Time Dashboard

Digital ACF Survey For High Risk Taluks(Bengaluru Urban, BBMP, Tumakuru, Chikkaballapura, Kolar) In 4 Districts of Karnataka (Revised National Tuberculosis Control Program)

GPMS Transportal For Universal Healthcare (July 2019)

N-ACF



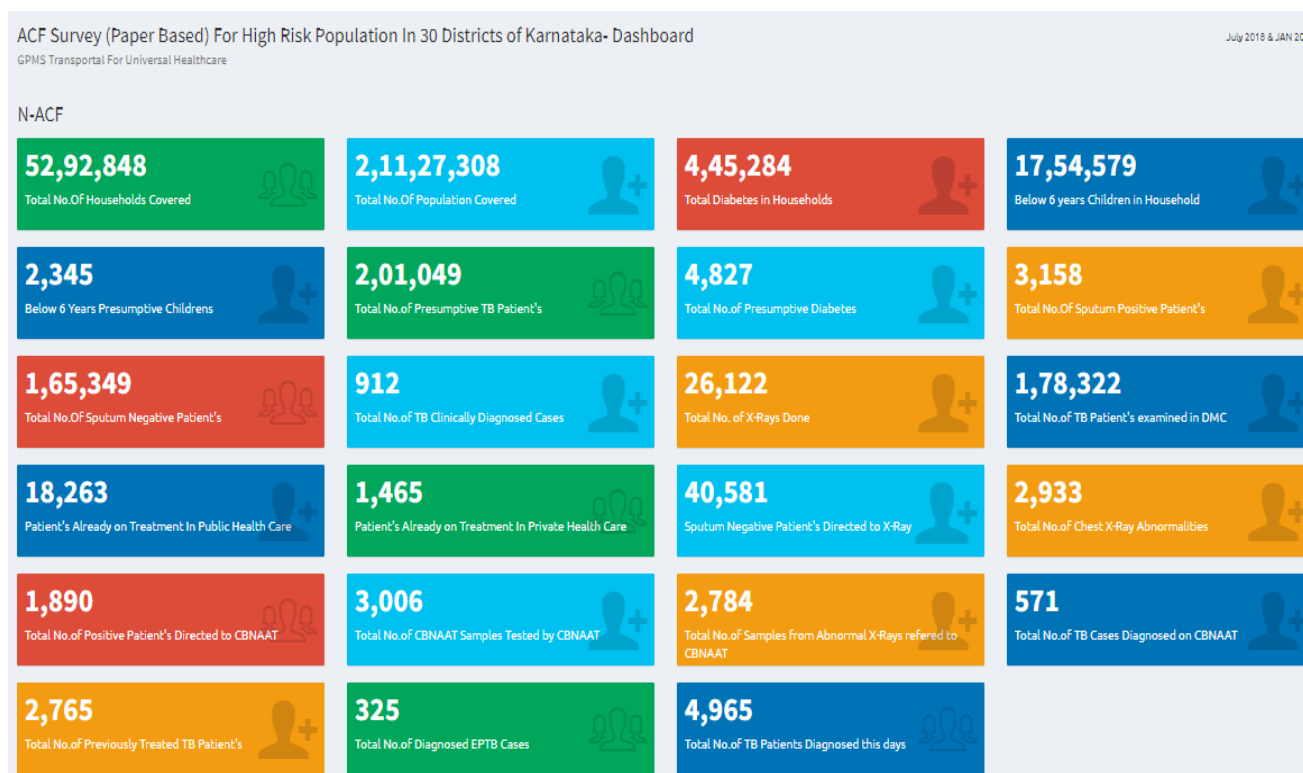
Impact:

- Direct digitization at source aided by MBBS interns of Ramaiah Medical College (part of their rural initiative), Health Inspector & Indian CST along with the ASHA worker.
- Found to be very easy and doable under a minute for each household.
- Easier to follow up during treatment compliance regime.
- Real time analysis of the work carried out by the ASHA worker thereby enabling the ASHA Mentor/Supervisor to provide DBT based on the work done by the ASHA worker.
- Offline entry mode enabled the ASHA workers to enter the data points even without connectivity.
- Provided an easy mechanism to understand which houses have to be re-visited to complete the screening.
- Reduces burden on an already overburdened system.
- Introduction of an efficient system.
- Enables real time decision monitoring and support system.

<https://tbindia.indiancst.com/GPMSTBTransportal/>

GPMS TB Transportal Digital ACF survey

One time survey data on paper (Jan 2nd 2019 – 14th Feb 2019 ACF Survey –Karnataka) by 28000 field workers 45 days being digitized on GPMS TB Transportal, 2028 new cases found (non scalable and expensive model)



<https://tbindia.indiancst.com/GPMSTBTransportal/>

Initiative by the Ministry of Health and Family Welfare, Govt. of India, NITI AAYOG, Govt. of Karnataka Powered by Indian CST.



GPMS Universal Health Care Information Therapy Transportal Common Integrated Dashboard



Revised National Tuberculosis Control Program Online New Module Developed and Integrated

GPMS TB Transportal Digital ACF survey

ACF Employee's Daily Activity form -1

Select Form 2 from the Side Left Panel for capturing the details of presumptive TB cases

Dashboard

Form One

Form One and Two

Form Three Report

Form Four and Five

Analytics

District Tuberculosis Disease Control Officers Office

ACF Employee Daily Activity Program Field In Form - 1 And Form - 2 (Revised National Tuberculosis Control Program)

GPMS Transportal For Universal Healthcare

Form - 1

State

Karnataka

District

Kolar

Primary Health Centre

--Select--

Sub Centre

--Select--

Ration Card

Name Of The Head Of The Family

Address

Total Number Of Family Members

Numbers Of People Tested

Numbers Of Childrens Below Six Years

Numbers Of Diabetes Patients

<https://tbindia.indiancst.com/GPMSTBTransportal/>

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8



GPMS Universal Health Care Information Therapy Transportal
Common Integrated Dashboard



Revised National Tuberculosis Control Program
GPMS TB Transportal Digital ACF survey

ACF Employee's Daily Activity Program Field form -1

Numbers Of Presumptive TB Patients

Number Of Sputum Samples Collected From
Presumptive TB Patients

Patients Already On TB Treatment

Government

Private

Number Of House Visited

☐ T ☒ X

Date

dd-mm-yyyy

Remarks

<https://tbindia.indiancst.com/GPMSTBTransportal/>

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GPMS Universal Health Care Information Therapy Transportal Common Integrated Dashboard



Revised National Tuberculosis Control Program GPMS TB Transportal Digital ACF survey

Select Form 2 from the Side Left Panel

Form - 2 **ACF Employee's Daily Activity form -2**

Name Of Presumptive TB Patient

Sex

Age

Full Address And Mobile Number

Have You Ever Been Treated For Tuberculosis Previously

☐ Yes ☐ No

Is He/She Diabetic Patient?

☐ Yes ☐ No

Fever for 2 weeks

☐ Yes ☐ No

Presence of blood in sputum any time during last 6 months

☐ Yes ☐ No

Chest pain in last one month

☐ Yes ☐ No

Persistent cough for 2 weeks

☐ Yes ☐ No

Significant weight loss

☐ Yes ☐ No

History of Anti-TB Treatment (previous / current)

☐ Yes ☐ No

Name OF DMC Where Sputum Sample Was Sent?

Remarks

Feed the data for Form 2 again for the next presumptive case in the same family.



GPMS Universal Health Care Information Therapy Transportal Common Integrated Dashboard



Revised National Tuberculosis Control GPMS TB Transportal Digital ACF survey

Primary Health Centre Field Activity Form-3 Consolidated

From the Side Left Panel Click On Form 3 for consolidated report generated from form 1 and form2

Government of Karnataka

ACF Employee Daily Activity Program Field In Form - 3 (Revised National Tuberculosis Control Program)

GPMS Transportal For Universal Healthcare

State Karnataka	District --Select--	Primary Health Centre
Sub Centre	Submit	

Primary Health Center Field Activity

Date	Name Of Target Population	Total No. Of High Risk(HR) Population Visited In House	Total No. Of Children's below Six Years	Total No. Of Diabetes Patients	Patients already On TB Treatment		Total No. Of Presumptive TB Patients Identified While Home Visits	Among Presumptive TB Patients Who Are Identified Through Home Visits		
					Government	Private		Children below Six	Diabetes Patients	Previously Treatment Taken For Tuberculosis
26-07-2019	17	3004	226	61	15	6	0			
25-07-2019	3	4434	355	92	2	30	9			
24-07-2019	17	2852	197	110	1	8	0			
23-07-2019	61	4576	298	134	1	1	24			
22-07-2019	19	3832	219	122	3	0	23			
20-07-2019	18	3365	225	89	3	16	0			
19-07-2019	43	4440	381	148	14	0	4			
18-07-2019	56	5698	393	167	73	16	13			
17-07-2019	27	4448	367	165	40	62	15			
16-07-2019	71	2318	191	85	14	11	3			

Showing 1 to 10 of 12 entries

<https://tbindia.indiancst.com/GPMSTBTransportal/>

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GPMS Universal Health Care Information Therapy Transportal Common Integrated Dashboard



Revised National Tuberculosis Control GPMS TB Transportal Digital ACF survey

From the Side Left Panel select Form 4 for DMC wise data capture

DMC Wise TB Unit Level Form (Revised National Tuberculosis Control Program)

GPMS Transportal For Universal Healthcare

Tuberculosis Unit Field Activity Daily Report

State

Karnataka



District

-Select-



Tuberculosis Unit

-Select-



DMC

-Select-



Reporting Date

05-07-2019

Total No. Of Sputum Tested In DMC

Total No. Of Patient Tested Positive From Total Sputum Samples(Sputum Positive)

Total No. Of Patient Tested Negative From Sputum Samples (Sputum Negative)

Total No. Of Sputum Positive Samples Directed To CBNAAT

Total No. Of Sputum Negative Patients Directed To X-Ray

Number Of Patient undergone X-ray

Total Number Of ChestX-Ray Abnormal Cases Found

Total Number Of Samples From Abnormal X-Ray Refer to CBNAAT

Total No. Of Samples From Abnormal X-Ray Tested at CBNAAT

<https://tbindia.indiancst.com/GPMSTBTransportal/>



GPMS Universal Health Care Information Therapy Transportal Common Integrated Dashboard



Revised National Tuberculosis Control GPMS TB Transportal Digital ACF survey

From the Side Left Panel Click On Form 5 for Report

TB Control Program

Dashboard
Form One
Form Four and Five
Form Four
Form Five Report
Analytics

Government of Karnataka
District Leval Report Form (Revised National Tuberculosis Control Program)

District Tuberculosis Center Filed Activity Form 5

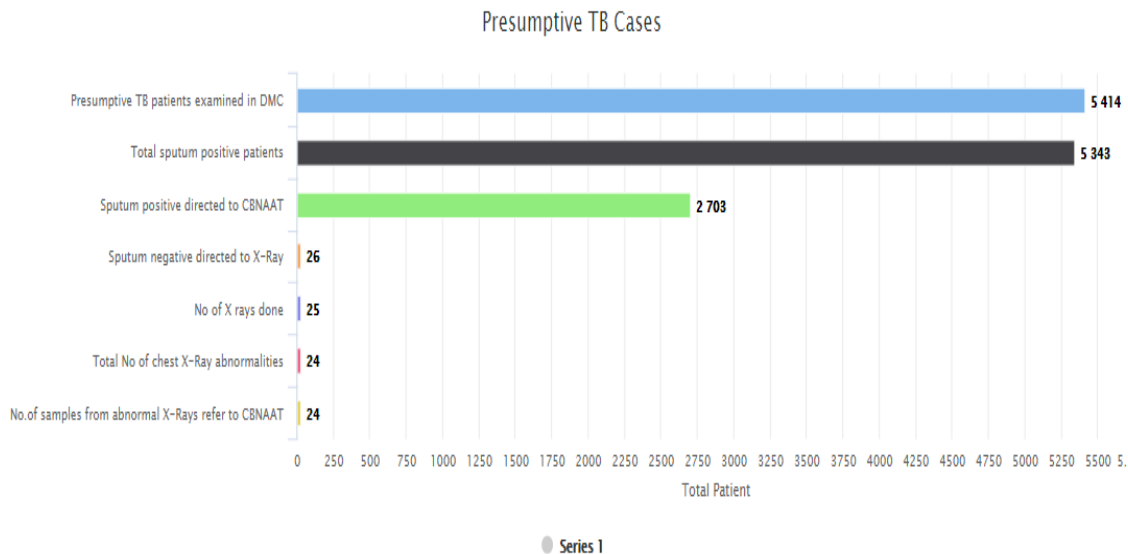
Date	Tuberculosis Unit Name	Total No. Of Sputum Samples Tested At DMC	Total No. Of Patient Tested Positive From Total Sputum Samples(Sputum Positive)	Total No. Of Patient Negative From Sputum Samples(Sputum Negative)	Total No. Of Sputum Positive Samples Directed To CBNAAT	Total No. Of Sputum Negative Patients Directed To X-Ray	Total No. Of Patients Undergone X-Ray	Total No. Of Chest X-Ray Abnormal Cases Found	Total No. Of Samples From Abnormal X-Rays Refer To CBNAAT	Total No. Of Samples From Abnormal X-Rays Tested at CBNAAT
01-01-1970	Test	1	1	1	1	1	0	1	0	1

