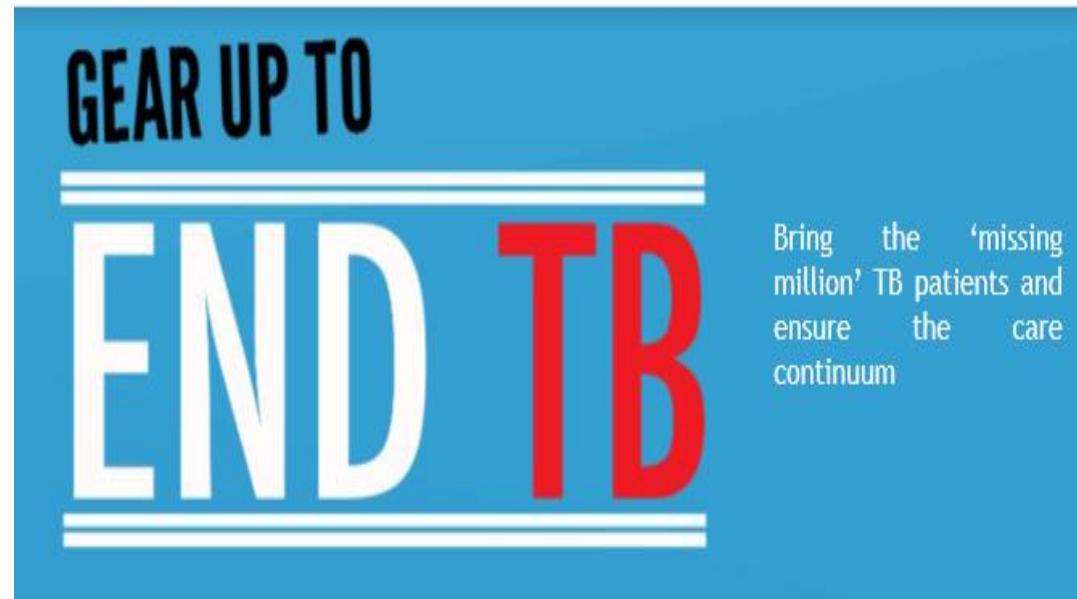




GPMS -RNTCP-ACF ONLINE NEW MODULE DEVELOPED AND INTEGRATED

GPMS TB Transportal



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

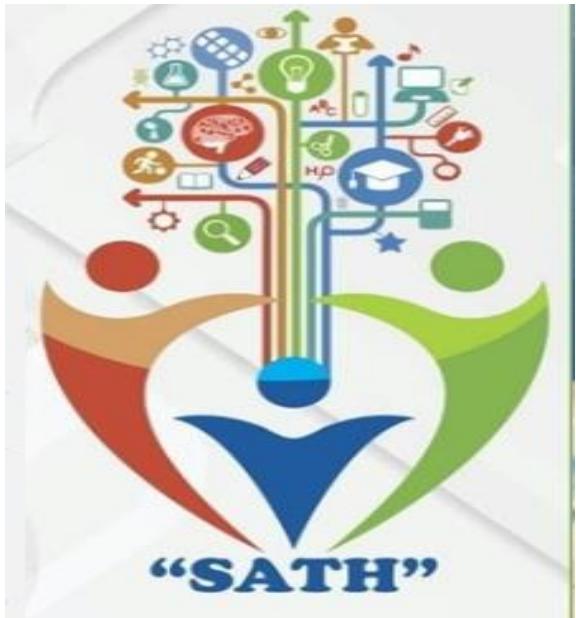
Initiative by the Ministry of Health and Family Welfare, Govt. of India, NITI AAYOG, Govt. of Karnataka Powered by Indian CST.





GPMS TB Transportal

Integrated Health care for Better Karnataka



- 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/>

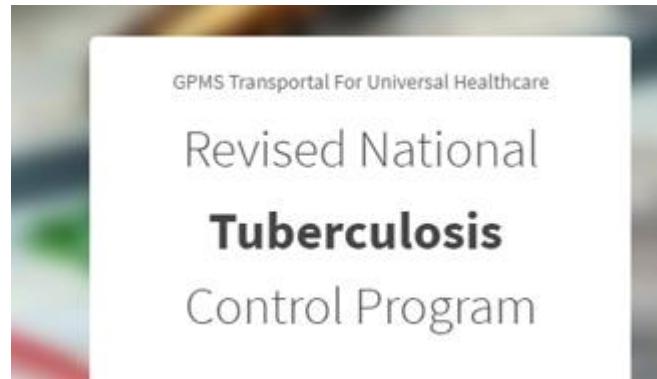


RNTCP – GPMS TB Transportal Digital ACF survey July 2019

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/>





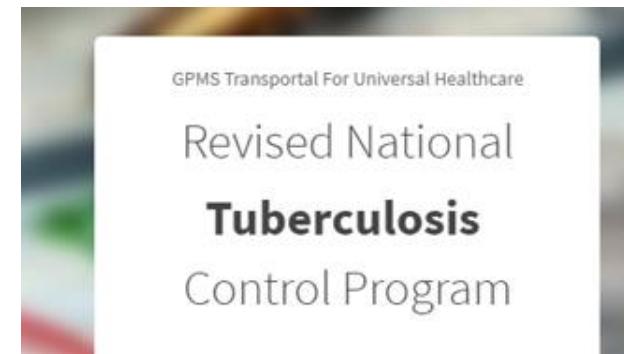
Revised National Tuberculosis Control Program

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



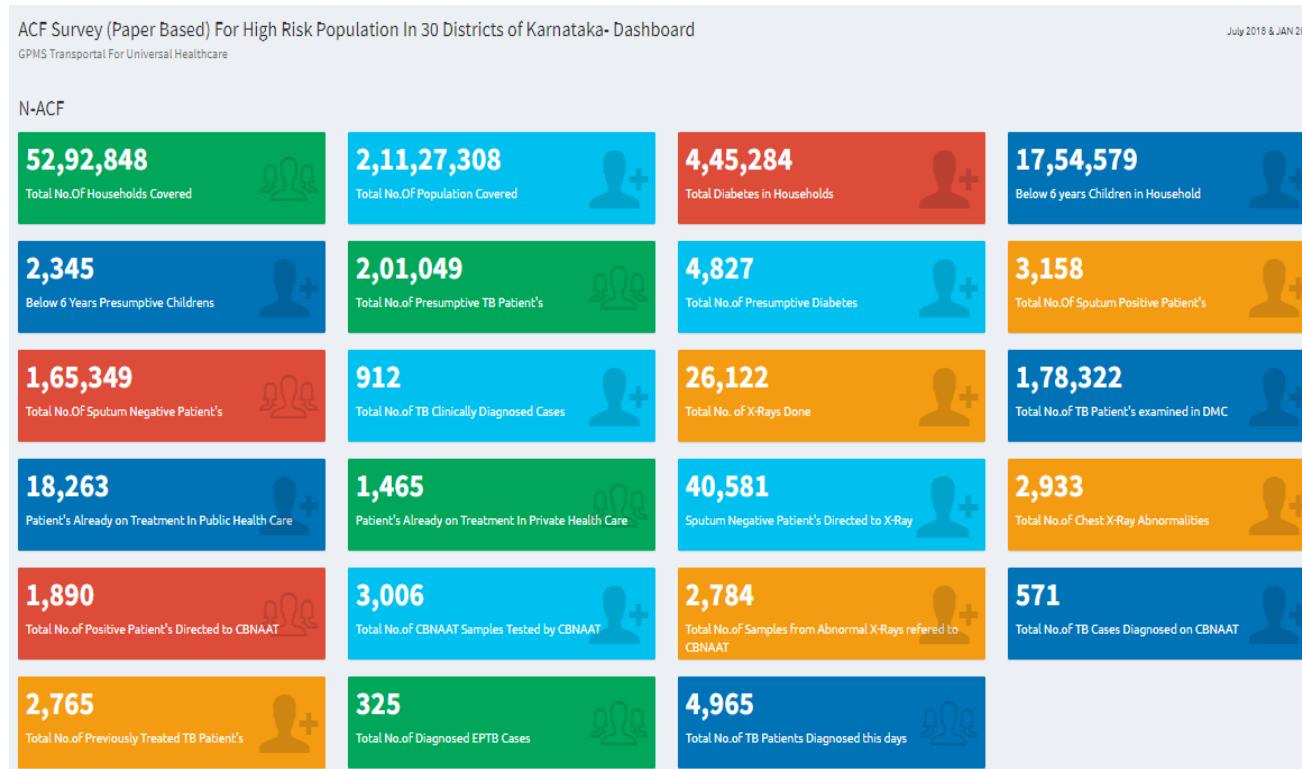
Impact:

- 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.



