



DEPARTMENT OF HEALTH AND FAMILY WELFARE – GOVT. OF KARNATAKA



Integrated GPMS Transportal For Universal Healthcare*

Sustainable Action for Transforming Human capital (SATH) program





About Ministry of Health and Family Welfare

The Ministry of Health and Family Welfare is an Indian government ministry charged with health policy in India. It is also responsible for all government programs relating to family planning in India

The Department of Health deals with health care, including awareness campaigns, immunization campaigns, preventive medicine, and public health.

सत्यमेव जयते

Ministry of Health and Family Welfare Government of India https://mohfw.gov.in





About NHM:



Government of India

The National Health Mission (NHM) encompasses its two Sub-Missions, the National Rural Health Mission (NRHM) and the newly launched National Urban Health Mission (NUHM). The main programmatic components include Health System Strengthening in rural and urban areas Reproductive-Maternal-Neonatal-Child and Adolescent Health (RMNCH+A), and Communicable and Non-Communicable Diseases. The NHM envisages achievement of universal access to equitable, affordable & quality health care services that are accountable and responsive to people's needs.

Ensure that all public health care facilities or publicly financed private care facilities provide assured quality of health care services.

nhm.gov.in





About Health & Family Welfare Department, Government of Karnataka



Health & Family Welfare

Karnataka state is one of the pioneer states in the country in providing comprehensive public health services to its people. Even before the concept of Primary Health Centers was conceived by the government of India, the state had already made a beginning in establishing a number of PHU's for providing comprehensive Health Care, and a delivery system consisting of curative, preventive, promotive and rehabilitation health care, to the people of the state. "HEALTH" is an asset to every person.

Government of Karnataka caters to its citizens' health related needs through NHM programs and hospitals. NHM – National health mission – executes several programs to prevent, early detection and management of communicable and non-communicable diseases, to track, immunize and monitor and ensure stable mother and child health and to procure and distribute necessary health related products to citizens of Karnataka

www.karnataka.gov.in/hfw





About Indian CST:



Indian Centre for Social Transformation (Indian CST) is a registered Public Charitable Trust (Registration No. HLS-4-00228-2009-10 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'.

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GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE

Initiative by the Ministry of Health and Family Welfare, Niti Aayog, Govt. of India, Department of Health and Family Welfare Government of Karnataka (KARHFW), Powered by Indian CST

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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 (HFWD) 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/ 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

http://www.karnataka.gov.in/hfw/Pages/Home.aspx

- 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.



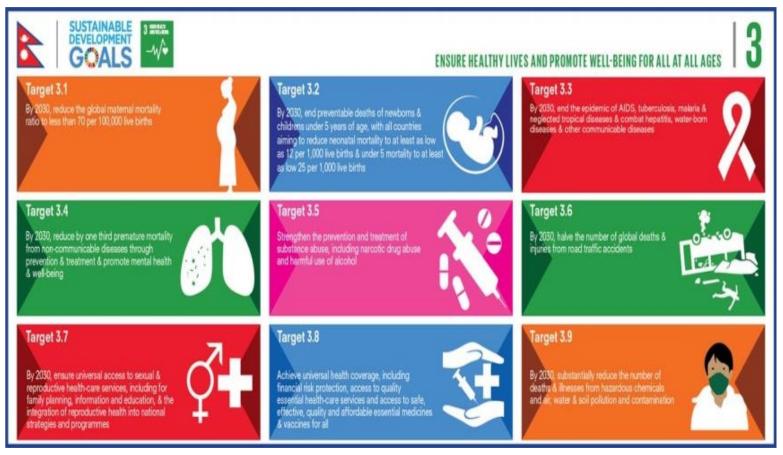
https://indiancst.com/India/ universalhealthcare/







IMPLEMENTATION OF SDG 3: ENSURE HEALTHY LIVES AND PROMOTE WELLBEING FOR ALL AT ALL AGES IN KARNATAKA STATE



Patients to access records held electronically whenever and wherever they need it.





THE VISION OF SATH

(Sustainable Action for Transforming Human capital)

Program initiated by NITI Aayog, is to transform Education and Health Sectors, by working closely with state level officials and other institutional level workers. In the states of Assam, Uttar Pradesh and Karnataka (selected by a transparency process), a futuristic role model is sought to be established. The road map of interventions, governance structures, monitoring and tracking mechanisms and hand holding of institutions through execution stage, entails measured steps to achieve the end objectives. This Single Integrated Dash Board using the GPMS Transportal for Universal Healthcare of Indian CST facilitates real time data capture at source and aggregation at institutional, District and State levels, of all existing software applications used in the State so that Policy interventions become data driven.











Ayushman Bharat is a National Health Protection Scheme, which will cover over 10 crore poor and vulnerable families (approximately 50 crore beneficiaries) providing coverage upto 5 lakh rupees per family per year for secondary and tertiary care hospitalization.

Improving Health for a Better Karnataka

GPMS Transportal for Universal Healthcare cloud computing platform has been further customized and developed for allowing digital access to Multiple Ministries at Central or State /District/ Urban Level /Rural Level / all Stakeholders / Govt. and Private Hospitals/ PHC's/ Sub-Centers / Doctors / GP's / Nurses / Multiple Stake holders / Associated with Healthcare Projects / Programs/ Schemes etc. To Work on This Single Cloud Computing integrated Platform For Monitoring of Mother and Child with Citizens Electronic Health Record with all Clinical Parameters

Any Karnataka State Citizens can access medical or ID records held electronically whenever and wherever they need it.

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GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE

CHALLENGES FACED

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CHALLENGES FACED BY- NITI AAYOG GOVERNMENT OF INDIA NHPS Working Group on IT

Following are the key questions that have emerged from meeting for further discussion on 19th February:

- 1. How can we create a clean database of beneficiaries?
- 2. Is SECC a good starting point for creating the beneficiary database?
 - a. How can we fill the missing elements (address, date of birth, spouse name etc.), which are not a part of SECC?
 - b. How can we establish the accuracy of the SECC database?
 - c. Is leveraging Aadhaar a better option?
 - i. Can we explore the possibility of seeding SECC with Aadhaar?
 - ii. What is the feasibility (in reference to section 57 of the Aadhaar Act) of doing so?
 - iii. What are the long term implications (in reference to upcoming data protection low) of doing so?
- 3. Of the modules proposed for the IT system, what are the 3-4 critical/ high priority modules that should be fast-tracked?
- 4. What is the bare minimum set of standards that need to be complied with? Who can help in identifying this set?
- 5. What all needs to be fast tracked as per the '2 speed' model i.e. isolate short term priorities at the same time not sacrificing long term objectives?
- 6. Can we retrofit existing platforms with the identified set of standards?
- 7. Can we adopt an API based approach to create an inter-operable nationwide ecosystem?





CHALLENGES FACED BY NHM HEALTH DEPARTMENT OFFICIALS GOVERNMENT OF KARNATAKA

- 1. NHM envisages a fully functional health information system facilitating smooth flow of information for effective decision-making. A robust health management information system is essential for decentralized health planning. Lack of indicators and local health needs assessment have been identified as constraints to effective decentralization.
- 2. The different health management information systems insilo's should be integrated to support regular decentralized analysis of data and for decision making at state, district, city and sub-district levels. The information systems will enable local users in management of health service delivery as well as help them in their routine activities.
- 3. Multiple information systems in various health programs need to be integrated for seamless data exchange to enable comprehensive decision making. This requires integration of service delivery data (both aggregate and granular, including HMIS, MCTS Hospital information Systems data, tracking data etc.), Nikshay with morbidity (IDSP), mortality (death reporting and MDR) and with other management information systems data (human resource management systems, finance management systems, drug inventory management systems, and information for private sector regulatory systems, e.g., Clinical Establishments Act, PCPNDT implementation).





CHALLENGES FACED BY HEALTH DEPARTMENT OFFICIALS GOVERNMENT OF KARNATAKA

- Each department under the Ministry of Health and Family Welfare Services, Government of Karnataka were working in silos.
- Multiple applications and databases are in silo's preventing seamless data sharing among department users and program offices. Despite computerization, data is shared after manual compilation leading to duplication of precious human efforts.
- Adding further inefficiency in the execution of various programs.
- The section required MIS for an effective and efficient decision making.
- Most of the departments, however, did not have any applications and, therefore, data was collected and collated manually for decision making.
- The manual processes also delayed actions by the decision makers.
 Today's report collected in a village, for example, takes 1 month to
 reach to the state level officer for decision making as it goes through
 time taking manual data collating process for all the villages, all the
 blocks, and all the districts in the state.





CHALLENGES FACED BY HEALTH DEPARTMENT OFFICIALS GOVERNMENT OF KARNATAKA

- There were chances of data discrepancy due to non-uniform data entry leading to inconsistent values in database and dubious report generation.
- Duplication of data is prevalent due to multitude of systems storing data about same subject / object.
- Some of the reports was needed data from multiple systems which would be possible only after manual compilation due to lack of integration among existing systems.
- There is no unified view of data and MIS for the entire department due to multitude of data sources. It leaded to cumbersome monitoring and reporting that limits the decision-making process.
- No decision support system was available real time for government officials at times of a disease outbreak.
- The different healthcare applications under various organizations in use do not have provision for recording and reporting health data for certain functional units such as NLEP, NPCB, Mental, Oral and NPPCD etc.