<https://tbindia.indiancst.com/GPMSTBTransportal/>



Revised National Tuberculosis Control GPMS TB Transportal Digital ACF survey

Government of Karnataka - Active Case Finding (ACF) TB Survey January -2019 -Analytics report



<https://tbindia.indiancst.com/GPMSTBTransportal/>

Project Sites in Karnataka: Screening of Population in High-Risk Habitat



Districts	Bengaluru Urban (1)#	Chikkaballapura (2)#	Kolar (3)#	Tumkur (4)#
Total Population (Projected 2017 in Million)	12.3	1.3	1.6	2.74
Target Population TB Patients(2017-18)	18,652	1662	1638	3285
Public Healthcare Facilities	634	289	361	722
Private Hospitals	7170	20	76	332
Asha Workers	2893	947	994	1812
RNTCP Infrastructure				
District Tuberculosis Centres (DTC)	2	1	1	1
Tuberculosis Centres	24	5	5	11
Designated Microscopy Centres (DMC)	98	13	15	29
Drug Resistant TB Centres (DR-TB)	1	NA	NA	NA
CBNAAT Centers	3	1	1	2
Intermediate Reference Lab (IRL)	1	NA	NA	NA

Impact of Our Innovation

- The total number of infected individuals in our proposed target districts presently accounts to 25,237 (2017-2018).
- From this we can estimate an additional 5,000 - 10,000 (20% - 40% of reported patients) to be the missing patients whose reduction and increase monitored compliance will be used as an indicator of the impact of our innovation

Justification for selection of project targeted sites

1. High density & Migratory Population;
2. Medical College Access;
3. Mines;
4. Quarries

Missing Million: Karnataka Pilot Study

Prof. Samir K. Brahmachari

Academy Professor, AcSIR & Founder Director CSIR-IGIB

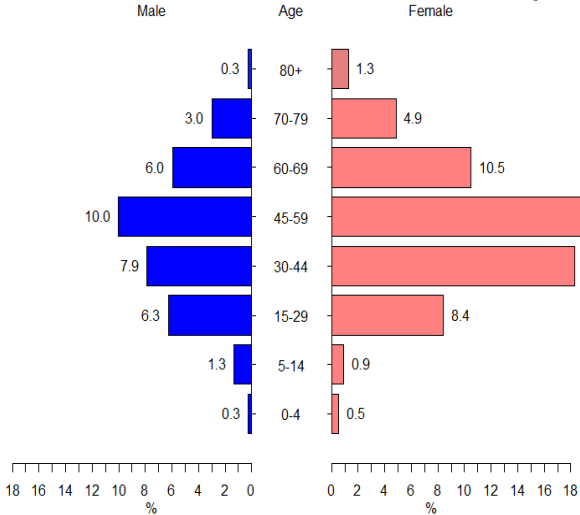
Chief Mentor, Open Source Drug Discovery

**Centre for Open Innovation, Indian Centre for Social
Transformation, Bangalore**

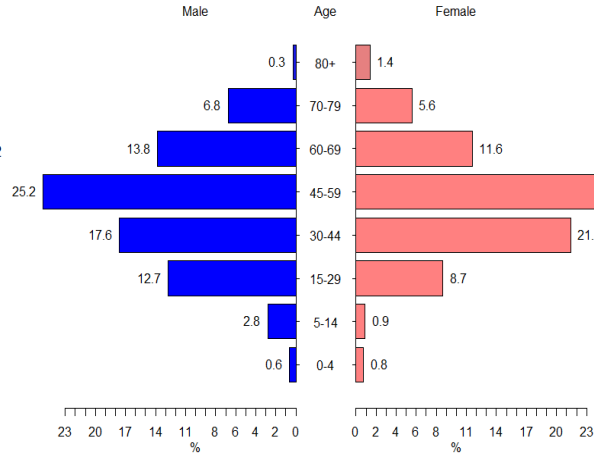
Former Director General, CSIR

Economic Burden of TB in India

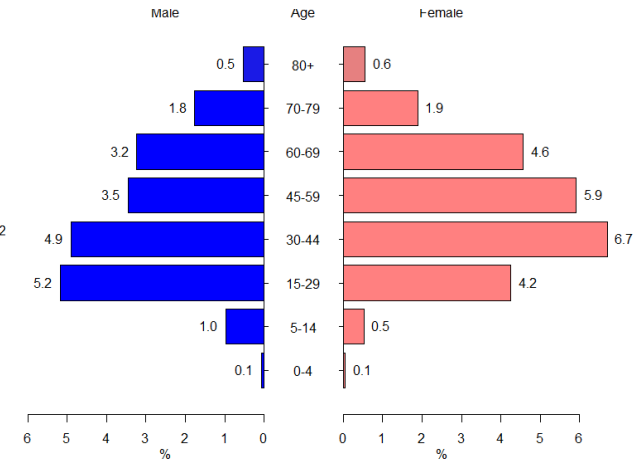
India DALYs Lost due to TB (2015)



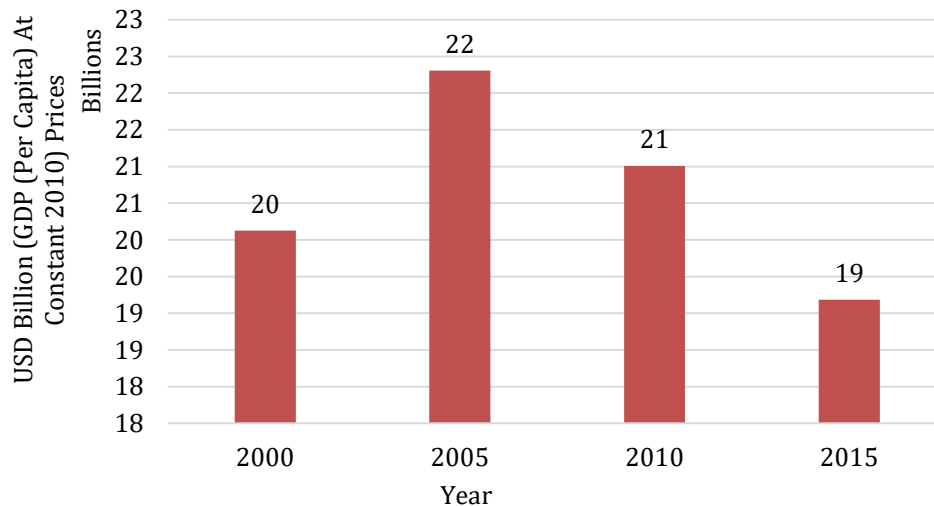
India YLLs as % of DALYs (2015)



India YLDs as % of DALYs (2015)



Yearwise Economic Loss In India Due to Tuberculosis



The year 2005 was also the year the Revised National Tuberculosis Program (RNTCP) was massively overhauled, as the disease burden of tuberculosis had become alarming

NEED DISRUPTIVE INNOVATION



GPMS TB TRANSPORTAL Innovative ICT Solution to Identify, Track and Ensure Treatment Compliance of TB Patients

Mr. Raja Seevan
(Project Coordinator)

Founder Trustee Indian Centre for Social Transformation (Indian CST)
(Registered Public Charitable Trust)

1st Floor, 25 Grace Mansion Infantry Road, Bengaluru, 560001
Karnataka, India

(<https://indiancst.com>)
(www.indiancst.in)



**Cloud Computing & Technical
Capabilities**

**GPMS Virtual TB
ROOM**

**Crowd Sourcing Medical Interns & Clinical
Knowledge Support**

AI/ML Cough Capture & Analysis



RAMAIAH
Medical College



INDRAPRASTHA INSTITUTE of
INFORMATION TECHNOLOGY DELHI

E-Pashuhaat GPMS Transportal

Healthy animal healthy
nation...



This portal was launched and is operational from 26th November, 2016 by the **Ministry of Agriculture and Farmers Welfare, Government of India**, under the Department of Animal Husbandry, Dairying and Fisheries (DADF).

- ❖ One stop for bovine breeders, sellers and buyers
- ❖ Minimizes the involvement of middlemen and Increase farmer's income
- ❖ Availability of disease free germplasm with known genetic merit
- ❖ Information on Veterinary Dispensary/Veterinary Hospital/Artificial Insemination Center/Mobile Veterinary Center etc.,

18,11,456
No.Of Live Animals



29,160
No.Of Organizations



10,15,20,335
Frozen Semen Doses
Produced



7,77,76,621
Frozen Semen Doses
Sold



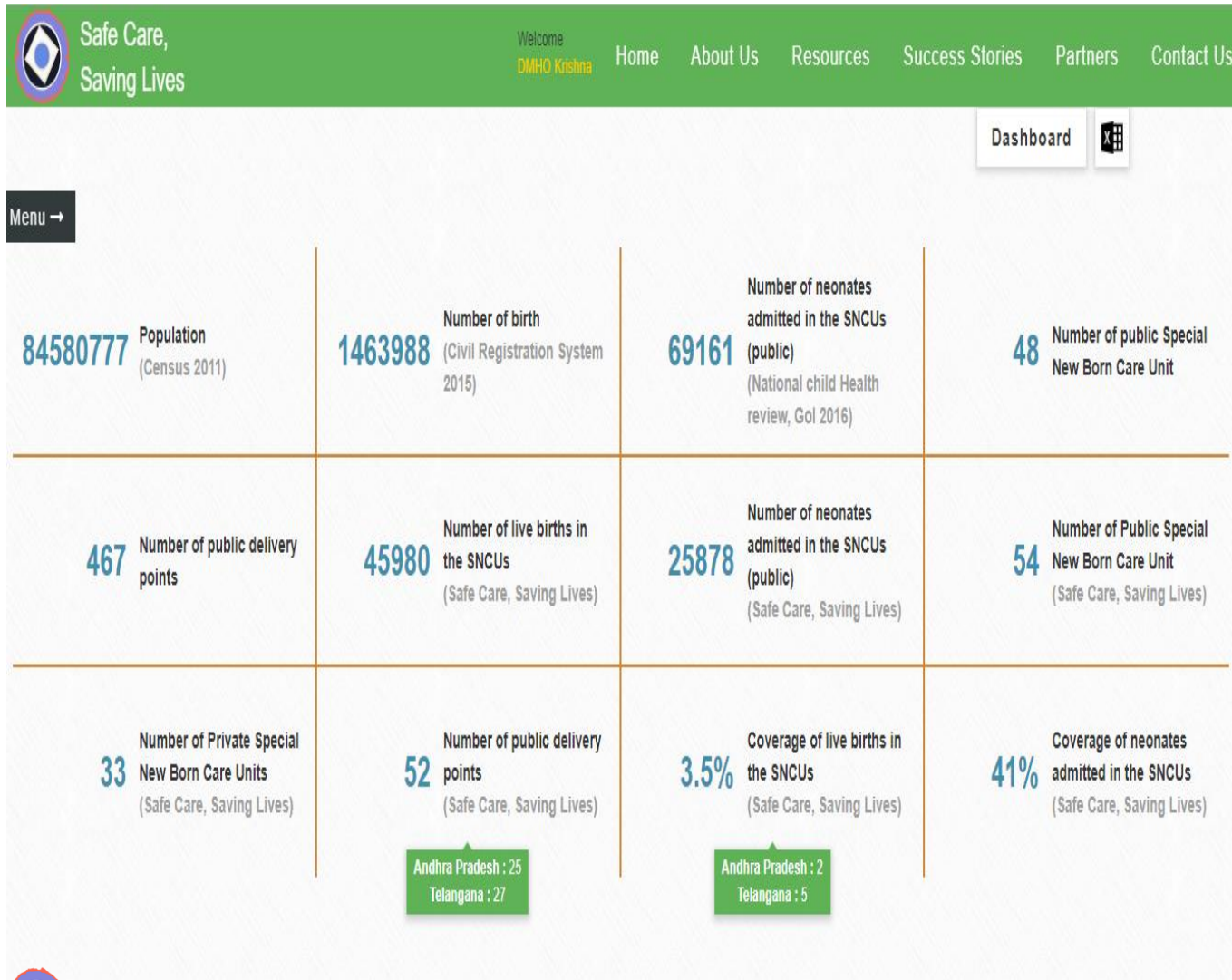
**E-Pashuhaat GPMS Transportal in
GOI. Mobile App UMANG**



**Current Status
Services Provided through
the Portal** Training, Animal
Certificates Services, Certification
Verification Services, Nutritional
advisory service, Good care
practice, Health Card Services,
Fodder Services, Artificial
Insemination Services, **SMS
reminder services, Disease
Screening and Testing, Mail
reminder services**

Indian CST – CSIR 4PI Capability in Cloud Hosting of Healthcare Data of AP & Telangana

The Safe Care, Saving Lives :Continuous Quality Improvement (CQI) to improve processes in the new-born area



*Accesses Health functional Healthcare portal, Maintained and Hosted in the **CSIR-4PI Cloud by Indian CST***



CSIR 4PI



Indian Centre For
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A Public Charitable Trust (Regd.)