**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	District	Primary Health Centre
Karnataka	Kolar	--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/>



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

Remarks

<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.



**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

--Select--

Age

Full Address And Mobile Number

Have You Ever Been Treated For Tuberculosis
Previously

Yes No

Is He/She Diabetic Patient?

Yes No

Persistent cough for 2 weeks

Yes No

Fever for 2 weeks

Significant weight loss

Yes No

Presence of blood in sputum any time during
last 6 months

Yes No

Chest pain in last one month

Yes No

History of Anti-TB Treatment (previous /
current)

Yes No

Name Of DMC Where Sputum Sample Was
Sent?

 x ▾

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	District	Primary Health Centre
Karnataka	-Select-	
Sub Centre	<input type="button" value="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/>

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 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	District	Tuberculosis Unit
Karnataka	-Select-	-Select-

DMC	Reporting Date
-Select-	05-07-2019

Total No. Of Sputum Tested In DMC	Total No. Of Patient Tested Positive From Total Sputum Samples(Sputum Positive)
<input type="text"/>	<input type="text"/>

Total No. Of Patient Tested Negative From Sputum Samples (Sputum Negative)	Total No. Of Sputum Positive Samples Directed To CBNAAT
<input type="text"/>	<input type="text"/>

Total No. Of Sputum Negative Patients Directed To X-Ray	Number Of Patient undergone X-ray
<input type="text"/>	<input type="text"/>

Total Number Of Chest X-Ray Abnormal Cases Found	Total Number Of Samples From Abnormal X-Ray Refer to CBNAAT
<input type="text"/>	<input type="text"/>

Total No. Of Samples From Abnormal X-Ray Tested at CBNAAT	
<input type="text"/>	

<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.



**Revised National Tuberculosis Control
GPMS TB Transportal Digital ACF survey**

From the Side Left Panel Click On Form 5 for Report

TB Control Program ≡ Fri, 5 Jul 2019 12:20:32 PM IndianCST DvP

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 Samples 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

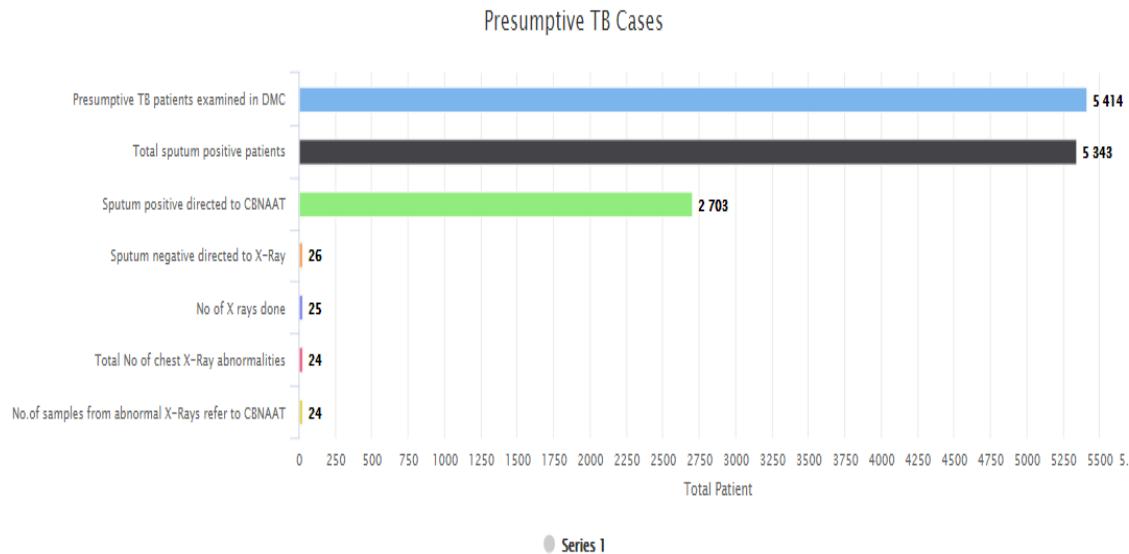
<https://tbindia.indiancst.com/GPMSTBTransportal/>

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



Revised National Tuberculosis Control GPMSTB Transportal Digital ACF survey

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



<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.

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

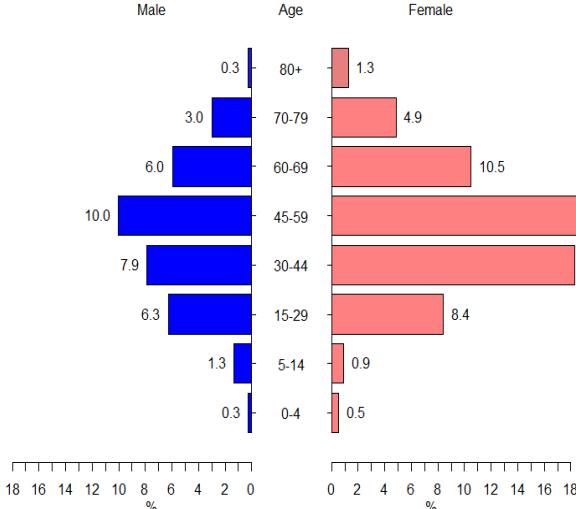
Chief Mentor, Open Source Drug Discovery

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

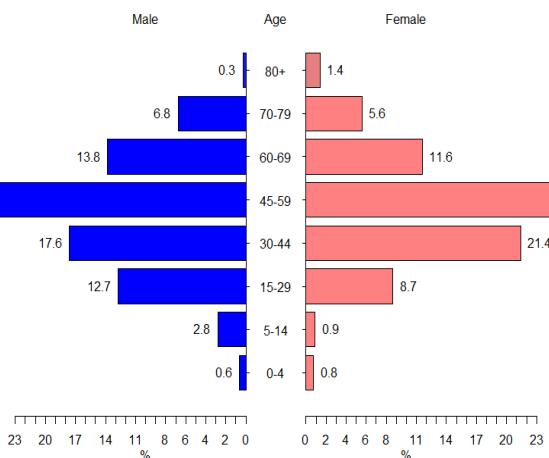
Former Director General, CSIR

Economic Burden of TB in India

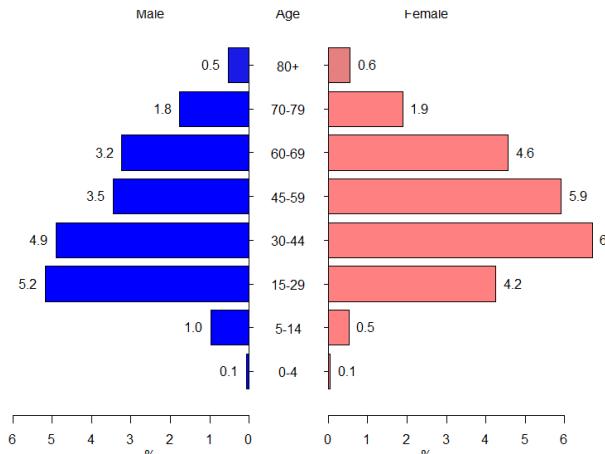
India DALYs Lost due to TB (2015)