ISSUES FACED BY CITIZENS, ORGANIZATIONS & HOSPITALS

- No digital access provided to Patients / Citizens individual medical records.
- No provision for uploading Patients / Citizens medical history .
- Doctors, dispensaries and Govt. or Private hospitals did not have access to patient data even if patient wanted to share his/ her own data during treatment.
- Escalating demands on health and social services leading to ever increasing costs year on year.
- Increasing costs to fund healthcare
- Ageing Populations
- Decreasing Government resources
- Increasing Consumer expectations
- Lack of a layered approach
- Need for a seamlessly integrated experience
- Obtain health services Anywhere in the country without suffering financial hardship or excessive indirect costs





ISSUES AND CHALENGES FACED BY HEALTH DEPARTMENTS & HOSPITALS

- 1. Multiple applications and databases in silo prevents seamless data sharing among department users and program offices.
- 2. Despite computerization, data is shared after manual compilation leading to duplication of precious human efforts.
- 3. Duplication of data is prevalent due to multitude of systems storing data about same subject/object.
- 4. There are chances of data discrepancy due to non-uniform data entry leading to inconsistent values in database and dubious report generation.
- 5. Some of the reports would need data from multiple systems which would be possible only after manual compilation due to lack of integration among existing systems.
- 6. There is no unified view of data and MIS for the entire department due to multitude of data sources.
- 7. It leads to cumbersome monitoring and reporting that limits the decision making process.
- 8. The applications under use do not have provision for recording and reporting health data for certain functional units such as NLEP, NPCB, Mental, Oral and NPPCD etc





GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE

CHALLENGES ADDRESSED

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CHALLENGES ADDRESSED IN THE INTEGRATED DASHBOARD Further Customized and Developed by INDIAN CST

- Integrated multiple applications data bases running under National Health Mission (NHM) in Karnataka integrated using API's.
- A fully functional health information system facilitating smooth flow of information for effective decision-making as needed by NHM.
- An Integrated platform to provide digital access to the all Karnataka citizens, Govt. or Private doctors, dispensaries, hospitals, etc. departmental officials and policy level makers.
- Registered 1,16,99,815 households under which 4,06,75,091 citizens registered in the GPMS Transportal for Universal Healthcare so that digital access after KYC to each citizen can be provided with an user name and password to access their medical records online.
- Integrated and enabled a free flow of Real time Data and Interoperability.
- Enabled platform that communicates with all the state and district,
 village level systems and other national health information systems.





CHALLENGES ADDRESSED IN THE INTEGRATED DASHBOARD Further Customized and Developed by INDIAN CST

- Integrating approximately around 148 APIs into this dashboard.
- The feature of multi-functionality has been provided.
- Transparency in the health sector has been brought about.
- The ability of fraud detection due to the integration of various schemes under the government for insurance claims.
- Real time automatic Big data analytics reports with Block chain technology is being integrated the moment data is entered into the applications.
- Provides real time decision support system.





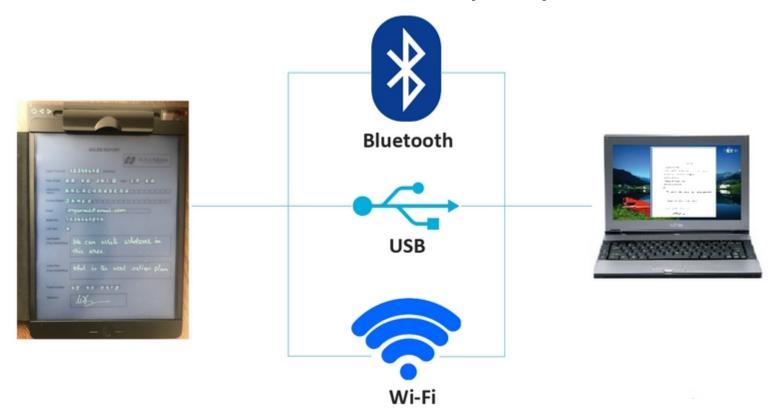
CHALLENGES ADDRESSED IN THE INTEGRATED DASHBOARD Further Customized and Developed by INDIAN CST

- A Dedicated STOP TB Module for real time data analytics enabled.
- All-encompassing analytics on the state of Karnataka, right from cradle to grave for every citizen.
- Capable of strengthening of the rural health system
- Enabled a seamless flow of data between e-hospital and other healthcare software's being used by NHM departments to create a consolidated health information of the citizens of Karnataka.
- The platform also supports Initiatives for reducing child and maternal mortality, stabilizing population along with gender and demographic balance have been taken.
- The output of these systems is been linked for display in GIS application for comprehensive decision-making.
- Open Data Sources to the benefit for a health platform
- Customized Role Based for providing secured Authorized Access
- Health professionals, researchers, planners, administrators and health consumers can use the same platform online for driving greater intelligence on how improve health ecosystems or programs.





CHALLENGES ADDRESSED IN THE INTEGRATED DASHBOARD Further Customized and Developed by INDIAN CST



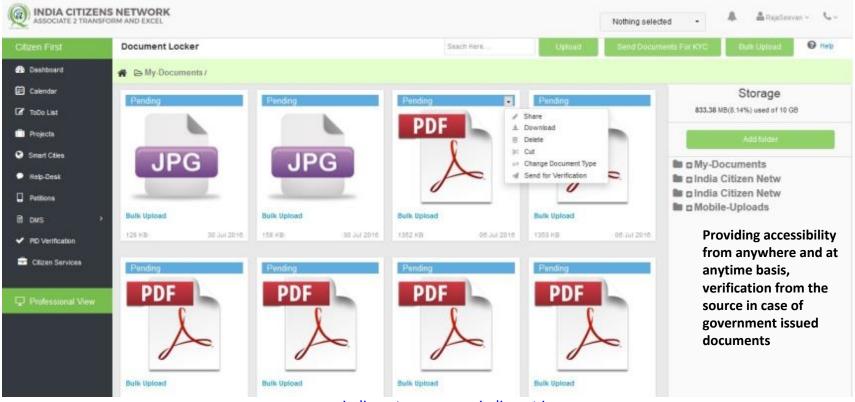
 Integrated State of the art digital Prescription Pad Paperless Handwriting Automated form processing solutions (PHAPS) useful for doctors integrated.





CHALLENGES ADDRESSED IN THE INTEGRATED DASHBOARD Further Customized and Developed by INDIAN CST

Citizens Digital Vault for storing 100 plus ID's on Cloud for e-KYC, Validation, Verifications using API's from NeGD is being enabled

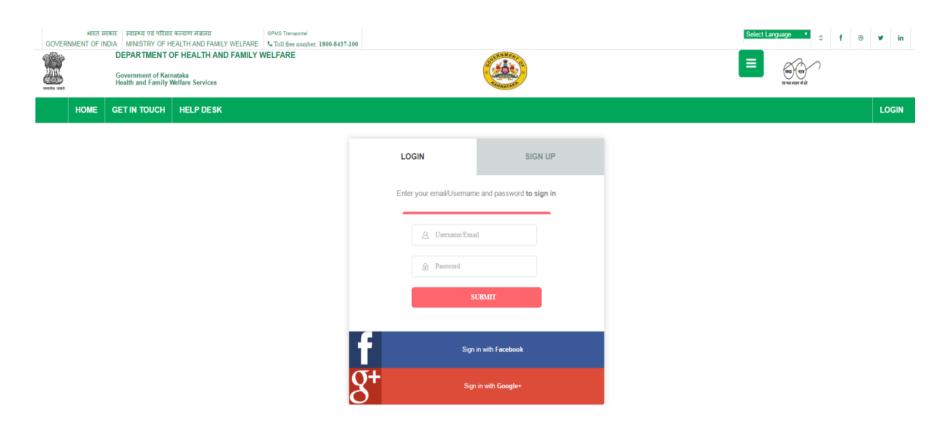


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Enter user name and password details and click on SUBMIT button.





GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE

EXECUTIVE SUMMARY

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Executive Summary

Indian CST has inked the MOU with Karnataka State Government Health and Family Welfare Department, Govt. of Karnataka (HFWD) 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 rolling out in the KTK State 30 districts, 30,000 health centers which includes Govt. and private for real time monitoring of Mother and Child with Citizens Electronic Health Record with all Clinical Parameters that will allow Multiple Ministries / 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 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

Indian CST has developed this make in India's Innovative GPMS Transportal for Universal Healthcare which is an integrated cloud computing solutions platform linked with GIS applications, web analytics, real-time data analytics, IVRS for comprehensive decision making platform and has been hosted from India's own supercomputing infrastructure at CISR 4PI Government of India.





GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE INTEGRATED WITH UMANG MOBILE APPLICATIONS

SDG 3: Health for all at all ages



Patients to access records held electronically whenever and wherever they need it.





This platform integrates all states, districts up-to block levels

- 1. Primary, secondary and a substantial part of tertiary care, by providing a continuum from community level to the district hospitals, with robust referral linkages to tertiary care that focuses on strengthening the Primary Health Care System. Integrates all outreach services in both rural areas and urban slums in India.
- 2. Helps realizing National health goals, on the survival and well-being of women and child survival to child development of all children 0-18 years, reducing existing disease burden and ensuring financial protection for households when implementing the Universal Health Coverage (UHC).