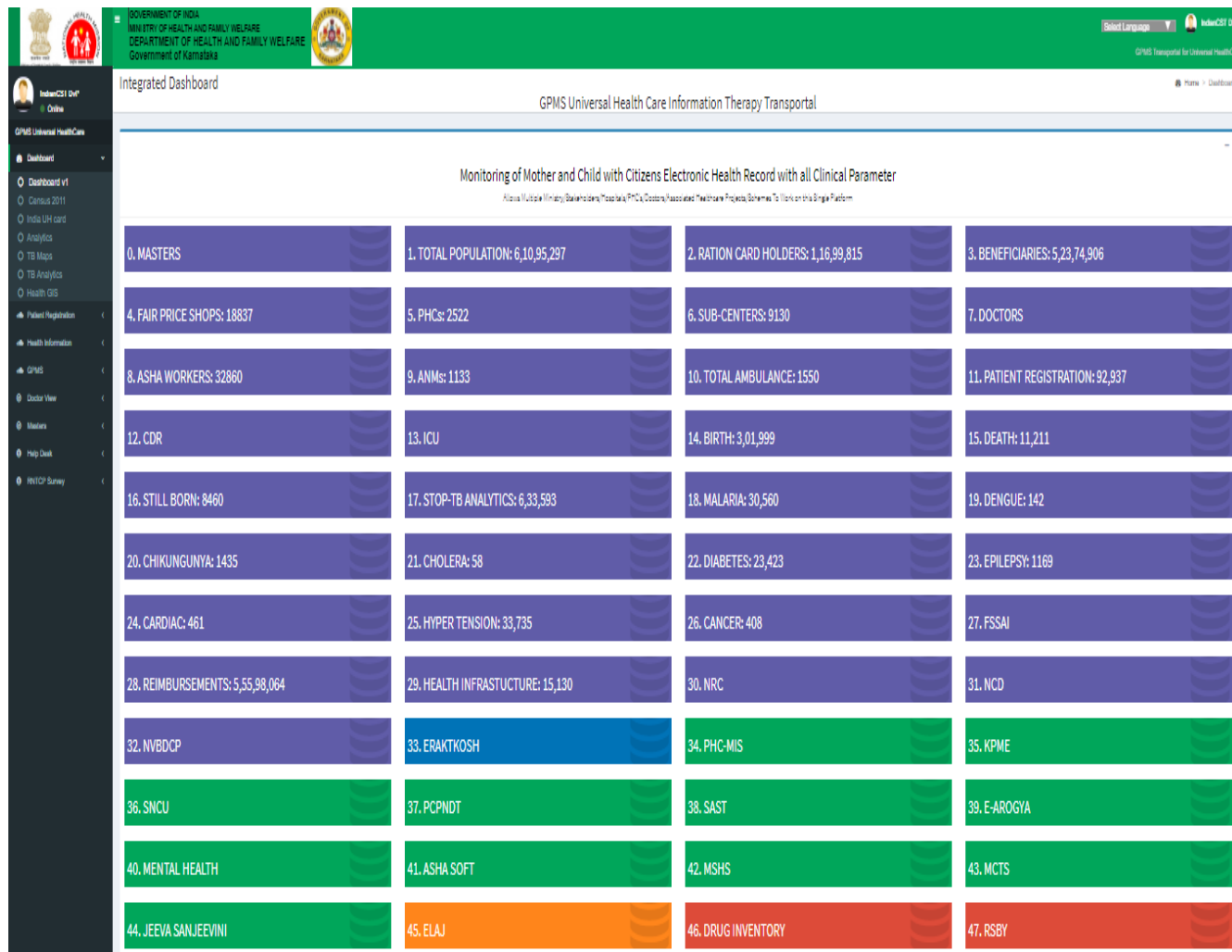
ACCESS
health international



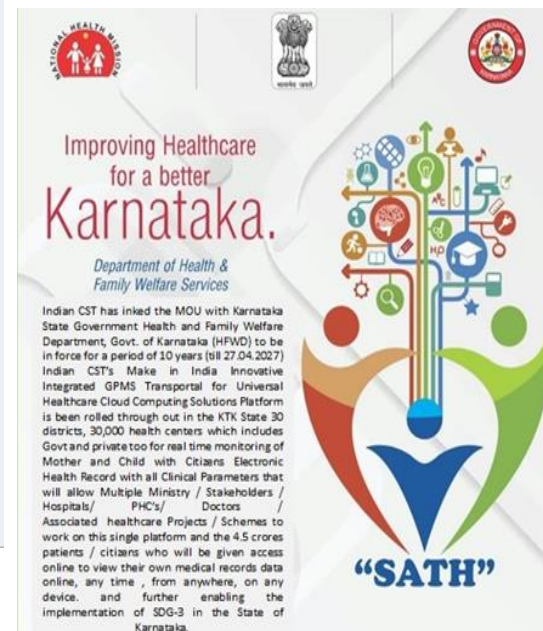
<http://safecaresavinglives.org/>

GPMS Transportal Used for Universal Healthcare for Karnataka

Single Cloud Computing Integrated Platform



The consolidated data pool will enable real time data capture at source and aggregation at State, District, Villages, Institutional, Organisational levels of all existing software applications used in the State of Karnataka. Thereby enabling Policy interventions to become data driven.



GPMS Transportal for Universal Healthcare

Integrated Health care for Better Karnataka



Improving Healthcare for a better Karnataka.
Department of Health & Family Welfare Services

Indian CST has inked the MOU with Karnataka State Government Health and Family Welfare Department, Govt. of Karnataka (HFW) to be in force for a period of 10 years (till 27-04-2027). Indian CST's Make in India Innovative Integrated GPMS Transportal for Universal Healthcare Cloud Computing Solutions Platform is being rolled through out in the KTK State 30 districts, 30,000 health centers which includes Govt and private too for real time monitoring of Mother and Child with Online Electronic Health Record with all Clinical Parameters that will allow Multiple Ministry / Stateholders / Hospitals / PHCs / Doctors / Associated Healthcare Projects / Schemes to work on this single platform and the 4.5 crores patients / citizens who will be given access online to view their own medical records data online, any time - from anywhere, on any device, and further enabling the implementation of SDG-3 in the State of Karnataka.

<http://www.karnataka.gov.in/hfw/Pages/Home.aspx> <https://indiancst.com/India/universalhealthcare/>

• SATH is an initiative through which NITI Aayog will partner with three states and to transform the health sector of the Indian states.

• NITI Aayog (the premier think tank of the Government of India) has selected Karnataka to improve healthcare delivery and key outcomes along with Uttar Pradesh and Assam.

Universal, easily accessible, affordable primary healthcare

- Comprehensive primary health care package with geriatric, palliative and rehabilitative care.
- Health Card for access to primary healthcare facility services anytime, anywhere.
- Free drugs and diagnostics along with low cost pharmacy chains (Jan Aushadhi stores)
- Free health care to victims of gender violence in public and private sector.

AFFORDABLE HEALTHCARE FOR ALL

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Initiative by the Ministry of Health and Family Welfare, Govt. of India, NITI AAYOG, Govt. of Karnataka Powered by Indian CST.

GPMS TB Transportal: Integration of Nikshay Data and Active Case Finding Survey Online for Karnataka*

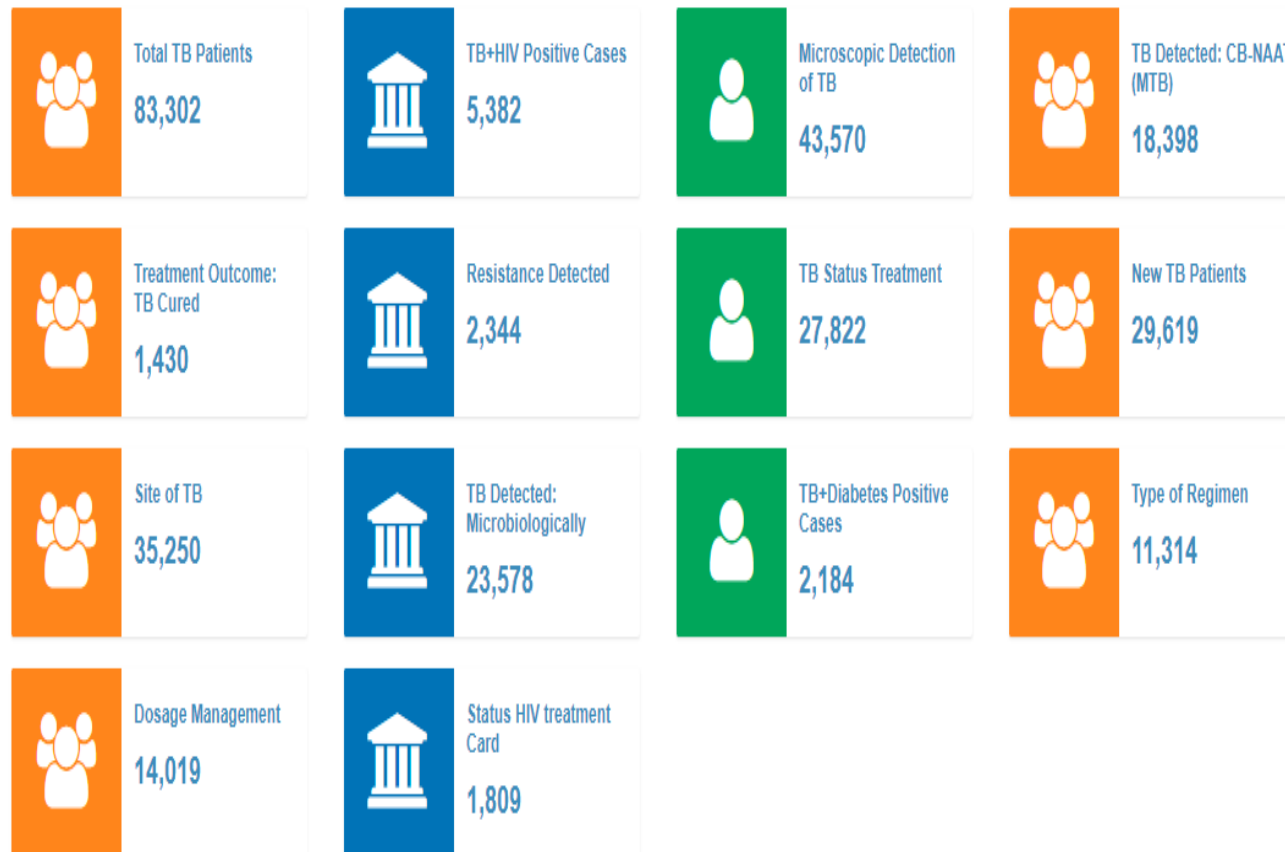
High end analysis & reports created through the GPMS TB Transportal.