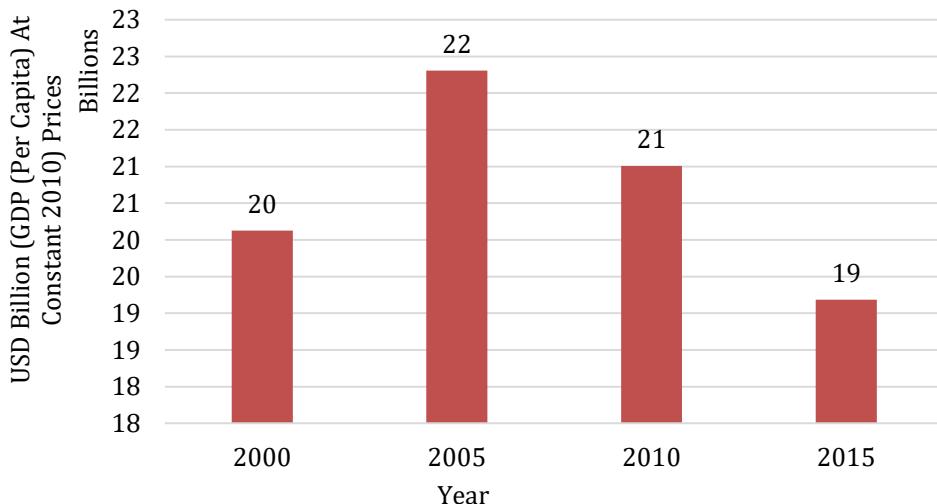
India YLLs as % of DALYs (2015)



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



RAMAIAH
Medical College



AI/ML Cough Capture & Analysis



INDRAPRASTHA INSTITUTE OF
INFORMATION TECHNOLOGY DELHI

E-Pashuhaar 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-Pashuhaar 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

The screenshot shows a dashboard with the following data:

Population (Census 2011)	Number of birth (Civil Registration System 2015)	Number of neonates admitted in the SNCUs (public) (National child Health review, Gol 2016)	Number of public Special New Born Care Unit
84580777	1463988	69161	48
Number of public delivery points	Number of live births in the SNCUs (Safe Care, Saving Lives)	Number of neonates admitted in the SNCUs (public) (Safe Care, Saving Lives)	Number of Public Special New Born Care Unit (Safe Care, Saving Lives)
467	45980	25878	54
Number of Private Special New Born Care Units (Safe Care, Saving Lives)	Number of public delivery points (Safe Care, Saving Lives)	Coverage of live births in the SNCUs (Safe Care, Saving Lives)	Coverage of neonates admitted in the SNCUs (Safe Care, Saving Lives)
33	52	3.5%	41%

Annotations at the bottom:

- Andhra Pradesh : 25
Telangana : 27
- Andhra Pradesh : 2
Telangana : 5



<http://safecaresavinglives.org/>

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



CSIR 4PI



Indian Centre For
Social Transformation
A Public Charitable Trust (Regd.)



ACCESS
health international

GPMS Transportal Used for Universal Healthcare for Karnataka

Single Cloud Computing Integrated Platform

GOVERNMENT OF INDIA
MINISTRY OF HEALTH AND FAMILY WELFARE
DEPARTMENT OF HEALTH AND FAMILY WELFARE
Government of Karnataka

Integrated Dashboard

GPMS Universal Health Care Information Therapy Transportal

Monitoring of Mother and Child with Citizens Electronic Health Record with all Clinical Parameter

Karnataka Ministry, State and Central PHCs, Districts Associated Healthcare Projects, Schemes To Work on a Single Platform

0. MASTERS	1. TOTAL POPULATION: 6,10,95,297	2. RATION CARD HOLDERS: 1,16,99,815	3. BENEFICIARIES: 5,23,74,906
4. FAIR PRICE SHOPS: 18837	5. PHCs: 2522	6. SUB-CENTERS: 9130	7. DOCTORS
8. ASHA WORKERS: 32860	9. ANMs: 1133	10. TOTAL AMBULANCE: 1550	11. PATIENT REGISTRATION: 92,937
12. CDR	13. ICU	14. BIRTH: 3,01,999	15. DEATH: 11,211
16. STILL BORN: 8460	17. STOP-TB ANALYTICS: 6,33,593	18. MALARIA: 30,560	19. DENGUE: 142
20. CHIKUNGUNYA: 1435	21. CHOLERA: 58	22. DIABETES: 23,423	23. EPILEPSY: 1169
24. CARDIAC: 461	25. HYPER TENSION: 33,735	26. CANCER: 408	27. FSSAI
28. REIMBURSEMENTS: 5,55,98,064	29. HEALTH INFRASTRUCTURE: 15,130	30. NRC	31. NCD
32. NVBDCP	33. ERAKTKOSH	34. PHC-MIS	35. KPME
36. SNCU	37. PCPNDT	38. SAST	39. E-AROGYA
40. MENTAL HEALTH	41. ASHA SOFT	42. MSHS	43. MCTS
44. JEEVA SANJEEVINI	45. ELAJ	46. DRUG INVENTORY	47. RSBY

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.

NATIONAL HEALTH INSURANCE

Improving Healthcare for a better Karnataka.

Department of Health & Family Welfare Services

Indian CST has linked the MOU with Karnataka State Government Health and Family Welfare Department, Govt. of Karnataka (HPWD) 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 been 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 Citizens Electronic Health Record with all Clinical Parameters that will allow Multiple Ministry / Stakeholders / Hospitals/ PHC's/ Doctors / Associated Healthcare Projects / Schemes to work on this single platform and the 4.5 crores patients / citizens who will be given access online, any time , from anywhere, on any device, and further enabling the implementation of SDG-3 in the State of Karnataka.



Government of India



GPMS Transportal for Universal Healthcare

Integrated Health care for Better Karnataka

Improving Healthcare for a better Karnataka.

Department of Health & Family Welfare Services

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

“SATH”

Indian CST has inked the MOU with Karnataka State Government, Health and Family Welfare Department, Govt. of Karnataka (RPNW) to be in force for a period of 10 years (till 27.04.2027). Indian CST is also in India Innovative Integrating 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 Citizens Electronic Health Record with all Clinical and Financial data that will allow Ministry / Stakeholders / Hospitals / PHCs / Doctors / Associated healthcare Project / Schemes to work on this single platform and the 4.5 crore patients / citizens who will be given access online to view their own medical records data online, any time and anywhere, on any device and further ensuring 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.

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- 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>)