This platform is capable of Real time monitoring of mother and child along with citizens Electronic Health Record with all Clinical Parameters

1. Allows authorized access to Multiple Ministries at Central Govt. of India, State Health departments / Multiple Stakeholders / Govt. and Private Hospitals/ PHC's/ Doctors / Associated healthcare Projects / Schemes that can login with their user name and password to work concurrently on this single integrated cloud computing platform from any of their locations in India.





Third party monitoring and evaluation at all levels enabled

- 1. Key performance indicators, drugs and supplies, regular district level online real-time surveys can be conducted for providing a strong disease surveillance system in India.
- 2. For managing all the doctors, staff nurses, pharmacists, laboratory technicians, ANMs, ASHA workers and citizens as beneficiaries.
- 3. it also brings accountability in governance that would include social audits through people's bodies, community based monitoring and an effective mechanism of concurrent evaluation of services that address the health of all citizen's in the prevention and control of communicable and non-communicable diseases, including locally endemic diseases.
- 4. Ensures that all public health care facilities or publicly financed private care facilities provide assured quality of health care services that delivers large range of preventive and curative care services.





KARNATAKA STATE BECOMES INDIA'S FIRST IMPLEMENTATION

- 1. SATH is an initiative through which NITI Aayog will partner with three states and to transform the health sector of the Indian states.
- 2. 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
- 3. GPMS Transportal for Universal Healthcare cloud computing platform to provide digital access for each family to access free drugs online.
- 4. Access to full range of primary care services e.g. diagnostic and laboratory etc. Services available in their location which will identify early identification of diseases through periodic screening conducted.
- 5. Health education and promotion of good health practices and values during these formative years where the timely management including assured referral for secondary and tertiary level care is appropriate anywhere from their own locations in India.
- 6. Platform is integrated with patient feedback and grievance monitoring online Help Desk redressal system is enabled.





In order to ensure and further enable the implementation of SDG-3 in the State of Karnataka

- 1. A MOU is in force for a period of 10 years (till 27.04.2027) from the date of signing of MOU i.e., 27.04.2017 (Government Order No. HFW 76 FPE 2017, Bengaluru, Dt: 06.05.2017). Thereby establishing a relationship between HFWED and Indian CST to jointly identify, qualify and develop solutions to improve healthy life and promote wellbeing of children (premature and term children).
- 2. For doing so, it is necessary to bring all the various stakeholders on to the same platform, so that there will be responsibility fixed to share all data and information relating to the myriad programs taken up aimed at achieving SDG-3 in the State of Karnataka.
- 3. All the stakeholders need to access the same validated data, to facilitate facts based decisions at each level-global to local.
- 4. Timely interventions are possible only when diverse data is processed, collated and analysed and made available in real time, by generation of appropriate alerts and delegation of tasks.





Indian CST's GPMS Healthcare Information Therapy Transportal

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

Allows Multiple Ministry / Stakeholders / Hospitals/ PHC's/ Doctors / Associated healthcare Projects / Schemes To Work on This Single Platform





GPMS Healthcare Information Therapy Transportal Monitoring of Mother and Child with Citizens Electronic Health Record with all Clinical Parameters

Allows Multiple Ministry / Stakeholders / Hospitals / PHC's / Doctors / Associated healthcare Projects / Schemes To Work on This Single Platform Individual Citizens/Organizations Registration/ ADMISSION Mother Municipal Corporation Legacy Update Hospital monitors approves online and Monitoringat INDIA CITIZENS mother and baby citizen makes payment Hospital/PHC/Clinic/ NETWORK with Aadhar Municipality health, then collects Nursing online and receipts is API to be integrated Homes/Others, and the new born details generated, then only and reports online gives birth to child Birth/Death Certificate using Birth will be Issued Insurance Certificate Companies application Form Indian CST/State Govt, Cloud online Informs State Infrastructure Govt. Dept. **GPMS Healthcare** and Information Therapy State Health Dept, respective Transportal with Integrated in case of Police Dept Communication System n Birth/Death(Diseas (Medico Legal Bank Payment Gateway es/Epidemics) Case) reported A. List of services available for Citizens: B. List of services available for PEHR (Patient Electronic Health Record). Citizens: Medical Reaccessible on demand, through Patient 1. e-Consultation imbursement Portal, Post Office, Municipal Office Health / Police 2. Drugs@Home under Govt. of Refill Reminders (prescribed drugs) Dept., in case of 3. Diagnostics@Home India and State 3. Reminders with instructions on Death and 4. Care@Home Govt. various conditions (empty stomach, etc.) for 5. General Counseling unnatural death Schemes and diagnostic tests 6. Family Doctor Health Programs Health Checkup and Chronic Disease 7. Second Opinion Management Providing Online 8. Facilitation 5. Immunization Reminders Patient 6. Pre and Post Natal care follow-up Reports generated Online Electronic 7. Post-Operative Care follow-up sent to Central Govt. Medical Record 8. Syndromic Analysis automatically online 9. Physician Quality Reporting

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GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE

INTRODUCTION

https://indiancst.com/India/universalhealthcare





INTRODUCTION

- 1. GPMS Transportal for Universal Healthcare an integrated dashboard which contains the information of all the programs under the Government of India and State Government of Karnataka
- 2. A consolidated health information of citizen's secured repository of Karnataka State
- 3. A decision making system for all departments, health facilities and managing stakeholders of NHM.
- 4. Empowers the health program management, beneficiaries monitoring and project implementation teams.
- 5. Reduces manual effort and thus it will help eliminate manual errors and redundancies.
- GPMS cloud computing solutions and integrated data correlated of all other applications is meant to strengthen the power of supervision.





INTRODUCTION -2

- 1. Cloud Computing Solution providing access to medical records, drug inventory, disease report, 24 hours a day, and 365 days a year.
- 2. Provisions to share medical records between patients and health professionals throughout the globe
- 3. GPMS Healthcare Cloud Computing Solutions Platform for rolling out through out in the KTK State 30 districts, 30,000 health centers
- 4. GPMS Trans portal for Universal Healthcare also becomes the world's first where integrating 100's of healthcare different systems into a single dashboard for providing affordable healthcare for all.
- 5. Cradle To Grave Solutions for mankind.
- 6. Democratization of Health services and solutions for the state of Karnataka, scalable to international standards.

PROJECT IMPLEMENTATION GOAL

- GPMS Transportal for universal healthcare Integration Plan project is intended to enable a seamless flow of data between e-Hospital and other 100 plus software's currently being used by NHM health facilities to create a consolidated health information for the citizen of Karnataka.
- 2. The consolidated data pool will cater to all the MIS needs of all the sections, departments running in the Health and Family Welfare services. This project will create a sharable and scalable single evidence based information pool to be used for informed and accurate decision makings by all the ministries, departments sections and managing stakeholders of NHM.
- 3. This project will dramatically reduce manual effort at data entry centres and thus it will help eliminate manual errors and redundancies.





GPMS TRANSPORTAL FOR UNIVERSAL HEALTCHARE IS BEING INTEGRATED WITH UMANG mobile apps

Ontology of Healthcare Programs and Policies

| Scope | 26 10 | Focus | 25 | Outcomes | Ŧ | Care | | Population | | |
|-------------------|----------|----------------|--------------|---------------------------|--------|------------|--------|-------------|--|--|
| Global | [+] | Drugs | <u> </u> | Accesibility | | Preventive | F | Individual | | |
| National | | Educational | es (| Cost | /with] | Wellness | for/of | Children | | |
| Local | | Financial | /policies on | Quality | 0 | Pregnancy | e l | Pre-natal | | |
| Urban | | Insurance | | Satisfaction | | Illness | care | Post-natal | | |
| Rural | | Information | programs | Safety | | Episodic | | Adolescents | | |
| Provider | | Personnel | E 20 | Parity | | Chronic | | Adults | | |
| | | Physician | Jud.) | Timeliness | | Palliative | | Mothers | | |
| | | General | | | | | | Workers | | |
| | | Specialist | | | | | | Aged | | |
| | | Nurses | | | | | | Family | | |
| | | Staff | | | | | | Community | | |
| | | Regulatory | | | | | | | | |
| | | Technology | | | | | | | | |
| | | Treatment | | | | | | | | |
| Namespranact, ber | dry, als | Administration | Mattern | al Healthcare Programm, G | 2 28 2 | otti | | 5 | | |





BENEFITS

ONLINE CITIZENS DIGITAL MEDICAL / RECORDS

- 1. Real time monitoring of mother and child along with his or her citizens Electronic Health Record with all Clinical Parameters which allows authorized access to Multiple Ministries at Central Govt. of India, State Health departments/ Multiple Stakeholders/Govt. And Private Hospitals/PHC's/ Doctors / Associated healthcare Projects Programs / Schemes / Beneficiaries that can login with their user name and password to work concurrently on this single integrated cloud computing platform from any of their locations in India.
- 2. Electronic Digital Health Records will be real-time, patient centered records that make information available instantly and securely to authorized users.