Real Time Monitoring of TB Patients

Home > Dashboard

Directly Observed Therapy

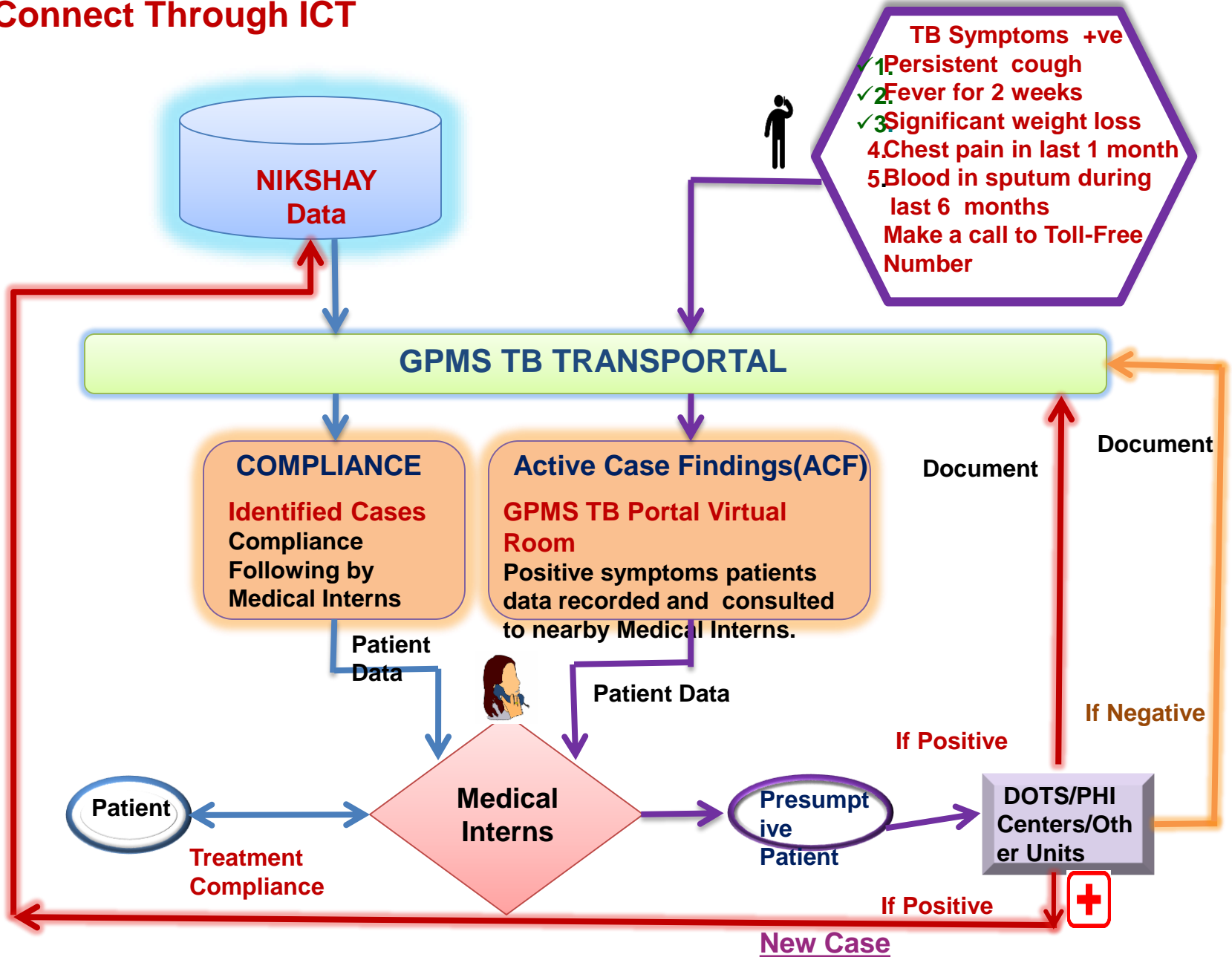
2017-2018



***MOU with DoH&FWS
Karnataka**

**Keeping a track of the TB
patients across the State
of Karnataka NIKSHAY
Version: 1.0**

Our Approach on Compliance & Missing Millions – Direct TB Patient Connect Through ICT



Project Sites in Karnataka: Screening of Population in High-Risk Habitat



Impact of Our Innovation

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
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3. Mines;
4. Quarries

MBBS Students/Interns Crowd Sourcing for Treatment Compliance and Active Case Finding(ACF)





Anju

Online

GPMS TB Transportal

Dashboard
Patient Registration
Health Information
GPMS
Intern

TB Patients List

Search

District

Select One

PHC NAME

Search

Page 1 of 1

Total Records : 10


Show
Per page

<<
<
1
Go
>
>>

Sl. No.	District	Diagnosis Date	MR No.	PHC	Checklist	View
1	Tumkur	28-06-2018	MR-00034700	Kunigal G H	Checklist	Patient Dashboard
2	Tumkur	23-06-2018	MR-00034699	District TB Center	Checklist	Patient Dashboard
3	Tumkur	23-06-2018	MR-00034698	Kunigal G H	Checklist	Patient Dashboard
4	Tumkur	19-06-2018	MR-00034697	District Health Lab	Checklist	Patient Dashboard
5	Tumkur	15-06-2018	MR-00034696	District TB Center	Checklist	Patient Dashboard
6	Tumkur	30-06-2018	MR-00034692	General Hospital Tiptur	Checklist	Patient Dashboard
7	Tumkur	21-06-2018	MR-00034691	Yaliyur	Checklist	Patient Dashboard

- Patients mapped to students by their respective PI.
- Data fetched from **NIKSHAY database** along with Pin code. (Unique Patient ID generated simultaneously.)
- 10 TB Patients mapped to each **MBBS Students/ Interns** along with their pin code (GIS mapping).
- In each login of **MBBS Students/ Interns** they get their respective patients id numbers of whom they will be tracking/monitoring.
- Students will also connect to potential high risk presumptive patients through GPMS TB Transportal by field visits and connect them to DOT/PHI centers.

Updating the treatment Compliance :MBBS Students/Interns

**Anju**
Online

GPMS TB Transportal

Dashboard

Patient Registration

Health Information

GPMS

Intern

Checklist for follow up for TB patient

Name : GANGADHAR Age : 30 Sex : M

1) How are you feeling now as compared to last week? ☐ Same ☒ Better ☐ Worse

2) Are the previous symptoms still persisting? ☒ Yes ☐ No

3) Is there reappearance of any symptoms? ☒ Yes ☐ No

4) Have you taken all the tablets in the last one week? ☐ Yes ☒ No

5) Did you have any problems while taking the drugs? ☐ Yes ☒ No

6) Are there any symptoms of ADR? ☒ Yes ☐ No

6).A. If yes, what symptoms

yesyesyesyesyes

7) Do you know how long the treatment for TB will last? ☒ Yes ☐ No

8) Do you know when you need to go for follow up next? ☒ Yes ☐ No

SubmitBack

- All medical Interns/Students will report to PI's (**Community Medicine Doctors**)
- Update and edit option enabled for the patient profile – only for the medical Interns/Students
 - **Updating the treatment regimen**
 - **Updating the patient details with time and GIS stamping approved by PI s (Community Medicine Doctors)**
- Integrate this project to **Indian Medical council AETCOM (Attitude, Ethics and communicate) curricula** for MBBS students.



RNTCP – GPMS Transportal Digital ACF survey

Available Across All Platforms - Mobile, Tablet & Desktop, Cloud



Indian Centre for Social Transformation was given the mandate to conduct pilot studies and provide capacity building for the digitization of Active Case Finding (ACF-Tuberculosis) during the second survey conducted from 15th July 2019 to 26th July 2019. Under the Department of Health & Family Welfare Services, Government of Karnataka.

Digital ACF Survey For High Risk Taluks (Bengaluru Urban, BBMP, Tumakuru, Chikkaballapura, Kolar) conducted in 4 Districts of Karnataka using GPMS Transportal .

RNTCP Mobile App

GPMS Transportal For Universal Healthcare

Revised National
Tuberculosis
Control Program

Email

Password

[Sign In](#)

[I forgot my password](#)



Services Provided through the Portal

Capacity building and Training program for the utilization of the Mobile/Tab based App were provided for the ASHA Mentors, STS, STLS and Lab Technicians of the selected district , Electronic patient registration cloud computing platform provides a integrated solution for eliminating the need for manual entry of data in the health sector as a whole. Treatment Compliance, Availability of Patient digital medical records, <https://indiancst.com/India/TBControlProgram/index.php/auth/login>

GPMS Transportal for Universal Healthcare

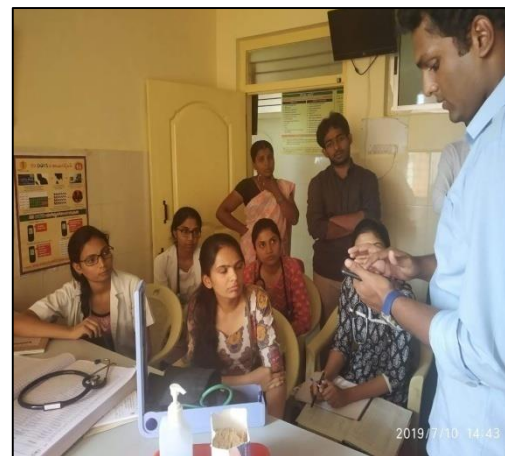
Digitization of ACF - TB Survey in July 2019 at Tumakuru , Chikkaballapur , Kolar, Bangalore Urban in Karnataka State



Dr. Samir K Brahmachari is providing insights into TB programs to Asha Workers and Health Inspectors



Indian CST Team is providing Hands on Training to Asha Workers



Indian CST Team is providing Hands on Training to Asha Workers



Indian CST Team recording the data of presumptive TB patient at their homes



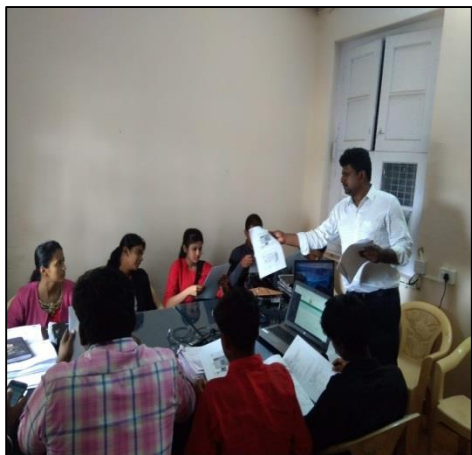
Indian CST Team recording the data of presumptive TB patient at their homes



Indian CST Team recording the data of presumptive TB patient at their homes

GPMS Transportal for Universal Healthcare

Digitization of ACF - TB Survey in July 2019 at Tumakuru , Chikkaballapur, Kolar, Bangalore Urban in Karnataka State



Digitization of ACF-TB Survey July 2019 at Tumakuru DTC, Office



ASHA Workers & Health Inspector during the Survey – Chintamani Taluk, Chikkaballapur District



Awareness class for kids at Chintamani Taluk, Chikkaballapur District



Conducting Training programs for Asha Workers and Health Inspectors



Indian CST Team in discussion with Karnataka State Health Officials



Indian CST Team is introducing the APP to the Ramaiah MBBS Interns @ Kaiwara PHC, Chintamani Taluk, Chikkaballapur District



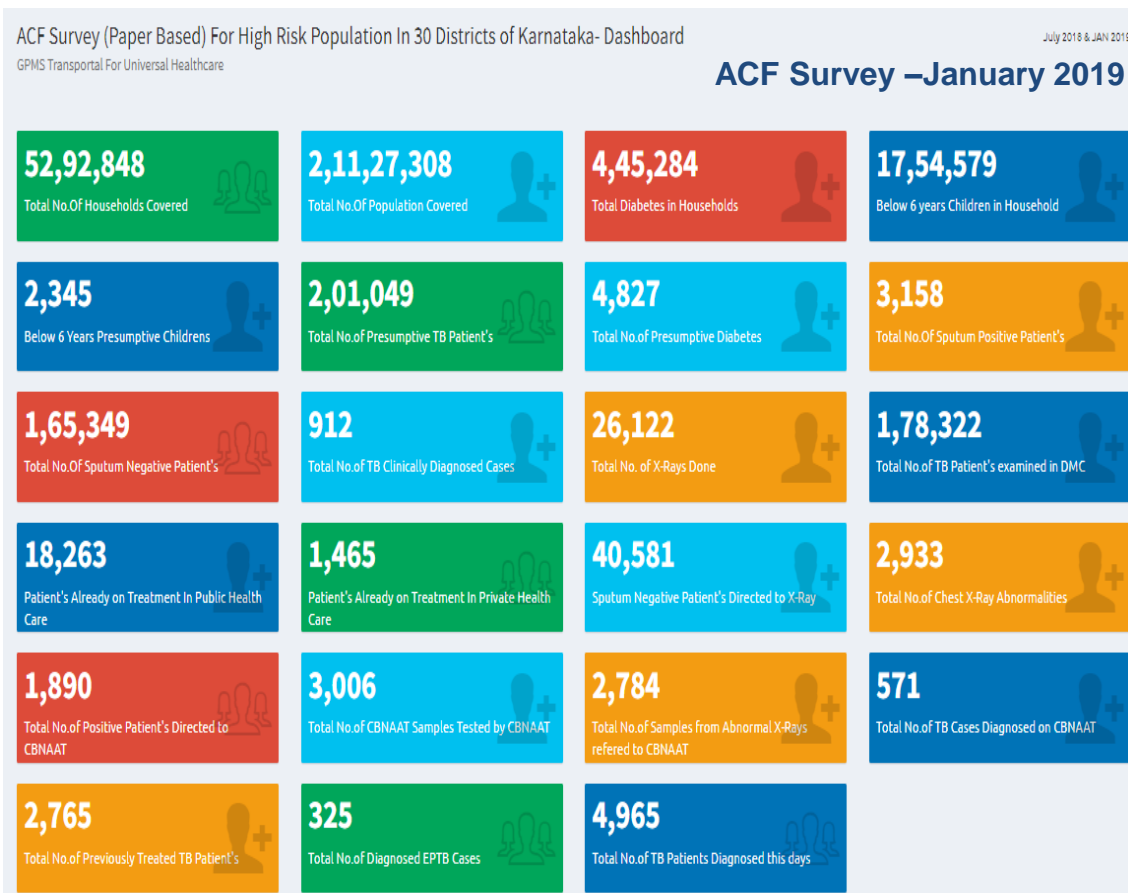
Indian CST Team is providing Hands on Training to Asha Workers