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

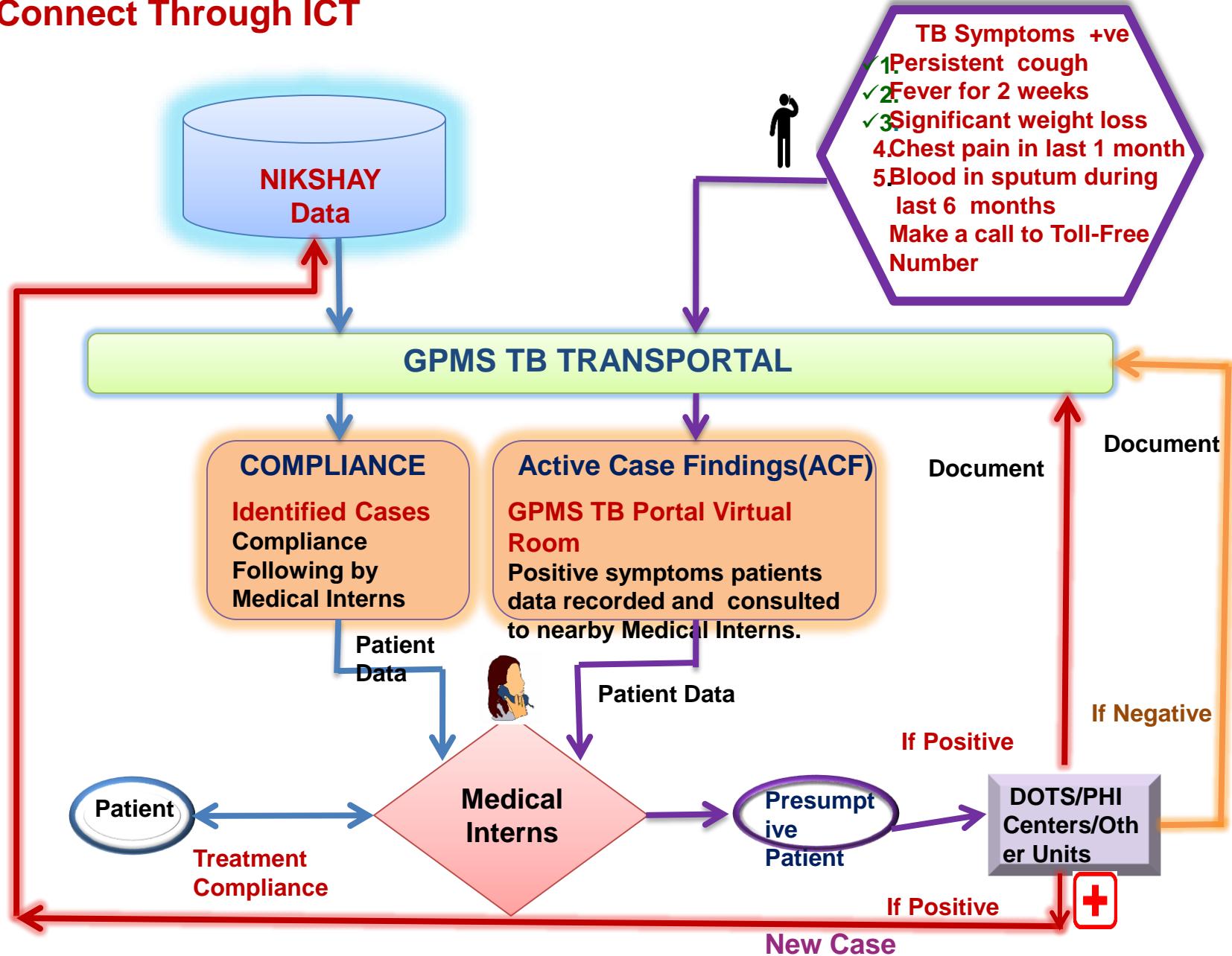


*MOU with DoH&FWS
Karnataka

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

- 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

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RNTCP Infrastructure				
District Tuberculosis Centres (DTC)	2	1	1	1
Tuberculosis Centres	24	5	5	11
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CBNAAT Centers	3	1	1	2
Intermediate Reference Lab (IRL)	1	NA	NA	NA

Justification for selection of project targeted sites

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

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



Profile: Anju (Online)

GPMS TB Transportal

- Dashboard
- Patient Registration
- Health Information
- GPMS
- Intern

TB Patients List

GPMS TB Transportal

Search

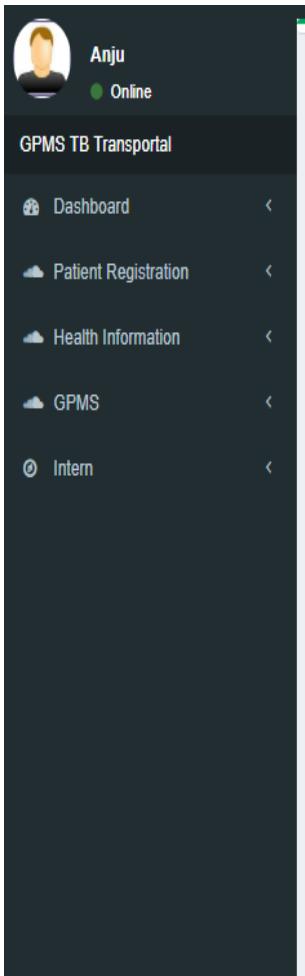
District: Select One, PHC NAME: Search

Page 1 of 1 Total Records: 10 Show 10 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	Yaljur	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



The screenshot shows a software interface for 'GPMS TB Transportal'. The left sidebar has a user profile for 'Anju' (Online) and a navigation menu with 'GPMS TB Transportal' and 'Intern' selected. The main content area is titled 'Checklist for follow up for TB patient' and displays the following information: Name: GANGADHAR, Age: 30, Sex: M. Below this is a list of 8 questions with radio button options. Question 6 has a sub-question '6).A. If yes, what symptoms' with a text input field containing 'yesyesyesyesyes'. At the bottom are 'Submit' and 'Back' buttons.

Question	Response
1) How are you feeling now as compared to last week?	<input type="radio"/> Same <input checked="" type="radio"/> Better <input type="radio"/> Worse
2) Are the previous symptoms still persisting?	<input checked="" type="radio"/> Yes <input type="radio"/> No
3) Is there reappearance of any symptoms?	<input checked="" type="radio"/> Yes <input type="radio"/> No
4) Have you taken all the tablets in the last one week?	<input type="radio"/> Yes <input checked="" type="radio"/> No
5) Did you have any problems while taking the drugs?	<input type="radio"/> Yes <input checked="" type="radio"/> No
6) Are there any symptoms of ADR?	<input checked="" type="radio"/> Yes <input type="radio"/> No
6).A. If yes, what symptoms	yesyesyesyesyes
7) Do you know how long the treatment for TB will last?	<input type="radio"/> Yes <input checked="" type="radio"/> No
8) Do you know when you need to go for follow up next?	<input checked="" type="radio"/> Yes <input type="radio"/> No

- 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

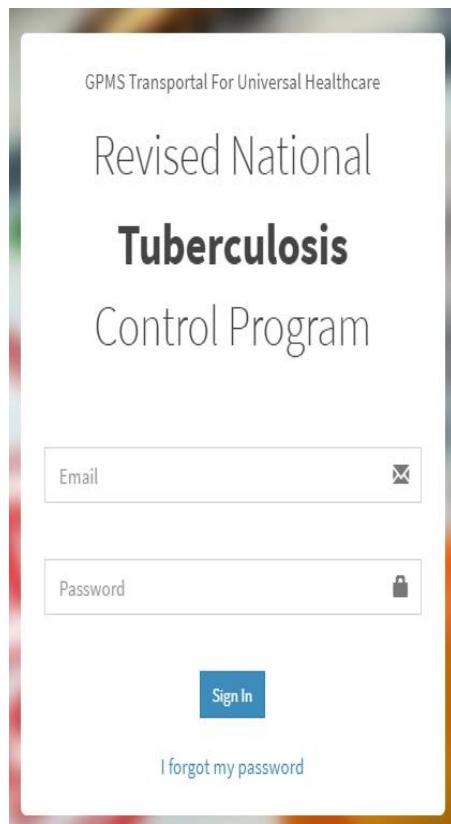
Available Across All Platforms - Mobile, Tablet & Desktop, Cloud



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



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

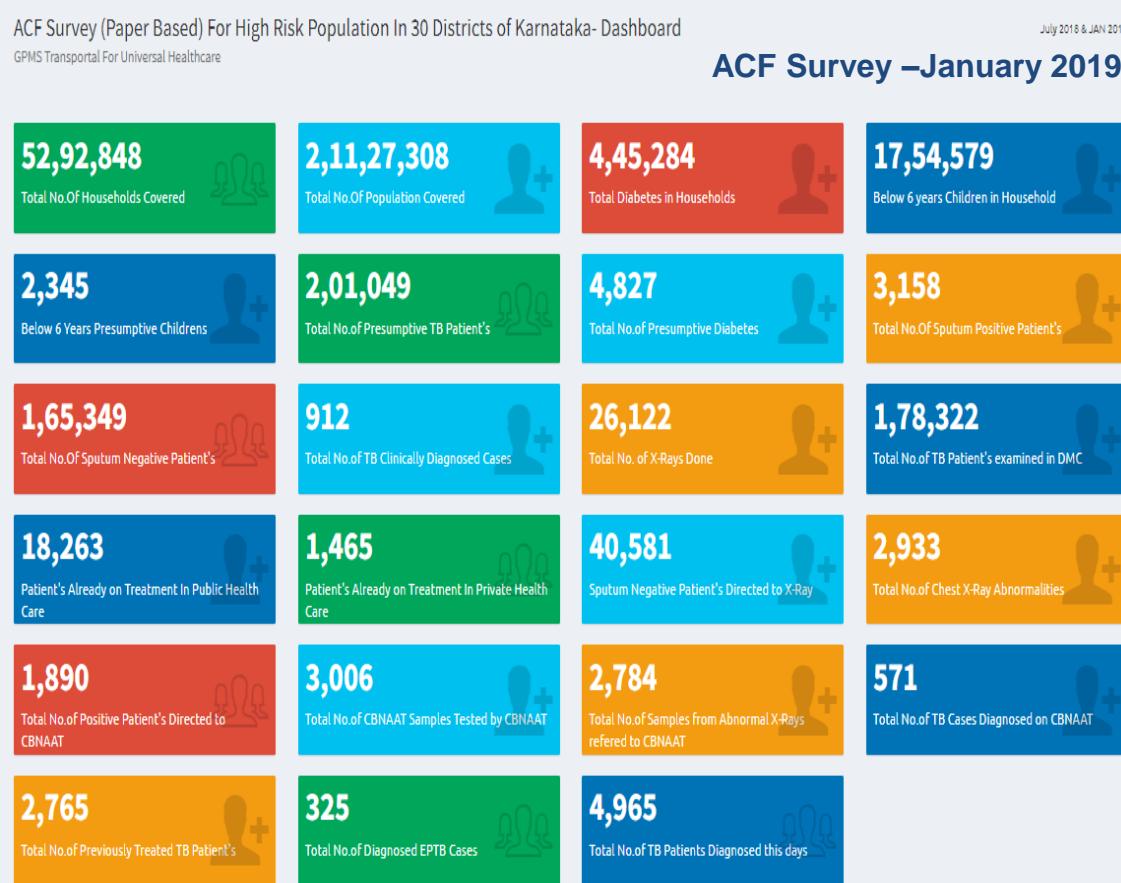


GPMS Transportal Digital ACF survey

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).