For Receiving Various Types Healthcare Services at Citizen's Door Step





BENEFITS

FOR ALL GOVT. OR PRIVATE HEALTH FACILITIES

- When a citizen enters any of the Government or Private healthcare facilities they can search this Indian central medical records registry online by entering any of the citizens govt. ID's or Aadhaar or Ration Card number and search
- 2. The Search will display the citizen's details for verification only if the healthcare facility person has authorized access
- 3. Only the authorized healthcare facility person can access and register online this patient who has come for consultation or admission can view their legacy specific medical records online including scan documents online.
- 4. Provision to upload patient's legacy medical records online or for registering medical encounter data by registering clinical outcomes like ICD and CPT Codes or Citizen to access to view specific medical records for Government to view of diseases by Gender and Age online

For Delivering Various Types Healthcare Medical Services at Citizens Door Step





BENEFITS

REAL TIME MONITORING OF BENEFICIARY MEDICAL REIMBURSEMENTS

- Latest ICD code are been connected with the Drug Code and Procedure codes to each of the medical record of patient / citizen, there is a default option to scan and upload ones medical records documents, The same is been integrated with the Aadhar, Ration card, SECC database, NPR database, MR. No. Patient No., etc.
- 2. All Healthcare facilities associated in the particular region to the Asha Workers, Doctor, Labs, blood banks, Fair Price shops, Households surveys, Medical Colleges, Pharmacy colleges, nursing colleges, clinics, research centres, iOSSD on going programs, Tests done reports, other Reports, Schools, Programs, Projects, Schemes, Dash Boards, Bank Payment Gateways, Census Populations, Property Taxes information with PID, Multiple government ID's, Multiple Banks IFSC codes, Police stations, Birth Records, Death records.
- 3. IVRS, Mobile Task Management for sending reminders, online helpdesk for citizens/ patients grievances to be addressed, medical reimbursements, multiple banks payment gateways,
- 4. Real-time reports for making policy decisions, GIS maps, vaccination schedules, mobile application etc. Multiple levels of security integration's are enabled.

For Receiving Various Types Healthcare Medical Services at their Door Step





BENEFITS

FOR DELIVERING G2C, G2B SERVICES AT THE CITIZENS DOOR STEP

- Offers Digital Access to patient record before he / she reach the hospital and the ambulance can also exchange the health information of the patient in case of emergency
- 2. Efforts will be made to align with the Govt.'s "100 Smart Cities", "Make in India", "Digital India", "and Swachh Bharat Mission" and other initiatives brought in from time to time.

GPMS Transportal Cloud Computing Solutions Platform

Integrated Data Analytics with Multiple Banks Payment Gateways Offered from India's Own Super Computing Facility



EMPOWERING CITIZENS...EMPOWERING NATION

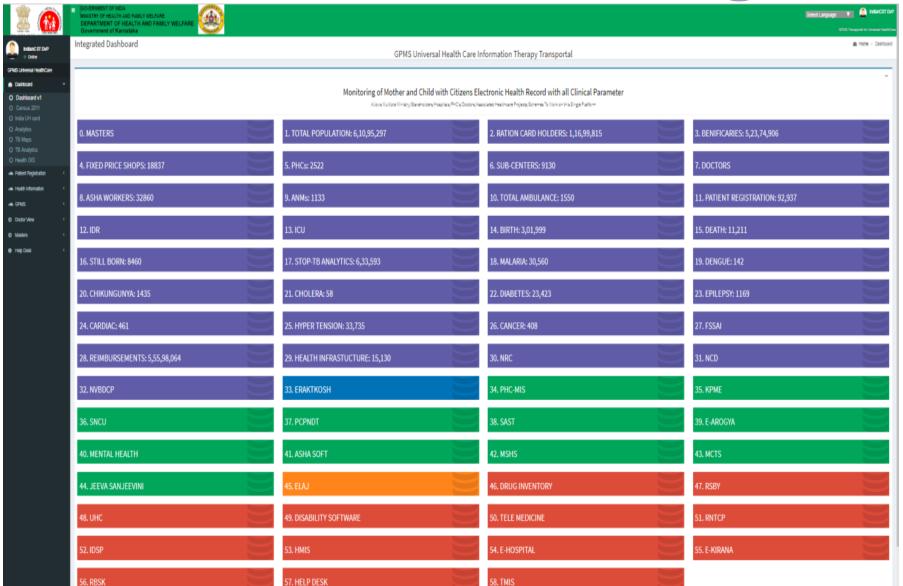
All citizen entitlements available on the cloud Online medical records Making financial transactions electronic & cashless Infrastructure as a Utility to Every Citizen Governance & Services On Demand Public Grievance Redressal e-Governance & e-Services: Across government Information for All

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It is an employment creation and capacity building and skill India program in place a real time Data analytics as a Service using the GPMS Transportal hosted from India's own Supercomputing facility. Project creation of One lakh people jobs in 5-5 years' time with generation of revenues required to make this a sustainable model

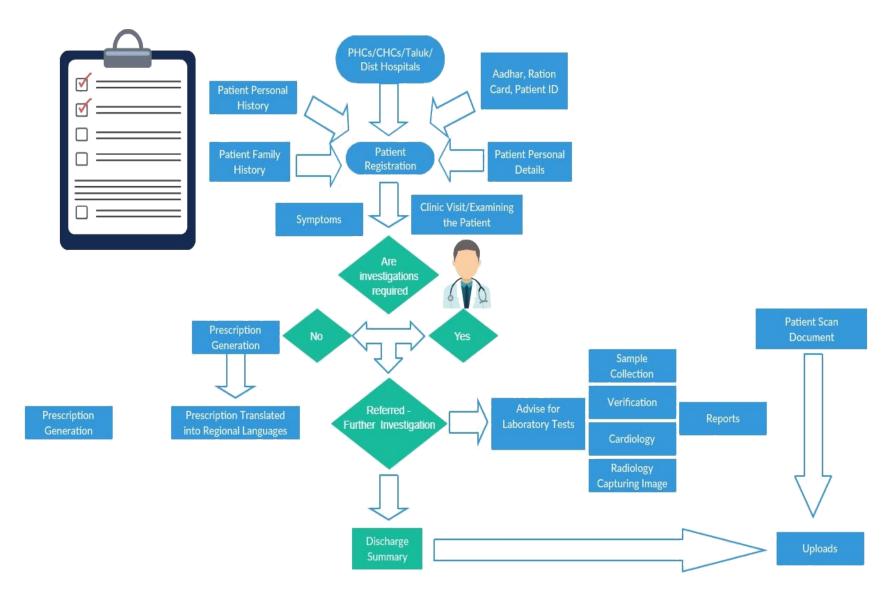
















GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE

BENEFITS





BENEFITS

INTEGRATED WITH RATION CARD, AADHAR ALONG WITH OTHER GOVT. ID'S

Only four levels of authorized users in the Cloud Platform who will have access:

- National Level Users
- State Level Users
- 3. District Level Users
- 4. Village Level Users

Whenever a patient or citizen enters any of the Government or Private healthcare facilities healthcare facility can search this Indian central medical records repoistroy online by entering any of the citizens ID's and search

Electronic patient registration software provides a solution for eliminating the need for manual entry of data in the health sector as a whole. It also enables a patient that is registered on this platform to have his medical records stored digitally that allows to access it whenever he intends in doing so at remote clinics or hospitals in interior parts of India.





GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE

INFANT DEATH ONLINE NEW MODULE DEVELOPED AND INTEGRATED



IDR- For Real Time Infant Death Reporting Format Online

The infant mortality rate (IMR) is universally regarded as an important indicator of the health and economic status of communities, and the effectiveness of maternal and child health services. According to the Sample Registration System (SRS) of India, IMR in Karnataka, a southern state of India, was 38 per 1000 live births in 2010.





Objective - IDR- Real Time Infant Death monitoring to reduce the IMR rate in the state of Karnataka.

IDR online can monitor:

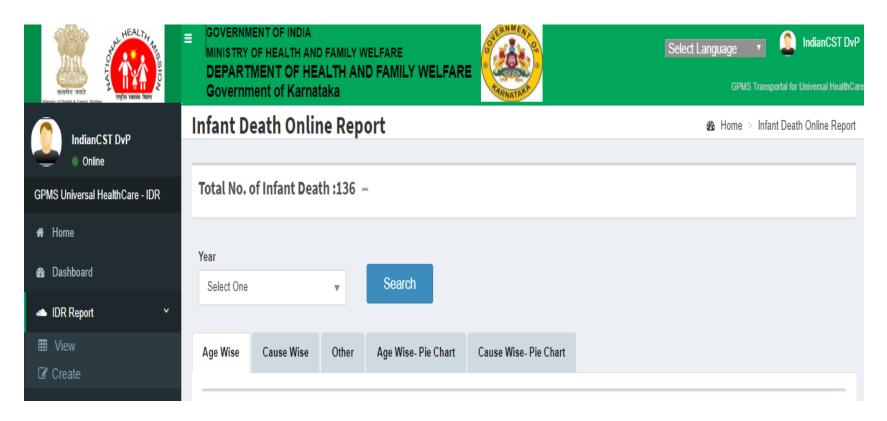
- Infant Mortality Rate in Karnataka
- Infant Deaths by Sex and Residence
- Distribution of Mortality Among INFANTS in Age Group 0-28 DAYS
- Leading Age-wise Infant Deaths in Karnataka
- Leading Cause-wise Infant Deaths in Karnataka
- Leading other cases of Infant Deaths in Karnataka
- Neo-natal Mortality Rates and Neo-natal Deaths to Infant Deaths in Karnataka





IDR- For Real Time Infant Death Reporting Format Online

Click on **IDR Report->Create** menu to enter the details of Infant Death Online Reporting