Indian CST Team is providing Hands on Training to Asha Workers

GPMS Transportal Digital ACF survey

One time survey data on paper (Jan 2nd 2019 – 14th Feb 2019 ACF Survey –Karnataka) by 28000 field workers 45 days being digitized on GPMS TB Transportal, 2028 new cases found (non scalable and expensive model).

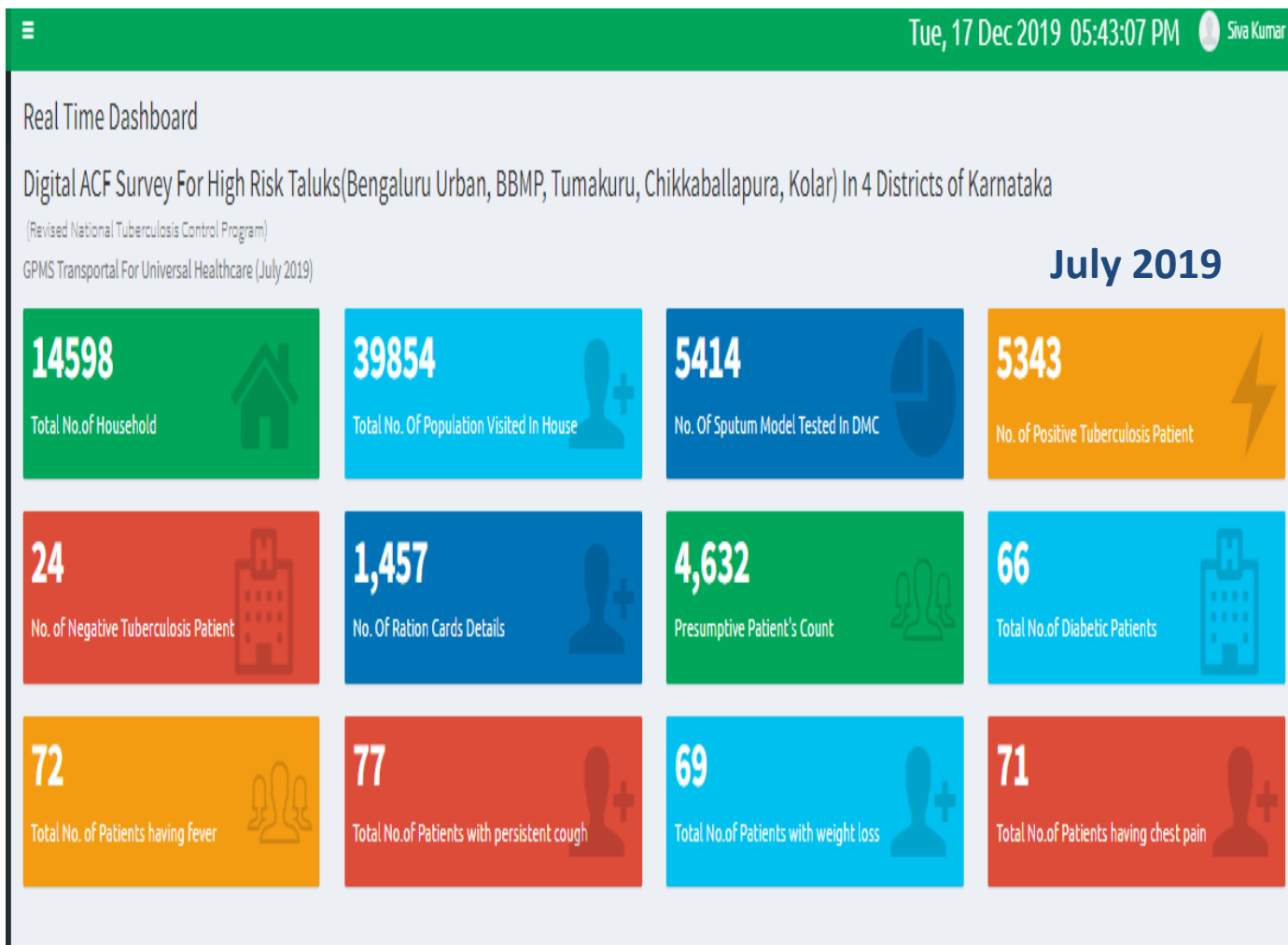


Impact:

- Direct digitization at source aided by MBBS interns of Ramaiah Medical College (part of their rural initiative), Health Inspector & Indian CST along with the ASHA worker.
- Found to be very easy and doable under a minute for each household.
- Easier to follow up during treatment compliance regime.
- Real time analysis of the work carried out by the ASHA worker thereby enabling the ASHA Mentor/Supervisor to provide DBT based on the work done by the ASHA worker.
- Offline entry mode enabled the ASHA workers to enter the data points even without connectivity.
- Provided an easy mechanism to understand which houses have to be re-visited to complete the screening.
- Reduces burden on an already overburdened system.
- Introduction of an efficient system.
- Enables real time decision monitoring and support system.

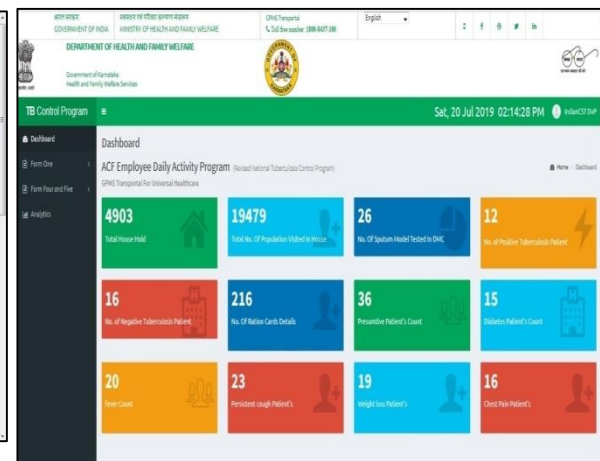
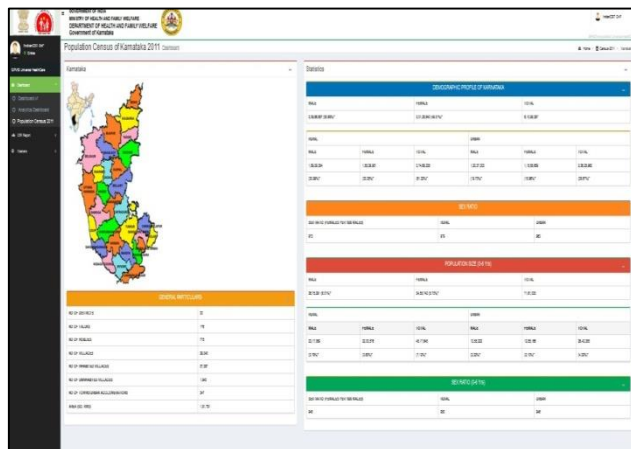
GPMS Transportal Digital ACF survey

Direct intervention of ICT for ACF using GPMS ACF Online will drastically reduce cost and improve accuracy of data (scalable and low cost model).

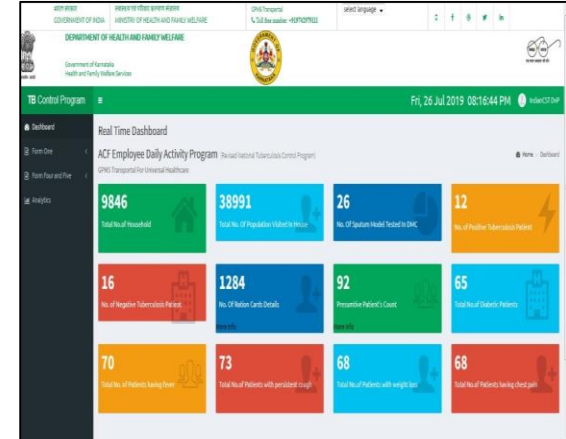
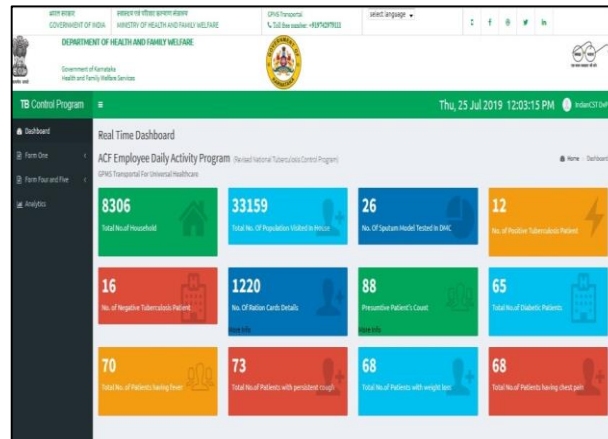
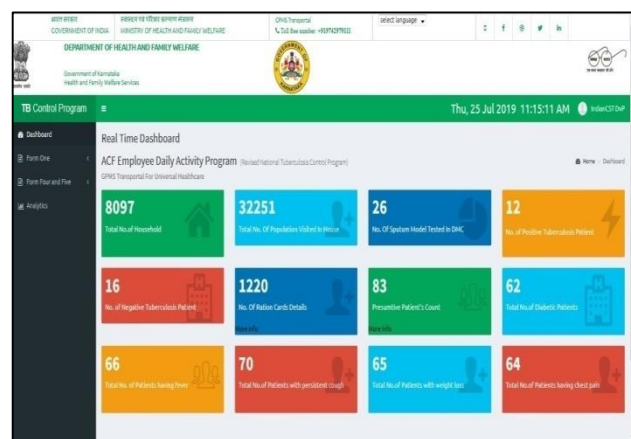