ACF Survey (Paper Based) For High Risk Population In 30 Districts of Karnataka- Dashboard
GPMS Transportal For Universal Healthcare



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).

Tue, 17 Dec 2019 05:43:07 PM  Siva Kumar

Real Time Dashboard

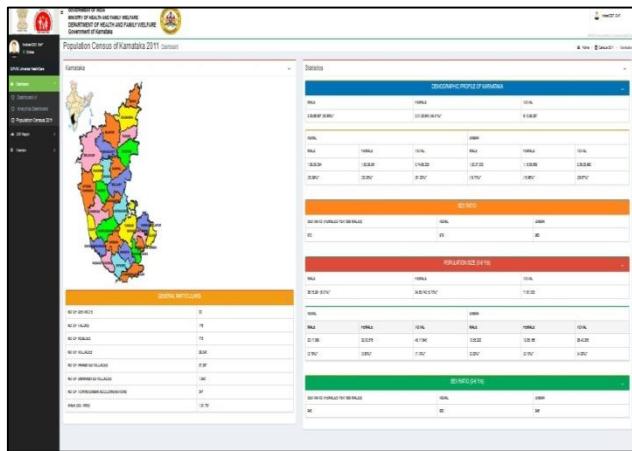
Digital ACF Survey For High Risk Taluks(Bengaluru Urban, BBMP, Tumakuru, Chikkaballapura, Kolar) In 4 Districts of Karnataka
(Revised National Tuberculosis Control Program)
GPMS Transportal For Universal Healthcare (July 2019)

July 2019

14598 Total No. of Household 	39854 Total No. Of Population Visited In House 	5414 No. Of Sputum Model Tested In DMC 	5343 No. of Positive Tuberculosis Patient 
24 No. of Negative Tuberculosis Patient 	1,457 No. Of Ration Cards Details 	4,632 Presumptive Patient's Count 	66 Total No. of Diabetic Patients 
72 Total No. of Patients having fever 	77 Total No. of Patients with persistent cough 	69 Total No. of Patients with weight loss 	71 Total No. of Patients having chest pain 



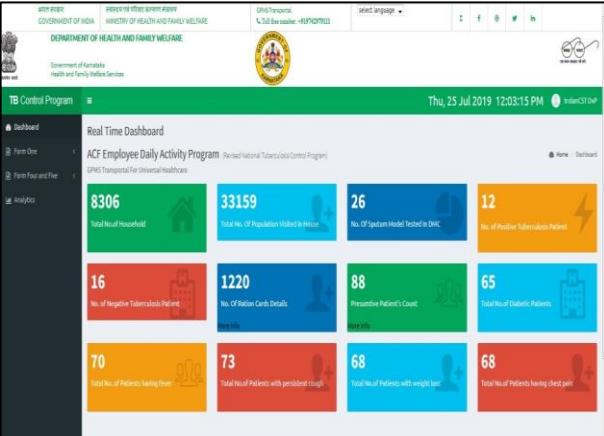
GPMS Transportal Universal Healthcare Dashboard