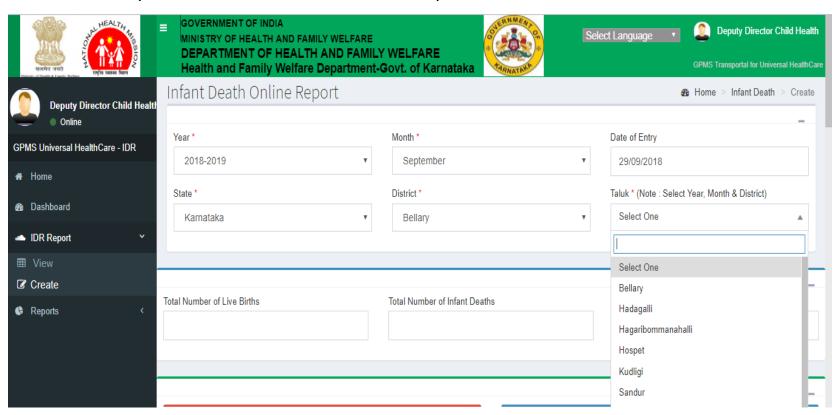






IDR- For Real Time Infant Death Reporting Format Online

Select a particular district and the particular Taluk from the list box



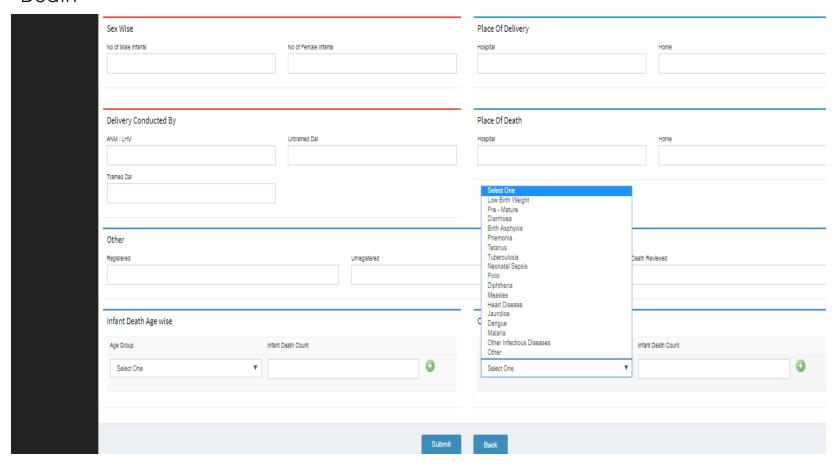
Select the particular **Year** from the year list box, enter the data for **Total Number of Live Births**, **Total Number of Infant Deaths**, **Total Number of Still Births**





IDR- For Real Time Infant Death Reporting Format Online

Enter the values for Sex wise, Number of Male Infants, Number of Female Infants, Place of Delivery, Delivery Conducted By, Place of Death, Infant Death Age wise and Cause of Death







IDR- For Real Time Infant Death View Format Online

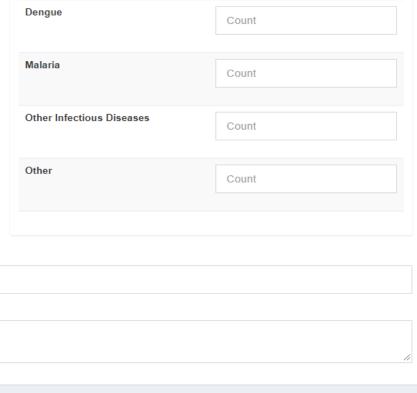
| Infant Death Age wise | | Cause Of Death | |
|-----------------------|--------------------|------------------|--------------------|
| Age Group | Infant Death Count | Cause Of Death | Infant Death Count |
| 0 to 1 Days | Count | Low Birth Weight | Count |
| 2 - 3 Days | Count | Pre - Mature | Count |
| 4 to 7 Days | Count | Diarrhoea | Count |
| 8 to 28 Days | Count | Birth Asphyxia | Count |
| 29 Days to 1 Year | Count | Pnemonia | Count |
| | | Tetanus | Count |





IDR- For Real Time Infant Death View Format Online

Enter data for complete and click on **Submit** Button



Submit Back

Powered by Indian CST.

Total Number of Death Reviewed

Remarks

As per Govt. of India Standards National eHealth Authority (NeHA) 2015

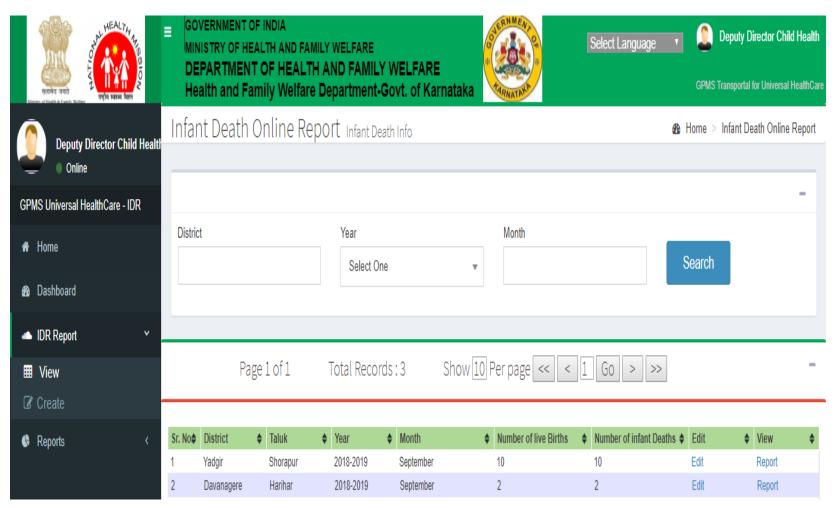
Initiative by the Ministry of Health and Family Welfare,





IDR- For Real Time Infant Death Reported View

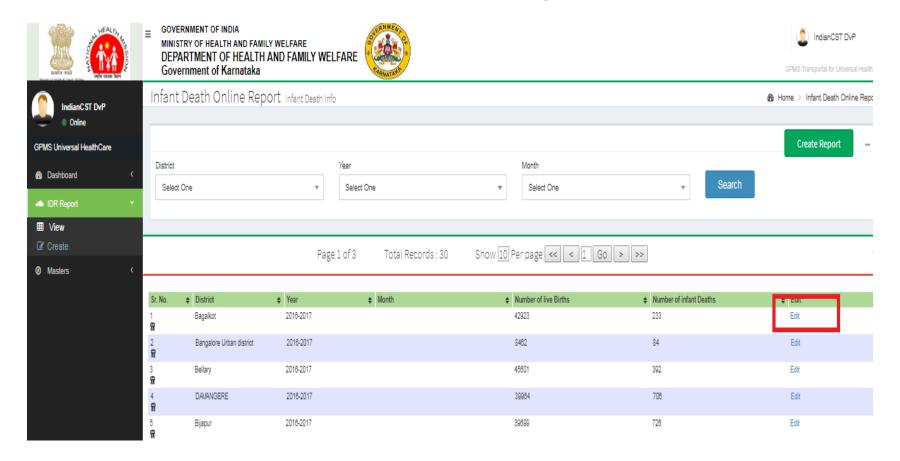
Click on **IDR Report ->View** menu to view the records







IDR- For Real Time Infant Death Reported View Online



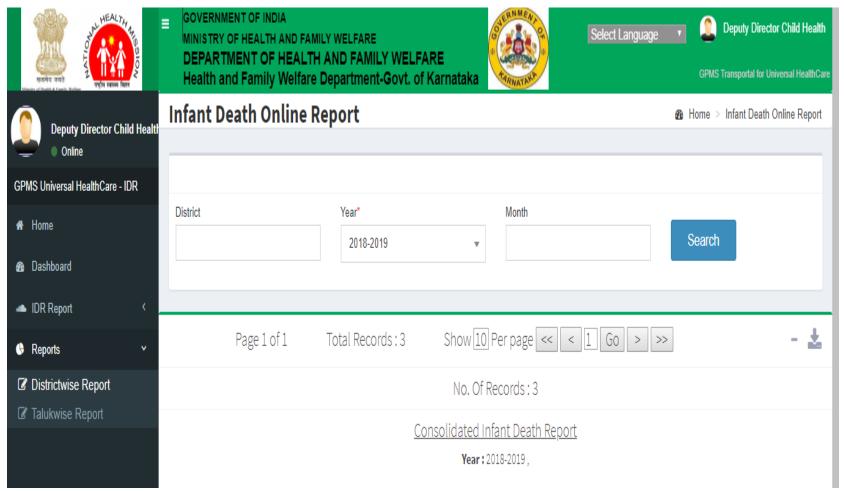
Click on **View link** to view the details of a particular record and also edit the data if you have permission only.