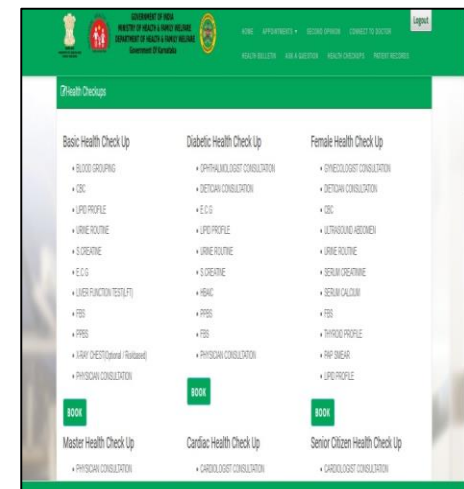
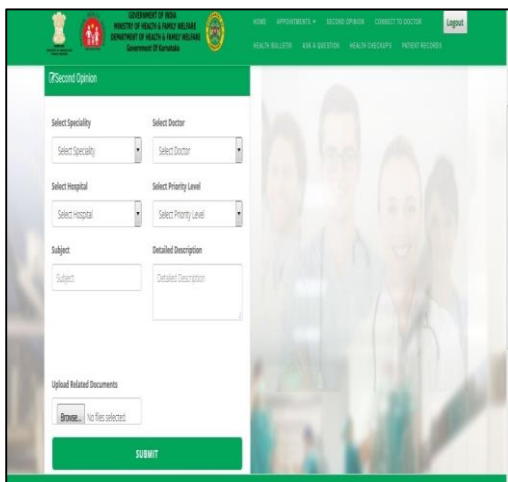
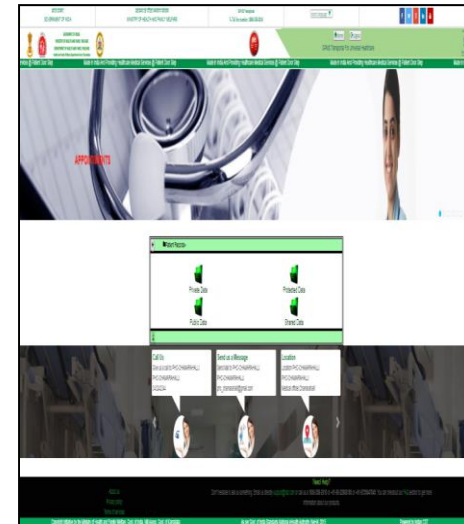
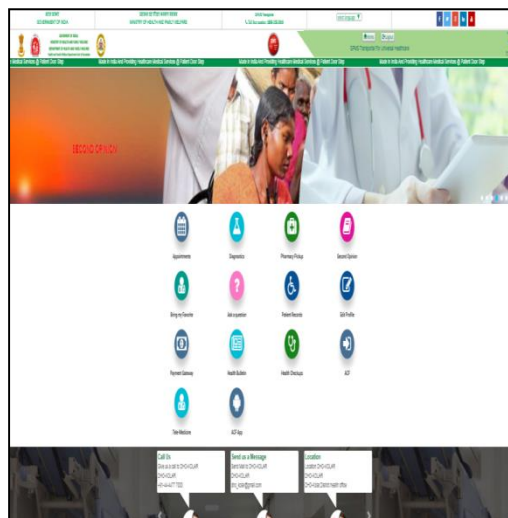
GPMS Transportal Universal Healthcare Dashboard

GPMS Transportal ACF Online Survey 26th July 2019 Real Time Dashboard

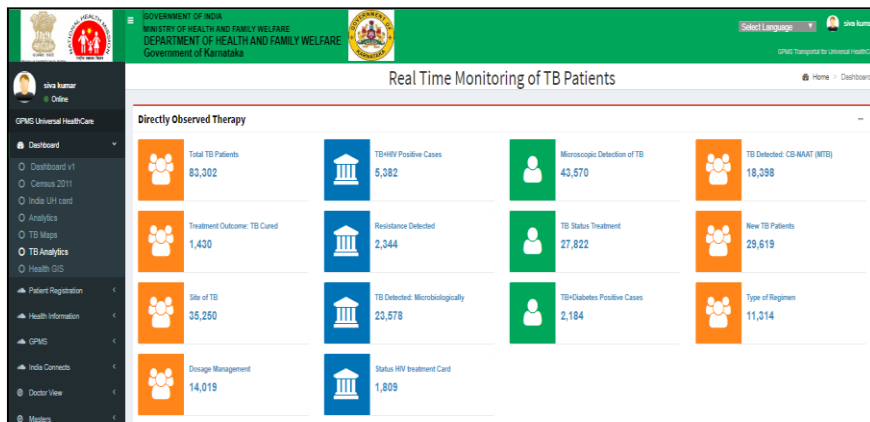


GPMS Transportal ACF Online Survey 25th July 2019 Real Time Dashboard

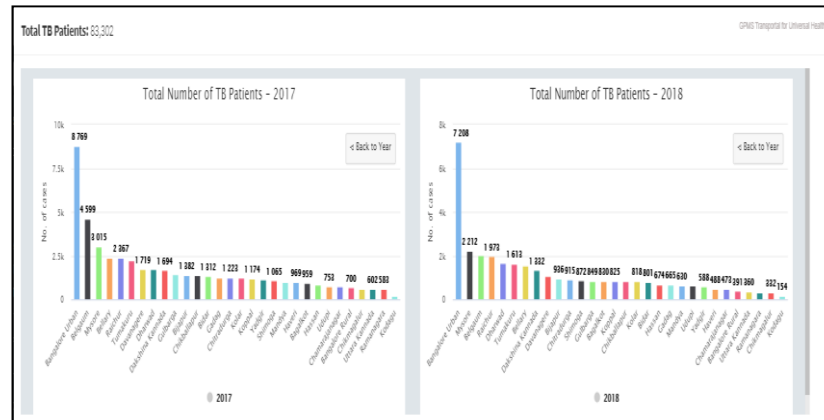




State wise TB Analytics

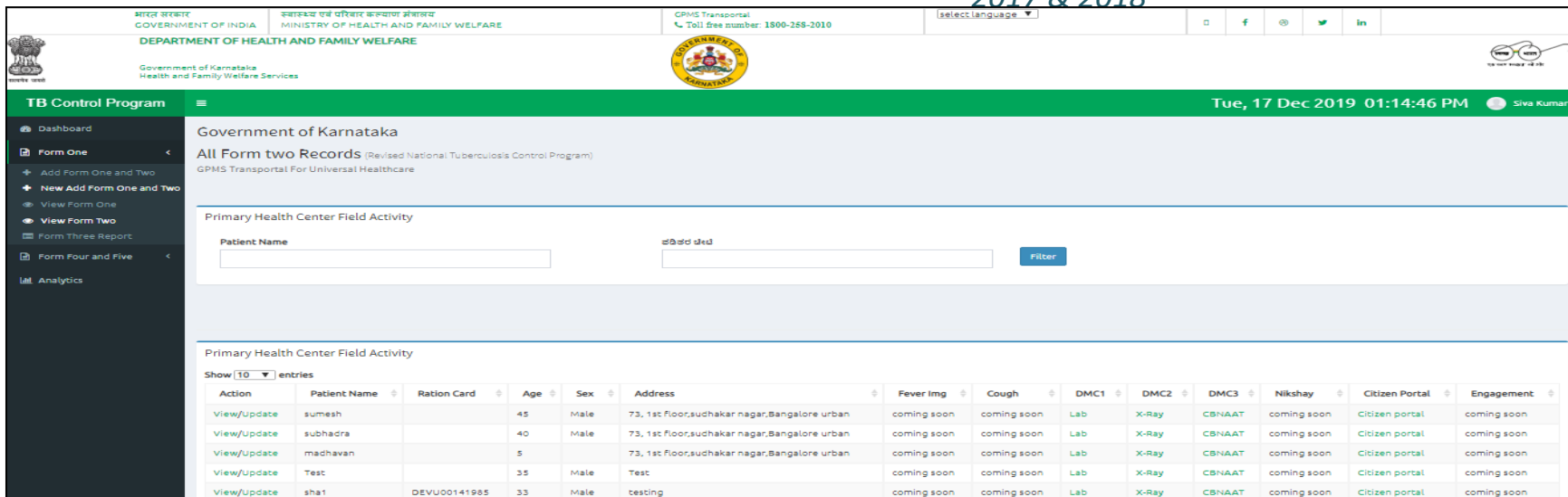


Mycobacterium tuberculosis (MTB) Analytics Year wise



Source: As per NIKSHAY 1.0

Source: Karnataka State NIKSHAY Data – 2017 & 2018



TB Control Program

Government of Karnataka

All Form two Records (Revised National Tuberculosis Control Program)

GPMS Transportal For Universal Healthcare

Primary Health Center Field Activity

Patient Name: Official ID: Filter

Primary Health Center Field Activity

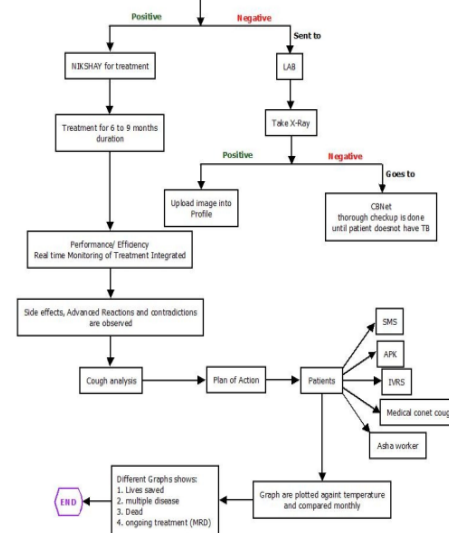
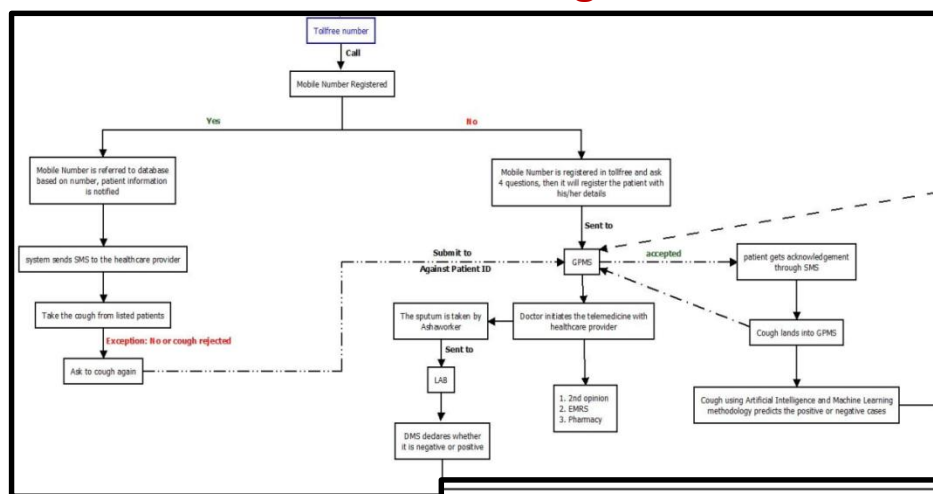
Show 10 entries

Action	Patient Name	Ration Card	Age	Sex	Address	Fever Img	Cough	DMC1	DMC2	DMC3	Nikshay	Citizen Portal	Engagement
View/Update	sumesh		45	Male	73, 1st floor, suchakar nagar, Bangalore urban	coming soon	coming soon	Lab	X-Ray	CBNAAT	coming soon	Citizen portal	coming soon
View/Update	subhadra		40	Male	73, 1st floor, suchakar nagar, Bangalore urban	coming soon	coming soon	Lab	X-Ray	CBNAAT	coming soon	Citizen portal	coming soon
View/Update	madhavan		5		73, 1st floor, suchakar nagar, Bangalore urban	coming soon	coming soon	Lab	X-Ray	CBNAAT	coming soon	Citizen portal	coming soon
View/Update	Test		35	Male	Test	coming soon	coming soon	Lab	X-Ray	CBNAAT	coming soon	Citizen portal	coming soon
View/Update	shat	DEVU00141985	33	Male	testing	coming soon	coming soon	Lab	X-Ray	CBNAAT	coming soon	Citizen portal	coming soon

Source: RNTCP Survey held in July 2019 in Karnataka State by Indian CST

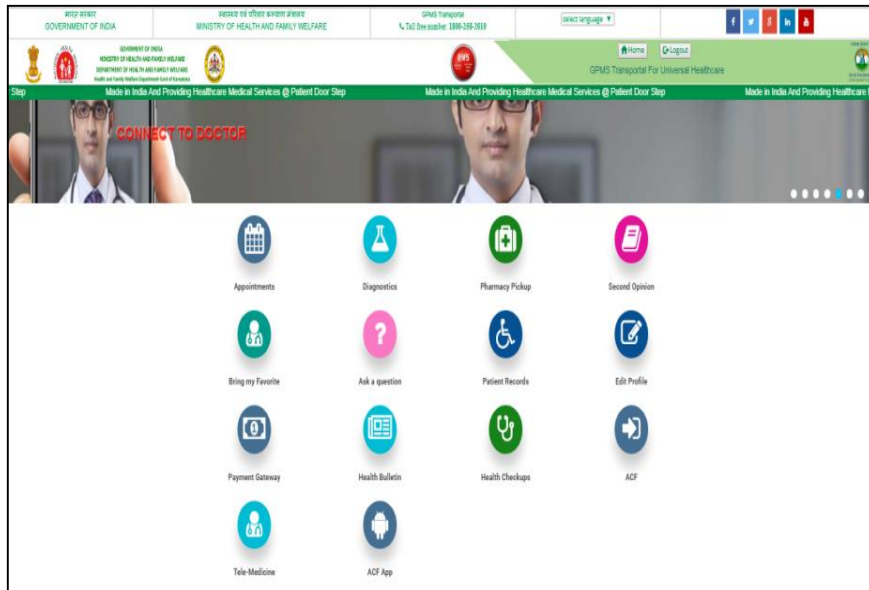
Ontology of a Cyberenvironment for TB Surveillance in India				
Timing	Surveillance	Data	TB Management	Stakeholder
Ad hoc	Identification	Bacteriological	Diagnosis	Healthcare Provider
Post hoc	Detection	Pathological	Clinical	People
On-demand	Collection	Demographic	Microbiological	Physician
Periodic	Analysis	Socio-economic	Pulmonary	Nurse
Real-time	Interpretation	Clinical	Extra-pulmonary	Pharmacist
Predictive	Application	Epidemiological	Drug susceptible cases	ASHA worker
	Reporting	Environmental	Drug Resistant TB cases	Treatment supporter
	Feedback	Geographical	Medical treatment	Volunteer
		Susceptibility	Contact cases	Entity
		Financial	Chemoprophylaxis	Hospital
			Stock of drugs	Clinic
			Fake drugs	Pharmacy
			Drug resistance	Home
			Single	Designated microscopic centre
			Multiple	Tuberculosis unit
			Personal Protection	Intermediate Reference Lab (IRL)
			Physical barriers	Citizen
			Access to TB care	Patient
			Geographical	Family
			Economic	Community
			Cultural	Agency
			Clinical	Public
			Strategic management	Private
			Target group	NGO
			Individual	Academia
			Aggregate	
			Resource allocation	
			Training	
			Outcome assessment	
			Follow up	