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

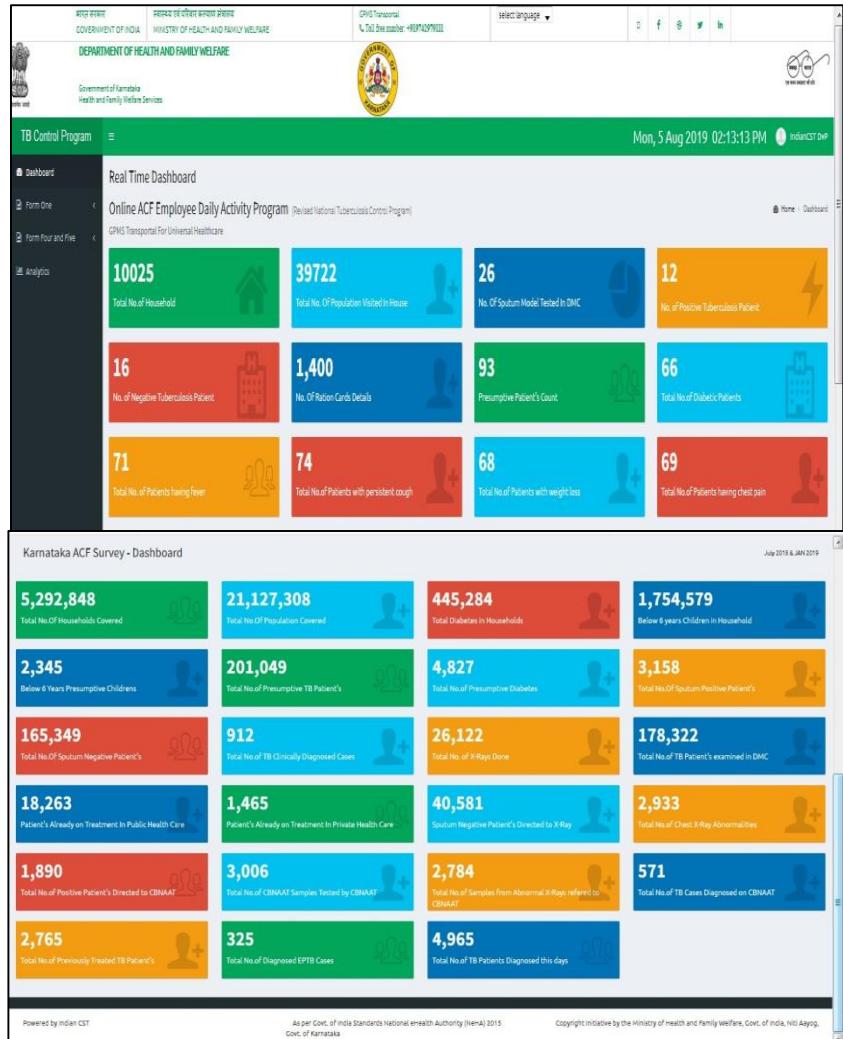


GPMS Transportal ACF Online Survey 25th July 2019 Real Time Dashboard

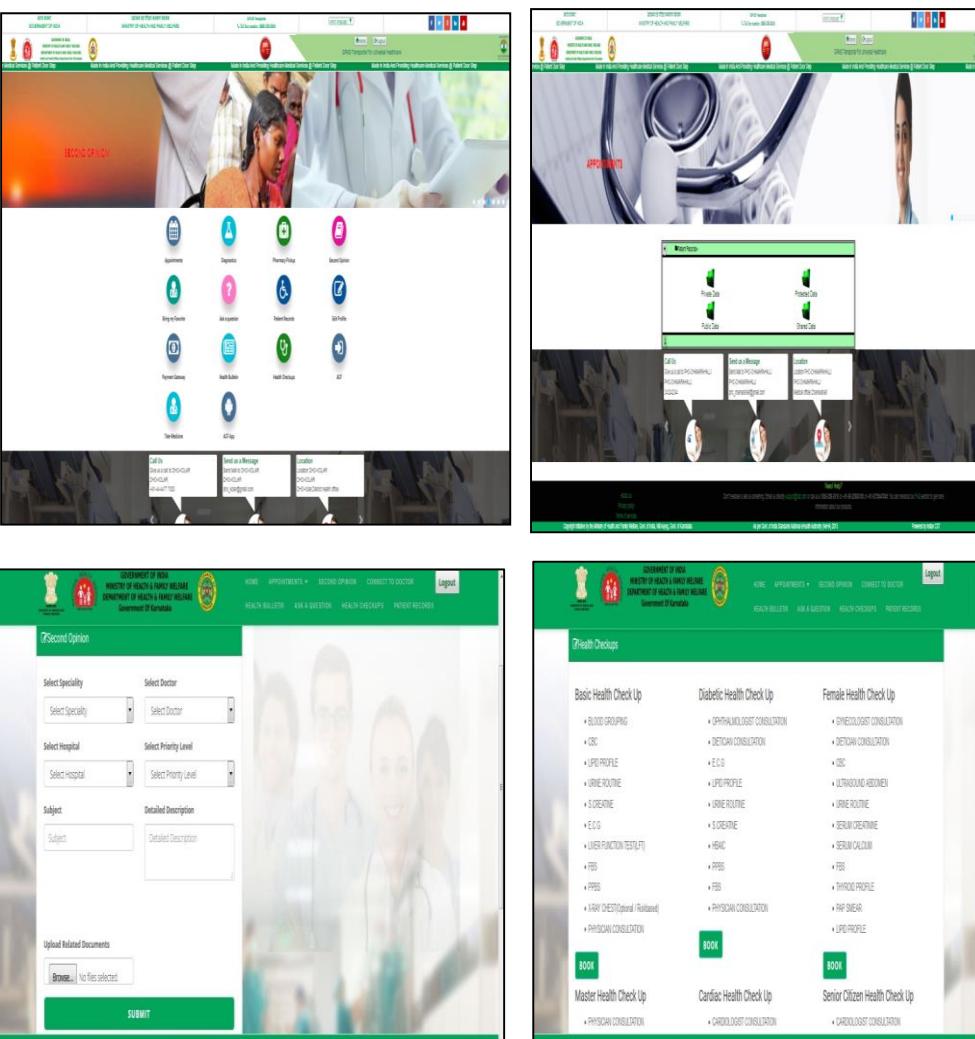




GPMS Transportal ACF Online Survey 8th Aug 2019 Real Time Dashboard Status



Citizen Portal for providing Healthcare Medical Services





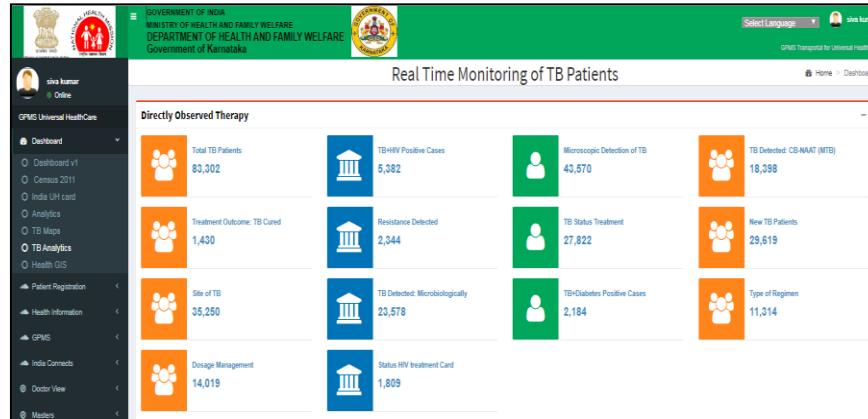
Government of India

GPMS Transportal for Universal Healthcare

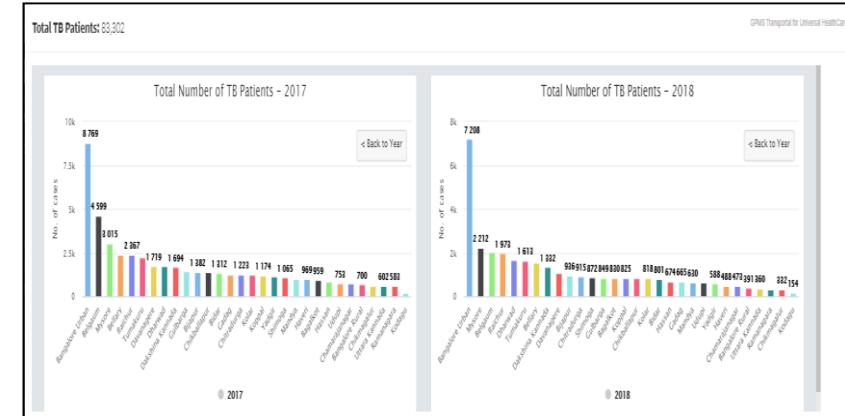
Karnataka State / District Wise Real Time Monitoring of TB Patients