IDR- For Real Time Infant Death Reported View

Click on IDR Report -> District wise report







IDR- For Real Time Infant Death Reporting Online

Click on IDR Report ->Taluk wise report

| महाया जावारी के प्रतिकृति प्रतिकृति प्रतिकृति के प्रतिकृति प्रतिकृति के प्रति के प्रतिकृति के प्रतिकृति के प्रतिकृति के प्रतिकृति के प्रति के प्रतिकृति के प्रति के प्रतिकृति के प्रतिकृति के प्रतिकृति के प्रतिकृति के प्रतिकृति | = | GOVERNM MINISTRY (DEPARTI Health ar | OF HEAL | TH AN | ALTH A | ND FAI | VILY W | | | ataka | 105 # | TARNATA | WA OF # | 5 | Gelect La | nguage | · 7 | ₫ | Deputy MS Transport | | Child Hea | |
|---|--|---|----------|---------------|-----------|-----------------------------|----------------------------|------------------------------|---------------------------|----------------------|-------------|---------------------|-------------------------------------|-------------------|-------------------|--------|---------|--------------------|----------------------|----------------|-------------------|---|
| Deputy Director Child Health Online Online | | | | | | | | | | | | æ | ♣ Home > Infant Death Online Report | | | | | | | | | |
| GPMS Universal HealthCare - IDR | | | | | | | | | | | | | | | | | | | | | | |
| ♣ Home | Di | istrict | | | | Year* | 2040 | | | | | Month | | | | | | Sear | nh. | | | |
| № Dashboard | | | | | | 2018 | -2019 | | | | 7 | | | | | | | Seal | JII . | | | |
| ▲ IDR Report 〈 | | | | | | | | | | | | | | | | | | | | | | |
| Reports | Page 1 of 1 Total Records: 2 Show 10 Per page << < 1 Go > >> - 🚣 | | | | | | | | | | | | 4 | | | | | | | | | |
| ☑ Districtwise Report | Consolidated Infant Death Report | | | | | | | | | | | | | | | | | | | | | |
| ☑ Talukwise Report | Year: 2018-2019, | | | | | | | | | | | | | | | | | | | | | |
| Consolidated Infant Death Report | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Total | Total Infanth Death a | | th age v | wise | vise 💠 Sex | | Place of Deliver | | ф | Delivery Conducte | | ed by 💠 | Place of | Dea | | | |
| | SE No. | District \$ | Taluk \$ | Year | Month \$ | Number of live births | number of \$ infant deaths | number of Still births | 0 - 1 \$ Day | 2 - <u>3</u> Days | 4-7 days | 8-2 <u>8</u> days - | 9 layş 1 Mat ear | e Fema t e | Hospit a l | Honte | Trans#t | ANM / \$ LHV | Untrained Dai | Trained Dai | Hospit # l | Н |
| | 1 | Davanagere | Harihar | 2018- 2019 | September | 2 | 2 | 2 | 1 | 1 | 0 | 0 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |





IDR- For Real Time Infant Death Reporting Online

Auto Generated Real Time Analytics Dashboard for Infant Death Reports

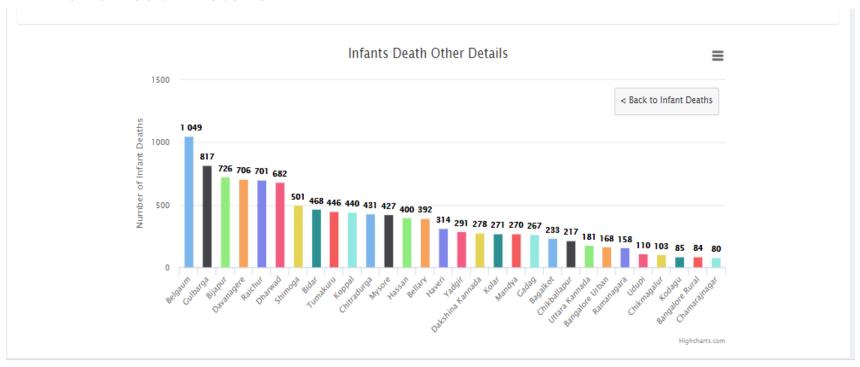
IDR dashboard displays the report containing Age wise, Cause wise and other details of Karnataka State infant death along with its graphical representation. The reports are shown from the values entered in the Infant Death reporting form. The sample screenshot is given below





Auto Generated Real Time Analytics Dashboards For Infant Death Reports

Infant Death Details



Powered by Indian CST.

As per Govt. of India Standards National eHealth Authority (NeHA) 2015

Initiative by the Ministry of Health and Family Welfare, Govt. of India, Niti Ayog, Govt. of Karnataka

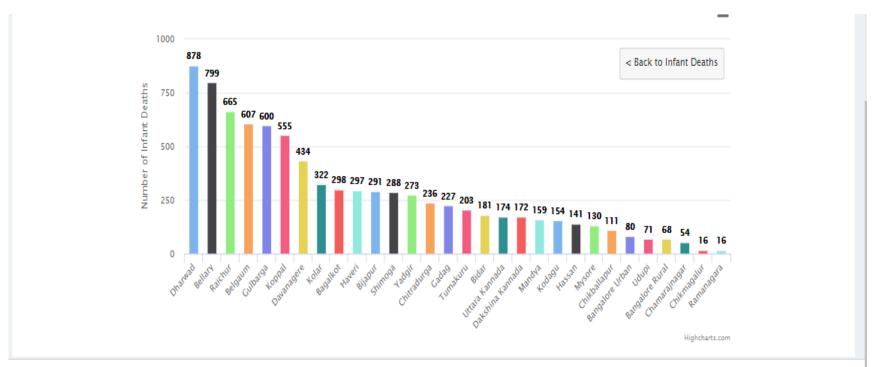




Auto Generated Real Time Analytics Dashboards

For Infant Still Birth Reports

Still Birth Details



Powered by Indian CST.

As per Govt. of India Standards National eHealth Authority (NeHA) 2015

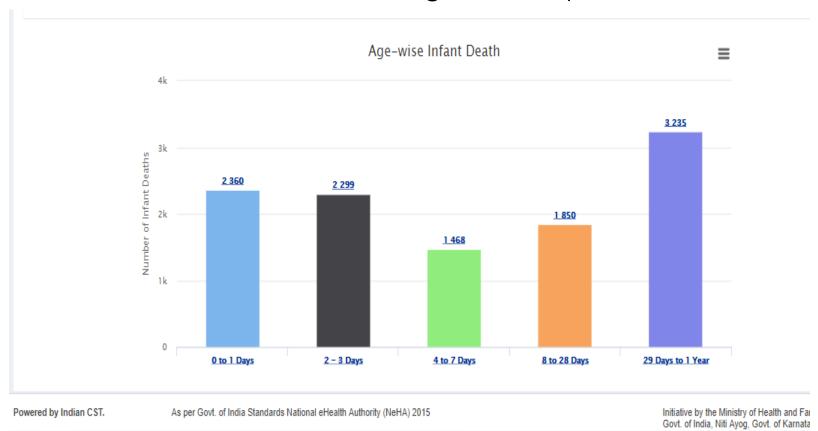
Initiative by the Ministry of Health and Family Welfare, Govt. of India, Niti Ayog, Govt. of Karnataka





Auto Generated Real Time Analytics Dashboards

For Infant Death Age Wise Reports

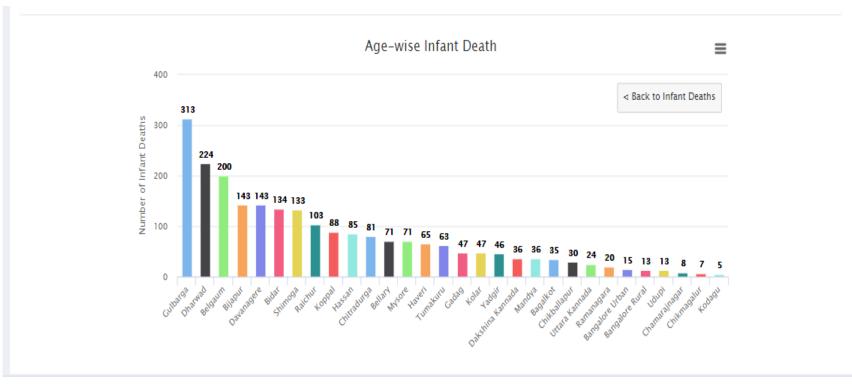






Auto Generated Real Time Analytics Dashboards

For Infant Death Age wise District Wise Reports



Powered by Indian CST.

As per Govt. of India Standards National eHealth Authority (NeHA) 2015

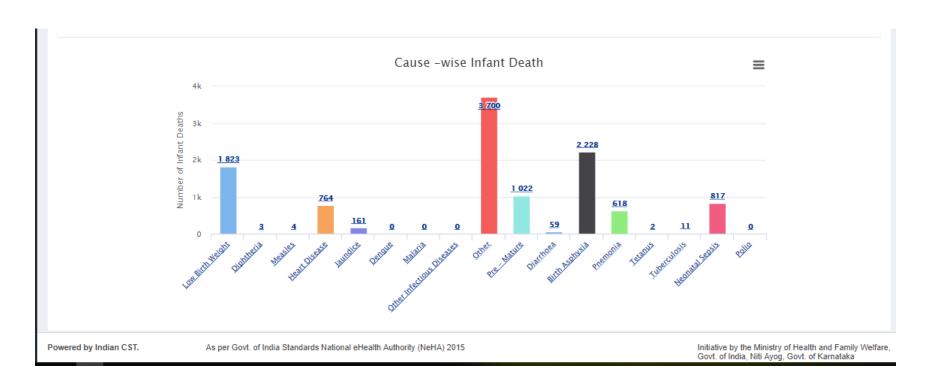
Initiative by the Ministry of Health and Family Welfare, Govt. of India, Niti Ayog, Govt. of Karnataka





Auto Generated Real Time Analytics Dashboards

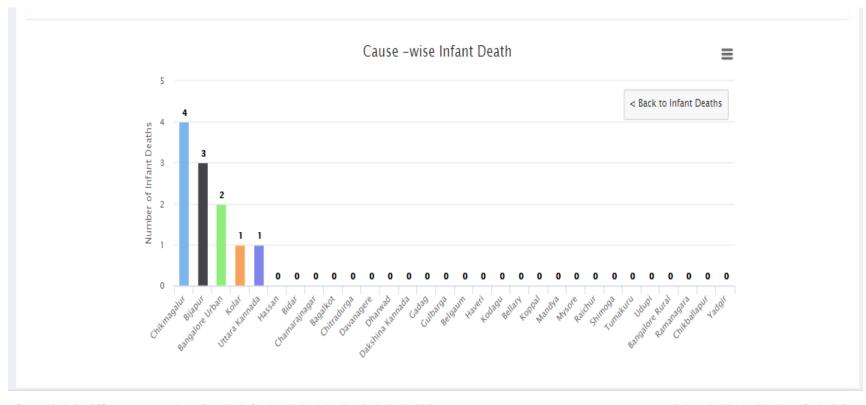
For Infant Death Cause Wise Reports







Auto Generated Real Time Analytics DashboardsFor Infant Death Cause wise District Wise Reports



Powered by Indian CST.