TB – Patient Monitoring Process Flow

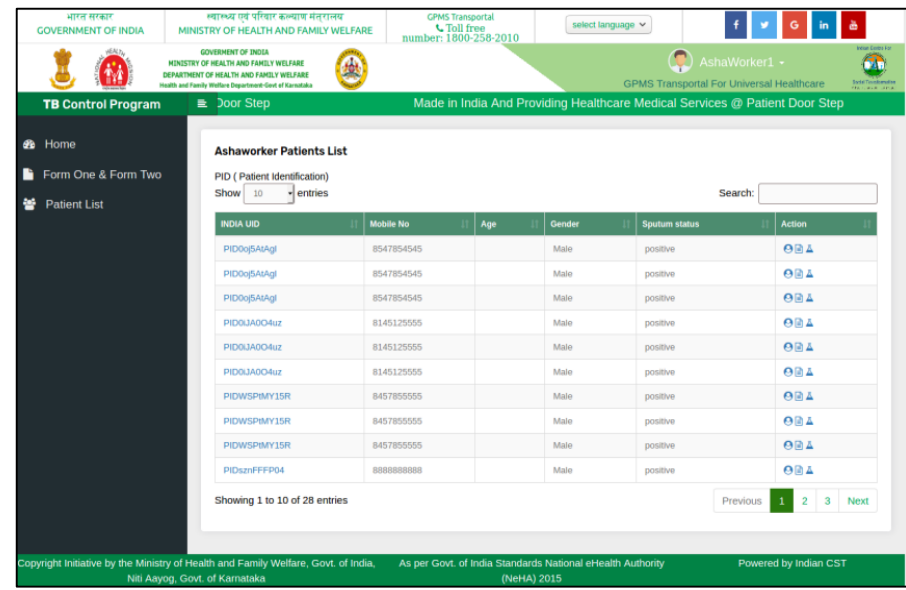


GPMS Transportal for Universal Healthcare

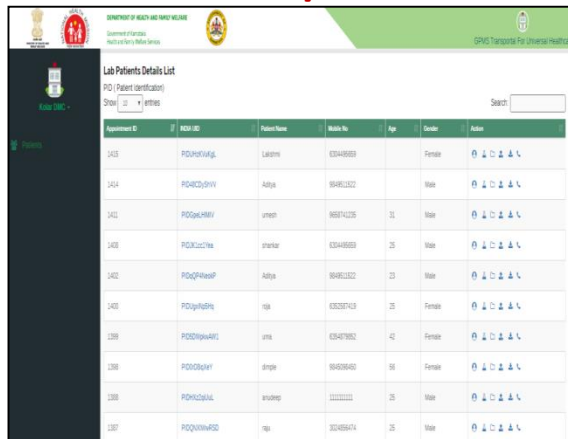
Citizen/ Patients Portal



ANM / Asha Worker – Patient List

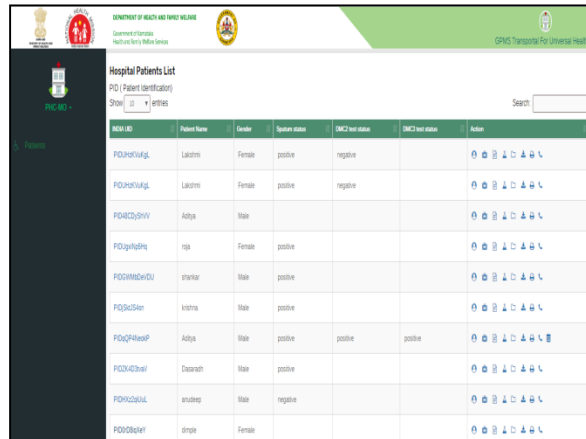


DMC / LAB



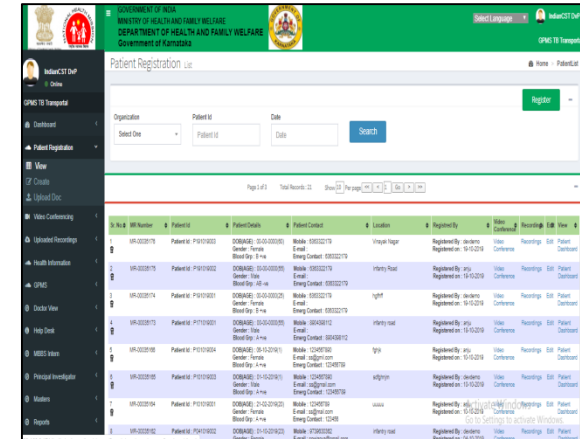
Appointment ID	INDIA UID	Patient Name	Mobile No	Age	Gender	Action
1435	PID0gSAAGl	Ladmi	8547854545		Female	
1434	PID0gSAAGl	Adya	8547854545		Male	
1433	PID0gSAAGl	Adya	8547854545		Male	
1432	PID0gSAAGl	Adya	8547854545		Male	
1431	PID0gSAAGl	Adya	8547854545		Male	
1430	PID0gSAAGl	Adya	8547854545		Male	
1429	PID0gSAAGl	Adya	8547854545		Male	
1428	PID0gSAAGl	Adya	8547854545		Male	
1427	PID0gSAAGl	Adya	8547854545		Male	
1426	PID0gSAAGl	Adya	8547854545		Male	
1425	PID0gSAAGl	Adya	8547854545		Male	
1424	PID0gSAAGl	Adya	8547854545		Male	
1423	PID0gSAAGl	Adya	8547854545		Male	
1422	PID0gSAAGl	Adya	8547854545		Male	
1421	PID0gSAAGl	Adya	8547854545		Male	
1420	PID0gSAAGl	Adya	8547854545		Male	
1419	PID0gSAAGl	Adya	8547854545		Male	
1418	PID0gSAAGl	Adya	8547854545		Male	
1417	PID0gSAAGl	Adya	8547854545		Male	

Doctor (PHC) / SC/ CHC/ DHO



INDIA UID	Patient Name	Gender	Sputum status	DMC test status	Action
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	
PID0gSAAGl	Ladmi	Female	positive	negative	

Volunteer / Medical Interns



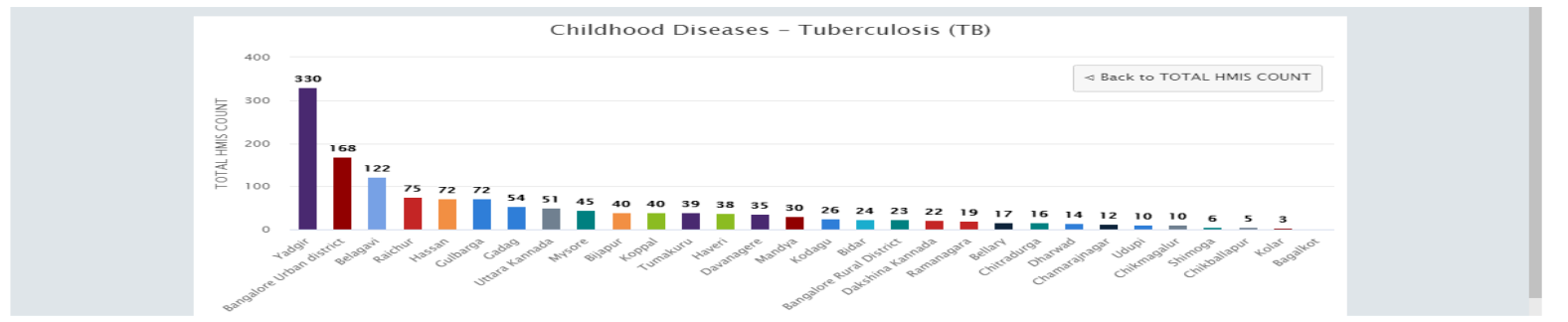
S.No	MR Number	Patient ID	Patient Name	Gender	Age	Location	Registered By	Registered On	Action
1	MR-000001	Patient-000001	Patient-000001	Male	00	000001	Registered By: 000001	Registered On: 00-00-00	
2	MR-000002	Patient-000002	Patient-000002	Male	00	000002	Registered By: 000002	Registered On: 00-00-00	
3	MR-000003	Patient-000003	Patient-000003	Male	00	000003	Registered By: 000003	Registered On: 00-00-00	
4	MR-000004	Patient-000004	Patient-000004	Male	00	000004	Registered By: 000004	Registered On: 00-00-00	
5	MR-000005	Patient-000005	Patient-000005	Male	00	000005	Registered By: 000005	Registered On: 00-00-00	
6	MR-000006	Patient-000006	Patient-000006	Male	00	000006	Registered By: 000006	Registered On: 00-00-00	
7	MR-000007	Patient-000007	Patient-000007	Male	00	000007	Registered By: 000007	Registered On: 00-00-00	
8	MR-000008	Patient-000008	Patient-000008	Male	00	000008	Registered By: 000008	Registered On: 00-00-00	
9	MR-000009	Patient-000009	Patient-000009	Male	00	000009	Registered By: 000009	Registered On: 00-00-00	
10	MR-000010	Patient-000010	Patient-000010	Male	00	000010	Registered By: 000010	Registered On: 00-00-00	
11	MR-000011	Patient-000011	Patient-000011	Male	00	000011	Registered By: 000011	Registered On: 00-00-00	
12	MR-000012	Patient-000012	Patient-000012	Male	00	000012	Registered By: 000012	Registered On: 00-00-00	
13	MR-000013	Patient-000013	Patient-000013	Male	00	000013	Registered By: 000013	Registered On: 00-00-00	
14	MR-000014	Patient-000014	Patient-000014	Male	00	000014	Registered By: 000014	Registered On: 00-00-00	
15	MR-000015	Patient-000015	Patient-000015	Male	00	000015	Registered By: 000015	Registered On: 00-00-00	
16	MR-000016	Patient-000016	Patient-000016	Male	00	000016	Registered By: 000016	Registered On: 00-00-00	
17	MR-000017	Patient-000017	Patient-000017	Male	00	000017	Registered By: 000017	Registered On: 00-00-00	
18	MR-000018	Patient-000018	Patient-000018	Male	00	000018	Registered By: 000018	Registered On: 00-00-00	