State wise TB Analytics

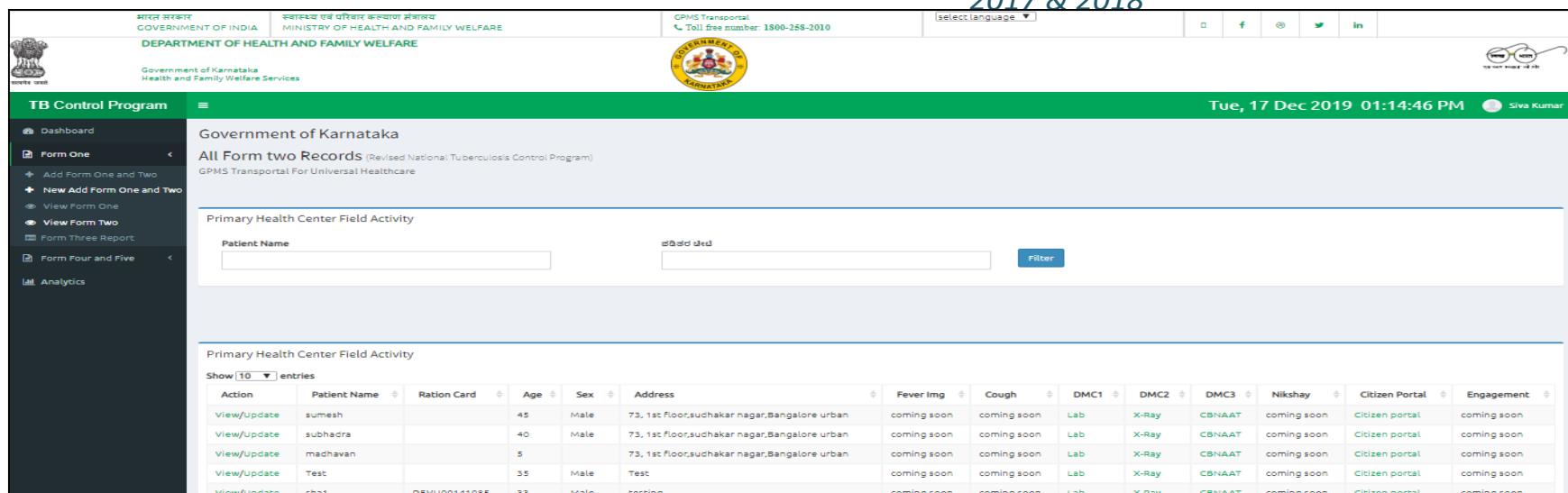


Mycobacterium tuberculosis (MTB) Analytics Year wise



Source: As per NIKSHAY 1.0

Source: Karnataka State NIKSHAY Data – 2017 & 2018



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

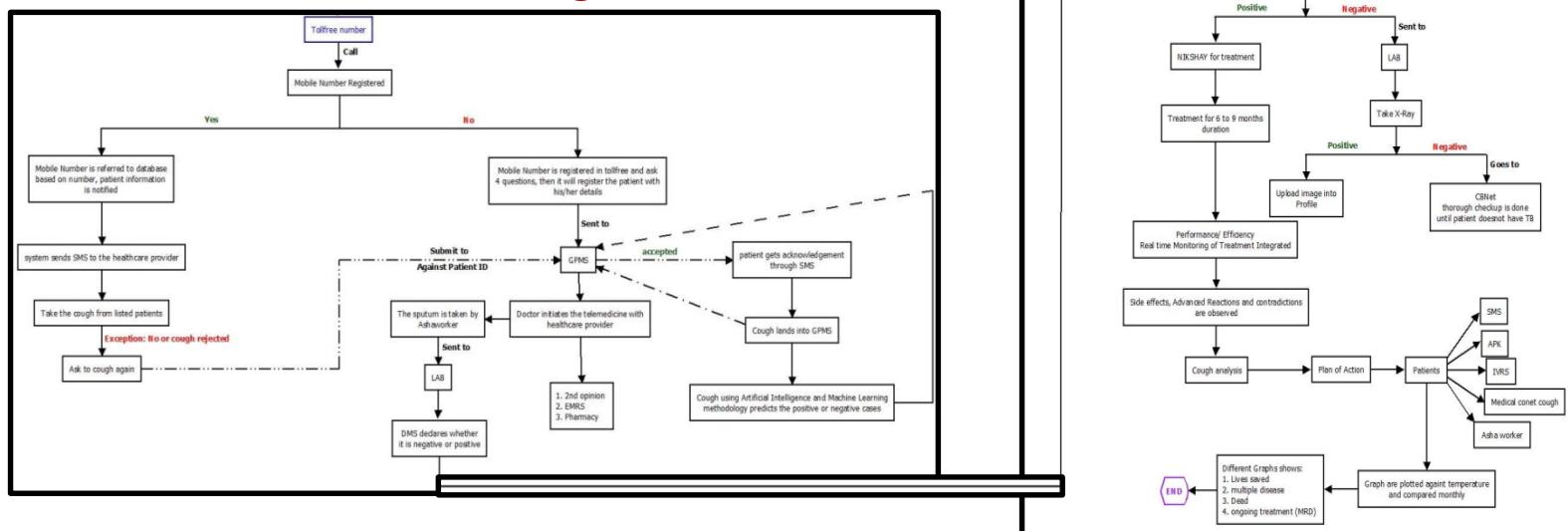


Ontology for TB GPMS Transportal for Universal Healthcare



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





Citizen/ Patients Portal

DMC / LAB

Lab Patients Details List							GRMS Transport For Universal Health
PO (Patient Identification)							Search
Search	Entites						
Registration ID	ADL ID	Patient Name	Mobile No	Age	Gender	Action	
1403	PQD1001W1	Lakshmi	9344065693	Female	0 1 2 3 4 5		
1414	PQD1020W1	Aditya	9848013222	Male	0 1 2 3 4 5		
1401	PQD094H1	umesh	9887412235	31	Male	0 1 2 3 4 5	
1408	PQD1221H1	shankar	9344065693	25	Male	0 1 2 3 4 5	
1402	PQD074H1	Aditya	9848013222	23	Male	0 1 2 3 4 5	
1405	PQD105B1	rea	9333074123	25	Female	0 1 2 3 4 5	
1398	PQD099W1	umita	9344065692	42	Female	0 1 2 3 4 5	
1398	PQD054H1	dimple	9848065693	56	Female	0 1 2 3 4 5	
1398	PQD1020B1	anudeep	9333074123	25	Male	0 1 2 3 4 5	
1397	PQD001W1	rea	9344065674	25	Male	0 1 2 3 4 5	

Doctor (PHC) / SC/ CHC/ DHO

Hospital Patients List						
PID (Patient identifier)	Gender	Status	ICM2 test status	ICM2 test result	Action	
Show <input checked="" type="checkbox"/> entries						Search <input type="text"/>
PID0198194	Lakshmi	Female	positive	negative	<input type="checkbox"/>	<input type="checkbox"/>
PID0198194	Lakshmi	Female	positive	negative	<input type="checkbox"/>	<input type="checkbox"/>
PID0203594	Aditya	Male			<input type="checkbox"/>	<input type="checkbox"/>
PID0203594	aja	Female	positive		<input type="checkbox"/>	<input type="checkbox"/>
PID0203594	shankar	Male	positive		<input type="checkbox"/>	<input type="checkbox"/>
PID0301614	lakshmi	Male	positive		<input type="checkbox"/>	<input type="checkbox"/>
PID0401609	Aditya	Male	positive	positive	<input type="checkbox"/>	<input type="checkbox"/>
PID0401609	Dhanesh	Male	positive		<input type="checkbox"/>	<input type="checkbox"/>
PID0501614	anusha	Male	negative		<input type="checkbox"/>	<input type="checkbox"/>
PID0501614	imple	Female			<input type="checkbox"/>	<input type="checkbox"/>

ANM / Asha Worker – Patient List

भारत सरकार
GOVERNMENT OF INDIA

राष्ट्रीय योगिता कल्याण मन्त्रालय
MINISTRY OF HEALTH & FAMILY WELFARE

GOVERNMENT OF INDIA
MINISTRY OF HEALTH & FAMILY WELFARE
DEPARTMENT OF HEALTH & FAMILY WELFARE
Health and Family Welfare Department-Govt of Karnataka

GPMS Transportal
Toll Free
number: 1800-258-2010

select language

 AshaWorker1 -
GPMS Transportal For Universal Healthcare

State Govt for
Tender Management

TB Control Program

Door Step

Made in India And Providing Healthcare Medical Services @ Patient Door Step

 Home

 Form One & Form Two

 Patient List

Ashaworker Patients List

PID (Patient Identification)
Show entries

Search:

INDIA UID	Mobile No	Age	Gender	Sputum status	Action
PID00j5AAGl	8547854545		Male	positive	 
PID00j5AAGl	8547854545		Male	positive	 
PID00j5AAGl	8547854545		Male	positive	 
PID00JA004uz	8145125555		Male	positive	 
PID00JA004uz	8145125555		Male	positive	 
PID00JA004uz	8145125555		Male	positive	 
PIDWSPMMY15R	8457855555		Male	positive	 
PIDWSPMMY15R	8457855555		Male	positive	 
PIDWSPMMY15R	8457855555		Male	positive	 
PID0snFFFFP04	8888888888		Male	positive	 

Showing 1 to 10 of 28 entries

Previous 1 2 3 Next

Volunteer / Medical Interns



Government of India

GPMS Transportal for Universal Healthcare

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

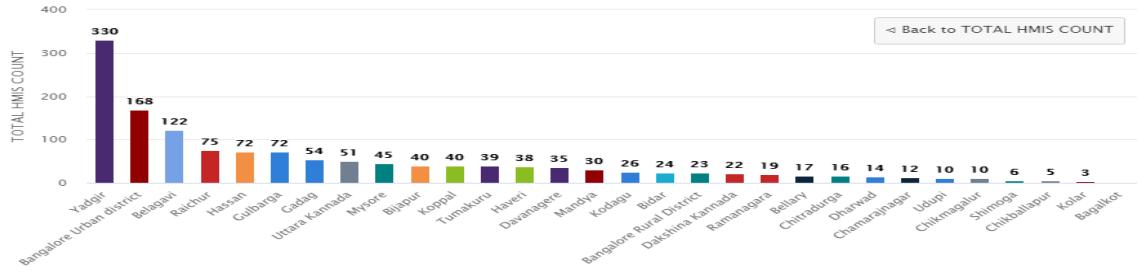


M10 - Number of Cases of Childhood Diseases 3,74,121

GPMS Transportal for Universal HealthCare

Childhood Diseases – Tuberculosis (TB)

[« Back to TOTAL HMIS COUNT](#)

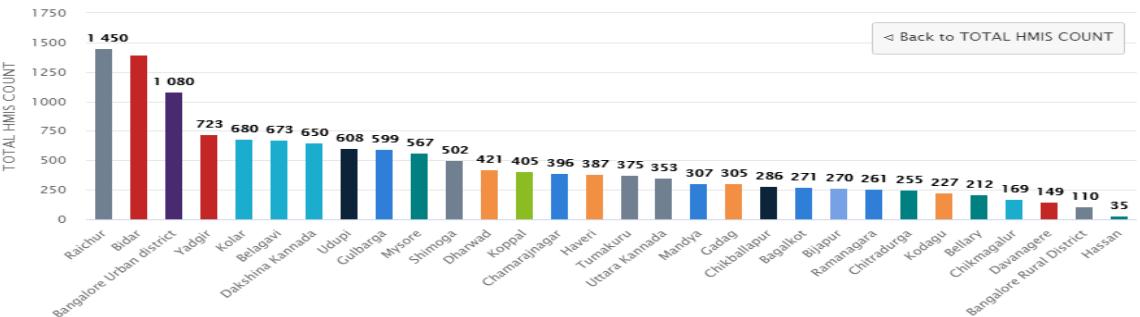


M14-Patient Services 1,426

GPMS Transportal for Universal HealthCare

Inpatient – Tuberculosis

[« Back to TOTAL HMIS COUNT](#)