As per Govt. of India Standards National eHealth Authority (NeHA) 2015

Initiative by the Ministry of Health and Family Welfare, Govt. of India, Niti Ayog, Govt. of Karnataka





Auto Generated Real Time Analytics Dashboards

For Infant Death Other Cause Wise Reports



Powered by Indian CST.

As per Govt. of India Standards National eHealth Authority (NeHA) 2015

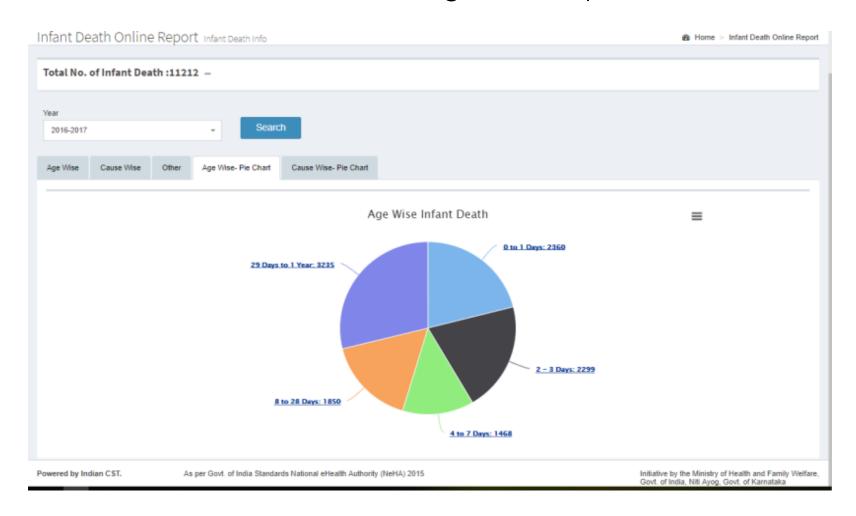
Initiative by the Ministry of Health and Family Welfare Govt. of India, Niti Ayog, Govt. of Karnataka





Auto Generated Real Time Analytics Dashboards

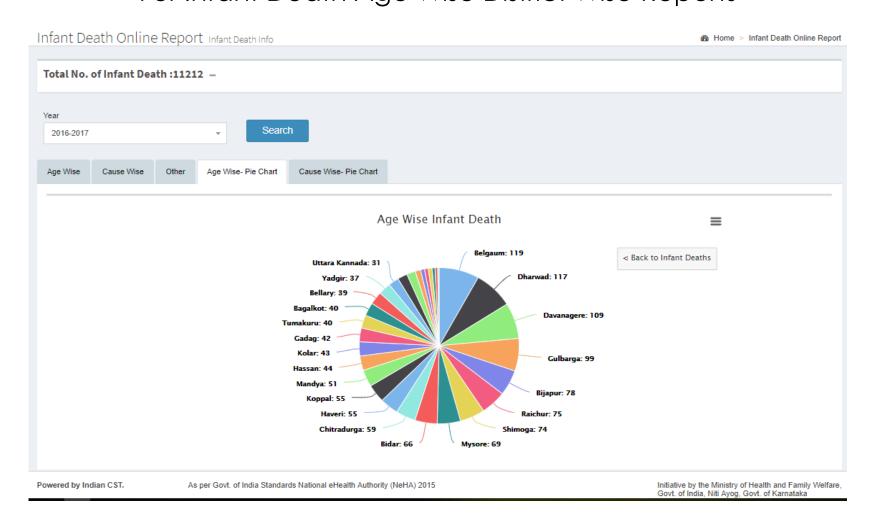
For Infant Death Age Wise Reports







Auto Generated Real Time Analytics DashboardsFor Infant Death Age Wise District Wise Reports

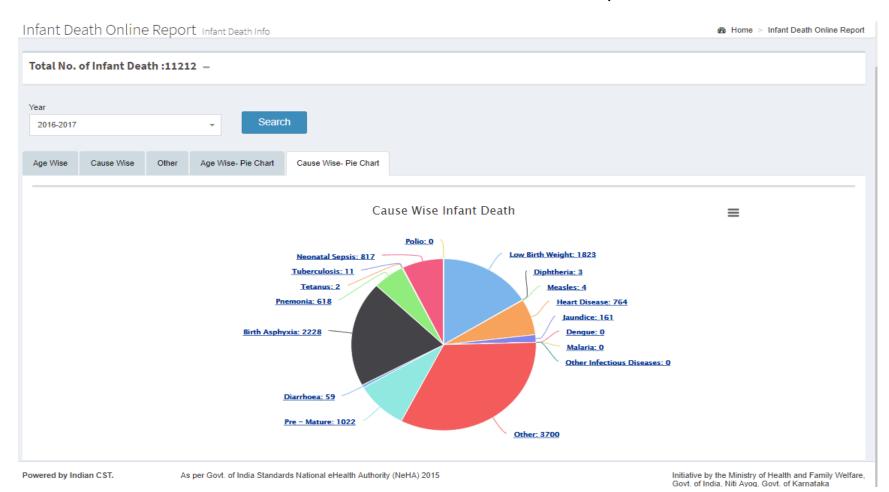






Auto Generated Real Time Analytics Dashboards

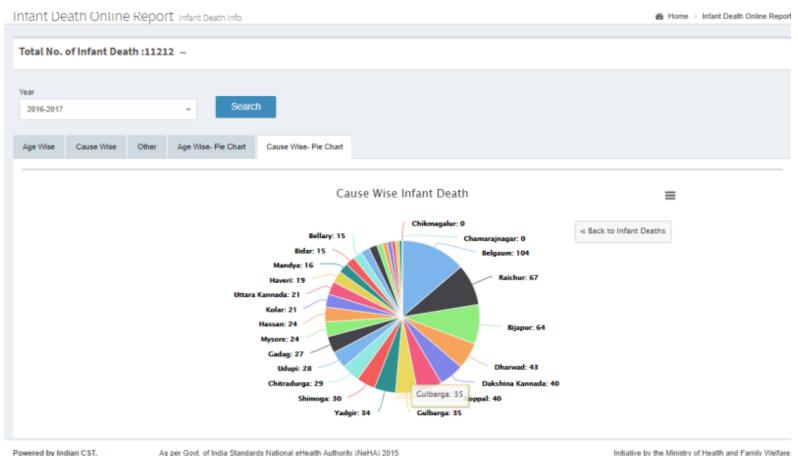
For Infant Death Cause wise Reports







Auto Generated Real Time Analytics Dashboards For Infant Death Cause wise District Wise Reports



Initiative by the Ministry of Health and Family Welfare Govt. of India, Niti Ayog, Govt. of Karnataka





ONLINE HELP DESK MODULE

Click on **GET IN TOUCH** to view the contact information Of Health Department



Nirman Bhawan



Our Location

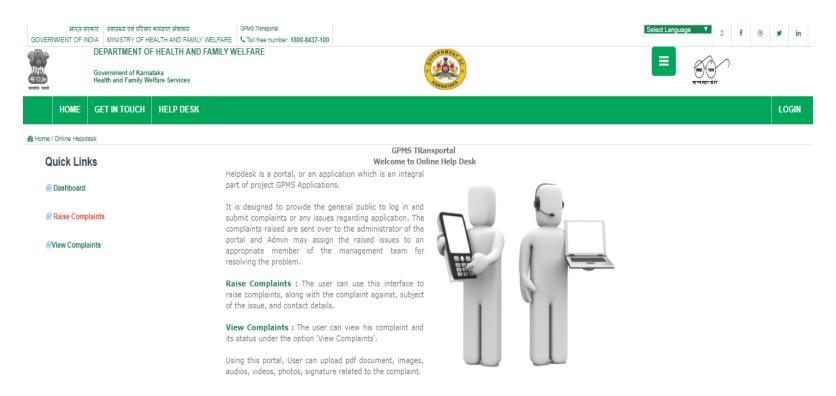






ONLINE HELP DESK MODULE

Click on **HELP DESK** menu to raise and view the complaints

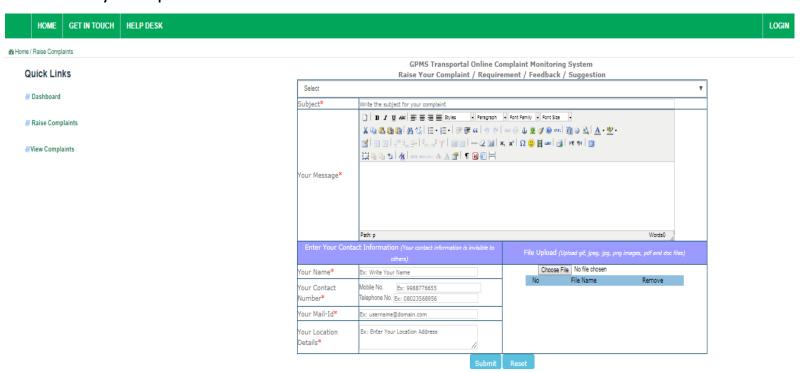






ONLINE HELP DESK MODULE

Click on **Raise complaints** menu to raise the complaint, and the complaint will be attended by a respective officer