GPMS Transportal for Universal Healthcare

Sustainable Development Goals (SDG) – TB -2017-2018

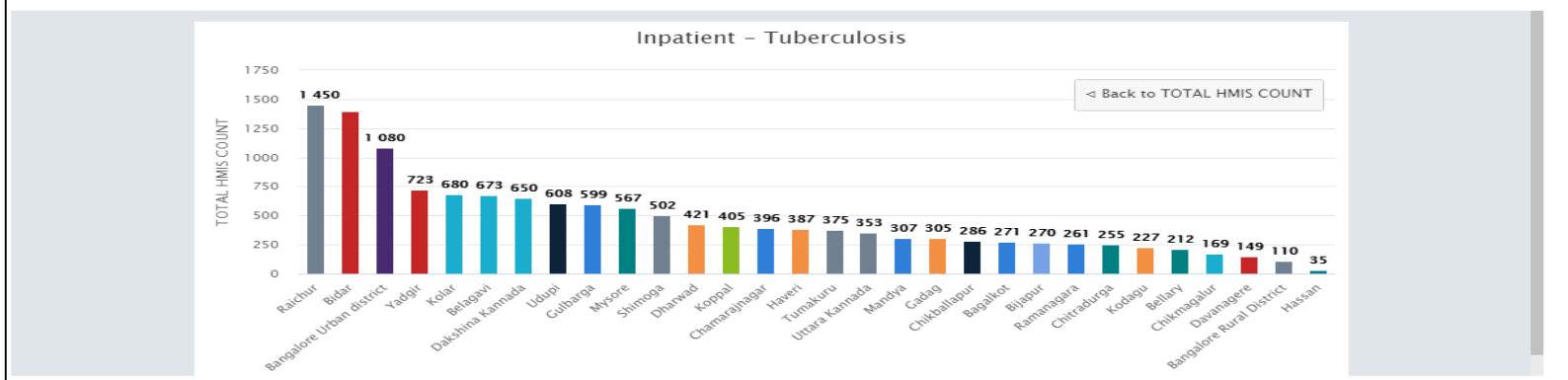
M10 - Number of Cases of Childhood Diseases 3,74,121

GPMS Transportal for Universal HealthCare



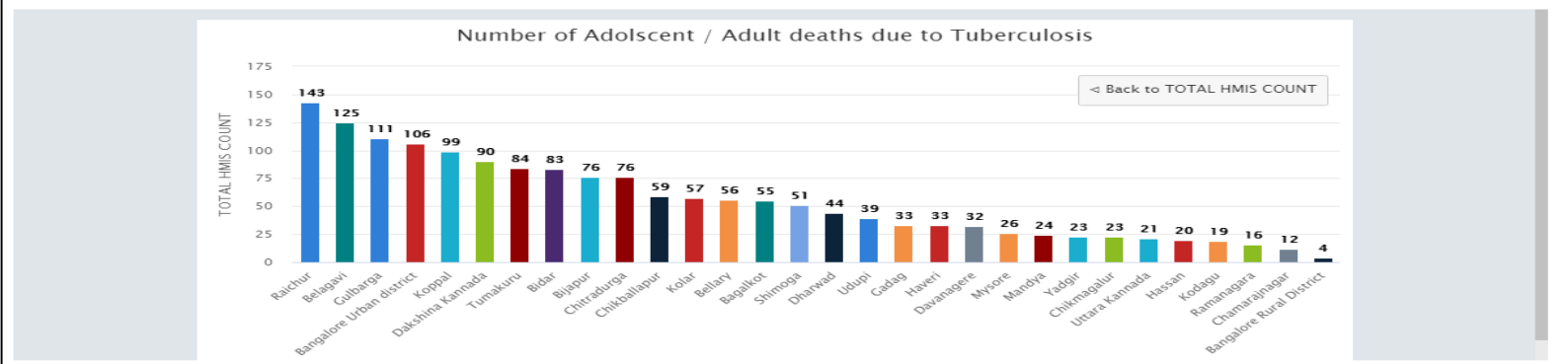
M14-Patient Services 1,426

GPMS Transportal for Universal HealthCare

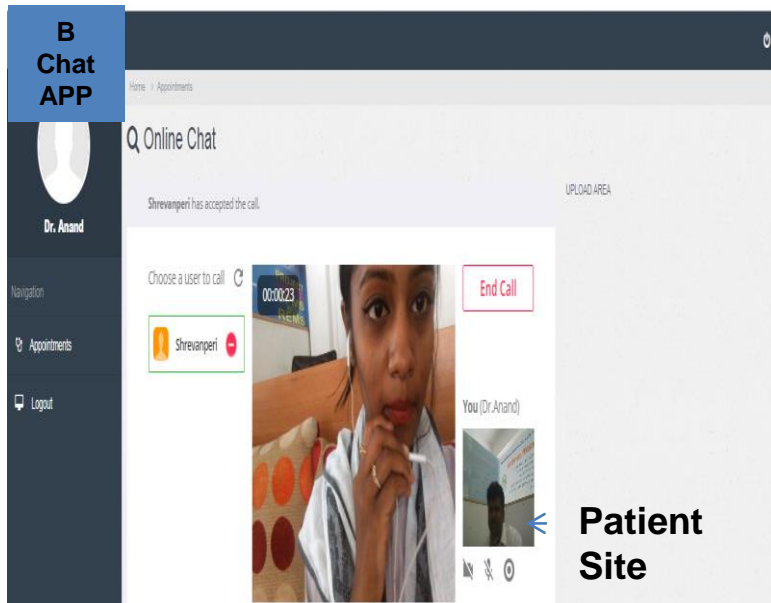
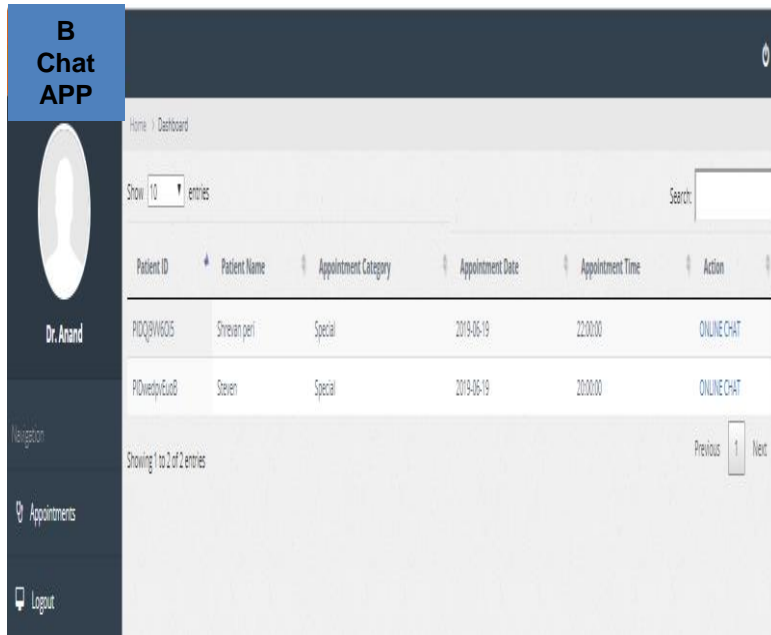


M16-Details Of Death Reported With Probable Causes 155

GPMS Transportal for Universal HealthCare



GPMS TB Transportal for Virtual TB Room for ACF – Command & Control Centre

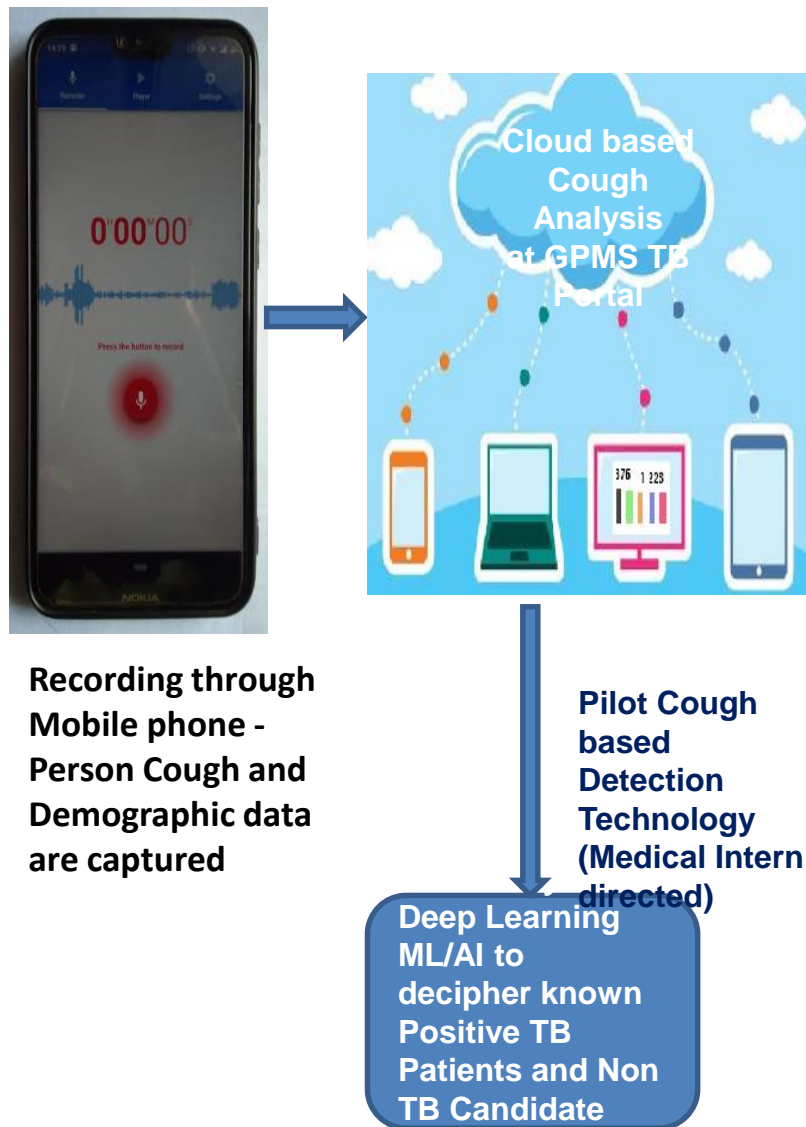


- Online 12X7 & 12X7 Offline Command and Control Centre, **(Virtual TB Room on GPMS TB Portal)** where presumptive TB patients can call and schedule the appointment with doctor as per their convenient time by dialing in to a non-metered toll free four digit number (proposed). Every call will be registered with a unique ID and recorded for analysis. First level online screening or counselling will be done by paramedic with the help of algorithm based solution housed in the software
- To address the missing million, these presumptive patients with at risk symptoms will be connected to respective medical interns for following up their diagnosis and treatment at respective DOT/PHI centers.

**Made In India and Data
Stored In India**

Case Finding of Presumptive TB Patients

AI/ML Potential non-invasive technology for mass screening of TB Patients



- Popularizing the number to be called by a citizen who has:

- Persistent cough
- Fever for 2 weeks
- Significant weight loss
- Chest pain in last 1 month
- Blood in sputum during last 6 months
- Make a call to Toll-Free Number

- Phone calls that are made to the number should be captured by the portal with location and pin code.
- Integration of the Tele-medicine module. (Option to record cough through)
 - Video option
 - SMS option(for contacting patients)
 - Voice option

Connecting each call made by Presumptive Patient with the nearest DOTS/PHI centers

- A call is made for the cough to be recorded and stored in the database for Data analytics –Machine /Deep learning/AI

Integrated Team Effort

"What we cannot do alone: Achieve together"

Medical Team



Dr. S. Kumar
M.D., Chancellor, SDUAHER



Dr. Lalitha



Dr. Gadicherla Suman



Dr. Saraswathi



Mrs. Padmavathi S



Mr. Raja Seevan
Founder Trustee & Project Coordinator



R. Sri Kumar
Author & Chairman



Mr. Arumugam
Trustee & Adviser



Dr. Vidyadhar Mudkavi
Director CSIR 4PI



Prof. Samir K. Brahmachari
Chief Mentor



Dr. Tavpritesh Sethi
Asst. Professor IIIT, Delhi



Shamprasad Podaralla,
Certified PMP & ITIL

Core Indian CST Team



Mr. D'souza Vernon



Mr. Terence



Mrs. Umme Uzma



Mrs. Akhilandeswari



Mrs. Vani Suresh



Shalu Mathew



Mrs. Sunitha



Mr. Andrew Manuel



Mrs. Sowjanya



Mrs. Hina Bansal



Ms. Pooja



Mr. Ramesh



Mr. Hemant



Mr. Jay Raval



Ms. Sireesh



Mr. Hari Krishna



Mr. Rahul



Mr. Rajesh



GPMS Universal Health Care Information Therapy Transportal Common Integrated Dashboard



For any clarification, please contact

Raja Seevan

Founder Trustee

Indian Centre for Social Transformation

Mobile No.+918073536006 or +919739047849

Empowering Nation ... Empowering Citizens

www.indiancst.in www.indiancst.com www.epashuhaat.gov.in

www.indiancst.com/India/universalhealthcare

<https://indiancst.com/India/TBControlProgram/index.php/auth/login>

<https://tscl.indiancst.com>

<https://municipality.indiancst.com>

<https://tbindia.indiancst.com/GPMSTBTransportal>

Indian Centre For



Social Transformation
A Public Charitable Trust (Regd.)