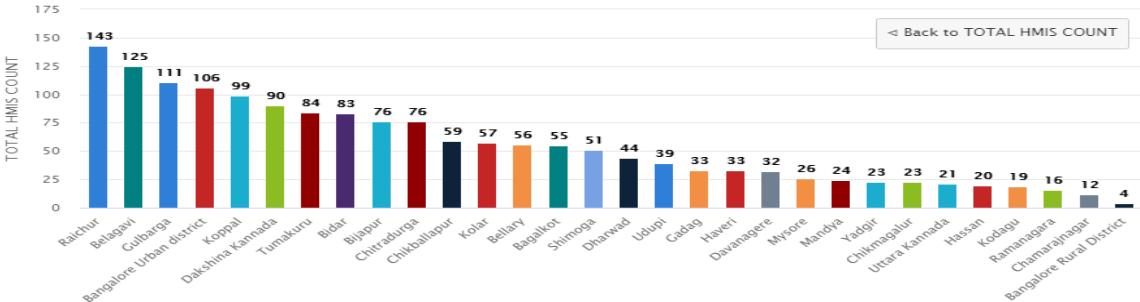


M16-Details Of Death Reported With Probable Causes 155

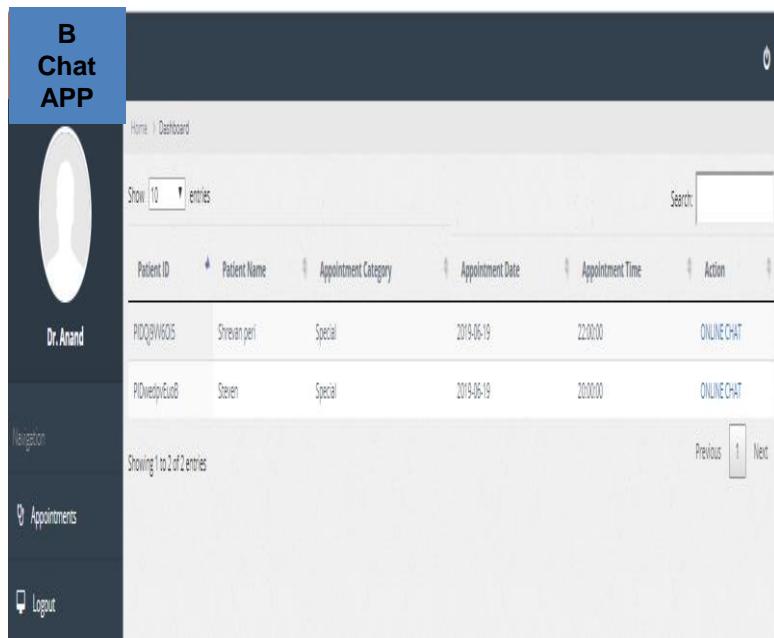
GPMS Transportal for Universal HealthCare

Number of Adolescent / Adult deaths due to Tuberculosis

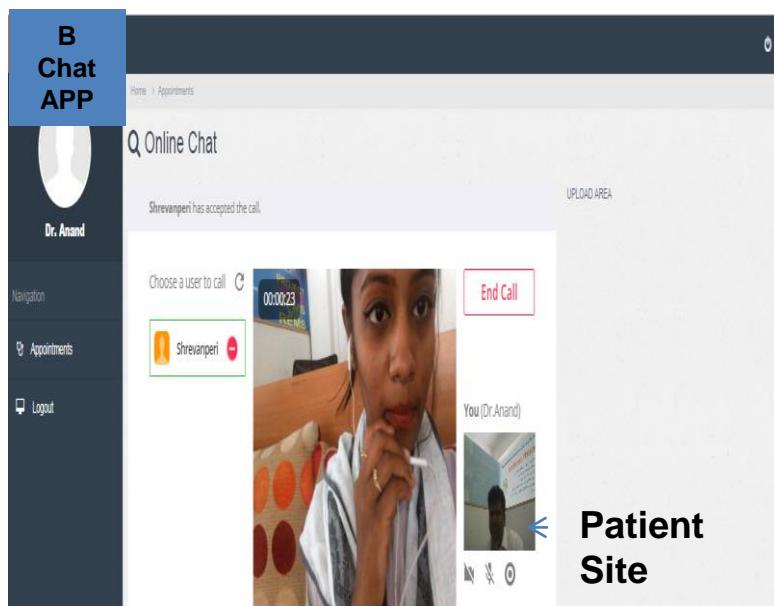
[« Back to TOTAL HMIS COUNT](#)



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



The screenshot shows a web-based application interface for managing patient appointments. The left sidebar is titled 'B Chat APP' and includes 'Dr. Anand', 'Navigation', 'Appointments', and 'Logout'. The main content area shows a table of appointments with columns: Patient ID, Patient Name, Appointment Category, Appointment Date, Appointment Time, and Action. Two entries are listed: 'PQJQ9W605' for 'Shrevarperi' (Special, 2019-06-19, 22:00:00, ONLINE CHAT) and 'PQwepyfGu8' for 'Steven' (Special, 2019-06-19, 20:00:00, ONLINE CHAT). A search bar and a 'Show 10 entries' button are at the top. A message at the bottom says 'Showing 1 to 2 of 2 entries'.



The screenshot shows a video call interface titled 'Q Online Chat'. The left sidebar is identical to the Command & Control Centre. The main area shows a video feed of a patient named 'Shrevarperi' and a doctor named 'You (Dr.Anand)'. A timestamp '00:00:23' is visible in the top left of the video frame. A red 'End Call' button is in the top right. Below the video are controls for volume, camera, and microphone. A blue arrow points from the text 'Patient Site' to the video feed. The text 'Shrevarperi has accepted the call.' is displayed above the video.

- **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



Recording through
Mobile phone -
Person Cough and
Demographic data
are captured



Pilot Cough
based
Detection
Technology
(Medical Intern
directed)

Deep Learning
ML/AI to
decipher known
Positive TB
Patients and Non
TB Candidate

- 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 Hegde
Ms. Padmavathi S



Mr.Raja Seevan
Founder Trustee &
Project Coordinator



R.Sri Kumar
Authur & Chairman
Trustee & Adviser



Mr.Arumugam
Author & Chairman
Trustee & Adviser



Dr.Vidyadhar
Mudkavi
Director CSIR 4PI



Prof. Samir K.
Brahmachari
Chief Mentor



Co Pi Dr.Tavpritesh
Sethi
Asst. Professor IIIT,
Delhi



Shamprasad
Podaralla,
Certified PMP &
ITIL

Core Indian CST Team



Mr.D'souza
Vernon



Mr.Terence



Mrs.Ummey Uzma



Mrs.Akhilandeswari



Mrs. Vani
suresh



Shalu
Mathew



Mrs.Sunitha



Mr.Andrew T.
Manuel



Ms.Sowjanya



Mrs.Hina
Bansal



Ms.Pooja



Mr.Ramesh
Mr.Hem
anth



Mr.Jay
Raval



Ms.Sireesh



Mr.Hari Krishna



Mr.Rahul



Mr.Rajesh



For any clarification, please contact

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Founder Trustee
Indian Centre for Social Transformation
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Empowering Nation ... Empowering Citizens

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www.indiancst.com/India/universalhealthcare

[https://indiancst.com/India/TBControlProgram/index.php/auth/login](http://indiancst.com/India/TBControlProgram/index.php/auth/login)

[https://tscl.indiancst.com](http://tscl.indiancst.com)

[https://municipality.indiancst.com](http://municipality.indiancst.com)

[https://tbindia.indiancst.com/GPMSTBTransportal](http://tbindia.indiancst.com/GPMSTBTransportal)

Indian Centre For



Social Transformation
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