ACKNOWLEDGEMENT

- Initiative by the Ministry of Health and Family Welfare, Govt. of India, NITI AAYOG, Govt. of Karnataka Health and Family Welfare.
- Powered by Indian CST And Team.
- Principal Secretary to Government of Health & Family Welfare Department, Government of Karnataka
- Hosted on India's own Super Computing infrastructure facility at CSIR 4PI.
- Mr. Mahesh, PS To Principal Secretary, Government of Health & Family Welfare Department, Government of Karnataka
- Dr. Sridhar S M, Deputy Director, e-hospital program, NHM
- Dr. Rajani, Deputy Director, Child Health
- Dr. Rajani P, Deputy Director, Mental Health
- Dr. R. Narayana, Deputy Director, EMRI





ACKNOWLEDGEMENT

- Dr. C. S. Nagalakshmamma, Deputy Director, Immunization
- Mrs. Aaliya Sulthan, Technical Officer, Nutrition
- Dr. Vishwanath, UNICEF Consultant, NHM
- Deputy Director, NVBDCP, NHM
- Deputy Director, NCD, NHM
- Deputy Director, PCNDT, NHM
- Deputy Director, State Blood Cell
- Dr. Prabhu, Deputy Director, Child Health
- Deputy Director, FSSAI
- Deputy Director, State Blood Cell
- Dr. Rajkumar, Project Director, RCH
- Dr. Sanjay, Joint Director(TB)





ACKNOWLEDGEMENT

- Mr. Venkataesh, Technical Director, NIC, Karnataka
- Mr. Madhukar M V, Co-ordinator CH, NHM
- Mr. Vishwanath, M&E Official, NHM
- Mr. Prasanna, IT Consultant, NHM
- Mrs. Ashwini G K, Programmer, NHM
- Ms. Anusha Naik, Programmer, NHM
- Ms. Nikhila S. H. State M&E Manager, Demography Section
- Mrs. Shalini K S, Senior Programme Manager, NHM
- Ms. Praveena P, Programmer, e-Hospital
- Mr. Prabjoth, Project Manager, BIOCON
- SAST Consultant, NHM



GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE

GPMS TRANSPORTAL FOR UNIVERSAL HEALTH CARE – USER REGISTRATION WITH LOGIN CREDENTIALS

https://indiancst.com/India/universalhealthcare





GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE DIGITAL ACCESS

GPMS Transportal for Universal Healthcare cloud computing platform has been further customized and developed for allowing digital access to Multiple Ministries at Central or State /District/ Urban Level /Rural Level / all Stakeholders / Govt. and Private Hospitals/ PHC's/ Sub-Centers / Doctors / GP's / Nurses / Multiple Stake holders / Associated with Healthcare Projects / Programs/ Schemes etc





GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE DIGITAL ACCESS

| User ID created for the Programme officers – Health and Family Welfare Services Department | 87 |
|--|-------|
| User ID created for the DHO Karnataka | 30 |
| User ID created for the Health Directorates Karnataka | 44 |
| User ID (HOD) District hospital for Health Karnataka | 42 |
| User ID Taluk/Sub divisional hospital for Health Karnataka | 146 |
| User ID (HOD) community Health Centres for Health Karnataka | 204 |
| User ID Primary health Centres for Health Karnataka | 2523 |
| Registered all the Asha workers with respective PHC | 34591 |





GPMS TRANSPORTAL FOR UNIVERSAL HEALTHCARE DIGITAL ACCESS

| Registered and provided user id for all the private hospital members | 10,000 |
|--|--------|
| District Tuberculosis officers | 30 |
| District RCHO –Reproductive child health officers | 30 |
| District RCHO –Reproductive child health officers | 30 |
| Total | 47,727 |





ANNEXURE

- Memorandum of Understanding between Health & Family Welfare Department, Government of Karnataka and Indian Center for Social Transformation, Bengaluru (First Part).
- 2. Memorandum of Understanding between Health & Family Welfare Department, Government of Karnataka and Indian Center for Social Transformation, Bengaluru (Second Part).
- 3. Proceedings of the Government of Karnataka Government Order No. HFW 76 FPE 2017, Bengaluru Dt: 06.05.2017
- 4. Project Management and Monitoring Of health care projects: Minutes of Meeting-Krishna Hall: 15/05/2017.
- Minutes of Meeting: Integration of Primary Indicators-HMIS, MCTS, ASHA SOFT, SNCU, IDSP, NCD, NVBDCP, RNTCP, Disability software, Drug Inventory, Jeeva Sanjeevini, Doctors and Hospital Details etc. – Vikas Soudha-Bengaluru: 24/05/2017
- 6. Minutes of Meeting: Meeting with IT support Team for Data for Organizational registration and integration of medical records- NHM: 7/06/2017
- 7. Minutes of Meeting: Meeting with IT support Team for medical records- NHM: 13/06/2017.





- 8. Minutes of Meeting: Project Management and Monitoring Of health care projects linked into Sustainable Development Goal, Integration of Health care Solution into GPMS Trans Portal-Vikas Soudha-Bengaluru: 24/07/2017.
- 9. Minutes of Meeting: Demo on GPMS Healthcare Portal- NHM, Krishna Hall, Anand Rao Circle, Karnataka: 11/08/2017
- 10. Important-complete meeting date-Meeting Schedule for ICST meeting as per email sent by Nodal Officer Ehospital dated 26/08/2017.
- 11. Proceedings of "Integration of Softwares into Single Dashboard" meeting which was held on 9/10/2017 at 3pm with ICST technical team under the chairmanship of Deputy Director, e-Hospital Program, NHM in Krishna Hall, 3rd Floor, NHM Bengaluru.
- 12. Proceedings of "ICST Status Review and Training Session" meeting which was held on 11/10/2017 at 1:00pm with ICST technical team under the chairmanship of Deputy Director, e-Hospital Program, NHM in Krishna Hall, 3rd Floor, NHM Bengaluru.
- 13. Minutes of Meeting: Integration of New API s and Programs into GPMS Transportal –Universal Health Common Dashboard- NHM, Krishna Hall, Anand Rao Circle, Karnataka: 14/12/2017.
- 14. Minutes of Meeting: Demo on Integrated GPMS Universal Healthcare Common Dashboard- MHFW-Karnataka- SAST,-TTMC A block, BMTC building –Bengaluru: 17/03/2018



Indian CST Research Publications

Structure based drug discovery for designing leads for the non-toxic metabolic targets in multi drug resistant Mycobacterium Tuberculosis

Divneet Kaur1, Shalu Mathew2, Chinchu G. S. Nair2, Azitha Begum2, Ashwin K. Jainanarayan1,5, Mukta Sharma1and Samir K. Brahmachari1,2,3,4* Kaur et al. J Transl Med (2017) 15:261 https://doi.org/10.1186/s12967-017-1363-9

https://link.springer.com/article/10.1186/s12967-017-1363-9

Spatio-Temporal Network Dynamics of Genes Underlying Schizophrenia

Anirudh Chellappa \$1, Ankit Kumar Pathak 2, Prashant Sinha2, Ashwin K. Jainarayanan3, Sanjeev Jain4, Samir K. Brahmachari1,2,5,6,* https://www.biorxiv.org/content/biorxiv/early/2018/07/13/369090.full.pdf



Indian CST Team's Achievements

- ☐ GPMS TRANSPORTAL becomes world first cloud computing integrated make in India solution platform
- GPMS Transportal for Universal Healthcare also becomes the world's first where integrating 100 plus healthcare different systems into a single dashboard for providing affordable healthcare for all
- □ Open Innovation Center The latest being the insilico validation methodology in open source for finding MTb new 20 novel drugs of which 4 are approved drugs which also becomes the world's first

https://indiancst.com/India/universalhealthcare







For DEMO of the GPMS UNIVERSAL HEALTHCARETRANSPORTAL Please Contact: Indian Centre for Social Transformation +918073536006

Indian Centre for Social Transformation





For any clarification, please contact

Raja Seevan Founder Trustee Indian Centre for Social Transformation Mobile No.+918073536006 or +919739047849

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www.indiancst.in

www.indiancst.com

www.epashuhaat.gov.in

www.indiancst.com/India/universalhealthcare

https://tscl.indiancst.com

https://municipality.indiancst.com